

Załącznik nr 1

do Raportu z wykonania badań przemysłowych pt. *Badania rozkładów rozmiaru cząstek w próbkach zawiesin pochodzących z procesów wytwarzania farb z sierpnia 2018 roku*

Raporty z badań analizatorem LS 13 320

Spis treści

Próbka D0	2
Próbka D1	80
Próbka D2	155
Próbka D3	230
Próbka D4	308
Próbka M01	386
Próbka M02	462
Próbka M03	539
Próbka M04	612
Próbka M05	686
Próbka M06	761
Próbka M07	838
Próbka M08	911
Próbka M09	989

File name: D:\PP_PROFARB\POMIARY\D0_START.\$av
 D0_START.\$av
 File ID: D0_START
 Operator: PP
 Optical model: TiO2_KW.rf780d PIDS included
 LS 13 320 Universal Liquid Module
 Pump speed: 50%
 Fluid: water

Average of 15 files

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 D:\KW\PROFARB\POMIARY\D0_START_15_133752.\$ls

Volume Statistics (Arithmetic) D0_START.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.437 µm
Mean:	0.366 µm	Variance:	0.191 µm ²
Median:	0.167 µm	C.V.:	119%
Mean/Median ratio:	2.190	Skewness:	1.985 Right skewed
Mode:	0.117 µm	Kurtosis:	3.619 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.080 µm	0.107 µm	0.167 µm	0.333 µm	1.054 µm

Surface Area Statistics (Arithmetic) D0_START.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.181 µm
Mean:	0.155 µm	Variance:	0.033 µm ²
Median:	0.109 µm	C.V.:	117%
Mean/Median ratio:	1.421	Skewness:	5.319 Right skewed
Mode:	0.088 µm	Kurtosis:	35.39 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.237 µm

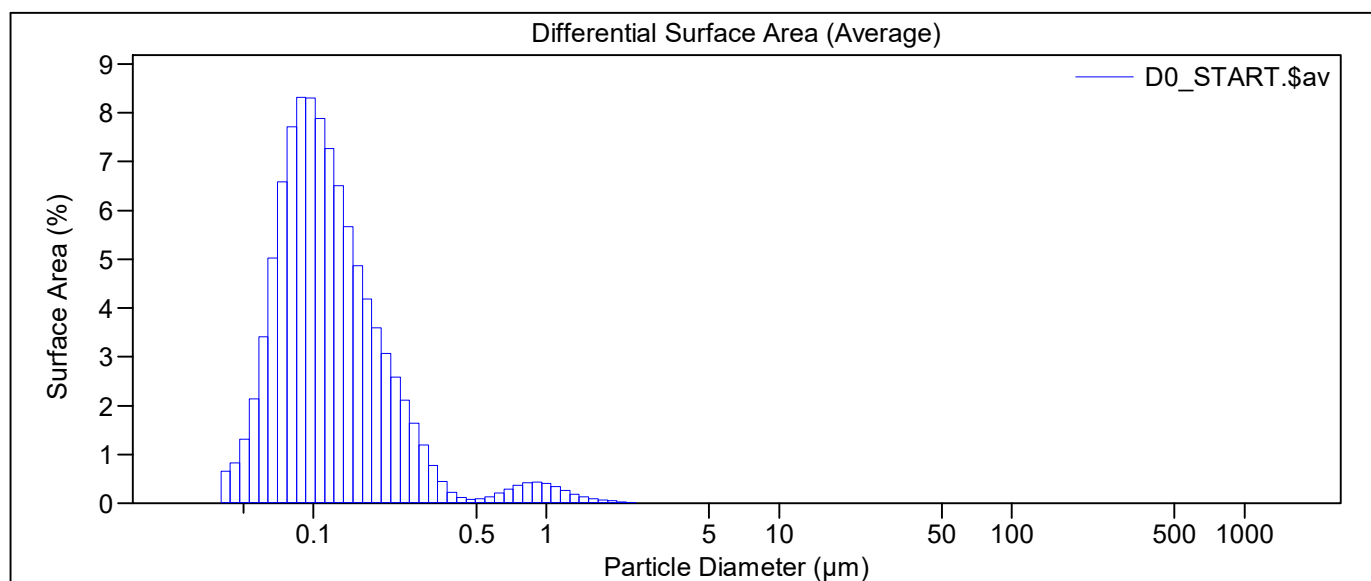
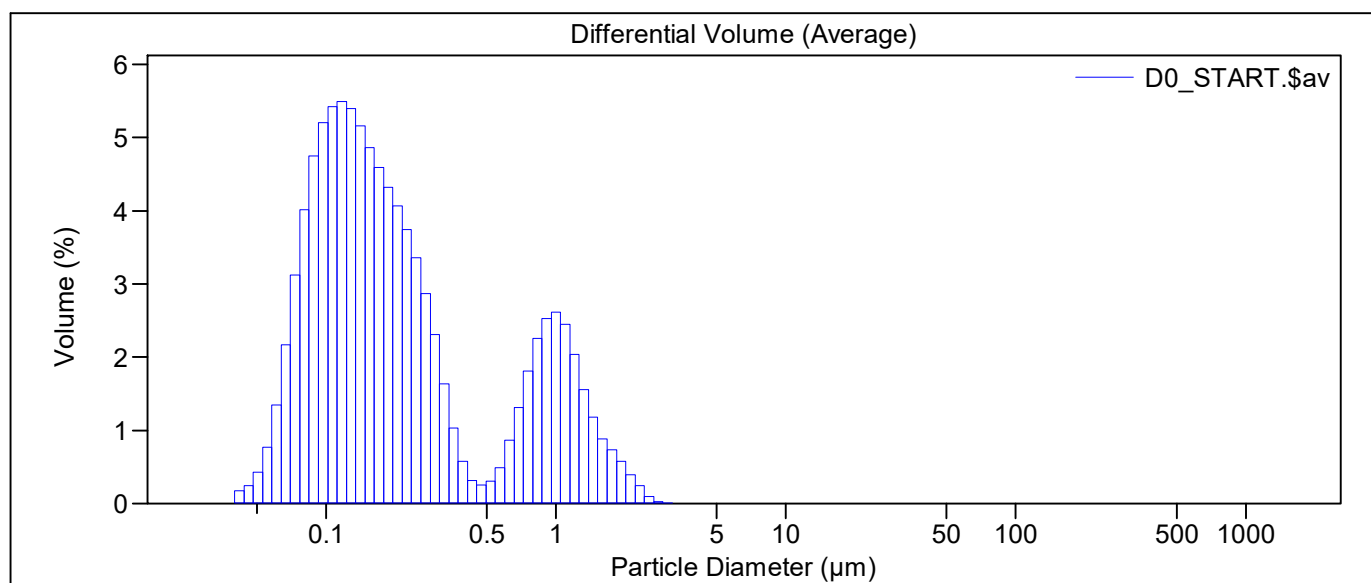
Number Statistics (Arithmetic)

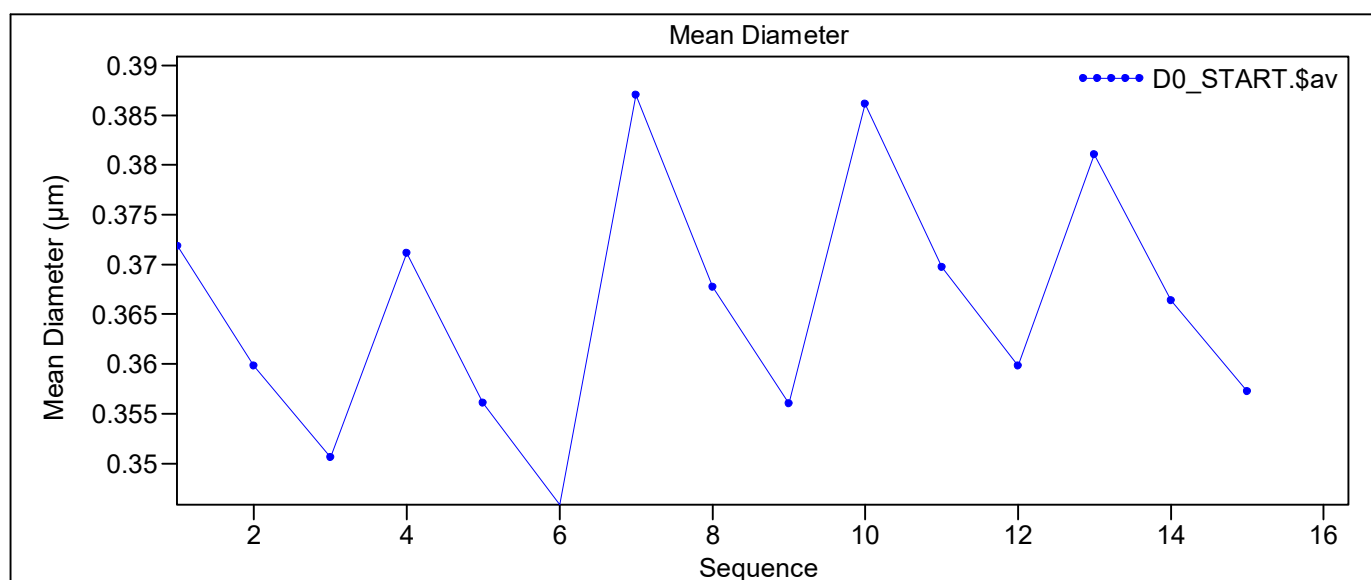
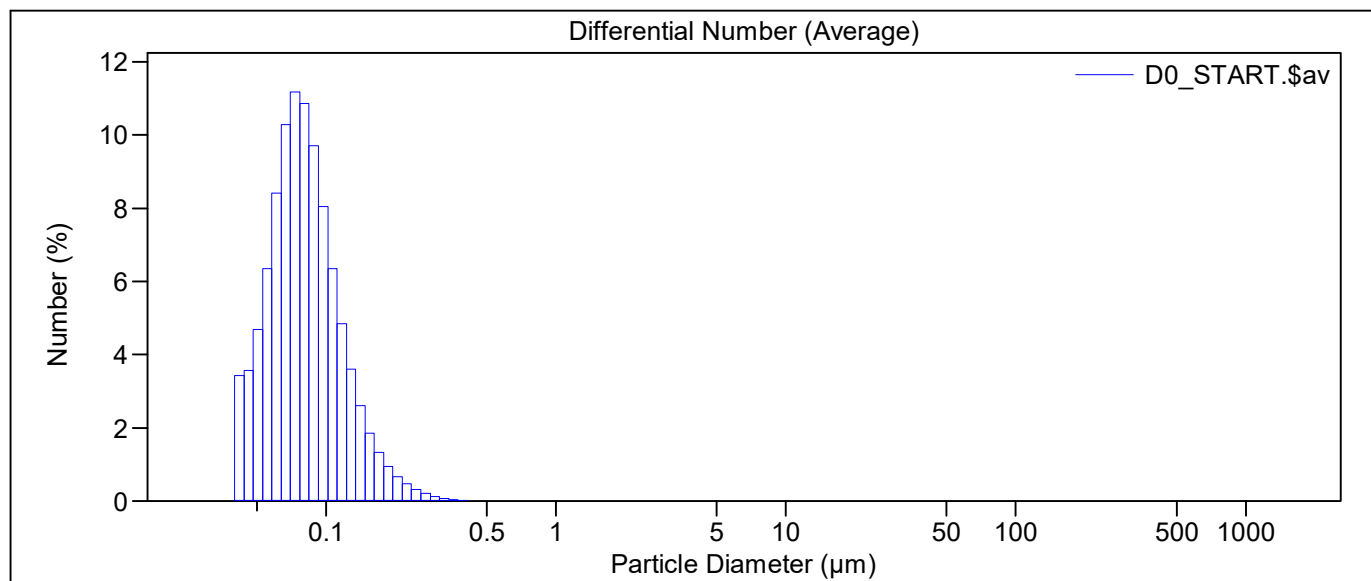
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Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.040 μm
Mean:	0.087 μm	Variance:	0.0016 μm^2
Median:	0.078 μm	C.V.:	46.0%
Mean/Median ratio:	1.109	Skewness:	5.380 Right skewed
Mode:	0.073 μm	Kurtosis:	102.6 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm





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Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.83	3.58
11	0.048	0.050	0.43	1.31	4.69
12	0.053	0.055	0.77	2.14	6.34
13	0.058	0.061	1.34	3.41	8.42
14	0.064	0.067	2.17	5.03	10.3
15	0.070	0.073	3.12	6.58	11.2
16	0.077	0.080	4.02	7.72	10.9
17	0.084	0.088	4.75	8.31	9.71

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.21	8.30	8.05
19	0.102	0.106	5.43	7.88	6.34
20	0.112	0.117	5.49	7.26	4.85
21	0.122	0.128	5.40	6.51	3.61
22	0.134	0.141	5.16	5.66	2.60
23	0.148	0.155	4.86	4.86	1.86
24	0.162	0.170	4.59	4.18	1.32
25	0.178	0.186	4.32	3.59	0.94
26	0.195	0.205	4.06	3.07	0.67
27	0.214	0.225	3.75	2.58	0.47
28	0.235	0.247	3.36	2.11	0.32
29	0.258	0.271	2.87	1.64	0.20
30	0.284	0.297	2.31	1.20	0.12
31	0.311	0.326	1.64	0.78	0.067
32	0.342	0.358	1.03	0.44	0.032
33	0.375	0.393	0.58	0.23	0.013
34	0.412	0.431	0.32	0.11	0.0055
35	0.452	0.474	0.26	0.084	0.0034
36	0.496	0.520	0.30	0.090	0.0030
37	0.545	0.571	0.49	0.13	0.0037
38	0.598	0.627	0.87	0.21	0.0050
39	0.656	0.688	1.31	0.29	0.0057
40	0.721	0.755	1.81	0.37	0.0059
41	0.791	0.829	2.26	0.42	0.0056
42	0.868	0.910	2.53	0.43	0.0047
43	0.953	0.999	2.62	0.41	0.0037
44	1.047	1.097	2.45	0.35	0.0026
45	1.149	1.204	2.04	0.26	0.0016
46	1.261	1.321	1.55	0.18	0.00095
47	1.385	1.451	1.18	0.13	0.00055
48	1.520	1.592	0.89	0.086	0.00031
49	1.668	1.748	0.73	0.065	0.00019
50	1.832	1.919	0.57	0.046	0.00011
51	2.011	2.107	0.39	0.029	0.000059
52	2.207	2.313	0.24	0.016	0.000028
53	2.423	2.539	0.097	0.0059	0.000008
54	2.660	2.787	0.027	0.0015	0.000002
55	2.920	3.059	0.0049	0.00025	2.4E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

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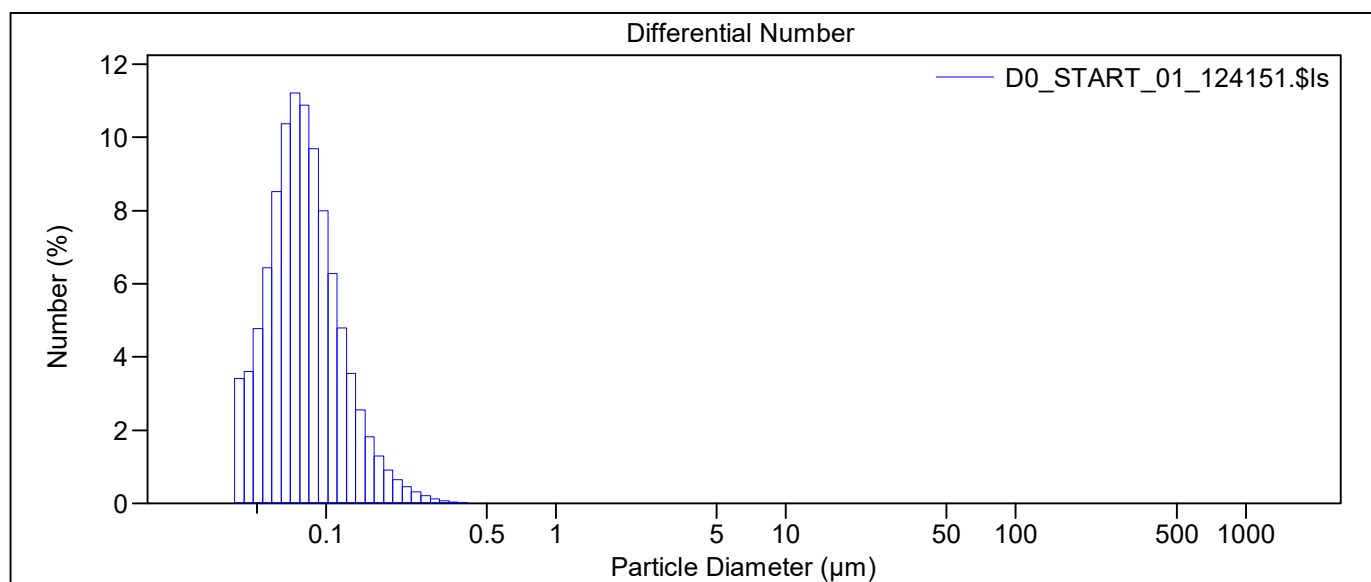
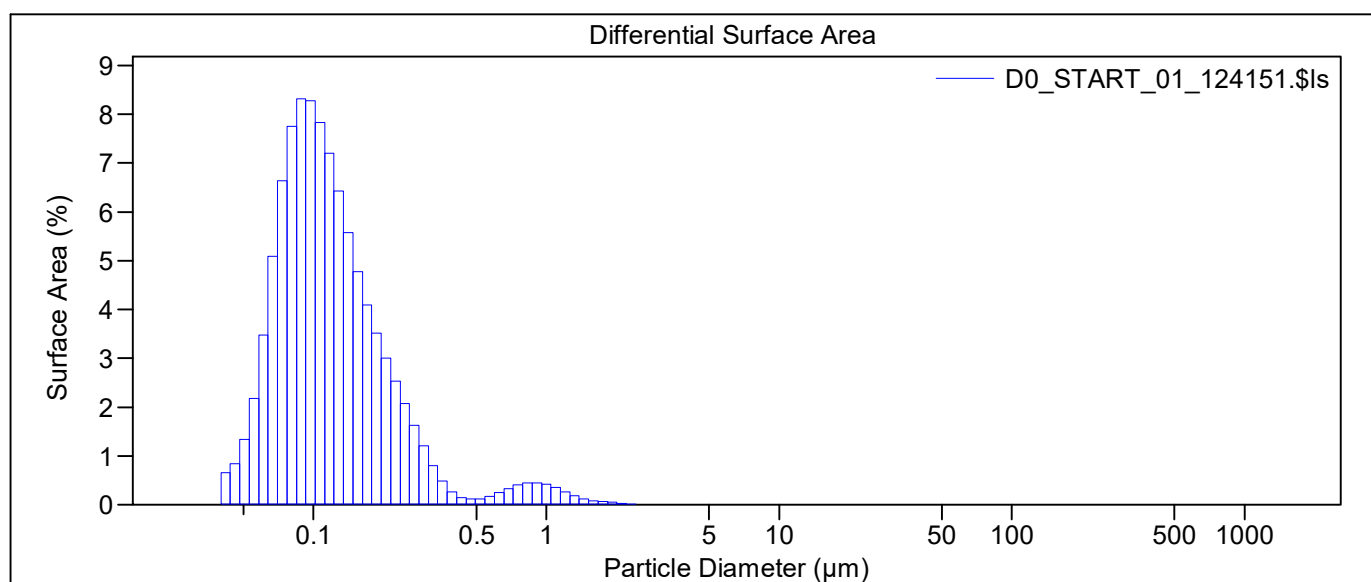
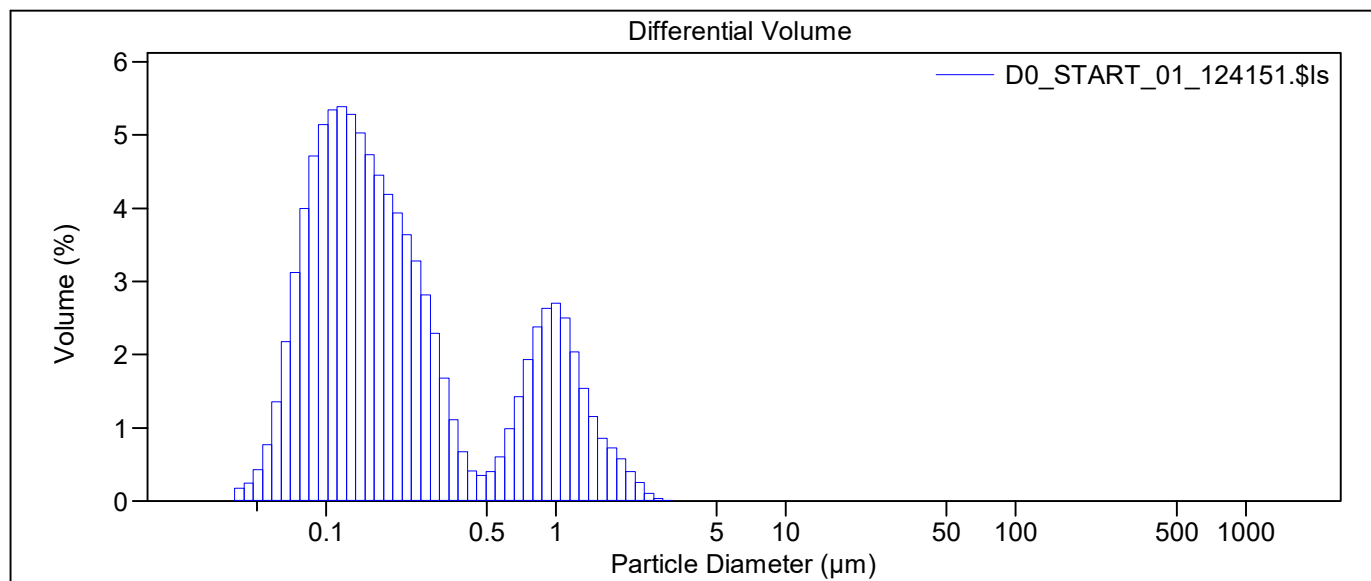
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
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File ID:	DO_START		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.94%		
LS 13 320	Universal Liquid Module		
Start time:	12:40 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_01_124151.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.439 µm
Mean:	0.372 µm		Variance:	0.192 µm ²
Median:	0.169 µm		C.V.:	118%
Mean/Median ratio:	2.194		Skewness:	1.954 Right skewed
Mode:	0.117 µm		Kurtosis:	3.554 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.107 µm	0.169 µm	0.366 µm	1.054 µm

Surface Area Statistics (Arithmetic)			D0_START_01_124151.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.184 µm
Mean:	0.156 µm		Variance:	0.034 µm ²
Median:	0.109 µm		C.V.:	118%
Mean/Median ratio:	1.439		Skewness:	5.186 Right skewed
Mode:	0.088 µm		Kurtosis:	33.81 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.109 µm	0.158 µm	0.241 µm

Number Statistics (Arithmetic)			D0_START_01_124151.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.086 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.3%
Mean/Median ratio:	1.109		Skewness:	5.517 Right skewed
Mode:	0.073 μm		Kurtosis:	104.4 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.099 μm	0.129 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.84	3.60
11	0.048	0.050	0.43	1.34	4.77
12	0.053	0.055	0.77	2.18	6.44
13	0.058	0.061	1.35	3.47	8.52
14	0.064	0.067	2.18	5.10	10.4
15	0.070	0.073	3.12	6.64	11.2
16	0.077	0.080	4.00	7.76	10.9
17	0.084	0.088	4.71	8.32	9.69
18	0.093	0.097	5.14	8.28	7.99
19	0.102	0.106	5.35	7.84	6.28
20	0.112	0.117	5.39	7.20	4.79
21	0.122	0.128	5.28	6.42	3.54
22	0.134	0.141	5.03	5.57	2.55
23	0.148	0.155	4.73	4.77	1.81
24	0.162	0.170	4.45	4.09	1.29
25	0.178	0.186	4.19	3.51	0.92
26	0.195	0.205	3.94	3.00	0.65
27	0.214	0.225	3.64	2.53	0.46
28	0.235	0.247	3.28	2.08	0.31
29	0.258	0.271	2.82	1.63	0.20
30	0.284	0.297	2.29	1.20	0.12
31	0.311	0.326	1.68	0.80	0.069
32	0.342	0.358	1.11	0.48	0.034
33	0.375	0.393	0.67	0.27	0.016
34	0.412	0.431	0.41	0.15	0.0073
35	0.452	0.474	0.35	0.12	0.0047
36	0.496	0.520	0.40	0.12	0.0040
37	0.545	0.571	0.60	0.16	0.0046
38	0.598	0.627	0.98	0.25	0.0057
39	0.656	0.688	1.43	0.32	0.0062
40	0.721	0.755	1.94	0.40	0.0064
41	0.791	0.829	2.38	0.45	0.0059
42	0.868	0.910	2.64	0.45	0.0050
43	0.953	0.999	2.71	0.42	0.0038
44	1.047	1.097	2.50	0.36	0.0027
45	1.149	1.204	2.04	0.26	0.0017

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.54	0.18	0.00094
47	1.385	1.451	1.15	0.12	0.00054
48	1.520	1.592	0.86	0.084	0.00030
49	1.668	1.748	0.72	0.065	0.00019
50	1.832	1.919	0.57	0.047	0.00012
51	2.011	2.107	0.40	0.030	0.000061
52	2.207	2.313	0.26	0.017	0.000029
53	2.423	2.539	0.10	0.0064	0.000009
54	2.660	2.787	0.031	0.0017	0.000002
55	2.920	3.059	0.0056	0.00028	2.76E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

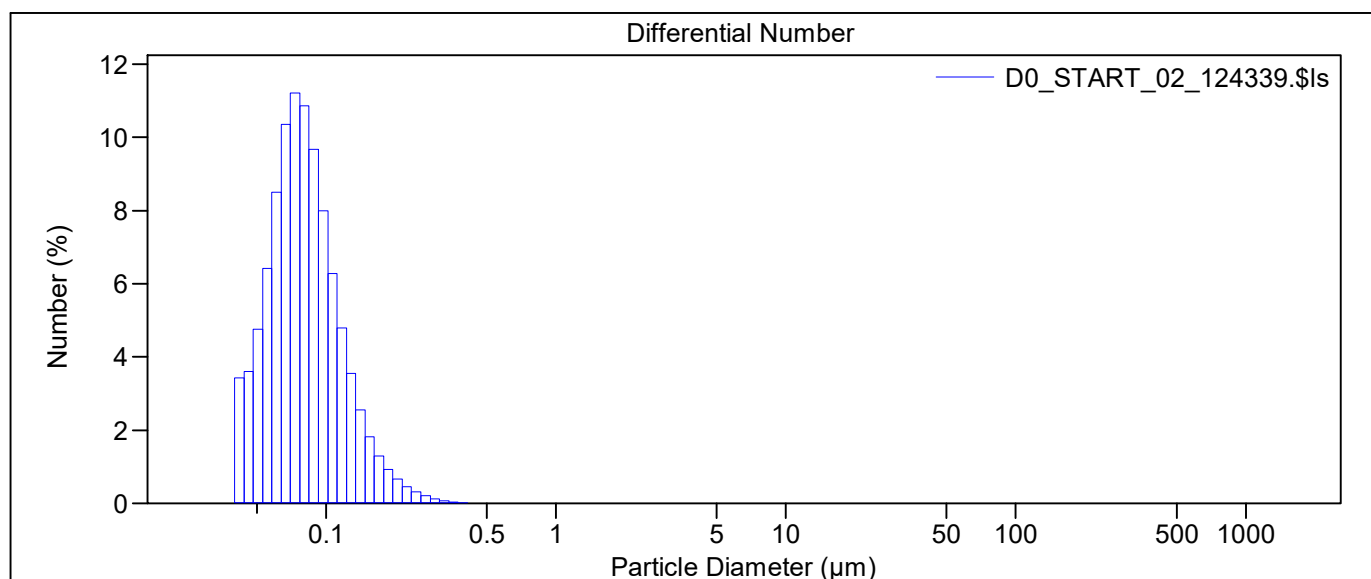
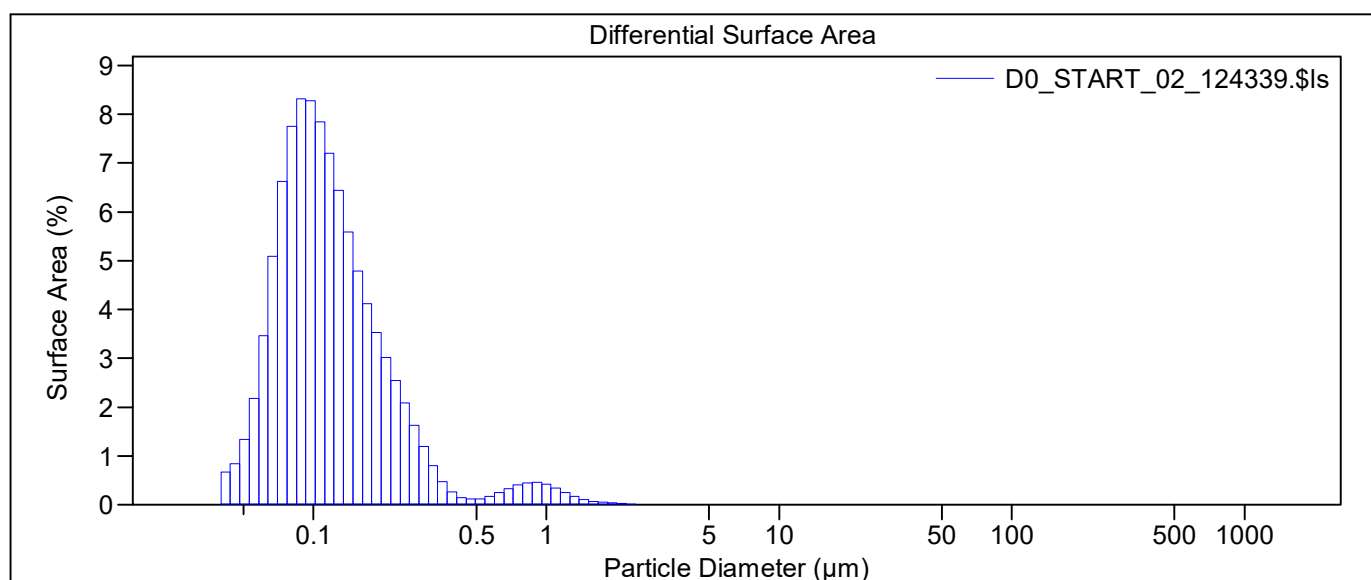
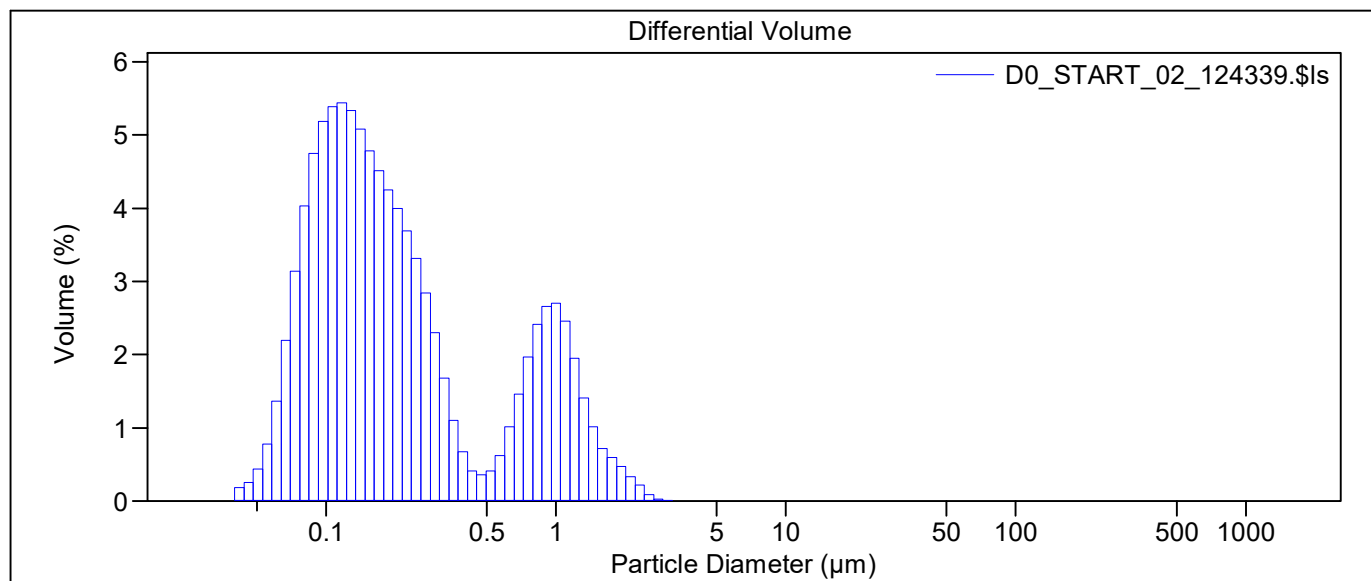
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_02_124339.\$ls		
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File ID:	DO_START		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.97%		
LS 13 320	Universal Liquid Module		
Start time:	12:41 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_02_124339.\$Is	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.422 μm
Mean:	0.360 μm		Variance:	0.178 μm ²
Median:	0.168 μm		C.V.:	117%
Mean/Median ratio:	2.143		Skewness:	1.997 Right skewed
Mode:	0.117 μm		Kurtosis:	3.847 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.168 μm	0.344 μm	1.022 μm

Surface Area Statistics (Arithmetic)			D0_START_02_124339.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.178 µm
Mean:	0.155 µm		Variance:	0.032 µm ²
Median:	0.109 µm		C.V.:	115%
Mean/Median ratio:	1.426		Skewness:	5.157 Right skewed
Mode:	0.088 µm		Kurtosis:	33.73 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.109 µm	0.158 µm	0.240 µm

Number Statistics (Arithmetic)			D0_START_02_124339.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.2%
Mean/Median ratio:	1.109		Skewness:	5.370 Right skewed
Mode:	0.073 μm		Kurtosis:	98.23 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.129 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.25	0.84	3.61
11	0.048	0.050	0.44	1.34	4.76
12	0.053	0.055	0.78	2.17	6.43
13	0.058	0.061	1.36	3.47	8.51
14	0.064	0.067	2.19	5.09	10.4
15	0.070	0.073	3.14	6.63	11.2
16	0.077	0.080	4.03	7.75	10.9
17	0.084	0.088	4.75	8.32	9.68
18	0.093	0.097	5.19	8.28	7.99
19	0.102	0.106	5.39	7.84	6.28
20	0.112	0.117	5.44	7.21	4.79
21	0.122	0.128	5.34	6.44	3.55
22	0.134	0.141	5.08	5.59	2.56
23	0.148	0.155	4.79	4.79	1.82
24	0.162	0.170	4.51	4.11	1.30
25	0.178	0.186	4.25	3.53	0.92
26	0.195	0.205	3.99	3.02	0.66
27	0.214	0.225	3.69	2.54	0.46
28	0.235	0.247	3.32	2.08	0.31
29	0.258	0.271	2.84	1.63	0.20
30	0.284	0.297	2.30	1.20	0.12
31	0.311	0.326	1.68	0.80	0.068
32	0.342	0.358	1.10	0.48	0.034
33	0.375	0.393	0.67	0.26	0.016
34	0.412	0.431	0.41	0.15	0.0072
35	0.452	0.474	0.36	0.12	0.0047
36	0.496	0.520	0.41	0.12	0.0041
37	0.545	0.571	0.62	0.17	0.0047
38	0.598	0.627	1.01	0.25	0.0058
39	0.656	0.688	1.46	0.33	0.0063
40	0.721	0.755	1.97	0.40	0.0064
41	0.791	0.829	2.41	0.45	0.0060
42	0.868	0.910	2.66	0.45	0.0050
43	0.953	0.999	2.70	0.42	0.0038
44	1.047	1.097	2.46	0.35	0.0026
45	1.149	1.204	1.95	0.25	0.0016

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.41	0.17	0.00086
47	1.385	1.451	1.01	0.11	0.00047
48	1.520	1.592	0.72	0.070	0.00025
49	1.668	1.748	0.59	0.053	0.00016
50	1.832	1.919	0.47	0.038	0.000094
51	2.011	2.107	0.34	0.025	0.000050
52	2.207	2.313	0.22	0.015	0.000025
53	2.423	2.539	0.091	0.0056	0.000008
54	2.660	2.787	0.027	0.0015	0.000002
55	2.920	3.059	0.0050	0.00025	2.45E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

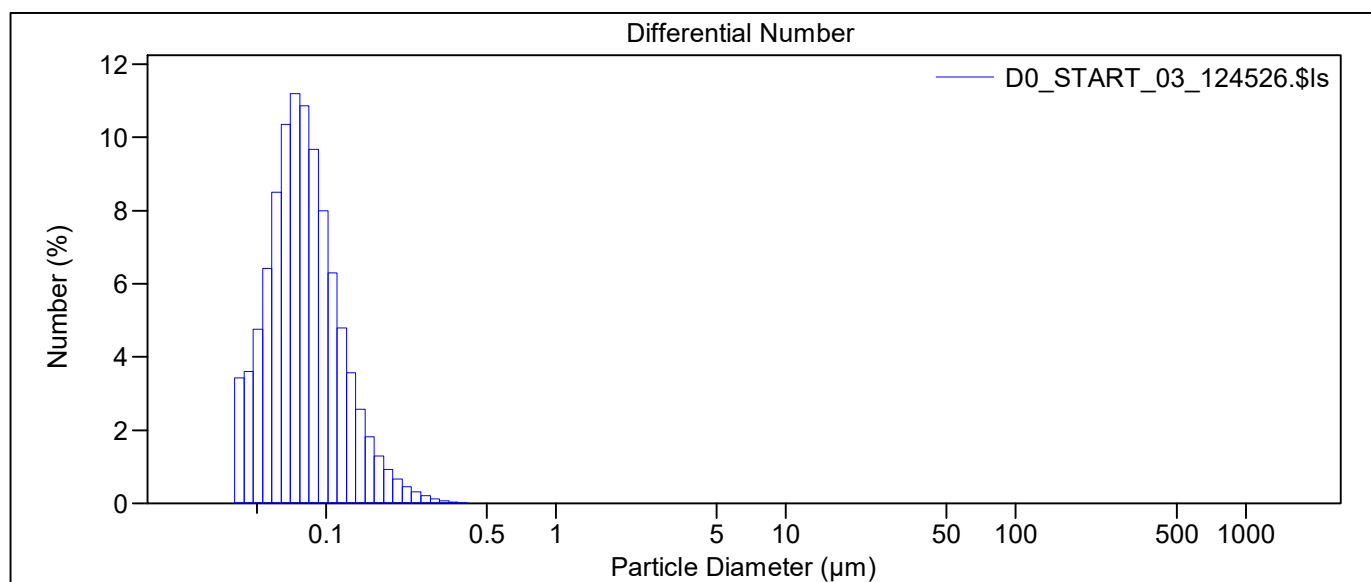
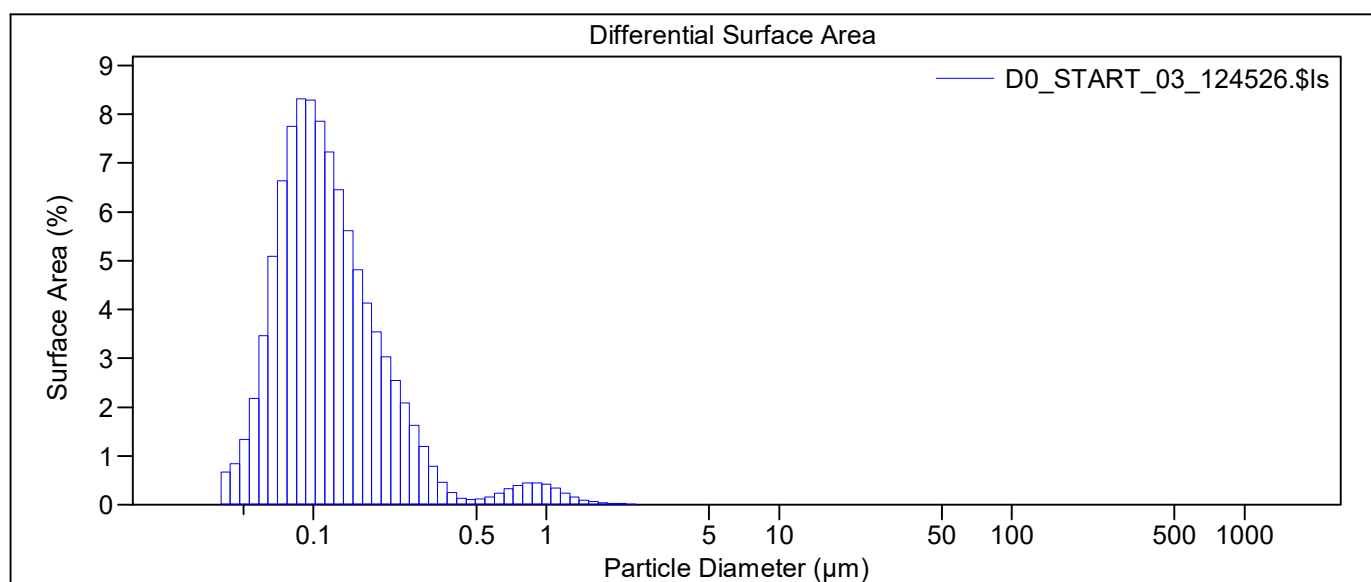
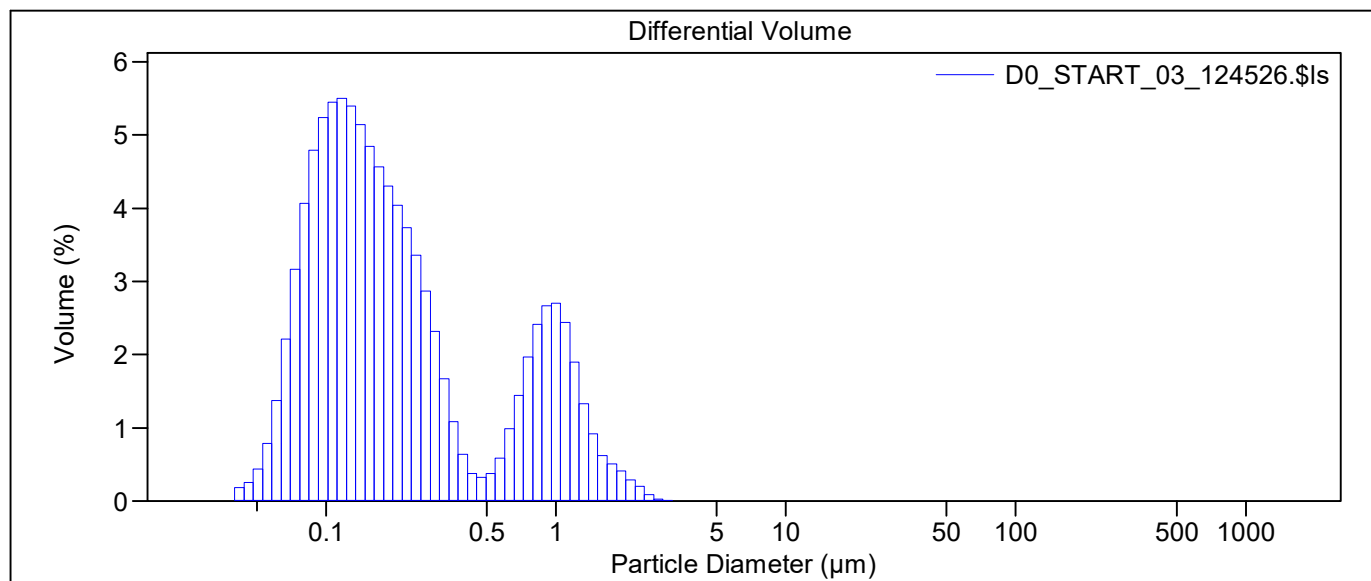
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

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	DO_START_03_124526.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.01%		
LS 13 320	Universal Liquid Module		
Start time:	12:43 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_03_124526.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.411 µm
Mean:	0.351 µm		Variance:	0.169 µm ²
Median:	0.166 µm		C.V.:	117%
Mean/Median ratio:	2.112		Skewness:	2.030 Right skewed
Mode:	0.117 µm		Kurtosis:	4.059 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.166 µm	0.329 µm	1.003 µm

Surface Area Statistics (Arithmetic)			D0_START_03_124526.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.174 µm
Mean:	0.154 µm		Variance:	0.030 µm ²
Median:	0.109 µm		C.V.:	113%
Mean/Median ratio:	1.415		Skewness:	5.167 Right skewed
Mode:	0.088 µm		Kurtosis:	34.00 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.109 µm	0.157 µm	0.238 µm

Number Statistics (Arithmetic)			D0_START_03_124526.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.1%
Mean/Median ratio:	1.109		Skewness:	5.254 Right skewed
Mode:	0.073 μm		Kurtosis:	94.31 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.25	0.84	3.61
11	0.048	0.050	0.44	1.34	4.76
12	0.053	0.055	0.79	2.17	6.43
13	0.058	0.061	1.37	3.47	8.50
14	0.064	0.067	2.21	5.09	10.4
15	0.070	0.073	3.17	6.63	11.2
16	0.077	0.080	4.06	7.75	10.9
17	0.084	0.088	4.79	8.32	9.68
18	0.093	0.097	5.24	8.29	7.99
19	0.102	0.106	5.45	7.86	6.29
20	0.112	0.117	5.50	7.23	4.80
21	0.122	0.128	5.40	6.46	3.56
22	0.134	0.141	5.15	5.61	2.57
23	0.148	0.155	4.84	4.81	1.83
24	0.162	0.170	4.57	4.13	1.30
25	0.178	0.186	4.30	3.54	0.93
26	0.195	0.205	4.04	3.03	0.66
27	0.214	0.225	3.73	2.55	0.46
28	0.235	0.247	3.36	2.09	0.31
29	0.258	0.271	2.87	1.63	0.20
30	0.284	0.297	2.32	1.20	0.12
31	0.311	0.326	1.67	0.79	0.067
32	0.342	0.358	1.08	0.46	0.033
33	0.375	0.393	0.64	0.25	0.015
34	0.412	0.431	0.38	0.13	0.0065
35	0.452	0.474	0.32	0.10	0.0042
36	0.496	0.520	0.38	0.11	0.0037
37	0.545	0.571	0.58	0.16	0.0044
38	0.598	0.627	0.99	0.24	0.0056
39	0.656	0.688	1.44	0.32	0.0062
40	0.721	0.755	1.97	0.40	0.0064
41	0.791	0.829	2.42	0.45	0.0059
42	0.868	0.910	2.67	0.45	0.0049
43	0.953	0.999	2.70	0.41	0.0038
44	1.047	1.097	2.44	0.34	0.0026
45	1.149	1.204	1.90	0.24	0.0015

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.33	0.15	0.00080
47	1.385	1.451	0.92	0.097	0.00042
48	1.520	1.592	0.62	0.060	0.00022
49	1.668	1.748	0.51	0.045	0.00013
50	1.832	1.919	0.41	0.033	0.000081
51	2.011	2.107	0.29	0.021	0.000044
52	2.207	2.313	0.20	0.013	0.000022
53	2.423	2.539	0.083	0.0050	0.000007
54	2.660	2.787	0.025	0.0014	0.000002
55	2.920	3.059	0.0047	0.00023	2.27E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

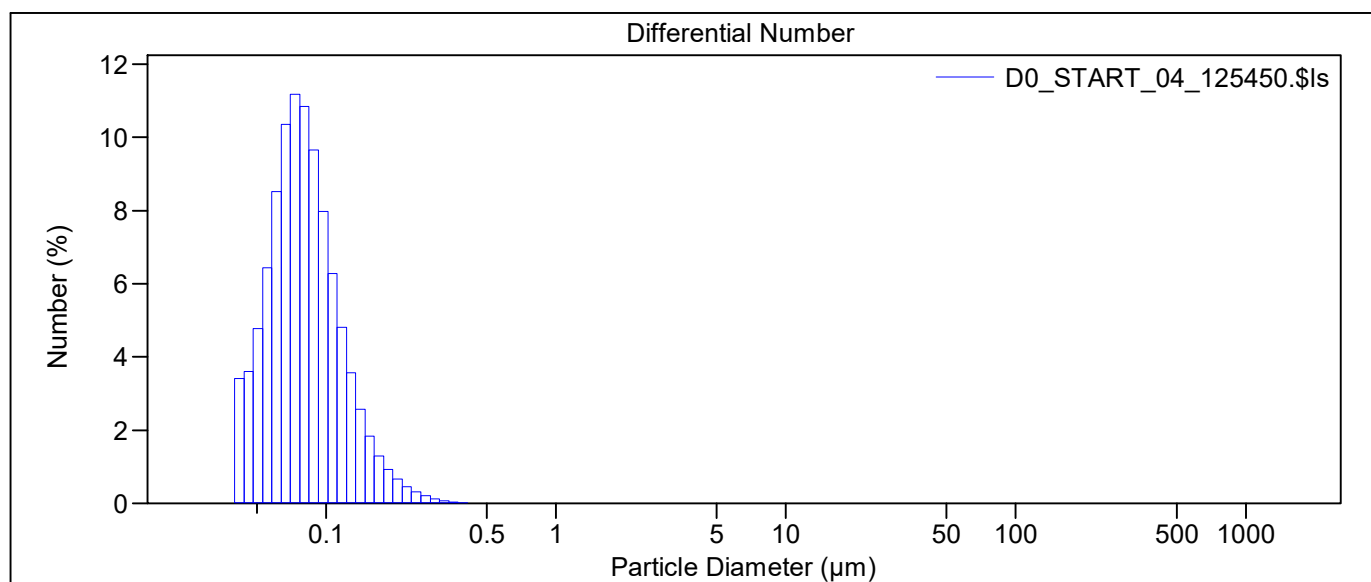
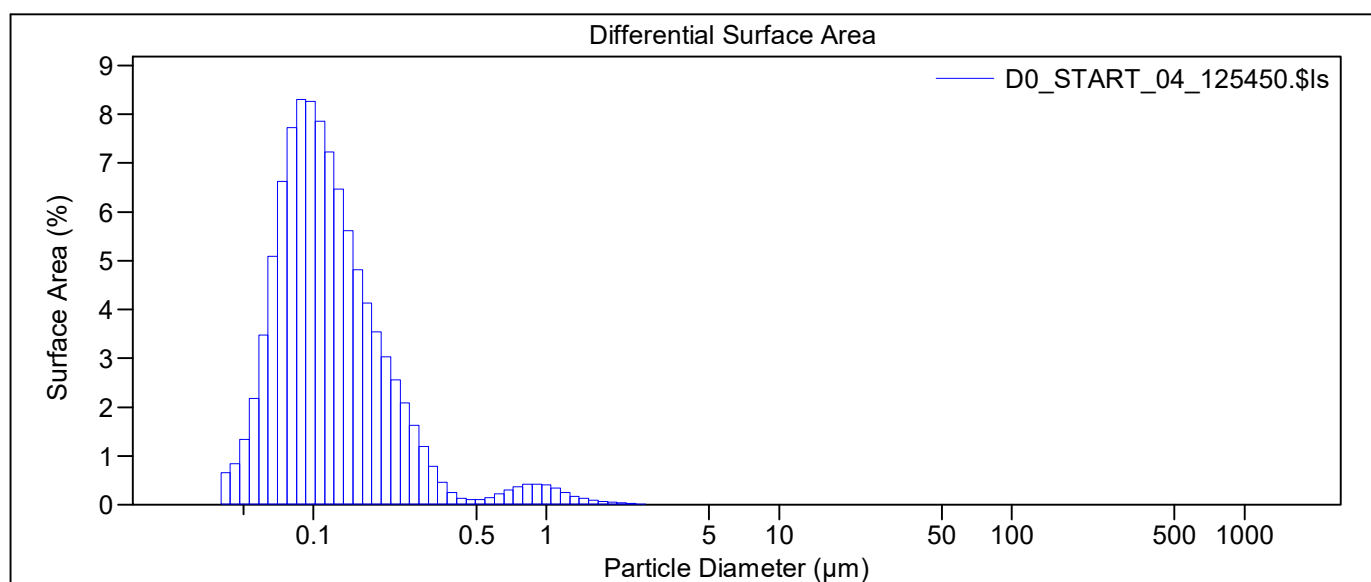
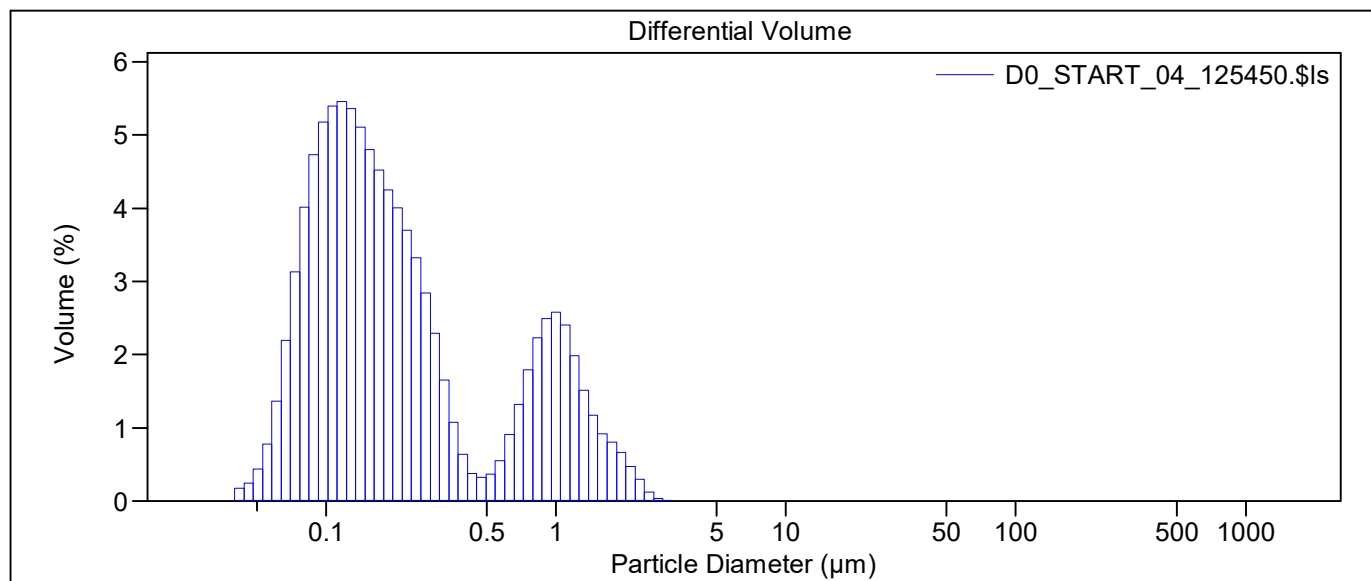
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_04_125450.\$ls		
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File ID:	DO_START		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.97%		
LS 13 320	Universal Liquid Module		
Start time:	12:53 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	50%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_04_125450.\$Is	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.447 μm
Mean:	0.371 μm		Variance:	0.200 μm ²
Median:	0.168 μm		C.V.:	120%
Mean/Median ratio:	2.212		Skewness:	2.011 Right skewed
Mode:	0.117 μm		Kurtosis:	3.760 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.168 μm	0.343 μm	1.063 μm

Surface Area Statistics (Arithmetic)			D0_START_04_125450.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.183 μm
Mean:	0.155 μm		Variance:	0.034 μm ²
Median:	0.109 μm		C.V.:	118%
Mean/Median ratio:	1.428		Skewness:	5.378 Right skewed
Mode:	0.088 μm		Kurtosis:	36.46 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.081 μm	0.109 μm	0.157 μm	0.238 μm

Number Statistics (Arithmetic)			D0_START_04_125450.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.1%
Mean/Median ratio:	1.109		Skewness:	5.450 Right skewed
Mode:	0.073 μm		Kurtosis:	105.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.41
10	0.044	0.046	0.25	0.84	3.60
11	0.048	0.050	0.44	1.34	4.78
12	0.053	0.055	0.78	2.18	6.44
13	0.058	0.061	1.36	3.47	8.52
14	0.064	0.067	2.19	5.09	10.4
15	0.070	0.073	3.13	6.62	11.2
16	0.077	0.080	4.01	7.73	10.8
17	0.084	0.088	4.73	8.30	9.65
18	0.093	0.097	5.17	8.27	7.98
19	0.102	0.106	5.39	7.85	6.29
20	0.112	0.117	5.45	7.23	4.81
21	0.122	0.128	5.36	6.47	3.57
22	0.134	0.141	5.11	5.62	2.57
23	0.148	0.155	4.80	4.82	1.83
24	0.162	0.170	4.52	4.13	1.30
25	0.178	0.186	4.25	3.54	0.93
26	0.195	0.205	4.00	3.03	0.66
27	0.214	0.225	3.70	2.55	0.46
28	0.235	0.247	3.32	2.09	0.31
29	0.258	0.271	2.84	1.63	0.20
30	0.284	0.297	2.29	1.20	0.12
31	0.311	0.326	1.65	0.78	0.067
32	0.342	0.358	1.07	0.46	0.033
33	0.375	0.393	0.64	0.25	0.015
34	0.412	0.431	0.38	0.14	0.0066
35	0.452	0.474	0.33	0.11	0.0043
36	0.496	0.520	0.37	0.11	0.0037
37	0.545	0.571	0.55	0.15	0.0042
38	0.598	0.627	0.91	0.23	0.0052
39	0.656	0.688	1.32	0.30	0.0057
40	0.721	0.755	1.80	0.37	0.0059
41	0.791	0.829	2.23	0.42	0.0055
42	0.868	0.910	2.50	0.43	0.0047
43	0.953	0.999	2.58	0.40	0.0036
44	1.047	1.097	2.40	0.34	0.0026
45	1.149	1.204	1.98	0.26	0.0016

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.51	0.18	0.00092
47	1.385	1.451	1.17	0.12	0.00054
48	1.520	1.592	0.91	0.089	0.00032
49	1.668	1.748	0.81	0.071	0.00021
50	1.832	1.919	0.66	0.054	0.00013
51	2.011	2.107	0.47	0.035	0.000071
52	2.207	2.313	0.30	0.020	0.000034
53	2.423	2.539	0.12	0.0074	0.000010
54	2.660	2.787	0.035	0.0019	0.000002
55	2.920	3.059	0.0060	0.00030	2.95E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

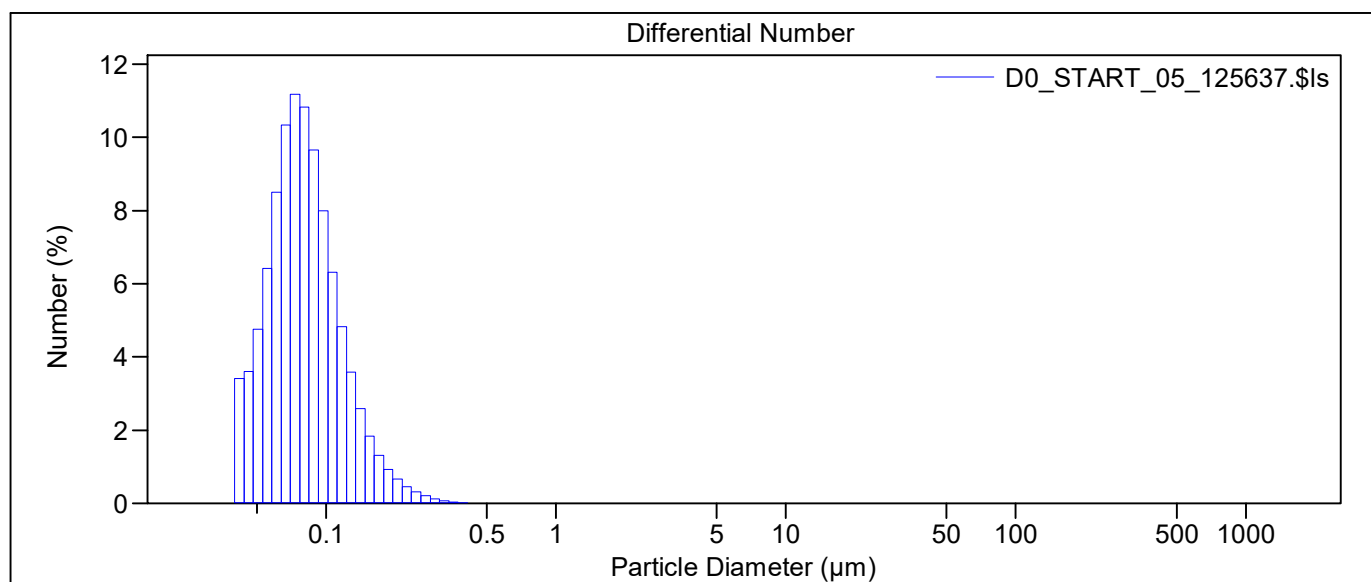
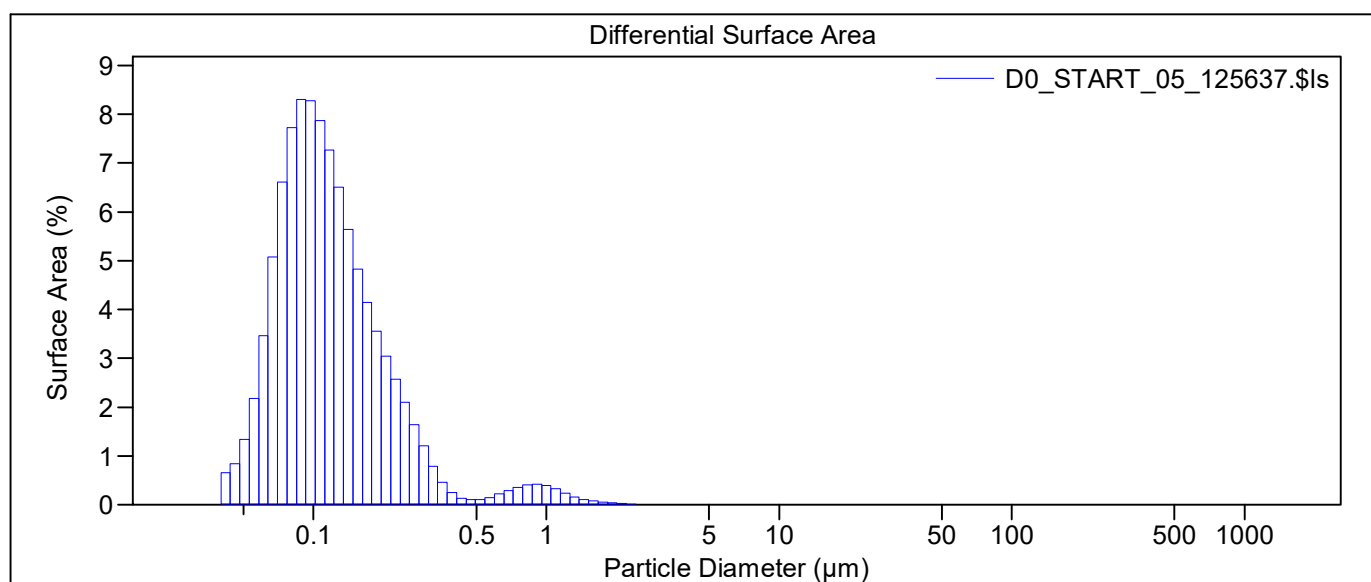
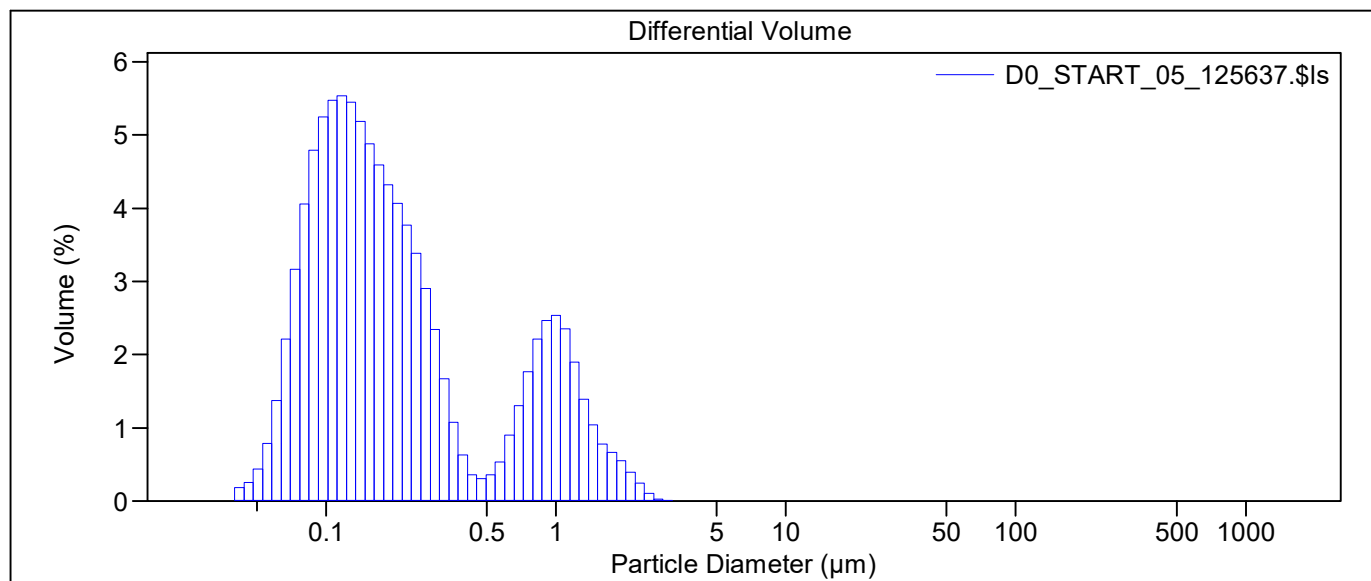
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_05_125637.\$ls		
	DO_START_05_125637.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.03%		
LS 13 320	Universal Liquid Module		
Start time:	12:54 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_05_125637.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.428 μm
Mean:	0.356 μm		Variance:	0.183 μm ²
Median:	0.165 μm		C.V.:	120%
Mean/Median ratio:	2.153		Skewness:	2.077 Right skewed
Mode:	0.117 μm		Kurtosis:	4.147 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.165 μm	0.322 μm	1.027 μm

Surface Area Statistics (Arithmetic)			D0_START_05_125637.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.176 µm
Mean:	0.153 µm		Variance:	0.031 µm ²
Median:	0.109 µm		C.V.:	115%
Mean/Median ratio:	1.411		Skewness:	5.399 Right skewed
Mode:	0.088 µm		Kurtosis:	37.09 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.236 µm

Number Statistics (Arithmetic)			D0_START_05_125637.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.0%
Mean/Median ratio:	1.109		Skewness:	5.255 Right skewed
Mode:	0.073 μm		Kurtosis:	98.12 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.84	3.60
11	0.048	0.050	0.44	1.34	4.76
12	0.053	0.055	0.79	2.17	6.42
13	0.058	0.061	1.38	3.46	8.50
14	0.064	0.067	2.21	5.08	10.3
15	0.070	0.073	3.16	6.61	11.2
16	0.077	0.080	4.06	7.73	10.8
17	0.084	0.088	4.79	8.30	9.66
18	0.093	0.097	5.24	8.28	8.00
19	0.102	0.106	5.47	7.88	6.31
20	0.112	0.117	5.54	7.26	4.83
21	0.122	0.128	5.45	6.50	3.59
22	0.134	0.141	5.19	5.65	2.58
23	0.148	0.155	4.88	4.83	1.84
24	0.162	0.170	4.59	4.14	1.31
25	0.178	0.186	4.32	3.55	0.93
26	0.195	0.205	4.07	3.05	0.66
27	0.214	0.225	3.77	2.57	0.46
28	0.235	0.247	3.39	2.11	0.31
29	0.258	0.271	2.91	1.65	0.20
30	0.284	0.297	2.35	1.21	0.12
31	0.311	0.326	1.67	0.79	0.067
32	0.342	0.358	1.08	0.46	0.033
33	0.375	0.393	0.63	0.25	0.014
34	0.412	0.431	0.36	0.13	0.0062
35	0.452	0.474	0.31	0.10	0.0041
36	0.496	0.520	0.35	0.10	0.0035
37	0.545	0.571	0.53	0.14	0.0040
38	0.598	0.627	0.90	0.22	0.0051
39	0.656	0.688	1.30	0.29	0.0056
40	0.721	0.755	1.77	0.36	0.0057
41	0.791	0.829	2.21	0.41	0.0054
42	0.868	0.910	2.47	0.42	0.0046
43	0.953	0.999	2.54	0.39	0.0035
44	1.047	1.097	2.35	0.33	0.0025
45	1.149	1.204	1.90	0.24	0.0015

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.39	0.16	0.00084
47	1.385	1.451	1.04	0.11	0.00047
48	1.520	1.592	0.78	0.075	0.00027
49	1.668	1.748	0.67	0.058	0.00017
50	1.832	1.919	0.55	0.044	0.00011
51	2.011	2.107	0.39	0.028	0.000058
52	2.207	2.313	0.25	0.016	0.000028
53	2.423	2.539	0.10	0.0061	0.000009
54	2.660	2.787	0.029	0.0016	0.000002
55	2.920	3.059	0.0050	0.00025	2.43E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

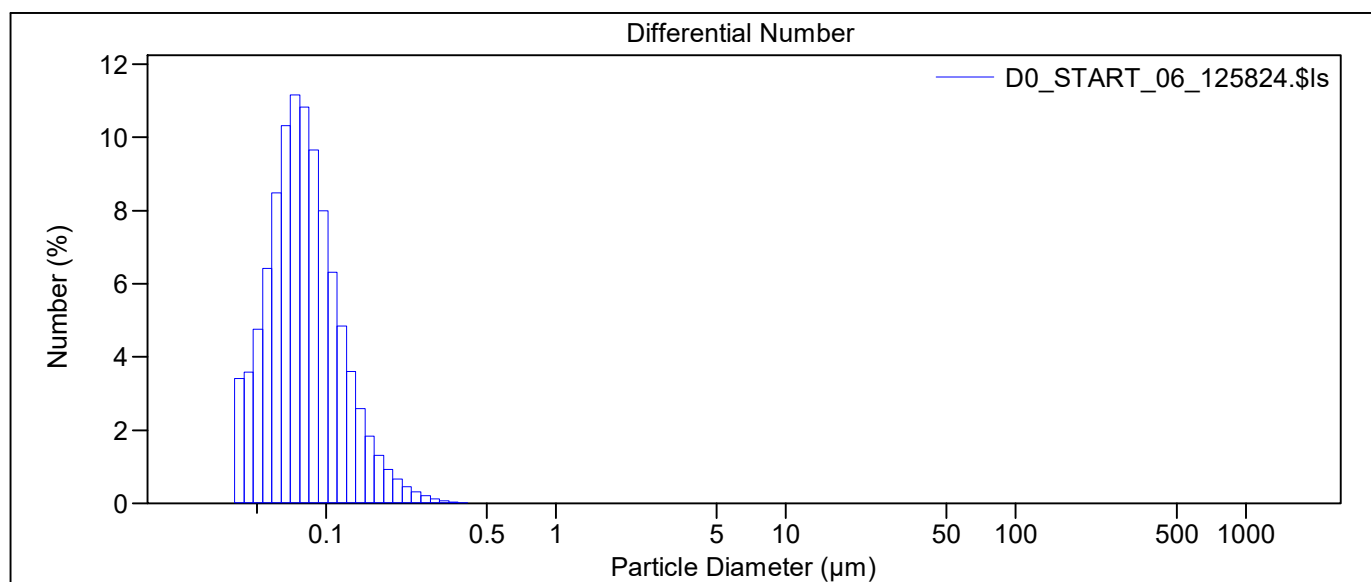
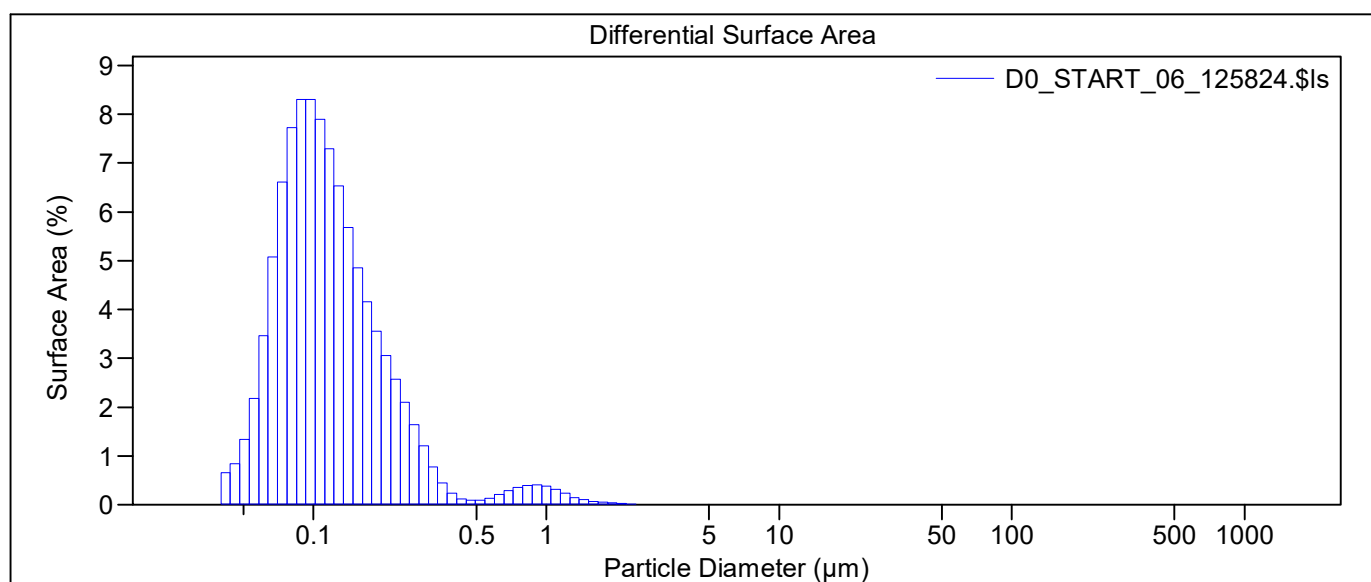
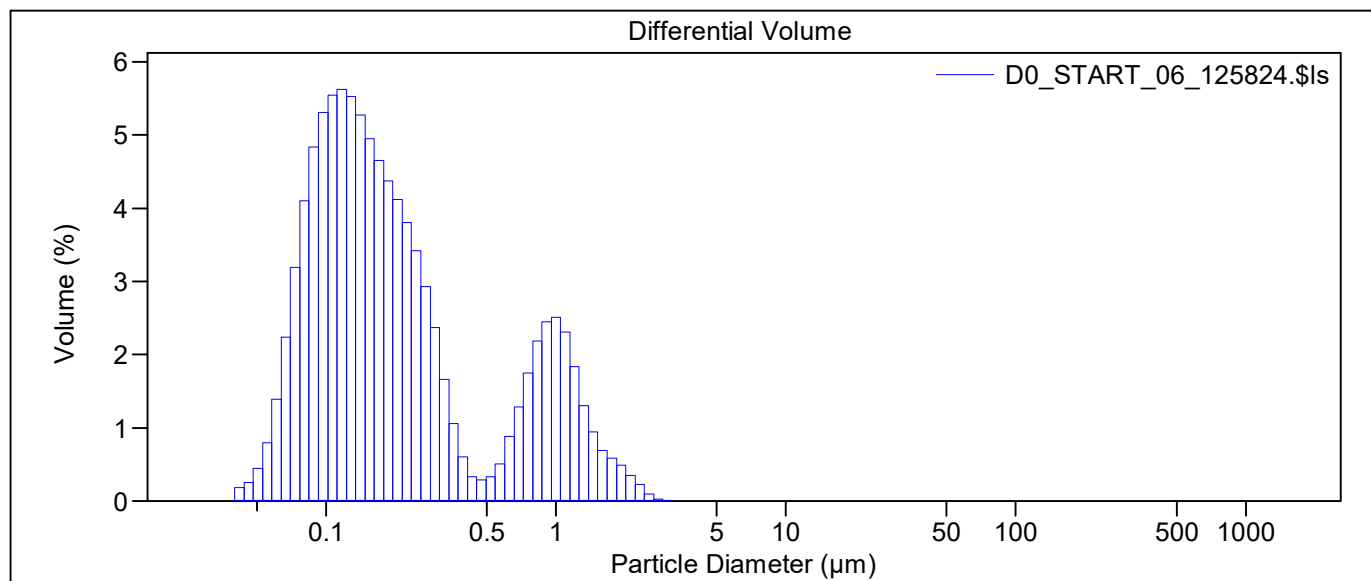
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_06_125824.\$ls		
	DO_START_06_125824.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.08%		
LS 13 320	Universal Liquid Module		
Start time:	12:56 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_06_125824.\$Is	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.416 μm
Mean:	0.346 μm		Variance:	0.173 μm ²
Median:	0.163 μm		C.V.:	120%
Mean/Median ratio:	2.119		Skewness:	2.132 Right skewed
Mode:	0.117 μm		Kurtosis:	4.474 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.163 μm	0.307 μm	1.004 μm

Surface Area Statistics (Arithmetic)			D0_START_06_125824.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.172 µm
Mean:	0.152 µm		Variance:	0.029 µm ²
Median:	0.109 µm		C.V.:	113%
Mean/Median ratio:	1.398		Skewness:	5.442 Right skewed
Mode:	0.088 µm		Kurtosis:	37.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.234 µm

Number Statistics (Arithmetic)			D0_START_06_125824.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.7%
Mean/Median ratio:	1.109		Skewness:	5.121 Right skewed
Mode:	0.073 μm		Kurtosis:	93.81 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.84	3.59
11	0.048	0.050	0.44	1.34	4.76
12	0.053	0.055	0.79	2.17	6.42
13	0.058	0.061	1.39	3.46	8.49
14	0.064	0.067	2.24	5.08	10.3
15	0.070	0.073	3.19	6.61	11.2
16	0.077	0.080	4.10	7.73	10.8
17	0.084	0.088	4.84	8.31	9.65
18	0.093	0.097	5.31	8.30	8.00
19	0.102	0.106	5.55	7.90	6.32
20	0.112	0.117	5.62	7.30	4.84
21	0.122	0.128	5.53	6.54	3.60
22	0.134	0.141	5.27	5.68	2.60
23	0.148	0.155	4.95	4.86	1.84
24	0.162	0.170	4.66	4.16	1.31
25	0.178	0.186	4.37	3.56	0.93
26	0.195	0.205	4.12	3.05	0.66
27	0.214	0.225	3.81	2.57	0.46
28	0.235	0.247	3.42	2.10	0.31
29	0.258	0.271	2.93	1.64	0.20
30	0.284	0.297	2.37	1.21	0.12
31	0.311	0.326	1.66	0.77	0.066
32	0.342	0.358	1.06	0.45	0.032
33	0.375	0.393	0.60	0.23	0.014
34	0.412	0.431	0.33	0.12	0.0056
35	0.452	0.474	0.28	0.091	0.0037
36	0.496	0.520	0.33	0.097	0.0032
37	0.545	0.571	0.51	0.13	0.0038
38	0.598	0.627	0.88	0.21	0.0049
39	0.656	0.688	1.28	0.28	0.0054
40	0.721	0.755	1.75	0.35	0.0056
41	0.791	0.829	2.19	0.40	0.0053
42	0.868	0.910	2.45	0.41	0.0045
43	0.953	0.999	2.51	0.38	0.0035
44	1.047	1.097	2.31	0.32	0.0024
45	1.149	1.204	1.83	0.23	0.0014

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.30	0.15	0.00078
47	1.385	1.451	0.94	0.099	0.00043
48	1.520	1.592	0.69	0.065	0.00023
49	1.668	1.748	0.58	0.050	0.00015
50	1.832	1.919	0.49	0.038	0.000095
51	2.011	2.107	0.35	0.025	0.000051
52	2.207	2.313	0.23	0.015	0.000025
53	2.423	2.539	0.094	0.0056	0.000008
54	2.660	2.787	0.026	0.0014	0.000002
55	2.920	3.059	0.0046	0.00023	2.2E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

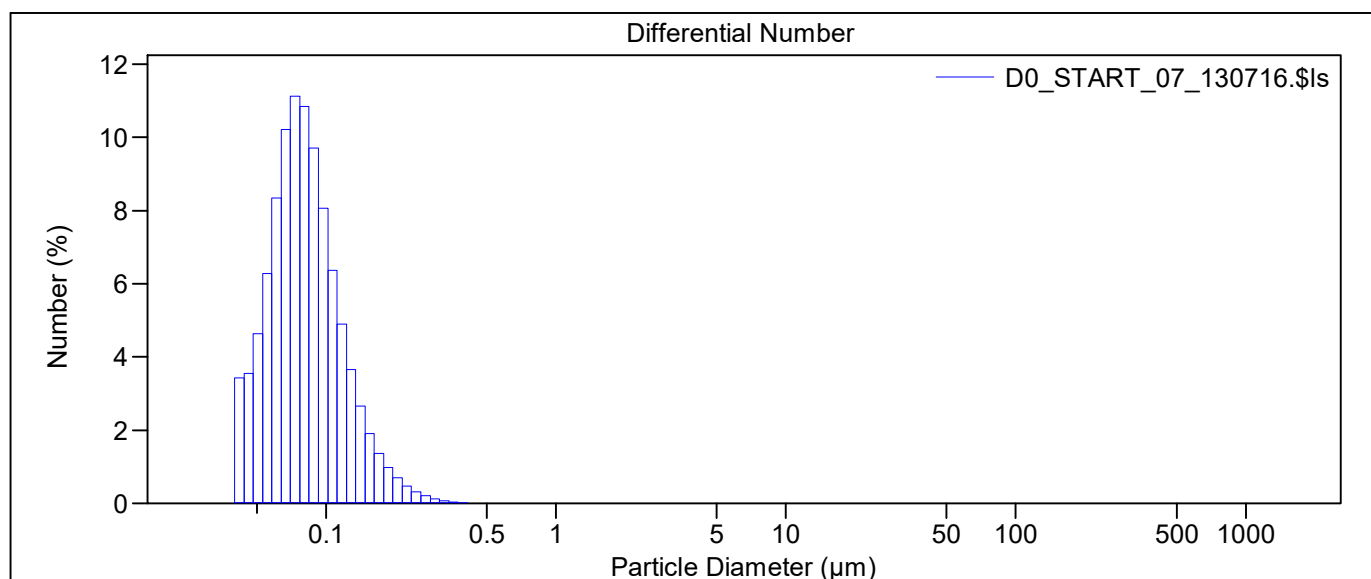
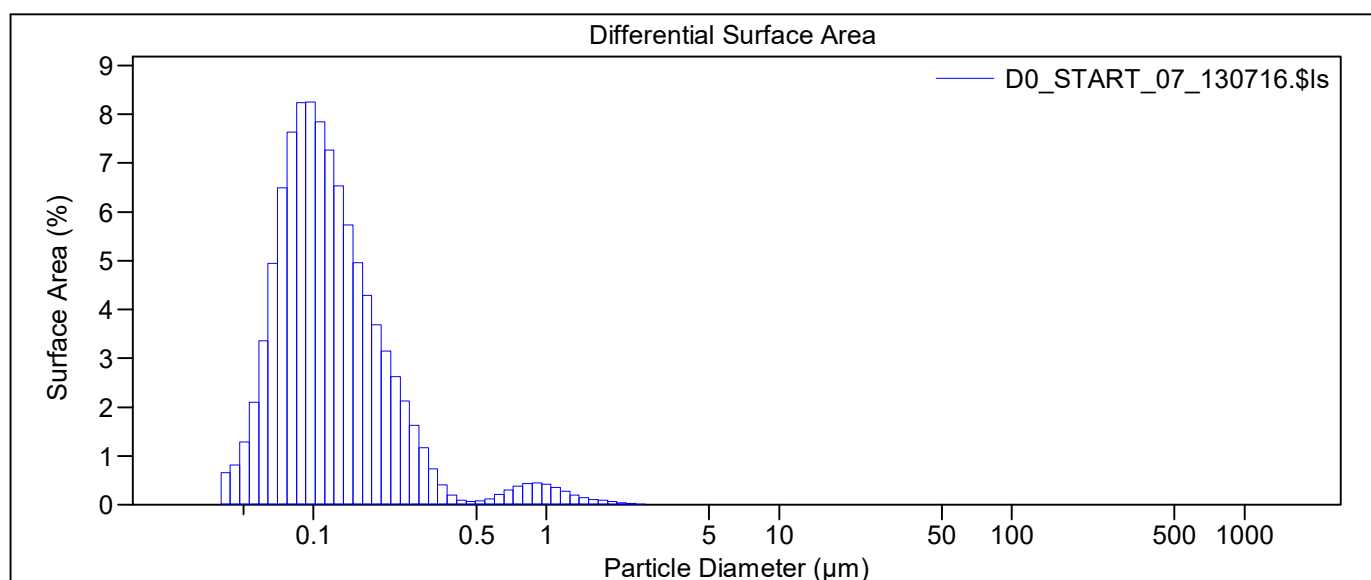
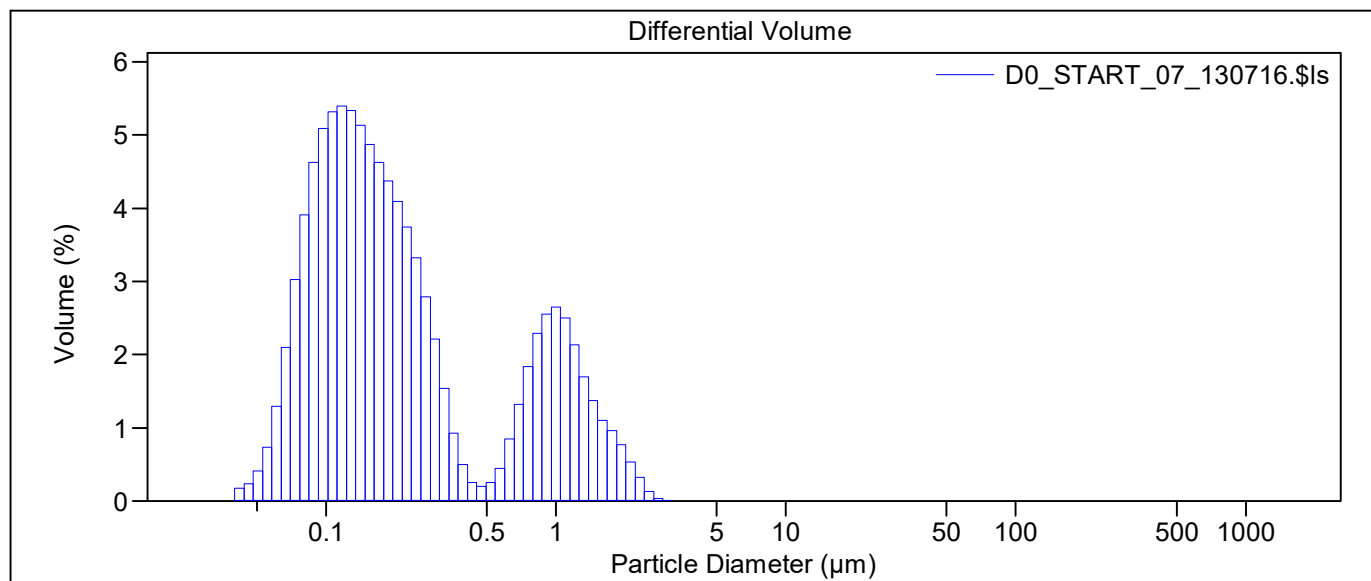
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_07_130716.\$ls		
	DO_START_07_130716.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.87%		
LS 13 320	Universal Liquid Module		
Start time:	13:05 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_07_130716.\$Is	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.465 µm
Mean:	0.387 µm		Variance:	0.217 µm ²
Median:	0.170 µm		C.V.:	120%
Mean/Median ratio:	2.276		Skewness:	1.912 Right skewed
Mode:	0.117 µm		Kurtosis:	3.189 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.108 µm	0.170 µm	0.365 µm	1.111 µm

Surface Area Statistics (Arithmetic)			D0_START_07_130716.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.190 μm
Mean:	0.157 μm		Variance:	0.036 μm ²
Median:	0.110 μm		C.V.:	121%
Mean/Median ratio:	1.437		Skewness:	5.342 Right skewed
Mode:	0.097 μm		Kurtosis:	35.26 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.110 μm	0.159 μm	0.237 μm

Number Statistics (Arithmetic)			D0_START_07_130716.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	46.2%
Mean/Median ratio:	1.109		Skewness:	5.587 Right skewed
Mode:	0.073 μm		Kurtosis:	112.2 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.65	3.42
10	0.044	0.046	0.24	0.82	3.56
11	0.048	0.050	0.41	1.28	4.64
12	0.053	0.055	0.74	2.10	6.28
13	0.058	0.061	1.30	3.36	8.34
14	0.064	0.067	2.10	4.95	10.2
15	0.070	0.073	3.03	6.50	11.1
16	0.077	0.080	3.91	7.64	10.8
17	0.084	0.088	4.63	8.24	9.71
18	0.093	0.097	5.09	8.25	8.07
19	0.102	0.106	5.31	7.85	6.37
20	0.112	0.117	5.40	7.26	4.89
21	0.122	0.128	5.33	6.54	3.65
22	0.134	0.141	5.13	5.73	2.66
23	0.148	0.155	4.87	4.96	1.91
24	0.162	0.170	4.62	4.29	1.37
25	0.178	0.186	4.37	3.69	0.98
26	0.195	0.205	4.09	3.15	0.69
27	0.214	0.225	3.74	2.62	0.48
28	0.235	0.247	3.32	2.12	0.32
29	0.258	0.271	2.79	1.62	0.20
30	0.284	0.297	2.22	1.17	0.12
31	0.311	0.326	1.54	0.74	0.064
32	0.342	0.358	0.93	0.41	0.029
33	0.375	0.393	0.50	0.20	0.012
34	0.412	0.431	0.25	0.091	0.0045
35	0.452	0.474	0.20	0.067	0.0027
36	0.496	0.520	0.26	0.077	0.0026
37	0.545	0.571	0.45	0.12	0.0035
38	0.598	0.627	0.85	0.21	0.0050
39	0.656	0.688	1.32	0.30	0.0059
40	0.721	0.755	1.84	0.38	0.0062
41	0.791	0.829	2.29	0.43	0.0058
42	0.868	0.910	2.55	0.44	0.0049
43	0.953	0.999	2.65	0.42	0.0038
44	1.047	1.097	2.51	0.36	0.0028
45	1.149	1.204	2.13	0.28	0.0018

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.70	0.20	0.0011
47	1.385	1.451	1.37	0.15	0.00065
48	1.520	1.592	1.10	0.11	0.00039
49	1.668	1.748	0.96	0.087	0.00026
50	1.832	1.919	0.77	0.063	0.00016
51	2.011	2.107	0.53	0.040	0.000083
52	2.207	2.313	0.33	0.022	0.000038
53	2.423	2.539	0.13	0.0081	0.000012
54	2.660	2.787	0.037	0.0021	0.000002
55	2.920	3.059	0.0064	0.00033	3.25E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

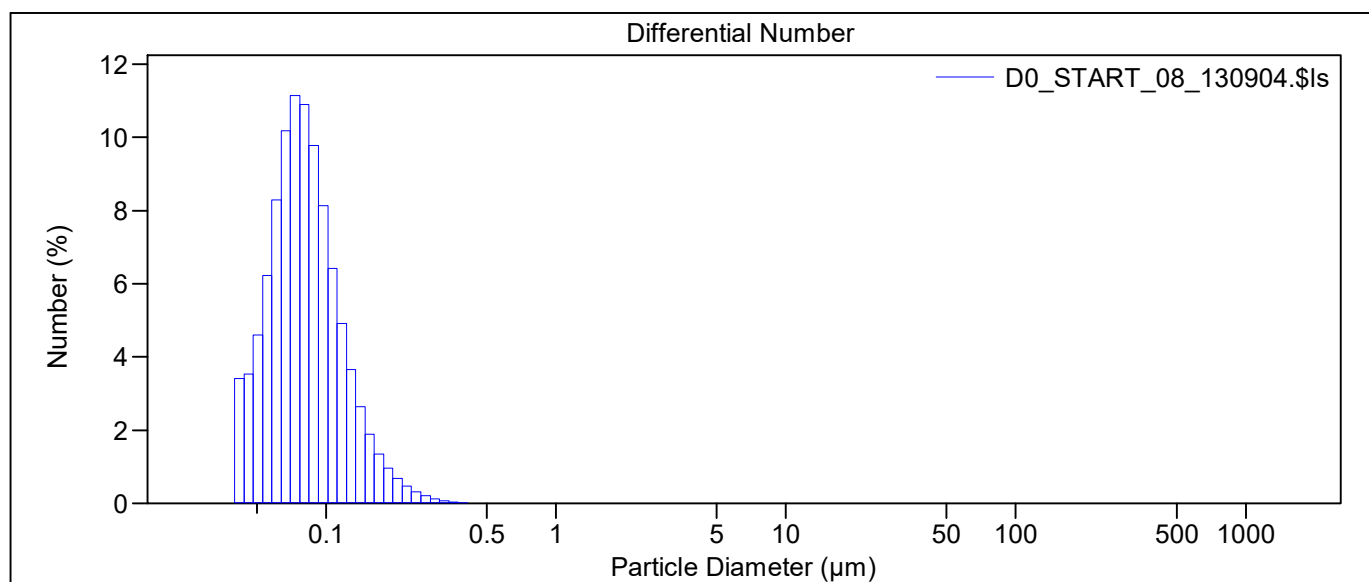
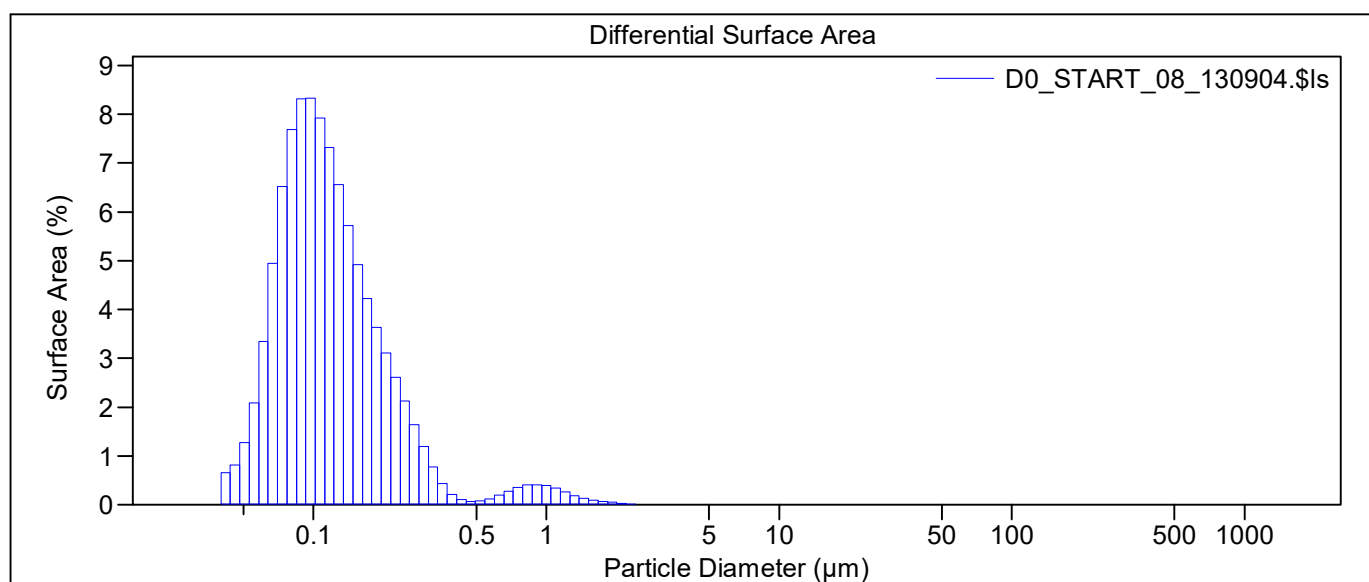
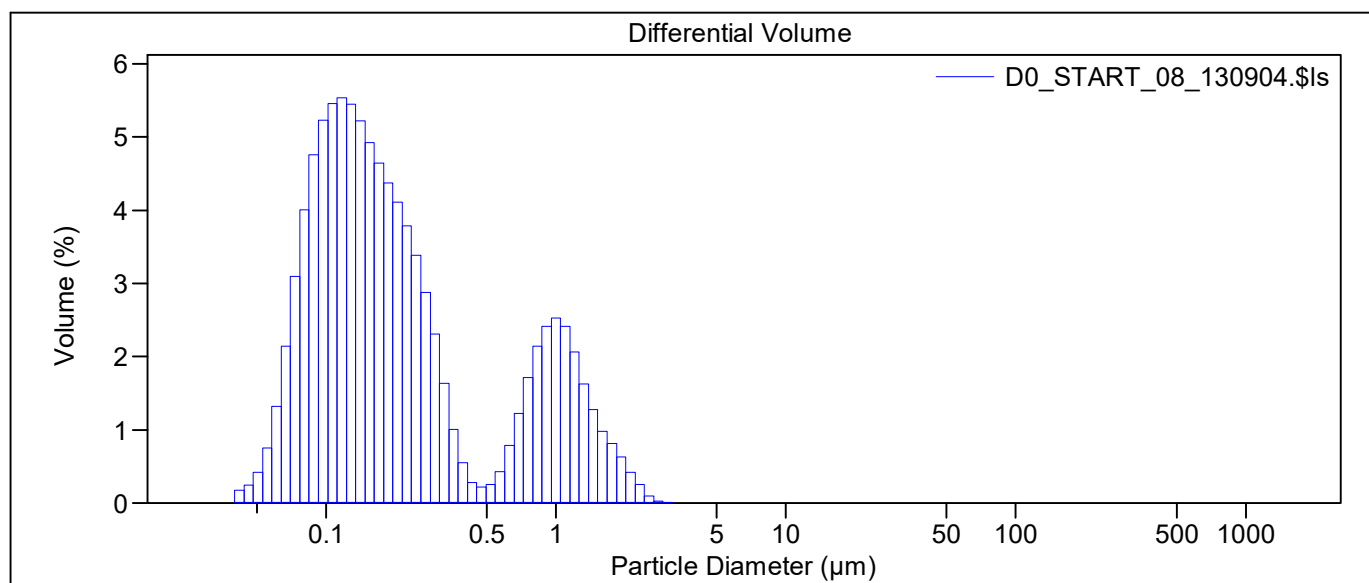
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_08_130904.\$ls		
	DO_START_08_130904.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.99%		
LS 13 320	Universal Liquid Module		
Start time:	13:07 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_08_130904.\$Is	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.444 μm
Mean:	0.368 μm		Variance:	0.197 μm ²
Median:	0.166 μm		C.V.:	121%
Mean/Median ratio:	2.210		Skewness:	1.989 Right skewed
Mode:	0.117 μm		Kurtosis:	3.550 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.166 μm	0.326 μm	1.072 μm

Surface Area Statistics (Arithmetic)			D0_START_08_130904.\$Is	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.182 μm
Mean:	0.155 μm		Variance:	0.033 μm ²
Median:	0.109 μm		C.V.:	117%
Mean/Median ratio:	1.416		Skewness:	5.417 Right skewed
Mode:	0.097 μm		Kurtosis:	36.50 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.158 μm	0.235 μm

Number Statistics (Arithmetic)			D0_START_08_130904.\$Is	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.9%
Mean/Median ratio:	1.108		Skewness:	5.358 Right skewed
Mode:	0.073 μm		Kurtosis:	104.1 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.24	0.81	3.54
11	0.048	0.050	0.42	1.28	4.59
12	0.053	0.055	0.75	2.09	6.23
13	0.058	0.061	1.32	3.35	8.30
14	0.064	0.067	2.14	4.95	10.2
15	0.070	0.073	3.10	6.53	11.1
16	0.077	0.080	4.01	7.69	10.9
17	0.084	0.088	4.75	8.32	9.78
18	0.093	0.097	5.23	8.33	8.13
19	0.102	0.106	5.46	7.93	6.42
20	0.112	0.117	5.53	7.32	4.92
21	0.122	0.128	5.45	6.57	3.66
22	0.134	0.141	5.22	5.73	2.65
23	0.148	0.155	4.92	4.92	1.89
24	0.162	0.170	4.65	4.23	1.35
25	0.178	0.186	4.38	3.63	0.96
26	0.195	0.205	4.11	3.11	0.68
27	0.214	0.225	3.78	2.60	0.47
28	0.235	0.247	3.38	2.12	0.32
29	0.258	0.271	2.88	1.64	0.21
30	0.284	0.297	2.31	1.20	0.12
31	0.311	0.326	1.63	0.77	0.067
32	0.342	0.358	1.01	0.43	0.031
33	0.375	0.393	0.55	0.22	0.013
34	0.412	0.431	0.28	0.10	0.0050
35	0.452	0.474	0.22	0.071	0.0029
36	0.496	0.520	0.26	0.076	0.0026
37	0.545	0.571	0.43	0.12	0.0033
38	0.598	0.627	0.79	0.19	0.0045
39	0.656	0.688	1.23	0.28	0.0053
40	0.721	0.755	1.71	0.35	0.0056
41	0.791	0.829	2.15	0.40	0.0053
42	0.868	0.910	2.41	0.41	0.0045
43	0.953	0.999	2.53	0.39	0.0036
44	1.047	1.097	2.41	0.34	0.0026
45	1.149	1.204	2.06	0.26	0.0017

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.62	0.19	0.00100
47	1.385	1.451	1.28	0.14	0.00059
48	1.520	1.592	0.98	0.095	0.00034
49	1.668	1.748	0.81	0.072	0.00022
50	1.832	1.919	0.63	0.050	0.00013
51	2.011	2.107	0.42	0.031	0.000064
52	2.207	2.313	0.25	0.017	0.000029
53	2.423	2.539	0.099	0.0060	0.000009
54	2.660	2.787	0.028	0.0015	0.000002
55	2.920	3.059	0.0049	0.00025	2.4E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

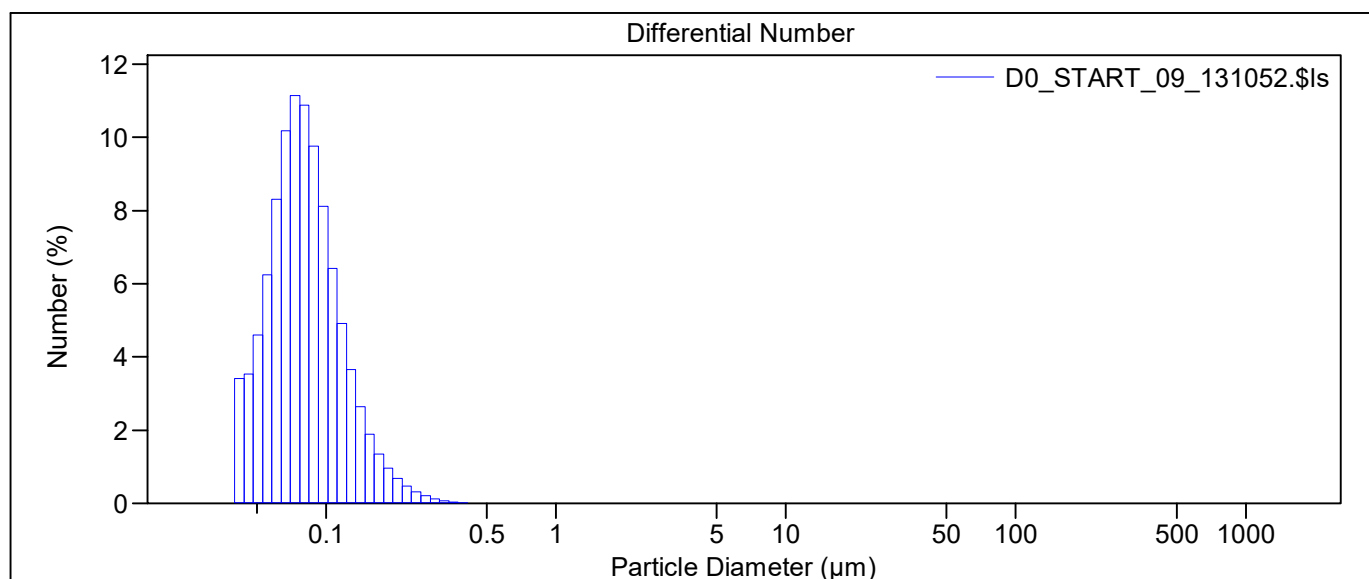
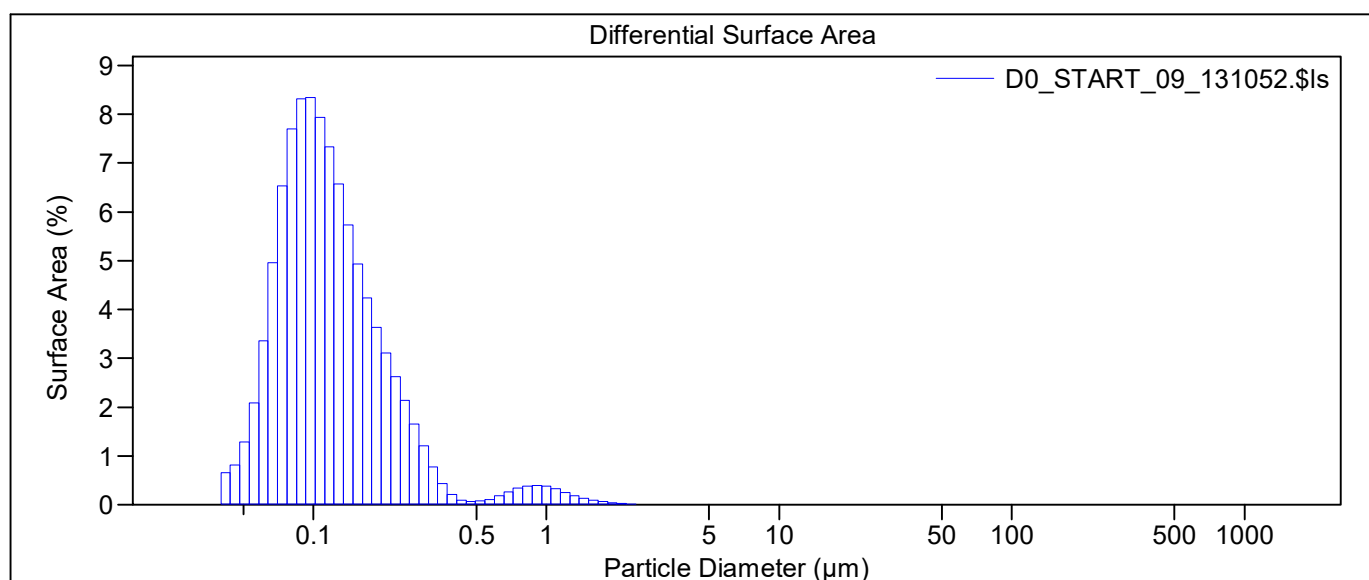
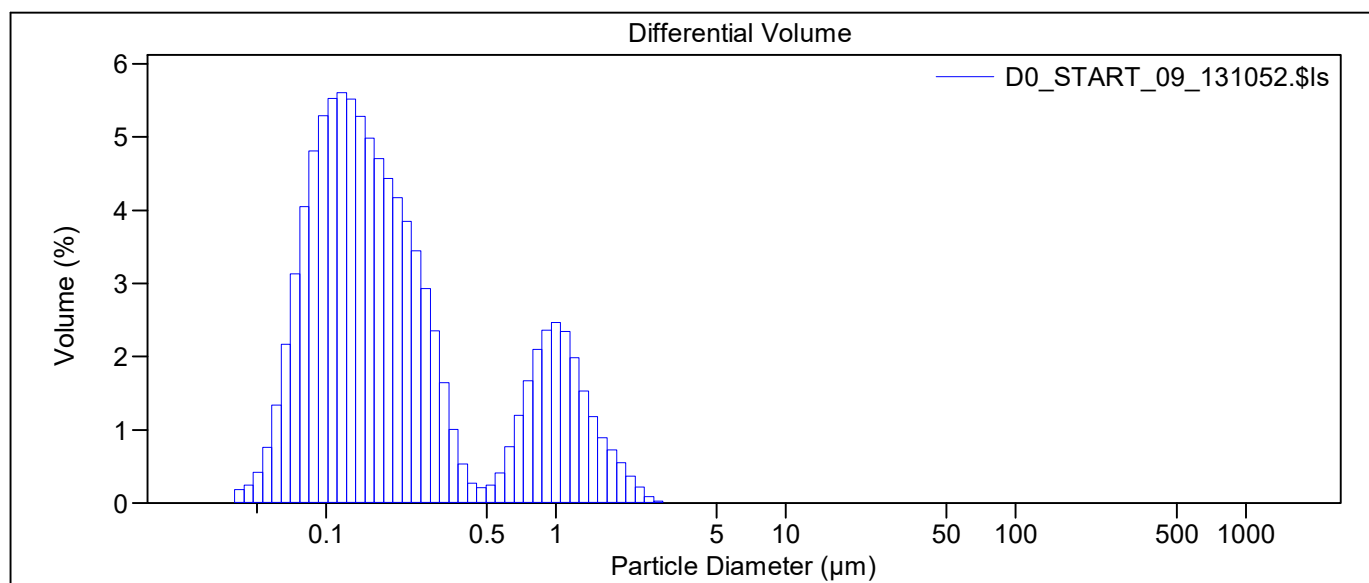
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_09_131052.\$ls		
	DO_START_09_131052.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.04%		
LS 13 320	Universal Liquid Module		
Start time:	13:09 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_09_131052.\$Is	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.431 µm
Mean:	0.356 µm		Variance:	0.186 µm ²
Median:	0.164 µm		C.V.:	121%
Mean/Median ratio:	2.166		Skewness:	2.049 Right skewed
Mode:	0.117 µm		Kurtosis:	3.858 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.164 µm	0.309 µm	1.044 µm

Surface Area Statistics (Arithmetic)			D0_START_09_131052.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.176 µm
Mean:	0.153 µm		Variance:	0.031 µm ²
Median:	0.109 µm		C.V.:	115%
Mean/Median ratio:	1.402		Skewness:	5.473 Right skewed
Mode:	0.097 µm		Kurtosis:	37.51 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.234 µm

Number Statistics (Arithmetic)			D0_START_09_131052.\$Is	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.7%
Mean/Median ratio:	1.108		Skewness:	5.200 Right skewed
Mode:	0.073 μm		Kurtosis:	98.80 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.25	0.82	3.54
11	0.048	0.050	0.42	1.28	4.60
12	0.053	0.055	0.76	2.09	6.24
13	0.058	0.061	1.33	3.35	8.30
14	0.064	0.067	2.17	4.96	10.2
15	0.070	0.073	3.13	6.53	11.1
16	0.077	0.080	4.05	7.70	10.9
17	0.084	0.088	4.81	8.32	9.77
18	0.093	0.097	5.29	8.34	8.12
19	0.102	0.106	5.53	7.94	6.41
20	0.112	0.117	5.60	7.33	4.92
21	0.122	0.128	5.52	6.58	3.66
22	0.134	0.141	5.29	5.74	2.65
23	0.148	0.155	4.98	4.93	1.89
24	0.162	0.170	4.70	4.24	1.35
25	0.178	0.186	4.43	3.64	0.96
26	0.195	0.205	4.17	3.12	0.68
27	0.214	0.225	3.85	2.62	0.48
28	0.235	0.247	3.44	2.14	0.32
29	0.258	0.271	2.93	1.66	0.21
30	0.284	0.297	2.35	1.21	0.13
31	0.311	0.326	1.65	0.77	0.067
32	0.342	0.358	1.00	0.43	0.031
33	0.375	0.393	0.54	0.21	0.012
34	0.412	0.431	0.27	0.095	0.0047
35	0.452	0.474	0.21	0.067	0.0027
36	0.496	0.520	0.25	0.073	0.0025
37	0.545	0.571	0.41	0.11	0.0031
38	0.598	0.627	0.77	0.19	0.0044
39	0.656	0.688	1.20	0.27	0.0052
40	0.721	0.755	1.67	0.34	0.0054
41	0.791	0.829	2.10	0.39	0.0052
42	0.868	0.910	2.36	0.40	0.0044
43	0.953	0.999	2.47	0.38	0.0035
44	1.047	1.097	2.35	0.33	0.0025
45	1.149	1.204	1.99	0.25	0.0016

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.53	0.18	0.00093
47	1.385	1.451	1.18	0.12	0.00054
48	1.520	1.592	0.89	0.085	0.00031
49	1.668	1.748	0.72	0.063	0.00019
50	1.832	1.919	0.56	0.044	0.00011
51	2.011	2.107	0.37	0.027	0.000055
52	2.207	2.313	0.22	0.015	0.000025
53	2.423	2.539	0.087	0.0053	0.000007
54	2.660	2.787	0.024	0.0013	0.000002
55	2.920	3.059	0.0042	0.00021	2.06E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

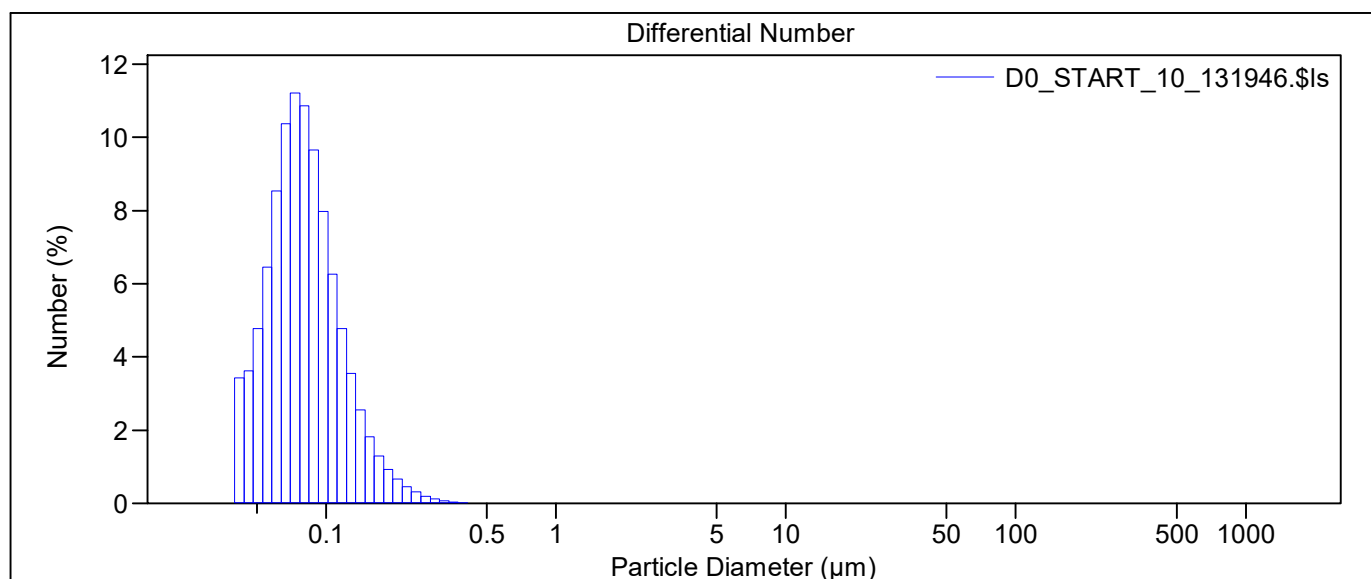
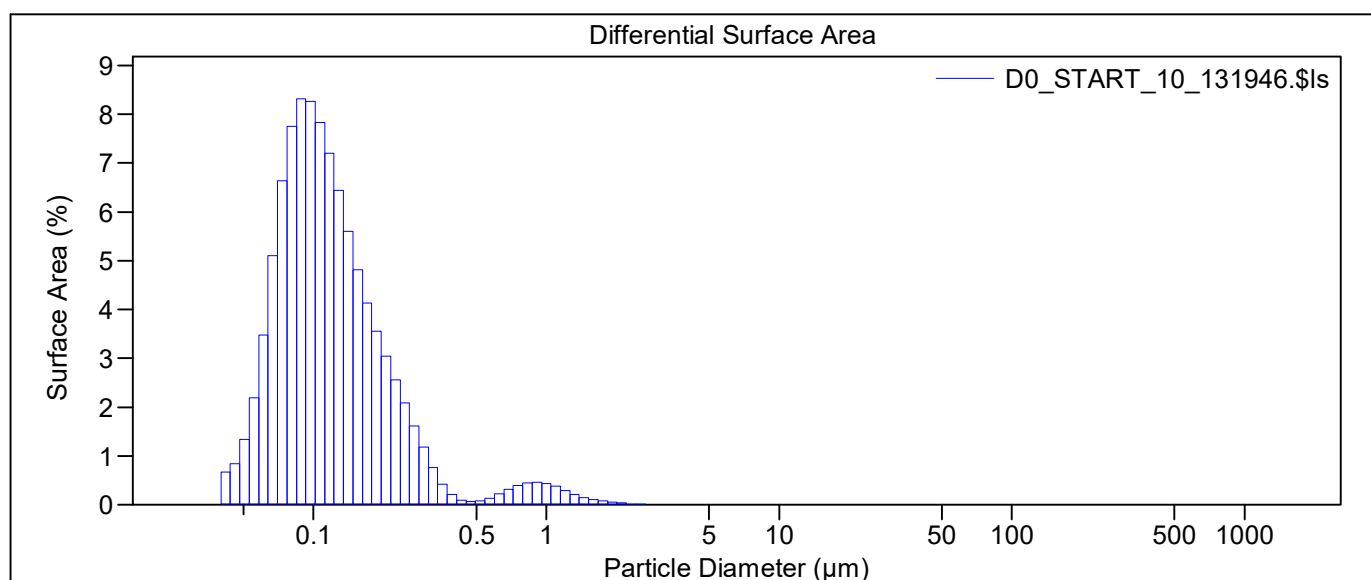
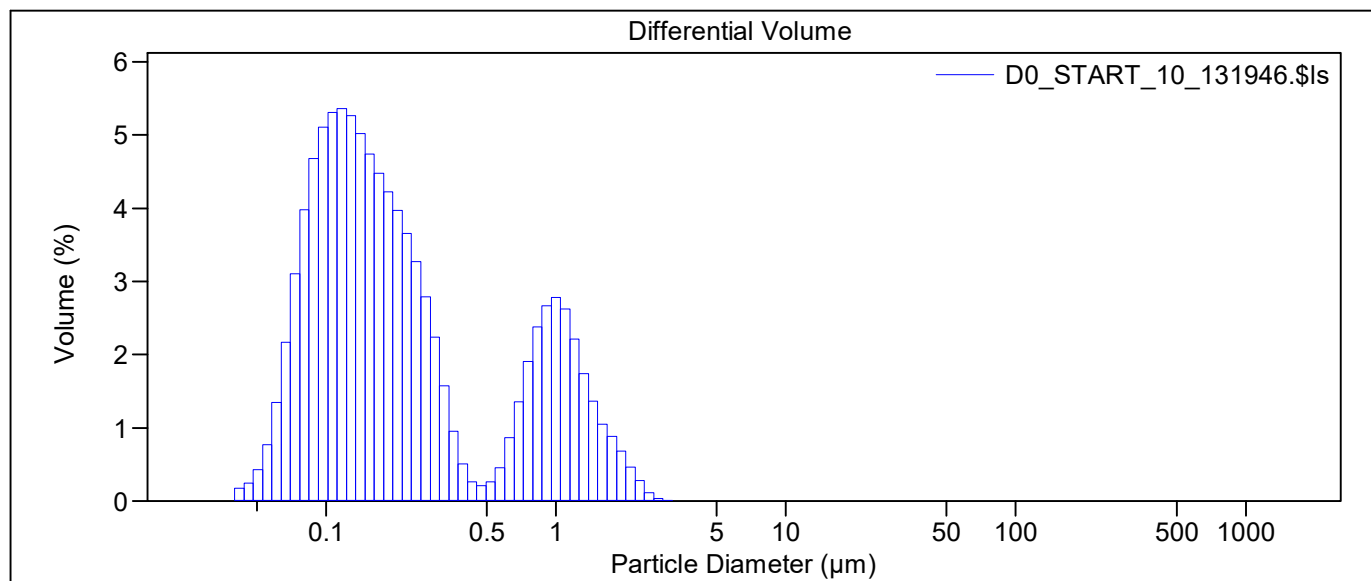
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_10_131946.\$ls		
	DO_START_10_131946.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.87%		
LS 13 320	Universal Liquid Module		
Start time:	13:18 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_10_131946.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.458 μm
Mean:	0.386 μm		Variance:	0.210 μm ²
Median:	0.170 μm		C.V.:	119%
Mean/Median ratio:	2.271		Skewness:	1.866 Right skewed
Mode:	0.117 μm		Kurtosis:	3.015 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.170 μm	0.383 μm	1.103 μm

Surface Area Statistics (Arithmetic)			D0_START_10_131946.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.190 µm
Mean:	0.157 µm		Variance:	0.036 µm ²
Median:	0.108 µm		C.V.:	121%
Mean/Median ratio:	1.447		Skewness:	5.216 Right skewed
Mode:	0.088 µm		Kurtosis:	33.48 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.158 µm	0.238 µm

Number Statistics (Arithmetic)			D0_START_10_131946.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.086 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.2%
Mean/Median ratio:	1.109		Skewness:	5.684 Right skewed
Mode:	0.073 μm		Kurtosis:	113.2 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.099 μm	0.129 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.84	3.61
11	0.048	0.050	0.43	1.34	4.78
12	0.053	0.055	0.77	2.19	6.45
13	0.058	0.061	1.35	3.48	8.53
14	0.064	0.067	2.17	5.11	10.4
15	0.070	0.073	3.10	6.64	11.2
16	0.077	0.080	3.98	7.76	10.9
17	0.084	0.088	4.68	8.32	9.66
18	0.093	0.097	5.11	8.27	7.97
19	0.102	0.106	5.31	7.83	6.26
20	0.112	0.117	5.36	7.20	4.78
21	0.122	0.128	5.26	6.44	3.55
22	0.134	0.141	5.02	5.60	2.56
23	0.148	0.155	4.74	4.81	1.82
24	0.162	0.170	4.48	4.14	1.30
25	0.178	0.186	4.23	3.56	0.93
26	0.195	0.205	3.97	3.04	0.66
27	0.214	0.225	3.66	2.55	0.46
28	0.235	0.247	3.28	2.08	0.31
29	0.258	0.271	2.79	1.62	0.20
30	0.284	0.297	2.24	1.18	0.12
31	0.311	0.326	1.57	0.76	0.064
32	0.342	0.358	0.96	0.42	0.030
33	0.375	0.393	0.51	0.20	0.012
34	0.412	0.431	0.26	0.094	0.0046
35	0.452	0.474	0.21	0.069	0.0028
36	0.496	0.520	0.26	0.078	0.0026
37	0.545	0.571	0.46	0.13	0.0035
38	0.598	0.627	0.87	0.22	0.0050
39	0.656	0.688	1.36	0.31	0.0059
40	0.721	0.755	1.91	0.40	0.0063
41	0.791	0.829	2.38	0.45	0.0060
42	0.868	0.910	2.67	0.46	0.0050
43	0.953	0.999	2.78	0.44	0.0040
44	1.047	1.097	2.63	0.38	0.0028
45	1.149	1.204	2.22	0.29	0.0018

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.74	0.21	0.0011
47	1.385	1.451	1.36	0.15	0.00064
48	1.520	1.592	1.05	0.10	0.00037
49	1.668	1.748	0.88	0.079	0.00023
50	1.832	1.919	0.69	0.056	0.00014
51	2.011	2.107	0.46	0.035	0.000071
52	2.207	2.313	0.28	0.019	0.000033
53	2.423	2.539	0.11	0.0069	0.000010
54	2.660	2.787	0.032	0.0018	0.000002
55	2.920	3.059	0.0056	0.00029	2.78E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

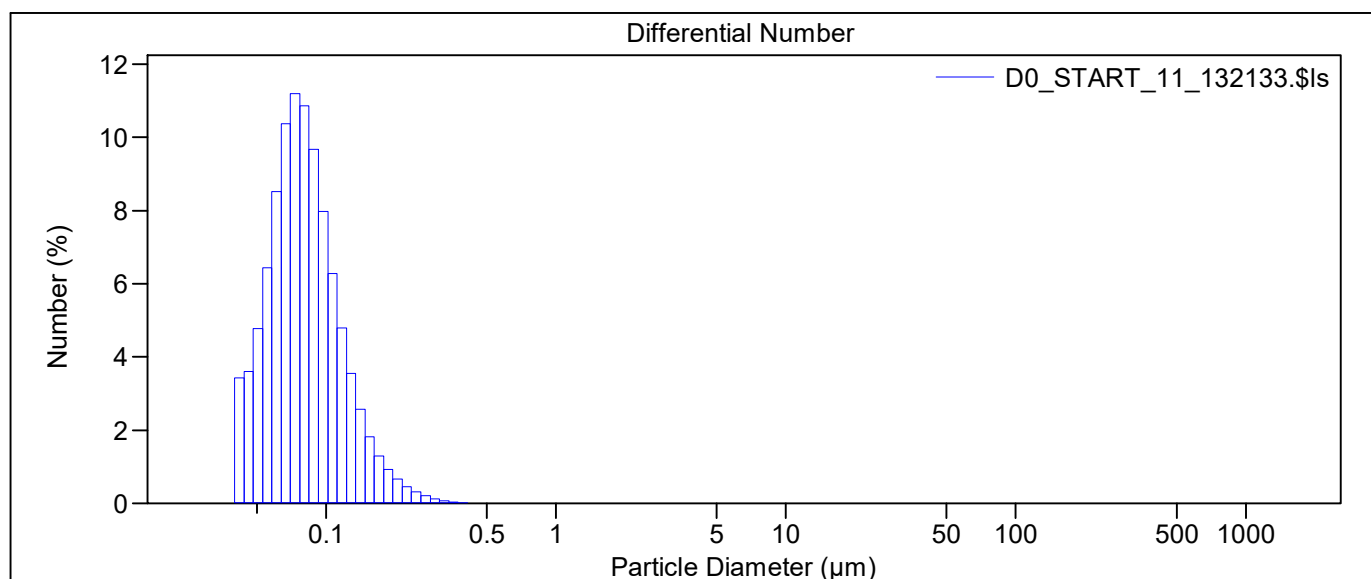
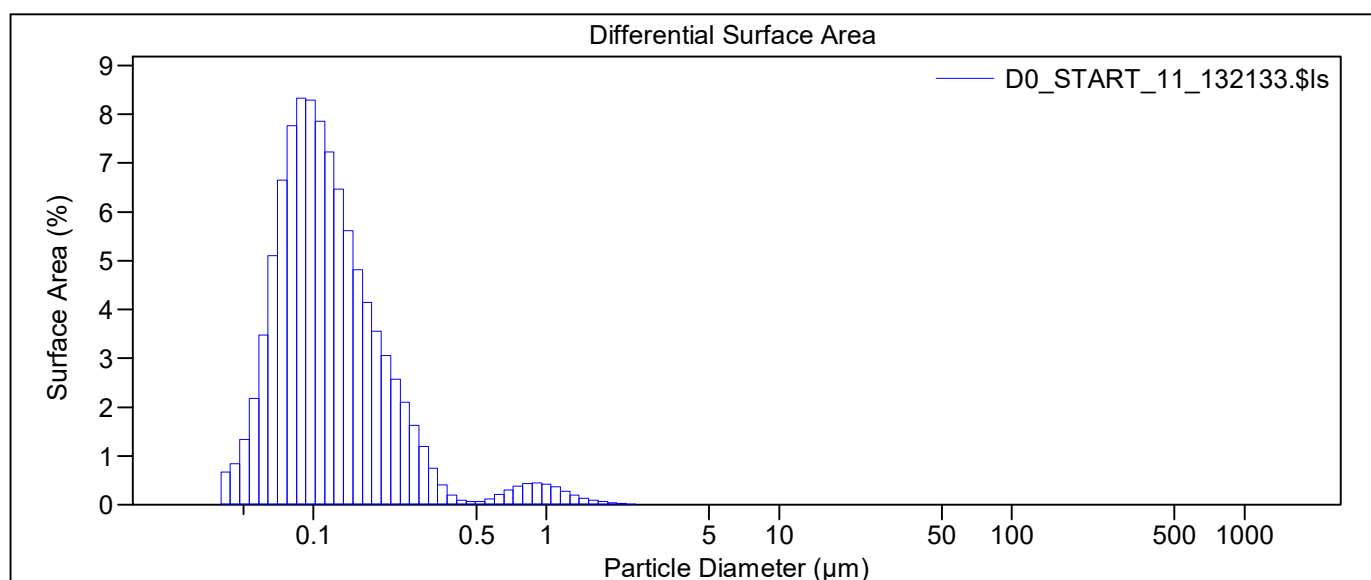
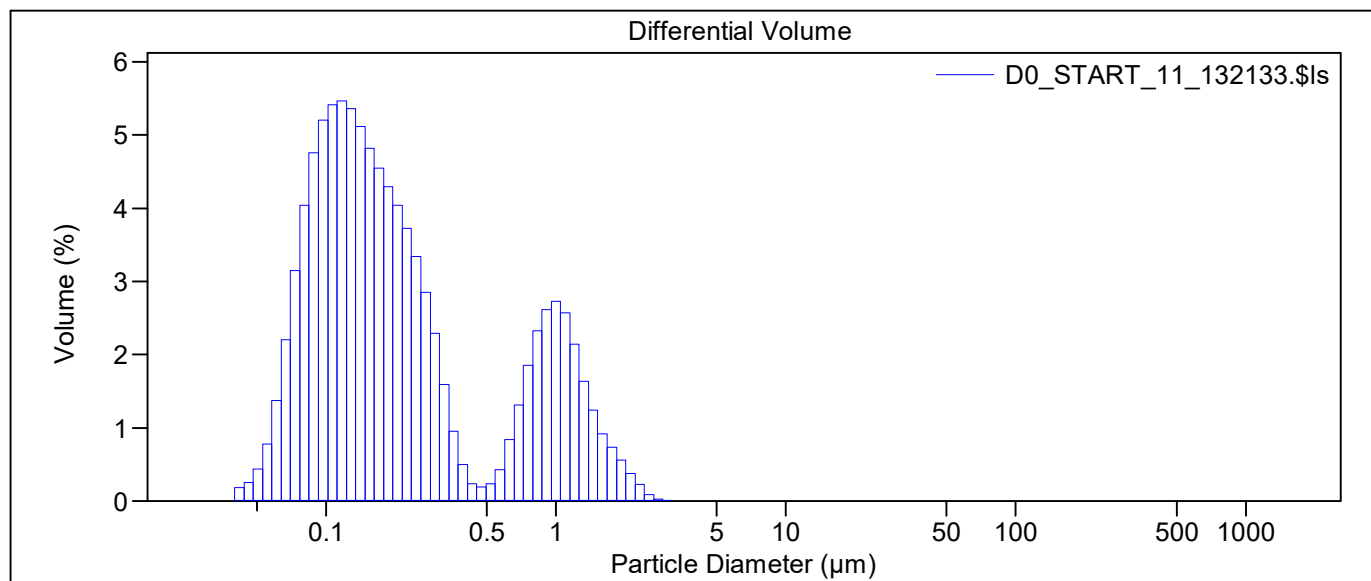
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D0\D0_START_11_132133.\$ls		
	D0_START_11_132133.\$ls		
File ID:	D0_START		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.93%		
LS 13 320	Universal Liquid Module		
Start time:	13:19 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_11_132133.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.439 µm
Mean:	0.370 µm		Variance:	0.193 µm ²
Median:	0.167 µm		C.V.:	119%
Mean/Median ratio:	2.213		Skewness:	1.922 Right skewed
Mode:	0.117 µm		Kurtosis:	3.287 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.167 µm	0.337 µm	1.068 µm

Surface Area Statistics (Arithmetic)			D0_START_11_132133.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.182 μm
Mean:	0.155 μm		Variance:	0.033 μm ²
Median:	0.108 μm		C.V.:	118%
Mean/Median ratio:	1.427		Skewness:	5.257 Right skewed
Mode:	0.088 μm		Kurtosis:	34.17 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.081 μm	0.108 μm	0.157 μm	0.235 μm

Number Statistics (Arithmetic)			D0_START_11_132133.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.086 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.0%
Mean/Median ratio:	1.109		Skewness:	5.476 Right skewed
Mode:	0.073 μm		Kurtosis:	105.8 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.25	0.84	3.61
11	0.048	0.050	0.44	1.34	4.77
12	0.053	0.055	0.78	2.18	6.44
13	0.058	0.061	1.37	3.48	8.52
14	0.064	0.067	2.21	5.11	10.4
15	0.070	0.073	3.15	6.65	11.2
16	0.077	0.080	4.04	7.77	10.9
17	0.084	0.088	4.76	8.34	9.67
18	0.093	0.097	5.20	8.30	7.98
19	0.102	0.106	5.41	7.86	6.28
20	0.112	0.117	5.47	7.23	4.79
21	0.122	0.128	5.36	6.46	3.56
22	0.134	0.141	5.12	5.62	2.56
23	0.148	0.155	4.82	4.82	1.83
24	0.162	0.170	4.55	4.15	1.30
25	0.178	0.186	4.29	3.56	0.93
26	0.195	0.205	4.04	3.05	0.66
27	0.214	0.225	3.73	2.57	0.46
28	0.235	0.247	3.34	2.10	0.31
29	0.258	0.271	2.85	1.63	0.20
30	0.284	0.297	2.29	1.19	0.12
31	0.311	0.326	1.59	0.75	0.064
32	0.342	0.358	0.96	0.41	0.029
33	0.375	0.393	0.50	0.20	0.011
34	0.412	0.431	0.24	0.086	0.0042
35	0.452	0.474	0.19	0.062	0.0025
36	0.496	0.520	0.24	0.071	0.0024
37	0.545	0.571	0.43	0.12	0.0032
38	0.598	0.627	0.84	0.21	0.0048
39	0.656	0.688	1.31	0.30	0.0057
40	0.721	0.755	1.85	0.38	0.0060
41	0.791	0.829	2.33	0.43	0.0057
42	0.868	0.910	2.61	0.44	0.0049
43	0.953	0.999	2.73	0.42	0.0038
44	1.047	1.097	2.57	0.36	0.0027
45	1.149	1.204	2.15	0.28	0.0017

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.64	0.19	0.00100
47	1.385	1.451	1.25	0.13	0.00057
48	1.520	1.592	0.92	0.089	0.00032
49	1.668	1.748	0.74	0.065	0.00019
50	1.832	1.919	0.56	0.045	0.00011
51	2.011	2.107	0.37	0.027	0.000056
52	2.207	2.313	0.22	0.015	0.000025
53	2.423	2.539	0.089	0.0054	0.000008
54	2.660	2.787	0.025	0.0014	0.000002
55	2.920	3.059	0.0044	0.00022	2.16E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

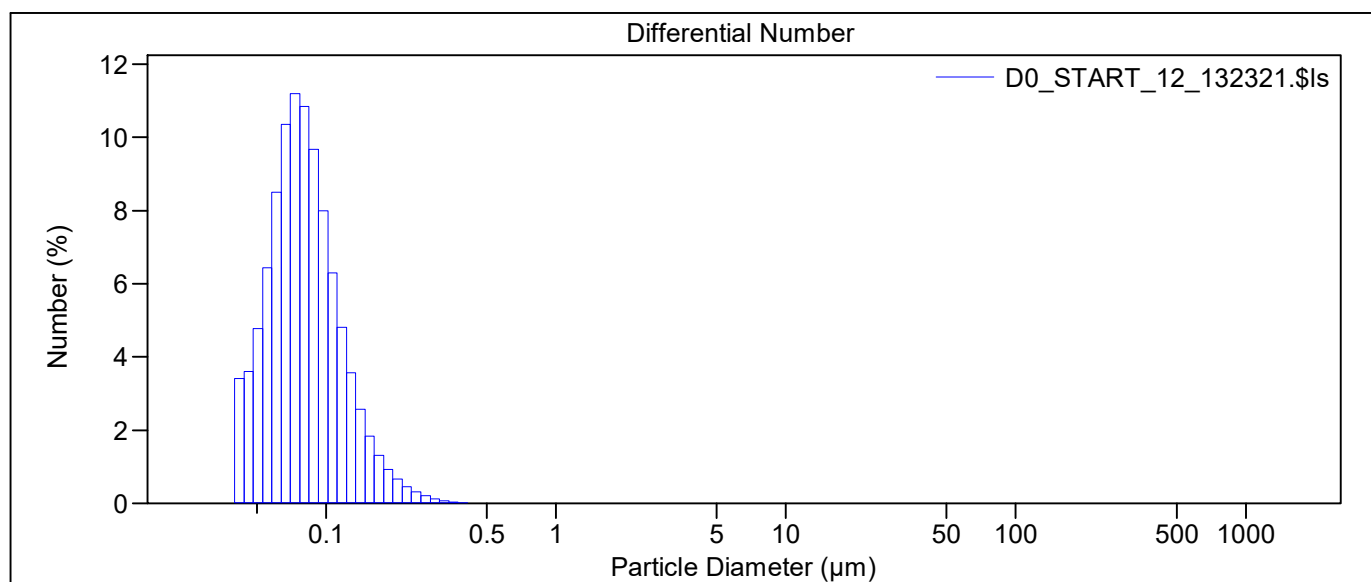
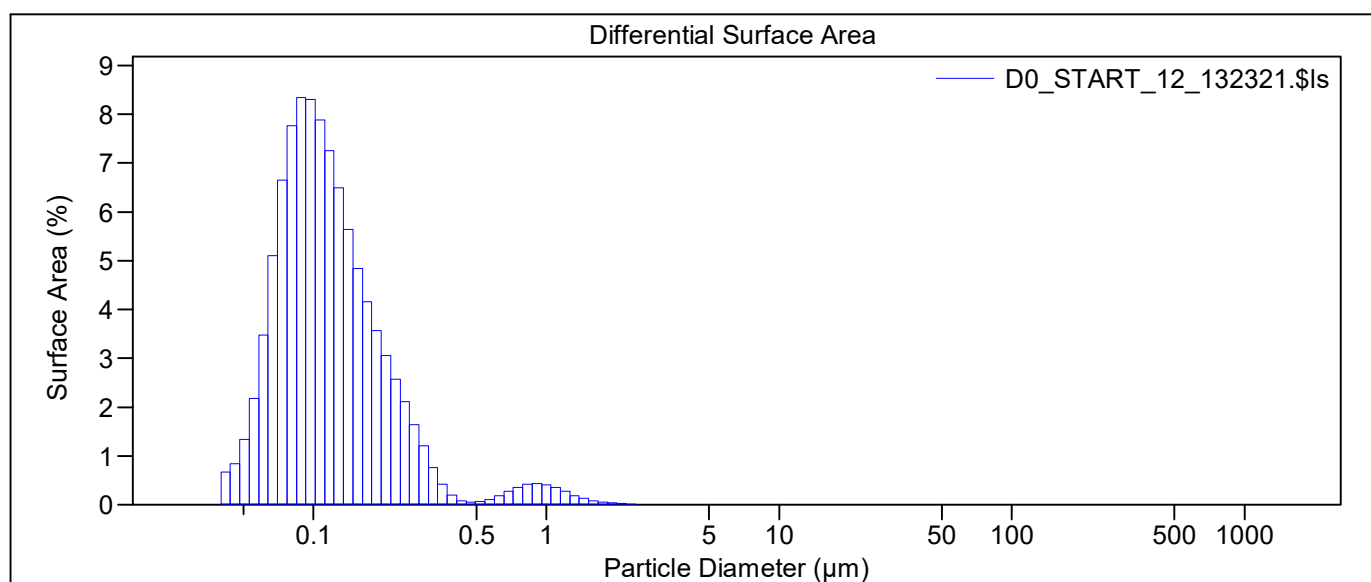
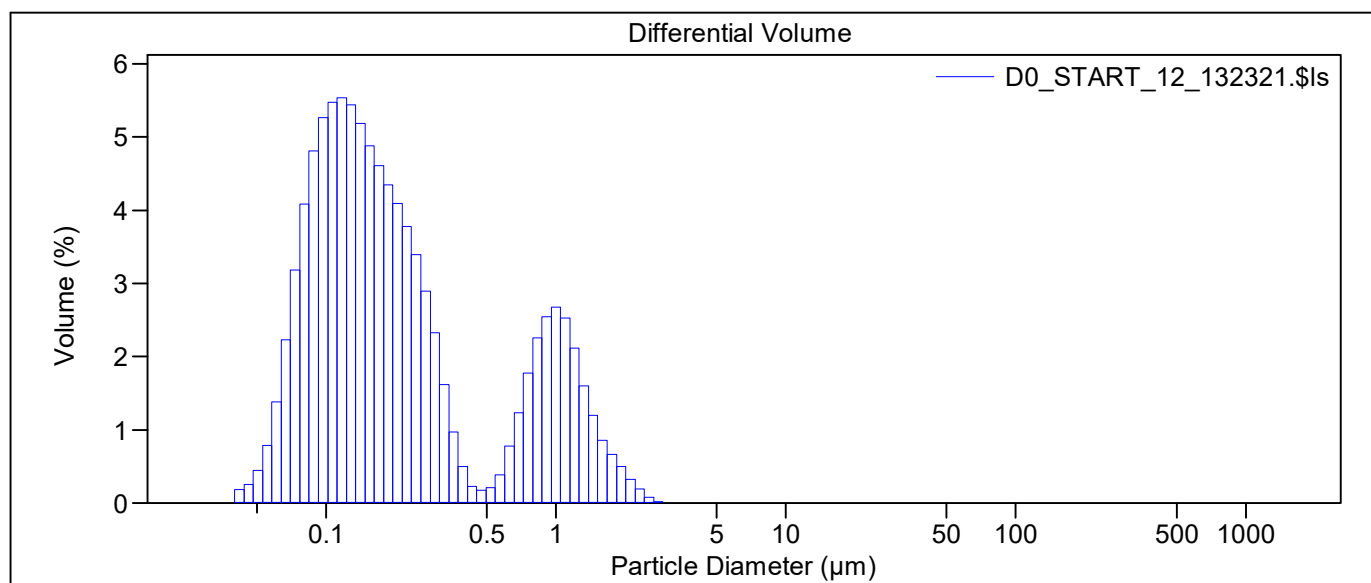
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D0\D0_START_12_132321.\$ls		
	D0_START_12_132321.\$ls		
File ID:	D0_START		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.97%		
LS 13 320	Universal Liquid Module		
Start time:	13:21 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_12_132321.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.429 μm
Mean:	0.360 μm		Variance:	0.184 μm ²
Median:	0.165 μm		C.V.:	119%
Mean/Median ratio:	2.181		Skewness:	1.956 Right skewed
Mode:	0.117 μm		Kurtosis:	3.423 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.165 μm	0.319 μm	1.050 μm

Surface Area Statistics (Arithmetic)			D0_START_12_132321.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.178 µm
Mean:	0.153 µm		Variance:	0.032 µm ²
Median:	0.108 µm		C.V.:	116%
Mean/Median ratio:	1.414		Skewness:	5.303 Right skewed
Mode:	0.088 µm		Kurtosis:	34.80 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.157 µm	0.234 µm

Number Statistics (Arithmetic)			D0_START_12_132321.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.086 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.8%
Mean/Median ratio:	1.109		Skewness:	5.337 Right skewed
Mode:	0.073 μm		Kurtosis:	101.5 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.84	3.60
11	0.048	0.050	0.44	1.34	4.77
12	0.053	0.055	0.79	2.18	6.43
13	0.058	0.061	1.38	3.48	8.51
14	0.064	0.067	2.23	5.11	10.4
15	0.070	0.073	3.18	6.65	11.2
16	0.077	0.080	4.08	7.77	10.9
17	0.084	0.088	4.81	8.34	9.67
18	0.093	0.097	5.26	8.31	7.99
19	0.102	0.106	5.48	7.88	6.29
20	0.112	0.117	5.54	7.25	4.80
21	0.122	0.128	5.44	6.49	3.57
22	0.134	0.141	5.18	5.64	2.57
23	0.148	0.155	4.88	4.84	1.83
24	0.162	0.170	4.61	4.16	1.31
25	0.178	0.186	4.34	3.57	0.93
26	0.195	0.205	4.09	3.06	0.66
27	0.214	0.225	3.78	2.58	0.46
28	0.235	0.247	3.39	2.11	0.31
29	0.258	0.271	2.90	1.64	0.20
30	0.284	0.297	2.33	1.20	0.12
31	0.311	0.326	1.62	0.76	0.065
32	0.342	0.358	0.97	0.42	0.029
33	0.375	0.393	0.50	0.19	0.011
34	0.412	0.431	0.23	0.081	0.0039
35	0.452	0.474	0.17	0.056	0.0023
36	0.496	0.520	0.21	0.061	0.0021
37	0.545	0.571	0.38	0.10	0.0029
38	0.598	0.627	0.77	0.19	0.0044
39	0.656	0.688	1.23	0.27	0.0053
40	0.721	0.755	1.78	0.36	0.0057
41	0.791	0.829	2.26	0.42	0.0055
42	0.868	0.910	2.55	0.43	0.0047
43	0.953	0.999	2.68	0.41	0.0037
44	1.047	1.097	2.53	0.35	0.0027
45	1.149	1.204	2.12	0.27	0.0017
46	1.261	1.321	1.60	0.19	0.00096
47	1.385	1.451	1.20	0.13	0.00054
48	1.520	1.592	0.86	0.083	0.00030
49	1.668	1.748	0.67	0.059	0.00017
50	1.832	1.919	0.50	0.040	0.000097
51	2.011	2.107	0.32	0.023	0.000047
52	2.207	2.313	0.19	0.013	0.000021
53	2.423	2.539	0.075	0.0045	0.000006
54	2.660	2.787	0.020	0.0011	0.000001
55	2.920	3.059	0.0037	0.00018	1.79E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

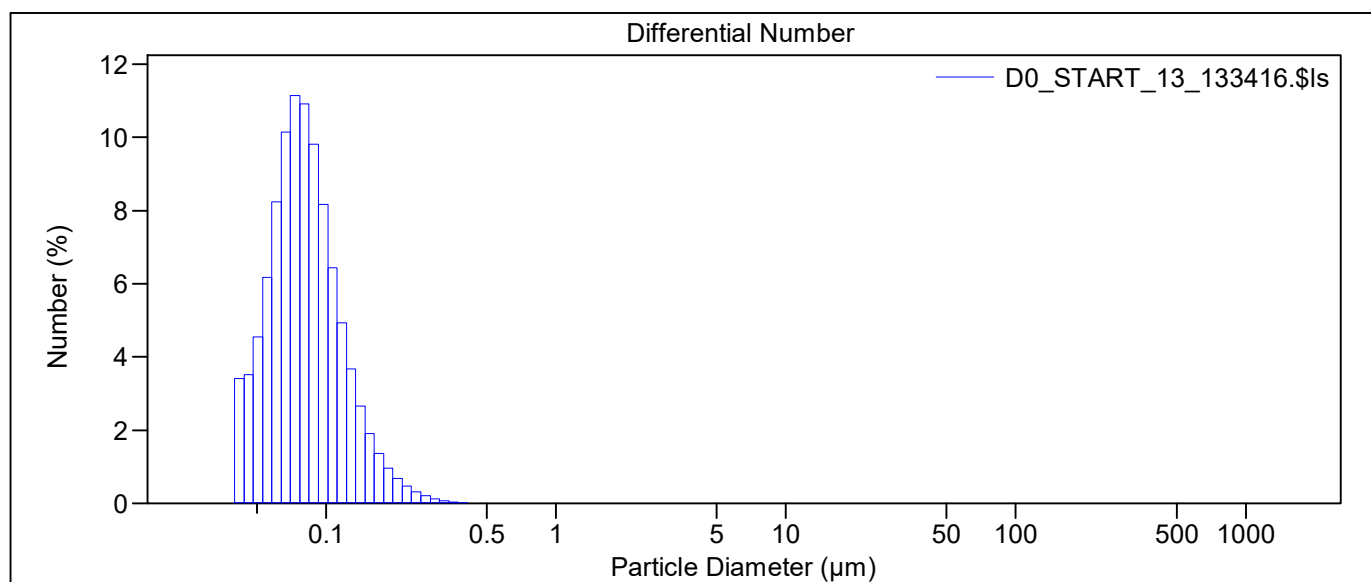
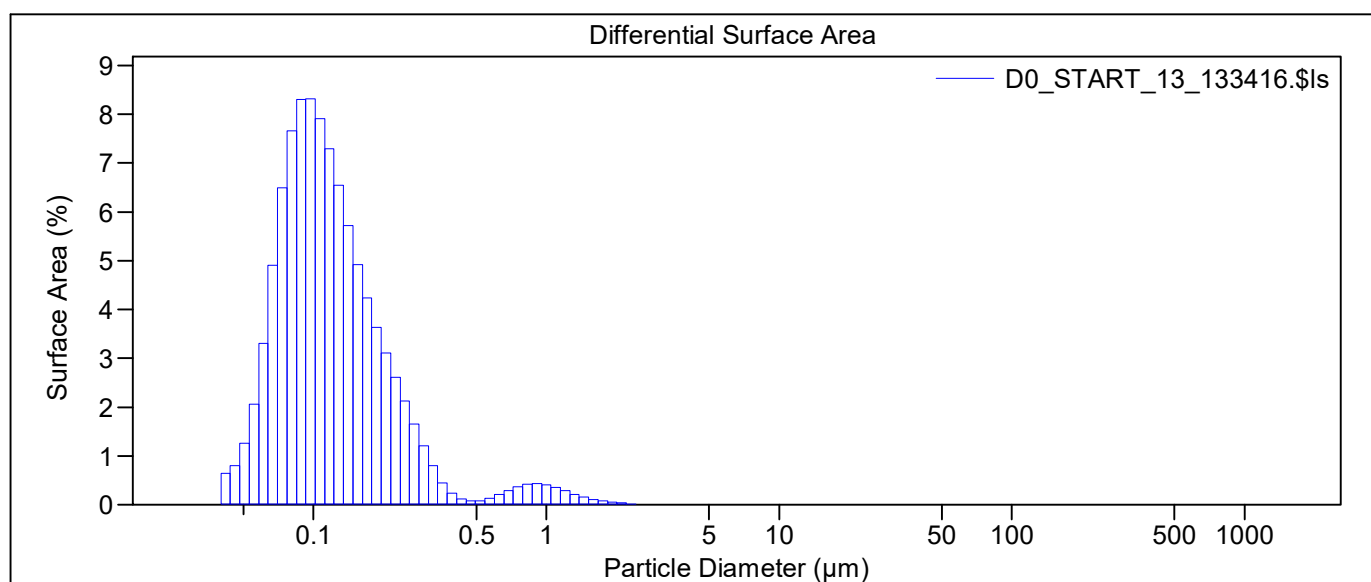
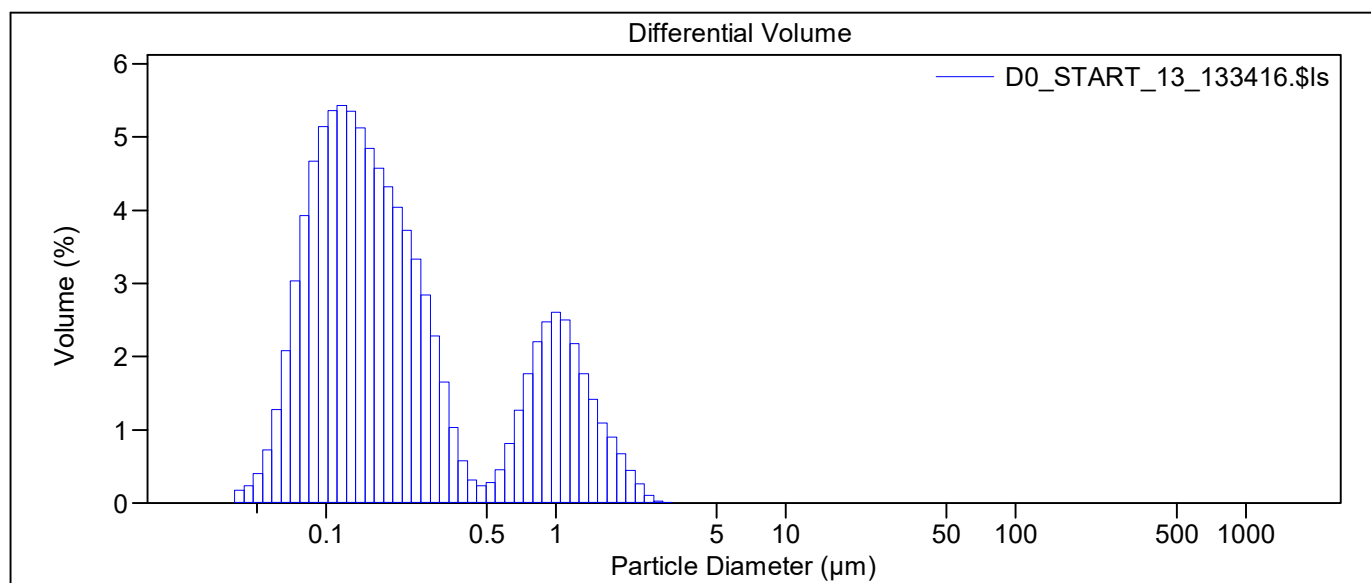
Beckman Coulter LS13320

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	DO_START_13_133416.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.90%		
LS 13 320	Universal Liquid Module		
Start time:	13:32 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_13_133416.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.455 µm
Mean:	0.381 µm		Variance:	0.207 µm ²
Median:	0.170 µm		C.V.:	119%
Mean/Median ratio:	2.246		Skewness:	1.902 Right skewed
Mode:	0.117 µm		Kurtosis:	3.114 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.108 µm	0.170 µm	0.356 µm	1.103 µm

Surface Area Statistics (Arithmetic)			D0_START_13_133416.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.188 μm
Mean:	0.157 μm		Variance:	0.035 μm ²
Median:	0.109 μm		C.V.:	119%
Mean/Median ratio:	1.434		Skewness:	5.290 Right skewed
Mode:	0.097 μm		Kurtosis:	34.45 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.159 μm	0.238 μm

Number Statistics (Arithmetic)			D0_START_13_133416.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	46.2%
Mean/Median ratio:	1.108		Skewness:	5.531 Right skewed
Mode:	0.073 μm		Kurtosis:	108.9 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.65	3.41
10	0.044	0.046	0.24	0.81	3.52
11	0.048	0.050	0.40	1.25	4.55
12	0.053	0.055	0.73	2.06	6.18
13	0.058	0.061	1.28	3.30	8.24
14	0.064	0.067	2.09	4.90	10.1
15	0.070	0.073	3.03	6.49	11.1
16	0.077	0.080	3.93	7.66	10.9
17	0.084	0.088	4.67	8.30	9.81
18	0.093	0.097	5.14	8.32	8.17
19	0.102	0.106	5.36	7.91	6.44
20	0.112	0.117	5.43	7.29	4.93
21	0.122	0.128	5.35	6.55	3.67
22	0.134	0.141	5.13	5.71	2.66
23	0.148	0.155	4.84	4.92	1.90
24	0.162	0.170	4.58	4.23	1.36
25	0.178	0.186	4.32	3.64	0.97
26	0.195	0.205	4.04	3.10	0.68
27	0.214	0.225	3.73	2.60	0.48
28	0.235	0.247	3.34	2.12	0.32
29	0.258	0.271	2.84	1.65	0.21
30	0.284	0.297	2.28	1.21	0.13
31	0.311	0.326	1.65	0.79	0.069
32	0.342	0.358	1.03	0.45	0.033
33	0.375	0.393	0.58	0.23	0.014
34	0.412	0.431	0.32	0.11	0.0057
35	0.452	0.474	0.24	0.079	0.0033
36	0.496	0.520	0.28	0.084	0.0029
37	0.545	0.571	0.46	0.13	0.0036
38	0.598	0.627	0.81	0.20	0.0048
39	0.656	0.688	1.27	0.29	0.0057
40	0.721	0.755	1.77	0.37	0.0060
41	0.791	0.829	2.20	0.42	0.0056
42	0.868	0.910	2.48	0.43	0.0048
43	0.953	0.999	2.61	0.41	0.0038
44	1.047	1.097	2.51	0.36	0.0028
45	1.149	1.204	2.18	0.28	0.0018

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.77	0.21	0.0011
47	1.385	1.451	1.41	0.15	0.00067
48	1.520	1.592	1.10	0.11	0.00039
49	1.668	1.748	0.90	0.081	0.00025
50	1.832	1.919	0.68	0.055	0.00014
51	2.011	2.107	0.45	0.033	0.000069
52	2.207	2.313	0.26	0.018	0.000031
53	2.423	2.539	0.10	0.0063	0.000009
54	2.660	2.787	0.029	0.0016	0.000002
55	2.920	3.059	0.0051	0.00026	2.58E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

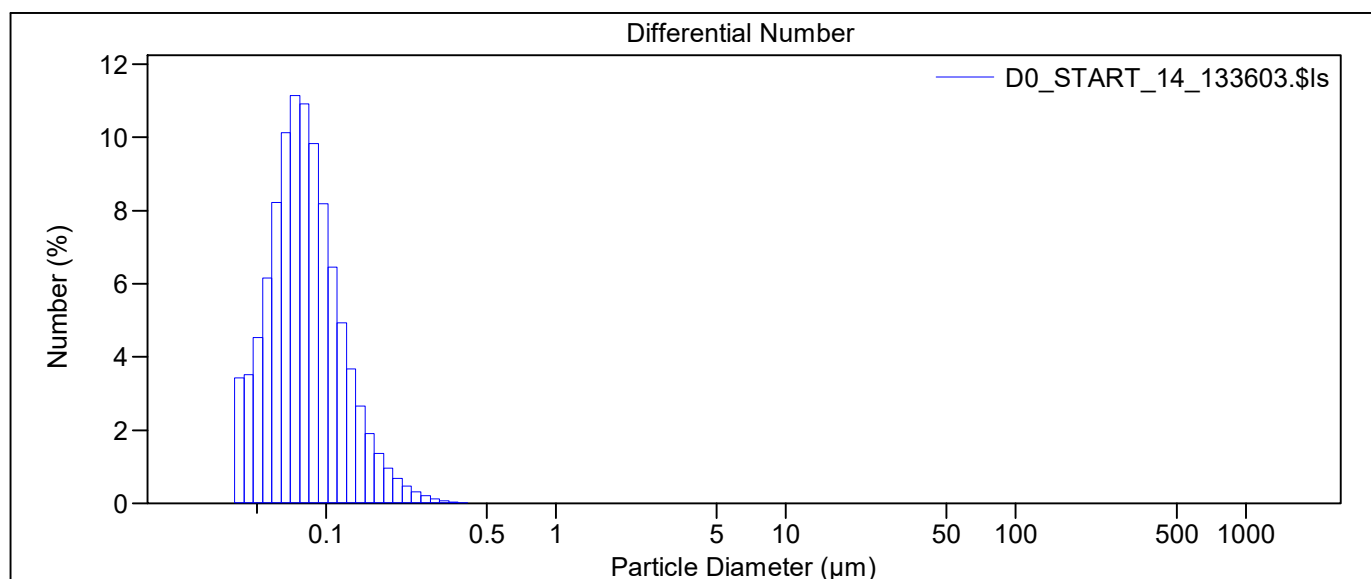
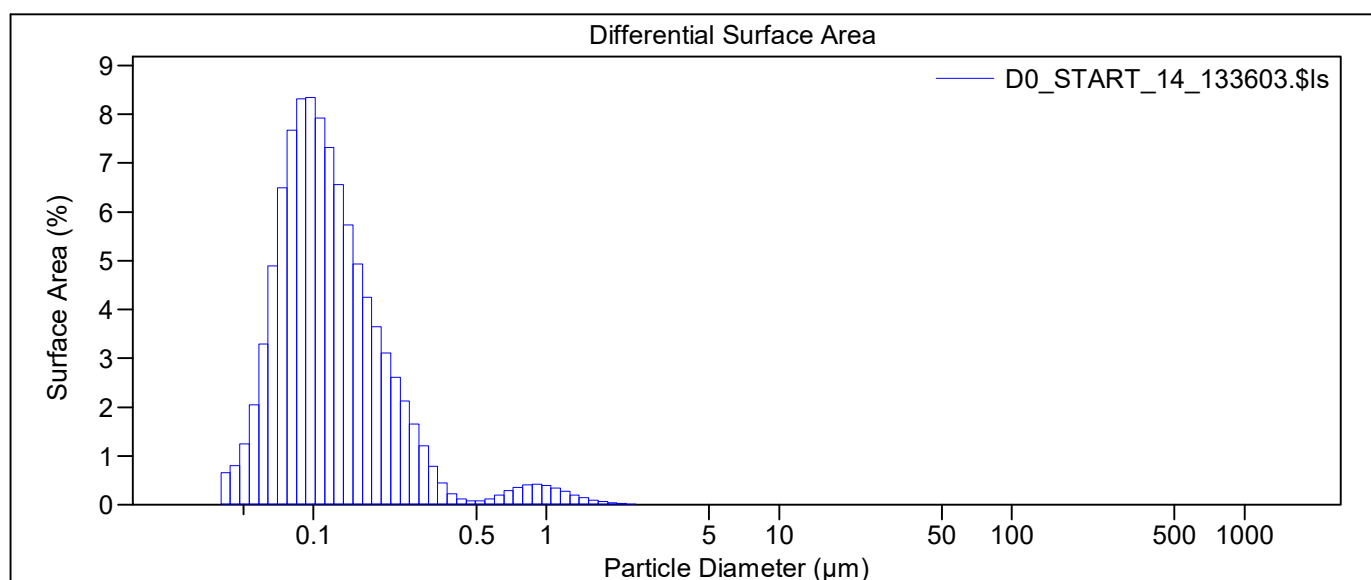
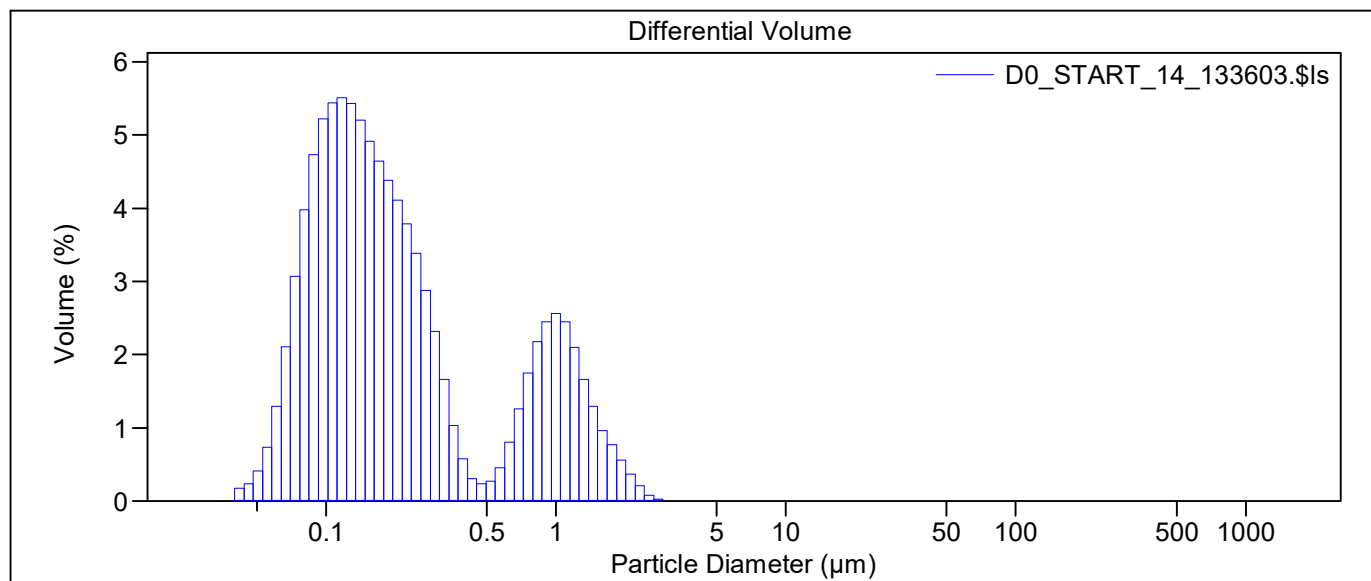
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_14_133603.\$ls		
	DO_START_14_133603.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.94%		
LS 13 320	Universal Liquid Module		
Start time:	13:34 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	64%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_14_133603.\$Is	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.437 µm
Mean:	0.366 µm		Variance:	0.191 µm ²
Median:	0.167 µm		C.V.:	119%
Mean/Median ratio:	2.190		Skewness:	1.957 Right skewed
Mode:	0.117 µm		Kurtosis:	3.398 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.107 µm	0.167 µm	0.330 µm	1.067 µm

Surface Area Statistics (Arithmetic)			D0_START_14_133603.\$Is	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.181 μm
Mean:	0.155 μm		Variance:	0.033 μm ²
Median:	0.109 μm		C.V.:	117%
Mean/Median ratio:	1.418		Skewness:	5.314 Right skewed
Mode:	0.097 μm		Kurtosis:	34.98 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.158 μm	0.237 μm

Number Statistics (Arithmetic)			D0_START_14_133603.\$Is	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	46.0%
Mean/Median ratio:	1.107		Skewness:	5.349 Right skewed
Mode:	0.073 μm		Kurtosis:	102.1 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.24	0.81	3.52
11	0.048	0.050	0.41	1.25	4.53
12	0.053	0.055	0.73	2.05	6.16
13	0.058	0.061	1.29	3.30	8.22
14	0.064	0.067	2.11	4.90	10.1
15	0.070	0.073	3.07	6.49	11.1
16	0.077	0.080	3.98	7.67	10.9
17	0.084	0.088	4.74	8.32	9.82
18	0.093	0.097	5.22	8.34	8.18
19	0.102	0.106	5.44	7.93	6.45
20	0.112	0.117	5.51	7.32	4.94
21	0.122	0.128	5.43	6.56	3.68
22	0.134	0.141	5.20	5.73	2.66
23	0.148	0.155	4.91	4.93	1.90
24	0.162	0.170	4.65	4.25	1.36
25	0.178	0.186	4.38	3.65	0.97
26	0.195	0.205	4.11	3.12	0.69
27	0.214	0.225	3.78	2.61	0.48
28	0.235	0.247	3.39	2.13	0.32
29	0.258	0.271	2.88	1.65	0.21
30	0.284	0.297	2.31	1.21	0.13
31	0.311	0.326	1.66	0.79	0.069
32	0.342	0.358	1.04	0.45	0.032
33	0.375	0.393	0.58	0.23	0.014
34	0.412	0.431	0.31	0.11	0.0055
35	0.452	0.474	0.24	0.077	0.0032
36	0.496	0.520	0.27	0.082	0.0028
37	0.545	0.571	0.45	0.12	0.0035
38	0.598	0.627	0.81	0.20	0.0047
39	0.656	0.688	1.26	0.28	0.0055
40	0.721	0.755	1.75	0.36	0.0058
41	0.791	0.829	2.18	0.41	0.0055
42	0.868	0.910	2.45	0.42	0.0046
43	0.953	0.999	2.56	0.40	0.0037
44	1.047	1.097	2.45	0.35	0.0027
45	1.149	1.204	2.10	0.27	0.0017
46	1.261	1.321	1.66	0.20	0.0010
47	1.385	1.451	1.29	0.14	0.00060
48	1.520	1.592	0.96	0.094	0.00034
49	1.668	1.748	0.77	0.068	0.00021
50	1.832	1.919	0.56	0.046	0.00011
51	2.011	2.107	0.36	0.027	0.000056
52	2.207	2.313	0.21	0.014	0.000025
53	2.423	2.539	0.083	0.0051	0.000007
54	2.660	2.787	0.023	0.0013	0.000002
55	2.920	3.059	0.0042	0.00021	2.09E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

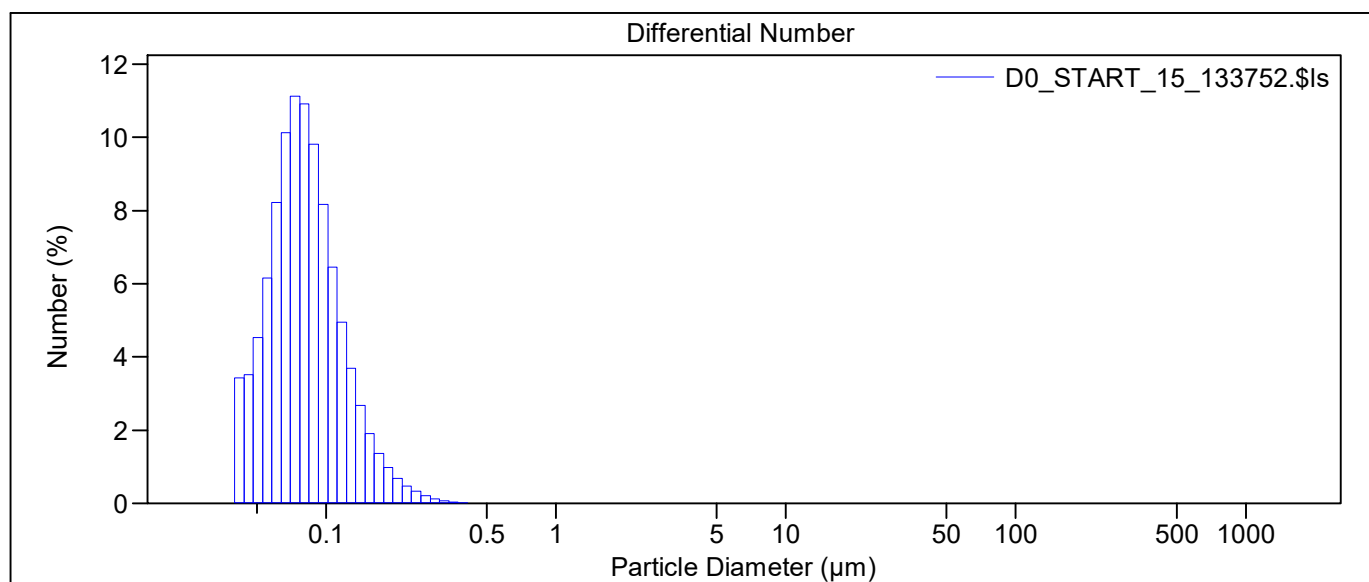
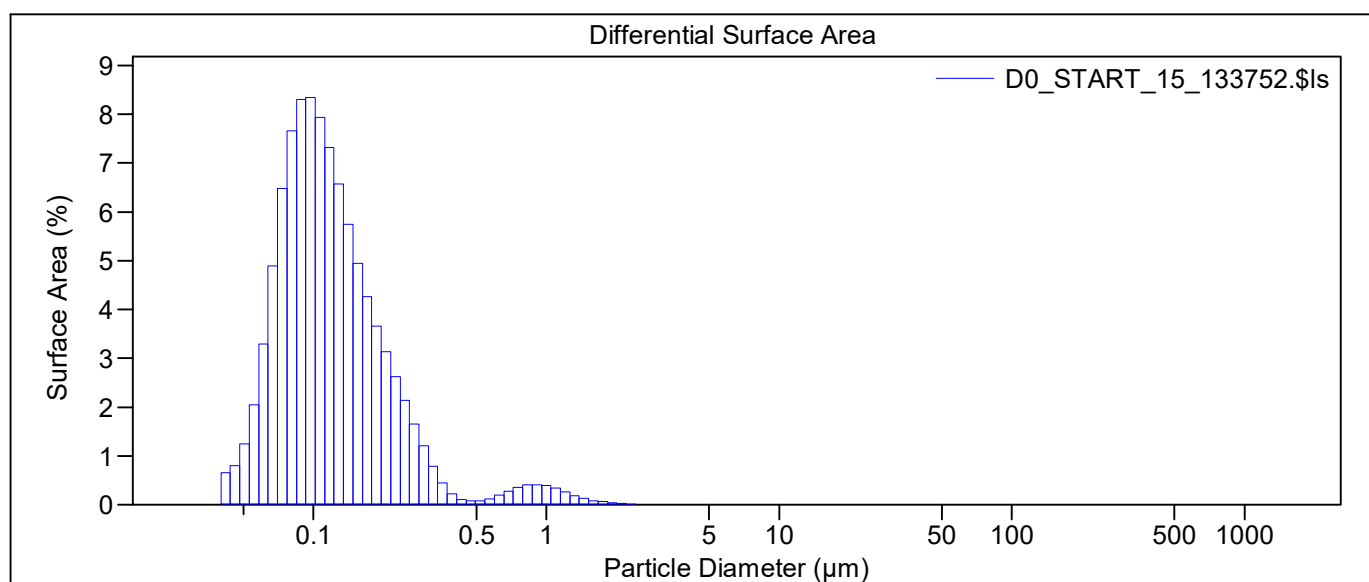
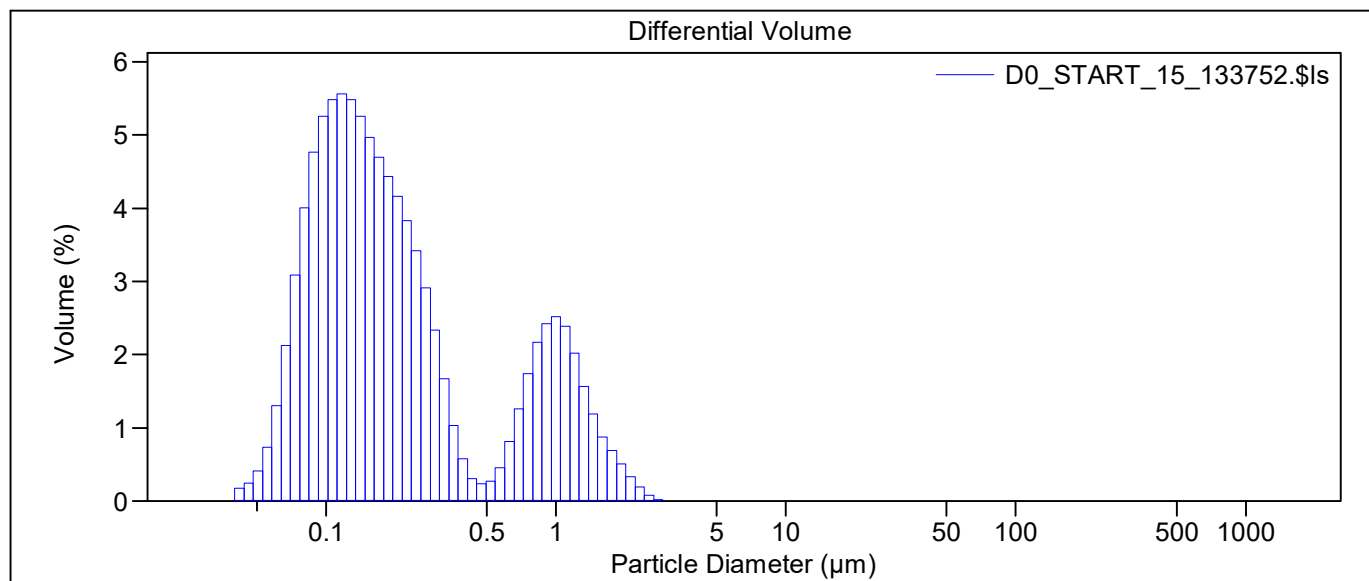
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\DO\DO_START_15_133752.\$ls		
	DO_START_15_133752.\$ls		
File ID:	DO_START		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.98%		
LS 13 320	Universal Liquid Module		
Start time:	13:36 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D0_START_15_133752.\$Is	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.427 μm
Mean:	0.357 μm		Variance:	0.182 μm ²
Median:	0.166 μm		C.V.:	119%
Mean/Median ratio:	2.154		Skewness:	2.005 Right skewed
Mode:	0.117 μm		Kurtosis:	3.661 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.166 μm	0.318 μm	1.042 μm

Surface Area Statistics (Arithmetic)			D0_START_15_133752.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.177 µm
Mean:	0.154 µm		Variance:	0.031 µm ²
Median:	0.109 µm		C.V.:	115%
Mean/Median ratio:	1.407		Skewness:	5.344 Right skewed
Mode:	0.097 µm		Kurtosis:	35.62 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.236 µm

Number Statistics (Arithmetic)			D0_START_15_133752.\$Is	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.9%
Mean/Median ratio:	1.108		Skewness:	5.224 Right skewed
Mode:	0.073 μm		Kurtosis:	97.74 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.24	0.81	3.52
11	0.048	0.050	0.41	1.25	4.53
12	0.053	0.055	0.74	2.05	6.16
13	0.058	0.061	1.30	3.30	8.22
14	0.064	0.067	2.12	4.90	10.1
15	0.070	0.073	3.09	6.49	11.1
16	0.077	0.080	4.01	7.66	10.9
17	0.084	0.088	4.77	8.31	9.81
18	0.093	0.097	5.25	8.34	8.18
19	0.102	0.106	5.48	7.93	6.45
20	0.112	0.117	5.56	7.32	4.94
21	0.122	0.128	5.48	6.58	3.69
22	0.134	0.141	5.26	5.75	2.67
23	0.148	0.155	4.97	4.95	1.91
24	0.162	0.170	4.70	4.26	1.36
25	0.178	0.186	4.44	3.67	0.97
26	0.195	0.205	4.16	3.13	0.69
27	0.214	0.225	3.83	2.63	0.48
28	0.235	0.247	3.42	2.14	0.32
29	0.258	0.271	2.91	1.66	0.21
30	0.284	0.297	2.33	1.21	0.13
31	0.311	0.326	1.67	0.79	0.068
32	0.342	0.358	1.04	0.45	0.032
33	0.375	0.393	0.58	0.23	0.013
34	0.412	0.431	0.31	0.11	0.0054
35	0.452	0.474	0.23	0.076	0.0031
36	0.496	0.520	0.28	0.082	0.0028
37	0.545	0.571	0.45	0.12	0.0034
38	0.598	0.627	0.81	0.20	0.0047
39	0.656	0.688	1.26	0.28	0.0055
40	0.721	0.755	1.74	0.36	0.0058
41	0.791	0.829	2.17	0.40	0.0054
42	0.868	0.910	2.42	0.41	0.0046
43	0.953	0.999	2.52	0.39	0.0036
44	1.047	1.097	2.39	0.34	0.0026
45	1.149	1.204	2.02	0.26	0.0016

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.57	0.18	0.00096
47	1.385	1.451	1.19	0.13	0.00056
48	1.520	1.592	0.87	0.085	0.00031
49	1.668	1.748	0.69	0.061	0.00018
50	1.832	1.919	0.51	0.041	0.00010
51	2.011	2.107	0.33	0.024	0.000050
52	2.207	2.313	0.19	0.013	0.000022
53	2.423	2.539	0.076	0.0046	0.000007
54	2.660	2.787	0.021	0.0012	0.000001
55	2.920	3.059	0.0039	0.00019	1.92E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D0_START.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARYD1\D1.\$av
D1.\$av
File ID: D1
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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D:\KW\PROFARB\POMIARYD1_02_135045.\$ls
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Volume Statistics (Arithmetic) D1.\$av

Calculations from 0.017 μm to 2000 μm

Volume:	100%	S.D.:	0.423 μm
Mean:	0.355 μm	Variance:	0.179 μm^2
Median:	0.166 μm	C.V.:	119%
Mean/Median ratio:	2.133	Skewness:	2.023 Right skewed
Mode:	0.117 μm	Kurtosis:	3.798 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.166 μm	0.316 μm	1.032 μm

Surface Area Statistics (Arithmetic) D1.\$av

Calculations from 0.017 μm to 2000 μm

Surface Area:	100%	S.D.:	0.176 μm
Mean:	0.154 μm	Variance:	0.031 μm^2
Median:	0.110 μm	C.V.:	114%
Mean/Median ratio:	1.406	Skewness:	5.322 Right skewed
Mode:	0.097 μm	Kurtosis:	35.52 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.110 μm	0.159 μm	0.237 μm

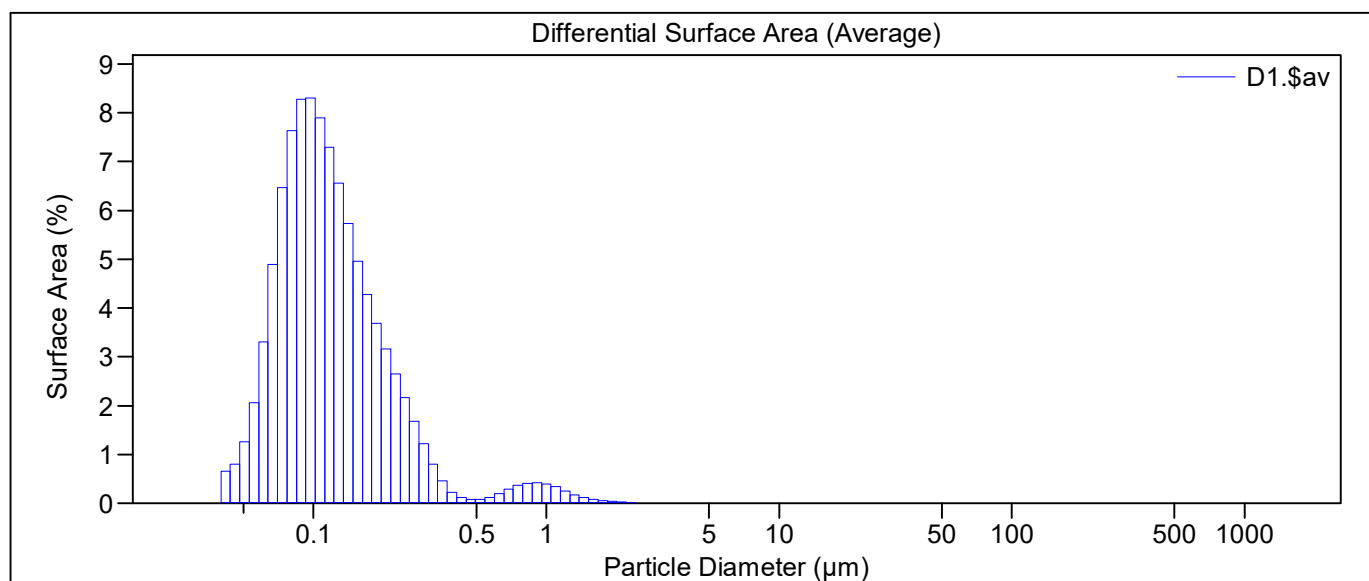
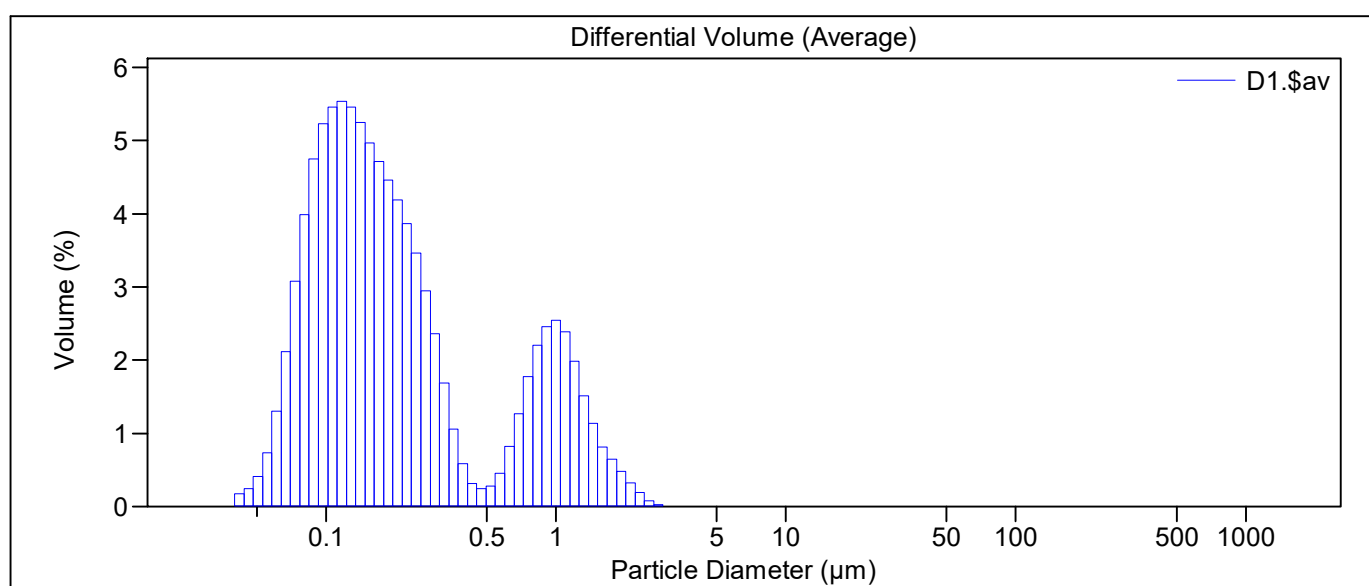
Number Statistics (Arithmetic)

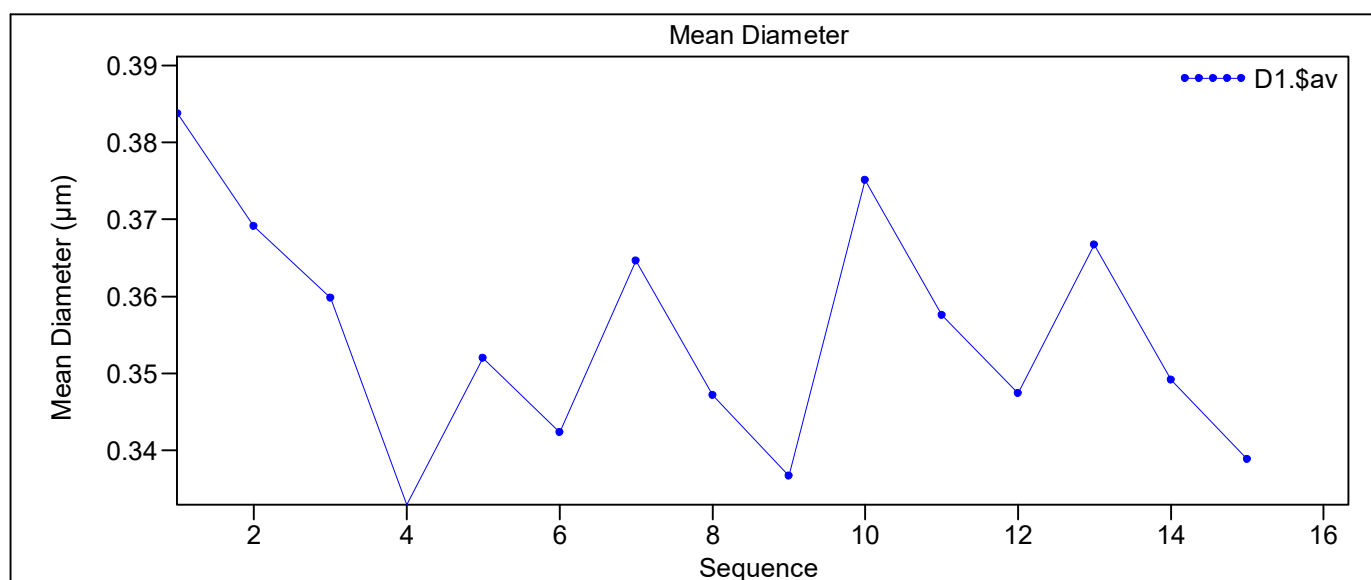
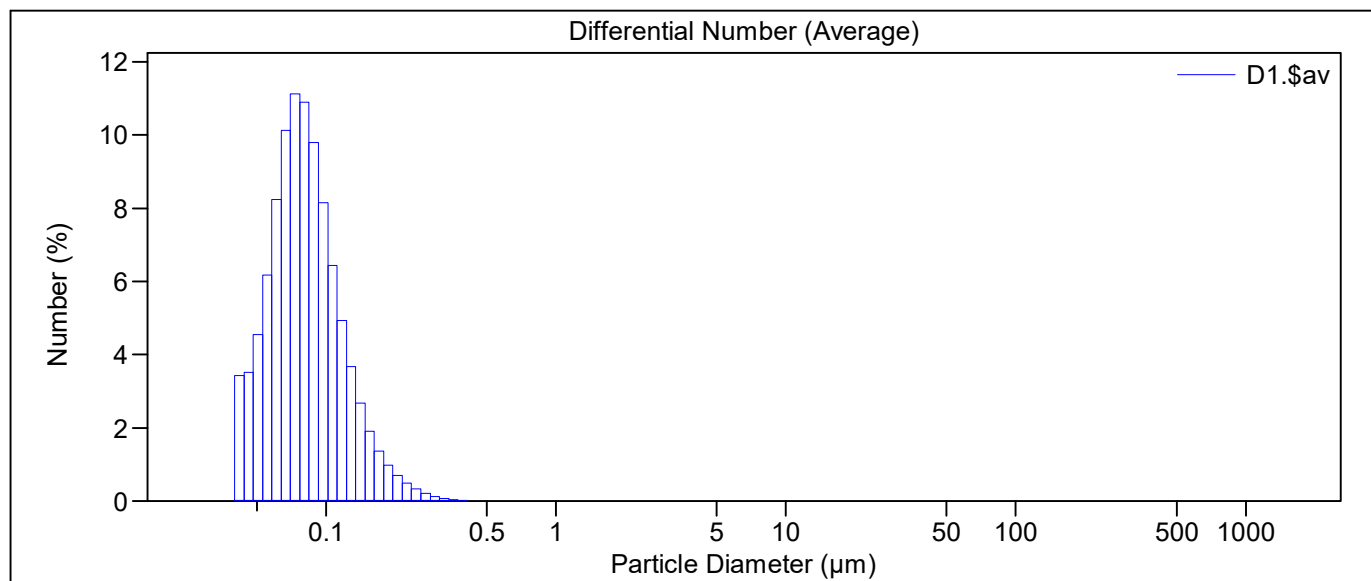
D1.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.040 μm
Mean:	0.087 μm	Variance:	0.0016 μm^2
Median:	0.079 μm	C.V.:	46.0%
Mean/Median ratio:	1.108	Skewness:	5.182 Right skewed
Mode:	0.073 μm	Kurtosis:	95.57 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm





D1.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.24	0.81	3.52
11	0.048	0.050	0.41	1.25	4.54
12	0.053	0.055	0.74	2.05	6.18
13	0.058	0.061	1.30	3.30	8.23
14	0.064	0.067	2.12	4.89	10.1
15	0.070	0.073	3.08	6.47	11.1
16	0.077	0.080	3.99	7.64	10.9
17	0.084	0.088	4.75	8.28	9.79

D1.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.23	8.31	8.15
19	0.102	0.106	5.46	7.90	6.44
20	0.112	0.117	5.53	7.30	4.93
21	0.122	0.128	5.46	6.56	3.68
22	0.134	0.141	5.25	5.74	2.67
23	0.148	0.155	4.97	4.95	1.91
24	0.162	0.170	4.71	4.28	1.37
25	0.178	0.186	4.46	3.69	0.98
26	0.195	0.205	4.19	3.16	0.70
27	0.214	0.225	3.87	2.65	0.49
28	0.235	0.247	3.46	2.16	0.33
29	0.258	0.271	2.95	1.68	0.21
30	0.284	0.297	2.36	1.23	0.13
31	0.311	0.326	1.69	0.80	0.069
32	0.342	0.358	1.06	0.45	0.033
33	0.375	0.393	0.59	0.23	0.014
34	0.412	0.431	0.31	0.11	0.0056
35	0.452	0.474	0.24	0.079	0.0032
36	0.496	0.520	0.28	0.083	0.0028
37	0.545	0.571	0.46	0.12	0.0035
38	0.598	0.627	0.82	0.20	0.0048
39	0.656	0.688	1.27	0.28	0.0056
40	0.721	0.755	1.77	0.36	0.0059
41	0.791	0.829	2.20	0.41	0.0055
42	0.868	0.910	2.46	0.42	0.0046
43	0.953	0.999	2.55	0.39	0.0036
44	1.047	1.097	2.39	0.34	0.0026
45	1.149	1.204	1.99	0.25	0.0016
46	1.261	1.321	1.52	0.18	0.00094
47	1.385	1.451	1.13	0.12	0.00053
48	1.520	1.592	0.82	0.079	0.00029
49	1.668	1.748	0.65	0.057	0.00017
50	1.832	1.919	0.48	0.039	0.000097
51	2.011	2.107	0.32	0.023	0.000049
52	2.207	2.313	0.20	0.013	0.000023
53	2.423	2.539	0.078	0.0047	0.000007
54	2.660	2.787	0.022	0.0012	0.000001
55	2.920	3.059	0.0041	0.00021	2.05E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

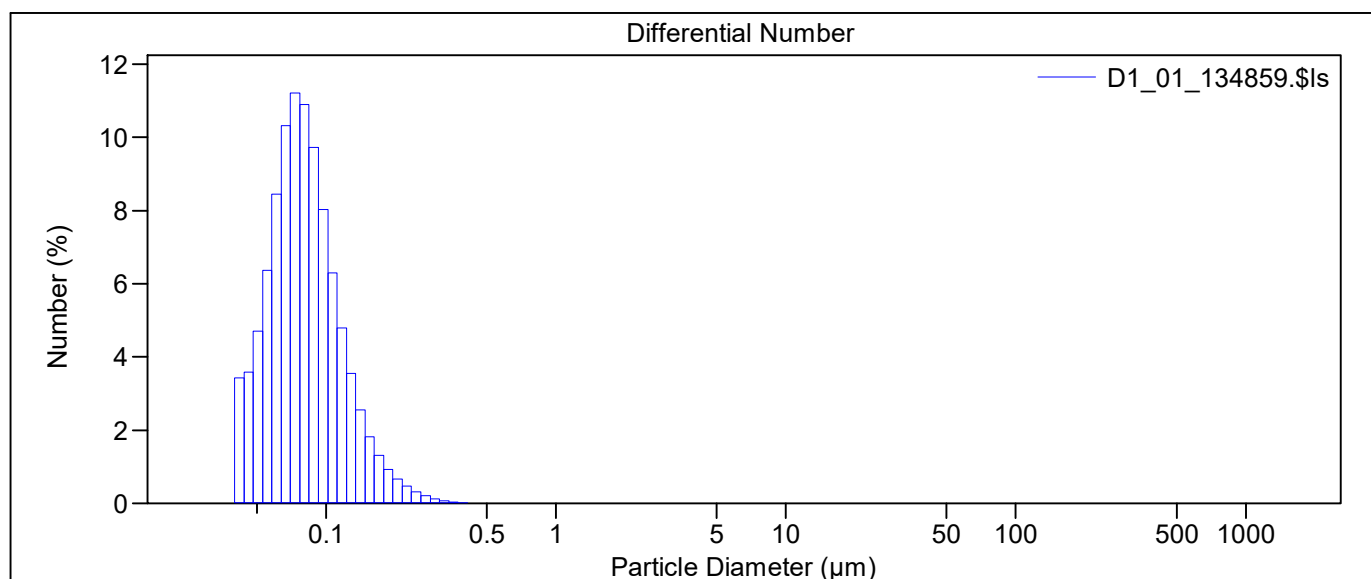
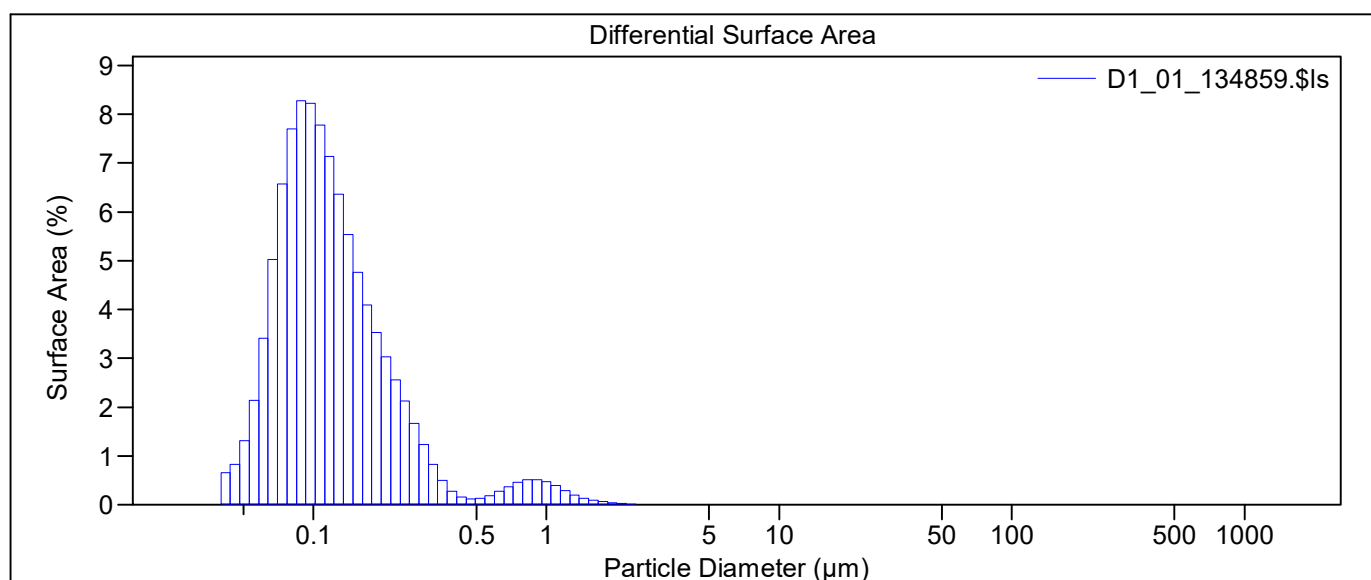
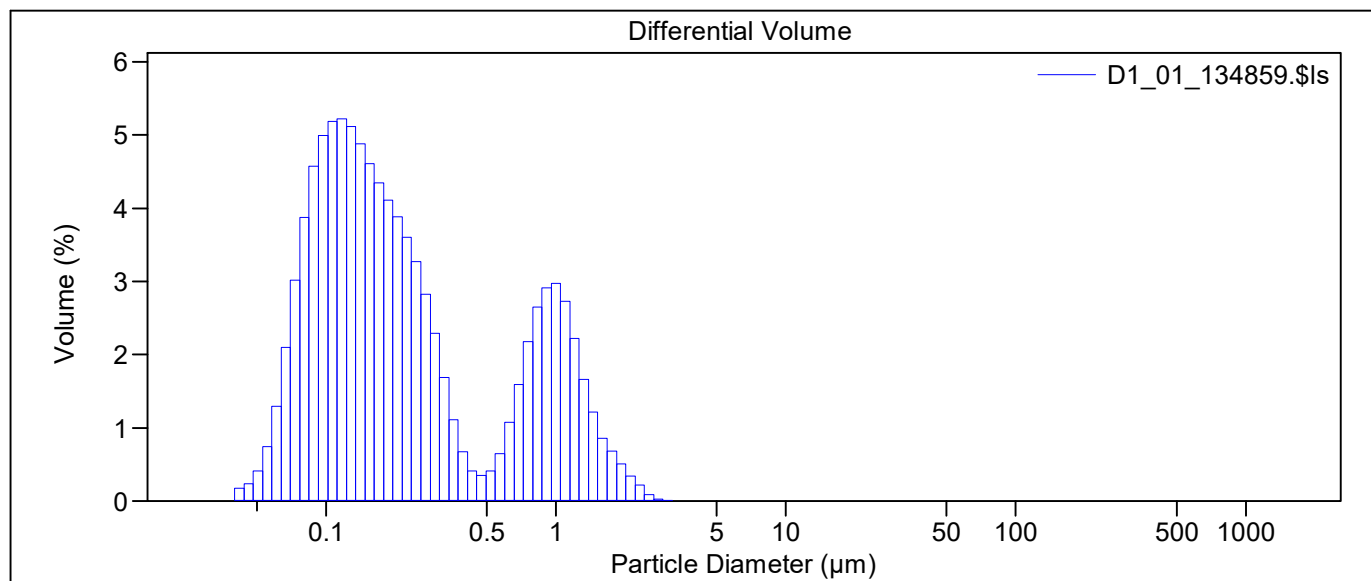
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_01_134859.\$ls		
	D1_01_134859.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.77%		
LS 13 320	Universal Liquid Module		
Start time:	13:47 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_01_134859.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.438 μm
Mean:	0.384 μm		Variance:	0.192 μm ²
Median:	0.175 μm		C.V.:	114%
Mean/Median ratio:	2.192		Skewness:	1.808 Right skewed
Mode:	0.117 μm		Kurtosis:	2.920 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.108 μm	0.175 μm	0.498 μm	1.068 μm

Surface Area Statistics (Arithmetic)			D1_01_134859.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.189 µm
Mean:	0.160 µm		Variance:	0.036 µm ²
Median:	0.109 µm		C.V.:	118%
Mean/Median ratio:	1.465		Skewness:	4.866 Right skewed
Mode:	0.088 µm		Kurtosis:	29.31 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.160 µm	0.247 µm

Number Statistics (Arithmetic)			D1_01_134859.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.041 μm
Mean:	0.087 μm		Variance:	0.0017 μm ²
Median:	0.078 μm		C.V.:	46.9%
Mean/Median ratio:	1.110		Skewness:	5.699 Right skewed
Mode:	0.073 μm		Kurtosis:	106.0 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.66	3.43
10	0.044	0.046	0.24	0.83	3.59
11	0.048	0.050	0.41	1.31	4.71
12	0.053	0.055	0.74	2.13	6.37
13	0.058	0.061	1.30	3.41	8.45
14	0.064	0.067	2.10	5.02	10.3
15	0.070	0.073	3.01	6.57	11.2
16	0.077	0.080	3.88	7.70	10.9
17	0.084	0.088	4.57	8.27	9.72
18	0.093	0.097	5.00	8.23	8.03
19	0.102	0.106	5.18	7.78	6.30
20	0.112	0.117	5.22	7.14	4.80
21	0.122	0.128	5.11	6.37	3.55
22	0.134	0.141	4.88	5.54	2.56
23	0.148	0.155	4.61	4.76	1.83
24	0.162	0.170	4.35	4.09	1.30
25	0.178	0.186	4.11	3.53	0.93
26	0.195	0.205	3.88	3.03	0.66
27	0.214	0.225	3.60	2.56	0.47
28	0.235	0.247	3.27	2.12	0.32
29	0.258	0.271	2.82	1.67	0.21
30	0.284	0.297	2.29	1.23	0.13
31	0.311	0.326	1.69	0.83	0.071
32	0.342	0.358	1.11	0.50	0.035
33	0.375	0.393	0.67	0.27	0.016
34	0.412	0.431	0.41	0.15	0.0076
35	0.452	0.474	0.35	0.12	0.0049
36	0.496	0.520	0.41	0.13	0.0043
37	0.545	0.571	0.65	0.18	0.0051
38	0.598	0.627	1.08	0.28	0.0064
39	0.656	0.688	1.60	0.37	0.0072
40	0.721	0.755	2.17	0.46	0.0074
41	0.791	0.829	2.65	0.51	0.0068
42	0.868	0.910	2.92	0.51	0.0057
43	0.953	0.999	2.97	0.48	0.0044
44	1.047	1.097	2.73	0.40	0.0030
45	1.149	1.204	2.22	0.29	0.0019

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.67	0.20	0.0011
47	1.385	1.451	1.22	0.13	0.00058
48	1.520	1.592	0.86	0.086	0.00031
49	1.668	1.748	0.68	0.063	0.00019
50	1.832	1.919	0.51	0.042	0.00011
51	2.011	2.107	0.34	0.026	0.000054
52	2.207	2.313	0.22	0.015	0.000026
53	2.423	2.539	0.088	0.0055	0.000008
54	2.660	2.787	0.026	0.0015	0.000002
55	2.920	3.059	0.0051	0.00027	2.6E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

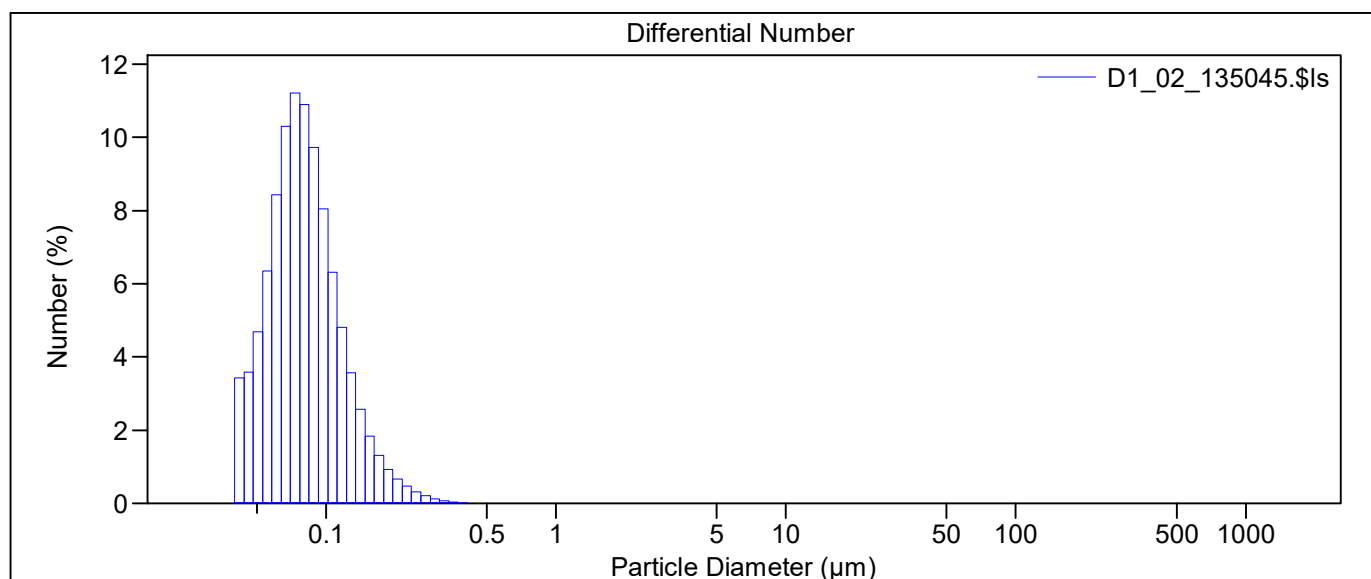
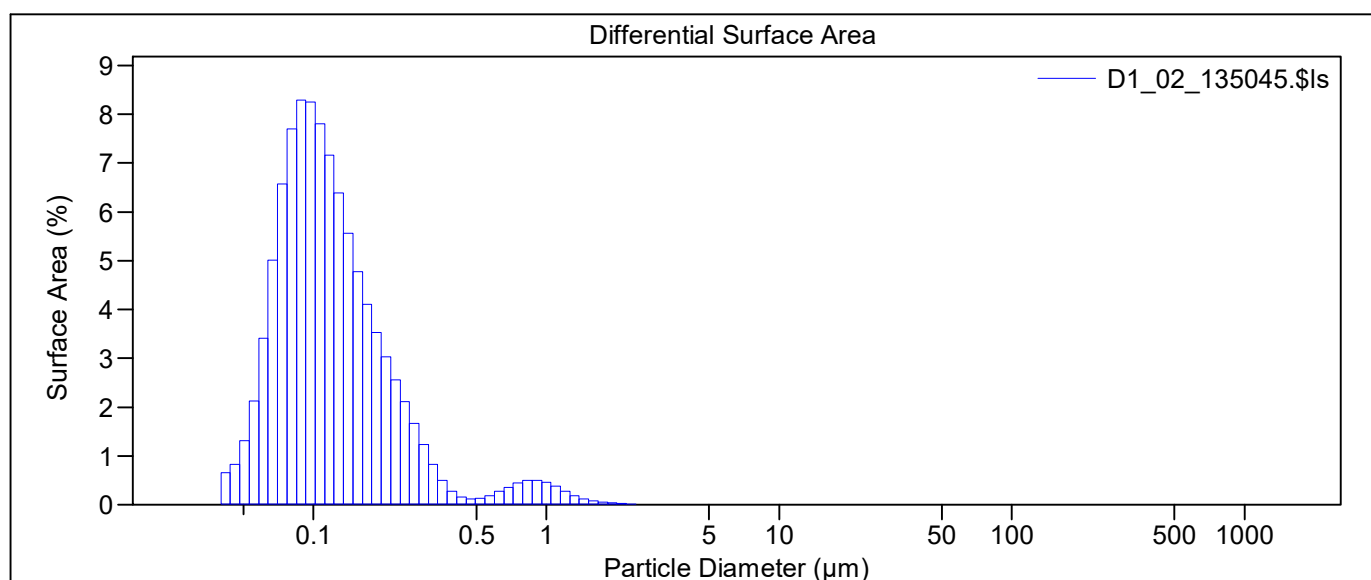
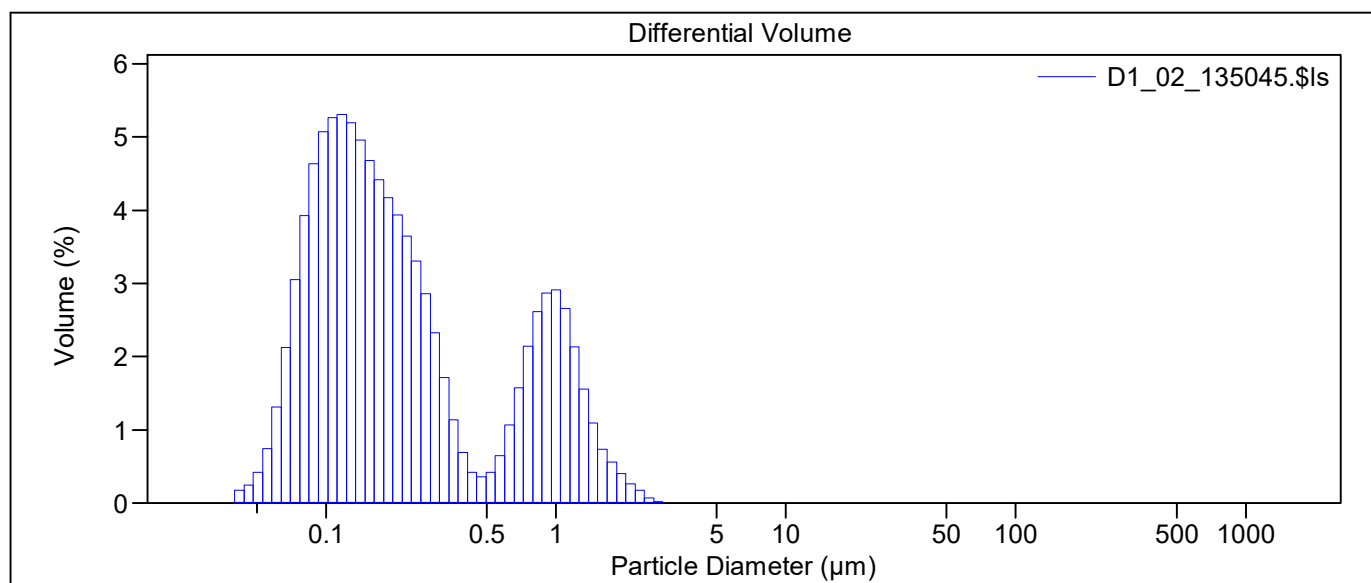
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_02_135045.\$ls		
	D1_02_135045.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.81%		
LS 13 320	Universal Liquid Module		
Start time:	13:49 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_02_135045.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.420 µm
Mean:	0.369 µm		Variance:	0.177 µm ²
Median:	0.172 µm		C.V.:	114%
Mean/Median ratio:	2.142		Skewness:	1.845 Right skewed
Mode:	0.117 µm		Kurtosis:	3.109 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.108 µm	0.172 µm	0.395 µm	1.036 µm

Surface Area Statistics (Arithmetic)			D1_02_135045.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.183 μm
Mean:	0.158 μm		Variance:	0.033 μm ²
Median:	0.109 μm		C.V.:	116%
Mean/Median ratio:	1.447		Skewness:	4.868 Right skewed
Mode:	0.088 μm		Kurtosis:	29.44 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.159 μm	0.245 μm

Number Statistics (Arithmetic)			D1_02_135045.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.041 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.7%
Mean/Median ratio:	1.110		Skewness:	5.518 Right skewed
Mode:	0.073 μm		Kurtosis:	99.46 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.66	3.43
10	0.044	0.046	0.24	0.83	3.59
11	0.048	0.050	0.42	1.31	4.70
12	0.053	0.055	0.75	2.13	6.36
13	0.058	0.061	1.31	3.41	8.43
14	0.064	0.067	2.12	5.02	10.3
15	0.070	0.073	3.05	6.57	11.2
16	0.077	0.080	3.93	7.70	10.9
17	0.084	0.088	4.64	8.29	9.73
18	0.093	0.097	5.07	8.25	8.04
19	0.102	0.106	5.27	7.80	6.31
20	0.112	0.117	5.31	7.17	4.81
21	0.122	0.128	5.20	6.39	3.56
22	0.134	0.141	4.96	5.56	2.57
23	0.148	0.155	4.68	4.78	1.83
24	0.162	0.170	4.42	4.11	1.31
25	0.178	0.186	4.17	3.53	0.93
26	0.195	0.205	3.93	3.03	0.66
27	0.214	0.225	3.65	2.56	0.47
28	0.235	0.247	3.31	2.12	0.32
29	0.258	0.271	2.86	1.67	0.21
30	0.284	0.297	2.33	1.24	0.13
31	0.311	0.326	1.72	0.83	0.072
32	0.342	0.358	1.13	0.50	0.036
33	0.375	0.393	0.69	0.28	0.016
34	0.412	0.431	0.42	0.15	0.0076
35	0.452	0.474	0.36	0.12	0.0049
36	0.496	0.520	0.42	0.13	0.0043
37	0.545	0.571	0.64	0.18	0.0050
38	0.598	0.627	1.07	0.27	0.0063
39	0.656	0.688	1.57	0.36	0.0070
40	0.721	0.755	2.14	0.45	0.0072
41	0.791	0.829	2.61	0.50	0.0066
42	0.868	0.910	2.87	0.50	0.0055
43	0.953	0.999	2.91	0.46	0.0042
44	1.047	1.097	2.66	0.38	0.0029
45	1.149	1.204	2.13	0.28	0.0018

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.55	0.19	0.00097
47	1.385	1.451	1.09	0.12	0.00052
48	1.520	1.592	0.73	0.072	0.00026
49	1.668	1.748	0.56	0.050	0.00015
50	1.832	1.919	0.40	0.033	0.000083
51	2.011	2.107	0.27	0.020	0.000041
52	2.207	2.313	0.17	0.012	0.000020
53	2.423	2.539	0.070	0.0044	0.000006
54	2.660	2.787	0.021	0.0012	0.000001
55	2.920	3.059	0.0042	0.00022	2.14E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

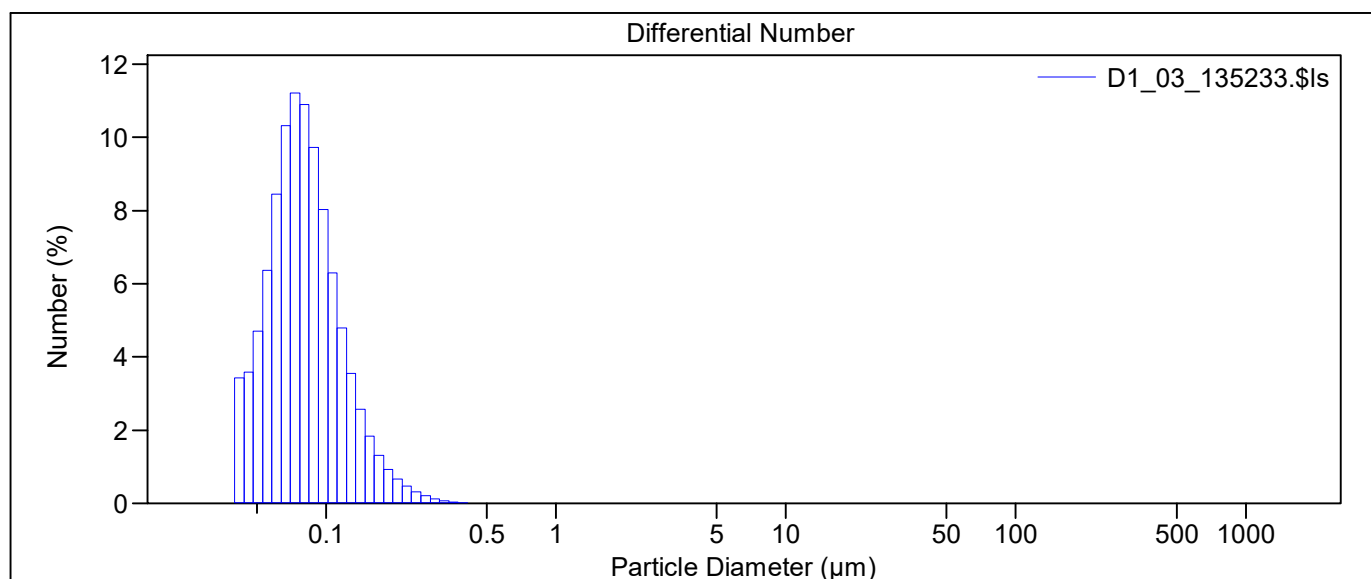
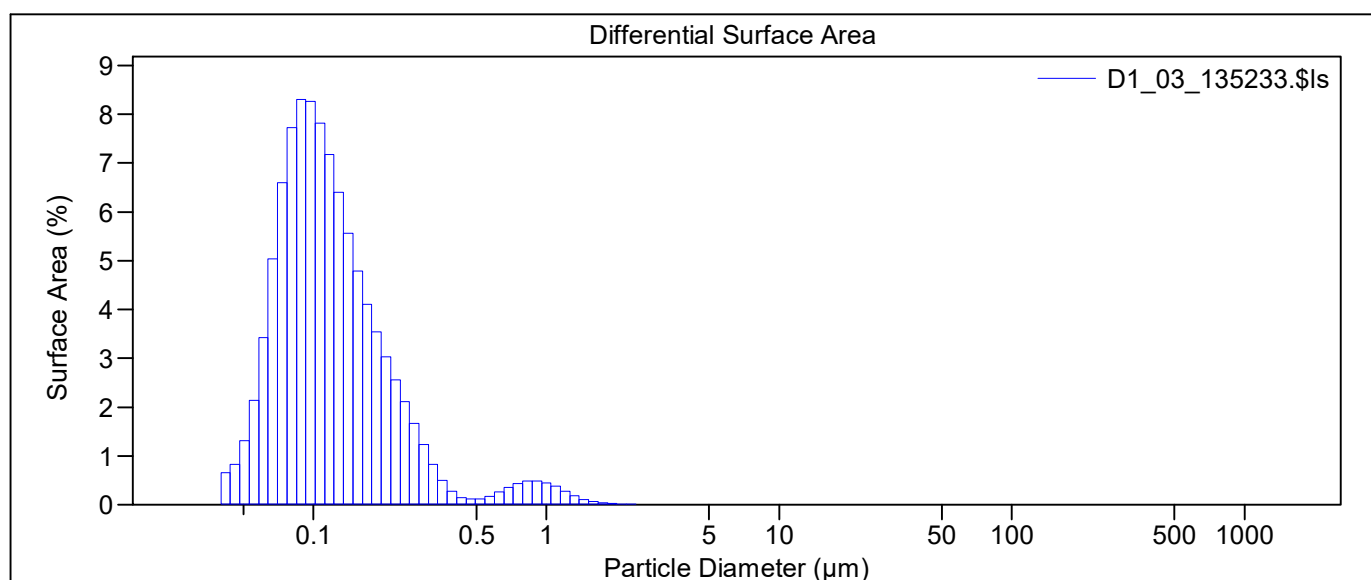
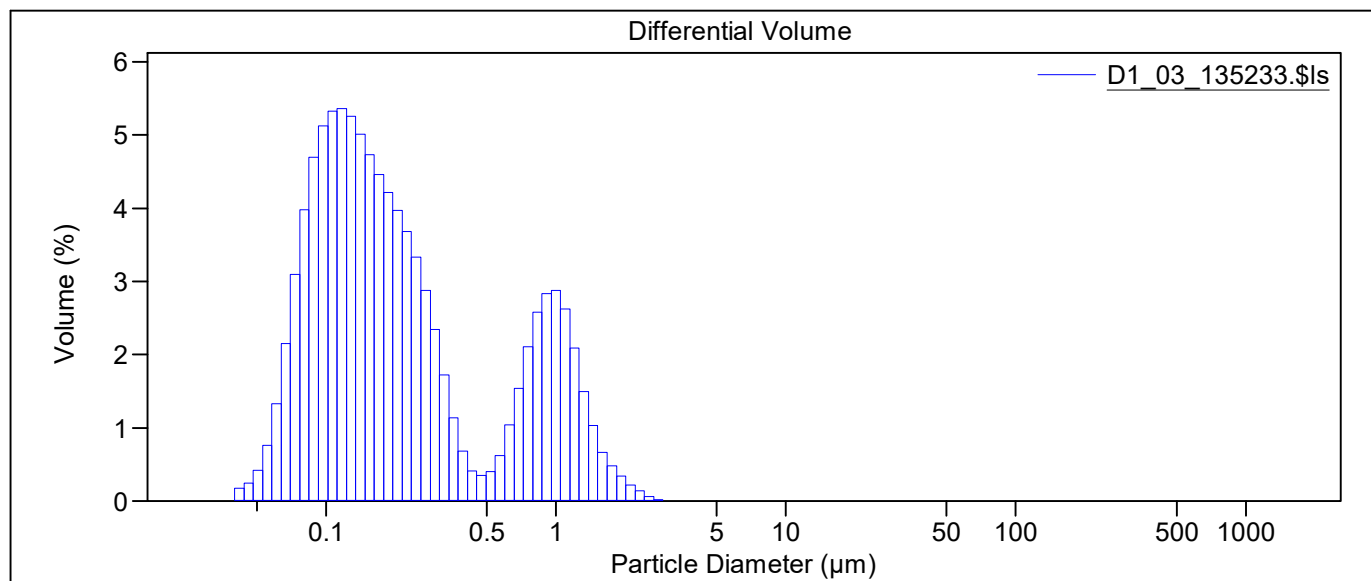
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D1\D1_03_135233.\$ls		
	D1_03_135233.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.84%		
LS 13 320	Universal Liquid Module		
Start time:	13:50 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_03_135233.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.409 µm
Mean:	0.360 µm		Variance:	0.167 µm ²
Median:	0.170 µm		C.V.:	114%
Mean/Median ratio:	2.113		Skewness:	1.859 Right skewed
Mode:	0.117 µm		Kurtosis:	3.148 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.107 µm	0.170 µm	0.363 µm	1.019 µm

Surface Area Statistics (Arithmetic)			D1_03_135233.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.178 µm
Mean:	0.156 µm		Variance:	0.032 µm ²
Median:	0.109 µm		C.V.:	114%
Mean/Median ratio:	1.436		Skewness:	4.871 Right skewed
Mode:	0.088 µm		Kurtosis:	29.43 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.159 µm	0.243 µm

Number Statistics (Arithmetic)			D1_03_135233.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.5%
Mean/Median ratio:	1.110		Skewness:	5.408 Right skewed
Mode:	0.073 μm		Kurtosis:	95.82 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.24	0.83	3.59
11	0.048	0.050	0.42	1.31	4.71
12	0.053	0.055	0.76	2.14	6.37
13	0.058	0.061	1.33	3.42	8.45
14	0.064	0.067	2.15	5.04	10.3
15	0.070	0.073	3.09	6.59	11.2
16	0.077	0.080	3.98	7.72	10.9
17	0.084	0.088	4.69	8.30	9.72
18	0.093	0.097	5.13	8.27	8.03
19	0.102	0.106	5.32	7.82	6.30
20	0.112	0.117	5.36	7.18	4.80
21	0.122	0.128	5.26	6.40	3.56
22	0.134	0.141	5.02	5.57	2.56
23	0.148	0.155	4.73	4.78	1.83
24	0.162	0.170	4.46	4.11	1.30
25	0.178	0.186	4.22	3.54	0.93
26	0.195	0.205	3.97	3.03	0.66
27	0.214	0.225	3.68	2.56	0.46
28	0.235	0.247	3.33	2.11	0.32
29	0.258	0.271	2.87	1.66	0.21
30	0.284	0.297	2.34	1.23	0.13
31	0.311	0.326	1.72	0.83	0.071
32	0.342	0.358	1.13	0.50	0.035
33	0.375	0.393	0.68	0.27	0.016
34	0.412	0.431	0.41	0.15	0.0074
35	0.452	0.474	0.35	0.11	0.0047
36	0.496	0.520	0.40	0.12	0.0041
37	0.545	0.571	0.62	0.17	0.0048
38	0.598	0.627	1.04	0.26	0.0061
39	0.656	0.688	1.54	0.35	0.0068
40	0.721	0.755	2.11	0.44	0.0070
41	0.791	0.829	2.58	0.49	0.0065
42	0.868	0.910	2.83	0.49	0.0054
43	0.953	0.999	2.88	0.45	0.0041
44	1.047	1.097	2.62	0.37	0.0028
45	1.149	1.204	2.09	0.27	0.0017
46	1.261	1.321	1.50	0.18	0.00093
47	1.385	1.451	1.03	0.11	0.00048
48	1.520	1.592	0.66	0.065	0.00023
49	1.668	1.748	0.48	0.043	0.00013
50	1.832	1.919	0.34	0.028	0.000069
51	2.011	2.107	0.22	0.016	0.000033
52	2.207	2.313	0.14	0.0094	0.000016
53	2.423	2.539	0.057	0.0035	0.000005
54	2.660	2.787	0.017	0.00095	0.000001
55	2.920	3.059	0.0036	0.00018	1.79E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

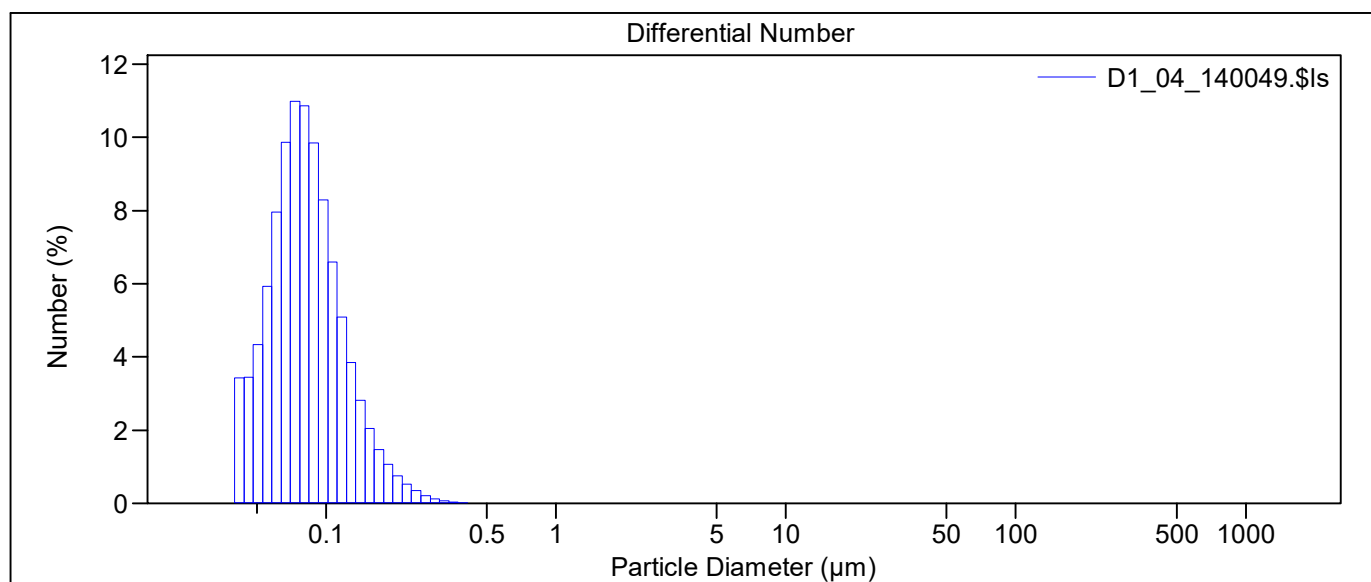
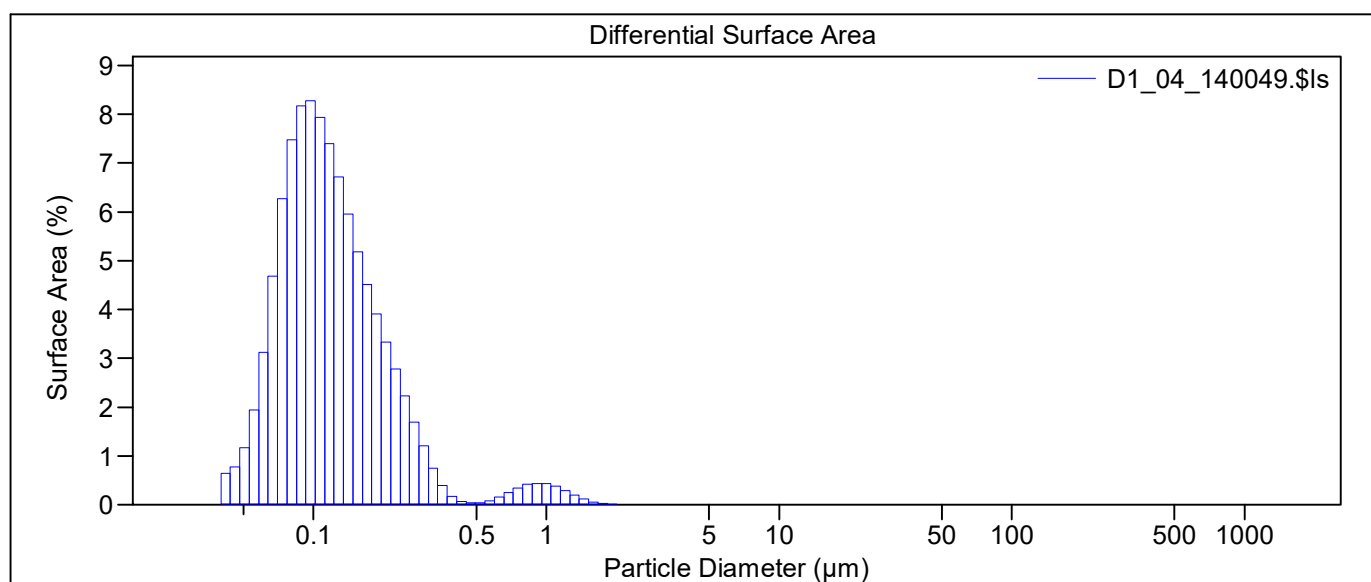
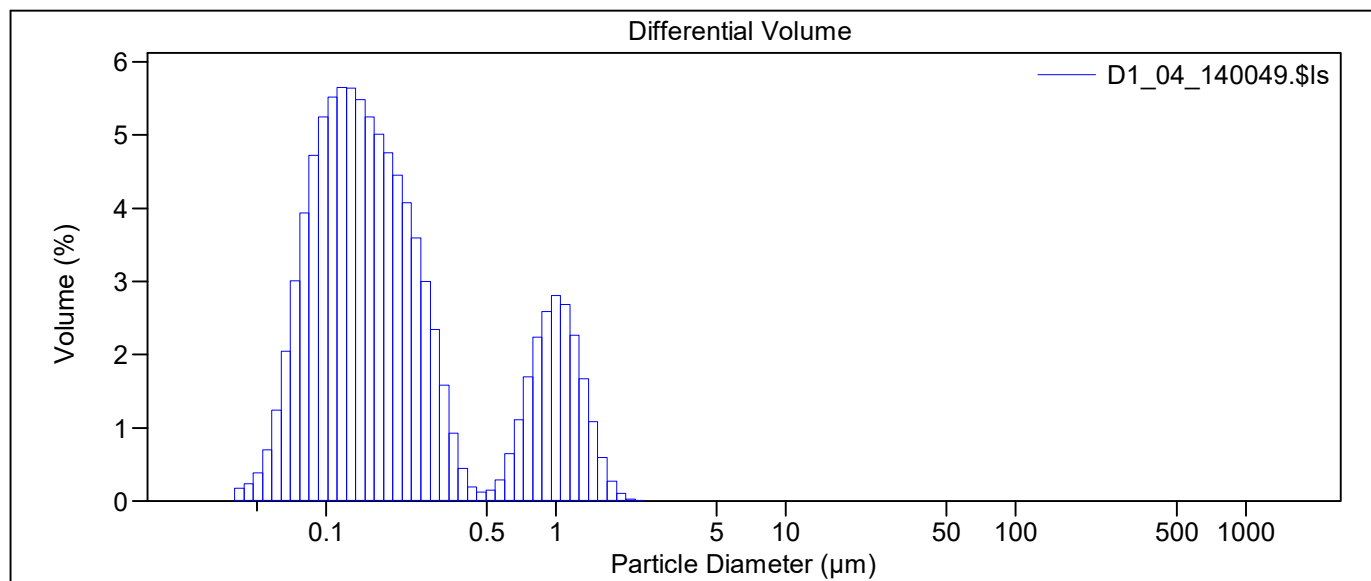
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D1\D1_04_140049.\$ls		
	D1_04_140049.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.38%		
LS 13 320	Universal Liquid Module		
Start time:	13:59 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	72%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_04_140049.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.377 μm
Mean:	0.333 μm		Variance:	0.142 μm ²
Median:	0.164 μm		C.V.:	113%
Mean/Median ratio:	2.024		Skewness:	1.774 Right skewed
Mode:	0.117 μm		Kurtosis:	2.074 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.108 μm	0.164 μm	0.294 μm	1.004 μm

Surface Area Statistics (Arithmetic)			D1_04_140049.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.166 μm
Mean:	0.153 μm		Variance:	0.028 μm ²
Median:	0.111 μm		C.V.:	108%
Mean/Median ratio:	1.378		Skewness:	4.933 Right skewed
Mode:	0.097 μm		Kurtosis:	28.40 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.111 μm	0.160 μm	0.234 μm

Number Statistics (Arithmetic)			D1_04_140049.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.8%
Mean/Median ratio:	1.108		Skewness:	4.877 Right skewed
Mode:	0.073 μm		Kurtosis:	83.11 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.43
10	0.044	0.046	0.23	0.77	3.45
11	0.048	0.050	0.39	1.17	4.34
12	0.053	0.055	0.70	1.94	5.93
13	0.058	0.061	1.24	3.13	7.96
14	0.064	0.067	2.04	4.68	9.87
15	0.070	0.073	3.01	6.27	11.0
16	0.077	0.080	3.93	7.47	10.9
17	0.084	0.088	4.72	8.17	9.85
18	0.093	0.097	5.25	8.28	8.29
19	0.102	0.106	5.52	7.93	6.59
20	0.112	0.117	5.65	7.39	5.10
21	0.122	0.128	5.64	6.72	3.84
22	0.134	0.141	5.48	5.95	2.82
23	0.148	0.155	5.25	5.19	2.04
24	0.162	0.170	5.01	4.52	1.48
25	0.178	0.186	4.76	3.91	1.06
26	0.195	0.205	4.45	3.33	0.75
27	0.214	0.225	4.08	2.78	0.52
28	0.235	0.247	3.60	2.23	0.35
29	0.258	0.271	3.00	1.69	0.22
30	0.284	0.297	2.35	1.21	0.13
31	0.311	0.326	1.58	0.74	0.066
32	0.342	0.358	0.93	0.40	0.029
33	0.375	0.393	0.45	0.17	0.011
34	0.412	0.431	0.19	0.067	0.0034
35	0.452	0.474	0.13	0.041	0.0017
36	0.496	0.520	0.14	0.043	0.0015
37	0.545	0.571	0.29	0.078	0.0023
38	0.598	0.627	0.65	0.16	0.0038
39	0.656	0.688	1.11	0.25	0.0049
40	0.721	0.755	1.70	0.34	0.0057
41	0.791	0.829	2.24	0.41	0.0057
42	0.868	0.910	2.59	0.44	0.0050
43	0.953	0.999	2.81	0.43	0.0041
44	1.047	1.097	2.68	0.37	0.0029
45	1.149	1.204	2.27	0.29	0.0019

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.67	0.19	0.0010
47	1.385	1.451	1.09	0.11	0.00051
48	1.520	1.592	0.59	0.057	0.00021
49	1.668	1.748	0.27	0.023	0.000072
50	1.832	1.919	0.10	0.0082	0.000021
51	2.011	2.107	0.027	0.0020	0.000004
52	2.207	2.313	0.0053	0.00035	0.000001
53	2.423	2.539	0.00057	0.000035	5.04E-8
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

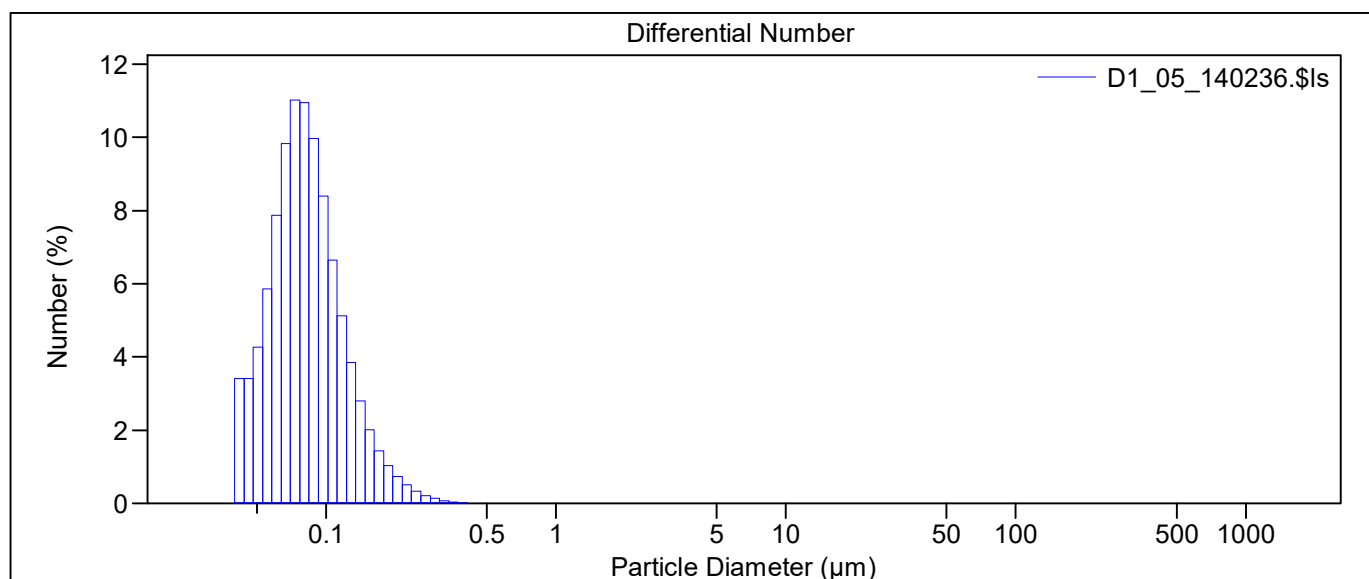
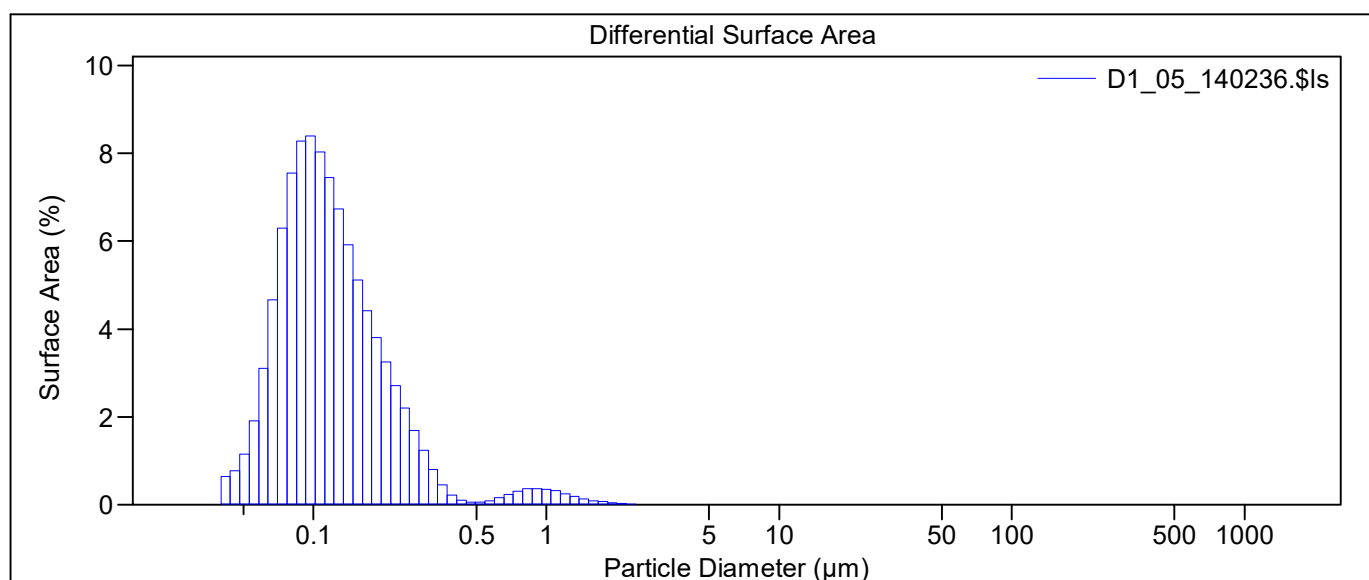
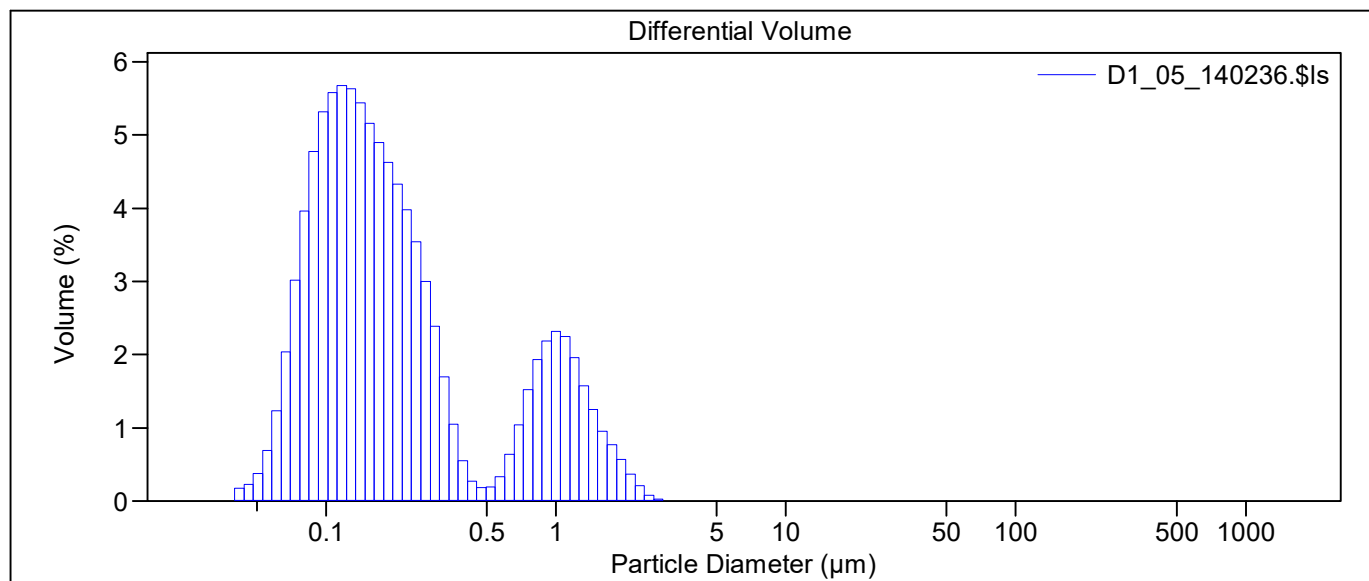
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_05_140236.\$ls		
	D1_05_140236.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.94%		
LS 13 320	Universal Liquid Module		
Start time:	14:00 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	75%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_05_140236.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.430 μm
Mean:	0.352 μm		Variance:	0.185 μm ²
Median:	0.164 μm		C.V.:	122%
Mean/Median ratio:	2.142		Skewness:	2.093 Right skewed
Mode:	0.117 μm		Kurtosis:	3.982 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.107 μm	0.164 μm	0.299 μm	1.047 μm

Surface Area Statistics (Arithmetic)			D1_05_140236.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.175 µm
Mean:	0.153 µm		Variance:	0.030 µm ²
Median:	0.111 µm		C.V.:	114%
Mean/Median ratio:	1.386		Skewness:	5.602 Right skewed
Mode:	0.097 µm		Kurtosis:	39.20 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.111 µm	0.159 µm	0.234 µm

Number Statistics (Arithmetic)			D1_05_140236.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.6%
Mean/Median ratio:	1.106		Skewness:	5.020 Right skewed
Mode:	0.073 μm		Kurtosis:	95.01 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



D1.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.42
10	0.044	0.046	0.23	0.77	3.41
11	0.048	0.050	0.38	1.15	4.26
12	0.053	0.055	0.69	1.91	5.85
13	0.058	0.061	1.23	3.10	7.88
14	0.064	0.067	2.03	4.67	9.84
15	0.070	0.073	3.02	6.30	11.0
16	0.077	0.080	3.96	7.55	11.0
17	0.084	0.088	4.77	8.28	9.97
18	0.093	0.097	5.32	8.40	8.39
19	0.102	0.106	5.58	8.03	6.66
20	0.112	0.117	5.68	7.45	5.13
21	0.122	0.128	5.63	6.73	3.84
22	0.134	0.141	5.44	5.92	2.80
23	0.148	0.155	5.16	5.11	2.01
24	0.162	0.170	4.90	4.42	1.44
25	0.178	0.186	4.63	3.81	1.03
26	0.195	0.205	4.33	3.25	0.73
27	0.214	0.225	3.98	2.72	0.51
28	0.235	0.247	3.55	2.20	0.34
29	0.258	0.271	3.00	1.70	0.22
30	0.284	0.297	2.39	1.23	0.13
31	0.311	0.326	1.70	0.80	0.071
32	0.342	0.358	1.05	0.45	0.033
33	0.375	0.393	0.55	0.21	0.013
34	0.412	0.431	0.27	0.096	0.0048
35	0.452	0.474	0.18	0.059	0.0025
36	0.496	0.520	0.19	0.057	0.0020
37	0.545	0.571	0.33	0.090	0.0026
38	0.598	0.627	0.64	0.16	0.0038
39	0.656	0.688	1.04	0.23	0.0046
40	0.721	0.755	1.53	0.31	0.0051
41	0.791	0.829	1.93	0.36	0.0049
42	0.868	0.910	2.19	0.37	0.0042
43	0.953	0.999	2.32	0.36	0.0034
44	1.047	1.097	2.24	0.31	0.0025
45	1.149	1.204	1.96	0.25	0.0016
46	1.261	1.321	1.58	0.18	0.00099
47	1.385	1.451	1.25	0.13	0.00059
48	1.520	1.592	0.95	0.092	0.00034
49	1.668	1.748	0.77	0.067	0.00021
50	1.832	1.919	0.57	0.045	0.00012
51	2.011	2.107	0.36	0.026	0.000056
52	2.207	2.313	0.21	0.014	0.000025
53	2.423	2.539	0.082	0.0049	0.000007
54	2.660	2.787	0.023	0.0013	0.000002
55	2.920	3.059	0.0041	0.00021	2.07E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

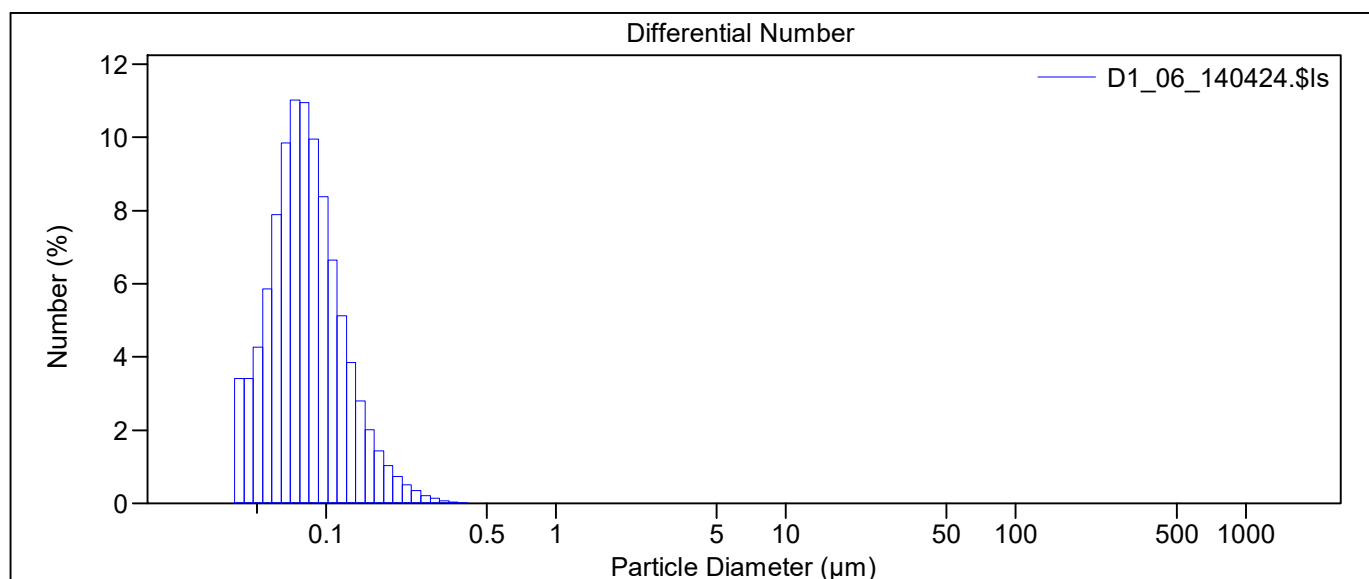
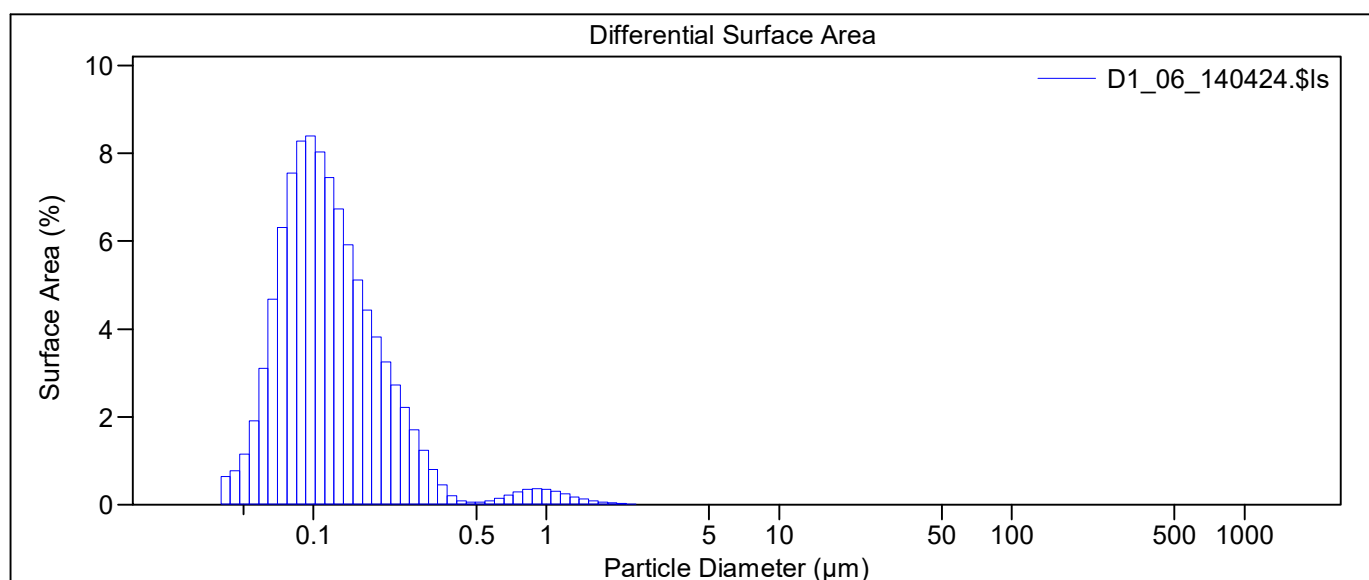
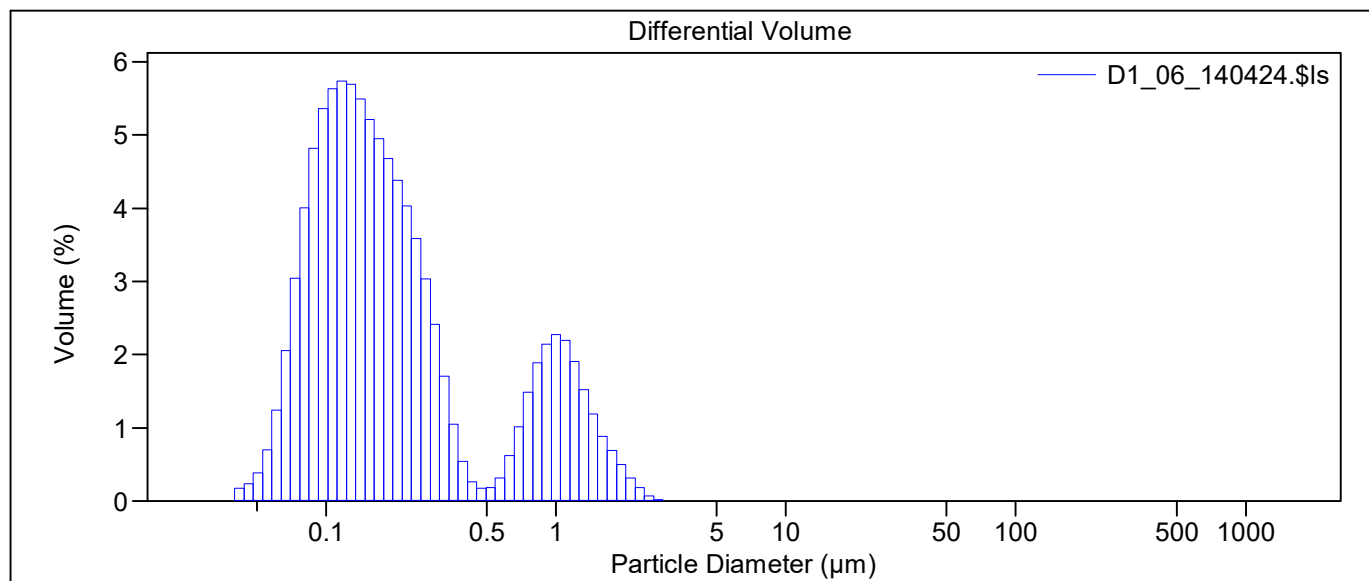
Beckman Coulter LS13320

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	D1_06_140424.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.99%		
LS 13 320	Universal Liquid Module		
Start time:	14:02 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	75%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_06_140424.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.418 µm
Mean:	0.342 µm		Variance:	0.175 µm ²
Median:	0.163 µm		C.V.:	122%
Mean/Median ratio:	2.104		Skewness:	2.136 Right skewed
Mode:	0.117 µm		Kurtosis:	4.201 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.107 µm	0.163 µm	0.290 µm	1.025 µm

Surface Area Statistics (Arithmetic)			D1_06_140424.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.170 µm
Mean:	0.152 µm		Variance:	0.029 µm ²
Median:	0.111 µm		C.V.:	112%
Mean/Median ratio:	1.375		Skewness:	5.635 Right skewed
Mode:	0.097 µm		Kurtosis:	39.82 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.111 µm	0.159 µm	0.233 µm

Number Statistics (Arithmetic)			D1_06_140424.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.4%
Mean/Median ratio:	1.106		Skewness:	4.893 Right skewed
Mode:	0.073 μm		Kurtosis:	90.70 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



D1.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.42
10	0.044	0.046	0.23	0.77	3.41
11	0.048	0.050	0.38	1.16	4.27
12	0.053	0.055	0.70	1.92	5.86
13	0.058	0.061	1.25	3.11	7.89
14	0.064	0.067	2.06	4.68	9.84
15	0.070	0.073	3.05	6.31	11.0
16	0.077	0.080	4.00	7.56	11.0
17	0.084	0.088	4.82	8.28	9.96
18	0.093	0.097	5.36	8.40	8.39
19	0.102	0.106	5.63	8.03	6.65
20	0.112	0.117	5.74	7.46	5.12
21	0.122	0.128	5.69	6.74	3.84
22	0.134	0.141	5.49	5.92	2.80
23	0.148	0.155	5.21	5.12	2.01
24	0.162	0.170	4.95	4.43	1.44
25	0.178	0.186	4.68	3.81	1.03
26	0.195	0.205	4.38	3.26	0.73
27	0.214	0.225	4.03	2.73	0.51
28	0.235	0.247	3.59	2.21	0.34
29	0.258	0.271	3.04	1.70	0.22
30	0.284	0.297	2.42	1.24	0.13
31	0.311	0.326	1.71	0.80	0.070
32	0.342	0.358	1.05	0.45	0.033
33	0.375	0.393	0.55	0.21	0.013
34	0.412	0.431	0.26	0.092	0.0046
35	0.452	0.474	0.18	0.056	0.0024
36	0.496	0.520	0.18	0.054	0.0019
37	0.545	0.571	0.32	0.085	0.0024
38	0.598	0.627	0.62	0.15	0.0036
39	0.656	0.688	1.01	0.22	0.0044
40	0.721	0.755	1.48	0.30	0.0049
41	0.791	0.829	1.89	0.35	0.0047
42	0.868	0.910	2.14	0.36	0.0041
43	0.953	0.999	2.27	0.35	0.0033
44	1.047	1.097	2.20	0.30	0.0024
45	1.149	1.204	1.91	0.24	0.0016

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.52	0.17	0.00094
47	1.385	1.451	1.19	0.12	0.00056
48	1.520	1.592	0.88	0.084	0.00031
49	1.668	1.748	0.69	0.060	0.00018
50	1.832	1.919	0.50	0.039	0.00010
51	2.011	2.107	0.31	0.023	0.000048
52	2.207	2.313	0.18	0.012	0.000021
53	2.423	2.539	0.069	0.0041	0.000006
54	2.660	2.787	0.019	0.0010	0.000001
55	2.920	3.059	0.0035	0.00017	1.74E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

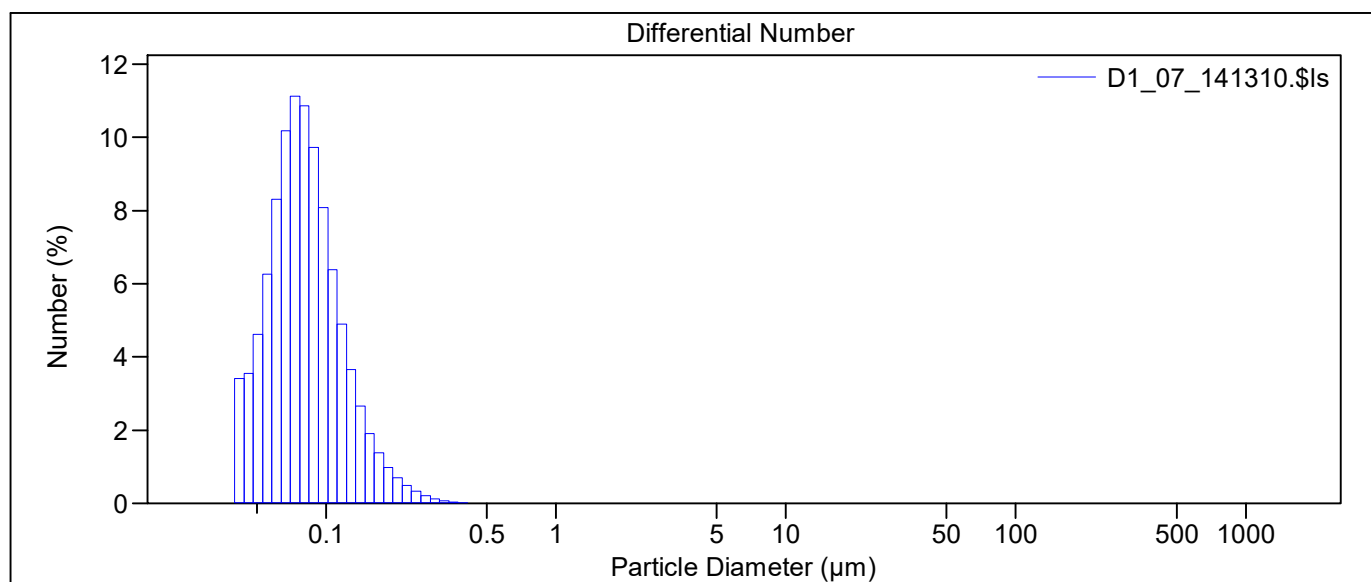
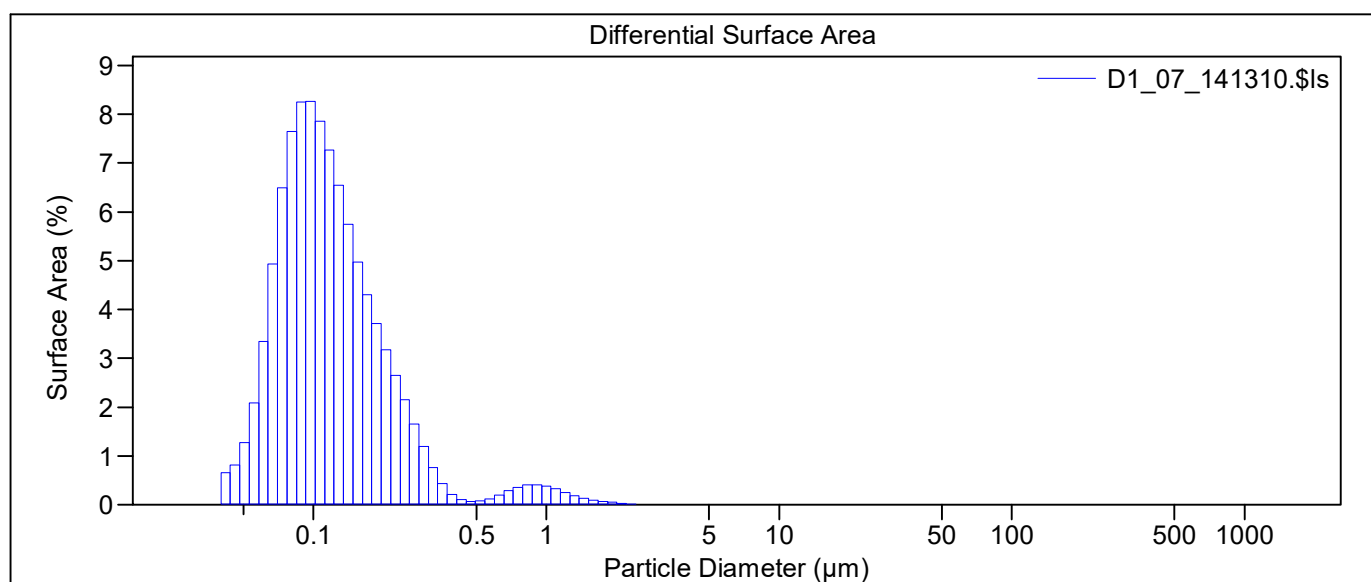
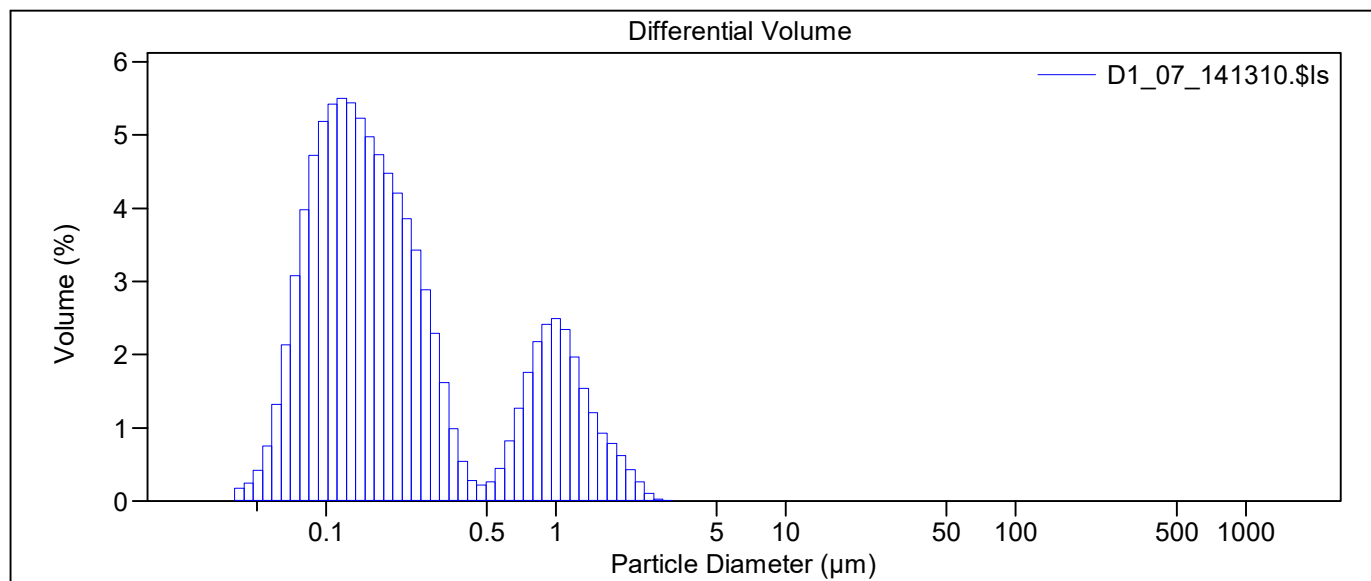
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_07_141310.\$ls		
	D1_07_141310.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.89%		
LS 13 320	Universal Liquid Module		
Start time:	14:11 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_07_141310.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.441 μm
Mean:	0.365 μm		Variance:	0.195 μm ²
Median:	0.167 μm		C.V.:	121%
Mean/Median ratio:	2.187		Skewness:	2.032 Right skewed
Mode:	0.117 μm		Kurtosis:	3.801 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.167 μm	0.321 μm	1.057 μm

Surface Area Statistics (Arithmetic)			D1_07_141310.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.180 µm
Mean:	0.155 µm		Variance:	0.032 µm ²
Median:	0.110 µm		C.V.:	117%
Mean/Median ratio:	1.411		Skewness:	5.448 Right skewed
Mode:	0.097 µm		Kurtosis:	37.23 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.159 µm	0.235 µm

Number Statistics (Arithmetic)			D1_07_141310.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	46.0%
Mean/Median ratio:	1.109		Skewness:	5.279 Right skewed
Mode:	0.073 μm		Kurtosis:	101.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D1.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.24	0.81	3.54
11	0.048	0.050	0.42	1.28	4.61
12	0.053	0.055	0.75	2.09	6.26
13	0.058	0.061	1.32	3.34	8.31
14	0.064	0.067	2.13	4.94	10.2
15	0.070	0.073	3.08	6.50	11.1
16	0.077	0.080	3.98	7.64	10.9
17	0.084	0.088	4.72	8.26	9.73
18	0.093	0.097	5.19	8.27	8.09
19	0.102	0.106	5.42	7.86	6.38
20	0.112	0.117	5.50	7.27	4.90
21	0.122	0.128	5.44	6.55	3.66
22	0.134	0.141	5.23	5.74	2.66
23	0.148	0.155	4.98	4.97	1.91
24	0.162	0.170	4.73	4.31	1.38
25	0.178	0.186	4.48	3.72	0.98
26	0.195	0.205	4.20	3.18	0.70
27	0.214	0.225	3.86	2.65	0.48
28	0.235	0.247	3.43	2.15	0.33
29	0.258	0.271	2.89	1.65	0.21
30	0.284	0.297	2.30	1.19	0.12
31	0.311	0.326	1.62	0.77	0.066
32	0.342	0.358	0.99	0.43	0.031
33	0.375	0.393	0.54	0.21	0.013
34	0.412	0.431	0.28	0.10	0.0050
35	0.452	0.474	0.22	0.071	0.0029
36	0.496	0.520	0.26	0.078	0.0027
37	0.545	0.571	0.45	0.12	0.0034
38	0.598	0.627	0.82	0.20	0.0047
39	0.656	0.688	1.27	0.29	0.0055
40	0.721	0.755	1.76	0.36	0.0058
41	0.791	0.829	2.18	0.41	0.0054
42	0.868	0.910	2.42	0.41	0.0046
43	0.953	0.999	2.50	0.39	0.0036
44	1.047	1.097	2.35	0.33	0.0025
45	1.149	1.204	1.97	0.25	0.0016
46	1.261	1.321	1.54	0.18	0.00095
47	1.385	1.451	1.20	0.13	0.00056
48	1.520	1.592	0.93	0.090	0.00033
49	1.668	1.748	0.79	0.070	0.00021
50	1.832	1.919	0.62	0.050	0.00013
51	2.011	2.107	0.43	0.031	0.000065
52	2.207	2.313	0.26	0.018	0.000030
53	2.423	2.539	0.11	0.0065	0.000009
54	2.660	2.787	0.030	0.0017	0.000002
55	2.920	3.059	0.0054	0.00027	2.68E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

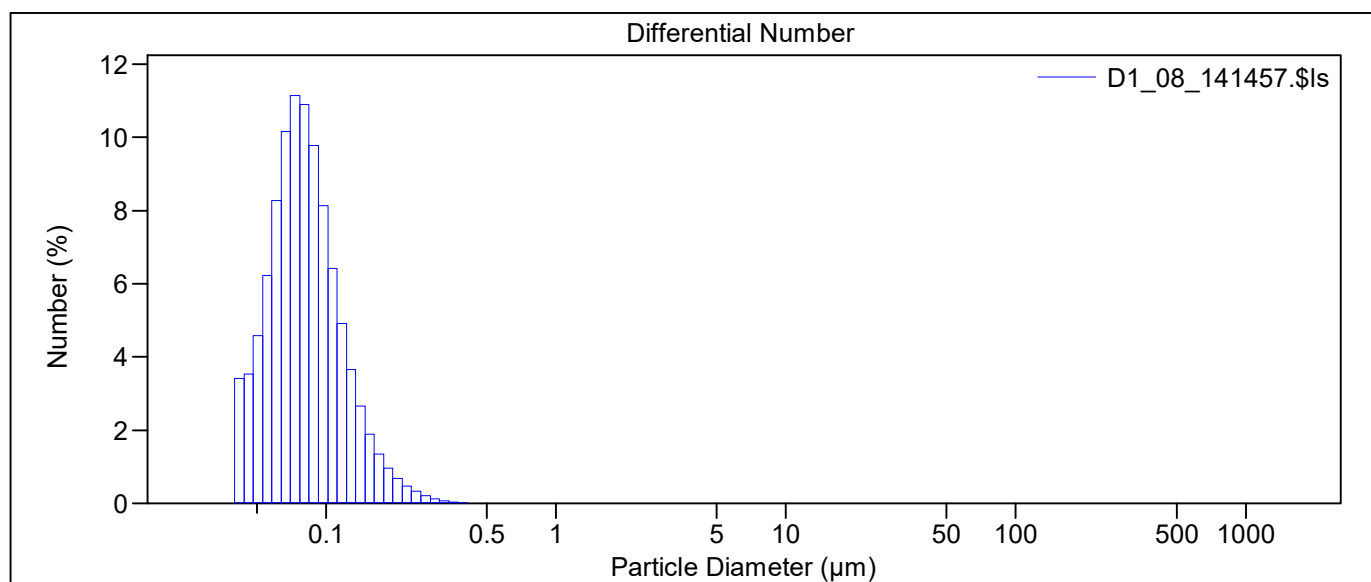
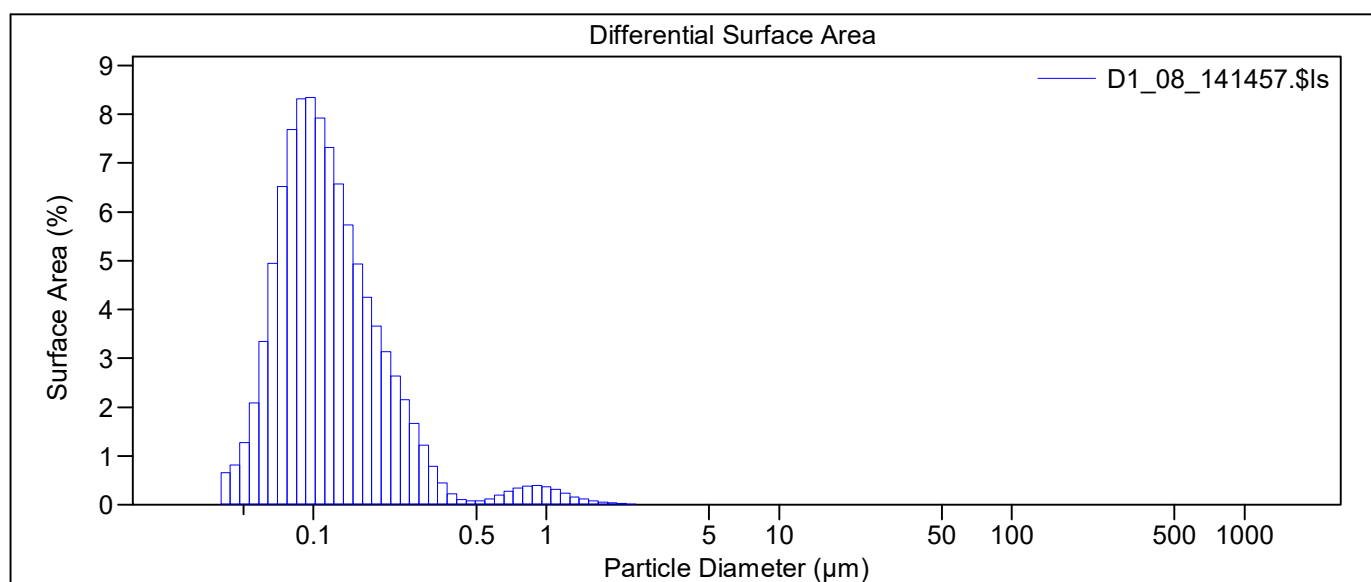
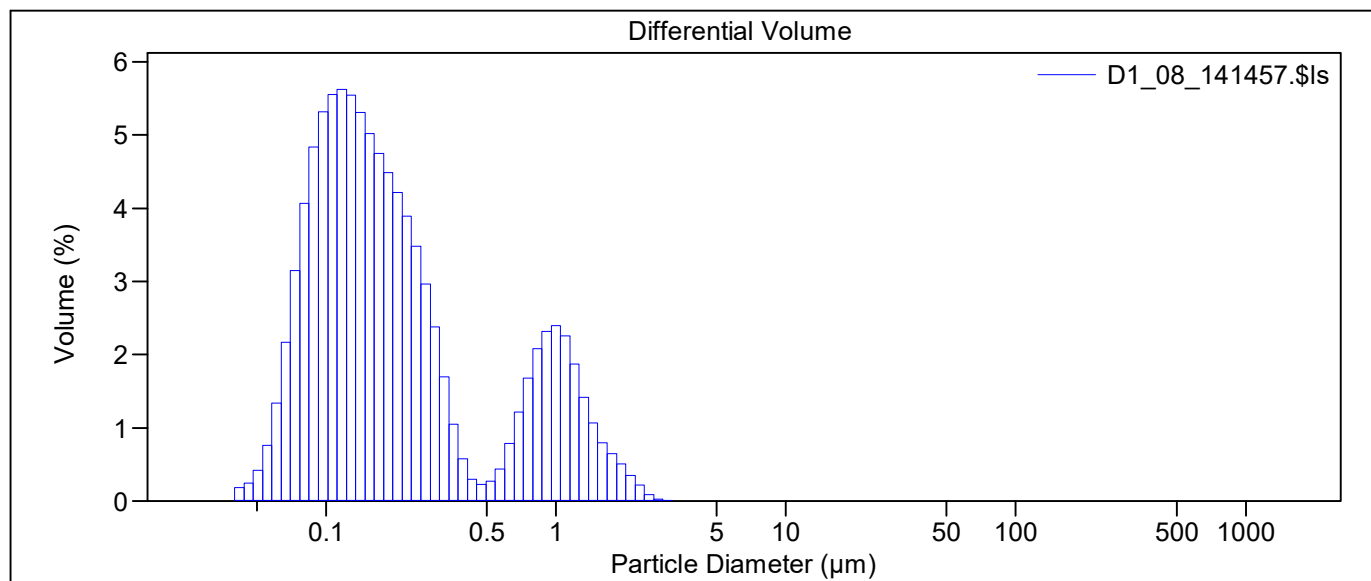
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D1\D1_08_141457.\$ls		
	D1_08_141457.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.00%		
LS 13 320	Universal Liquid Module		
Start time:	14:13 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	61%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_08_141457.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.420 µm
Mean:	0.347 µm		Variance:	0.177 µm ²
Median:	0.164 µm		C.V.:	121%
Mean/Median ratio:	2.123		Skewness:	2.121 Right skewed
Mode:	0.117 µm		Kurtosis:	4.292 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.164 µm	0.303 µm	1.017 µm

Surface Area Statistics (Arithmetic)			D1_08_141457.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.172 μm
Mean:	0.152 μm		Variance:	0.030 μm ²
Median:	0.109 μm		C.V.:	113%
Mean/Median ratio:	1.393		Skewness:	5.510 Right skewed
Mode:	0.097 μm		Kurtosis:	38.52 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.158 μm	0.234 μm

Number Statistics (Arithmetic)			D1_08_141457.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.7%
Mean/Median ratio:	1.108		Skewness:	5.073 Right skewed
Mode:	0.073 μm		Kurtosis:	93.90 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.25	0.81	3.53
11	0.048	0.050	0.42	1.27	4.58
12	0.053	0.055	0.76	2.08	6.22
13	0.058	0.061	1.34	3.34	8.28
14	0.064	0.067	2.17	4.94	10.2
15	0.070	0.073	3.15	6.52	11.1
16	0.077	0.080	4.07	7.69	10.9
17	0.084	0.088	4.83	8.32	9.78
18	0.093	0.097	5.32	8.34	8.13
19	0.102	0.106	5.55	7.93	6.42
20	0.112	0.117	5.63	7.32	4.92
21	0.122	0.128	5.54	6.57	3.66
22	0.134	0.141	5.31	5.74	2.65
23	0.148	0.155	5.02	4.94	1.89
24	0.162	0.170	4.75	4.25	1.35
25	0.178	0.186	4.48	3.66	0.97
26	0.195	0.205	4.22	3.14	0.69
27	0.214	0.225	3.89	2.64	0.48
28	0.235	0.247	3.48	2.15	0.32
29	0.258	0.271	2.96	1.67	0.21
30	0.284	0.297	2.38	1.22	0.13
31	0.311	0.326	1.69	0.79	0.068
32	0.342	0.358	1.05	0.44	0.032
33	0.375	0.393	0.58	0.22	0.013
34	0.412	0.431	0.30	0.11	0.0052
35	0.452	0.474	0.23	0.074	0.0030
36	0.496	0.520	0.27	0.079	0.0027
37	0.545	0.571	0.44	0.12	0.0033
38	0.598	0.627	0.79	0.19	0.0045
39	0.656	0.688	1.22	0.27	0.0052
40	0.721	0.755	1.68	0.34	0.0054
41	0.791	0.829	2.08	0.38	0.0051
42	0.868	0.910	2.32	0.39	0.0043
43	0.953	0.999	2.40	0.37	0.0034
44	1.047	1.097	2.25	0.31	0.0024
45	1.149	1.204	1.87	0.24	0.0015

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.42	0.16	0.00086
47	1.385	1.451	1.07	0.11	0.00049
48	1.520	1.592	0.79	0.076	0.00027
49	1.668	1.748	0.65	0.057	0.00017
50	1.832	1.919	0.51	0.040	0.00010
51	2.011	2.107	0.35	0.025	0.000052
52	2.207	2.313	0.22	0.014	0.000024
53	2.423	2.539	0.087	0.0052	0.000007
54	2.660	2.787	0.025	0.0014	0.000002
55	2.920	3.059	0.0044	0.00022	2.16E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

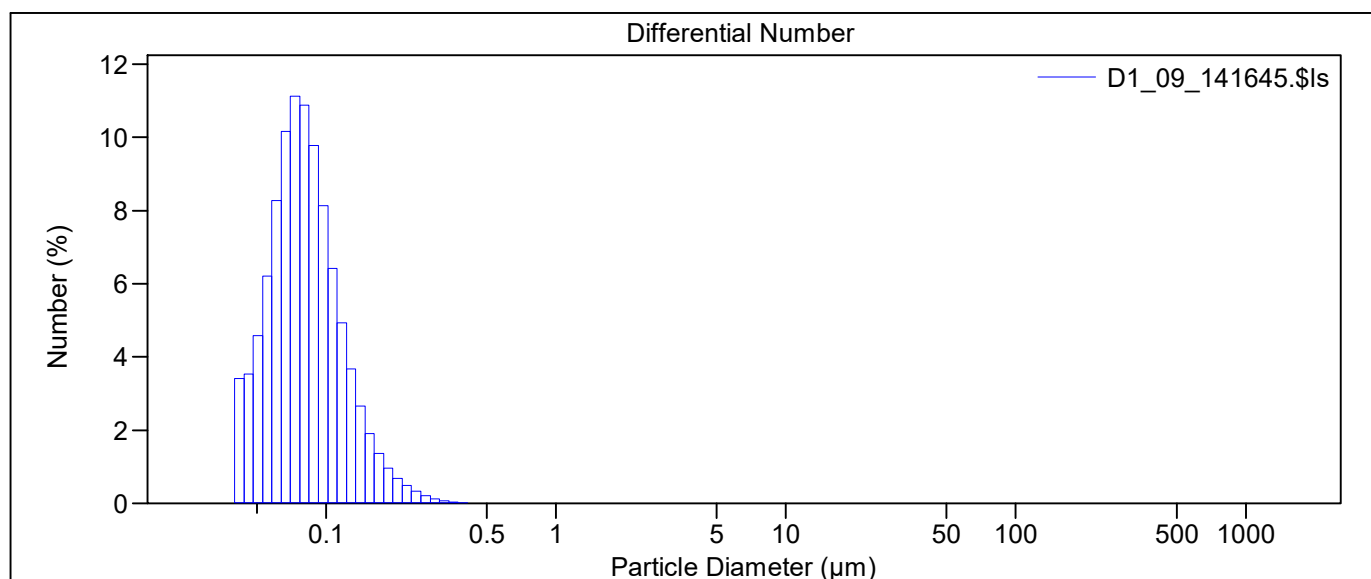
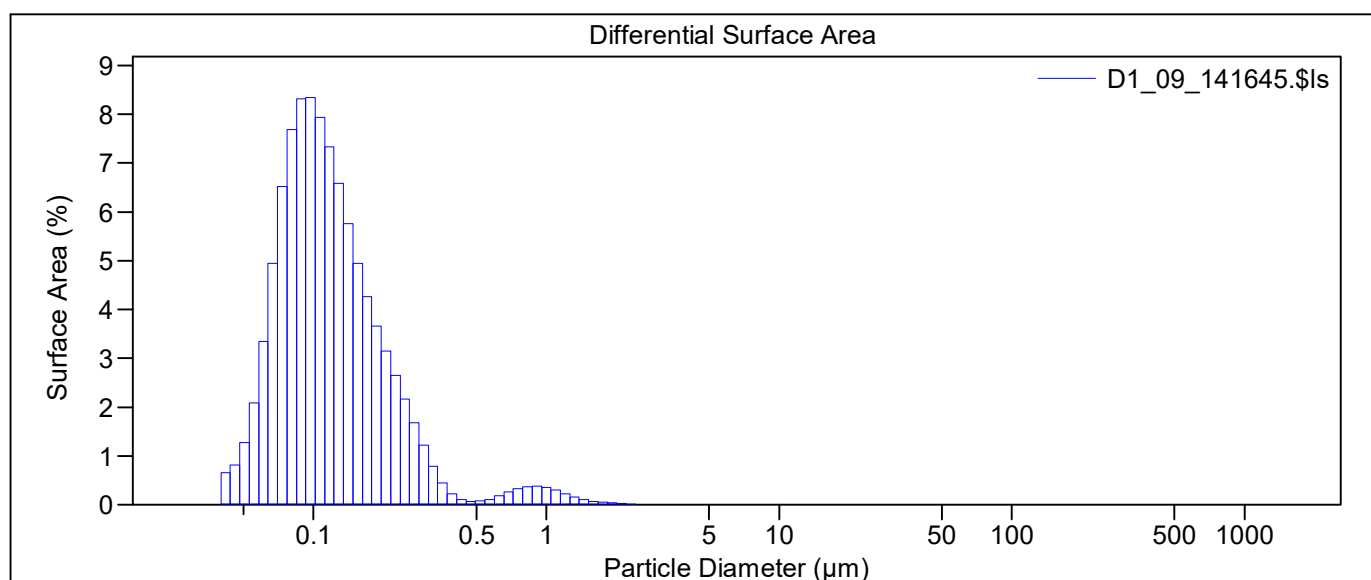
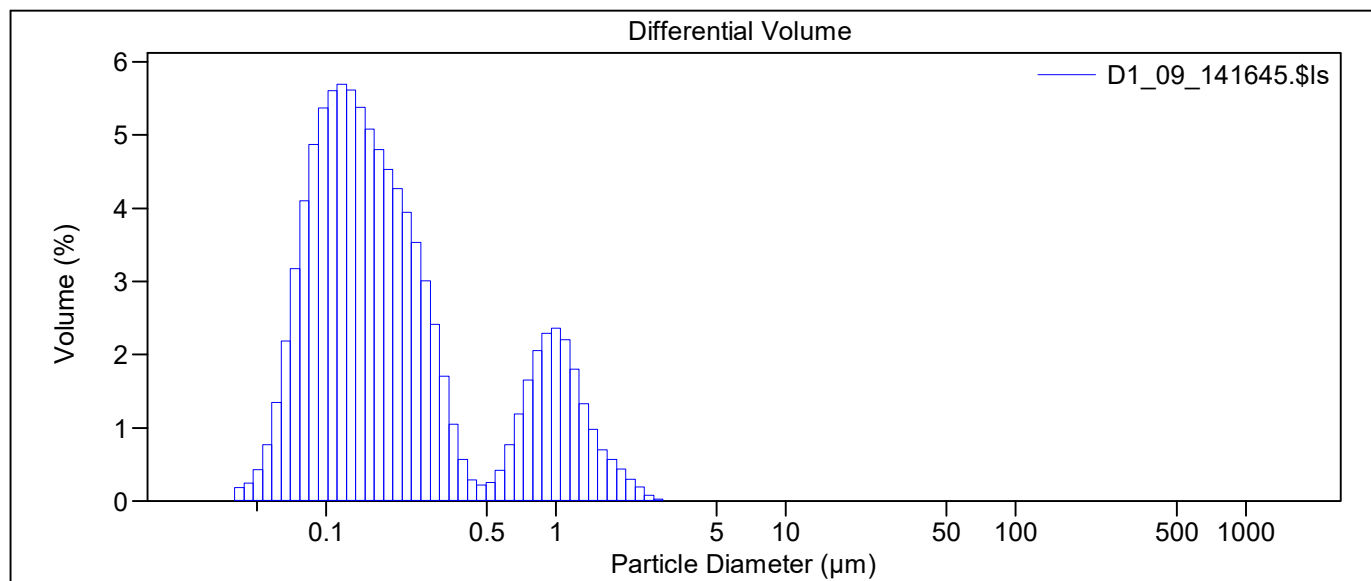
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_09_141645.\$ls		
	D1_09_141645.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.05%		
LS 13 320	Universal Liquid Module		
Start time:	14:15 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_09_141645.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%			
Mean:	0.337 μm	S.D.:	0.407 μm	
Median:	0.162 μm	Variance:	0.166 μm ²	
Mean/Median ratio:	2.080	C.V.:	121%	
Mode:	0.117 μm	Skewness:	2.175 Right skewed	
		Kurtosis:	4.616 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.162 μm	0.293 μm	0.992 μm

Surface Area Statistics (Arithmetic)			D1_09_141645.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.167 μm
Mean:	0.151 μm		Variance:	0.028 μm ²
Median:	0.109 μm		C.V.:	111%
Mean/Median ratio:	1.381		Skewness:	5.540 Right skewed
Mode:	0.097 μm		Kurtosis:	39.21 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.158 μm	0.233 μm

Number Statistics (Arithmetic)			D1_09_141645.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.5%
Mean/Median ratio:	1.108		Skewness:	4.931 Right skewed
Mode:	0.073 μm		Kurtosis:	89.02 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D1.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.81	3.53
11	0.048	0.050	0.43	1.27	4.58
12	0.053	0.055	0.77	2.08	6.22
13	0.058	0.061	1.35	3.34	8.28
14	0.064	0.067	2.19	4.94	10.2
15	0.070	0.073	3.17	6.52	11.1
16	0.077	0.080	4.10	7.69	10.9
17	0.084	0.088	4.88	8.32	9.77
18	0.093	0.097	5.37	8.34	8.13
19	0.102	0.106	5.61	7.94	6.43
20	0.112	0.117	5.69	7.34	4.93
21	0.122	0.128	5.61	6.59	3.67
22	0.134	0.141	5.38	5.76	2.66
23	0.148	0.155	5.08	4.95	1.90
24	0.162	0.170	4.80	4.27	1.36
25	0.178	0.186	4.53	3.67	0.97
26	0.195	0.205	4.27	3.15	0.69
27	0.214	0.225	3.95	2.65	0.48
28	0.235	0.247	3.53	2.16	0.33
29	0.258	0.271	3.01	1.68	0.21
30	0.284	0.297	2.42	1.23	0.13
31	0.311	0.326	1.71	0.79	0.068
32	0.342	0.358	1.05	0.44	0.032
33	0.375	0.393	0.57	0.22	0.013
34	0.412	0.431	0.29	0.10	0.0049
35	0.452	0.474	0.22	0.070	0.0029
36	0.496	0.520	0.26	0.074	0.0025
37	0.545	0.571	0.42	0.11	0.0031
38	0.598	0.627	0.77	0.19	0.0043
39	0.656	0.688	1.19	0.26	0.0051
40	0.721	0.755	1.65	0.33	0.0053
41	0.791	0.829	2.05	0.37	0.0050
42	0.868	0.910	2.29	0.38	0.0042
43	0.953	0.999	2.36	0.36	0.0033
44	1.047	1.097	2.20	0.30	0.0023
45	1.149	1.204	1.80	0.23	0.0014
46	1.261	1.321	1.33	0.15	0.00080
47	1.385	1.451	0.98	0.10	0.00044
48	1.520	1.592	0.70	0.066	0.00024
49	1.668	1.748	0.56	0.049	0.00015
50	1.832	1.919	0.44	0.035	0.000086
51	2.011	2.107	0.30	0.022	0.000044
52	2.207	2.313	0.19	0.012	0.000021
53	2.423	2.539	0.077	0.0046	0.000007
54	2.660	2.787	0.022	0.0012	0.000001
55	2.920	3.059	0.0040	0.00020	1.92E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

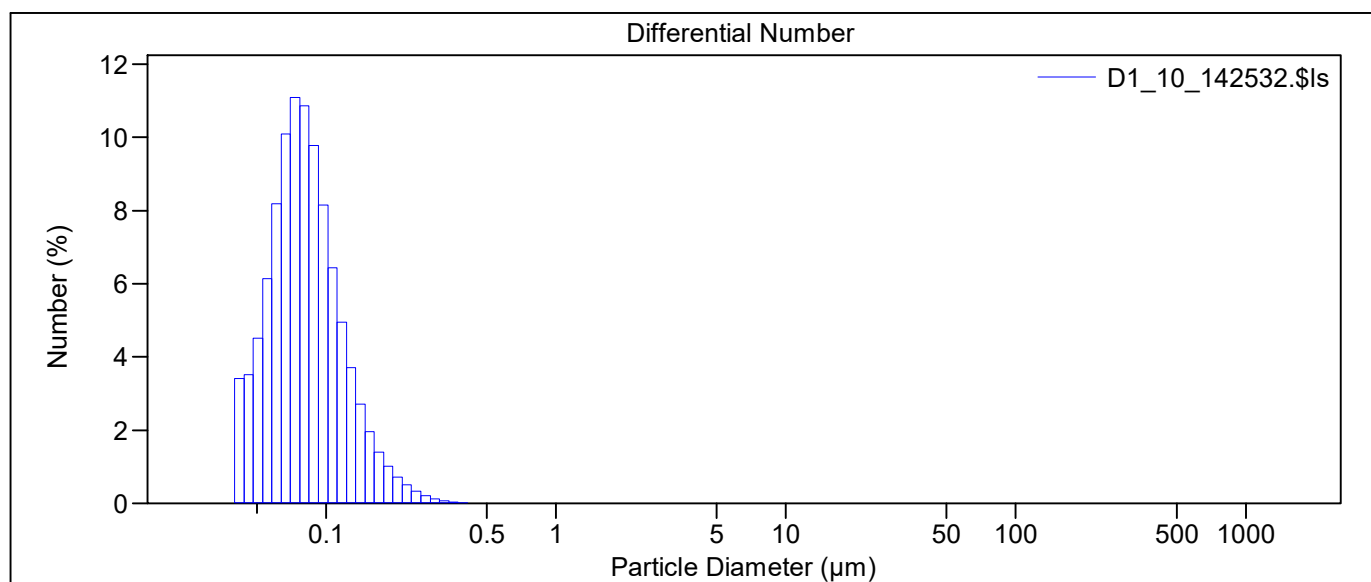
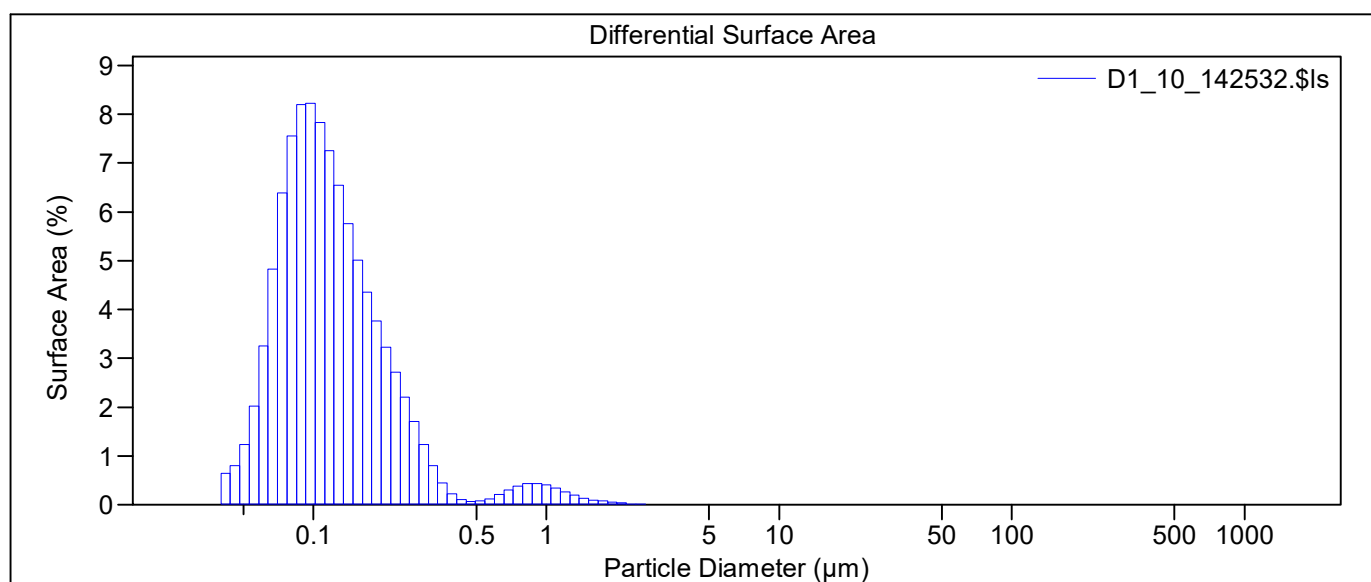
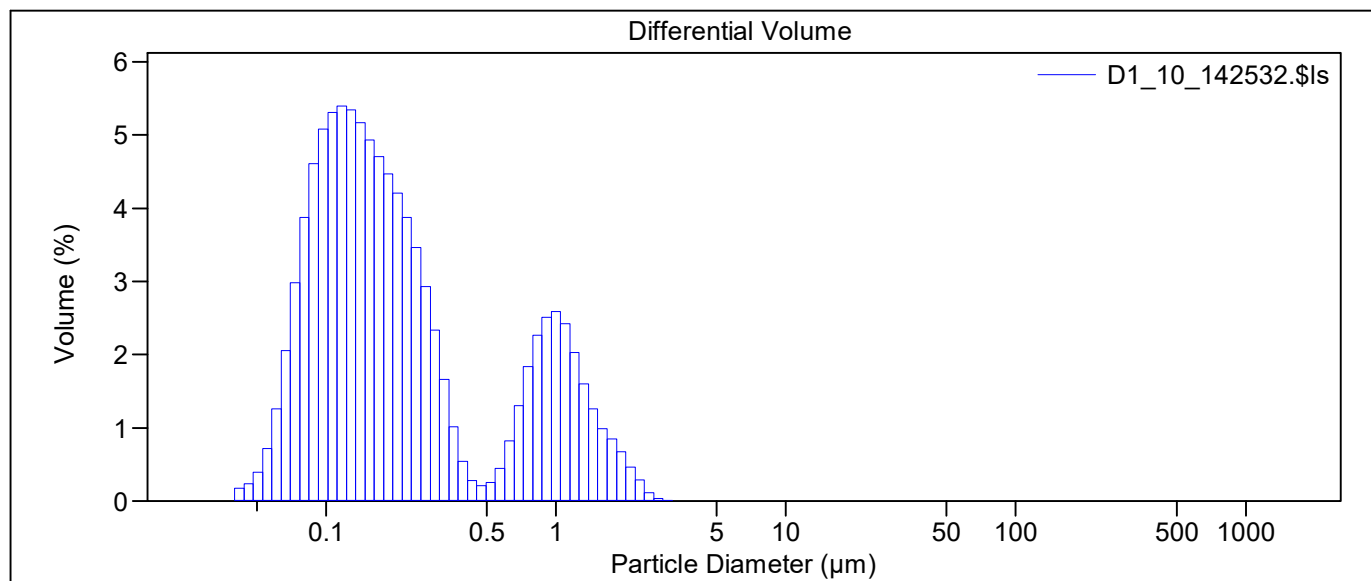
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_10_142532.\$ls		
	D1_10_142532.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.77%		
LS 13 320	Universal Liquid Module		
Start time:	14:23 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_10_142532.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.450 μm
Mean:	0.375 μm		Variance:	0.203 μm ²
Median:	0.170 μm		C.V.:	120%
Mean/Median ratio:	2.203		Skewness:	1.977 Right skewed
Mode:	0.117 μm		Kurtosis:	3.540 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.108 μm	0.170 μm	0.338 μm	1.078 μm

Surface Area Statistics (Arithmetic)			D1_10_142532.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.185 μm
Mean:	0.157 μm		Variance:	0.034 μm ²
Median:	0.110 μm		C.V.:	118%
Mean/Median ratio:	1.424		Skewness:	5.349 Right skewed
Mode:	0.097 μm		Kurtosis:	35.72 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.083 μm	0.110 μm	0.160 μm	0.239 μm

Number Statistics (Arithmetic)			D1_10_142532.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.041 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	46.3%
Mean/Median ratio:	1.110		Skewness:	5.369 Right skewed
Mode:	0.073 μm		Kurtosis:	103.4 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.42
10	0.044	0.046	0.23	0.80	3.51
11	0.048	0.050	0.40	1.24	4.52
12	0.053	0.055	0.71	2.03	6.15
13	0.058	0.061	1.26	3.25	8.19
14	0.064	0.067	2.05	4.83	10.1
15	0.070	0.073	2.99	6.40	11.1
16	0.077	0.080	3.87	7.56	10.9
17	0.084	0.088	4.61	8.19	9.78
18	0.093	0.097	5.08	8.23	8.15
19	0.102	0.106	5.31	7.84	6.44
20	0.112	0.117	5.40	7.26	4.95
21	0.122	0.128	5.35	6.55	3.70
22	0.134	0.141	5.17	5.76	2.71
23	0.148	0.155	4.93	5.01	1.95
24	0.162	0.170	4.70	4.35	1.41
25	0.178	0.186	4.47	3.77	1.01
26	0.195	0.205	4.21	3.23	0.72
27	0.214	0.225	3.88	2.71	0.50
28	0.235	0.247	3.46	2.21	0.34
29	0.258	0.271	2.93	1.70	0.22
30	0.284	0.297	2.34	1.24	0.13
31	0.311	0.326	1.66	0.80	0.070
32	0.342	0.358	1.02	0.45	0.032
33	0.375	0.393	0.54	0.22	0.013
34	0.412	0.431	0.28	0.10	0.0051
35	0.452	0.474	0.21	0.070	0.0029
36	0.496	0.520	0.25	0.076	0.0026
37	0.545	0.571	0.44	0.12	0.0035
38	0.598	0.627	0.82	0.21	0.0049
39	0.656	0.688	1.30	0.30	0.0059
40	0.721	0.755	1.84	0.38	0.0062
41	0.791	0.829	2.27	0.43	0.0058
42	0.868	0.910	2.51	0.43	0.0049
43	0.953	0.999	2.59	0.41	0.0038
44	1.047	1.097	2.42	0.35	0.0027
45	1.149	1.204	2.03	0.27	0.0017

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.60	0.19	0.0010
47	1.385	1.451	1.26	0.14	0.00061
48	1.520	1.592	0.98	0.097	0.00036
49	1.668	1.748	0.85	0.076	0.00023
50	1.832	1.919	0.67	0.055	0.00014
51	2.011	2.107	0.46	0.035	0.000073
52	2.207	2.313	0.29	0.020	0.000034
53	2.423	2.539	0.12	0.0072	0.000010
54	2.660	2.787	0.034	0.0019	0.000002
55	2.920	3.059	0.0060	0.00031	3.06E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

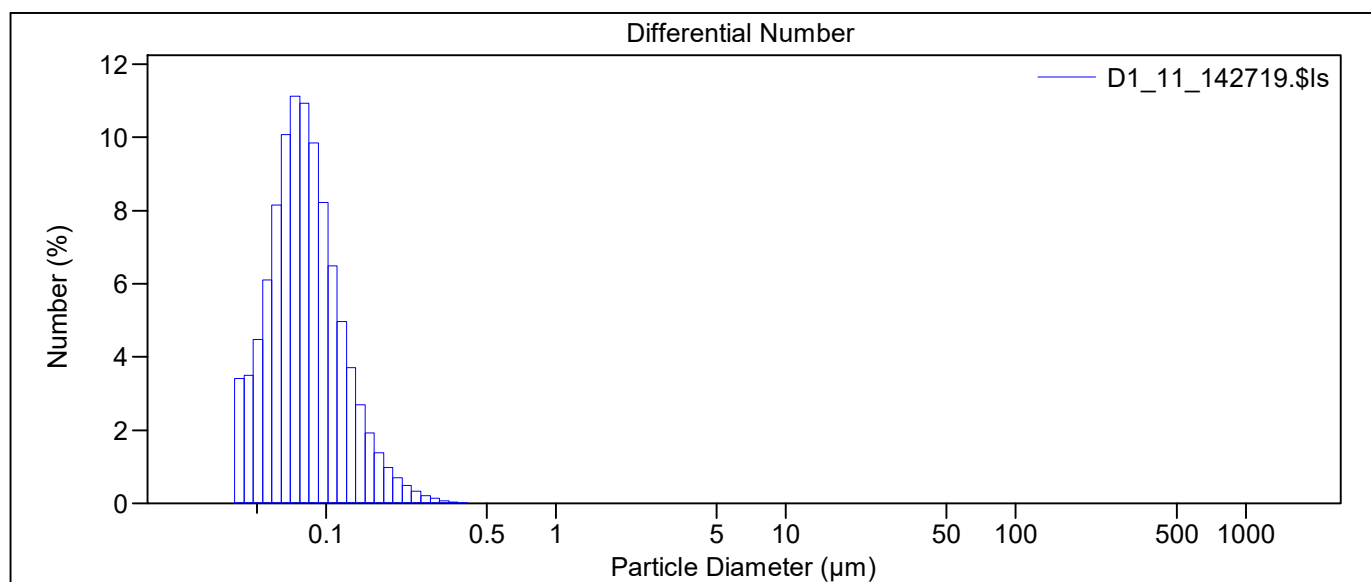
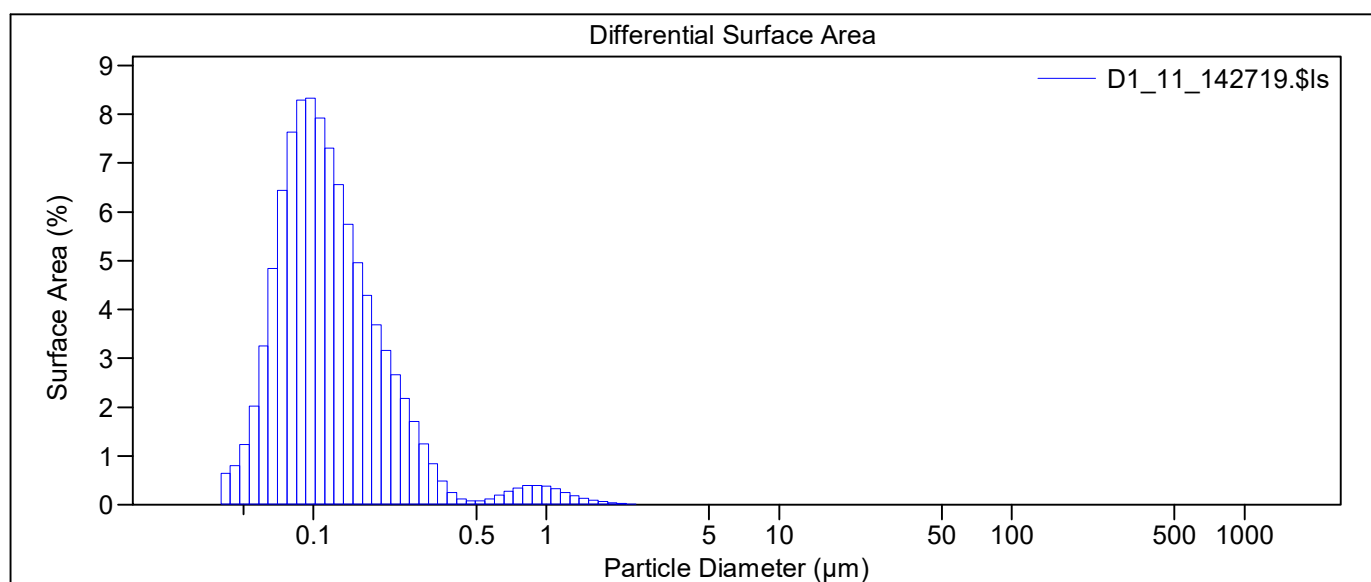
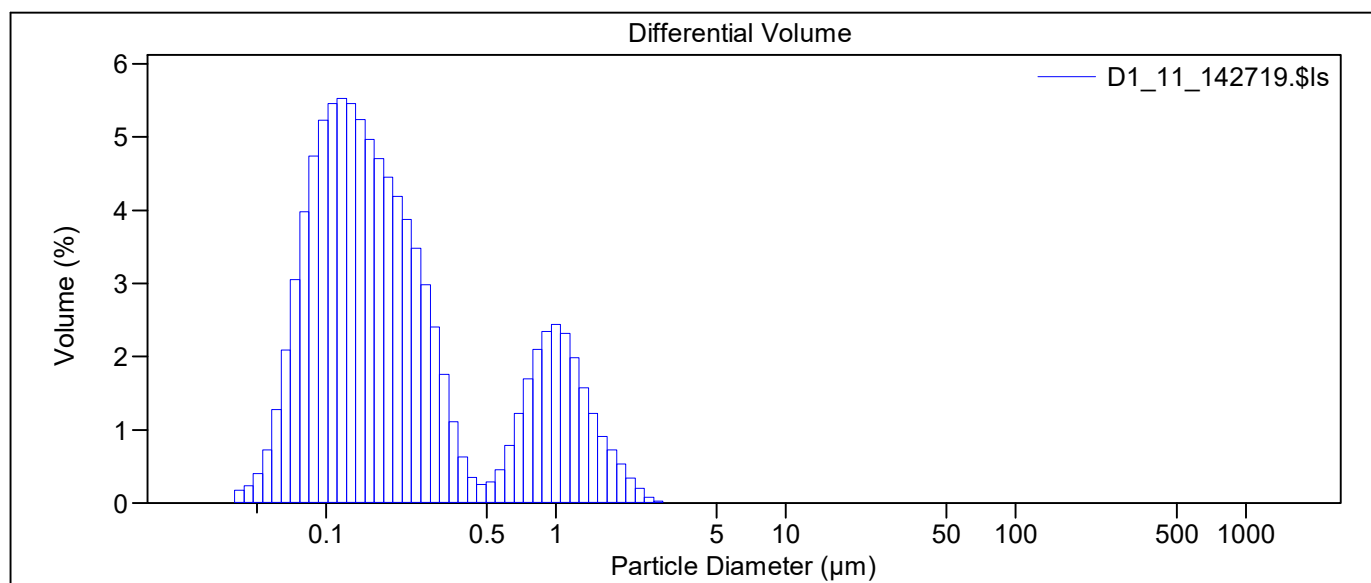
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_11_142719.\$ls		
	D1_11_142719.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.88%		
LS 13 320	Universal Liquid Module		
Start time:	14:25 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	66%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_11_142719.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.428 μm
Mean:	0.358 μm		Variance:	0.184 μm ²
Median:	0.167 μm		C.V.:	120%
Mean/Median ratio:	2.142		Skewness:	2.027 Right skewed
Mode:	0.117 μm		Kurtosis:	3.746 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.107 μm	0.167 μm	0.317 μm	1.044 μm

Surface Area Statistics (Arithmetic)			D1_11_142719.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.177 µm
Mean:	0.155 µm		Variance:	0.031 µm ²
Median:	0.110 µm		C.V.:	115%
Mean/Median ratio:	1.407		Skewness:	5.380 Right skewed
Mode:	0.097 µm		Kurtosis:	36.22 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.159 µm	0.238 µm

Number Statistics (Arithmetic)			D1_11_142719.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	46.0%
Mean/Median ratio:	1.108		Skewness:	5.182 Right skewed
Mode:	0.073 μm		Kurtosis:	96.51 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.24	0.80	3.49
11	0.048	0.050	0.40	1.23	4.47
12	0.053	0.055	0.72	2.02	6.10
13	0.058	0.061	1.28	3.25	8.15
14	0.064	0.067	2.09	4.84	10.1
15	0.070	0.073	3.06	6.44	11.1
16	0.077	0.080	3.98	7.63	10.9
17	0.084	0.088	4.74	8.29	9.85
18	0.093	0.097	5.23	8.33	8.22
19	0.102	0.106	5.46	7.92	6.48
20	0.112	0.117	5.53	7.31	4.96
21	0.122	0.128	5.45	6.57	3.70
22	0.134	0.141	5.24	5.75	2.69
23	0.148	0.155	4.96	4.96	1.93
24	0.162	0.170	4.71	4.28	1.38
25	0.178	0.186	4.45	3.69	0.99
26	0.195	0.205	4.19	3.16	0.70
27	0.214	0.225	3.87	2.66	0.49
28	0.235	0.247	3.48	2.18	0.33
29	0.258	0.271	2.98	1.70	0.22
30	0.284	0.297	2.41	1.25	0.13
31	0.311	0.326	1.76	0.83	0.073
32	0.342	0.358	1.11	0.48	0.035
33	0.375	0.393	0.63	0.25	0.015
34	0.412	0.431	0.35	0.12	0.0062
35	0.452	0.474	0.25	0.083	0.0034
36	0.496	0.520	0.29	0.085	0.0029
37	0.545	0.571	0.46	0.12	0.0035
38	0.598	0.627	0.79	0.19	0.0046
39	0.656	0.688	1.23	0.28	0.0054
40	0.721	0.755	1.70	0.35	0.0057
41	0.791	0.829	2.10	0.39	0.0053
42	0.868	0.910	2.34	0.40	0.0045
43	0.953	0.999	2.44	0.38	0.0035
44	1.047	1.097	2.32	0.33	0.0025
45	1.149	1.204	1.99	0.26	0.0016
46	1.261	1.321	1.58	0.18	0.00098
47	1.385	1.451	1.22	0.13	0.00057
48	1.520	1.592	0.91	0.089	0.00032
49	1.668	1.748	0.73	0.064	0.00019
50	1.832	1.919	0.53	0.043	0.00011
51	2.011	2.107	0.34	0.025	0.000053
52	2.207	2.313	0.20	0.013	0.000023
53	2.423	2.539	0.078	0.0048	0.000007
54	2.660	2.787	0.022	0.0012	0.000001
55	2.920	3.059	0.0040	0.00020	2.01E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

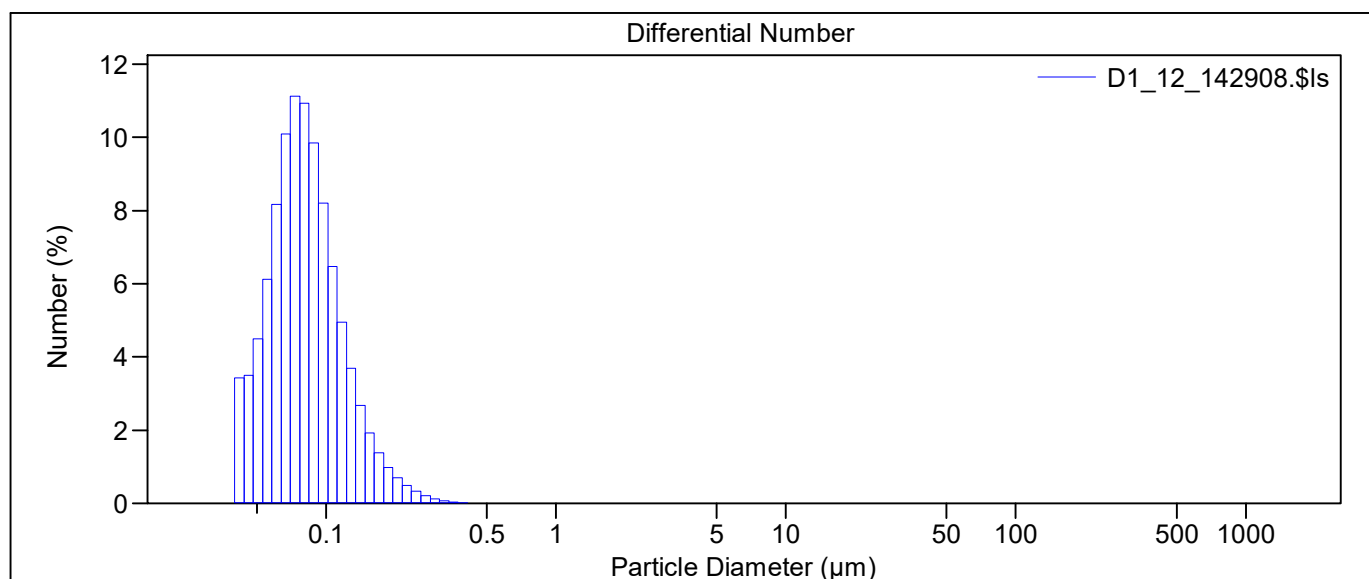
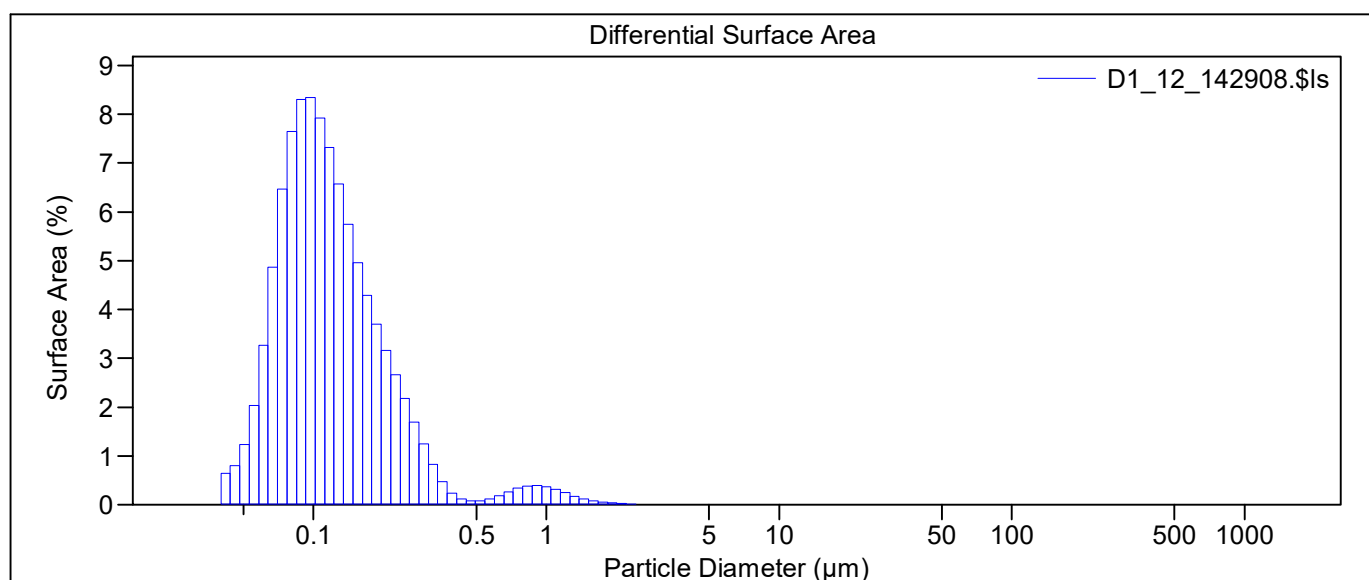
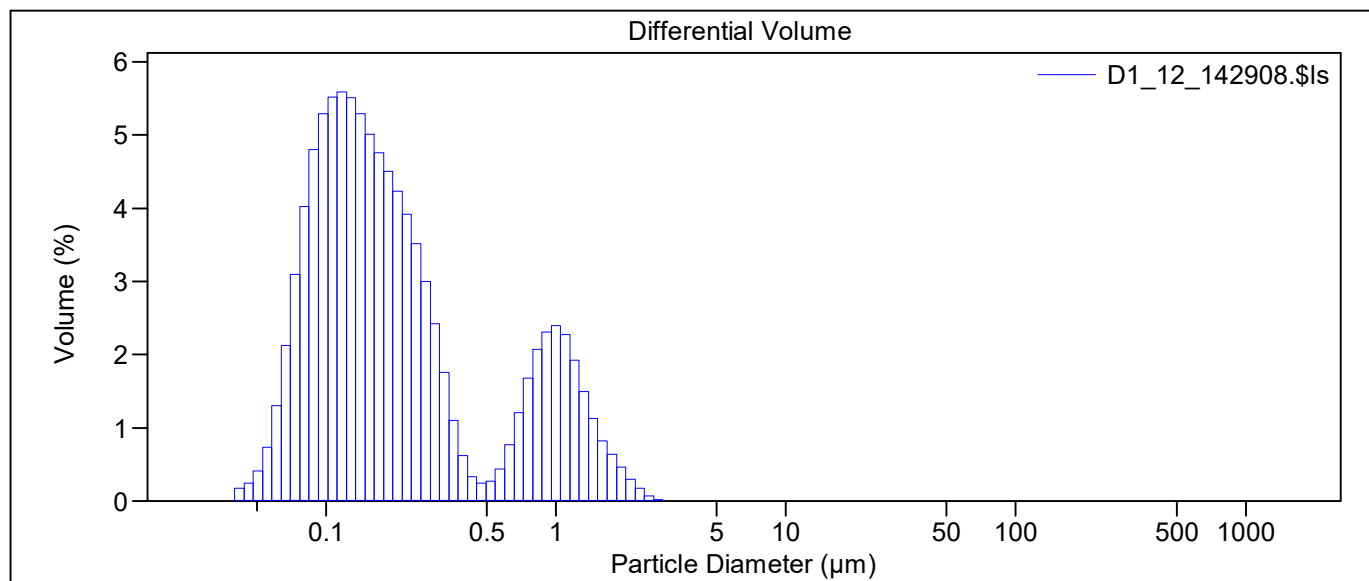
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D1\D1_12_142908.\$ls		
	D1_12_142908.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.92%		
LS 13 320	Universal Liquid Module		
Start time:	14:27 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	65%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_12_142908.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.417 µm
Mean:	0.347 µm		Variance:	0.174 µm ²
Median:	0.165 µm		C.V.:	120%
Mean/Median ratio:	2.106		Skewness:	2.076 Right skewed
Mode:	0.117 µm		Kurtosis:	4.013 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.107 µm	0.165 µm	0.306 µm	1.020 µm

Surface Area Statistics (Arithmetic)			D1_12_142908.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.172 µm
Mean:	0.153 µm		Variance:	0.030 µm ²
Median:	0.110 µm		C.V.:	113%
Mean/Median ratio:	1.395		Skewness:	5.417 Right skewed
Mode:	0.097 µm		Kurtosis:	36.93 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.159 µm	0.236 µm

Number Statistics (Arithmetic)			D1_12_142908.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.8%
Mean/Median ratio:	1.108		Skewness:	5.057 Right skewed
Mode:	0.073 μm		Kurtosis:	92.34 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.24	0.80	3.50
11	0.048	0.050	0.41	1.24	4.49
12	0.053	0.055	0.74	2.03	6.12
13	0.058	0.061	1.30	3.27	8.17
14	0.064	0.067	2.12	4.86	10.1
15	0.070	0.073	3.10	6.46	11.1
16	0.077	0.080	4.03	7.65	10.9
17	0.084	0.088	4.80	8.30	9.84
18	0.093	0.097	5.29	8.34	8.21
19	0.102	0.106	5.52	7.93	6.47
20	0.112	0.117	5.59	7.32	4.96
21	0.122	0.128	5.51	6.57	3.69
22	0.134	0.141	5.29	5.75	2.68
23	0.148	0.155	5.02	4.96	1.92
24	0.162	0.170	4.76	4.29	1.38
25	0.178	0.186	4.50	3.70	0.98
26	0.195	0.205	4.24	3.17	0.70
27	0.214	0.225	3.91	2.67	0.49
28	0.235	0.247	3.51	2.18	0.33
29	0.258	0.271	3.00	1.70	0.21
30	0.284	0.297	2.42	1.25	0.13
31	0.311	0.326	1.76	0.82	0.072
32	0.342	0.358	1.10	0.47	0.034
33	0.375	0.393	0.62	0.24	0.014
34	0.412	0.431	0.33	0.12	0.0059
35	0.452	0.474	0.24	0.078	0.0032
36	0.496	0.520	0.27	0.080	0.0027
37	0.545	0.571	0.44	0.12	0.0033
38	0.598	0.627	0.77	0.19	0.0044
39	0.656	0.688	1.20	0.27	0.0052
40	0.721	0.755	1.68	0.34	0.0055
41	0.791	0.829	2.07	0.38	0.0052
42	0.868	0.910	2.31	0.39	0.0043
43	0.953	0.999	2.40	0.37	0.0034
44	1.047	1.097	2.27	0.32	0.0024
45	1.149	1.204	1.92	0.24	0.0016

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.49	0.17	0.00092
47	1.385	1.451	1.13	0.12	0.00052
48	1.520	1.592	0.82	0.079	0.00029
49	1.668	1.748	0.64	0.056	0.00017
50	1.832	1.919	0.47	0.037	0.000094
51	2.011	2.107	0.30	0.022	0.000045
52	2.207	2.313	0.18	0.012	0.000020
53	2.423	2.539	0.070	0.0042	0.000006
54	2.660	2.787	0.020	0.0011	0.000001
55	2.920	3.059	0.0036	0.00018	1.79E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

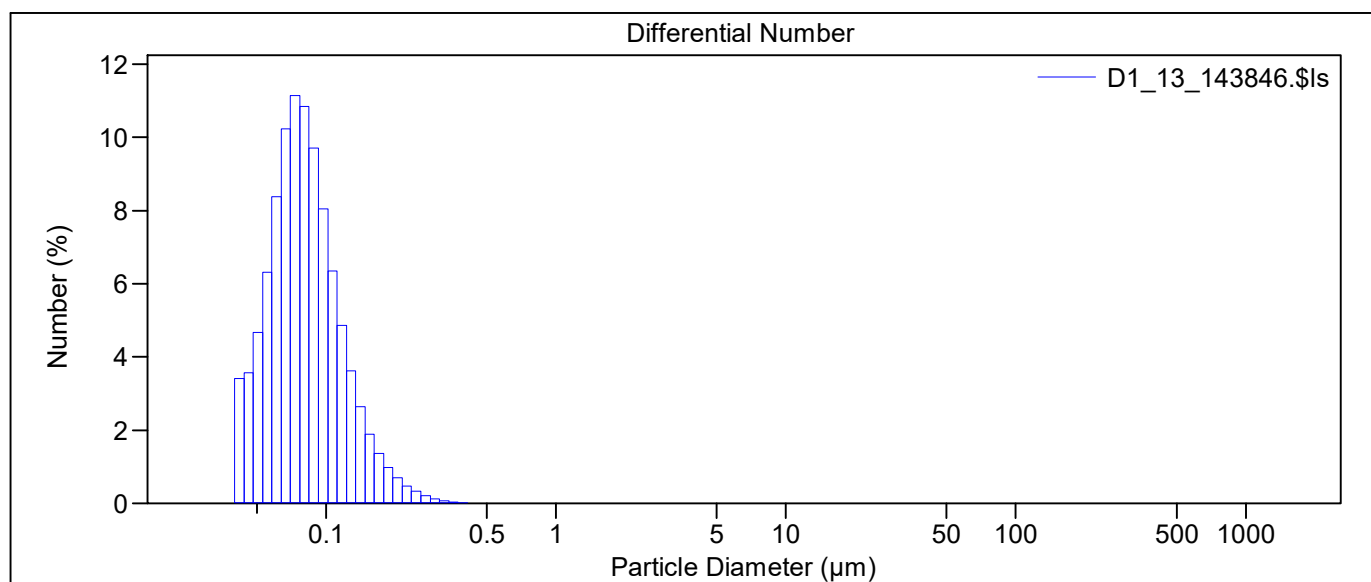
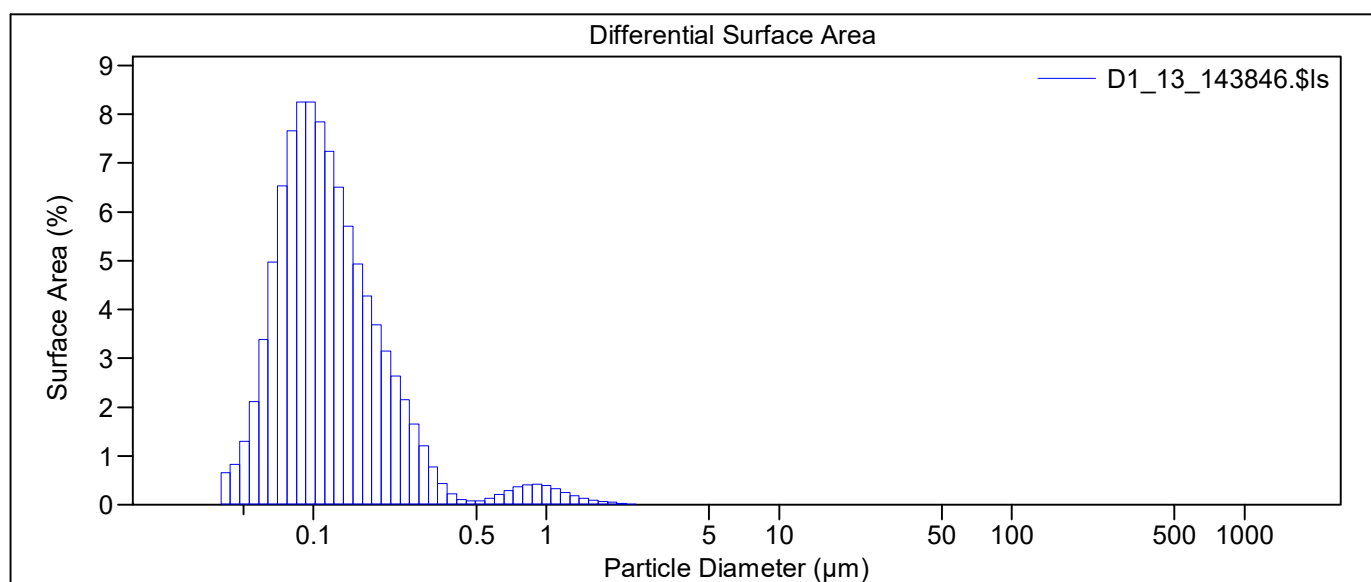
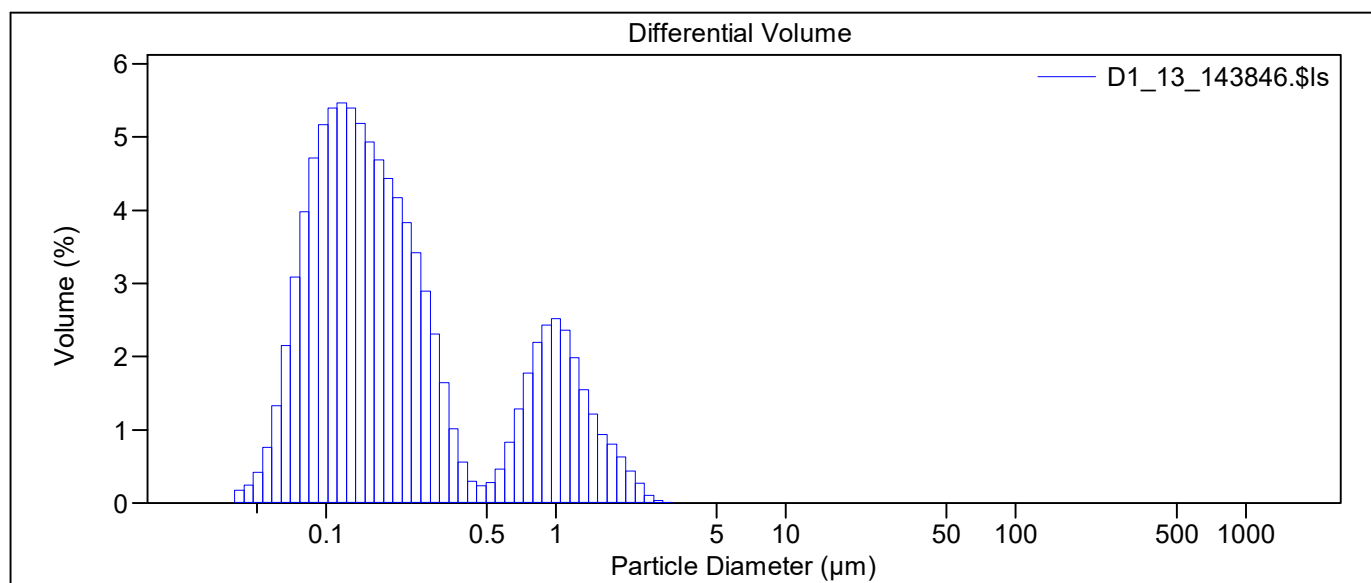
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_13_143846.\$ls		
	D1_13_143846.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.87%		
LS 13 320	Universal Liquid Module		
Start time:	14:37 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_13_143846.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.443 μm
Mean:	0.367 μm		Variance:	0.196 μm ²
Median:	0.167 μm		C.V.:	121%
Mean/Median ratio:	2.191		Skewness:	2.018 Right skewed
Mode:	0.117 μm		Kurtosis:	3.741 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.167 μm	0.327 μm	1.061 μm

Surface Area Statistics (Arithmetic)			D1_13_143846.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%			
Mean:	0.155 µm	S.D.:	0.181 µm	
Median:	0.109 µm	Variance:	0.033 µm ²	
Mean/Median ratio:	1.416	C.V.:	117%	
Mode:	0.088 µm	Skewness:	5.419 Right skewed	
		Kurtosis:	36.82 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.159 µm	0.236 µm

Number Statistics (Arithmetic)			D1_13_143846.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.1%
Mean/Median ratio:	1.110		Skewness:	5.319 Right skewed
Mode:	0.073 μm		Kurtosis:	102.1 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.24	0.82	3.56
11	0.048	0.050	0.42	1.30	4.66
12	0.053	0.055	0.76	2.11	6.31
13	0.058	0.061	1.33	3.38	8.38
14	0.064	0.067	2.15	4.98	10.2
15	0.070	0.073	3.09	6.53	11.1
16	0.077	0.080	3.98	7.66	10.8
17	0.084	0.088	4.71	8.26	9.70
18	0.093	0.097	5.17	8.25	8.05
19	0.102	0.106	5.39	7.84	6.34
20	0.112	0.117	5.47	7.24	4.86
21	0.122	0.128	5.40	6.51	3.63
22	0.134	0.141	5.19	5.70	2.64
23	0.148	0.155	4.93	4.94	1.89
24	0.162	0.170	4.68	4.27	1.36
25	0.178	0.186	4.44	3.69	0.97
26	0.195	0.205	4.17	3.15	0.69
27	0.214	0.225	3.83	2.64	0.48
28	0.235	0.247	3.42	2.15	0.32
29	0.258	0.271	2.89	1.65	0.21
30	0.284	0.297	2.31	1.20	0.13
31	0.311	0.326	1.64	0.78	0.067
32	0.342	0.358	1.01	0.44	0.031
33	0.375	0.393	0.56	0.22	0.013
34	0.412	0.431	0.30	0.11	0.0053
35	0.452	0.474	0.23	0.076	0.0031
36	0.496	0.520	0.28	0.083	0.0028
37	0.545	0.571	0.46	0.12	0.0035
38	0.598	0.627	0.83	0.20	0.0048
39	0.656	0.688	1.28	0.29	0.0056
40	0.721	0.755	1.77	0.36	0.0058
41	0.791	0.829	2.19	0.41	0.0055
42	0.868	0.910	2.44	0.41	0.0046
43	0.953	0.999	2.52	0.39	0.0036
44	1.047	1.097	2.36	0.33	0.0025
45	1.149	1.204	1.98	0.26	0.0016

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.55	0.18	0.00095
47	1.385	1.451	1.21	0.13	0.00056
48	1.520	1.592	0.94	0.091	0.00033
49	1.668	1.748	0.80	0.071	0.00021
50	1.832	1.919	0.63	0.051	0.00013
51	2.011	2.107	0.43	0.032	0.000066
52	2.207	2.313	0.27	0.018	0.000031
53	2.423	2.539	0.11	0.0065	0.000009
54	2.660	2.787	0.031	0.0017	0.000002
55	2.920	3.059	0.0054	0.00027	2.68E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

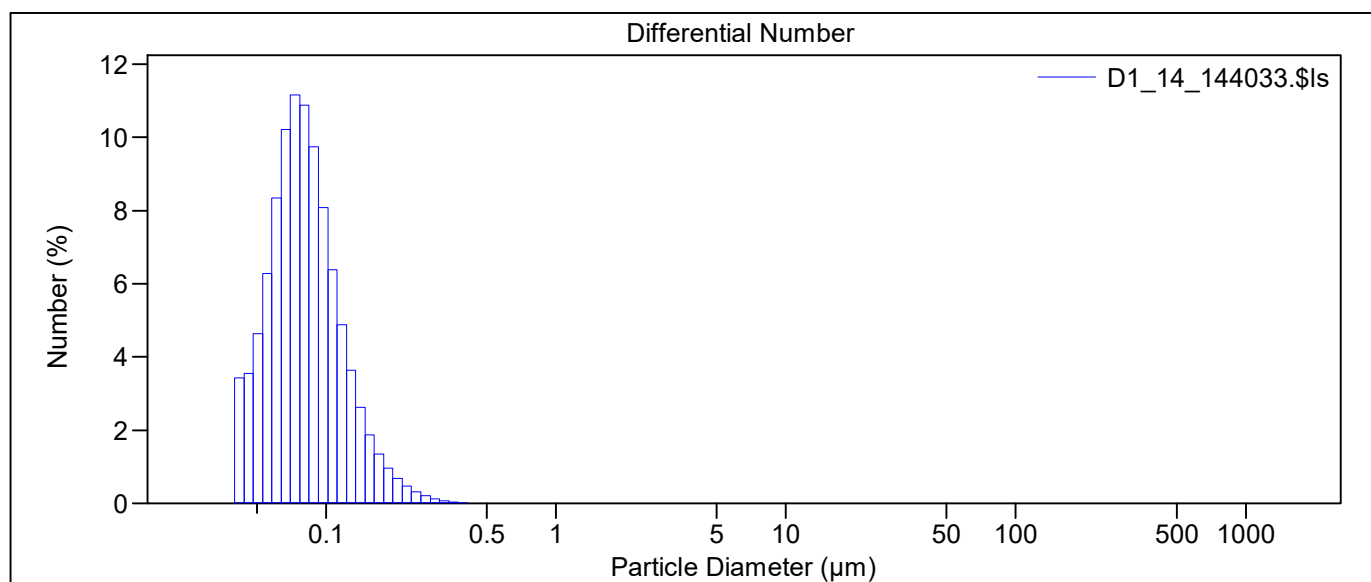
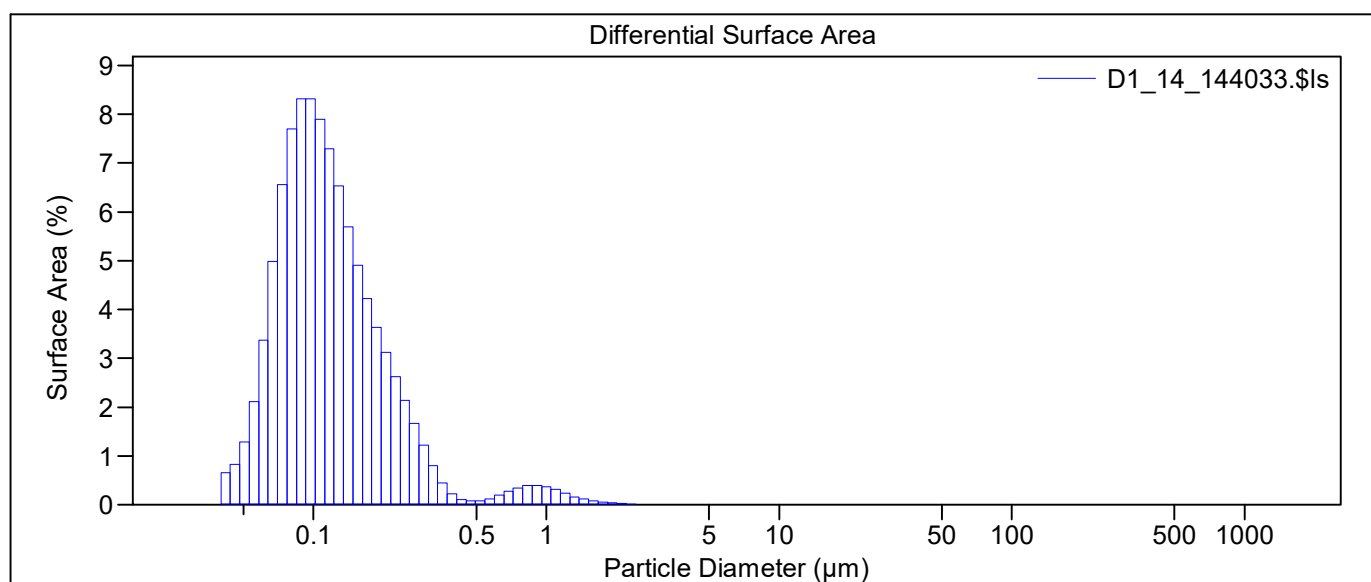
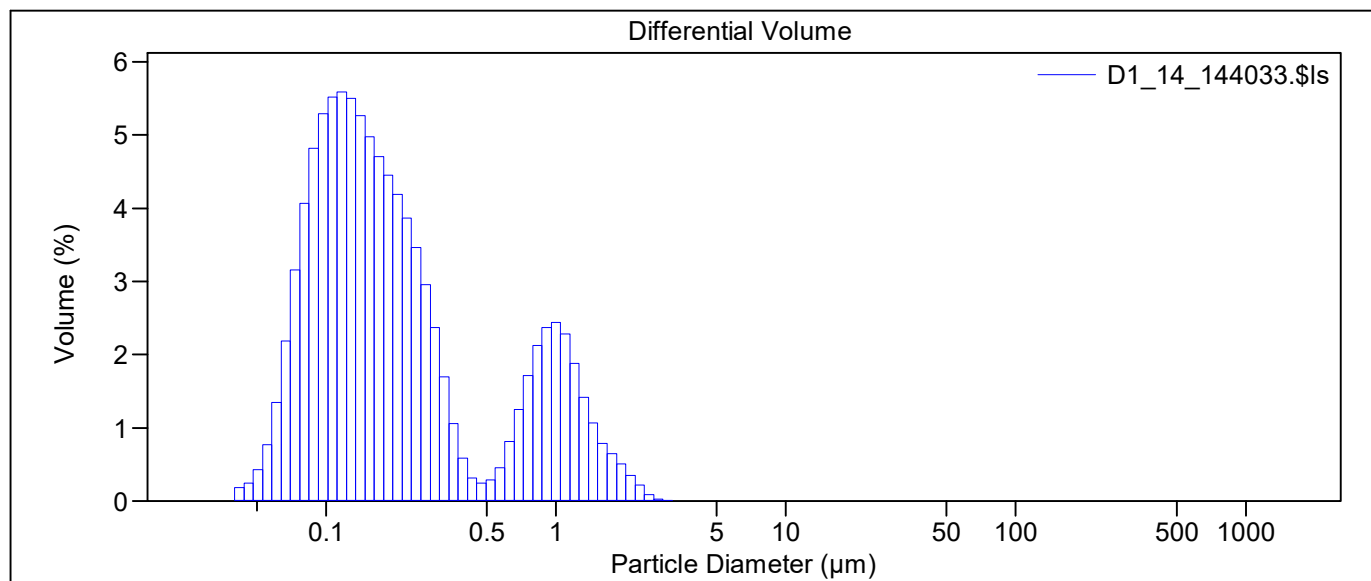
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_14_144033.\$ls		
	D1_14_144033.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.98%		
LS 13 320	Universal Liquid Module		
Start time:	14:38 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_14_144033.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.421 μm
Mean:	0.349 μm		Variance:	0.177 μm ²
Median:	0.164 μm		C.V.:	121%
Mean/Median ratio:	2.126		Skewness:	2.102 Right skewed
Mode:	0.117 μm		Kurtosis:	4.216 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.164 μm	0.307 μm	1.019 μm

Surface Area Statistics (Arithmetic)			D1_14_144033.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.173 µm
Mean:	0.152 µm		Variance:	0.030 µm ²
Median:	0.109 µm		C.V.:	114%
Mean/Median ratio:	1.398		Skewness:	5.462 Right skewed
Mode:	0.097 µm		Kurtosis:	37.84 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.235 µm

Number Statistics (Arithmetic)			D1_14_144033.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.8%
Mean/Median ratio:	1.108		Skewness:	5.118 Right skewed
Mode:	0.073 μm		Kurtosis:	94.67 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.82	3.55
11	0.048	0.050	0.43	1.29	4.63
12	0.053	0.055	0.77	2.11	6.28
13	0.058	0.061	1.35	3.38	8.35
14	0.064	0.067	2.19	4.99	10.2
15	0.070	0.073	3.15	6.55	11.2
16	0.077	0.080	4.07	7.71	10.9
17	0.084	0.088	4.82	8.32	9.75
18	0.093	0.097	5.30	8.32	8.09
19	0.102	0.106	5.52	7.90	6.38
20	0.112	0.117	5.59	7.29	4.88
21	0.122	0.128	5.50	6.54	3.63
22	0.134	0.141	5.27	5.70	2.63
23	0.148	0.155	4.98	4.90	1.88
24	0.162	0.170	4.71	4.23	1.34
25	0.178	0.186	4.45	3.64	0.96
26	0.195	0.205	4.19	3.12	0.68
27	0.214	0.225	3.87	2.62	0.48
28	0.235	0.247	3.47	2.14	0.32
29	0.258	0.271	2.95	1.66	0.21
30	0.284	0.297	2.37	1.22	0.13
31	0.311	0.326	1.70	0.79	0.068
32	0.342	0.358	1.06	0.45	0.032
33	0.375	0.393	0.59	0.23	0.014
34	0.412	0.431	0.31	0.11	0.0055
35	0.452	0.474	0.24	0.078	0.0032
36	0.496	0.520	0.28	0.083	0.0028
37	0.545	0.571	0.46	0.12	0.0034
38	0.598	0.627	0.82	0.20	0.0046
39	0.656	0.688	1.25	0.28	0.0054
40	0.721	0.755	1.72	0.35	0.0056
41	0.791	0.829	2.13	0.39	0.0052
42	0.868	0.910	2.37	0.40	0.0044
43	0.953	0.999	2.44	0.37	0.0034
44	1.047	1.097	2.28	0.32	0.0024
45	1.149	1.204	1.88	0.24	0.0015

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.42	0.16	0.00086
47	1.385	1.451	1.07	0.11	0.00049
48	1.520	1.592	0.79	0.075	0.00027
49	1.668	1.748	0.65	0.056	0.00017
50	1.832	1.919	0.51	0.040	0.000100
51	2.011	2.107	0.35	0.025	0.000052
52	2.207	2.313	0.22	0.014	0.000024
53	2.423	2.539	0.087	0.0052	0.000007
54	2.660	2.787	0.025	0.0014	0.000002
55	2.920	3.059	0.0044	0.00022	2.17E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

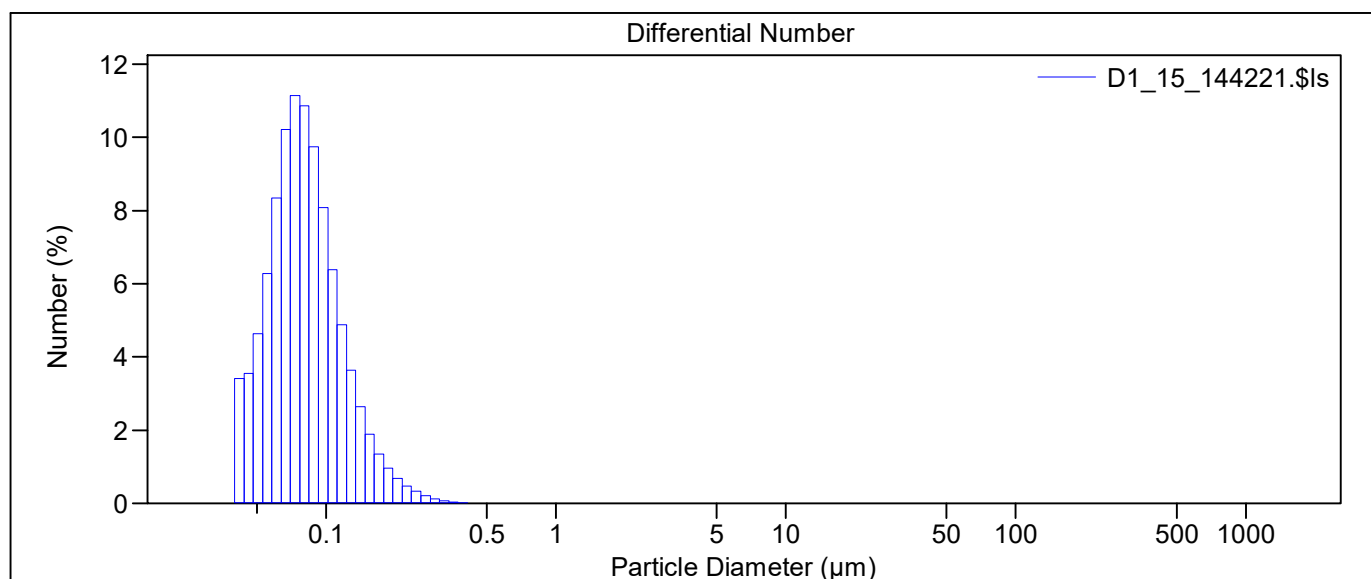
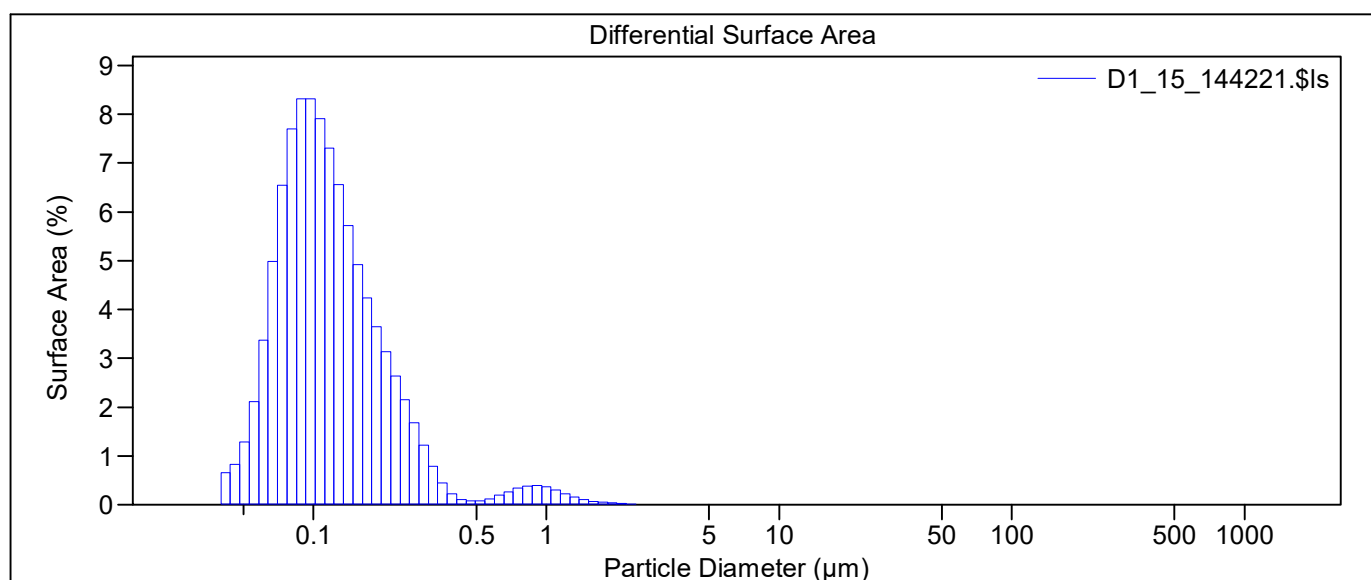
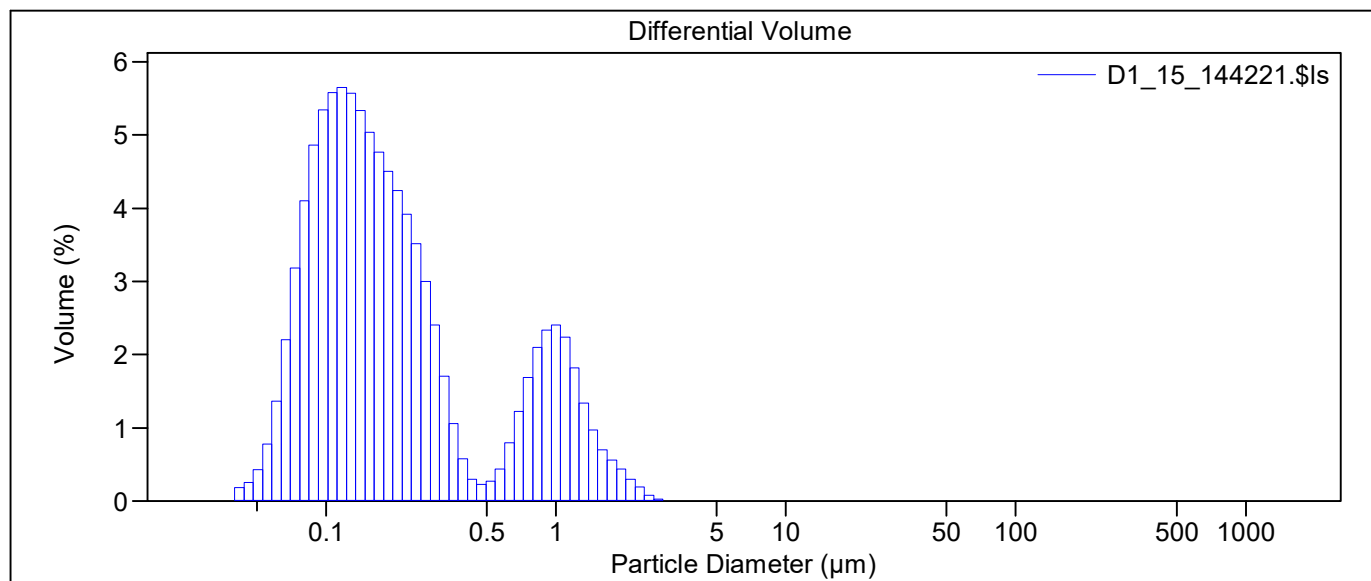
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARYD1\D1_15_144221.\$ls		
	D1_15_144221.\$ls		
File ID:	D1		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.02%		
LS 13 320	Universal Liquid Module		
Start time:	14:40 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D1_15_144221.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.408 µm
Mean:	0.339 µm		Variance:	0.167 µm ²
Median:	0.162 µm		C.V.:	121%
Mean/Median ratio:	2.086		Skewness:	2.153 Right skewed
Mode:	0.117 µm		Kurtosis:	4.517 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.162 µm	0.297 µm	0.994 µm

Surface Area Statistics (Arithmetic)			D1_15_144221.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.168 µm
Mean:	0.151 µm		Variance:	0.028 µm ²
Median:	0.109 µm		C.V.:	111%
Mean/Median ratio:	1.386		Skewness:	5.490 Right skewed
Mode:	0.097 µm		Kurtosis:	38.47 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.234 µm

Number Statistics (Arithmetic)			D1_15_144221.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.6%
Mean/Median ratio:	1.108		Skewness:	4.979 Right skewed
Mode:	0.073 μm		Kurtosis:	89.92 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.82	3.55
11	0.048	0.050	0.43	1.29	4.63
12	0.053	0.055	0.77	2.11	6.28
13	0.058	0.061	1.36	3.38	8.34
14	0.064	0.067	2.20	4.99	10.2
15	0.070	0.073	3.18	6.55	11.1
16	0.077	0.080	4.10	7.70	10.9
17	0.084	0.088	4.86	8.32	9.74
18	0.093	0.097	5.35	8.32	8.09
19	0.102	0.106	5.58	7.91	6.38
20	0.112	0.117	5.65	7.31	4.89
21	0.122	0.128	5.57	6.56	3.64
22	0.134	0.141	5.33	5.72	2.64
23	0.148	0.155	5.04	4.92	1.88
24	0.162	0.170	4.77	4.24	1.35
25	0.178	0.186	4.50	3.65	0.96
26	0.195	0.205	4.24	3.13	0.68
27	0.214	0.225	3.92	2.64	0.48
28	0.235	0.247	3.52	2.15	0.32
29	0.258	0.271	3.00	1.67	0.21
30	0.284	0.297	2.41	1.22	0.13
31	0.311	0.326	1.71	0.79	0.068
32	0.342	0.358	1.05	0.44	0.032
33	0.375	0.393	0.58	0.22	0.013
34	0.412	0.431	0.30	0.10	0.0051
35	0.452	0.474	0.23	0.073	0.0030
36	0.496	0.520	0.27	0.078	0.0026
37	0.545	0.571	0.44	0.12	0.0032
38	0.598	0.627	0.80	0.19	0.0045
39	0.656	0.688	1.22	0.27	0.0052
40	0.721	0.755	1.69	0.34	0.0054
41	0.791	0.829	2.10	0.38	0.0051
42	0.868	0.910	2.34	0.39	0.0043
43	0.953	0.999	2.40	0.36	0.0033
44	1.047	1.097	2.23	0.31	0.0023
45	1.149	1.204	1.82	0.23	0.0014

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.33	0.15	0.00080
47	1.385	1.451	0.98	0.10	0.00044
48	1.520	1.592	0.70	0.066	0.00024
49	1.668	1.748	0.56	0.049	0.00015
50	1.832	1.919	0.44	0.035	0.000086
51	2.011	2.107	0.30	0.022	0.000045
52	2.207	2.313	0.19	0.012	0.000021
53	2.423	2.539	0.077	0.0046	0.000007
54	2.660	2.787	0.022	0.0012	0.000001
55	2.920	3.059	0.0040	0.00020	1.92E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D1.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARYD2\D2.\$av
D2.\$av
File ID: D2
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) D2.\$av

Calculations from 0.017 μm to 2000 μm

Volume:	100%	S.D.:	0.405 μm
Mean:	0.334 μm	Variance:	0.164 μm^2
Median:	0.162 μm	C.V.:	121%
Mean/Median ratio:	2.066	Skewness:	2.208 Right skewed
Mode:	0.117 μm	Kurtosis:	4.841 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.162 μm	0.290 μm	0.982 μm

Surface Area Statistics (Arithmetic) D2.\$av

Calculations from 0.017 μm to 2000 μm

Surface Area:	100%	S.D.:	0.166 μm
Mean:	0.151 μm	Variance:	0.028 μm^2
Median:	0.110 μm	C.V.:	110%
Mean/Median ratio:	1.376	Skewness:	5.564 Right skewed
Mode:	0.097 μm	Kurtosis:	39.79 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.110 μm	0.158 μm	0.233 μm

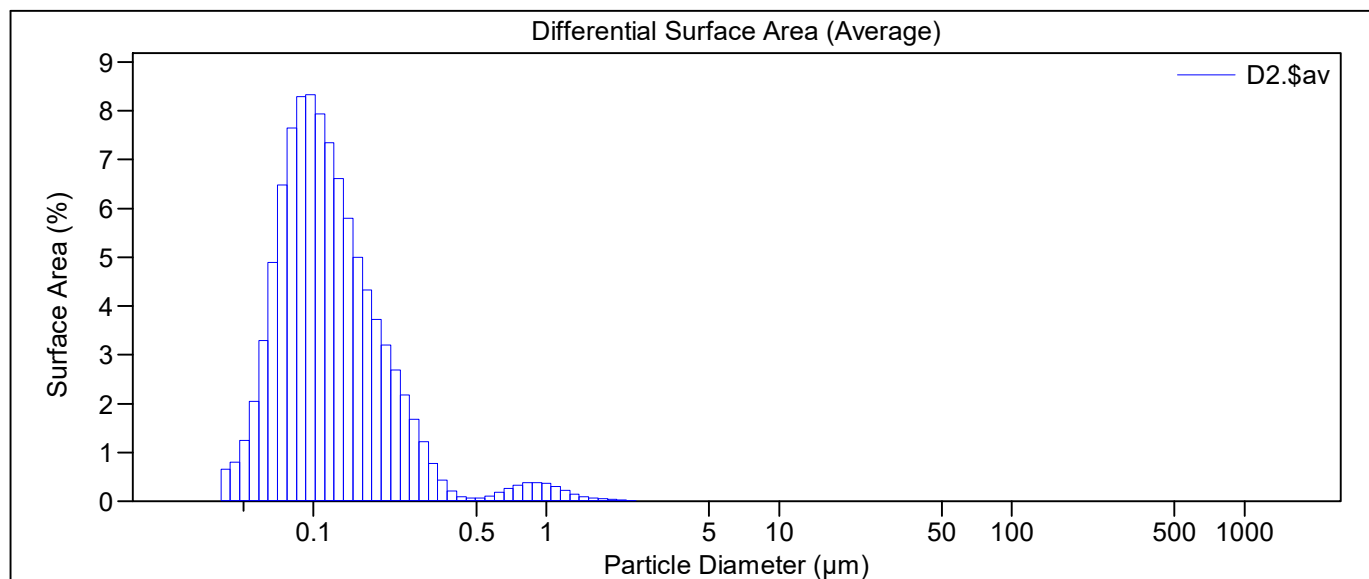
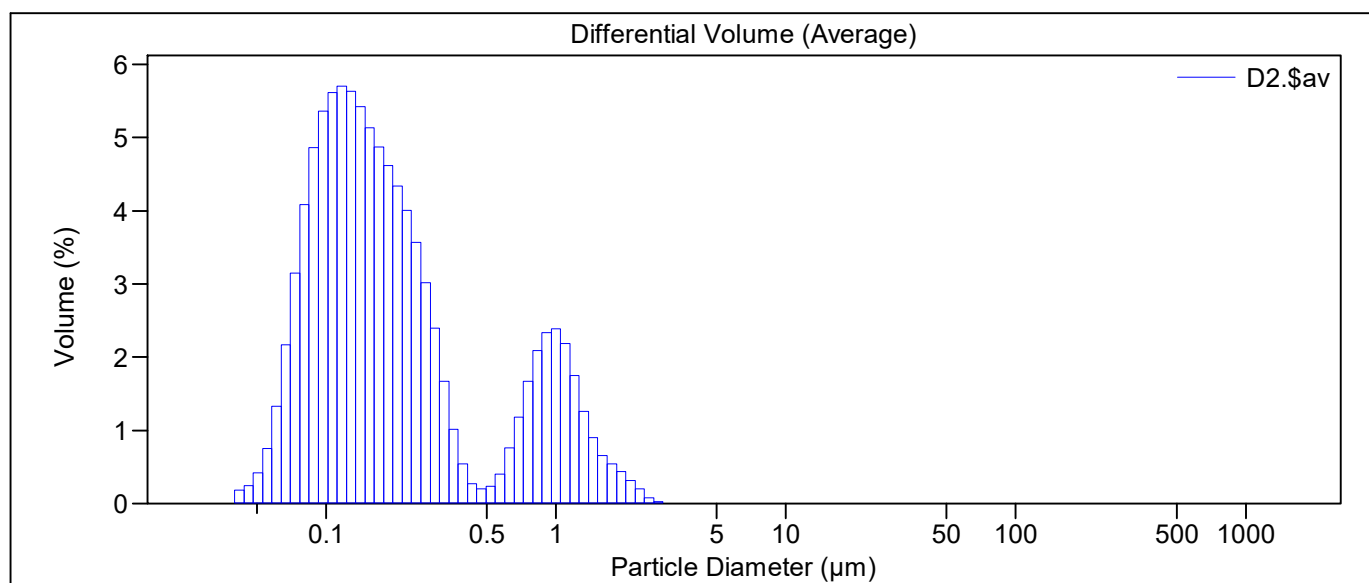
Number Statistics (Arithmetic)

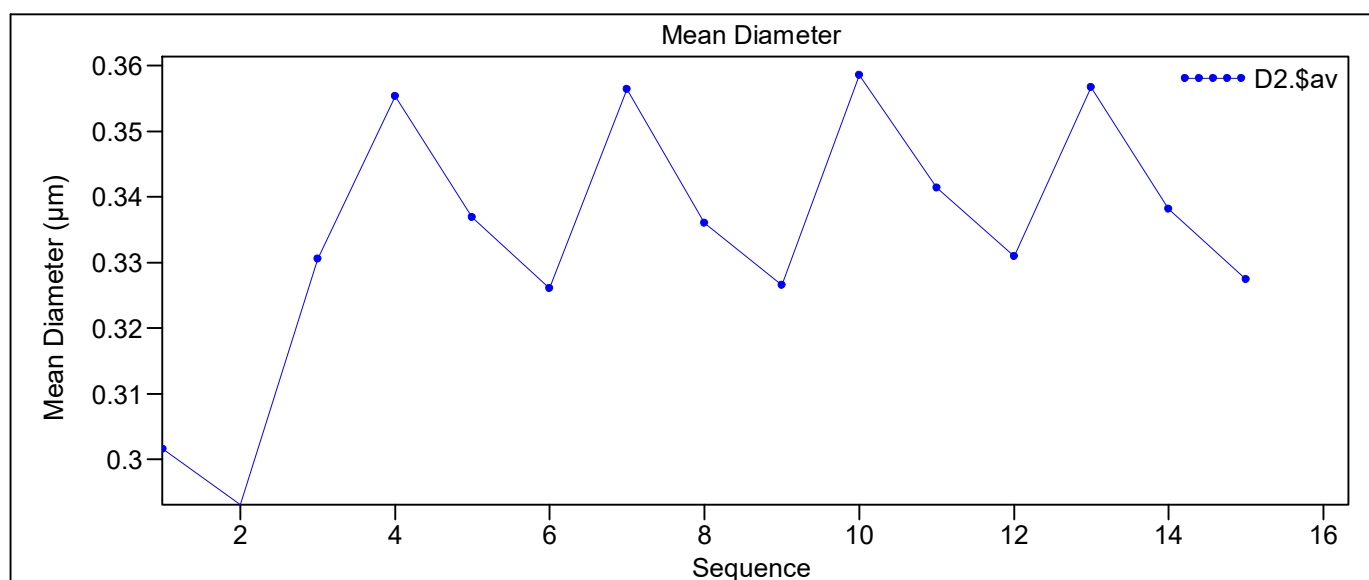
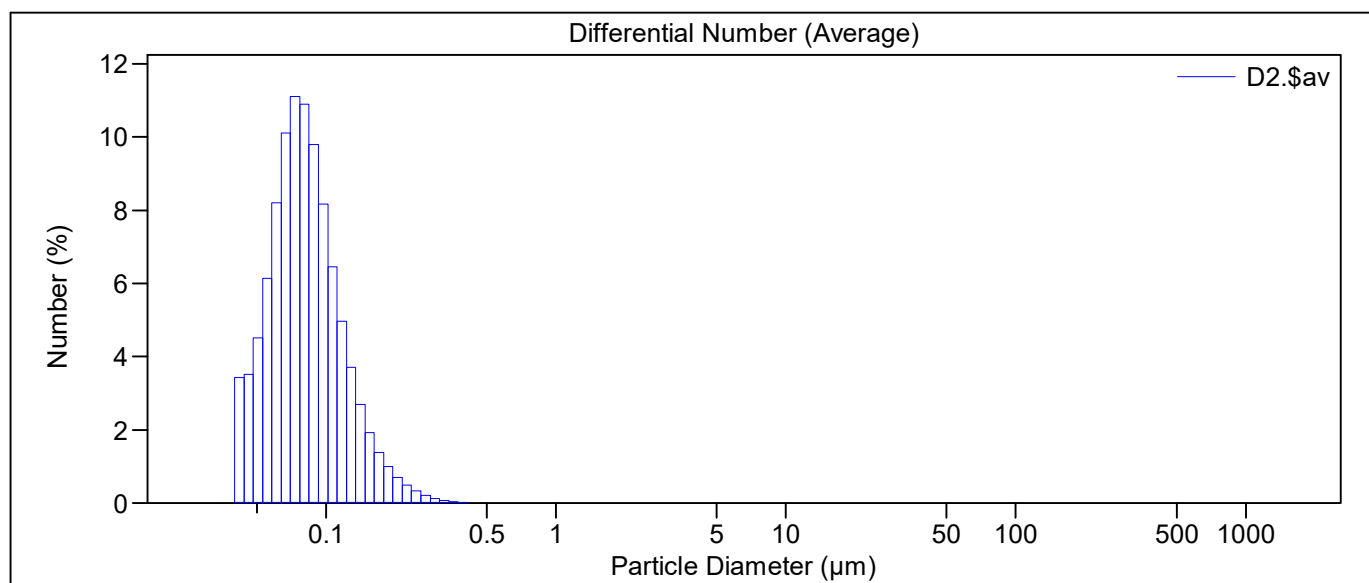
D2.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.040 μm
Mean:	0.087 μm	Variance:	0.0016 μm^2
Median:	0.079 μm	C.V.:	45.5%
Mean/Median ratio:	1.108	Skewness:	4.874 Right skewed
Mode:	0.073 μm	Kurtosis:	87.35 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm





Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.25	0.81	3.51
11	0.048	0.050	0.42	1.25	4.52
12	0.053	0.055	0.75	2.05	6.14
13	0.058	0.061	1.33	3.29	8.20
14	0.064	0.067	2.17	4.89	10.1
15	0.070	0.073	3.15	6.48	11.1
16	0.077	0.080	4.09	7.65	10.9
17	0.084	0.088	4.86	8.29	9.80

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.36	8.33	8.17
19	0.102	0.106	5.61	7.94	6.46
20	0.112	0.117	5.70	7.35	4.96
21	0.122	0.128	5.64	6.62	3.71
22	0.134	0.141	5.42	5.80	2.69
23	0.148	0.155	5.14	5.00	1.93
24	0.162	0.170	4.87	4.33	1.38
25	0.178	0.186	4.61	3.73	0.99
26	0.195	0.205	4.34	3.20	0.70
27	0.214	0.225	4.00	2.69	0.49
28	0.235	0.247	3.57	2.18	0.33
29	0.258	0.271	3.02	1.68	0.21
30	0.284	0.297	2.40	1.22	0.13
31	0.311	0.326	1.67	0.77	0.067
32	0.342	0.358	1.02	0.43	0.031
33	0.375	0.393	0.54	0.21	0.012
34	0.412	0.431	0.27	0.093	0.0046
35	0.452	0.474	0.20	0.065	0.0027
36	0.496	0.520	0.24	0.069	0.0024
37	0.545	0.571	0.40	0.11	0.0030
38	0.598	0.627	0.76	0.18	0.0043
39	0.656	0.688	1.18	0.26	0.0051
40	0.721	0.755	1.67	0.33	0.0054
41	0.791	0.829	2.09	0.38	0.0051
42	0.868	0.910	2.33	0.39	0.0043
43	0.953	0.999	2.39	0.36	0.0033
44	1.047	1.097	2.19	0.30	0.0023
45	1.149	1.204	1.75	0.22	0.0014
46	1.261	1.321	1.26	0.14	0.00076
47	1.385	1.451	0.90	0.094	0.00041
48	1.520	1.592	0.65	0.062	0.00022
49	1.668	1.748	0.54	0.047	0.00014
50	1.832	1.919	0.44	0.035	0.000087
51	2.011	2.107	0.31	0.022	0.000046
52	2.207	2.313	0.20	0.013	0.000022
53	2.423	2.539	0.081	0.0048	0.000007
54	2.660	2.787	0.023	0.0013	0.000001
55	2.920	3.059	0.0041	0.00020	2E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

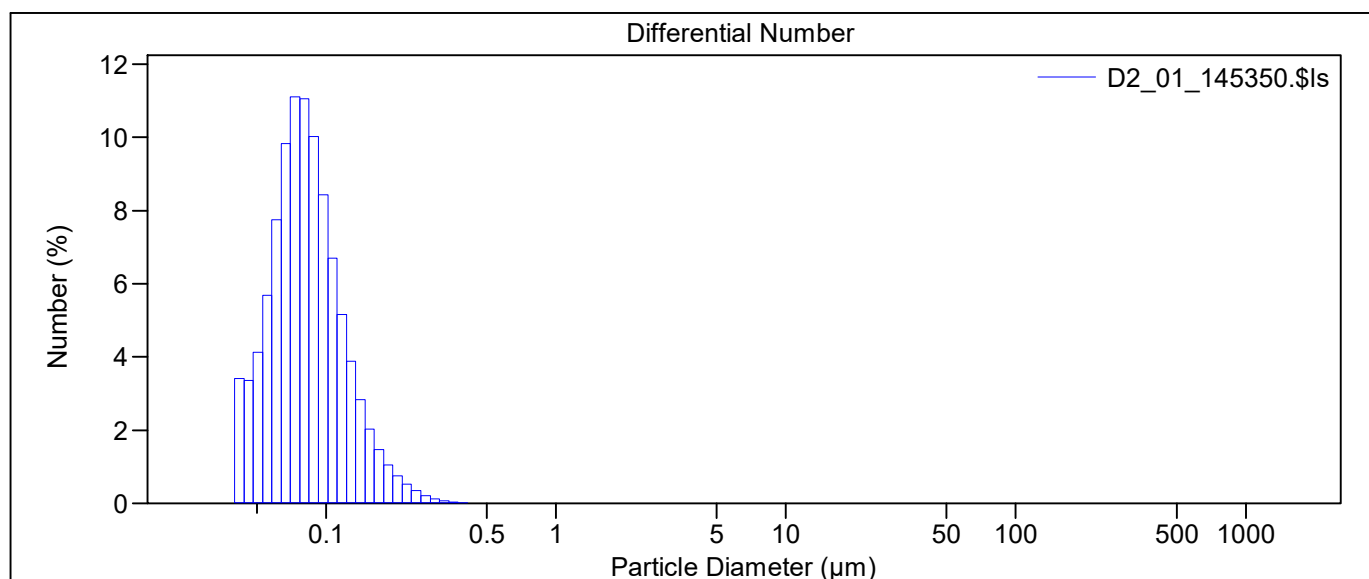
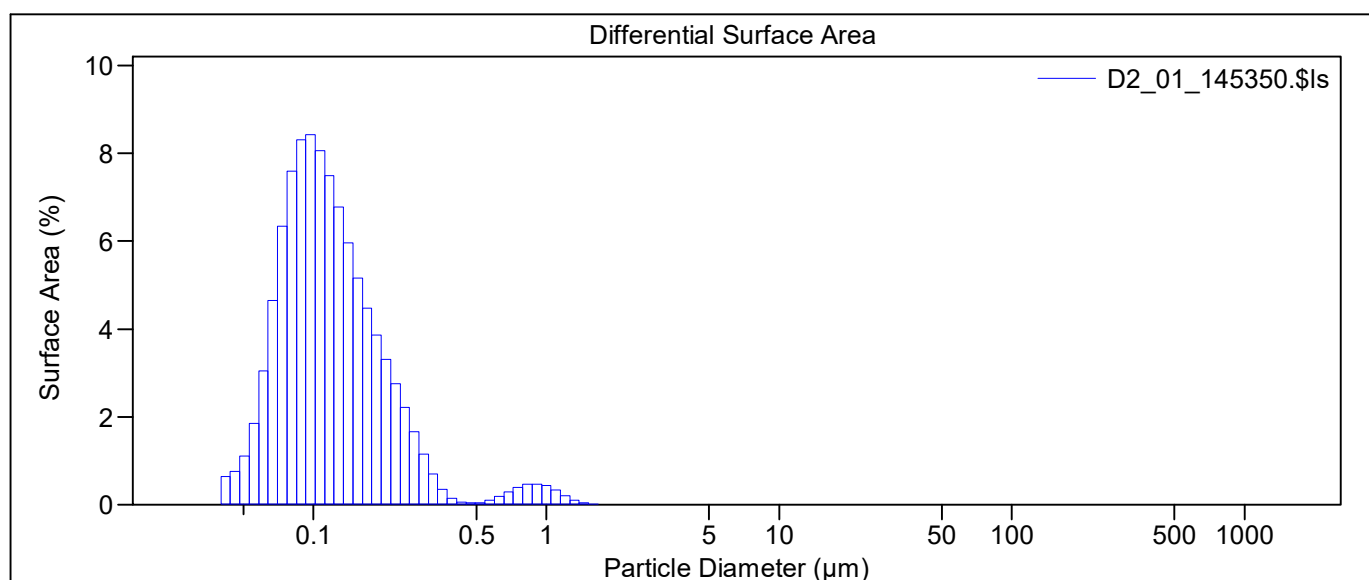
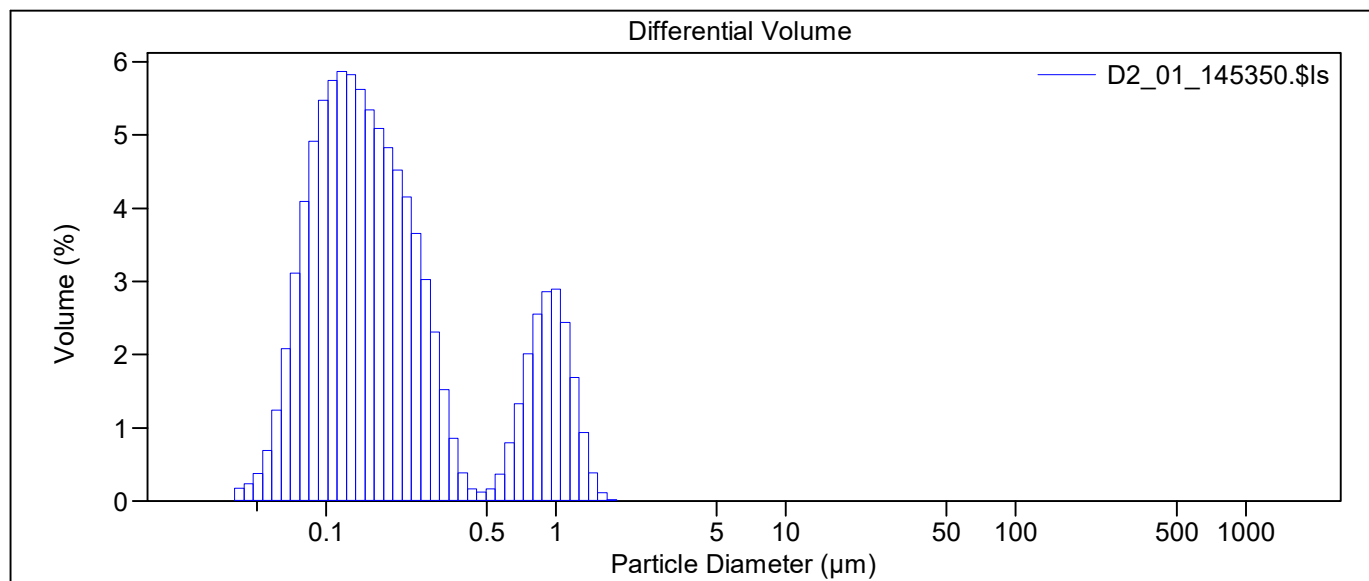
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_01_145350.\$ls		
	D2_01_145350.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.66%		
LS 13 320	Universal Liquid Module		
Start time:	14:52 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	78%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_01_145350.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.328 μm
Mean:	0.302 μm		Variance:	0.107 μm ²
Median:	0.160 μm		C.V.:	109%
Mean/Median ratio:	1.886		Skewness:	1.773 Right skewed
Mode:	0.117 μm		Kurtosis:	1.921 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.106 μm	0.160 μm	0.275 μm	0.908 μm

Surface Area Statistics (Arithmetic)			D2_01_145350.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.151 μm
Mean:	0.149 μm		Variance:	0.023 μm ²
Median:	0.111 μm		C.V.:	101%
Mean/Median ratio:	1.350		Skewness:	4.698 Right skewed
Mode:	0.097 μm		Kurtosis:	25.57 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.111 μm	0.159 μm	0.231 μm

Number Statistics (Arithmetic)			D2_01_145350.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.2%
Mean/Median ratio:	1.105		Skewness:	4.552 Right skewed
Mode:	0.073 μm		Kurtosis:	69.54 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.41
10	0.044	0.046	0.23	0.75	3.36
11	0.048	0.050	0.38	1.11	4.12
12	0.053	0.055	0.69	1.85	5.68
13	0.058	0.061	1.24	3.04	7.75
14	0.064	0.067	2.08	4.65	9.82
15	0.070	0.073	3.11	6.34	11.1
16	0.077	0.080	4.10	7.60	11.1
17	0.084	0.088	4.92	8.31	10.0
18	0.093	0.097	5.47	8.42	8.44
19	0.102	0.106	5.75	8.06	6.70
20	0.112	0.117	5.87	7.49	5.17
21	0.122	0.128	5.82	6.77	3.88
22	0.134	0.141	5.63	5.96	2.83
23	0.148	0.155	5.34	5.16	2.03
24	0.162	0.170	5.09	4.47	1.46
25	0.178	0.186	4.82	3.87	1.05
26	0.195	0.205	4.53	3.30	0.74
27	0.214	0.225	4.15	2.76	0.52
28	0.235	0.247	3.66	2.21	0.34
29	0.258	0.271	3.02	1.67	0.21
30	0.284	0.297	2.31	1.16	0.12
31	0.311	0.326	1.52	0.70	0.062
32	0.342	0.358	0.86	0.36	0.026
33	0.375	0.393	0.39	0.15	0.0090
34	0.412	0.431	0.17	0.057	0.0029
35	0.452	0.474	0.12	0.037	0.0016
36	0.496	0.520	0.16	0.047	0.0016
37	0.545	0.571	0.37	0.097	0.0028
38	0.598	0.627	0.80	0.19	0.0046
39	0.656	0.688	1.33	0.29	0.0058
40	0.721	0.755	2.01	0.40	0.0066
41	0.791	0.829	2.55	0.46	0.0063
42	0.868	0.910	2.86	0.47	0.0053
43	0.953	0.999	2.90	0.43	0.0041
44	1.047	1.097	2.44	0.33	0.0026
45	1.149	1.204	1.69	0.21	0.0014

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.93	0.11	0.00057
47	1.385	1.451	0.39	0.040	0.00018
48	1.520	1.592	0.11	0.010	0.000039
49	1.668	1.748	0.020	0.0017	0.000005
50	1.832	1.919	0.0014	0.00011	2.87E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

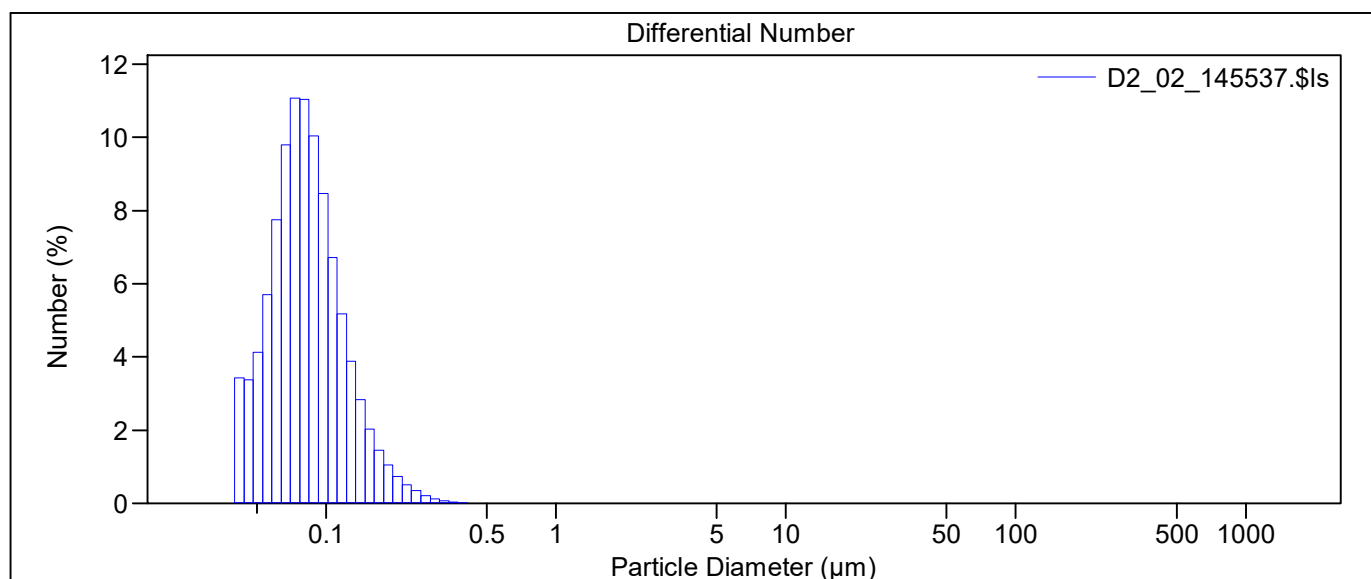
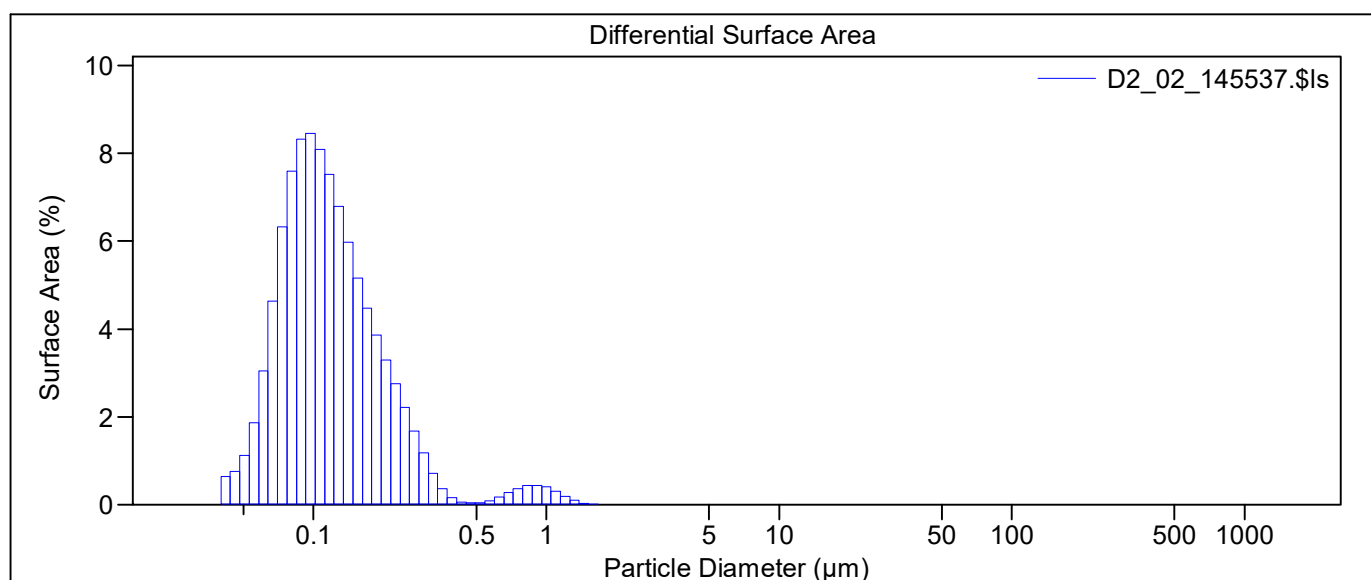
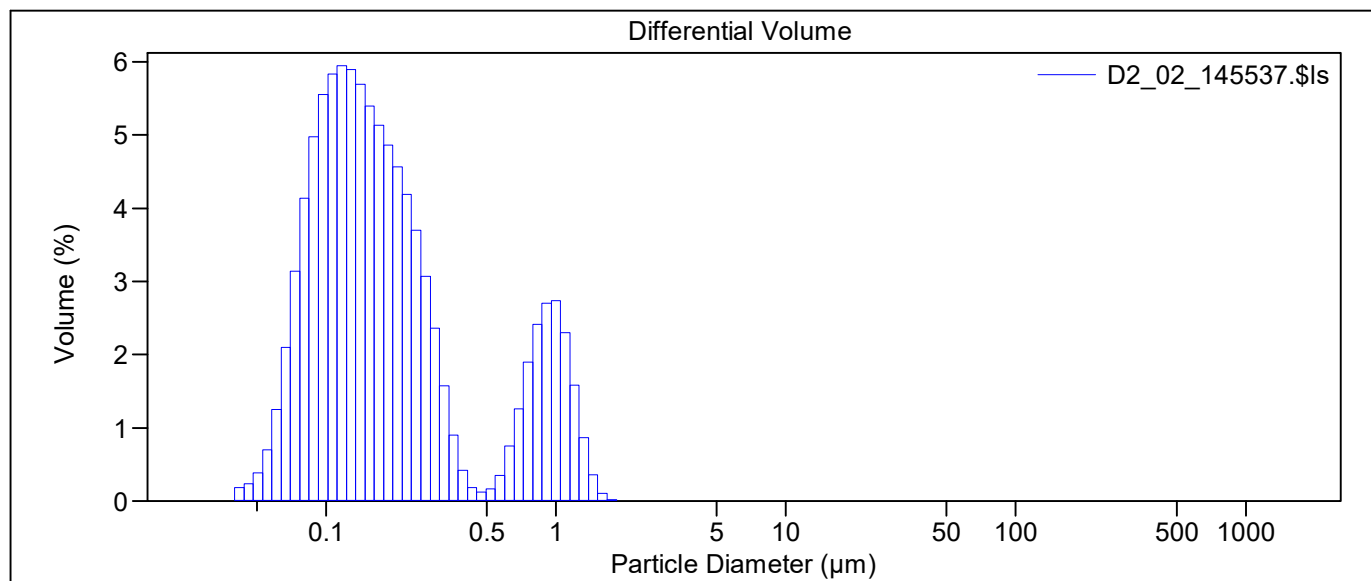
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_02_145537.\$ls		
	D2_02_145537.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.70%		
LS 13 320	Universal Liquid Module		
Start time:	14:53 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	79%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_02_145537.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.320 µm
Mean:	0.293 µm		Variance:	0.102 µm ²
Median:	0.158 µm		C.V.:	109%
Mean/Median ratio:	1.852		Skewness:	1.855 Right skewed
Mode:	0.117 µm		Kurtosis:	2.261 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.158 µm	0.268 µm	0.889 µm

Surface Area Statistics (Arithmetic)			D2_02_145537.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.147 µm
Mean:	0.148 µm		Variance:	0.021 µm ²
Median:	0.111 µm		C.V.:	99.1%
Mean/Median ratio:	1.338		Skewness:	4.789 Right skewed
Mode:	0.097 µm		Kurtosis:	26.90 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.111 µm	0.158 µm	0.230 µm

Number Statistics (Arithmetic)			D2_02_145537.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.0%
Mean/Median ratio:	1.105		Skewness:	4.410 Right skewed
Mode:	0.073 μm		Kurtosis:	66.11 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.43
10	0.044	0.046	0.24	0.76	3.37
11	0.048	0.050	0.38	1.12	4.13
12	0.053	0.055	0.70	1.86	5.70
13	0.058	0.061	1.25	3.05	7.75
14	0.064	0.067	2.10	4.64	9.79
15	0.070	0.073	3.14	6.33	11.1
16	0.077	0.080	4.14	7.60	11.0
17	0.084	0.088	4.98	8.33	10.0
18	0.093	0.097	5.55	8.46	8.46
19	0.102	0.106	5.83	8.09	6.72
20	0.112	0.117	5.94	7.52	5.18
21	0.122	0.128	5.90	6.79	3.88
22	0.134	0.141	5.69	5.98	2.83
23	0.148	0.155	5.40	5.16	2.03
24	0.162	0.170	5.13	4.47	1.46
25	0.178	0.186	4.86	3.86	1.05
26	0.195	0.205	4.56	3.30	0.74
27	0.214	0.225	4.19	2.76	0.51
28	0.235	0.247	3.70	2.22	0.34
29	0.258	0.271	3.07	1.68	0.22
30	0.284	0.297	2.37	1.18	0.13
31	0.311	0.326	1.57	0.71	0.063
32	0.342	0.358	0.90	0.37	0.027
33	0.375	0.393	0.42	0.16	0.0096
34	0.412	0.431	0.18	0.062	0.0031
35	0.452	0.474	0.13	0.040	0.0017
36	0.496	0.520	0.16	0.046	0.0016
37	0.545	0.571	0.35	0.091	0.0026
38	0.598	0.627	0.75	0.18	0.0043
39	0.656	0.688	1.26	0.27	0.0054
40	0.721	0.755	1.90	0.37	0.0061
41	0.791	0.829	2.41	0.43	0.0059
42	0.868	0.910	2.70	0.44	0.0050
43	0.953	0.999	2.74	0.41	0.0038
44	1.047	1.097	2.30	0.31	0.0024
45	1.149	1.204	1.58	0.19	0.0013

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.87	0.097	0.00052
47	1.385	1.451	0.36	0.036	0.00016
48	1.520	1.592	0.10	0.0095	0.000035
49	1.668	1.748	0.018	0.0015	0.000005
50	1.832	1.919	0.0013	0.000098	2.5E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

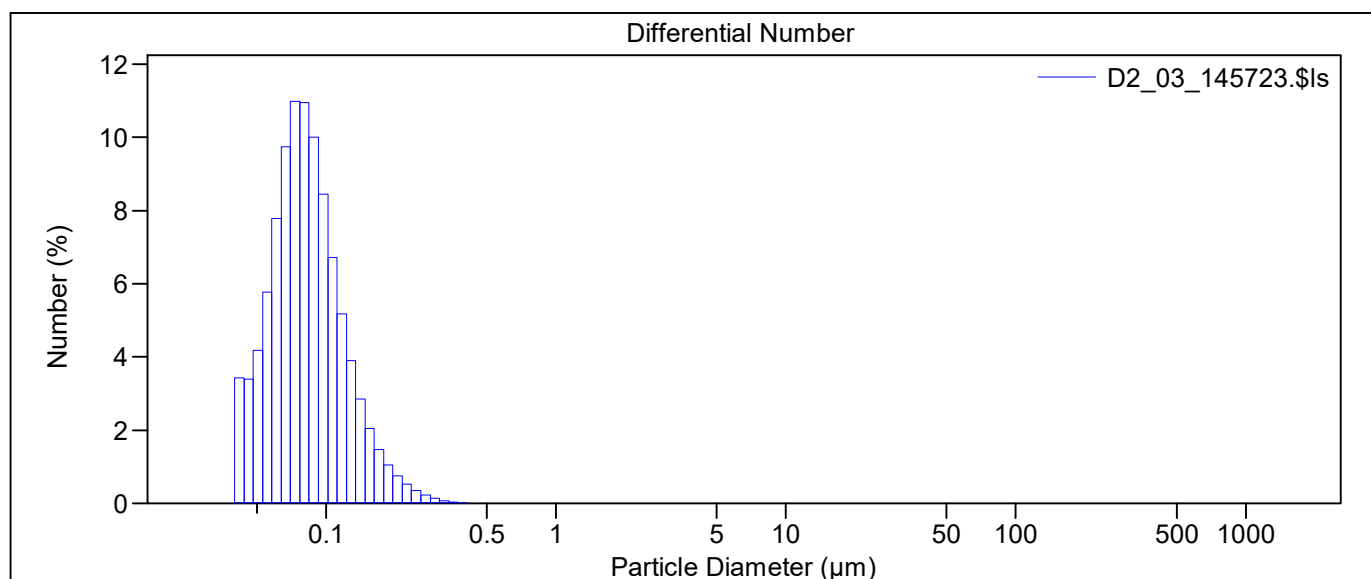
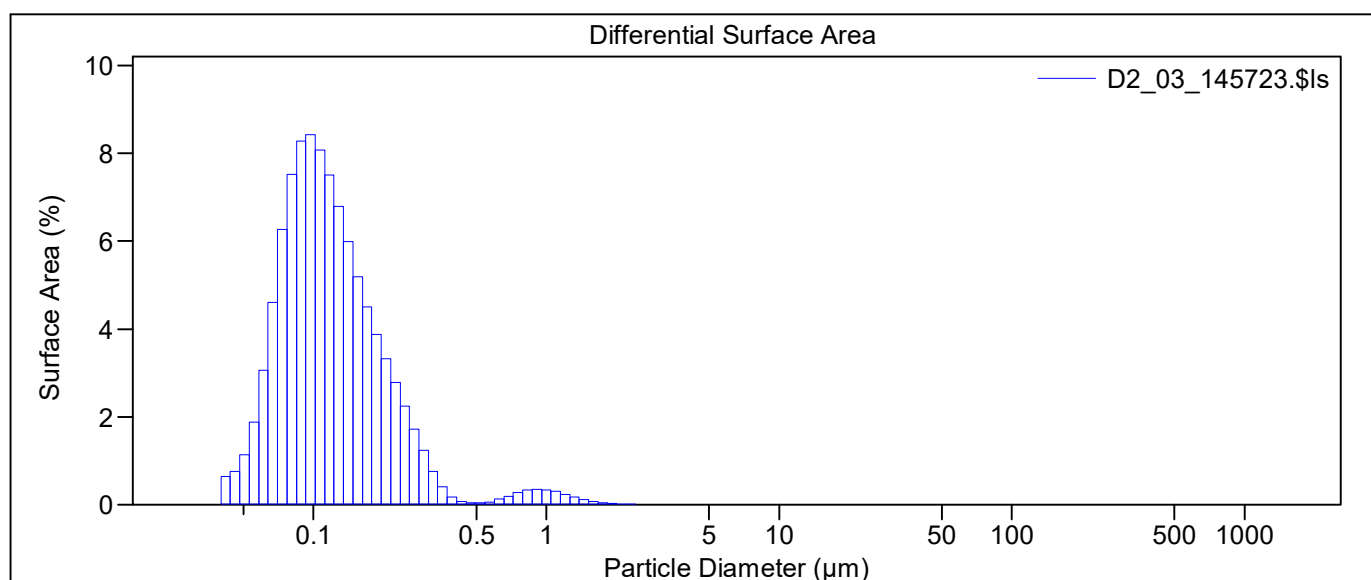
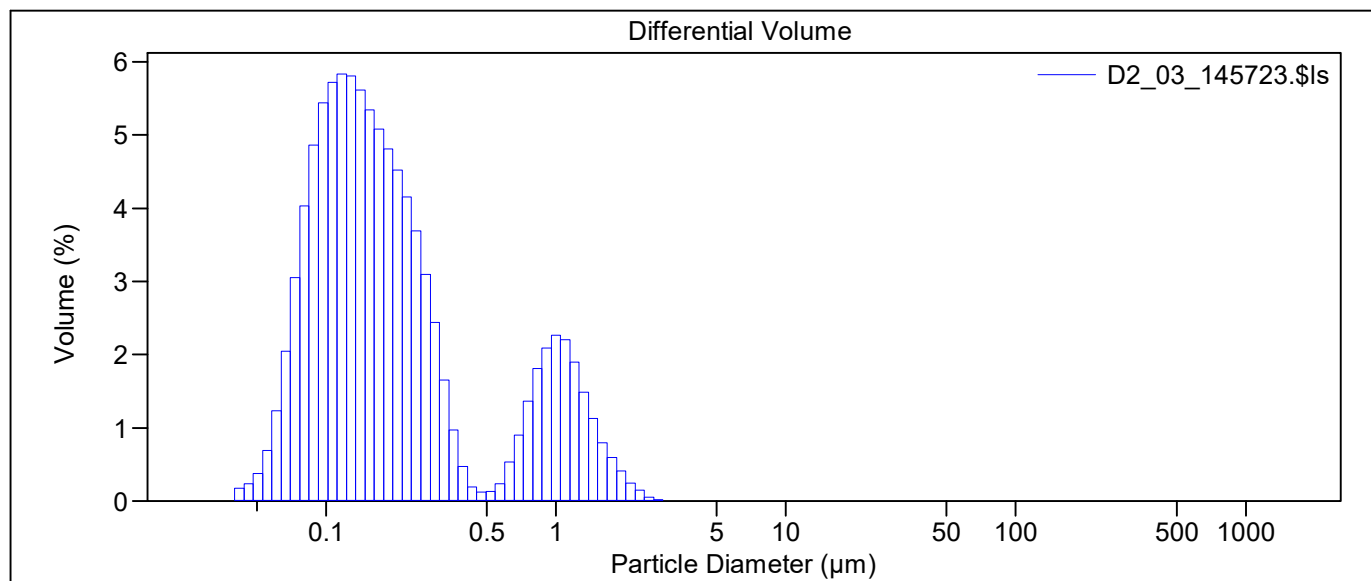
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_03_145723.\$ls		
	D2_03_145723.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.99%		
LS 13 320	Universal Liquid Module		
Start time:	14:55 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	79%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_03_145723.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.405 µm
Mean:	0.331 µm		Variance:	0.164 µm ²
Median:	0.161 µm		C.V.:	122%
Mean/Median ratio:	2.057		Skewness:	2.182 Right skewed
Mode:	0.117 µm		Kurtosis:	4.404 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.107 µm	0.161 µm	0.277 µm	1.005 µm

Surface Area Statistics (Arithmetic)			D2_03_145723.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.165 µm
Mean:	0.150 µm		Variance:	0.027 µm ²
Median:	0.111 µm		C.V.:	110%
Mean/Median ratio:	1.357		Skewness:	5.705 Right skewed
Mode:	0.097 µm		Kurtosis:	40.77 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.111 µm	0.159 µm	0.231 µm

Number Statistics (Arithmetic)			D2_03_145723.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.089 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.1%
Mean/Median ratio:	1.105		Skewness:	4.709 Right skewed
Mode:	0.073 μm		Kurtosis:	85.65 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



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D2.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.43
10	0.044	0.046	0.23	0.76	3.39
11	0.048	0.050	0.38	1.13	4.19
12	0.053	0.055	0.69	1.88	5.77
13	0.058	0.061	1.24	3.06	7.78
14	0.064	0.067	2.05	4.61	9.75
15	0.070	0.073	3.06	6.26	11.0
16	0.077	0.080	4.03	7.53	11.0
17	0.084	0.088	4.87	8.28	10.00
18	0.093	0.097	5.44	8.43	8.45
19	0.102	0.106	5.72	8.07	6.71
20	0.112	0.117	5.84	7.51	5.18
21	0.122	0.128	5.80	6.80	3.89
22	0.134	0.141	5.62	5.99	2.85
23	0.148	0.155	5.34	5.19	2.05
24	0.162	0.170	5.08	4.50	1.47
25	0.178	0.186	4.81	3.88	1.05
26	0.195	0.205	4.52	3.32	0.75
27	0.214	0.225	4.15	2.78	0.52
28	0.235	0.247	3.69	2.25	0.35
29	0.258	0.271	3.09	1.72	0.22
30	0.284	0.297	2.44	1.23	0.13
31	0.311	0.326	1.65	0.76	0.067
32	0.342	0.358	0.97	0.41	0.030
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.19	0.068	0.0034
35	0.452	0.474	0.12	0.039	0.0017
36	0.496	0.520	0.13	0.037	0.0013
37	0.545	0.571	0.24	0.063	0.0018
38	0.598	0.627	0.53	0.13	0.0031
39	0.656	0.688	0.90	0.20	0.0039
40	0.721	0.755	1.37	0.27	0.0045
41	0.791	0.829	1.81	0.33	0.0045
42	0.868	0.910	2.09	0.35	0.0039
43	0.953	0.999	2.26	0.34	0.0032
44	1.047	1.097	2.20	0.30	0.0024
45	1.149	1.204	1.90	0.24	0.0015
46	1.261	1.321	1.49	0.17	0.00091
47	1.385	1.451	1.13	0.12	0.00053
48	1.520	1.592	0.79	0.075	0.00028
49	1.668	1.748	0.59	0.051	0.00016
50	1.832	1.919	0.41	0.032	0.000083
51	2.011	2.107	0.25	0.018	0.000038
52	2.207	2.313	0.14	0.0094	0.000017
53	2.423	2.539	0.056	0.0033	0.000005
54	2.660	2.787	0.015	0.00082	0.000001
55	2.920	3.059	0.0032	0.00016	1.56E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

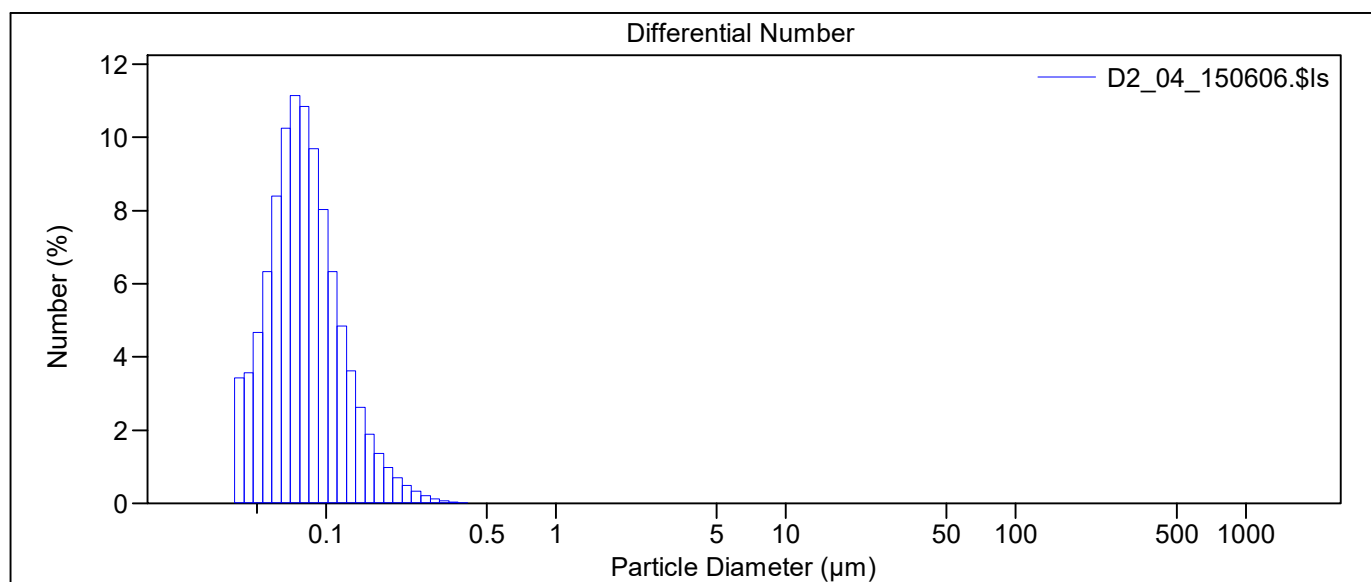
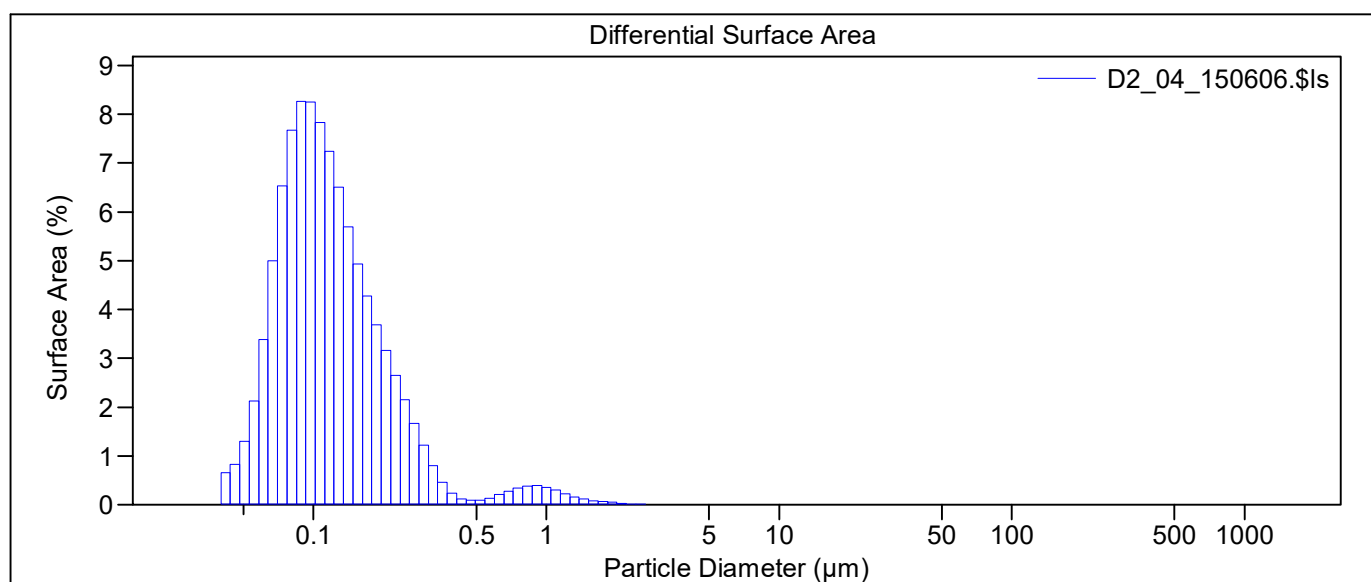
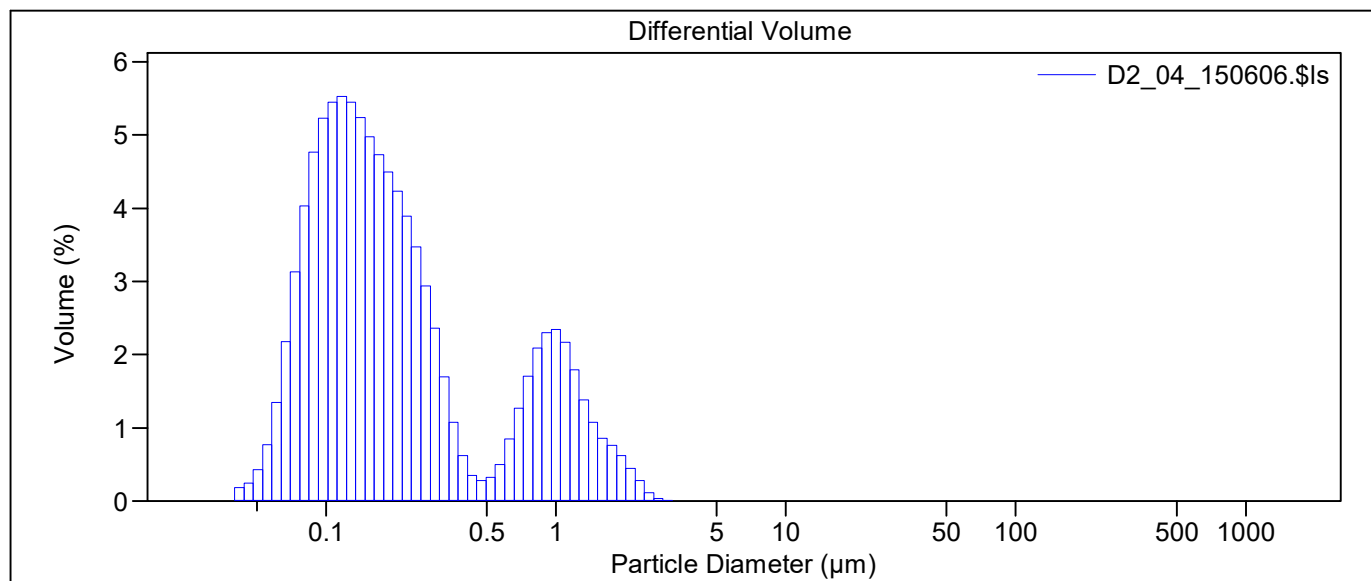
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_04_150606.\$ls		
	D2_04_150606.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.89%		
LS 13 320	Universal Liquid Module		
Start time:	15:04 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_04_150606.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.434 μm
Mean:	0.355 μm		Variance:	0.189 μm ²
Median:	0.166 μm		C.V.:	122%
Mean/Median ratio:	2.147		Skewness:	2.143 Right skewed
Mode:	0.117 μm		Kurtosis:	4.408 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.166 μm	0.310 μm	1.028 μm

Surface Area Statistics (Arithmetic)			D2_04_150606.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.176 µm
Mean:	0.153 µm		Variance:	0.031 µm ²
Median:	0.109 µm		C.V.:	115%
Mean/Median ratio:	1.402		Skewness:	5.578 Right skewed
Mode:	0.088 µm		Kurtosis:	39.75 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.235 µm

Number Statistics (Arithmetic)			D2_04_150606.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.0%
Mean/Median ratio:	1.110		Skewness:	5.142 Right skewed
Mode:	0.073 μm		Kurtosis:	96.80 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.82	3.57
11	0.048	0.050	0.43	1.30	4.68
12	0.053	0.055	0.77	2.12	6.33
13	0.058	0.061	1.35	3.39	8.39
14	0.064	0.067	2.18	4.99	10.3
15	0.070	0.073	3.13	6.54	11.1
16	0.077	0.080	4.03	7.67	10.8
17	0.084	0.088	4.77	8.26	9.69
18	0.093	0.097	5.23	8.25	8.03
19	0.102	0.106	5.45	7.84	6.33
20	0.112	0.117	5.53	7.24	4.85
21	0.122	0.128	5.45	6.51	3.62
22	0.134	0.141	5.24	5.69	2.63
23	0.148	0.155	4.98	4.93	1.89
24	0.162	0.170	4.74	4.27	1.36
25	0.178	0.186	4.49	3.69	0.97
26	0.195	0.205	4.23	3.17	0.69
27	0.214	0.225	3.89	2.65	0.48
28	0.235	0.247	3.47	2.16	0.33
29	0.258	0.271	2.94	1.66	0.21
30	0.284	0.297	2.36	1.22	0.13
31	0.311	0.326	1.70	0.80	0.069
32	0.342	0.358	1.07	0.46	0.033
33	0.375	0.393	0.62	0.24	0.014
34	0.412	0.431	0.35	0.12	0.0061
35	0.452	0.474	0.28	0.089	0.0036
36	0.496	0.520	0.32	0.094	0.0032
37	0.545	0.571	0.50	0.13	0.0037
38	0.598	0.627	0.85	0.21	0.0048
39	0.656	0.688	1.27	0.28	0.0055
40	0.721	0.755	1.71	0.35	0.0056
41	0.791	0.829	2.09	0.39	0.0052
42	0.868	0.910	2.30	0.39	0.0043
43	0.953	0.999	2.34	0.36	0.0033
44	1.047	1.097	2.17	0.30	0.0023
45	1.149	1.204	1.79	0.23	0.0014

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.38	0.16	0.00084
47	1.385	1.451	1.08	0.11	0.00050
48	1.520	1.592	0.85	0.082	0.00030
49	1.668	1.748	0.76	0.066	0.00020
50	1.832	1.919	0.62	0.050	0.00012
51	2.011	2.107	0.45	0.033	0.000067
52	2.207	2.313	0.28	0.019	0.000032
53	2.423	2.539	0.11	0.0069	0.000010
54	2.660	2.787	0.033	0.0018	0.000002
55	2.920	3.059	0.0057	0.00028	2.77E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

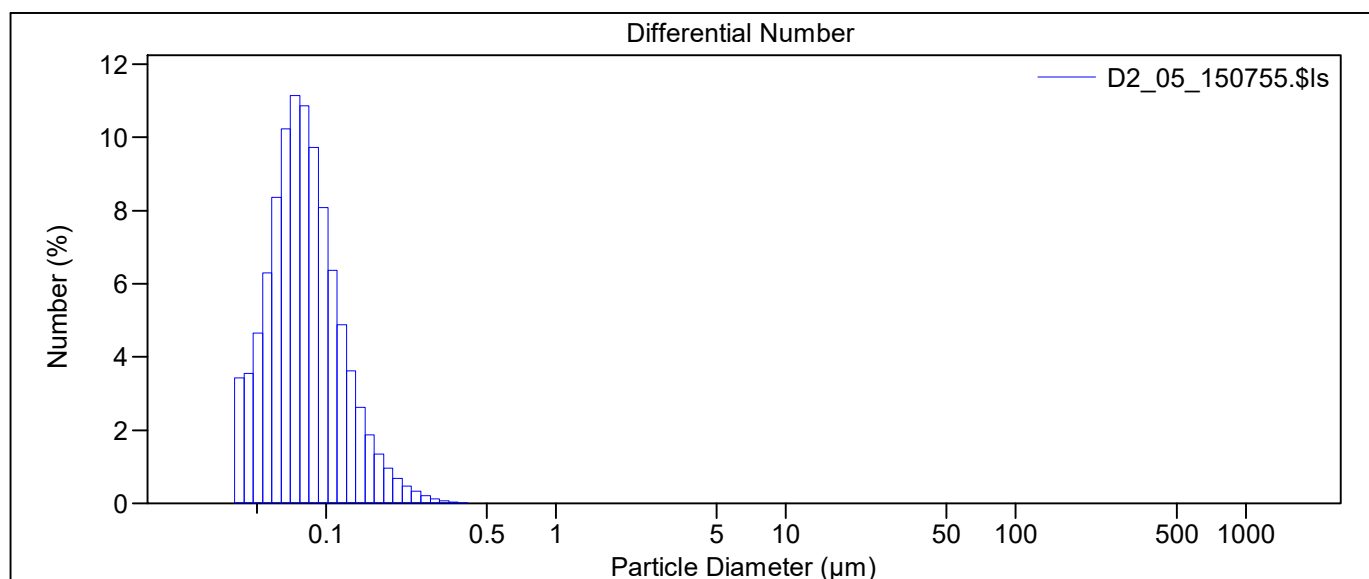
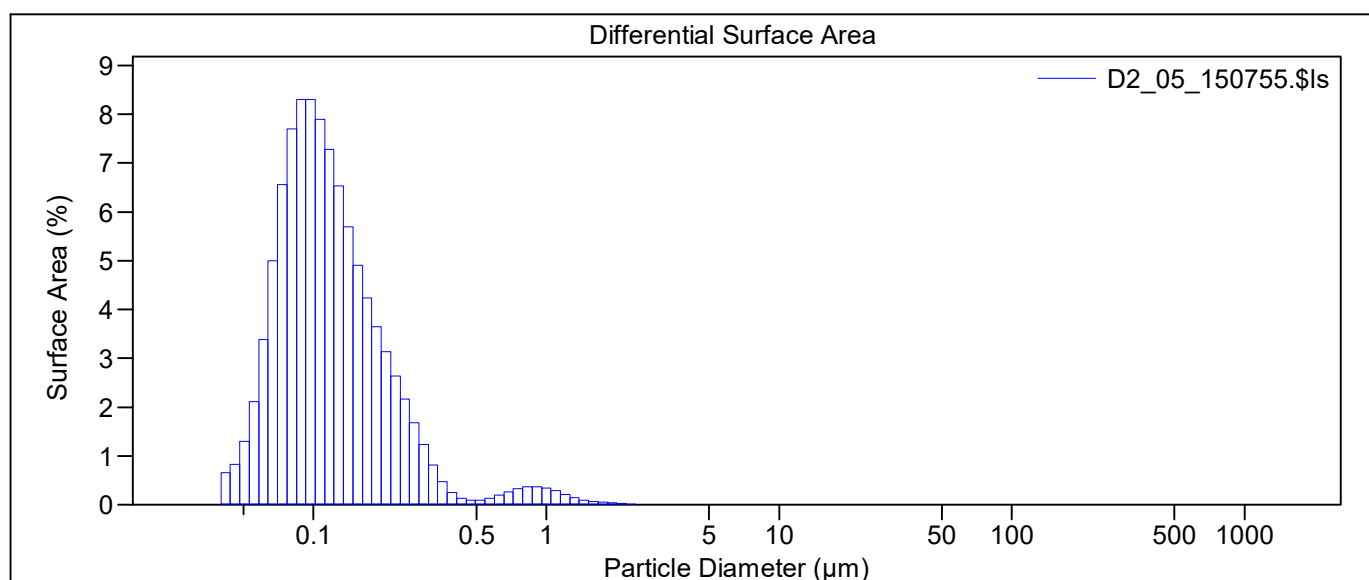
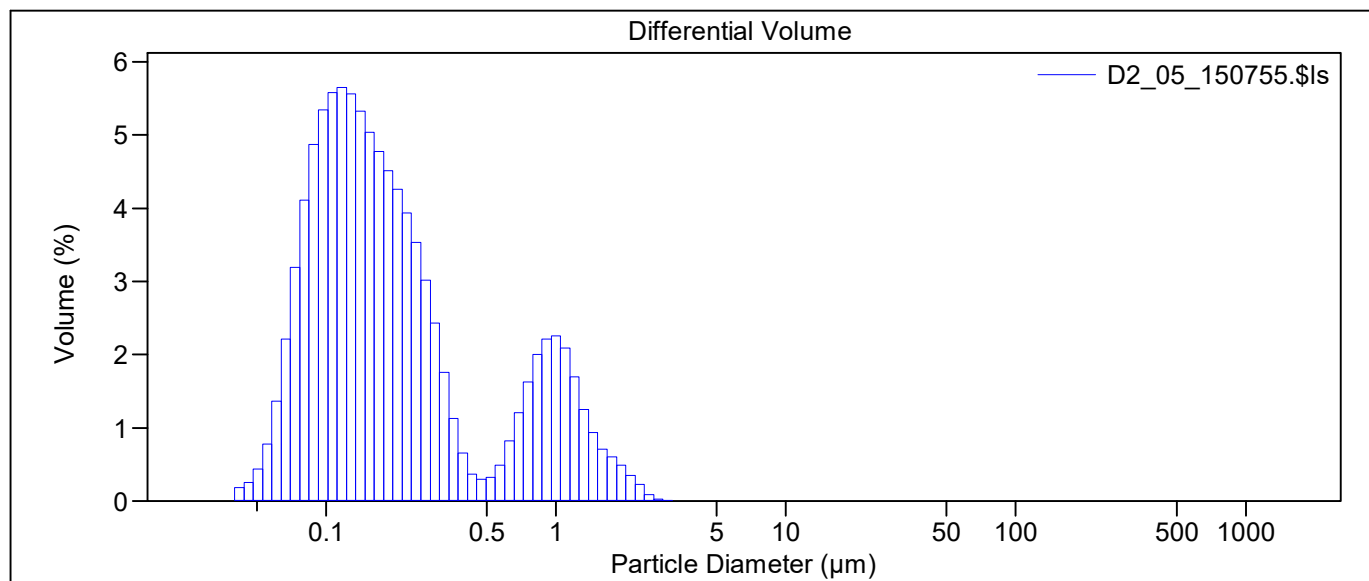
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_05_150755.\$ls		
	D2_05_150755.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.00%		
LS 13 320	Universal Liquid Module		
Start time:	15:06 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_05_150755.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.411 μm
Mean:	0.337 μm		Variance:	0.169 μm ²
Median:	0.162 μm		C.V.:	122%
Mean/Median ratio:	2.075		Skewness:	2.239 Right skewed
Mode:	0.117 μm		Kurtosis:	4.996 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.162 μm	0.296 μm	0.984 μm

Surface Area Statistics (Arithmetic)			D2_05_150755.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.167 μm
Mean:	0.151 μm		Variance:	0.028 μm ²
Median:	0.109 μm		C.V.:	111%
Mean/Median ratio:	1.383		Skewness:	5.618 Right skewed
Mode:	0.088 μm		Kurtosis:	40.88 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.158 μm	0.234 μm

Number Statistics (Arithmetic)			D2_05_150755.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.7%
Mean/Median ratio:	1.109		Skewness:	4.921 Right skewed
Mode:	0.073 μm		Kurtosis:	88.65 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



D2.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.82	3.56
11	0.048	0.050	0.43	1.30	4.65
12	0.053	0.055	0.78	2.11	6.29
13	0.058	0.061	1.37	3.38	8.36
14	0.064	0.067	2.21	4.99	10.2
15	0.070	0.073	3.19	6.56	11.1
16	0.077	0.080	4.11	7.70	10.9
17	0.084	0.088	4.87	8.31	9.73
18	0.093	0.097	5.35	8.31	8.07
19	0.102	0.106	5.58	7.90	6.37
20	0.112	0.117	5.65	7.28	4.87
21	0.122	0.128	5.56	6.53	3.63
22	0.134	0.141	5.33	5.70	2.63
23	0.148	0.155	5.04	4.91	1.88
24	0.162	0.170	4.77	4.24	1.34
25	0.178	0.186	4.52	3.65	0.96
26	0.195	0.205	4.26	3.14	0.69
27	0.214	0.225	3.94	2.64	0.48
28	0.235	0.247	3.53	2.16	0.32
29	0.258	0.271	3.02	1.68	0.21
30	0.284	0.297	2.43	1.23	0.13
31	0.311	0.326	1.76	0.81	0.070
32	0.342	0.358	1.13	0.47	0.034
33	0.375	0.393	0.65	0.25	0.015
34	0.412	0.431	0.37	0.13	0.0063
35	0.452	0.474	0.29	0.093	0.0038
36	0.496	0.520	0.33	0.095	0.0032
37	0.545	0.571	0.49	0.13	0.0036
38	0.598	0.627	0.82	0.20	0.0046
39	0.656	0.688	1.21	0.26	0.0051
40	0.721	0.755	1.63	0.33	0.0052
41	0.791	0.829	2.01	0.36	0.0049
42	0.868	0.910	2.22	0.37	0.0041
43	0.953	0.999	2.26	0.34	0.0031
44	1.047	1.097	2.09	0.29	0.0022
45	1.149	1.204	1.70	0.21	0.0013
46	1.261	1.321	1.25	0.14	0.00075
47	1.385	1.451	0.94	0.098	0.00042
48	1.520	1.592	0.71	0.067	0.00024
49	1.668	1.748	0.60	0.052	0.00016
50	1.832	1.919	0.49	0.039	0.000096
51	2.011	2.107	0.35	0.025	0.000052
52	2.207	2.313	0.22	0.015	0.000025
53	2.423	2.539	0.091	0.0054	0.000008
54	2.660	2.787	0.026	0.0014	0.000002
55	2.920	3.059	0.0045	0.00022	2.18E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

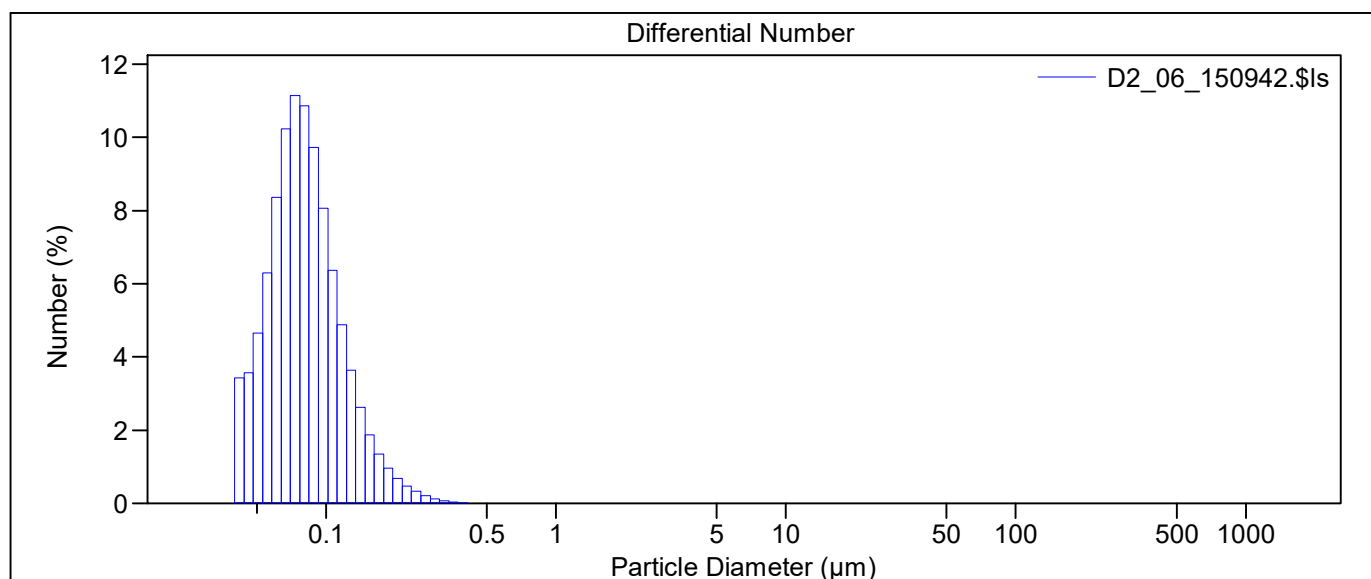
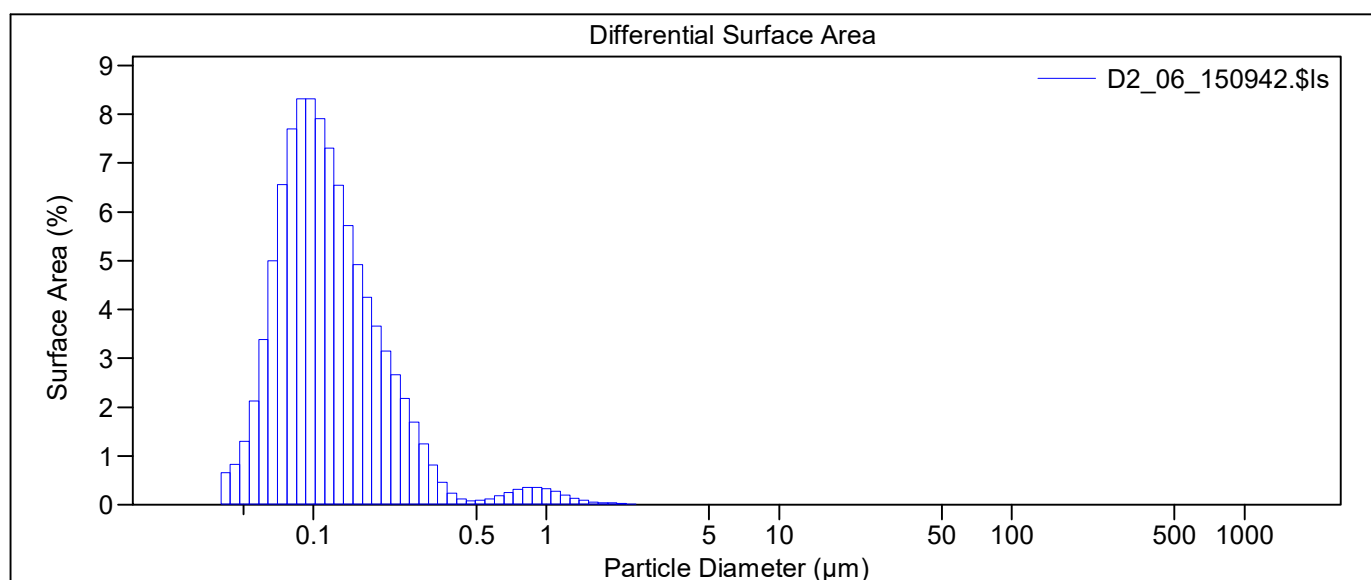
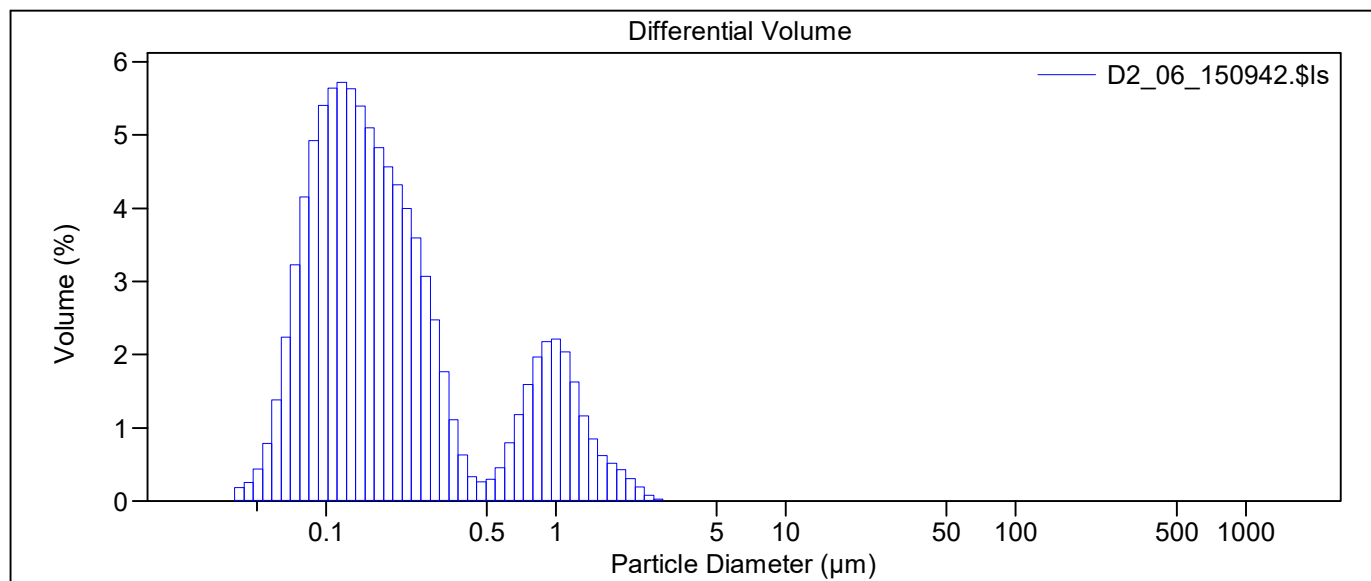
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_06_150942.\$ls		
	D2_06_150942.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.06%		
LS 13 320	Universal Liquid Module		
Start time:	15:08 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_06_150942.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.397 μm
Mean:	0.326 μm		Variance:	0.158 μm ²
Median:	0.161 μm		C.V.:	122%
Mean/Median ratio:	2.030		Skewness:	2.302 Right skewed
Mode:	0.117 μm		Kurtosis:	5.390 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.161 μm	0.285 μm	0.956 μm

Surface Area Statistics (Arithmetic)			D2_06_150942.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.162 µm
Mean:	0.149 µm		Variance:	0.026 µm ²
Median:	0.109 µm		C.V.:	109%
Mean/Median ratio:	1.370		Skewness:	5.658 Right skewed
Mode:	0.097 µm		Kurtosis:	41.79 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.233 µm

Number Statistics (Arithmetic)			D2_06_150942.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.5%
Mean/Median ratio:	1.109		Skewness:	4.777 Right skewed
Mode:	0.073 μm		Kurtosis:	83.89 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.83	3.56
11	0.048	0.050	0.44	1.30	4.65
12	0.053	0.055	0.79	2.12	6.30
13	0.058	0.061	1.38	3.39	8.36
14	0.064	0.067	2.24	5.00	10.2
15	0.070	0.073	3.22	6.56	11.1
16	0.077	0.080	4.16	7.71	10.9
17	0.084	0.088	4.92	8.31	9.72
18	0.093	0.097	5.41	8.32	8.07
19	0.102	0.106	5.64	7.91	6.37
20	0.112	0.117	5.72	7.30	4.88
21	0.122	0.128	5.64	6.55	3.63
22	0.134	0.141	5.40	5.72	2.63
23	0.148	0.155	5.10	4.92	1.88
24	0.162	0.170	4.83	4.25	1.34
25	0.178	0.186	4.57	3.66	0.96
26	0.195	0.205	4.32	3.15	0.69
27	0.214	0.225	4.00	2.66	0.48
28	0.235	0.247	3.59	2.17	0.33
29	0.258	0.271	3.07	1.69	0.21
30	0.284	0.297	2.47	1.24	0.13
31	0.311	0.326	1.77	0.81	0.069
32	0.342	0.358	1.11	0.46	0.033
33	0.375	0.393	0.63	0.24	0.014
34	0.412	0.431	0.34	0.12	0.0057
35	0.452	0.474	0.26	0.083	0.0034
36	0.496	0.520	0.30	0.086	0.0029
37	0.545	0.571	0.46	0.12	0.0033
38	0.598	0.627	0.79	0.19	0.0044
39	0.656	0.688	1.18	0.26	0.0049
40	0.721	0.755	1.59	0.31	0.0050
41	0.791	0.829	1.97	0.35	0.0047
42	0.868	0.910	2.18	0.36	0.0039
43	0.953	0.999	2.21	0.33	0.0030
44	1.047	1.097	2.04	0.28	0.0021
45	1.149	1.204	1.63	0.20	0.0013

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.17	0.13	0.00069
47	1.385	1.451	0.85	0.087	0.00038
48	1.520	1.592	0.62	0.058	0.00021
49	1.668	1.748	0.52	0.044	0.00013
50	1.832	1.919	0.43	0.033	0.000083
51	2.011	2.107	0.31	0.022	0.000045
52	2.207	2.313	0.20	0.013	0.000022
53	2.423	2.539	0.081	0.0048	0.000007
54	2.660	2.787	0.023	0.0012	0.000001
55	2.920	3.059	0.0040	0.00019	1.89E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

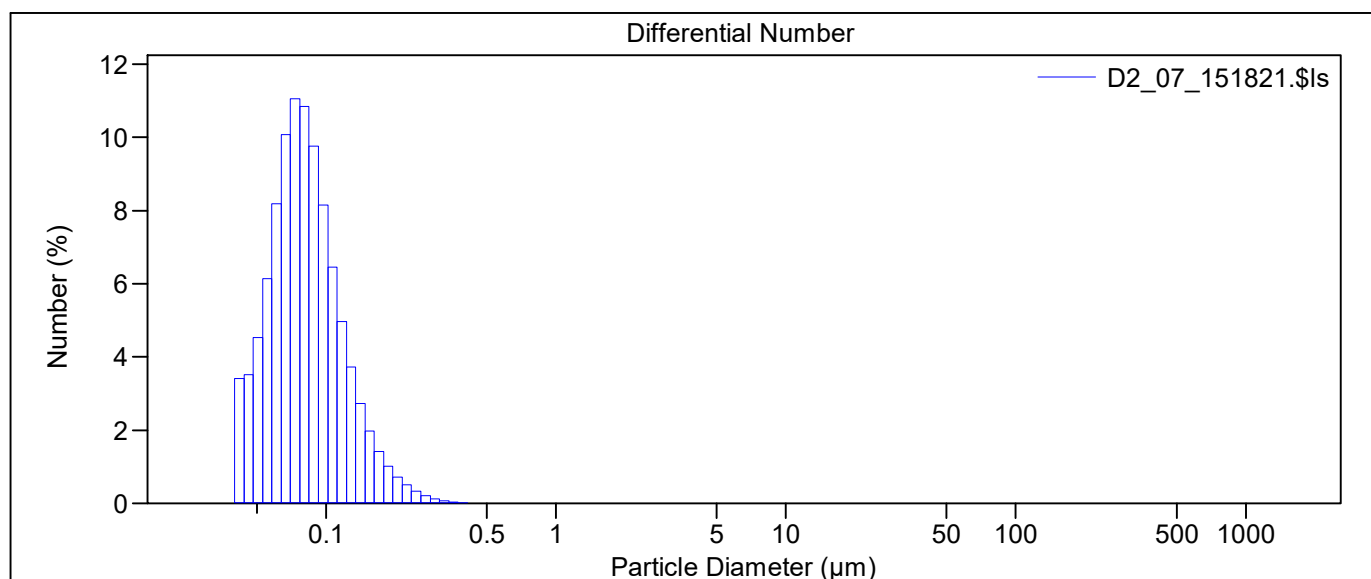
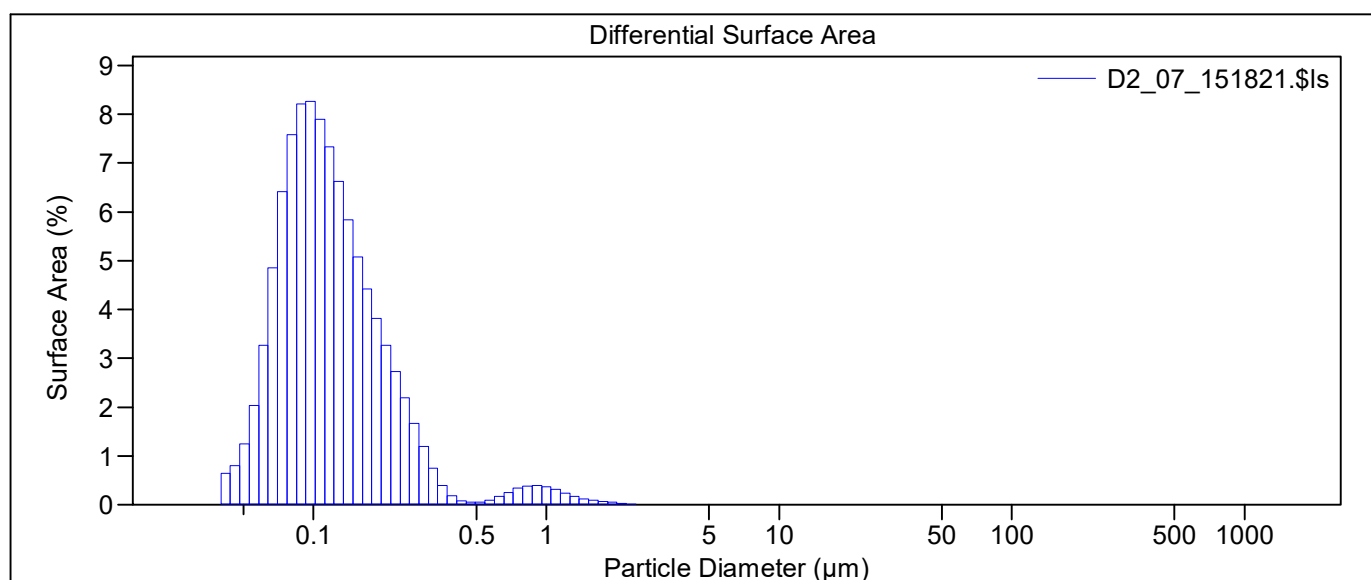
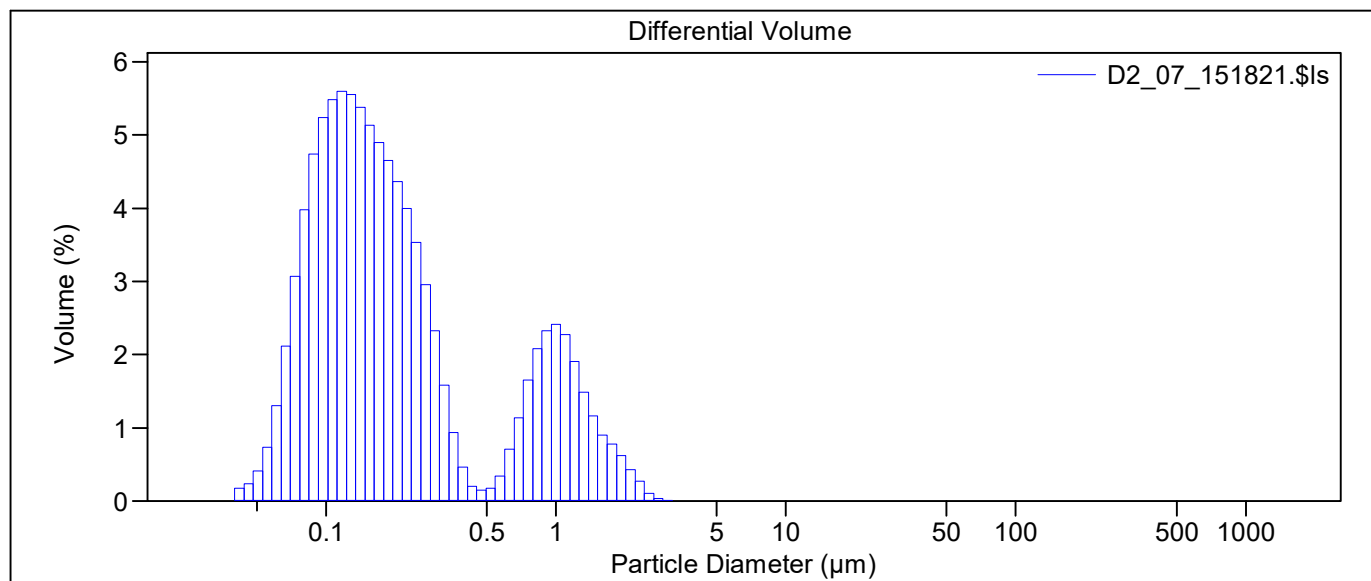
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_07_151821.\$ls		
	D2_07_151821.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.89%		
LS 13 320	Universal Liquid Module		
Start time:	15:16 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_07_151821.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.437 μm
Mean:	0.356 μm		Variance:	0.191 μm ²
Median:	0.165 μm		C.V.:	123%
Mean/Median ratio:	2.163		Skewness:	2.106 Right skewed
Mode:	0.117 μm		Kurtosis:	4.136 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.107 μm	0.165 μm	0.301 μm	1.045 μm

Surface Area Statistics (Arithmetic)			D2_07_151821.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.176 μm
Mean:	0.153 μm		Variance:	0.031 μm ²
Median:	0.110 μm		C.V.:	115%
Mean/Median ratio:	1.392		Skewness:	5.619 Right skewed
Mode:	0.097 μm		Kurtosis:	39.74 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.083 μm	0.110 μm	0.159 μm	0.233 μm

Number Statistics (Arithmetic)			D2_07_151821.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.7%
Mean/Median ratio:	1.109		Skewness:	5.094 Right skewed
Mode:	0.073 μm		Kurtosis:	97.65 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.24	0.80	3.51
11	0.048	0.050	0.41	1.24	4.52
12	0.053	0.055	0.74	2.04	6.15
13	0.058	0.061	1.30	3.27	8.19
14	0.064	0.067	2.11	4.85	10.1
15	0.070	0.073	3.07	6.41	11.1
16	0.077	0.080	3.98	7.58	10.8
17	0.084	0.088	4.74	8.22	9.76
18	0.093	0.097	5.24	8.27	8.14
19	0.102	0.106	5.49	7.89	6.45
20	0.112	0.117	5.59	7.33	4.97
21	0.122	0.128	5.56	6.63	3.73
22	0.134	0.141	5.37	5.84	2.73
23	0.148	0.155	5.13	5.08	1.97
24	0.162	0.170	4.90	4.42	1.42
25	0.178	0.186	4.65	3.82	1.02
26	0.195	0.205	4.36	3.27	0.72
27	0.214	0.225	4.00	2.73	0.50
28	0.235	0.247	3.53	2.19	0.33
29	0.258	0.271	2.95	1.67	0.21
30	0.284	0.297	2.33	1.20	0.13
31	0.311	0.326	1.58	0.74	0.065
32	0.342	0.358	0.94	0.40	0.029
33	0.375	0.393	0.46	0.18	0.011
34	0.412	0.431	0.20	0.073	0.0036
35	0.452	0.474	0.15	0.048	0.0020
36	0.496	0.520	0.18	0.052	0.0018
37	0.545	0.571	0.34	0.091	0.0026
38	0.598	0.627	0.71	0.17	0.0041
39	0.656	0.688	1.14	0.25	0.0050
40	0.721	0.755	1.65	0.34	0.0055
41	0.791	0.829	2.08	0.38	0.0052
42	0.868	0.910	2.32	0.39	0.0044
43	0.953	0.999	2.41	0.37	0.0034
44	1.047	1.097	2.27	0.32	0.0024
45	1.149	1.204	1.90	0.24	0.0015

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.48	0.17	0.00091
47	1.385	1.451	1.16	0.12	0.00054
48	1.520	1.592	0.90	0.087	0.00032
49	1.668	1.748	0.78	0.068	0.00021
50	1.832	1.919	0.62	0.049	0.00012
51	2.011	2.107	0.43	0.031	0.000065
52	2.207	2.313	0.27	0.018	0.000031
53	2.423	2.539	0.11	0.0065	0.000009
54	2.660	2.787	0.031	0.0017	0.000002
55	2.920	3.059	0.0056	0.00028	2.77E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

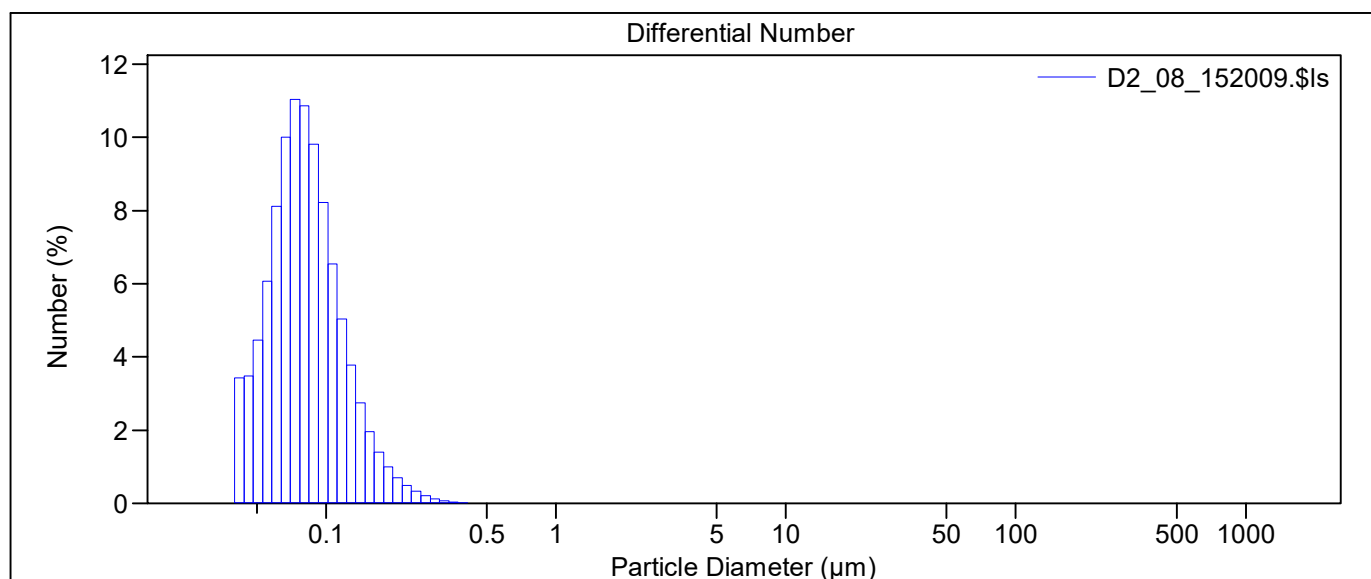
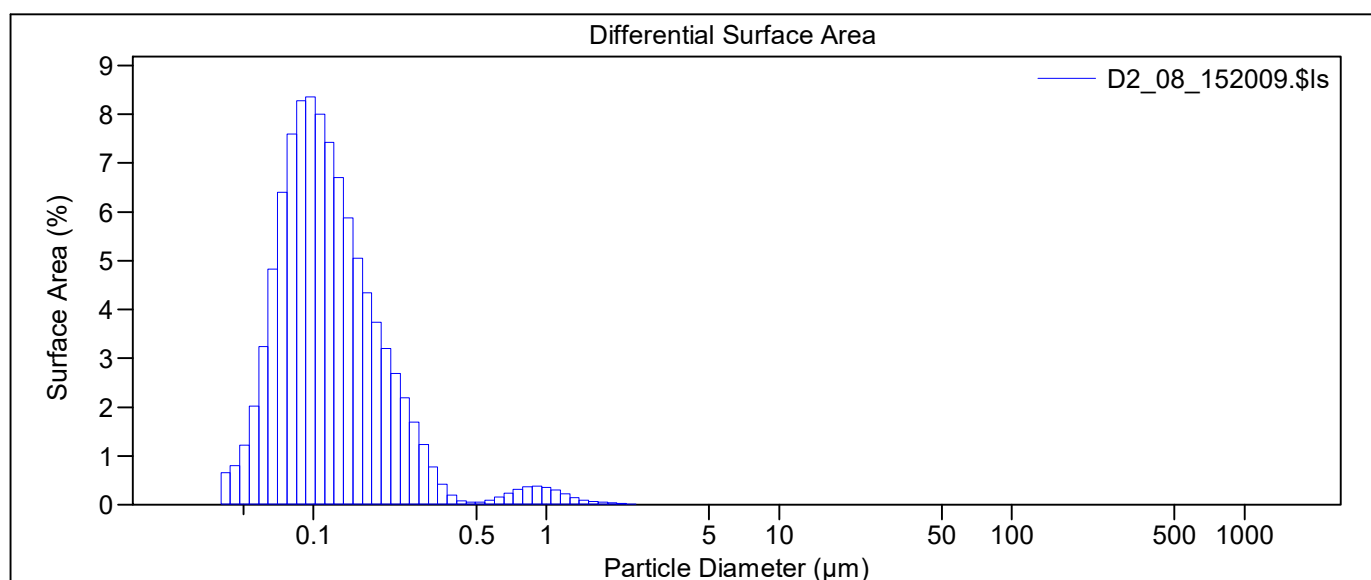
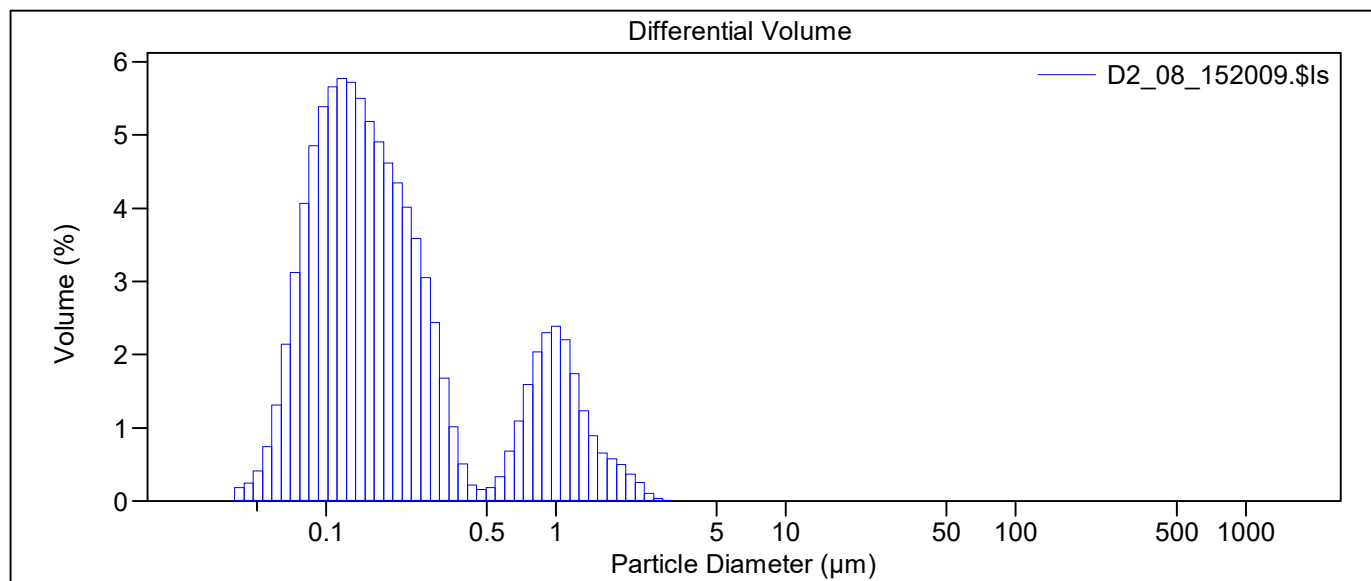
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_08_152009.\$ls		
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File ID:	D2		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.00%		
LS 13 320	Universal Liquid Module		
Start time:	15:18 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	66%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_08_152009.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.413 μm
Mean:	0.336 μm		Variance:	0.171 μm ²
Median:	0.161 μm		C.V.:	123%
Mean/Median ratio:	2.084		Skewness:	2.263 Right skewed
Mode:	0.117 μm		Kurtosis:	5.136 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.161 μm	0.286 μm	0.990 μm

Surface Area Statistics (Arithmetic)			D2_08_152009.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.167 μm
Mean:	0.151 μm		Variance:	0.028 μm ²
Median:	0.110 μm		C.V.:	111%
Mean/Median ratio:	1.370		Skewness:	5.723 Right skewed
Mode:	0.097 μm		Kurtosis:	42.30 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.083 μm	0.110 μm	0.158 μm	0.232 μm

Number Statistics (Arithmetic)			D2_08_152009.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.4%
Mean/Median ratio:	1.107		Skewness:	4.847 Right skewed
Mode:	0.073 μm		Kurtosis:	88.67 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.43
10	0.044	0.046	0.24	0.80	3.49
11	0.048	0.050	0.41	1.23	4.46
12	0.053	0.055	0.74	2.02	6.08
13	0.058	0.061	1.31	3.24	8.12
14	0.064	0.067	2.14	4.82	10.0
15	0.070	0.073	3.12	6.41	11.0
16	0.077	0.080	4.06	7.60	10.9
17	0.084	0.088	4.86	8.27	9.82
18	0.093	0.097	5.38	8.36	8.23
19	0.102	0.106	5.66	8.00	6.54
20	0.112	0.117	5.77	7.43	5.04
21	0.122	0.128	5.72	6.71	3.77
22	0.134	0.141	5.50	5.88	2.74
23	0.148	0.155	5.19	5.05	1.96
24	0.162	0.170	4.90	4.35	1.40
25	0.178	0.186	4.62	3.73	1.00
26	0.195	0.205	4.35	3.20	0.71
27	0.214	0.225	4.01	2.69	0.49
28	0.235	0.247	3.59	2.19	0.33
29	0.258	0.271	3.05	1.70	0.21
30	0.284	0.297	2.44	1.24	0.13
31	0.311	0.326	1.68	0.78	0.068
32	0.342	0.358	1.01	0.43	0.031
33	0.375	0.393	0.50	0.19	0.012
34	0.412	0.431	0.22	0.077	0.0038
35	0.452	0.474	0.16	0.050	0.0021
36	0.496	0.520	0.18	0.052	0.0018
37	0.545	0.571	0.33	0.087	0.0025
38	0.598	0.627	0.68	0.16	0.0039
39	0.656	0.688	1.09	0.24	0.0047
40	0.721	0.755	1.59	0.32	0.0052
41	0.791	0.829	2.04	0.37	0.0050
42	0.868	0.910	2.30	0.38	0.0043
43	0.953	0.999	2.39	0.36	0.0033
44	1.047	1.097	2.20	0.30	0.0023
45	1.149	1.204	1.74	0.22	0.0014

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.23	0.14	0.00075
47	1.385	1.451	0.89	0.093	0.00041
48	1.520	1.592	0.65	0.062	0.00023
49	1.668	1.748	0.58	0.050	0.00015
50	1.832	1.919	0.50	0.039	0.000098
51	2.011	2.107	0.37	0.026	0.000055
52	2.207	2.313	0.25	0.016	0.000028
53	2.423	2.539	0.11	0.0063	0.000009
54	2.660	2.787	0.031	0.0017	0.000002
55	2.920	3.059	0.0055	0.00027	2.65E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

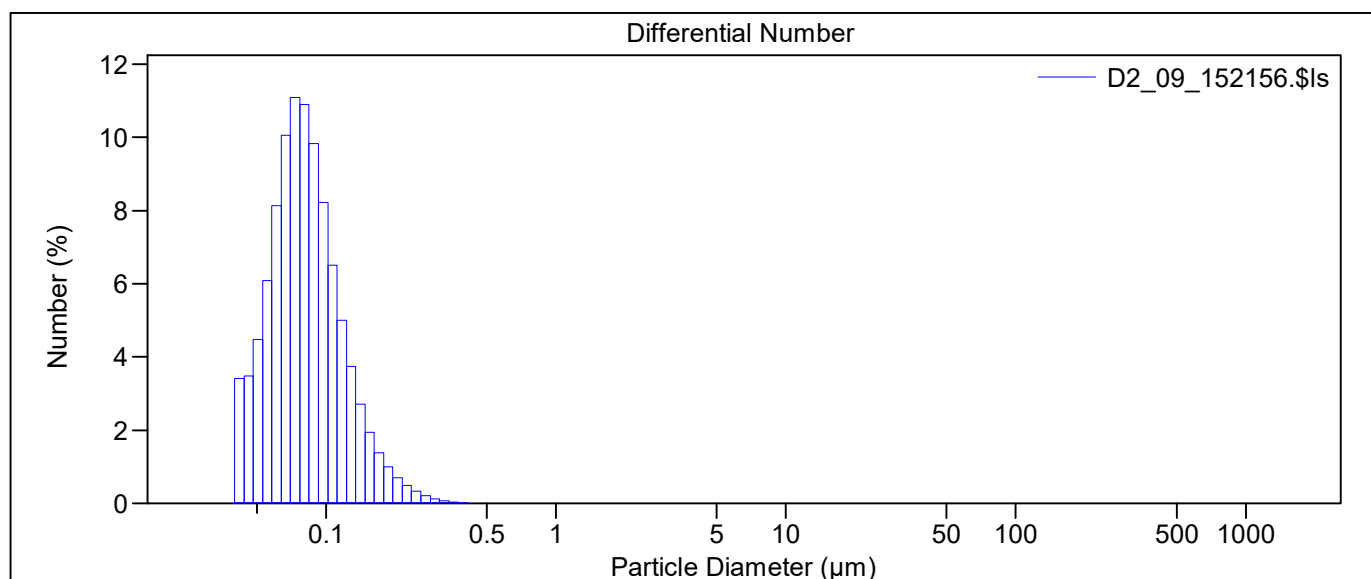
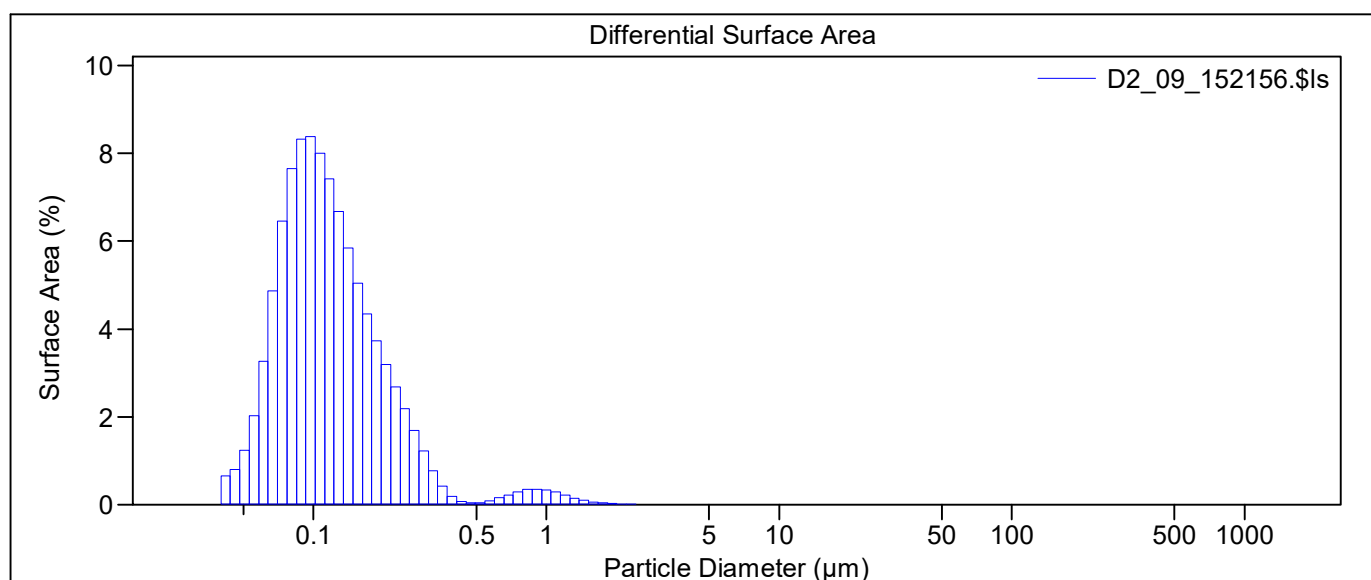
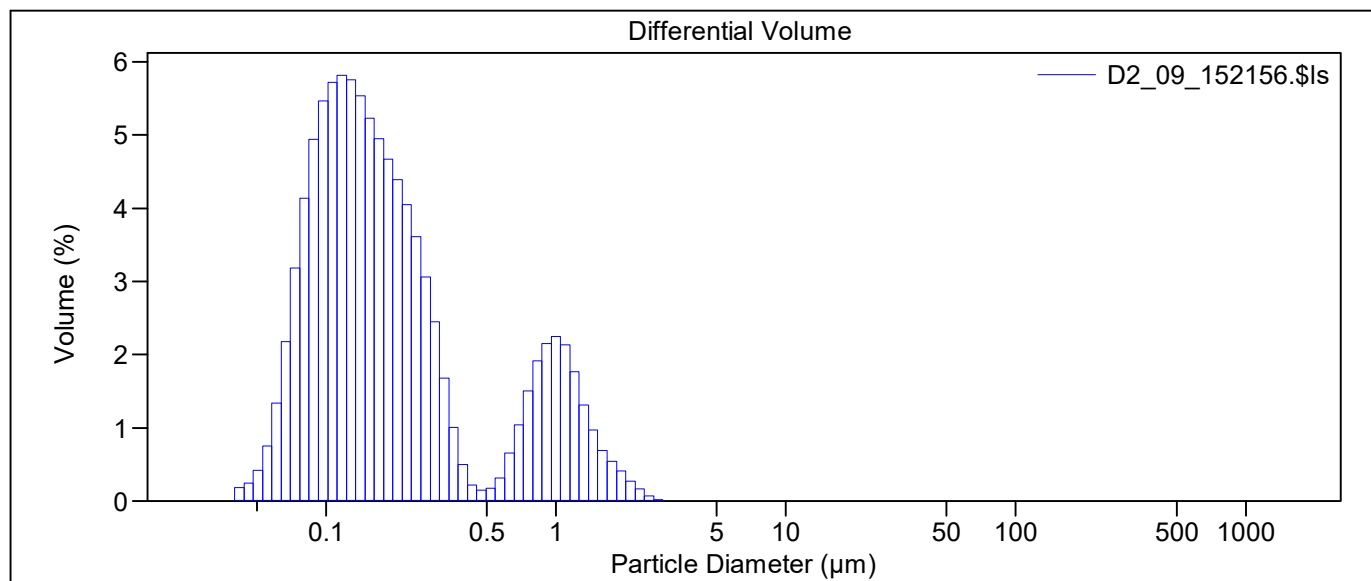
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_09_152156.\$ls		
	D2_09_152156.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.10%		
LS 13 320	Universal Liquid Module		
Start time:	15:20 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	65%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_09_152156.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.400 μm
Mean:	0.327 μm		Variance:	0.160 μm ²
Median:	0.160 μm		C.V.:	122%
Mean/Median ratio:	2.047		Skewness:	2.245 Right skewed
Mode:	0.117 μm		Kurtosis:	4.910 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.160 μm	0.278 μm	0.978 μm

Surface Area Statistics (Arithmetic)			D2_09_152156.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.163 µm
Mean:	0.149 µm		Variance:	0.026 µm ²
Median:	0.109 µm		C.V.:	109%
Mean/Median ratio:	1.361		Skewness:	5.707 Right skewed
Mode:	0.097 µm		Kurtosis:	41.61 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.230 µm

Number Statistics (Arithmetic)			D2_09_152156.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.2%
Mean/Median ratio:	1.107		Skewness:	4.744 Right skewed
Mode:	0.073 μm		Kurtosis:	85.29 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D2.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.80	3.49
11	0.048	0.050	0.42	1.24	4.47
12	0.053	0.055	0.76	2.03	6.10
13	0.058	0.061	1.34	3.27	8.14
14	0.064	0.067	2.18	4.86	10.1
15	0.070	0.073	3.18	6.46	11.1
16	0.077	0.080	4.14	7.66	10.9
17	0.084	0.088	4.94	8.33	9.83
18	0.093	0.097	5.46	8.39	8.22
19	0.102	0.106	5.72	8.01	6.51
20	0.112	0.117	5.82	7.42	5.00
21	0.122	0.128	5.76	6.68	3.74
22	0.134	0.141	5.53	5.85	2.72
23	0.148	0.155	5.23	5.04	1.94
24	0.162	0.170	4.95	4.34	1.39
25	0.178	0.186	4.67	3.73	0.99
26	0.195	0.205	4.39	3.20	0.70
27	0.214	0.225	4.05	2.68	0.49
28	0.235	0.247	3.61	2.18	0.33
29	0.258	0.271	3.06	1.69	0.21
30	0.284	0.297	2.44	1.23	0.13
31	0.311	0.326	1.68	0.77	0.066
32	0.342	0.358	1.00	0.42	0.030
33	0.375	0.393	0.50	0.19	0.011
34	0.412	0.431	0.22	0.074	0.0037
35	0.452	0.474	0.15	0.048	0.0020
36	0.496	0.520	0.17	0.049	0.0017
37	0.545	0.571	0.32	0.082	0.0023
38	0.598	0.627	0.65	0.15	0.0036
39	0.656	0.688	1.04	0.23	0.0044
40	0.721	0.755	1.51	0.30	0.0048
41	0.791	0.829	1.91	0.34	0.0046
42	0.868	0.910	2.15	0.35	0.0039
43	0.953	0.999	2.25	0.34	0.0031
44	1.047	1.097	2.13	0.29	0.0022
45	1.149	1.204	1.77	0.22	0.0014
46	1.261	1.321	1.31	0.15	0.00078
47	1.385	1.451	0.97	0.100	0.00044
48	1.520	1.592	0.69	0.064	0.00023
49	1.668	1.748	0.54	0.046	0.00014
50	1.832	1.919	0.41	0.032	0.000080
51	2.011	2.107	0.27	0.019	0.000040
52	2.207	2.313	0.17	0.011	0.000019
53	2.423	2.539	0.068	0.0040	0.000006
54	2.660	2.787	0.019	0.0010	0.000001
55	2.920	3.059	0.0036	0.00017	1.72E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

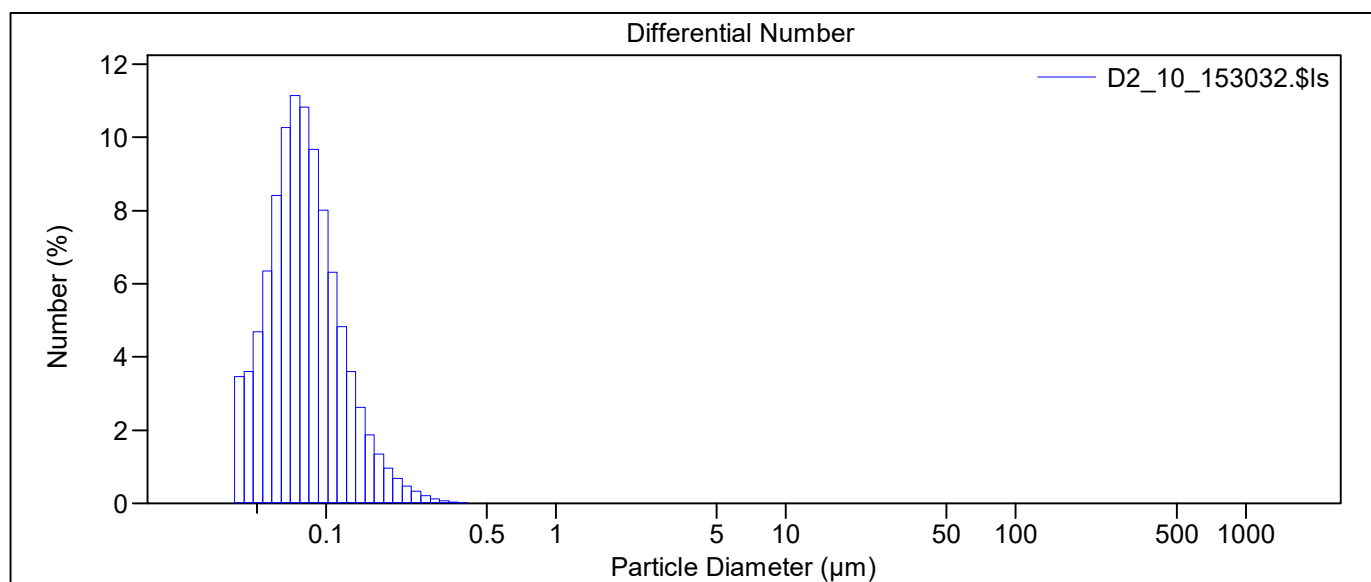
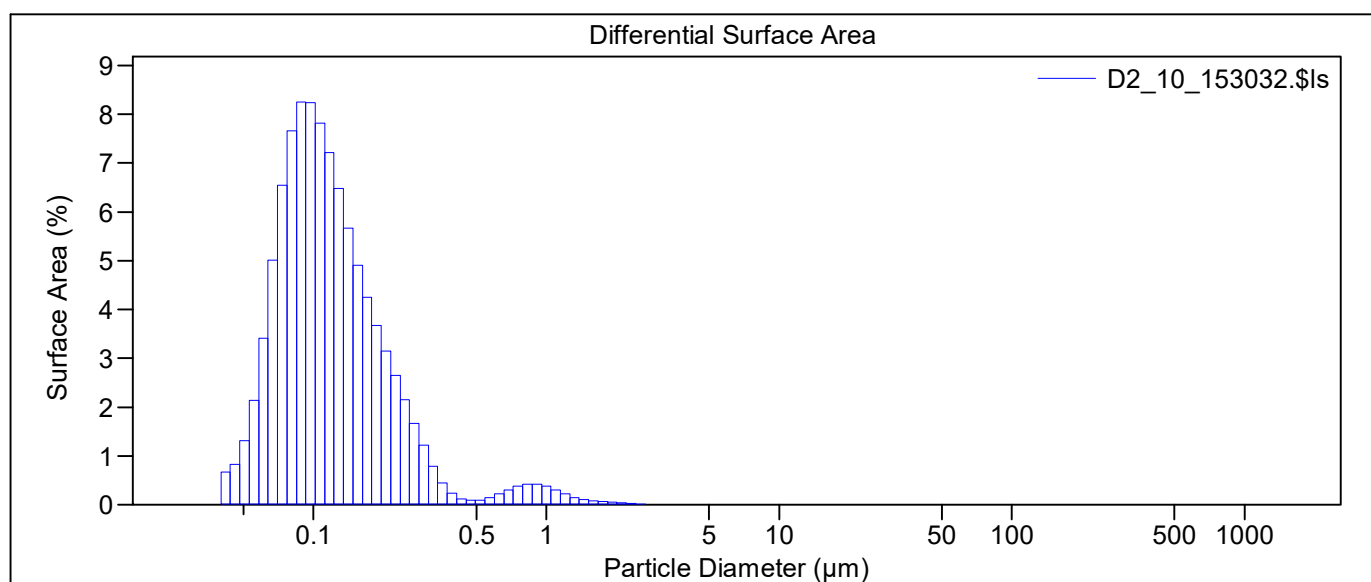
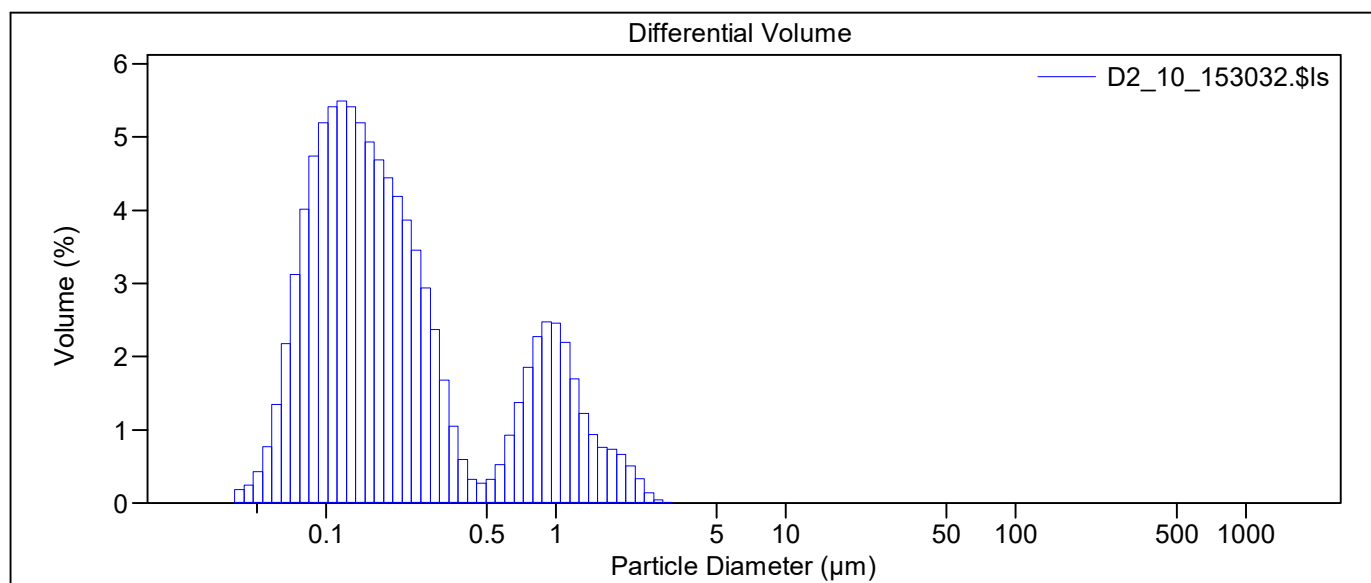
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_10_153032.\$ls		
	D2_10_153032.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.82%		
LS 13 320	Universal Liquid Module		
Start time:	15:28 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_10_153032.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.437 µm
Mean:	0.358 µm		Variance:	0.191 µm ²
Median:	0.167 µm		C.V.:	122%
Mean/Median ratio:	2.153		Skewness:	2.166 Right skewed
Mode:	0.117 µm		Kurtosis:	4.640 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.107 µm	0.167 µm	0.318 µm	1.018 µm

Surface Area Statistics (Arithmetic)			D2_10_153032.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.177 µm
Mean:	0.154 µm		Variance:	0.031 µm ²
Median:	0.109 µm		C.V.:	115%
Mean/Median ratio:	1.409		Skewness:	5.553 Right skewed
Mode:	0.088 µm		Kurtosis:	39.86 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.159 µm	0.237 µm

Number Statistics (Arithmetic)			D2_10_153032.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.1%
Mean/Median ratio:	1.110		Skewness:	5.197 Right skewed
Mode:	0.073 μm		Kurtosis:	97.71 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.46
10	0.044	0.046	0.25	0.83	3.60
11	0.048	0.050	0.43	1.31	4.70
12	0.053	0.055	0.77	2.13	6.35
13	0.058	0.061	1.35	3.40	8.41
14	0.064	0.067	2.17	5.01	10.3
15	0.070	0.073	3.12	6.55	11.1
16	0.077	0.080	4.01	7.67	10.8
17	0.084	0.088	4.74	8.25	9.67
18	0.093	0.097	5.20	8.24	8.01
19	0.102	0.106	5.42	7.82	6.31
20	0.112	0.117	5.49	7.22	4.84
21	0.122	0.128	5.41	6.49	3.60
22	0.134	0.141	5.20	5.67	2.62
23	0.148	0.155	4.93	4.90	1.88
24	0.162	0.170	4.69	4.24	1.35
25	0.178	0.186	4.45	3.67	0.97
26	0.195	0.205	4.19	3.15	0.69
27	0.214	0.225	3.86	2.64	0.48
28	0.235	0.247	3.46	2.16	0.32
29	0.258	0.271	2.94	1.67	0.21
30	0.284	0.297	2.37	1.23	0.13
31	0.311	0.326	1.68	0.79	0.068
32	0.342	0.358	1.05	0.45	0.032
33	0.375	0.393	0.59	0.23	0.014
34	0.412	0.431	0.32	0.11	0.0056
35	0.452	0.474	0.27	0.087	0.0036
36	0.496	0.520	0.33	0.097	0.0033
37	0.545	0.571	0.52	0.14	0.0039
38	0.598	0.627	0.93	0.23	0.0053
39	0.656	0.688	1.38	0.31	0.0060
40	0.721	0.755	1.86	0.38	0.0061
41	0.791	0.829	2.28	0.42	0.0056
42	0.868	0.910	2.48	0.42	0.0046
43	0.953	0.999	2.46	0.38	0.0035
44	1.047	1.097	2.19	0.31	0.0023
45	1.149	1.204	1.70	0.22	0.0014

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.23	0.14	0.00075
47	1.385	1.451	0.94	0.099	0.00043
48	1.520	1.592	0.76	0.074	0.00027
49	1.668	1.748	0.73	0.065	0.00019
50	1.832	1.919	0.66	0.053	0.00013
51	2.011	2.107	0.51	0.037	0.000077
52	2.207	2.313	0.34	0.022	0.000038
53	2.423	2.539	0.14	0.0084	0.000012
54	2.660	2.787	0.040	0.0022	0.000003
55	2.920	3.059	0.0067	0.00034	3.29E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

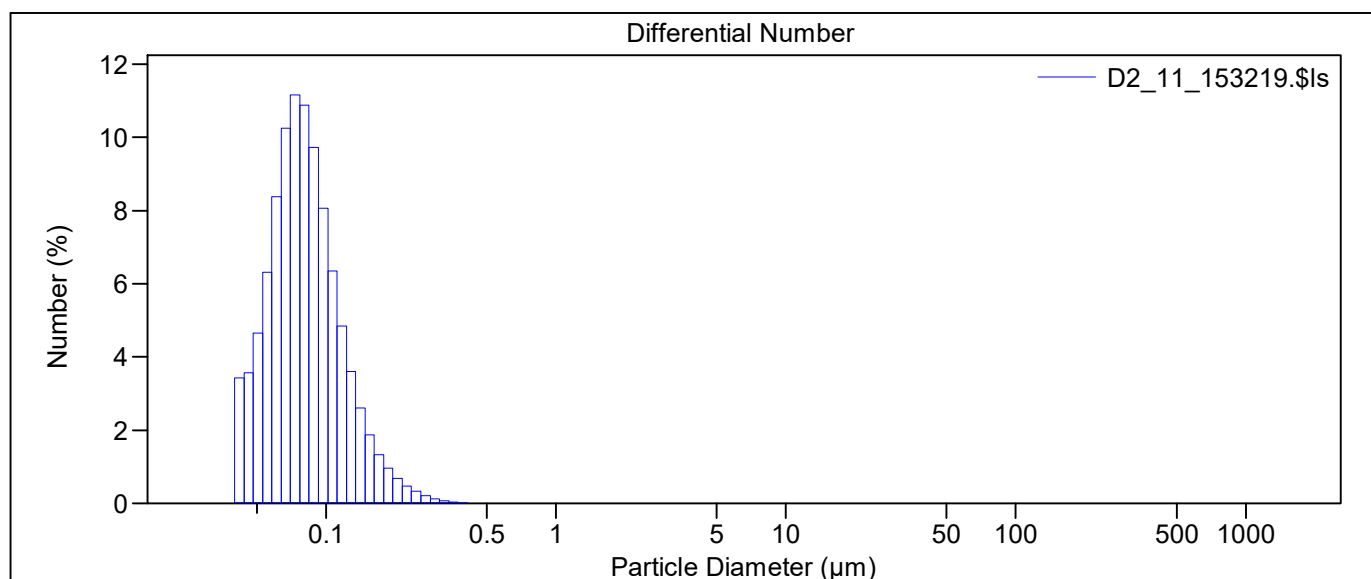
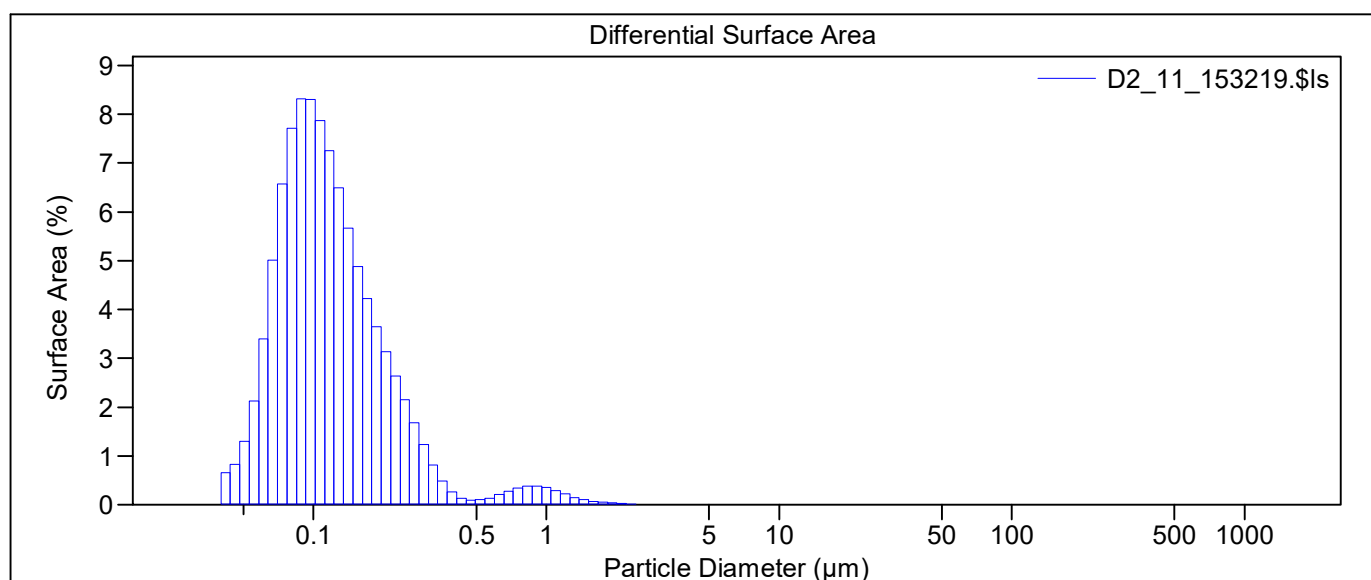
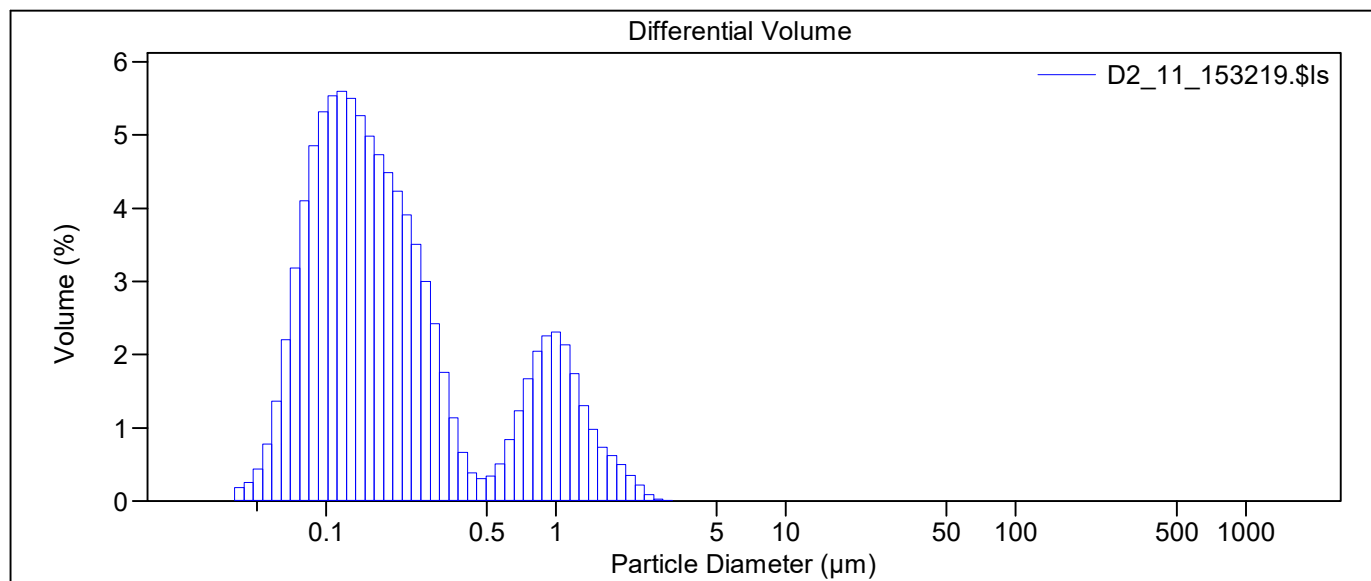
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_11_153219.\$ls		
	D2_11_153219.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.95%		
LS 13 320	Universal Liquid Module		
Start time:	15:30 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_11_153219.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.414 μm
Mean:	0.341 μm		Variance:	0.171 μm ²
Median:	0.164 μm		C.V.:	121%
Mean/Median ratio:	2.088		Skewness:	2.191 Right skewed
Mode:	0.117 μm		Kurtosis:	4.723 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.164 μm	0.302 μm	0.995 μm

Surface Area Statistics (Arithmetic)			D2_11_153219.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.170 µm
Mean:	0.151 µm		Variance:	0.029 µm ²
Median:	0.109 µm		C.V.:	112%
Mean/Median ratio:	1.391		Skewness:	5.545 Right skewed
Mode:	0.088 µm		Kurtosis:	39.60 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.235 µm

Number Statistics (Arithmetic)			D2_11_153219.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.8%
Mean/Median ratio:	1.109		Skewness:	4.996 Right skewed
Mode:	0.073 μm		Kurtosis:	90.43 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D2.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.25	0.83	3.57
11	0.048	0.050	0.43	1.30	4.66
12	0.053	0.055	0.78	2.12	6.31
13	0.058	0.061	1.36	3.40	8.38
14	0.064	0.067	2.21	5.01	10.3
15	0.070	0.073	3.18	6.57	11.2
16	0.077	0.080	4.10	7.72	10.9
17	0.084	0.088	4.85	8.32	9.73
18	0.093	0.097	5.32	8.30	8.06
19	0.102	0.106	5.53	7.87	6.34
20	0.112	0.117	5.60	7.25	4.85
21	0.122	0.128	5.50	6.50	3.60
22	0.134	0.141	5.27	5.66	2.61
23	0.148	0.155	4.99	4.88	1.87
24	0.162	0.170	4.73	4.22	1.34
25	0.178	0.186	4.48	3.64	0.96
26	0.195	0.205	4.23	3.13	0.68
27	0.214	0.225	3.91	2.64	0.48
28	0.235	0.247	3.51	2.16	0.32
29	0.258	0.271	3.00	1.68	0.21
30	0.284	0.297	2.42	1.24	0.13
31	0.311	0.326	1.76	0.82	0.070
32	0.342	0.358	1.14	0.48	0.034
33	0.375	0.393	0.67	0.26	0.015
34	0.412	0.431	0.38	0.13	0.0066
35	0.452	0.474	0.30	0.097	0.0040
36	0.496	0.520	0.34	0.099	0.0033
37	0.545	0.571	0.50	0.13	0.0038
38	0.598	0.627	0.84	0.20	0.0047
39	0.656	0.688	1.24	0.27	0.0053
40	0.721	0.755	1.67	0.33	0.0054
41	0.791	0.829	2.05	0.37	0.0050
42	0.868	0.910	2.26	0.38	0.0041
43	0.953	0.999	2.31	0.35	0.0032
44	1.047	1.097	2.14	0.30	0.0022
45	1.149	1.204	1.74	0.22	0.0014
46	1.261	1.321	1.30	0.15	0.00078
47	1.385	1.451	0.98	0.10	0.00045
48	1.520	1.592	0.74	0.070	0.00025
49	1.668	1.748	0.62	0.054	0.00016
50	1.832	1.919	0.50	0.039	0.000098
51	2.011	2.107	0.35	0.025	0.000052
52	2.207	2.313	0.22	0.014	0.000025
53	2.423	2.539	0.089	0.0053	0.000008
54	2.660	2.787	0.025	0.0014	0.000002
55	2.920	3.059	0.0045	0.00022	2.16E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

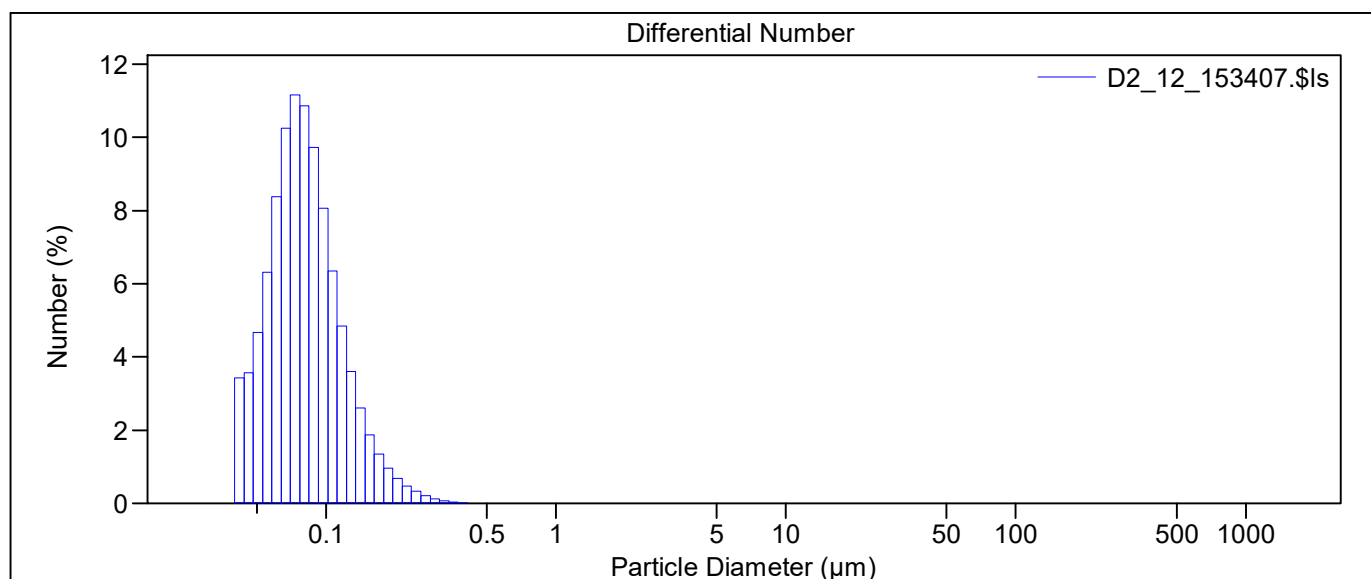
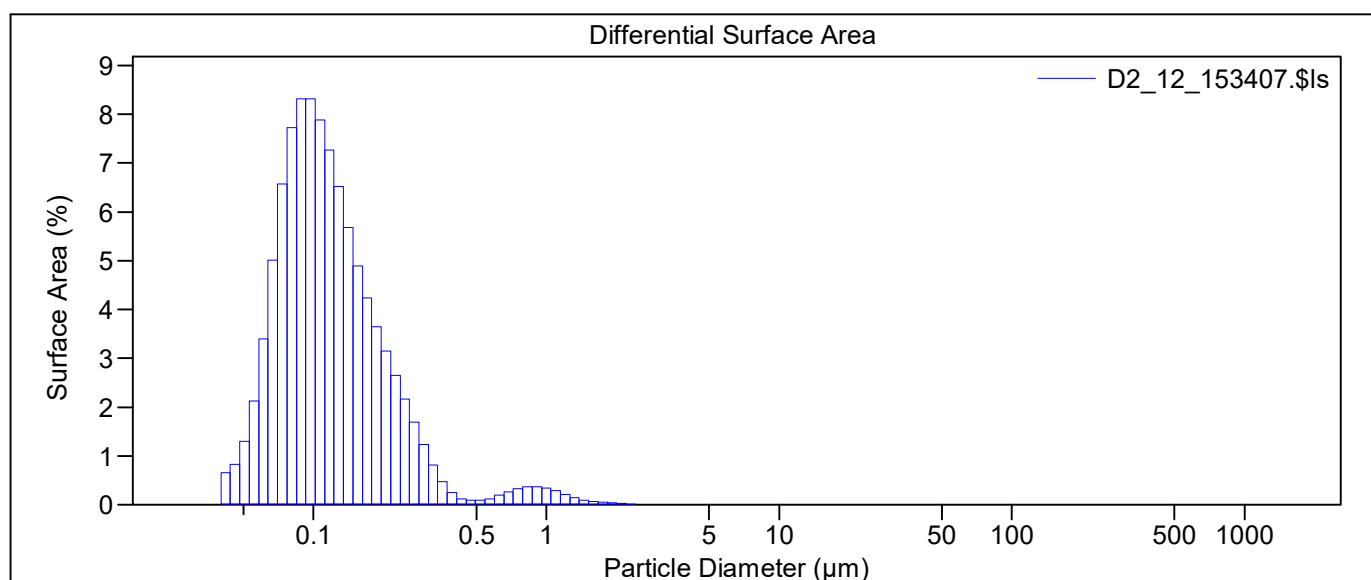
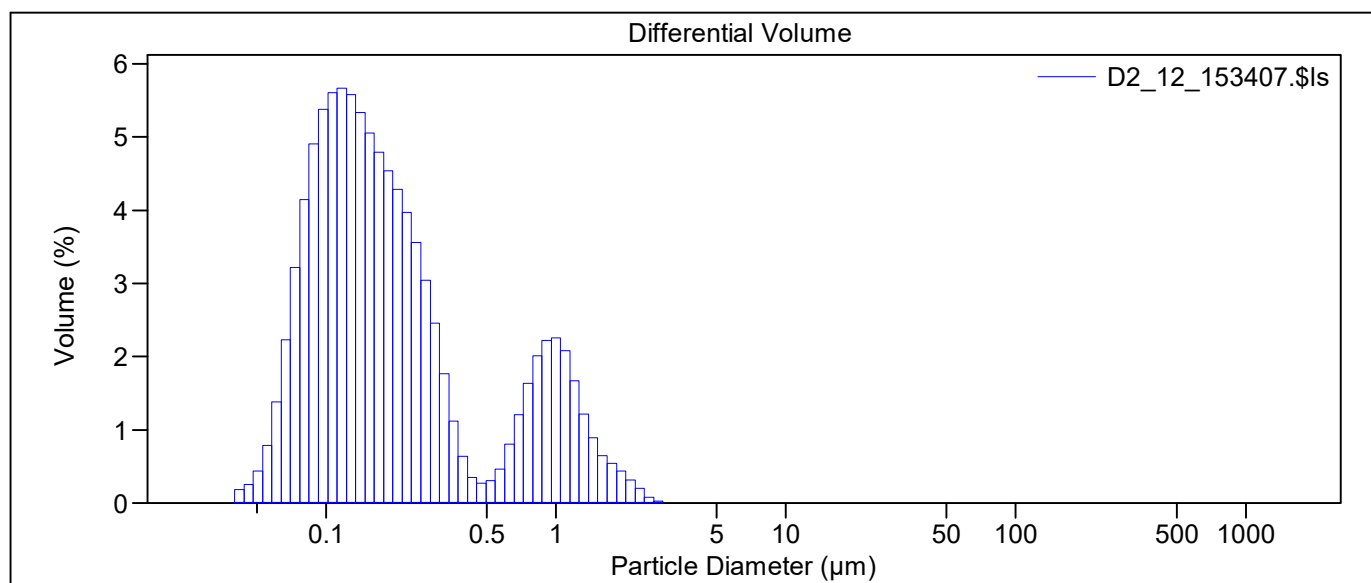
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_12_153407.\$ls		
	D2_12_153407.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.00%		
LS 13 320	Universal Liquid Module		
Start time:	15:32 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_12_153407.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.402 μm
Mean:	0.331 μm		Variance:	0.161 μm ²
Median:	0.162 μm		C.V.:	121%
Mean/Median ratio:	2.048		Skewness:	2.254 Right skewed
Mode:	0.117 μm		Kurtosis:	5.109 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.162 μm	0.291 μm	0.969 μm

Surface Area Statistics (Arithmetic)			D2_12_153407.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.165 μm
Mean:	0.150 μm		Variance:	0.027 μm ²
Median:	0.109 μm		C.V.:	110%
Mean/Median ratio:	1.377		Skewness:	5.597 Right skewed
Mode:	0.088 μm		Kurtosis:	40.66 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.158 μm	0.234 μm

Number Statistics (Arithmetic)			D2_12_153407.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.6%
Mean/Median ratio:	1.109		Skewness:	4.856 Right skewed
Mode:	0.073 μm		Kurtosis:	86.00 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.25	0.83	3.57
11	0.048	0.050	0.44	1.30	4.66
12	0.053	0.055	0.79	2.13	6.31
13	0.058	0.061	1.38	3.40	8.38
14	0.064	0.067	2.23	5.01	10.3
15	0.070	0.073	3.22	6.58	11.2
16	0.077	0.080	4.15	7.72	10.9
17	0.084	0.088	4.90	8.32	9.72
18	0.093	0.097	5.38	8.31	8.06
19	0.102	0.106	5.60	7.89	6.35
20	0.112	0.117	5.67	7.27	4.85
21	0.122	0.128	5.58	6.52	3.61
22	0.134	0.141	5.34	5.68	2.61
23	0.148	0.155	5.05	4.90	1.87
24	0.162	0.170	4.79	4.23	1.34
25	0.178	0.186	4.54	3.65	0.96
26	0.195	0.205	4.29	3.14	0.69
27	0.214	0.225	3.97	2.65	0.48
28	0.235	0.247	3.56	2.17	0.33
29	0.258	0.271	3.04	1.69	0.21
30	0.284	0.297	2.45	1.24	0.13
31	0.311	0.326	1.77	0.81	0.070
32	0.342	0.358	1.12	0.47	0.033
33	0.375	0.393	0.64	0.24	0.014
34	0.412	0.431	0.35	0.12	0.0059
35	0.452	0.474	0.27	0.085	0.0035
36	0.496	0.520	0.30	0.088	0.0030
37	0.545	0.571	0.47	0.12	0.0034
38	0.598	0.627	0.81	0.19	0.0045
39	0.656	0.688	1.21	0.26	0.0051
40	0.721	0.755	1.64	0.33	0.0052
41	0.791	0.829	2.02	0.36	0.0048
42	0.868	0.910	2.22	0.37	0.0040
43	0.953	0.999	2.26	0.34	0.0031
44	1.047	1.097	2.08	0.28	0.0022
45	1.149	1.204	1.67	0.21	0.0013

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.22	0.14	0.00072
47	1.385	1.451	0.89	0.092	0.00040
48	1.520	1.592	0.65	0.061	0.00022
49	1.668	1.748	0.54	0.047	0.00014
50	1.832	1.919	0.44	0.034	0.000085
51	2.011	2.107	0.31	0.022	0.000045
52	2.207	2.313	0.20	0.013	0.000022
53	2.423	2.539	0.081	0.0048	0.000007
54	2.660	2.787	0.023	0.0012	0.000001
55	2.920	3.059	0.0041	0.00020	1.93E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

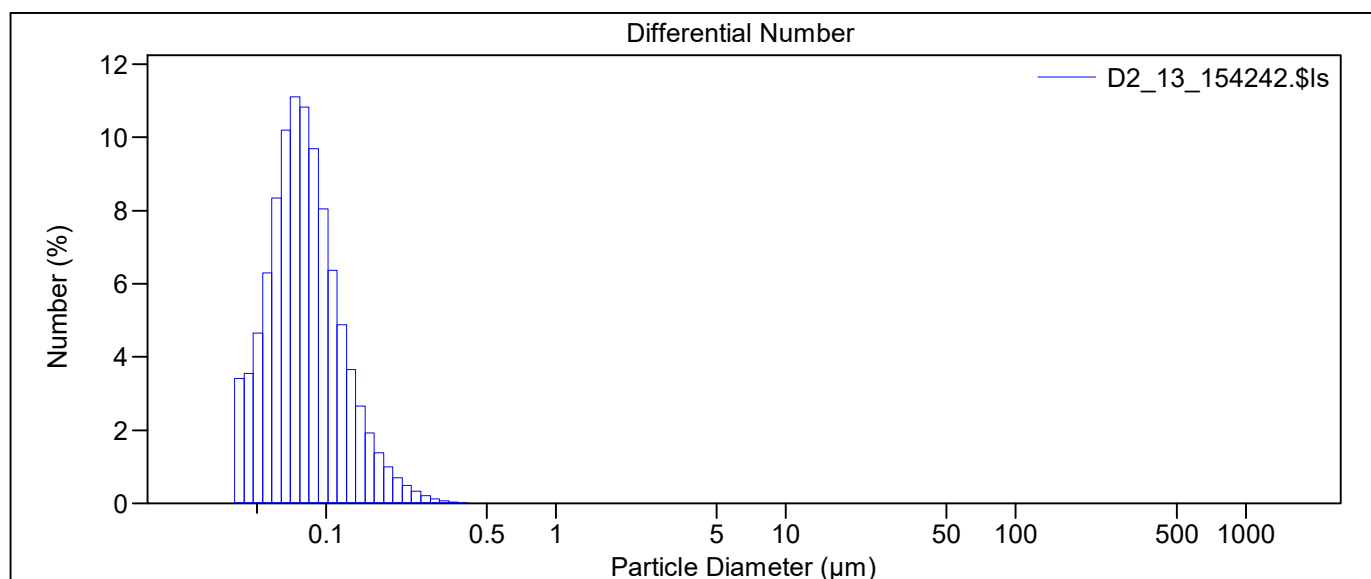
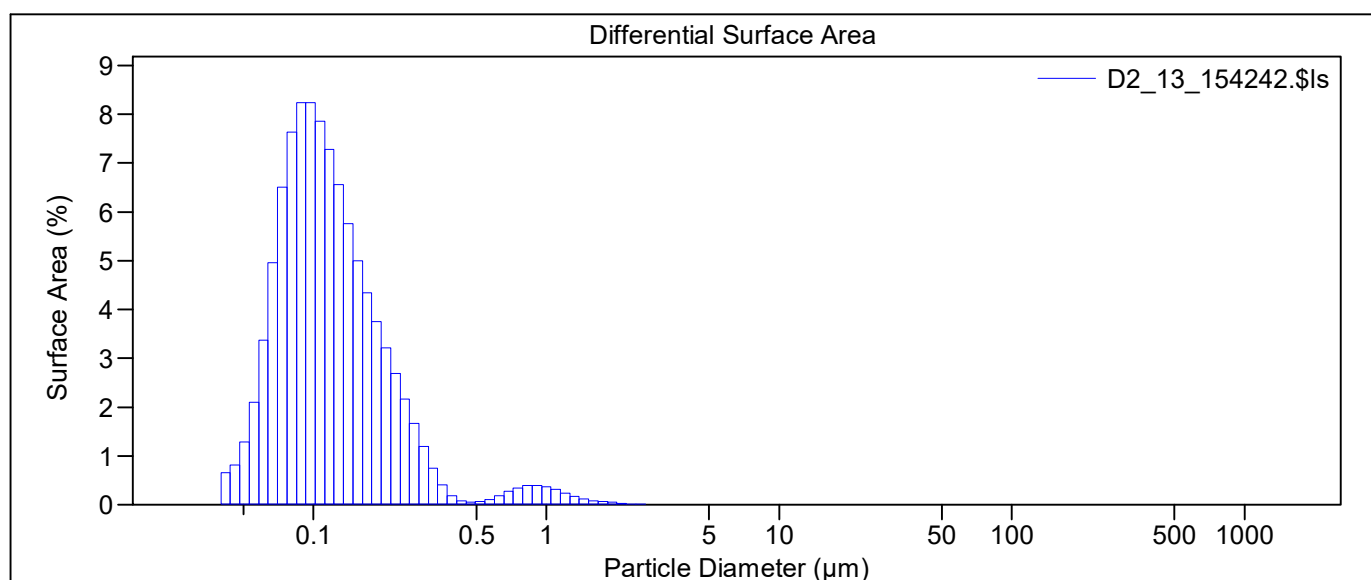
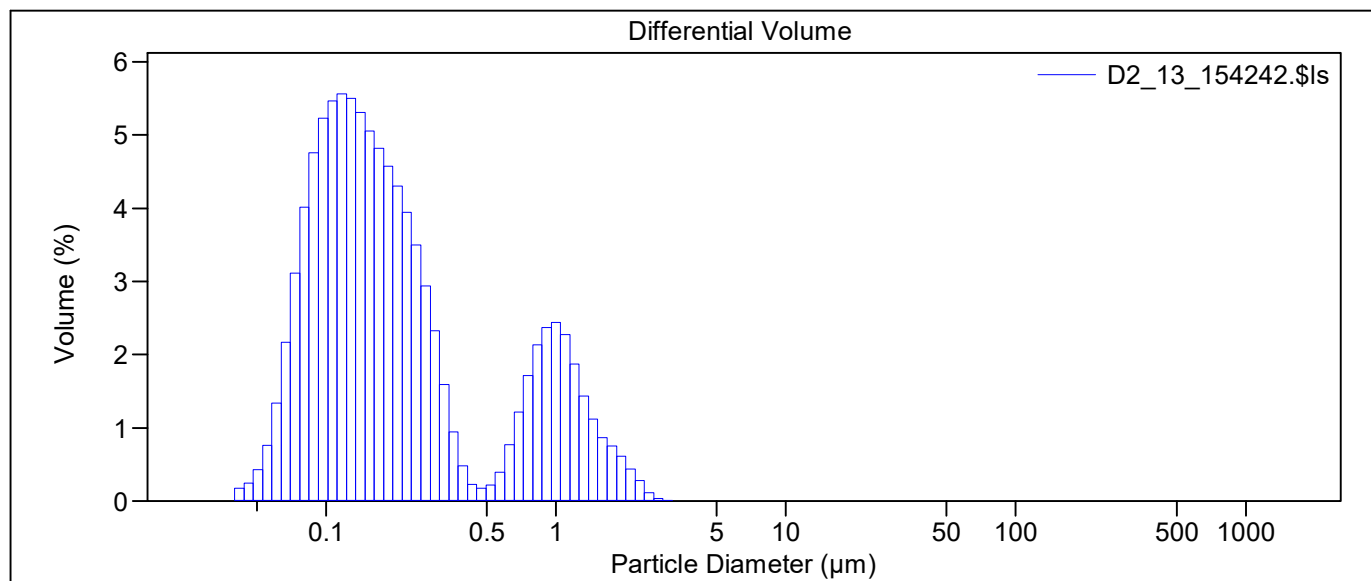
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D2\D2_13_154242.\$ls		
	D2_13_154242.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.91%		
LS 13 320	Universal Liquid Module		
Start time:	15:41 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_13_154242.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.436 μm
Mean:	0.357 μm		Variance:	0.190 μm ²
Median:	0.165 μm		C.V.:	122%
Mean/Median ratio:	2.164		Skewness:	2.109 Right skewed
Mode:	0.117 μm		Kurtosis:	4.203 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.165 μm	0.305 μm	1.039 μm

Surface Area Statistics (Arithmetic)			D2_13_154242.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.177 µm
Mean:	0.153 µm		Variance:	0.031 µm ²
Median:	0.109 µm		C.V.:	115%
Mean/Median ratio:	1.397		Skewness:	5.584 Right skewed
Mode:	0.097 µm		Kurtosis:	39.44 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.233 µm

Number Statistics (Arithmetic)			D2_13_154242.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.8%
Mean/Median ratio:	1.110		Skewness:	5.144 Right skewed
Mode:	0.073 μm		Kurtosis:	98.24 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.82	3.56
11	0.048	0.050	0.43	1.29	4.65
12	0.053	0.055	0.76	2.10	6.29
13	0.058	0.061	1.34	3.37	8.35
14	0.064	0.067	2.16	4.96	10.2
15	0.070	0.073	3.12	6.50	11.1
16	0.077	0.080	4.02	7.63	10.8
17	0.084	0.088	4.76	8.24	9.69
18	0.093	0.097	5.23	8.24	8.05
19	0.102	0.106	5.47	7.85	6.36
20	0.112	0.117	5.56	7.27	4.89
21	0.122	0.128	5.51	6.56	3.66
22	0.134	0.141	5.31	5.76	2.67
23	0.148	0.155	5.06	5.00	1.92
24	0.162	0.170	4.82	4.34	1.38
25	0.178	0.186	4.57	3.75	0.99
26	0.195	0.205	4.30	3.22	0.71
27	0.214	0.225	3.95	2.69	0.49
28	0.235	0.247	3.50	2.17	0.33
29	0.258	0.271	2.94	1.66	0.21
30	0.284	0.297	2.33	1.20	0.12
31	0.311	0.326	1.59	0.75	0.064
32	0.342	0.358	0.95	0.40	0.029
33	0.375	0.393	0.48	0.19	0.011
34	0.412	0.431	0.23	0.080	0.0040
35	0.452	0.474	0.17	0.056	0.0023
36	0.496	0.520	0.21	0.063	0.0021
37	0.545	0.571	0.39	0.10	0.0029
38	0.598	0.627	0.77	0.19	0.0044
39	0.656	0.688	1.21	0.27	0.0052
40	0.721	0.755	1.71	0.35	0.0056
41	0.791	0.829	2.13	0.39	0.0053
42	0.868	0.910	2.37	0.40	0.0044
43	0.953	0.999	2.44	0.37	0.0034
44	1.047	1.097	2.27	0.32	0.0024
45	1.149	1.204	1.88	0.24	0.0015

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.44	0.17	0.00087
47	1.385	1.451	1.12	0.12	0.00051
48	1.520	1.592	0.86	0.083	0.00030
49	1.668	1.748	0.76	0.066	0.00020
50	1.832	1.919	0.62	0.049	0.00012
51	2.011	2.107	0.44	0.032	0.000065
52	2.207	2.313	0.28	0.018	0.000031
53	2.423	2.539	0.11	0.0068	0.000010
54	2.660	2.787	0.032	0.0018	0.000002
55	2.920	3.059	0.0057	0.00029	2.82E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

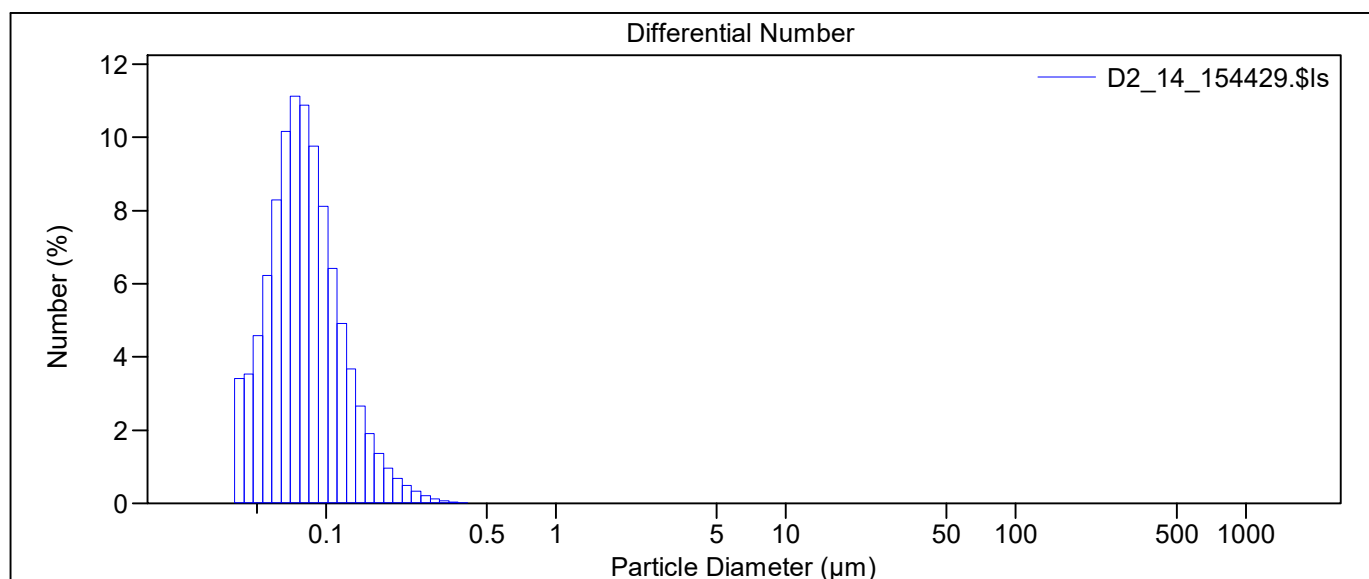
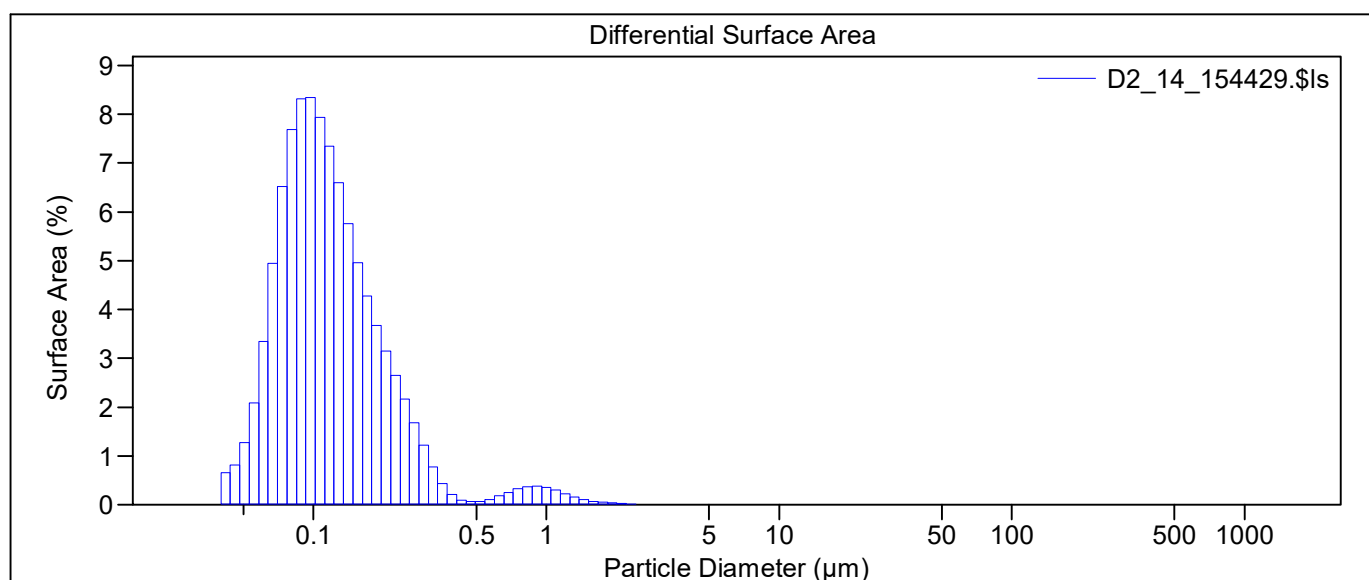
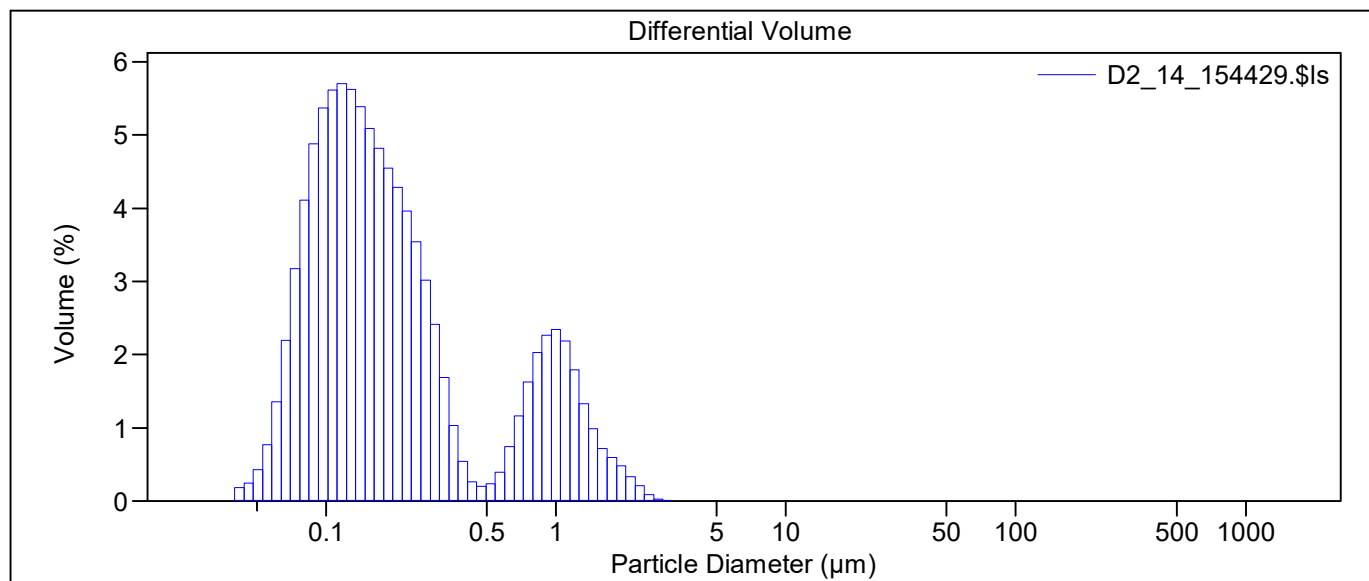
Beckman Coulter LS13320

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File ID:	D2		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.05%		
LS 13 320	Universal Liquid Module		
Start time:	15:42 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_14_154429.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.412 μm
Mean:	0.338 μm		Variance:	0.170 μm ²
Median:	0.162 μm		C.V.:	122%
Mean/Median ratio:	2.092		Skewness:	2.197 Right skewed
Mode:	0.117 μm		Kurtosis:	4.721 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.162 μm	0.292 μm	0.997 μm

Surface Area Statistics (Arithmetic)			D2_14_154429.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.168 µm
Mean:	0.151 µm		Variance:	0.028 µm ²
Median:	0.109 µm		C.V.:	112%
Mean/Median ratio:	1.380		Skewness:	5.616 Right skewed
Mode:	0.097 µm		Kurtosis:	40.38 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.233 µm

Number Statistics (Arithmetic)			D2_14_154429.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.5%
Mean/Median ratio:	1.108		Skewness:	4.934 Right skewed
Mode:	0.073 μm		Kurtosis:	90.22 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.82	3.53
11	0.048	0.050	0.43	1.28	4.59
12	0.053	0.055	0.77	2.09	6.23
13	0.058	0.061	1.35	3.35	8.29
14	0.064	0.067	2.20	4.95	10.2
15	0.070	0.073	3.18	6.52	11.1
16	0.077	0.080	4.11	7.69	10.9
17	0.084	0.088	4.88	8.31	9.76
18	0.093	0.097	5.37	8.34	8.12
19	0.102	0.106	5.62	7.94	6.42
20	0.112	0.117	5.70	7.34	4.92
21	0.122	0.128	5.62	6.60	3.67
22	0.134	0.141	5.39	5.76	2.66
23	0.148	0.155	5.09	4.96	1.90
24	0.162	0.170	4.82	4.27	1.36
25	0.178	0.186	4.55	3.67	0.97
26	0.195	0.205	4.28	3.15	0.69
27	0.214	0.225	3.96	2.65	0.48
28	0.235	0.247	3.54	2.16	0.33
29	0.258	0.271	3.02	1.68	0.21
30	0.284	0.297	2.42	1.22	0.13
31	0.311	0.326	1.69	0.78	0.067
32	0.342	0.358	1.03	0.43	0.031
33	0.375	0.393	0.54	0.21	0.012
34	0.412	0.431	0.26	0.092	0.0045
35	0.452	0.474	0.20	0.064	0.0026
36	0.496	0.520	0.23	0.068	0.0023
37	0.545	0.571	0.40	0.10	0.0029
38	0.598	0.627	0.75	0.18	0.0042
39	0.656	0.688	1.16	0.25	0.0049
40	0.721	0.755	1.62	0.32	0.0052
41	0.791	0.829	2.03	0.37	0.0049
42	0.868	0.910	2.27	0.38	0.0042
43	0.953	0.999	2.34	0.35	0.0032
44	1.047	1.097	2.19	0.30	0.0023
45	1.149	1.204	1.79	0.22	0.0014

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.33	0.15	0.00079
47	1.385	1.451	0.99	0.10	0.00045
48	1.520	1.592	0.72	0.068	0.00025
49	1.668	1.748	0.60	0.051	0.00015
50	1.832	1.919	0.48	0.038	0.000093
51	2.011	2.107	0.33	0.024	0.000049
52	2.207	2.313	0.21	0.014	0.000024
53	2.423	2.539	0.087	0.0052	0.000007
54	2.660	2.787	0.025	0.0014	0.000002
55	2.920	3.059	0.0045	0.00022	2.19E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

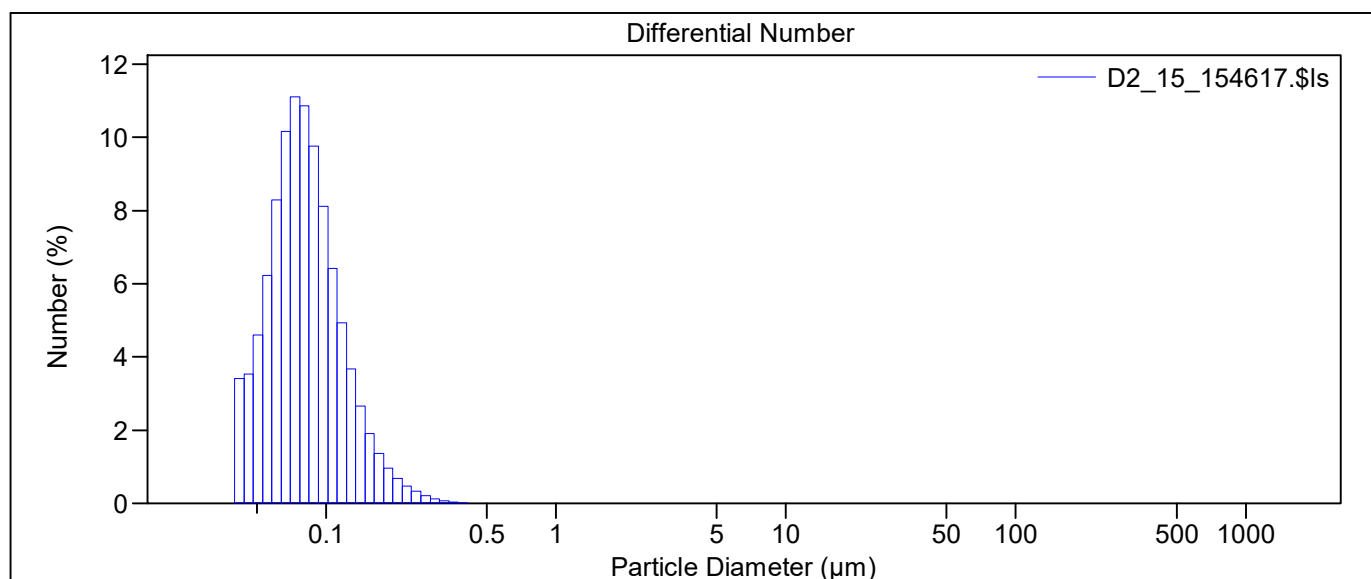
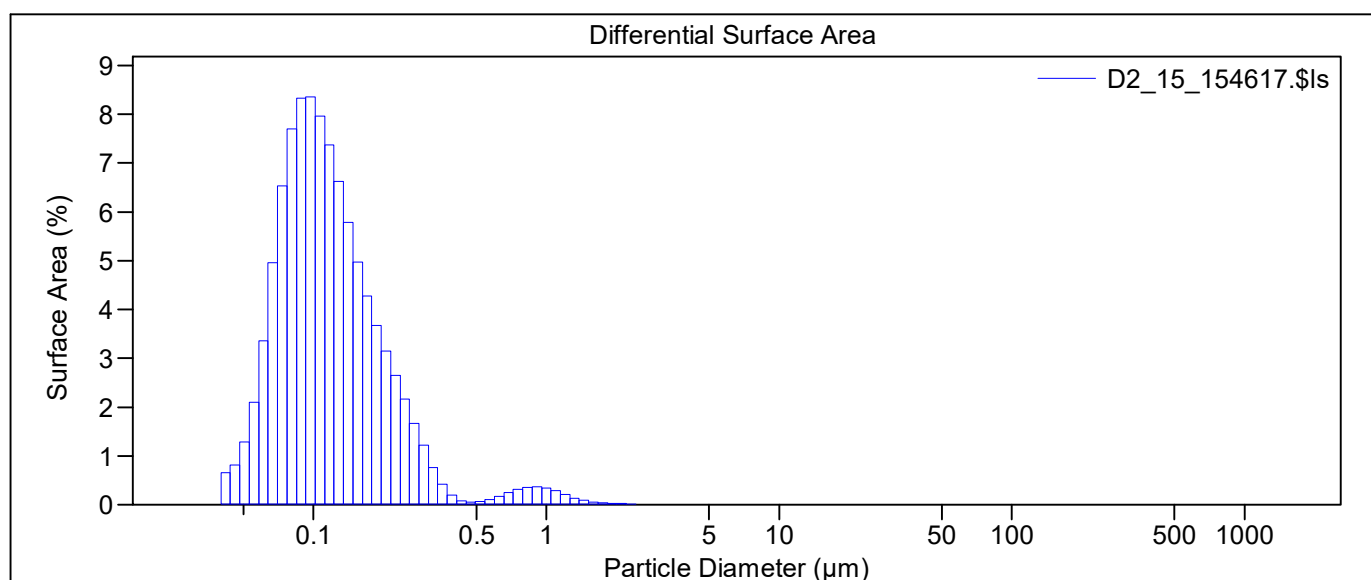
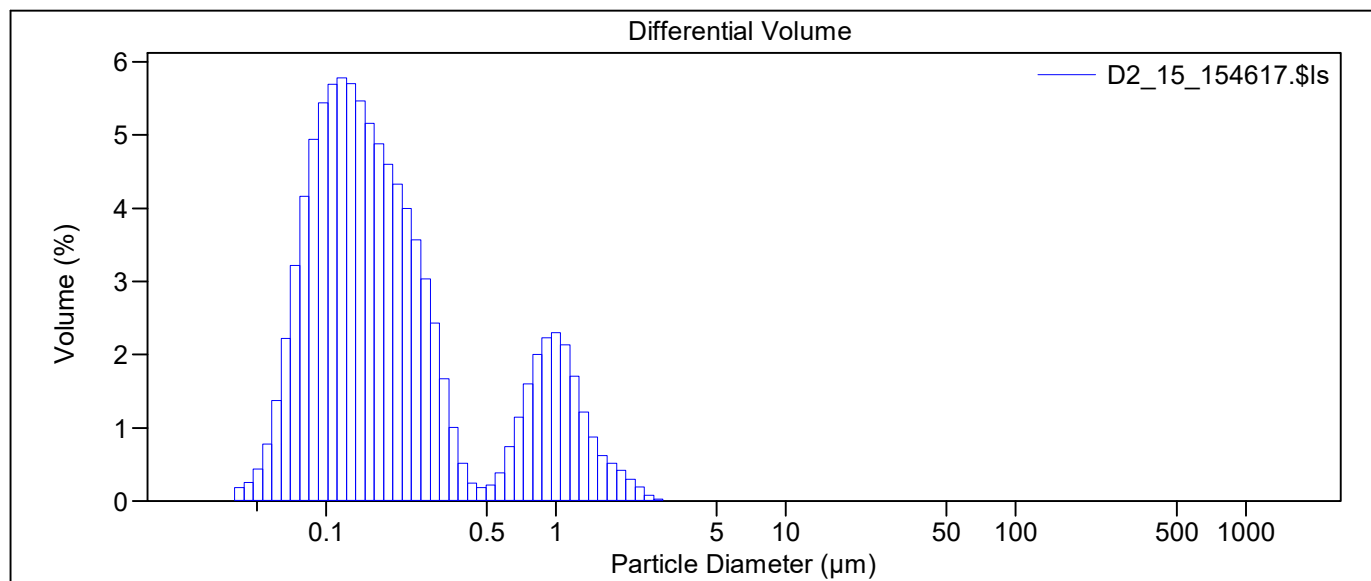
Beckman Coulter LS13320

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	D2_15_154617.\$ls		
File ID:	D2		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.10%		
LS 13 320	Universal Liquid Module		
Start time:	15:44 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D2_15_154617.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.400 μm
Mean:	0.327 μm		Variance:	0.160 μm ²
Median:	0.160 μm		C.V.:	122%
Mean/Median ratio:	2.050		Skewness:	2.268 Right skewed
Mode:	0.117 μm		Kurtosis:	5.171 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.160 μm	0.282 μm	0.969 μm

Surface Area Statistics (Arithmetic)			D2_15_154617.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.163 µm
Mean:	0.149 µm		Variance:	0.027 µm ²
Median:	0.109 µm		C.V.:	109%
Mean/Median ratio:	1.366		Skewness:	5.671 Right skewed
Mode:	0.097 µm		Kurtosis:	41.57 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.231 µm

Number Statistics (Arithmetic)			D2_15_154617.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.3%
Mean/Median ratio:	1.108		Skewness:	4.797 Right skewed
Mode:	0.073 μm		Kurtosis:	85.78 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D2.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.82	3.53
11	0.048	0.050	0.43	1.28	4.59
12	0.053	0.055	0.78	2.09	6.23
13	0.058	0.061	1.37	3.36	8.29
14	0.064	0.067	2.22	4.96	10.2
15	0.070	0.073	3.22	6.53	11.1
16	0.077	0.080	4.16	7.70	10.9
17	0.084	0.088	4.94	8.33	9.76
18	0.093	0.097	5.44	8.36	8.12
19	0.102	0.106	5.69	7.97	6.43
20	0.112	0.117	5.78	7.37	4.93
21	0.122	0.128	5.70	6.62	3.68
22	0.134	0.141	5.47	5.78	2.67
23	0.148	0.155	5.16	4.97	1.90
24	0.162	0.170	4.88	4.28	1.36
25	0.178	0.186	4.60	3.68	0.97
26	0.195	0.205	4.33	3.15	0.69
27	0.214	0.225	4.00	2.65	0.48
28	0.235	0.247	3.57	2.16	0.32
29	0.258	0.271	3.03	1.67	0.21
30	0.284	0.297	2.43	1.22	0.13
31	0.311	0.326	1.67	0.76	0.066
32	0.342	0.358	1.00	0.42	0.030
33	0.375	0.393	0.52	0.20	0.012
34	0.412	0.431	0.24	0.083	0.0041
35	0.452	0.474	0.19	0.058	0.0024
36	0.496	0.520	0.22	0.064	0.0022
37	0.545	0.571	0.38	0.10	0.0028
38	0.598	0.627	0.74	0.18	0.0041
39	0.656	0.688	1.15	0.25	0.0048
40	0.721	0.755	1.60	0.32	0.0051
41	0.791	0.829	2.00	0.36	0.0048
42	0.868	0.910	2.23	0.37	0.0040
43	0.953	0.999	2.30	0.34	0.0031
44	1.047	1.097	2.13	0.29	0.0022
45	1.149	1.204	1.71	0.21	0.0013
46	1.261	1.321	1.22	0.14	0.00072
47	1.385	1.451	0.88	0.090	0.00039
48	1.520	1.592	0.62	0.058	0.00021
49	1.668	1.748	0.51	0.044	0.00013
50	1.832	1.919	0.42	0.033	0.000081
51	2.011	2.107	0.30	0.021	0.000043
52	2.207	2.313	0.20	0.013	0.000022
53	2.423	2.539	0.082	0.0048	0.000007
54	2.660	2.787	0.023	0.0013	0.000001
55	2.920	3.059	0.0043	0.00021	2.02E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D2.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\D3\D3.\$av
D3.\$av
File ID: D3
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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D:\KW\PROFARB\POMIARY\D3_02_160456.\$ls
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Volume Statistics (Arithmetic) D3.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.405 µm
Mean:	0.333 µm	Variance:	0.164 µm ²
Median:	0.162 µm	C.V.:	121%
Mean/Median ratio:	2.057	Skewness:	2.244 Right skewed
Mode:	0.117 µm	Kurtosis:	5.046 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.162 µm	0.290 µm	0.977 µm

Surface Area Statistics (Arithmetic) D3.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.166 µm
Mean:	0.151 µm	Variance:	0.027 µm ²
Median:	0.109 µm	C.V.:	110%
Mean/Median ratio:	1.375	Skewness:	5.605 Right skewed
Mode:	0.097 µm	Kurtosis:	40.65 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.234 µm

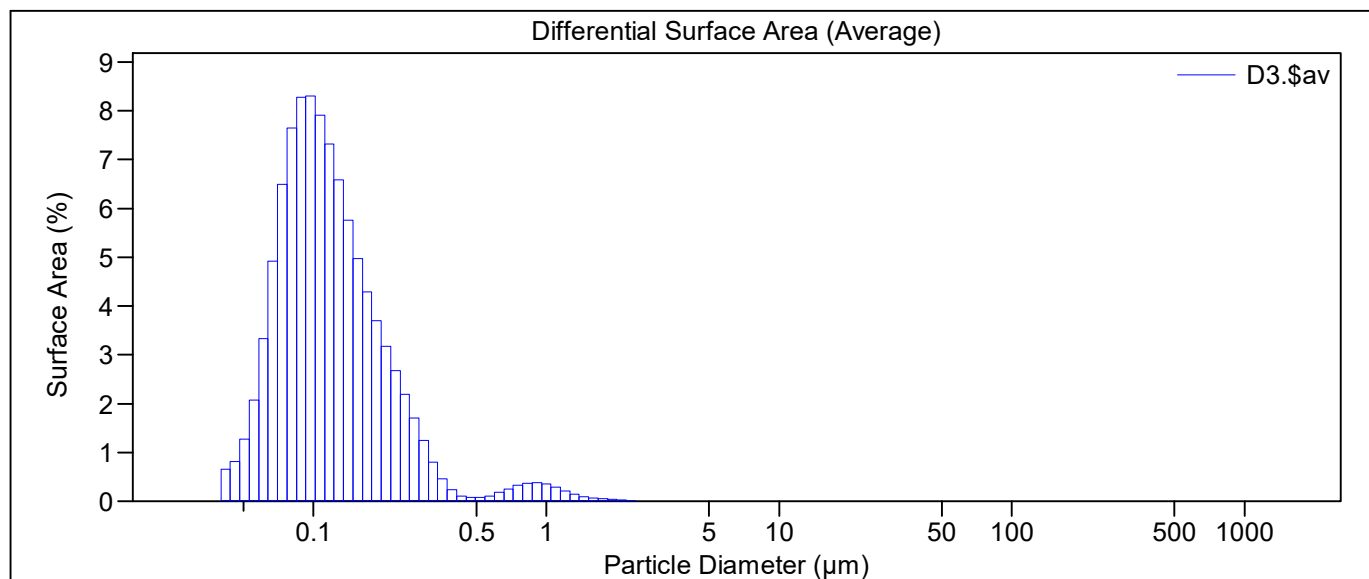
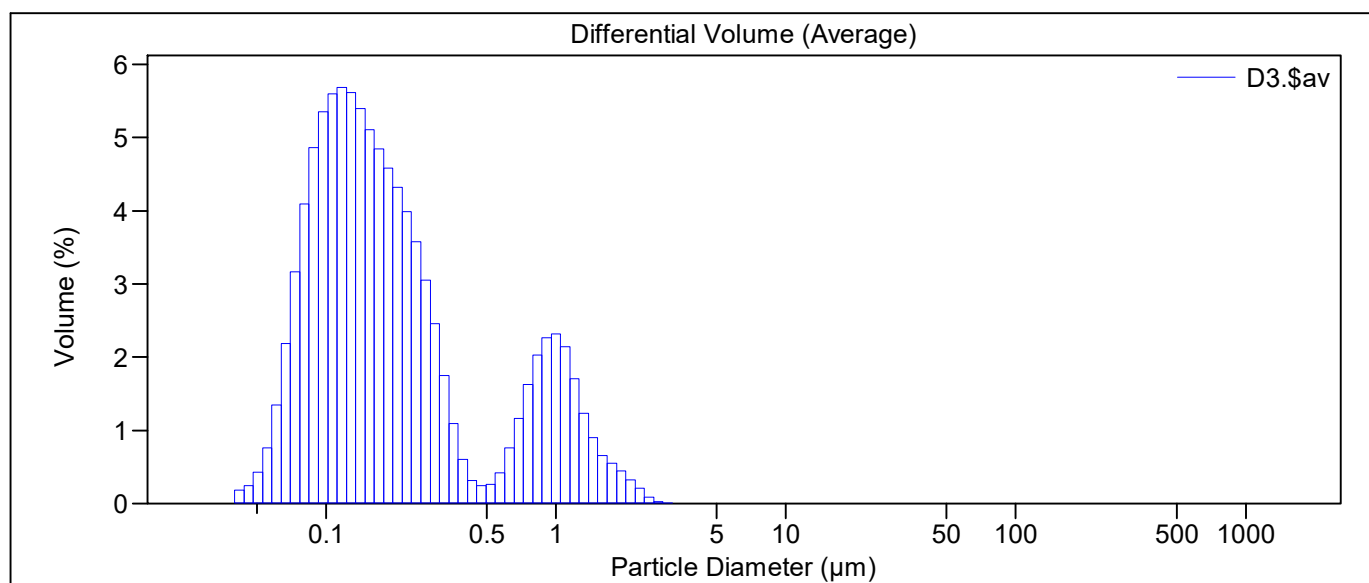
Number Statistics (Arithmetic)

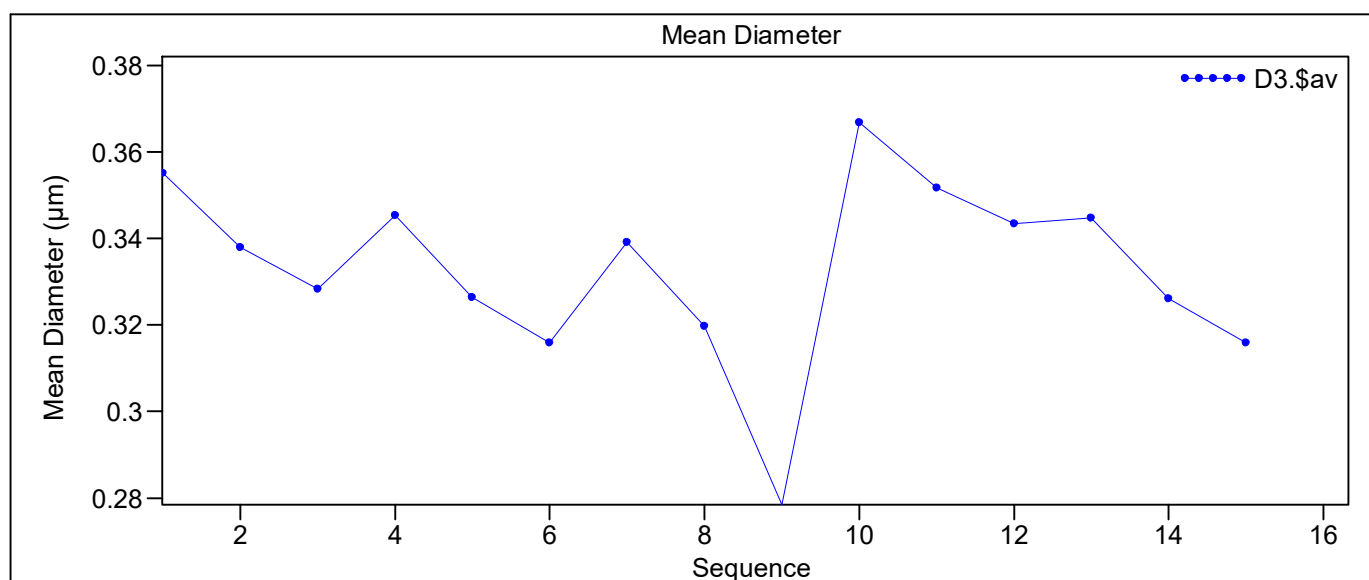
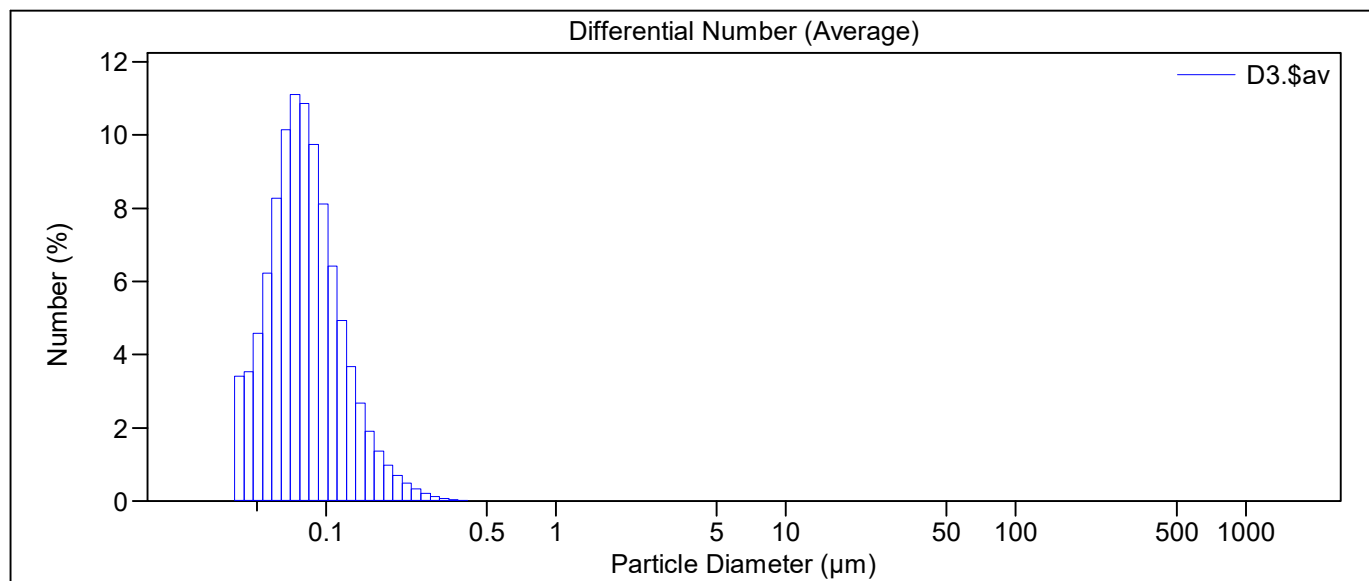
D3.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.040 μm
Mean:	0.087 μm	Variance:	0.0016 μm^2
Median:	0.079 μm	C.V.:	45.6%
Mean/Median ratio:	1.109	Skewness:	4.847 Right skewed
Mode:	0.073 μm	Kurtosis:	86.37 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm





D3.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.81	3.53
11	0.048	0.050	0.43	1.27	4.58
12	0.053	0.055	0.77	2.08	6.22
13	0.058	0.061	1.35	3.33	8.27
14	0.064	0.067	2.19	4.92	10.2
15	0.070	0.073	3.16	6.49	11.1
16	0.077	0.080	4.09	7.65	10.9
17	0.084	0.088	4.86	8.28	9.75

D3.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.35	8.31	8.12
19	0.102	0.106	5.60	7.92	6.42
20	0.112	0.117	5.69	7.32	4.93
21	0.122	0.128	5.62	6.59	3.68
22	0.134	0.141	5.40	5.77	2.67
23	0.148	0.155	5.11	4.97	1.91
24	0.162	0.170	4.84	4.29	1.37
25	0.178	0.186	4.58	3.70	0.98
26	0.195	0.205	4.32	3.18	0.70
27	0.214	0.225	3.99	2.68	0.49
28	0.235	0.247	3.58	2.19	0.33
29	0.258	0.271	3.06	1.70	0.21
30	0.284	0.297	2.46	1.25	0.13
31	0.311	0.326	1.75	0.81	0.070
32	0.342	0.358	1.09	0.46	0.033
33	0.375	0.393	0.60	0.23	0.014
34	0.412	0.431	0.31	0.11	0.0054
35	0.452	0.474	0.24	0.077	0.0031
36	0.496	0.520	0.27	0.077	0.0026
37	0.545	0.571	0.42	0.11	0.0031
38	0.598	0.627	0.76	0.18	0.0043
39	0.656	0.688	1.16	0.25	0.0049
40	0.721	0.755	1.62	0.32	0.0052
41	0.791	0.829	2.03	0.37	0.0049
42	0.868	0.910	2.26	0.37	0.0042
43	0.953	0.999	2.32	0.35	0.0032
44	1.047	1.097	2.14	0.29	0.0022
45	1.149	1.204	1.71	0.21	0.0014
46	1.261	1.321	1.24	0.14	0.00074
47	1.385	1.451	0.90	0.093	0.00041
48	1.520	1.592	0.65	0.062	0.00022
49	1.668	1.748	0.55	0.047	0.00014
50	1.832	1.919	0.45	0.035	0.000088
51	2.011	2.107	0.32	0.023	0.000047
52	2.207	2.313	0.21	0.014	0.000023
53	2.423	2.539	0.086	0.0051	0.000007
54	2.660	2.787	0.025	0.0013	0.000002
55	2.920	3.059	0.0044	0.00022	2.13E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

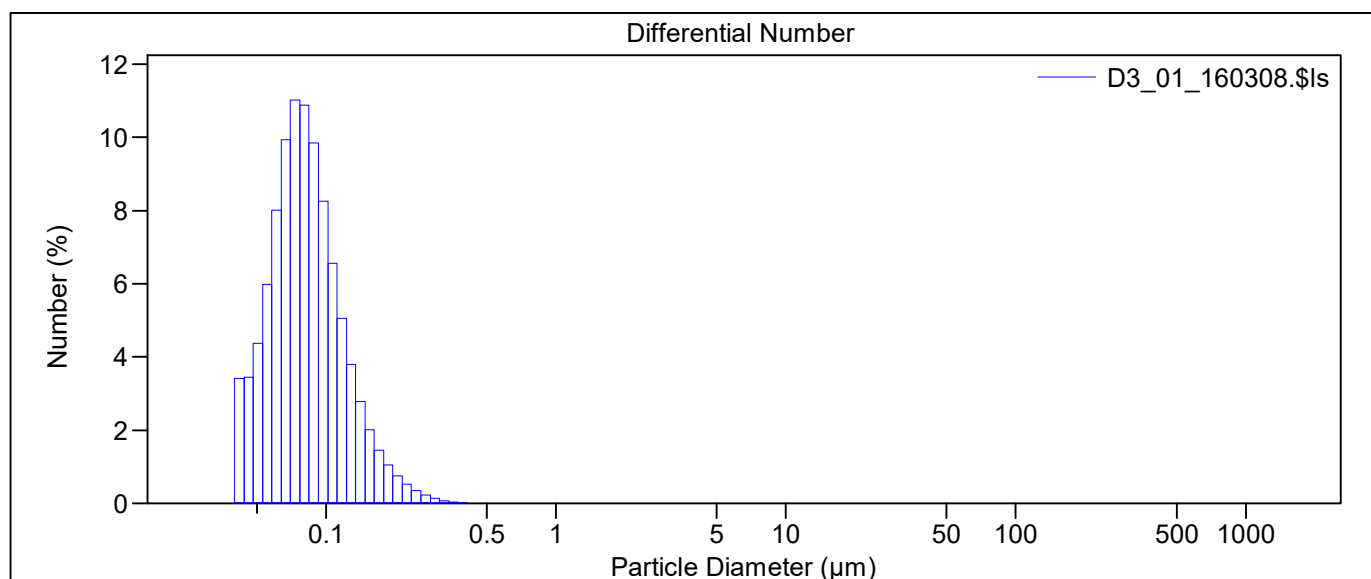
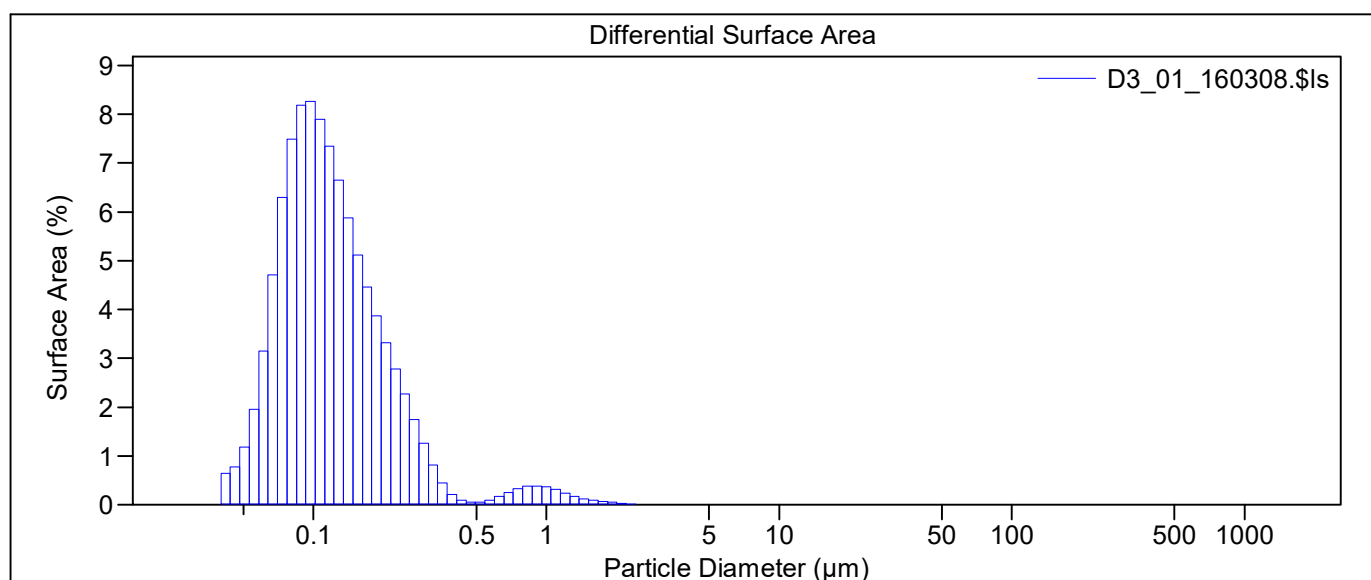
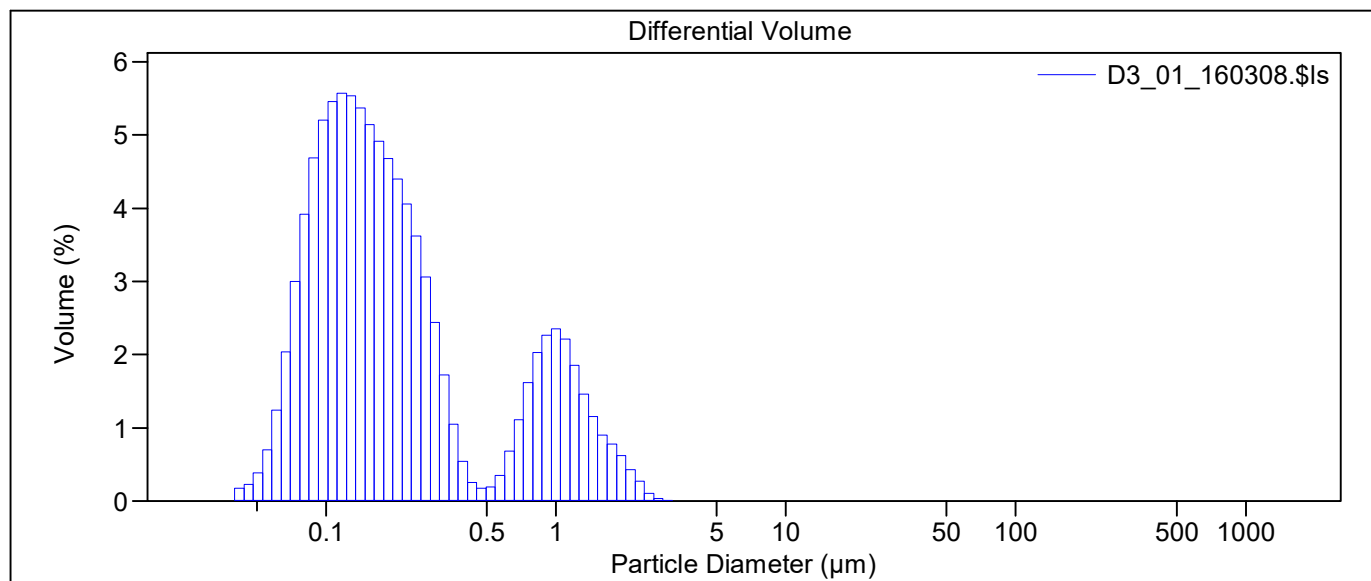
Beckman Coulter LS13320

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	D3_01_160308.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.79%		
LS 13 320	Universal Liquid Module		
Start time:	16:01 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	70%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_01_160308.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.435 μm
Mean:	0.355 μm		Variance:	0.189 μm ²
Median:	0.166 μm		C.V.:	123%
Mean/Median ratio:	2.135		Skewness:	2.133 Right skewed
Mode:	0.117 μm		Kurtosis:	4.276 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.108 μm	0.166 μm	0.302 μm	1.040 μm

Surface Area Statistics (Arithmetic)			D3_01_160308.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.176 μm
Mean:	0.154 μm		Variance:	0.031 μm ²
Median:	0.111 μm		C.V.:	114%
Mean/Median ratio:	1.390		Skewness:	5.624 Right skewed
Mode:	0.097 μm		Kurtosis:	40.00 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.111 μm	0.160 μm	0.236 μm

Number Statistics (Arithmetic)			D3_01_160308.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.9%
Mean/Median ratio:	1.109		Skewness:	5.015 Right skewed
Mode:	0.073 μm		Kurtosis:	94.41 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.101 μm	0.133 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.41
10	0.044	0.046	0.23	0.78	3.45
11	0.048	0.050	0.39	1.19	4.37
12	0.053	0.055	0.70	1.95	5.98
13	0.058	0.061	1.24	3.15	8.01
14	0.064	0.067	2.04	4.71	9.93
15	0.070	0.073	3.00	6.30	11.0
16	0.077	0.080	3.92	7.50	10.9
17	0.084	0.088	4.69	8.18	9.85
18	0.093	0.097	5.20	8.27	8.26
19	0.102	0.106	5.46	7.90	6.55
20	0.112	0.117	5.57	7.34	5.05
21	0.122	0.128	5.54	6.65	3.80
22	0.134	0.141	5.37	5.87	2.78
23	0.148	0.155	5.14	5.12	2.01
24	0.162	0.170	4.91	4.46	1.46
25	0.178	0.186	4.68	3.87	1.05
26	0.195	0.205	4.40	3.32	0.75
27	0.214	0.225	4.06	2.78	0.52
28	0.235	0.247	3.62	2.26	0.35
29	0.258	0.271	3.06	1.74	0.22
30	0.284	0.297	2.44	1.26	0.13
31	0.311	0.326	1.72	0.81	0.072
32	0.342	0.358	1.05	0.45	0.033
33	0.375	0.393	0.54	0.21	0.013
34	0.412	0.431	0.26	0.092	0.0046
35	0.452	0.474	0.18	0.057	0.0024
36	0.496	0.520	0.19	0.057	0.0020
37	0.545	0.571	0.35	0.094	0.0027
38	0.598	0.627	0.68	0.17	0.0040
39	0.656	0.688	1.11	0.25	0.0049
40	0.721	0.755	1.62	0.33	0.0054
41	0.791	0.829	2.03	0.38	0.0052
42	0.868	0.910	2.27	0.38	0.0044
43	0.953	0.999	2.35	0.36	0.0034
44	1.047	1.097	2.22	0.31	0.0024
45	1.149	1.204	1.86	0.24	0.0015

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.46	0.17	0.00092
47	1.385	1.451	1.16	0.12	0.00055
48	1.520	1.592	0.90	0.087	0.00032
49	1.668	1.748	0.78	0.069	0.00021
50	1.832	1.919	0.62	0.050	0.00013
51	2.011	2.107	0.43	0.031	0.000066
52	2.207	2.313	0.27	0.018	0.000031
53	2.423	2.539	0.11	0.0065	0.000010
54	2.660	2.787	0.031	0.0017	0.000002
55	2.920	3.059	0.0056	0.00028	2.85E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

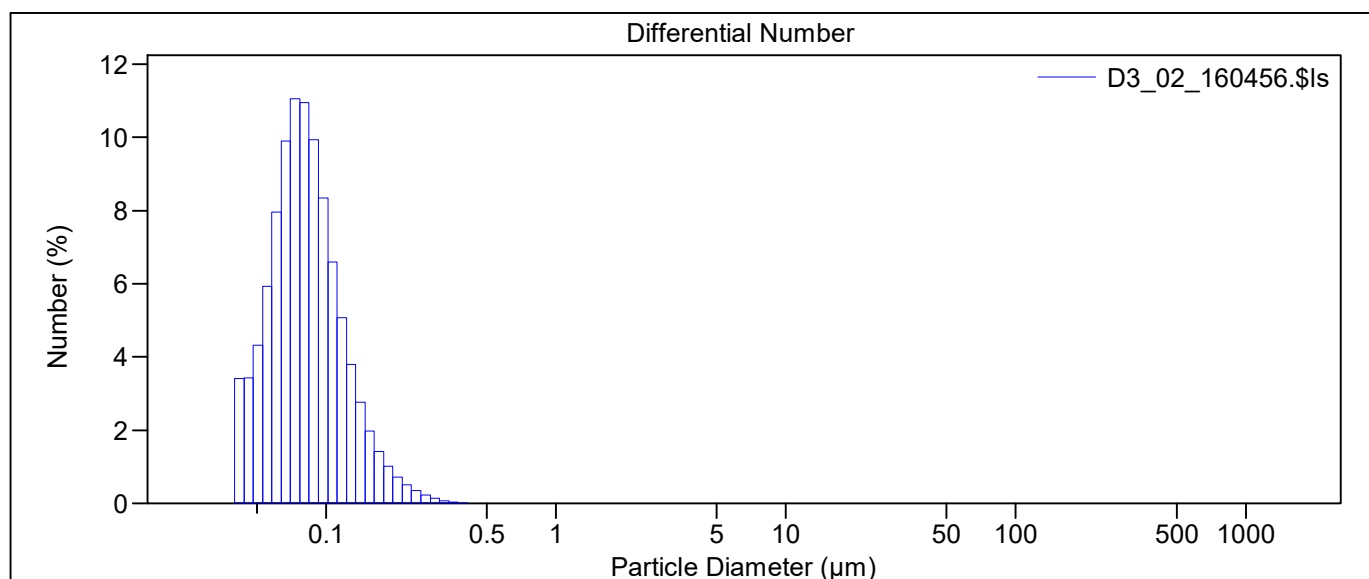
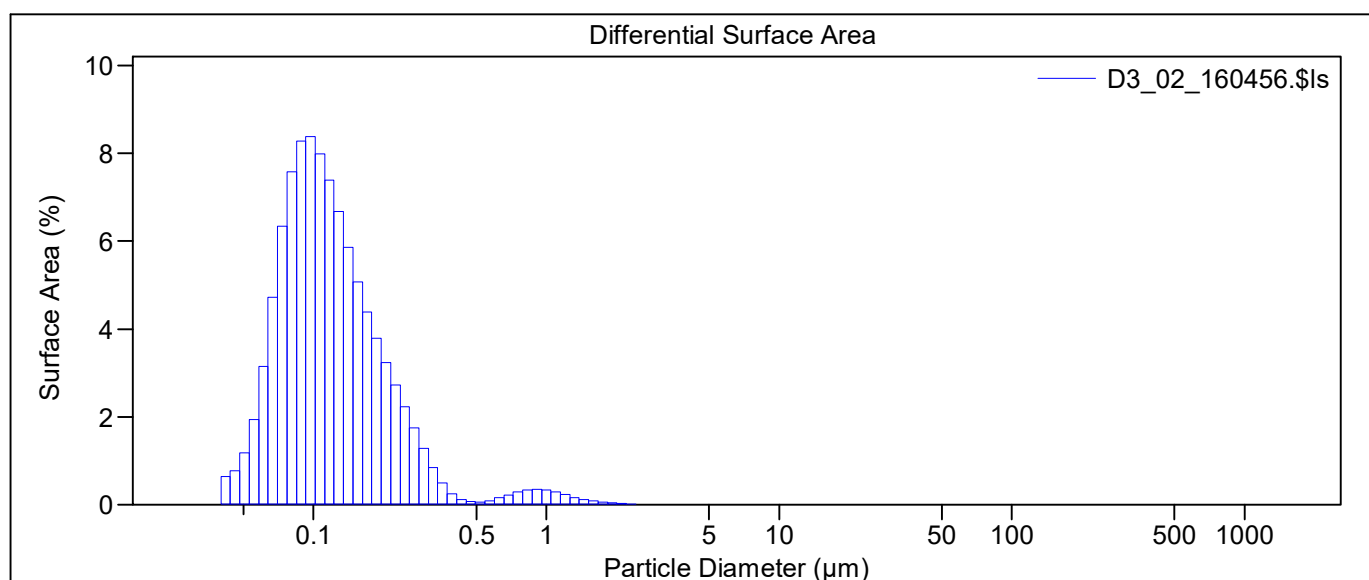
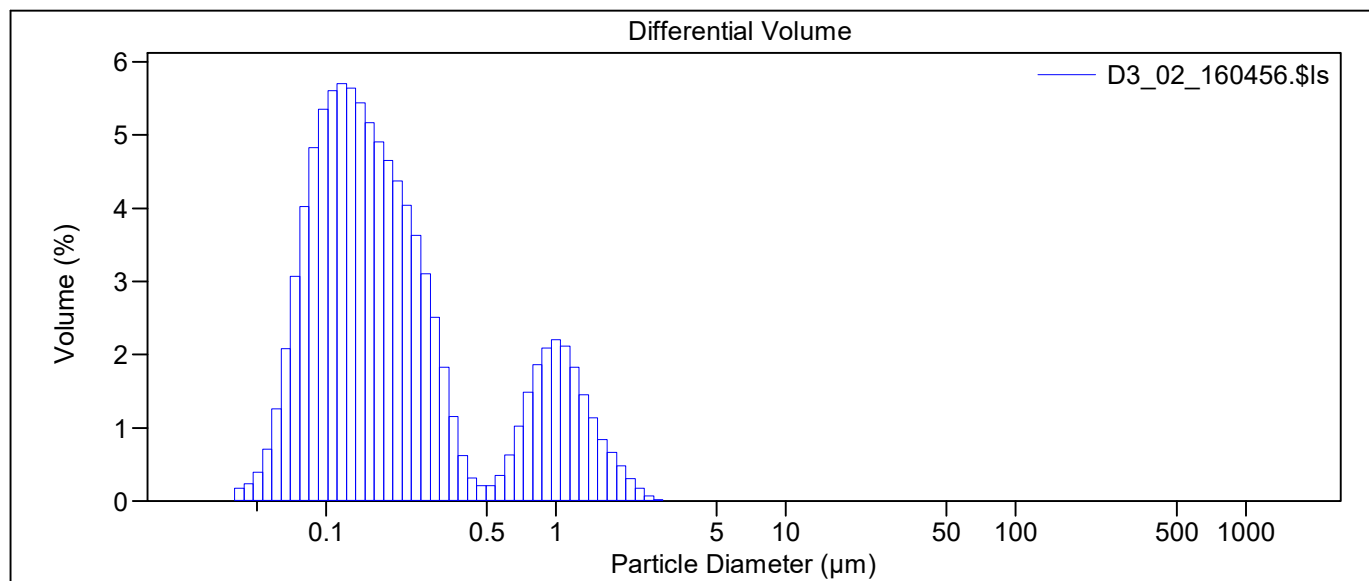
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_02_160456.\$ls		
	D3_02_160456.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.91%		
LS 13 320	Universal Liquid Module		
Start time:	16:03 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	73%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_02_160456.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.413 μm
Mean:	0.338 μm		Variance:	0.170 μm ²
Median:	0.163 μm		C.V.:	122%
Mean/Median ratio:	2.073		Skewness:	2.182 Right skewed
Mode:	0.117 μm		Kurtosis:	4.474 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.107 μm	0.163 μm	0.290 μm	1.008 μm

Surface Area Statistics (Arithmetic)			D3_02_160456.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.168 µm
Mean:	0.152 µm		Variance:	0.028 µm ²
Median:	0.110 µm		C.V.:	111%
Mean/Median ratio:	1.374		Skewness:	5.645 Right skewed
Mode:	0.097 µm		Kurtosis:	40.36 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.159 µm	0.235 µm

Number Statistics (Arithmetic)			D3_02_160456.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.6%
Mean/Median ratio:	1.107		Skewness:	4.834 Right skewed
Mode:	0.073 μm		Kurtosis:	87.74 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.101 μm	0.132 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.41
10	0.044	0.046	0.24	0.78	3.43
11	0.048	0.050	0.39	1.18	4.32
12	0.053	0.055	0.71	1.94	5.92
13	0.058	0.061	1.26	3.15	7.96
14	0.064	0.067	2.08	4.72	9.91
15	0.070	0.073	3.07	6.35	11.1
16	0.077	0.080	4.02	7.57	10.9
17	0.084	0.088	4.82	8.28	9.93
18	0.093	0.097	5.36	8.38	8.34
19	0.102	0.106	5.61	7.99	6.60
20	0.112	0.117	5.70	7.40	5.07
21	0.122	0.128	5.64	6.67	3.79
22	0.134	0.141	5.44	5.86	2.76
23	0.148	0.155	5.17	5.07	1.98
24	0.162	0.170	4.91	4.39	1.43
25	0.178	0.186	4.65	3.79	1.02
26	0.195	0.205	4.37	3.24	0.73
27	0.214	0.225	4.04	2.73	0.51
28	0.235	0.247	3.63	2.24	0.34
29	0.258	0.271	3.11	1.74	0.22
30	0.284	0.297	2.51	1.28	0.14
31	0.311	0.326	1.83	0.85	0.075
32	0.342	0.358	1.16	0.49	0.036
33	0.375	0.393	0.62	0.24	0.015
34	0.412	0.431	0.32	0.11	0.0056
35	0.452	0.474	0.21	0.067	0.0028
36	0.496	0.520	0.21	0.062	0.0021
37	0.545	0.571	0.35	0.092	0.0026
38	0.598	0.627	0.63	0.15	0.0037
39	0.656	0.688	1.02	0.23	0.0045
40	0.721	0.755	1.48	0.30	0.0049
41	0.791	0.829	1.86	0.34	0.0046
42	0.868	0.910	2.09	0.35	0.0039
43	0.953	0.999	2.20	0.33	0.0031
44	1.047	1.097	2.12	0.29	0.0023
45	1.149	1.204	1.83	0.23	0.0015

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.46	0.17	0.00090
47	1.385	1.451	1.13	0.12	0.00053
48	1.520	1.592	0.84	0.080	0.00030
49	1.668	1.748	0.66	0.058	0.00018
50	1.832	1.919	0.48	0.038	0.000097
51	2.011	2.107	0.31	0.022	0.000046
52	2.207	2.313	0.18	0.012	0.000020
53	2.423	2.539	0.068	0.0041	0.000006
54	2.660	2.787	0.019	0.0010	0.000001
55	2.920	3.059	0.0035	0.00017	1.74E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

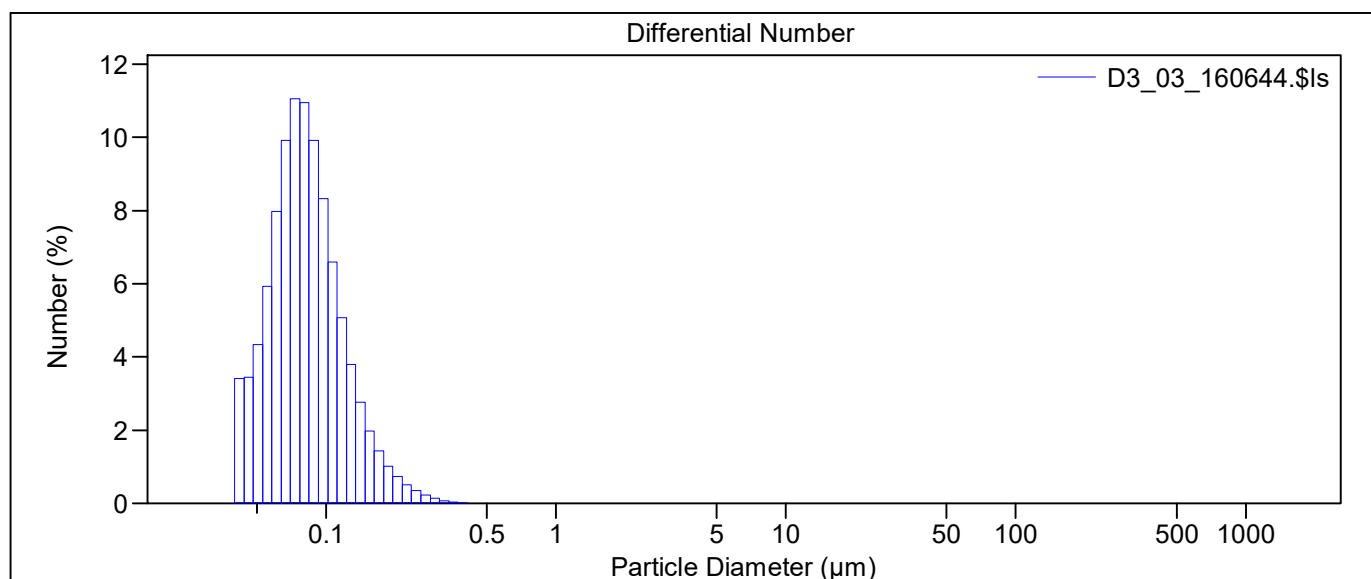
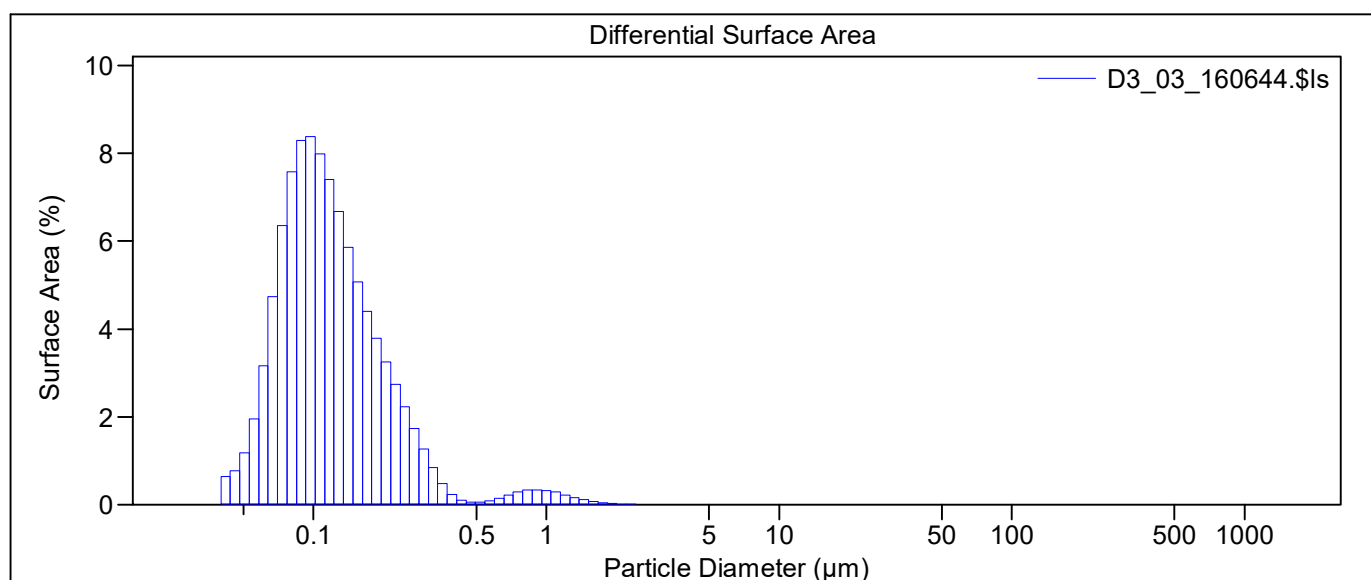
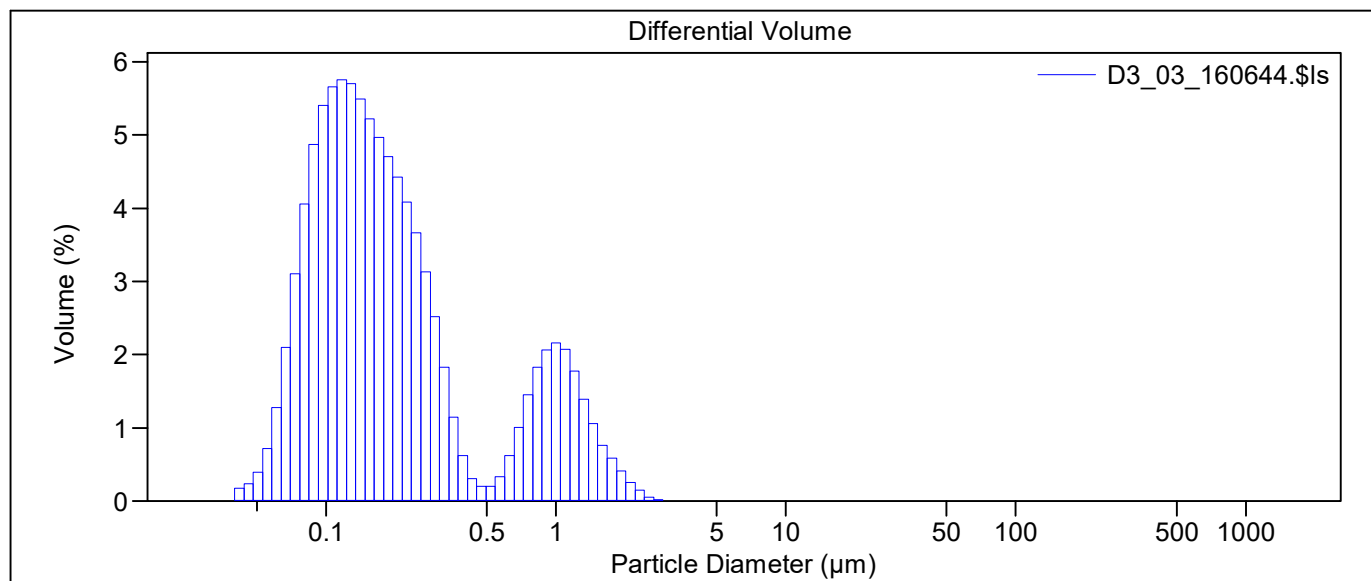
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_03_160644.\$ls		
	D3_03_160644.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.95%		
LS 13 320	Universal Liquid Module		
Start time:	16:05 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	72%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_03_160644.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.400 μm
Mean:	0.328 μm		Variance:	0.160 μm ²
Median:	0.162 μm		C.V.:	122%
Mean/Median ratio:	2.033		Skewness:	2.223 Right skewed
Mode:	0.117 μm		Kurtosis:	4.702 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.162 μm	0.282 μm	0.984 μm

Surface Area Statistics (Arithmetic)			D3_03_160644.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.164 µm
Mean:	0.150 µm		Variance:	0.027 µm ²
Median:	0.110 µm		C.V.:	109%
Mean/Median ratio:	1.363		Skewness:	5.660 Right skewed
Mode:	0.097 µm		Kurtosis:	40.75 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.159 µm	0.233 µm

Number Statistics (Arithmetic)			D3_03_160644.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.4%
Mean/Median ratio:	1.107		Skewness:	4.713 Right skewed
Mode:	0.073 μm		Kurtosis:	83.53 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.101 μm	0.132 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.41
10	0.044	0.046	0.24	0.78	3.44
11	0.048	0.050	0.40	1.18	4.33
12	0.053	0.055	0.72	1.95	5.94
13	0.058	0.061	1.28	3.16	7.97
14	0.064	0.067	2.10	4.73	9.92
15	0.070	0.073	3.10	6.36	11.1
16	0.077	0.080	4.06	7.58	10.9
17	0.084	0.088	4.87	8.29	9.92
18	0.093	0.097	5.41	8.38	8.33
19	0.102	0.106	5.66	7.99	6.59
20	0.112	0.117	5.76	7.40	5.06
21	0.122	0.128	5.70	6.68	3.79
22	0.134	0.141	5.50	5.87	2.76
23	0.148	0.155	5.22	5.08	1.98
24	0.162	0.170	4.96	4.40	1.43
25	0.178	0.186	4.71	3.80	1.02
26	0.195	0.205	4.42	3.25	0.73
27	0.214	0.225	4.09	2.74	0.51
28	0.235	0.247	3.67	2.24	0.34
29	0.258	0.271	3.13	1.74	0.22
30	0.284	0.297	2.52	1.28	0.14
31	0.311	0.326	1.83	0.84	0.074
32	0.342	0.358	1.15	0.48	0.035
33	0.375	0.393	0.62	0.24	0.014
34	0.412	0.431	0.31	0.11	0.0054
35	0.452	0.474	0.20	0.064	0.0027
36	0.496	0.520	0.20	0.059	0.0020
37	0.545	0.571	0.33	0.088	0.0025
38	0.598	0.627	0.62	0.15	0.0035
39	0.656	0.688	1.00	0.22	0.0043
40	0.721	0.755	1.45	0.29	0.0047
41	0.791	0.829	1.83	0.33	0.0045
42	0.868	0.910	2.06	0.34	0.0038
43	0.953	0.999	2.16	0.33	0.0031
44	1.047	1.097	2.07	0.28	0.0022
45	1.149	1.204	1.77	0.22	0.0014

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.39	0.16	0.00085
47	1.385	1.451	1.06	0.11	0.00049
48	1.520	1.592	0.77	0.072	0.00027
49	1.668	1.748	0.58	0.050	0.00015
50	1.832	1.919	0.41	0.032	0.000082
51	2.011	2.107	0.26	0.018	0.000038
52	2.207	2.313	0.15	0.0096	0.000017
53	2.423	2.539	0.057	0.0034	0.000005
54	2.660	2.787	0.016	0.00084	0.000001
55	2.920	3.059	0.0029	0.00014	1.44E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

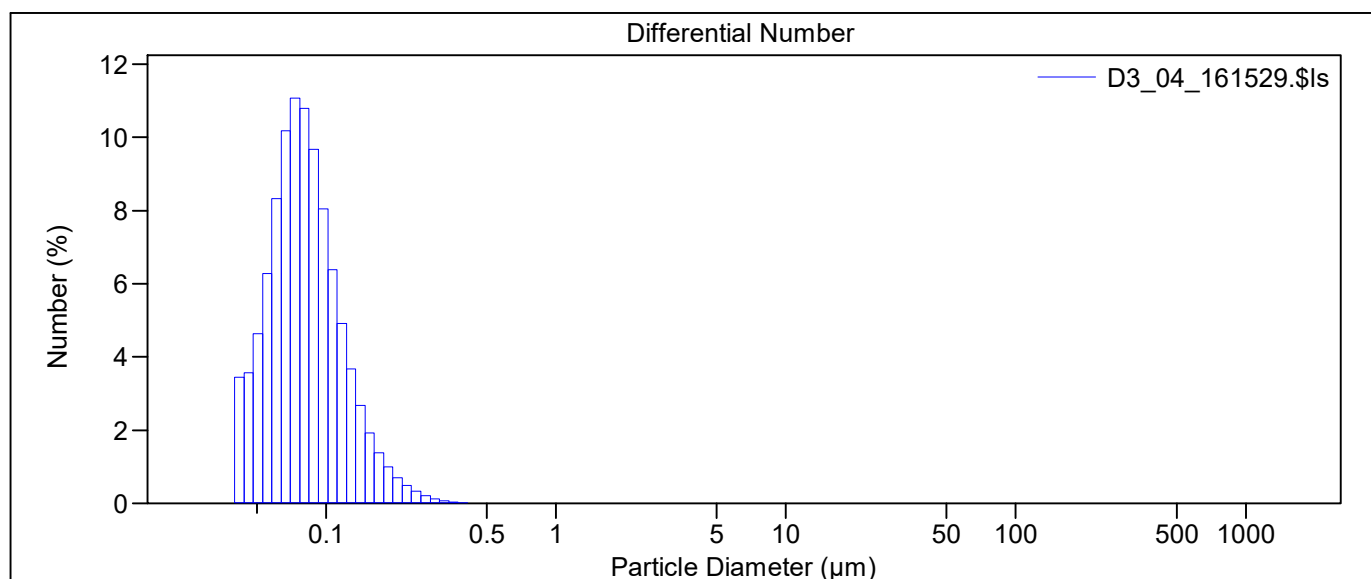
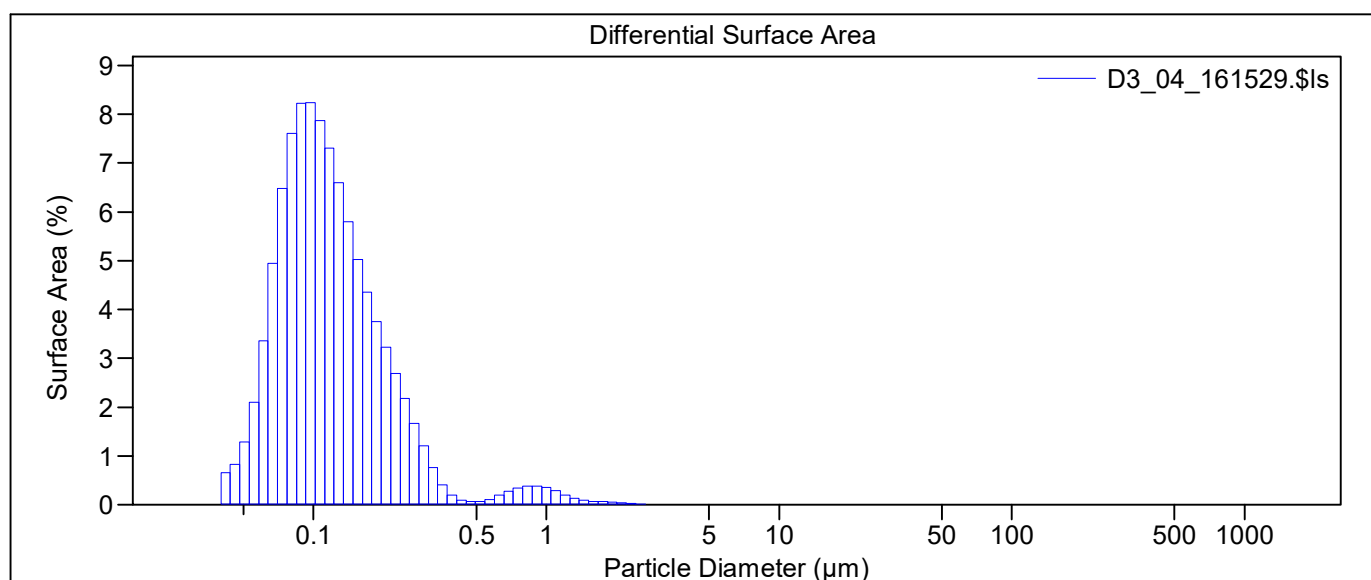
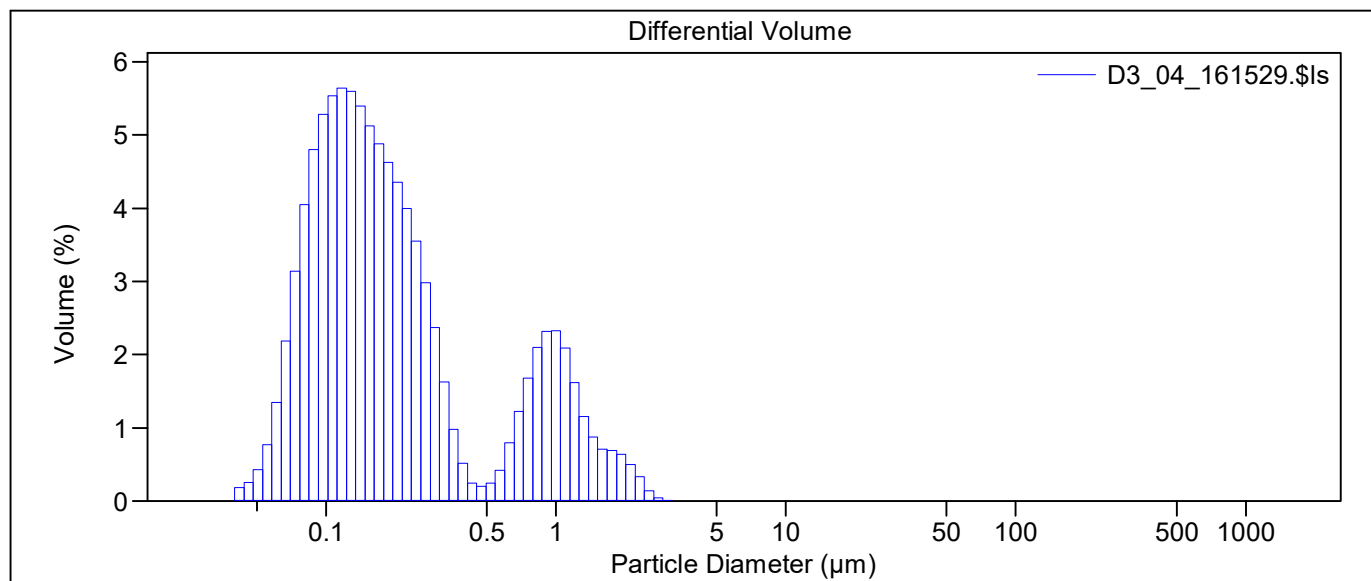
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_04_161529.\$ls		
	D3_04_161529.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.92%		
LS 13 320	Universal Liquid Module		
Start time:	16:13 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_04_161529.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.430 µm
Mean:	0.345 µm		Variance:	0.185 µm ²
Median:	0.163 µm		C.V.:	124%
Mean/Median ratio:	2.121		Skewness:	2.284 Right skewed
Mode:	0.117 µm		Kurtosis:	5.236 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.163 µm	0.294 µm	0.998 µm

Surface Area Statistics (Arithmetic)			D3_04_161529.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.171 µm
Mean:	0.151 µm		Variance:	0.029 µm ²
Median:	0.110 µm		C.V.:	113%
Mean/Median ratio:	1.381		Skewness:	5.803 Right skewed
Mode:	0.097 µm		Kurtosis:	43.83 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.158 µm	0.232 µm

Number Statistics (Arithmetic)			D3_04_161529.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.7%
Mean/Median ratio:	1.110		Skewness:	4.955 Right skewed
Mode:	0.073 μm		Kurtosis:	92.83 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.45
10	0.044	0.046	0.25	0.82	3.56
11	0.048	0.050	0.43	1.29	4.64
12	0.053	0.055	0.77	2.10	6.28
13	0.058	0.061	1.35	3.36	8.33
14	0.064	0.067	2.18	4.94	10.2
15	0.070	0.073	3.14	6.48	11.1
16	0.077	0.080	4.05	7.61	10.8
17	0.084	0.088	4.80	8.22	9.67
18	0.093	0.097	5.29	8.25	8.05
19	0.102	0.106	5.54	7.87	6.38
20	0.112	0.117	5.65	7.31	4.91
21	0.122	0.128	5.60	6.60	3.68
22	0.134	0.141	5.40	5.80	2.68
23	0.148	0.155	5.13	5.02	1.93
24	0.162	0.170	4.88	4.35	1.39
25	0.178	0.186	4.63	3.76	0.99
26	0.195	0.205	4.36	3.22	0.71
27	0.214	0.225	4.00	2.70	0.49
28	0.235	0.247	3.55	2.18	0.33
29	0.258	0.271	2.99	1.67	0.21
30	0.284	0.297	2.37	1.21	0.13
31	0.311	0.326	1.63	0.76	0.065
32	0.342	0.358	0.98	0.41	0.030
33	0.375	0.393	0.52	0.20	0.012
34	0.412	0.431	0.25	0.087	0.0043
35	0.452	0.474	0.20	0.064	0.0026
36	0.496	0.520	0.25	0.072	0.0024
37	0.545	0.571	0.42	0.11	0.0031
38	0.598	0.627	0.80	0.19	0.0045
39	0.656	0.688	1.22	0.27	0.0052
40	0.721	0.755	1.68	0.34	0.0054
41	0.791	0.829	2.10	0.38	0.0051
42	0.868	0.910	2.32	0.39	0.0043
43	0.953	0.999	2.33	0.35	0.0032
44	1.047	1.097	2.09	0.29	0.0022
45	1.149	1.204	1.62	0.20	0.0013

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.15	0.13	0.00070
47	1.385	1.451	0.87	0.091	0.00040
48	1.520	1.592	0.71	0.067	0.00024
49	1.668	1.748	0.69	0.060	0.00018
50	1.832	1.919	0.64	0.050	0.00013
51	2.011	2.107	0.50	0.036	0.000074
52	2.207	2.313	0.34	0.022	0.000038
53	2.423	2.539	0.14	0.0083	0.000012
54	2.660	2.787	0.041	0.0022	0.000003
55	2.920	3.059	0.0068	0.00034	3.32E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

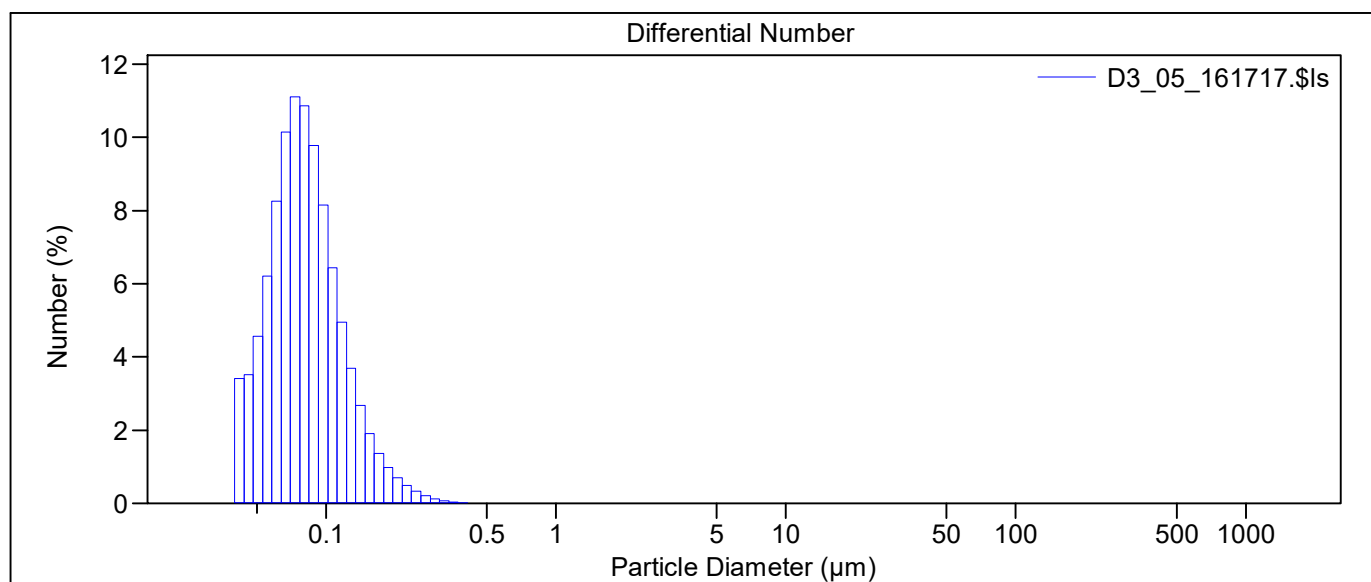
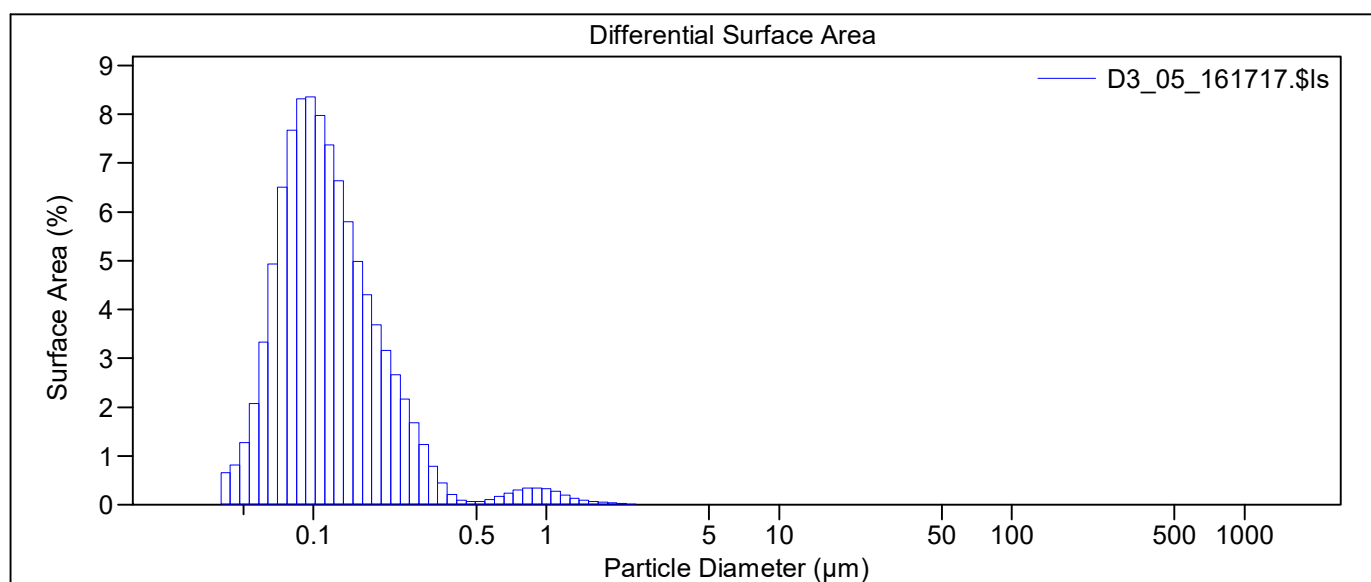
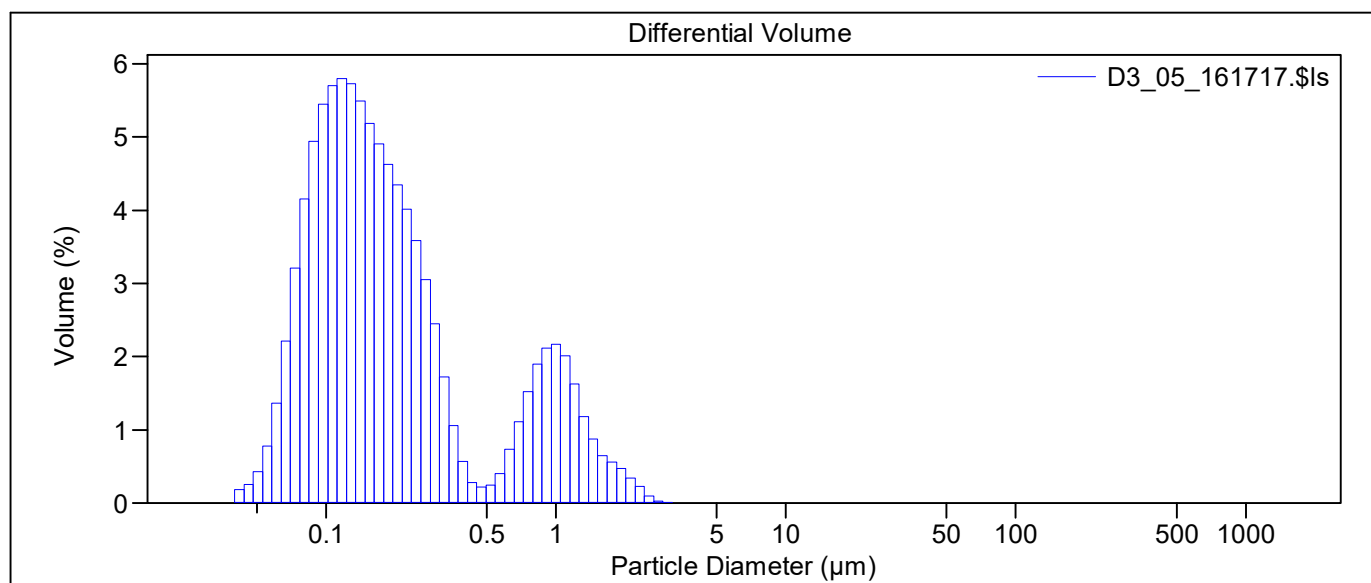
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_05_161717.\$ls		
	D3_05_161717.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.10%		
LS 13 320	Universal Liquid Module		
Start time:	16:15 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_05_161717.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.404 µm
Mean:	0.326 µm		Variance:	0.163 µm ²
Median:	0.160 µm		C.V.:	124%
Mean/Median ratio:	2.046		Skewness:	2.340 Right skewed
Mode:	0.117 µm		Kurtosis:	5.546 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.160 µm	0.280 µm	0.964 µm

Surface Area Statistics (Arithmetic)			D3_05_161717.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.163 µm
Mean:	0.149 µm		Variance:	0.026 µm ²
Median:	0.109 µm		C.V.:	109%
Mean/Median ratio:	1.362		Skewness:	5.814 Right skewed
Mode:	0.097 µm		Kurtosis:	44.08 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.231 µm

Number Statistics (Arithmetic)			D3_05_161717.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.3%
Mean/Median ratio:	1.108		Skewness:	4.743 Right skewed
Mode:	0.073 μm		Kurtosis:	85.14 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.81	3.52
11	0.048	0.050	0.43	1.27	4.57
12	0.053	0.055	0.77	2.08	6.20
13	0.058	0.061	1.36	3.33	8.26
14	0.064	0.067	2.22	4.93	10.1
15	0.070	0.073	3.21	6.51	11.1
16	0.077	0.080	4.16	7.68	10.9
17	0.084	0.088	4.94	8.32	9.77
18	0.093	0.097	5.45	8.36	8.14
19	0.102	0.106	5.71	7.97	6.45
20	0.112	0.117	5.80	7.38	4.95
21	0.122	0.128	5.73	6.64	3.70
22	0.134	0.141	5.49	5.80	2.68
23	0.148	0.155	5.19	4.99	1.91
24	0.162	0.170	4.90	4.30	1.37
25	0.178	0.186	4.62	3.69	0.97
26	0.195	0.205	4.35	3.16	0.69
27	0.214	0.225	4.01	2.66	0.48
28	0.235	0.247	3.59	2.17	0.33
29	0.258	0.271	3.05	1.68	0.21
30	0.284	0.297	2.45	1.23	0.13
31	0.311	0.326	1.73	0.79	0.068
32	0.342	0.358	1.06	0.44	0.031
33	0.375	0.393	0.57	0.22	0.013
34	0.412	0.431	0.28	0.098	0.0048
35	0.452	0.474	0.22	0.068	0.0028
36	0.496	0.520	0.25	0.071	0.0024
37	0.545	0.571	0.40	0.10	0.0029
38	0.598	0.627	0.73	0.17	0.0041
39	0.656	0.688	1.11	0.24	0.0047
40	0.721	0.755	1.53	0.30	0.0048
41	0.791	0.829	1.90	0.34	0.0045
42	0.868	0.910	2.11	0.35	0.0038
43	0.953	0.999	2.17	0.32	0.0030
44	1.047	1.097	2.01	0.27	0.0021
45	1.149	1.204	1.62	0.20	0.0013

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.18	0.13	0.00070
47	1.385	1.451	0.87	0.090	0.00039
48	1.520	1.592	0.65	0.061	0.00022
49	1.668	1.748	0.56	0.048	0.00014
50	1.832	1.919	0.47	0.037	0.000092
51	2.011	2.107	0.34	0.024	0.000050
52	2.207	2.313	0.22	0.014	0.000025
53	2.423	2.539	0.093	0.0054	0.000008
54	2.660	2.787	0.027	0.0014	0.000002
55	2.920	3.059	0.0046	0.00023	2.21E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

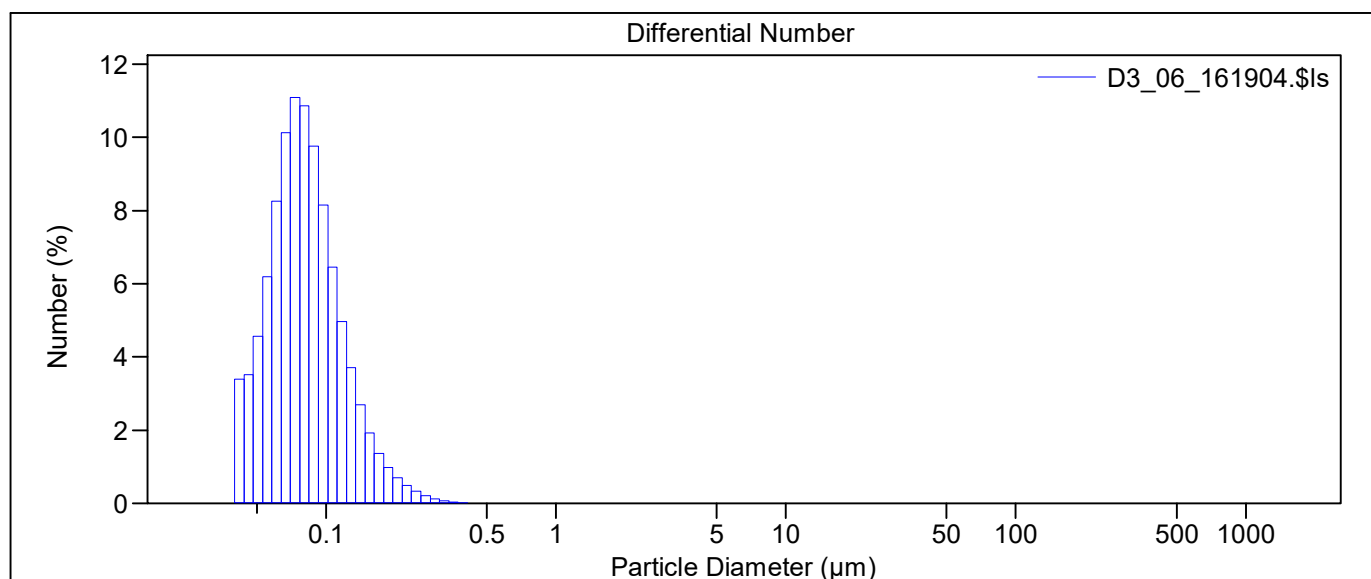
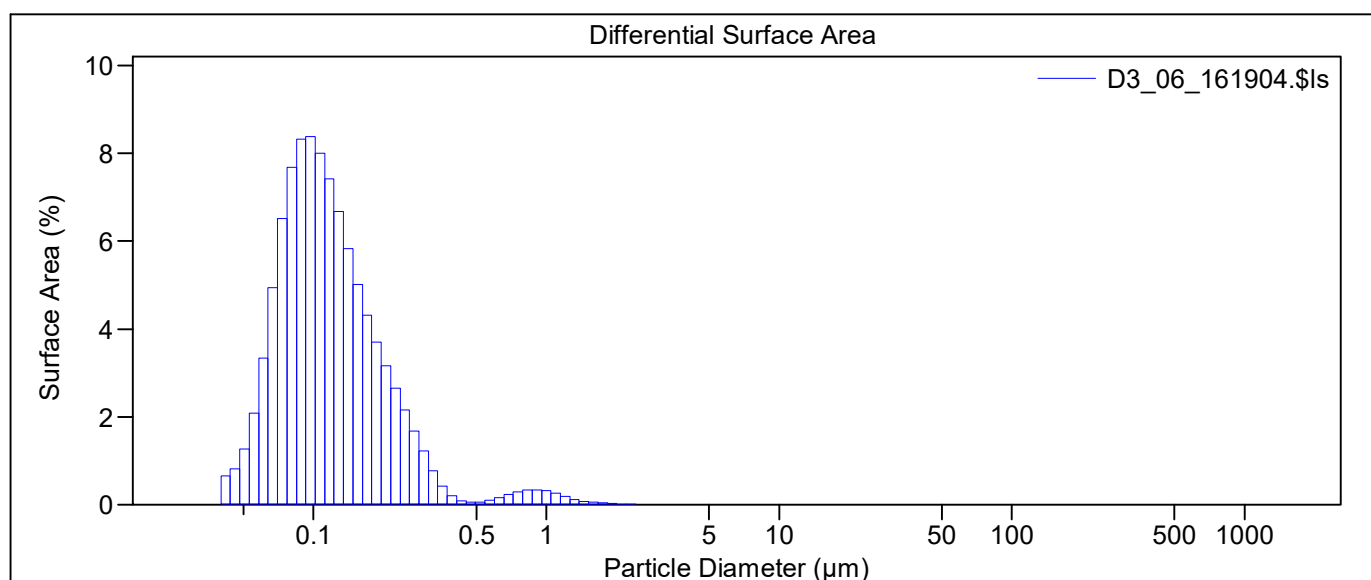
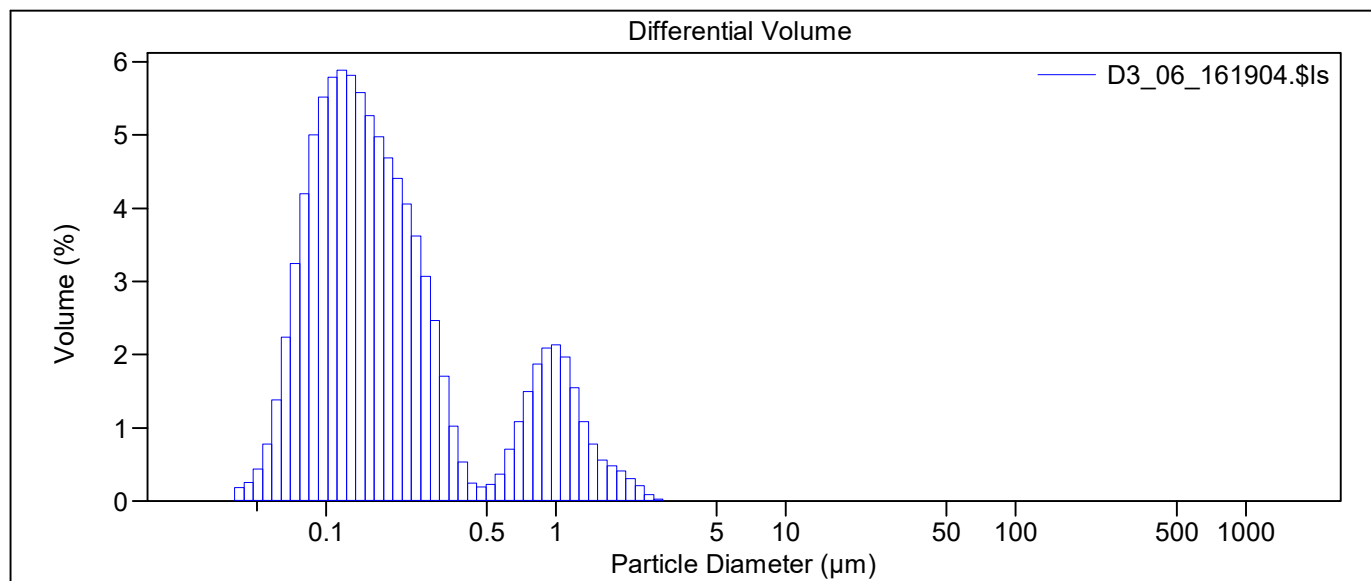
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_06_161904.\$ls		
	D3_06_161904.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.16%		
LS 13 320	Universal Liquid Module		
Start time:	16:17 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_06_161904.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.390 μm
Mean:	0.316 μm		Variance:	0.152 μm ²
Median:	0.158 μm		C.V.:	124%
Mean/Median ratio:	2.003		Skewness:	2.416 Right skewed
Mode:	0.117 μm		Kurtosis:	6.058 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.105 μm	0.158 μm	0.272 μm	0.937 μm

Surface Area Statistics (Arithmetic)			D3_06_161904.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.158 µm
Mean:	0.147 µm		Variance:	0.025 µm ²
Median:	0.109 µm		C.V.:	107%
Mean/Median ratio:	1.349		Skewness:	5.871 Right skewed
Mode:	0.097 µm		Kurtosis:	45.40 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.229 µm

Number Statistics (Arithmetic)			D3_06_161904.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	45.0%
Mean/Median ratio:	1.107		Skewness:	4.603 Right skewed
Mode:	0.073 μm		Kurtosis:	80.76 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.40
10	0.044	0.046	0.25	0.81	3.51
11	0.048	0.050	0.44	1.27	4.56
12	0.053	0.055	0.78	2.08	6.20
13	0.058	0.061	1.38	3.33	8.25
14	0.064	0.067	2.24	4.93	10.1
15	0.070	0.073	3.24	6.51	11.1
16	0.077	0.080	4.20	7.68	10.9
17	0.084	0.088	5.00	8.33	9.77
18	0.093	0.097	5.52	8.38	8.15
19	0.102	0.106	5.79	8.00	6.46
20	0.112	0.117	5.89	7.41	4.97
21	0.122	0.128	5.82	6.67	3.71
22	0.134	0.141	5.58	5.83	2.69
23	0.148	0.155	5.27	5.02	1.92
24	0.162	0.170	4.98	4.32	1.37
25	0.178	0.186	4.69	3.70	0.98
26	0.195	0.205	4.40	3.17	0.69
27	0.214	0.225	4.06	2.66	0.48
28	0.235	0.247	3.62	2.16	0.33
29	0.258	0.271	3.07	1.67	0.21
30	0.284	0.297	2.46	1.22	0.13
31	0.311	0.326	1.70	0.77	0.066
32	0.342	0.358	1.03	0.42	0.030
33	0.375	0.393	0.54	0.20	0.012
34	0.412	0.431	0.25	0.084	0.0041
35	0.452	0.474	0.19	0.059	0.0024
36	0.496	0.520	0.22	0.063	0.0021
37	0.545	0.571	0.37	0.096	0.0027
38	0.598	0.627	0.71	0.17	0.0039
39	0.656	0.688	1.09	0.23	0.0045
40	0.721	0.755	1.49	0.29	0.0047
41	0.791	0.829	1.87	0.33	0.0044
42	0.868	0.910	2.09	0.34	0.0037
43	0.953	0.999	2.13	0.31	0.0029
44	1.047	1.097	1.97	0.26	0.0020
45	1.149	1.204	1.55	0.19	0.0012

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.08	0.12	0.00063
47	1.385	1.451	0.77	0.079	0.00034
48	1.520	1.592	0.56	0.051	0.00019
49	1.668	1.748	0.48	0.040	0.00012
50	1.832	1.919	0.41	0.032	0.000079
51	2.011	2.107	0.31	0.021	0.000044
52	2.207	2.313	0.21	0.013	0.000022
53	2.423	2.539	0.086	0.0050	0.000007
54	2.660	2.787	0.025	0.0013	0.000002
55	2.920	3.059	0.0043	0.00021	2.03E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

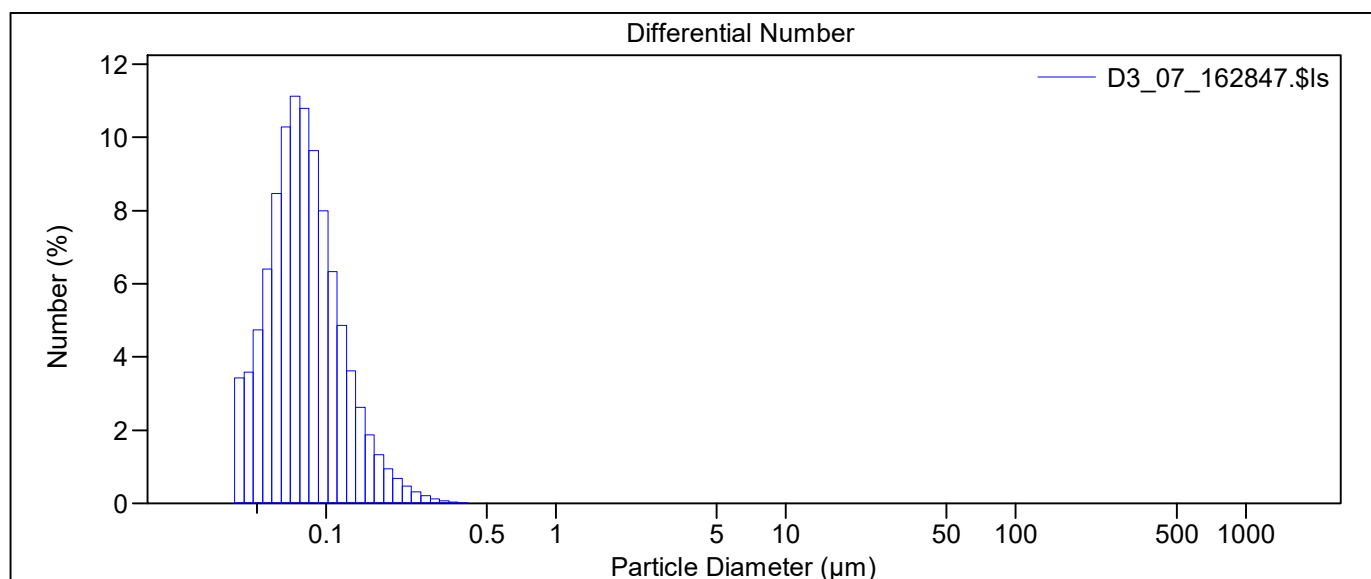
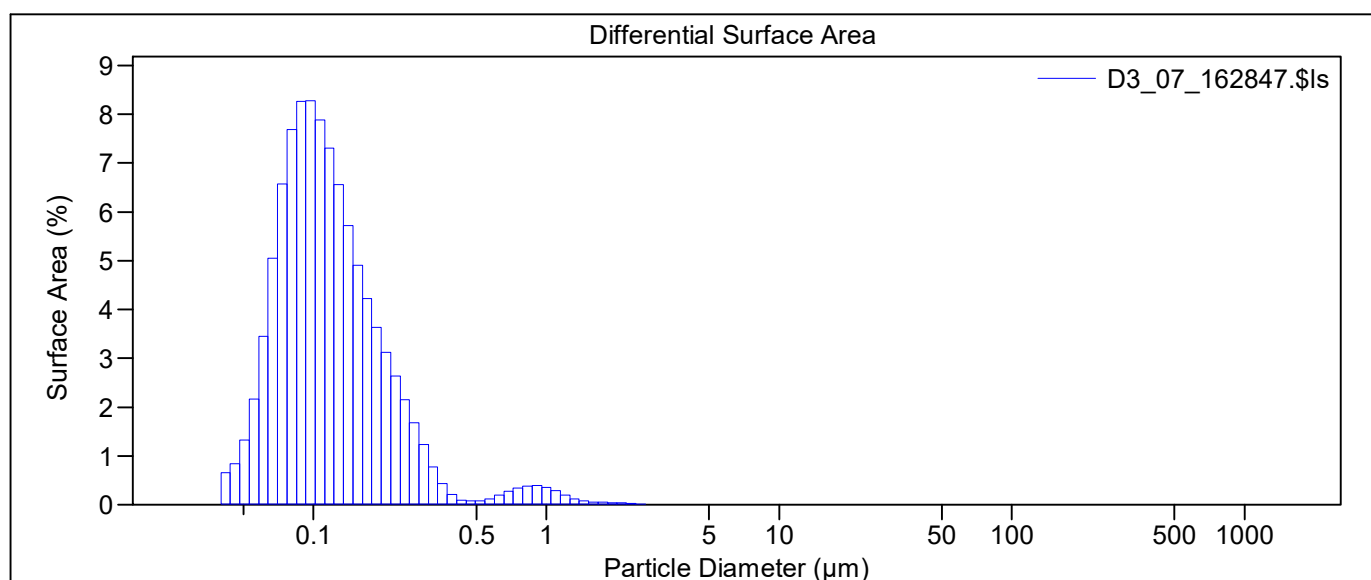
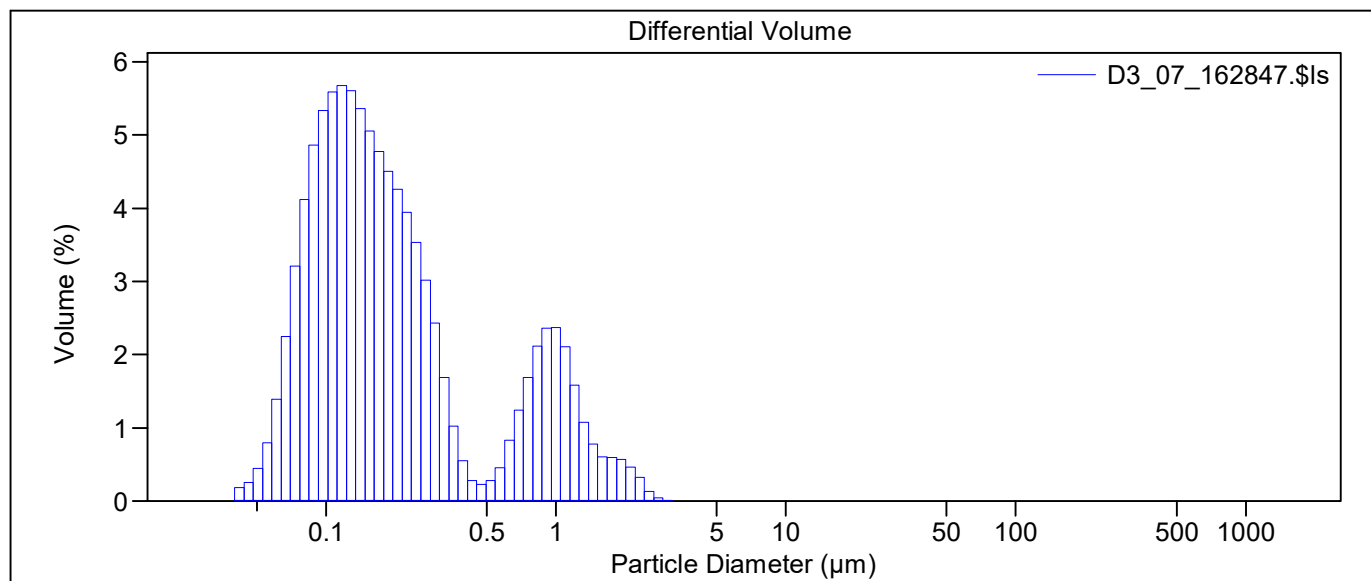
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_07_162847.\$ls		
	D3_07_162847.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.99%		
LS 13 320	Universal Liquid Module		
Start time:	16:27 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_07_162847.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.420 μm
Mean:	0.339 μm		Variance:	0.176 μm ²
Median:	0.162 μm		C.V.:	124%
Mean/Median ratio:	2.098		Skewness:	2.320 Right skewed
Mode:	0.117 μm		Kurtosis:	5.552 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.162 μm	0.293 μm	0.979 μm

Surface Area Statistics (Arithmetic)			D3_07_162847.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.168 µm
Mean:	0.150 µm		Variance:	0.028 µm ²
Median:	0.109 µm		C.V.:	112%
Mean/Median ratio:	1.381		Skewness:	5.764 Right skewed
Mode:	0.097 µm		Kurtosis:	43.71 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.233 µm

Number Statistics (Arithmetic)			D3_07_162847.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.6%
Mean/Median ratio:	1.110		Skewness:	4.940 Right skewed
Mode:	0.073 μm		Kurtosis:	90.73 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.26	0.84	3.59
11	0.048	0.050	0.45	1.33	4.74
12	0.053	0.055	0.80	2.16	6.40
13	0.058	0.061	1.39	3.45	8.46
14	0.064	0.067	2.24	5.05	10.3
15	0.070	0.073	3.21	6.57	11.1
16	0.077	0.080	4.12	7.69	10.8
17	0.084	0.088	4.86	8.27	9.63
18	0.093	0.097	5.34	8.27	7.99
19	0.102	0.106	5.59	7.89	6.33
20	0.112	0.117	5.68	7.30	4.86
21	0.122	0.128	5.60	6.56	3.62
22	0.134	0.141	5.36	5.72	2.62
23	0.148	0.155	5.05	4.91	1.87
24	0.162	0.170	4.78	4.23	1.33
25	0.178	0.186	4.51	3.63	0.95
26	0.195	0.205	4.26	3.13	0.68
27	0.214	0.225	3.94	2.64	0.48
28	0.235	0.247	3.54	2.16	0.32
29	0.258	0.271	3.02	1.68	0.21
30	0.284	0.297	2.43	1.23	0.13
31	0.311	0.326	1.69	0.78	0.066
32	0.342	0.358	1.03	0.43	0.031
33	0.375	0.393	0.55	0.21	0.012
34	0.412	0.431	0.28	0.096	0.0047
35	0.452	0.474	0.23	0.073	0.0029
36	0.496	0.520	0.28	0.081	0.0027
37	0.545	0.571	0.45	0.12	0.0033
38	0.598	0.627	0.83	0.20	0.0046
39	0.656	0.688	1.24	0.27	0.0052
40	0.721	0.755	1.69	0.34	0.0054
41	0.791	0.829	2.12	0.38	0.0051
42	0.868	0.910	2.36	0.39	0.0043
43	0.953	0.999	2.37	0.36	0.0033
44	1.047	1.097	2.11	0.29	0.0022
45	1.149	1.204	1.59	0.20	0.0012

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.08	0.12	0.00064
47	1.385	1.451	0.78	0.080	0.00035
48	1.520	1.592	0.61	0.057	0.00021
49	1.668	1.748	0.60	0.051	0.00015
50	1.832	1.919	0.57	0.045	0.00011
51	2.011	2.107	0.46	0.033	0.000067
52	2.207	2.313	0.32	0.021	0.000035
53	2.423	2.539	0.13	0.0080	0.000011
54	2.660	2.787	0.039	0.0021	0.000002
55	2.920	3.059	0.0065	0.00032	3.12E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

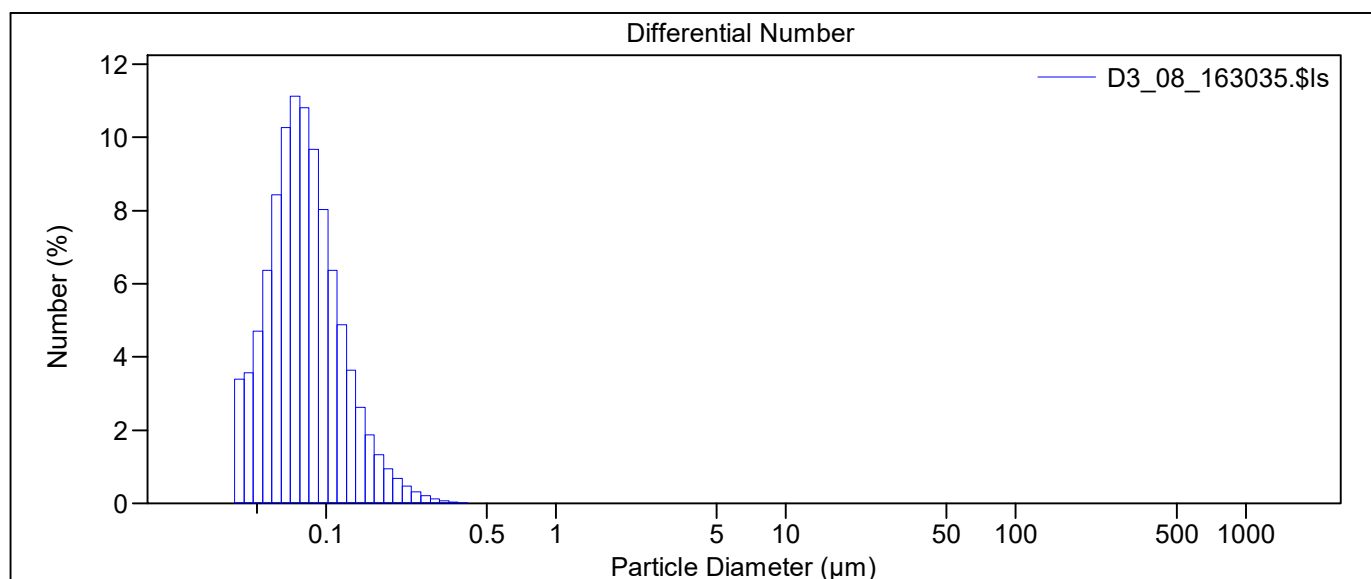
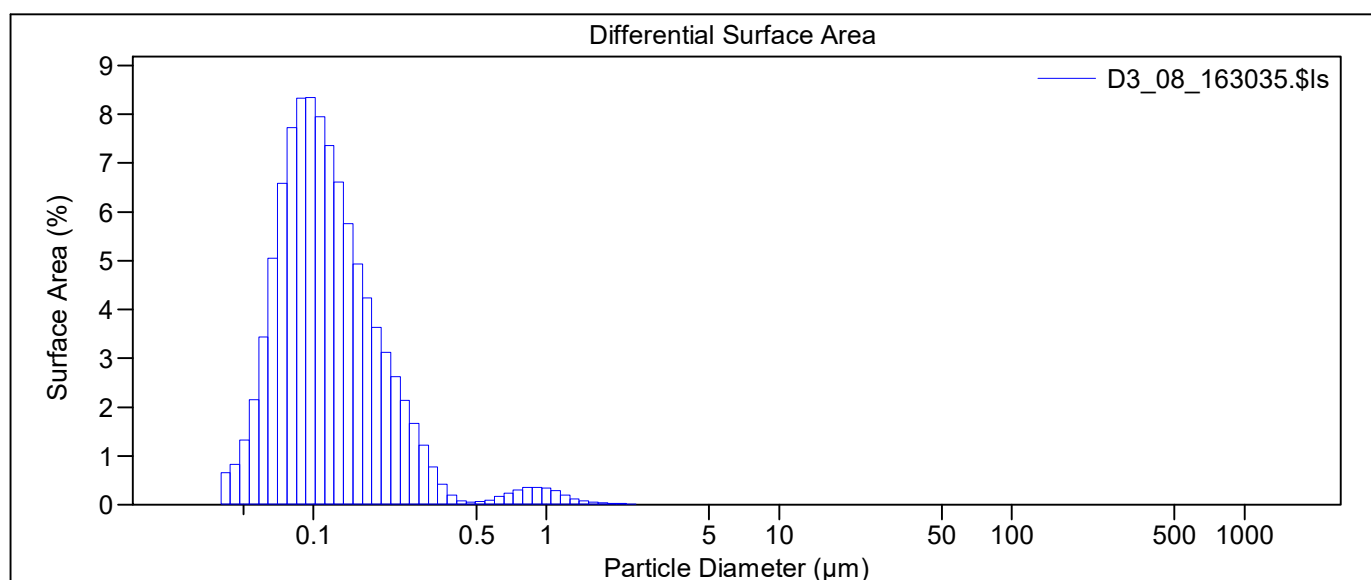
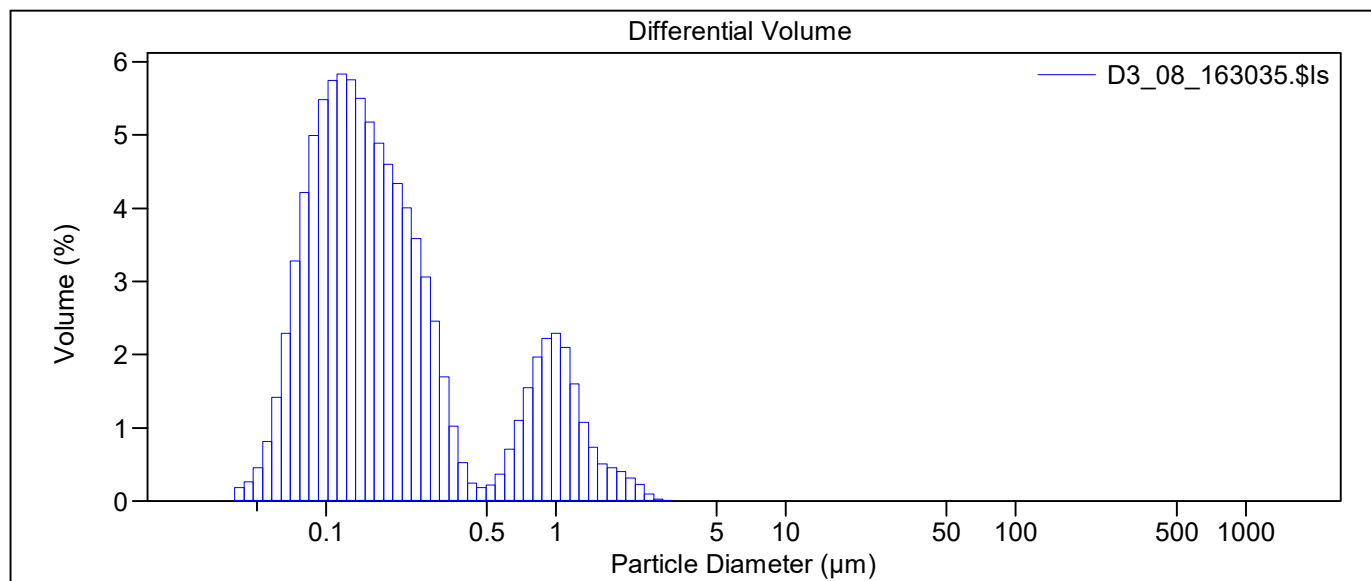
Beckman Coulter LS13320

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	D3_08_163035.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.13%		
LS 13 320	Universal Liquid Module		
Start time:	16:28 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_08_163035.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.394 μm
Mean:	0.320 μm		Variance:	0.155 μm ²
Median:	0.158 μm		C.V.:	123%
Mean/Median ratio:	2.023		Skewness:	2.381 Right skewed
Mode:	0.117 μm		Kurtosis:	5.944 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.104 μm	0.158 μm	0.276 μm	0.947 μm

Surface Area Statistics (Arithmetic)			D3_08_163035.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.159 μm
Mean:	0.147 μm		Variance:	0.025 μm ²
Median:	0.109 μm		C.V.:	108%
Mean/Median ratio:	1.358		Skewness:	5.793 Right skewed
Mode:	0.097 μm		Kurtosis:	44.22 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.156 μm	0.230 μm

Number Statistics (Arithmetic)			D3_08_163035.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.2%
Mean/Median ratio:	1.108		Skewness:	4.702 Right skewed
Mode:	0.073 μm		Kurtosis:	83.06 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.66	3.40
10	0.044	0.046	0.26	0.83	3.56
11	0.048	0.050	0.45	1.32	4.71
12	0.053	0.055	0.81	2.16	6.36
13	0.058	0.061	1.42	3.44	8.43
14	0.064	0.067	2.29	5.05	10.3
15	0.070	0.073	3.28	6.59	11.1
16	0.077	0.080	4.22	7.73	10.8
17	0.084	0.088	4.99	8.33	9.67
18	0.093	0.097	5.49	8.34	8.04
19	0.102	0.106	5.75	7.96	6.36
20	0.112	0.117	5.84	7.36	4.89
21	0.122	0.128	5.76	6.61	3.64
22	0.134	0.141	5.50	5.76	2.63
23	0.148	0.155	5.18	4.94	1.87
24	0.162	0.170	4.89	4.24	1.34
25	0.178	0.186	4.60	3.64	0.95
26	0.195	0.205	4.33	3.12	0.68
27	0.214	0.225	4.01	2.63	0.47
28	0.235	0.247	3.59	2.14	0.32
29	0.258	0.271	3.06	1.67	0.21
30	0.284	0.297	2.46	1.22	0.13
31	0.311	0.326	1.70	0.77	0.066
32	0.342	0.358	1.03	0.42	0.030
33	0.375	0.393	0.53	0.20	0.012
34	0.412	0.431	0.24	0.083	0.0040
35	0.452	0.474	0.18	0.057	0.0023
36	0.496	0.520	0.21	0.061	0.0020
37	0.545	0.571	0.36	0.094	0.0026
38	0.598	0.627	0.71	0.17	0.0039
39	0.656	0.688	1.10	0.24	0.0045
40	0.721	0.755	1.55	0.30	0.0048
41	0.791	0.829	1.97	0.35	0.0046
42	0.868	0.910	2.23	0.36	0.0039
43	0.953	0.999	2.30	0.34	0.0031
44	1.047	1.097	2.10	0.28	0.0021
45	1.149	1.204	1.60	0.20	0.0012

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.07	0.12	0.00062
47	1.385	1.451	0.73	0.074	0.00032
48	1.520	1.592	0.51	0.047	0.00017
49	1.668	1.748	0.45	0.038	0.00011
50	1.832	1.919	0.40	0.031	0.000076
51	2.011	2.107	0.31	0.022	0.000045
52	2.207	2.313	0.23	0.014	0.000025
53	2.423	2.539	0.097	0.0056	0.000008
54	2.660	2.787	0.029	0.0015	0.000002
55	2.920	3.059	0.0051	0.00024	2.36E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

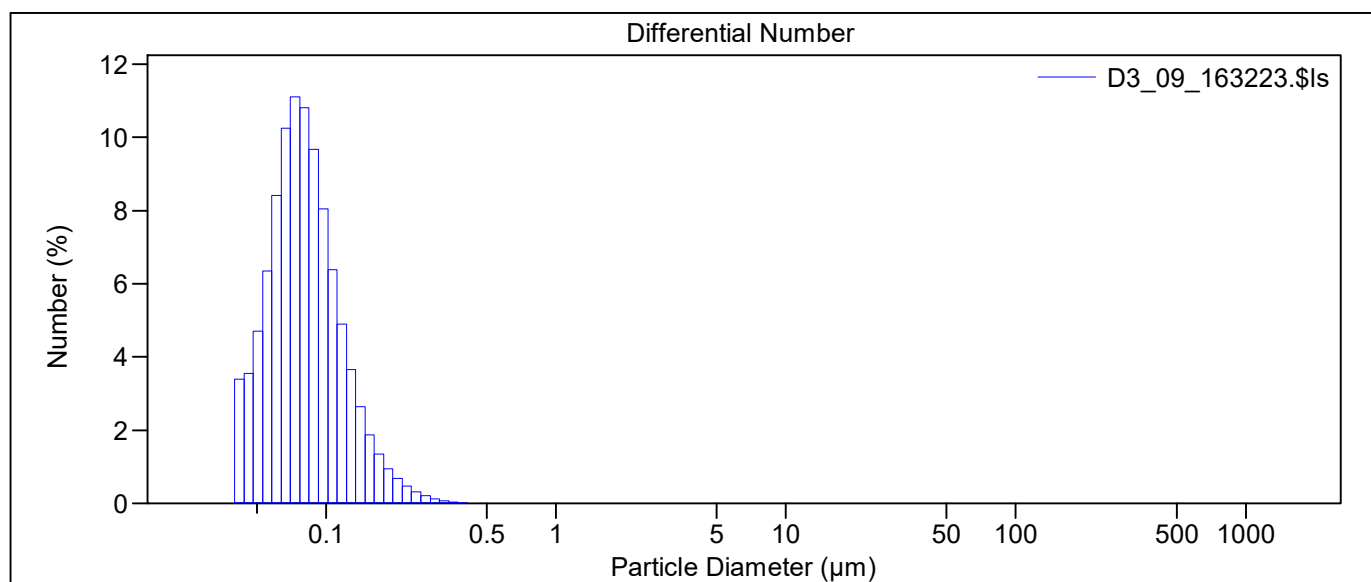
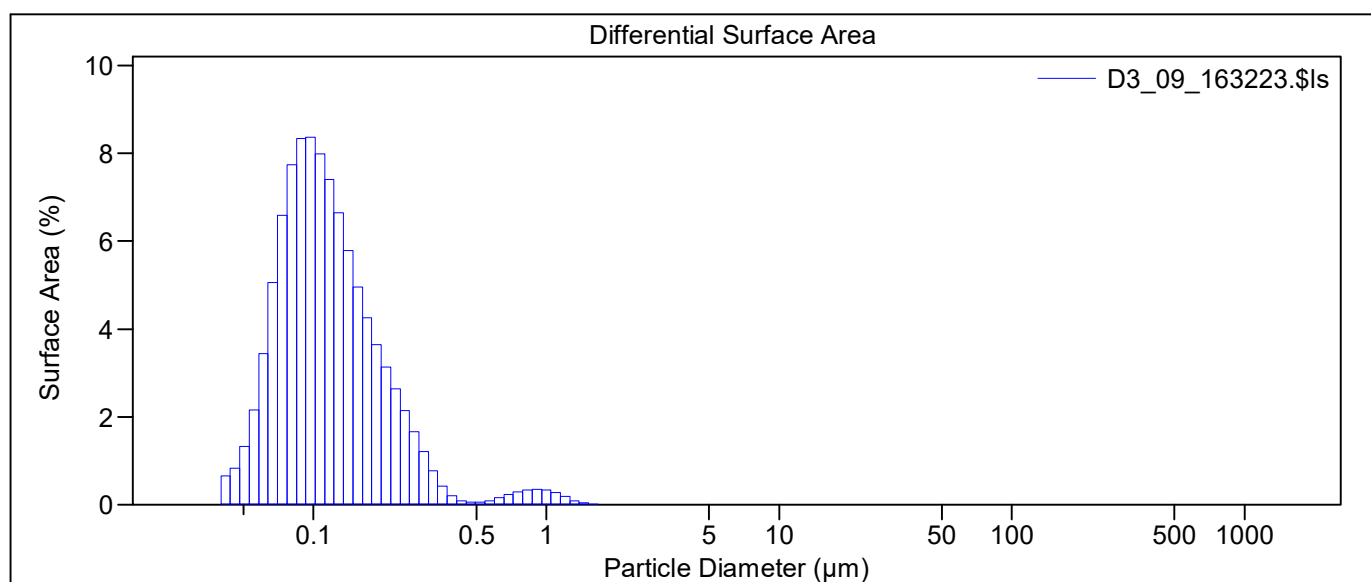
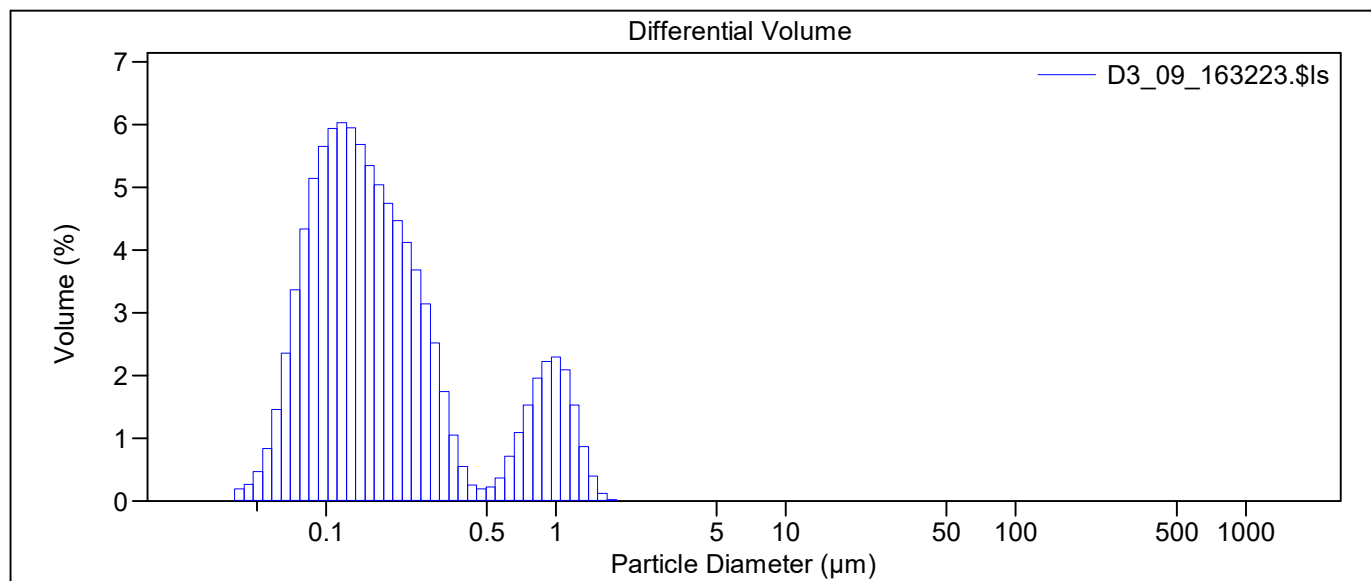
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_09_163223.\$ls		
	D3_09_163223.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.19%		
LS 13 320	Universal Liquid Module		
Start time:	16:30 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_09_163223.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.310 μm
Mean:	0.278 μm		Variance:	0.096 μm ²
Median:	0.154 μm		C.V.:	111%
Mean/Median ratio:	1.810		Skewness:	2.049 Right skewed
Mode:	0.117 μm		Kurtosis:	3.168 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.154 μm	0.258 μm	0.851 μm

Surface Area Statistics (Arithmetic)			D3_09_163223.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.139 µm
Mean:	0.143 µm		Variance:	0.019 µm ²
Median:	0.108 µm		C.V.:	97.0%
Mean/Median ratio:	1.323		Skewness:	5.043 Right skewed
Mode:	0.097 µm		Kurtosis:	30.87 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.108 µm	0.155 µm	0.227 µm

Number Statistics (Arithmetic)			D3_09_163223.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.8%
Mean/Median ratio:	1.108		Skewness:	4.242 Right skewed
Mode:	0.073 μm		Kurtosis:	62.30 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.66	3.39
10	0.044	0.046	0.27	0.83	3.56
11	0.048	0.050	0.47	1.32	4.70
12	0.053	0.055	0.83	2.16	6.35
13	0.058	0.061	1.46	3.44	8.42
14	0.064	0.067	2.35	5.05	10.3
15	0.070	0.073	3.37	6.60	11.1
16	0.077	0.080	4.34	7.74	10.8
17	0.084	0.088	5.14	8.35	9.67
18	0.093	0.097	5.66	8.37	8.05
19	0.102	0.106	5.93	7.99	6.38
20	0.112	0.117	6.03	7.40	4.90
21	0.122	0.128	5.95	6.65	3.66
22	0.134	0.141	5.69	5.79	2.64
23	0.148	0.155	5.35	4.96	1.88
24	0.162	0.170	5.04	4.26	1.34
25	0.178	0.186	4.74	3.65	0.95
26	0.195	0.205	4.46	3.13	0.68
27	0.214	0.225	4.12	2.63	0.47
28	0.235	0.247	3.68	2.14	0.32
29	0.258	0.271	3.14	1.66	0.21
30	0.284	0.297	2.52	1.22	0.12
31	0.311	0.326	1.74	0.77	0.065
32	0.342	0.358	1.05	0.42	0.030
33	0.375	0.393	0.55	0.20	0.012
34	0.412	0.431	0.25	0.084	0.0041
35	0.452	0.474	0.19	0.058	0.0024
36	0.496	0.520	0.22	0.062	0.0021
37	0.545	0.571	0.37	0.093	0.0026
38	0.598	0.627	0.71	0.16	0.0038
39	0.656	0.688	1.10	0.23	0.0044
40	0.721	0.755	1.53	0.29	0.0046
41	0.791	0.829	1.96	0.34	0.0045
42	0.868	0.910	2.22	0.35	0.0038
43	0.953	0.999	2.29	0.33	0.0030
44	1.047	1.097	2.09	0.27	0.0021
45	1.149	1.204	1.53	0.18	0.0011

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.87	0.095	0.00049
47	1.385	1.451	0.40	0.039	0.00017
48	1.520	1.592	0.12	0.011	0.000039
49	1.668	1.748	0.023	0.0019	0.000006
50	1.832	1.919	0.0033	0.00025	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

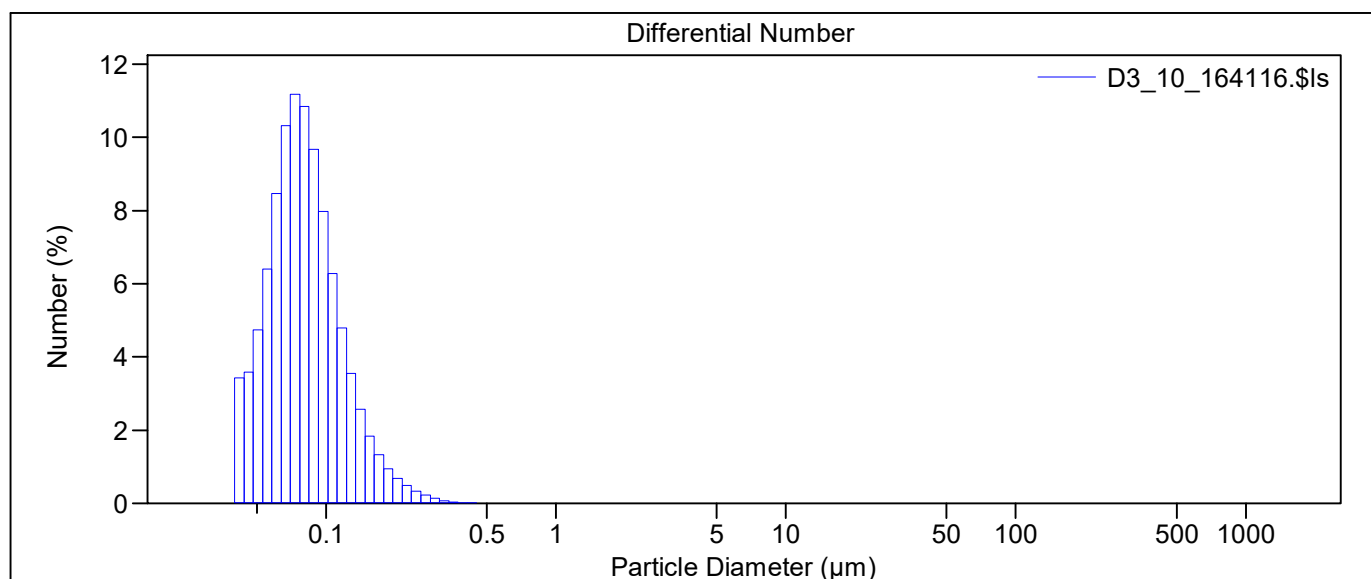
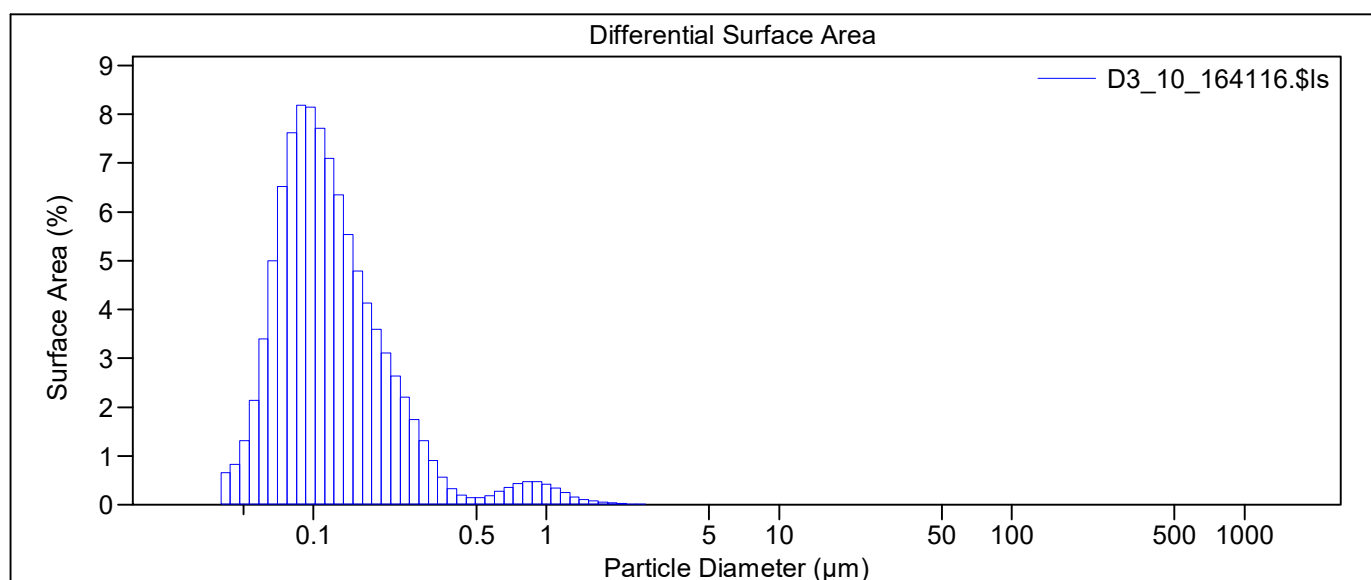
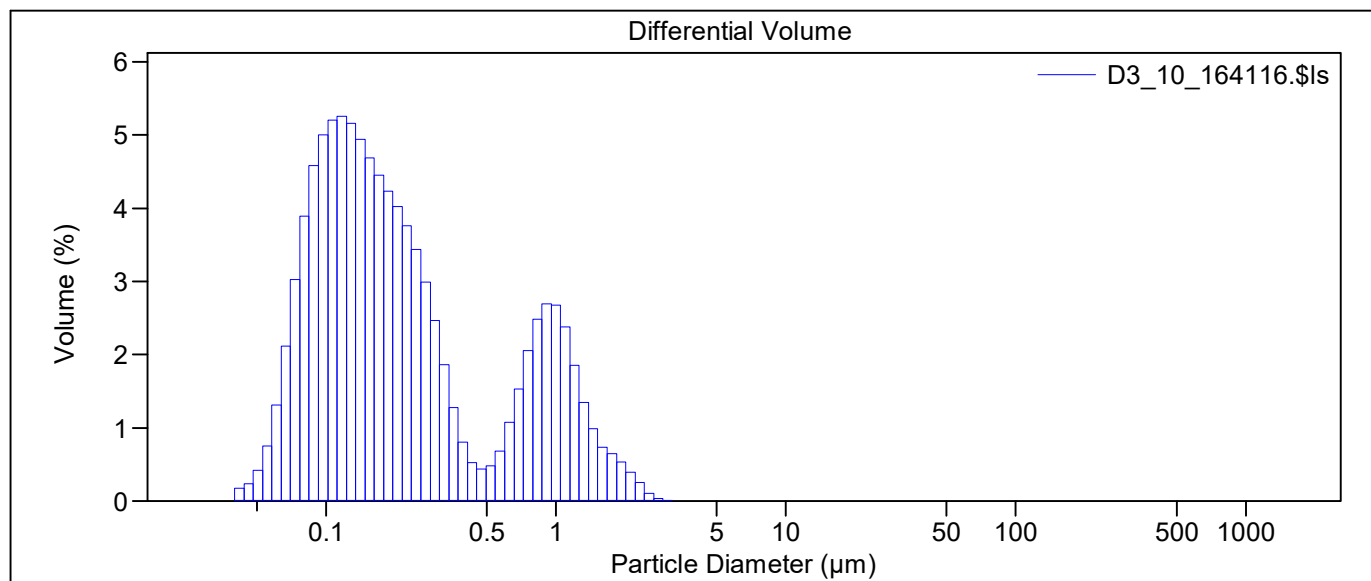
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_10_164116.\$ls		
	D3_10_164116.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.70%		
LS 13 320	Universal Liquid Module		
Start time:	16:39 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_10_164116.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.427 μm
Mean:	0.367 μm		Variance:	0.182 μm ²
Median:	0.174 μm		C.V.:	116%
Mean/Median ratio:	2.114		Skewness:	2.014 Right skewed
Mode:	0.117 μm		Kurtosis:	3.991 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.108 μm	0.174 μm	0.368 μm	1.022 μm

Surface Area Statistics (Arithmetic)			D3_10_164116.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.182 µm
Mean:	0.158 µm		Variance:	0.033 µm ²
Median:	0.110 µm		C.V.:	115%
Mean/Median ratio:	1.441		Skewness:	5.089 Right skewed
Mode:	0.088 µm		Kurtosis:	33.26 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.161 µm	0.248 µm

Number Statistics (Arithmetic)			D3_10_164116.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.041 μm
Mean:	0.087 μm		Variance:	0.0017 μm ²
Median:	0.078 μm		C.V.:	47.0%
Mean/Median ratio:	1.112		Skewness:	5.366 Right skewed
Mode:	0.073 μm		Kurtosis:	95.91 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.65	3.42
10	0.044	0.046	0.24	0.83	3.59
11	0.048	0.050	0.42	1.31	4.74
12	0.053	0.055	0.75	2.13	6.40
13	0.058	0.061	1.31	3.40	8.47
14	0.064	0.067	2.11	5.00	10.3
15	0.070	0.073	3.03	6.52	11.2
16	0.077	0.080	3.89	7.63	10.8
17	0.084	0.088	4.58	8.19	9.67
18	0.093	0.097	5.01	8.15	7.98
19	0.102	0.106	5.20	7.72	6.27
20	0.112	0.117	5.26	7.10	4.79
21	0.122	0.128	5.16	6.35	3.55
22	0.134	0.141	4.94	5.54	2.57
23	0.148	0.155	4.69	4.79	1.85
24	0.162	0.170	4.45	4.14	1.32
25	0.178	0.186	4.24	3.59	0.95
26	0.195	0.205	4.02	3.11	0.68
27	0.214	0.225	3.76	2.64	0.48
28	0.235	0.247	3.44	2.20	0.33
29	0.258	0.271	2.99	1.75	0.22
30	0.284	0.297	2.47	1.31	0.14
31	0.311	0.326	1.87	0.90	0.078
32	0.342	0.358	1.28	0.56	0.040
33	0.375	0.393	0.81	0.32	0.019
34	0.412	0.431	0.52	0.19	0.0095
35	0.452	0.474	0.44	0.15	0.0060
36	0.496	0.520	0.48	0.15	0.0050
37	0.545	0.571	0.69	0.19	0.0054
38	0.598	0.627	1.07	0.27	0.0064
39	0.656	0.688	1.53	0.35	0.0068
40	0.721	0.755	2.05	0.43	0.0069
41	0.791	0.829	2.48	0.47	0.0063
42	0.868	0.910	2.69	0.47	0.0052
43	0.953	0.999	2.68	0.42	0.0039
44	1.047	1.097	2.38	0.34	0.0026
45	1.149	1.204	1.86	0.24	0.0015

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.35	0.16	0.00085
47	1.385	1.451	0.99	0.11	0.00047
48	1.520	1.592	0.74	0.073	0.00027
49	1.668	1.748	0.65	0.059	0.00018
50	1.832	1.919	0.53	0.044	0.00011
51	2.011	2.107	0.39	0.029	0.000061
52	2.207	2.313	0.26	0.018	0.000030
53	2.423	2.539	0.11	0.0066	0.000009
54	2.660	2.787	0.031	0.0018	0.000002
55	2.920	3.059	0.0056	0.00029	2.85E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

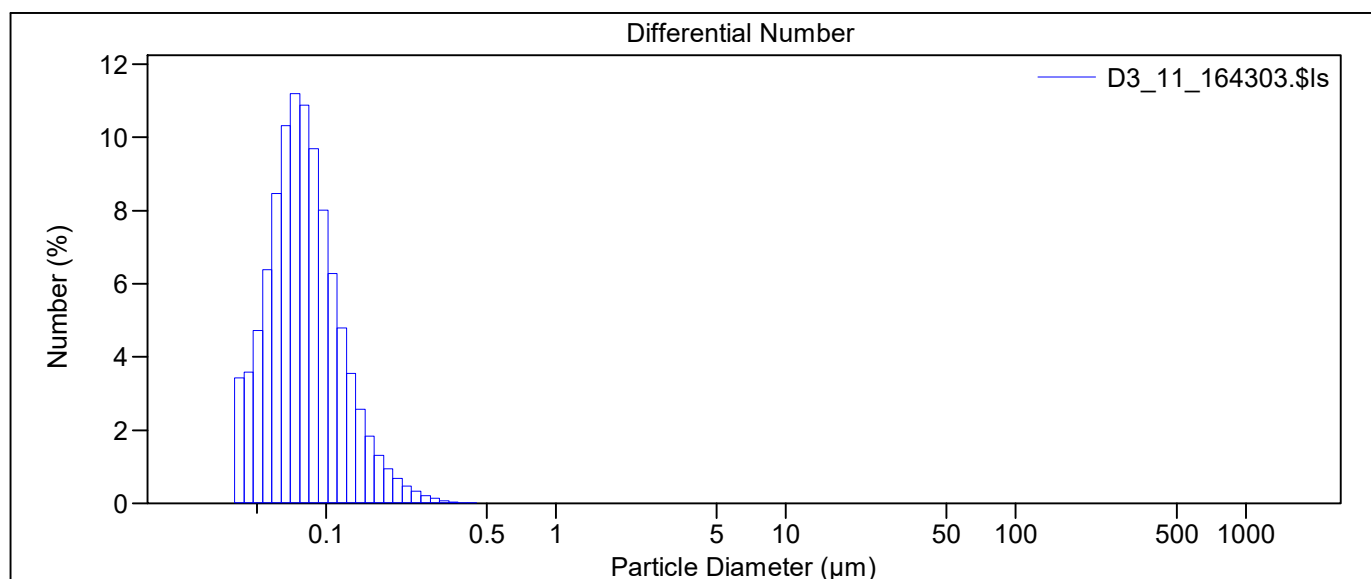
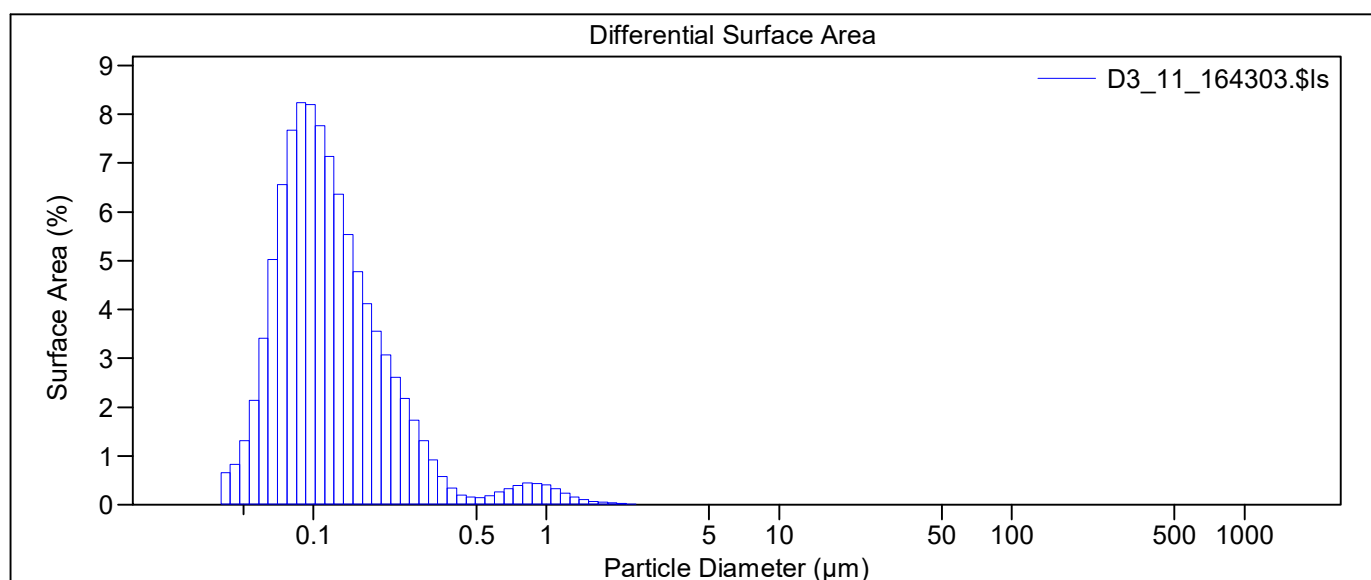
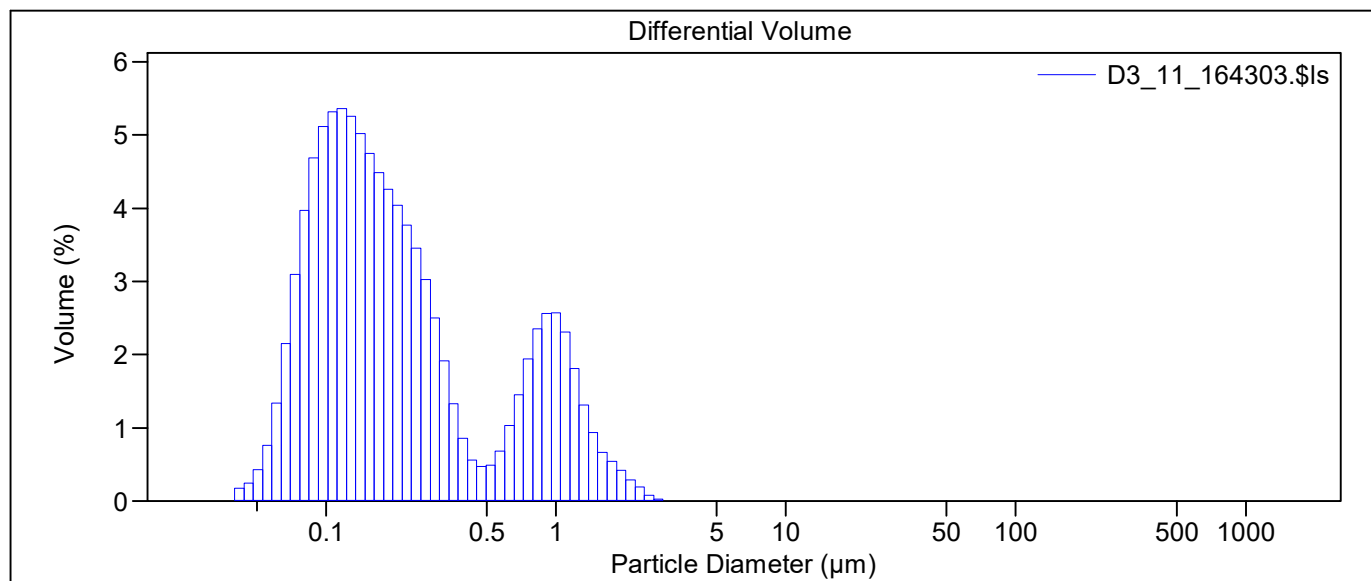
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_11_164303.\$ls		
	D3_11_164303.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.77%		
LS 13 320	Universal Liquid Module		
Start time:	16:41 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_11_164303.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.408 μm
Mean:	0.352 μm		Variance:	0.166 μm ²
Median:	0.170 μm		C.V.:	116%
Mean/Median ratio:	2.065		Skewness:	2.048 Right skewed
Mode:	0.117 μm		Kurtosis:	4.151 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.107 μm	0.170 μm	0.340 μm	0.995 μm

Surface Area Statistics (Arithmetic)			D3_11_164303.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.175 µm
Mean:	0.156 µm		Variance:	0.031 µm ²
Median:	0.109 µm		C.V.:	112%
Mean/Median ratio:	1.424		Skewness:	5.093 Right skewed
Mode:	0.088 µm		Kurtosis:	33.35 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.160 µm	0.246 µm

Number Statistics (Arithmetic)			D3_11_164303.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.041 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.7%
Mean/Median ratio:	1.111		Skewness:	5.200 Right skewed
Mode:	0.073 μm		Kurtosis:	90.12 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.24	0.83	3.59
11	0.048	0.050	0.43	1.31	4.72
12	0.053	0.055	0.76	2.14	6.38
13	0.058	0.061	1.34	3.41	8.46
14	0.064	0.067	2.16	5.02	10.3
15	0.070	0.073	3.09	6.56	11.2
16	0.077	0.080	3.97	7.67	10.9
17	0.084	0.088	4.68	8.25	9.69
18	0.093	0.097	5.12	8.21	8.01
19	0.102	0.106	5.31	7.76	6.28
20	0.112	0.117	5.36	7.13	4.79
21	0.122	0.128	5.25	6.37	3.55
22	0.134	0.141	5.02	5.54	2.56
23	0.148	0.155	4.75	4.77	1.83
24	0.162	0.170	4.49	4.11	1.31
25	0.178	0.186	4.26	3.56	0.94
26	0.195	0.205	4.04	3.07	0.67
27	0.214	0.225	3.77	2.61	0.48
28	0.235	0.247	3.46	2.18	0.33
29	0.258	0.271	3.02	1.74	0.22
30	0.284	0.297	2.51	1.31	0.14
31	0.311	0.326	1.91	0.91	0.079
32	0.342	0.358	1.33	0.58	0.041
33	0.375	0.393	0.86	0.34	0.020
34	0.412	0.431	0.56	0.20	0.0100
35	0.452	0.474	0.47	0.15	0.0063
36	0.496	0.520	0.49	0.15	0.0050
37	0.545	0.571	0.68	0.18	0.0052
38	0.598	0.627	1.03	0.26	0.0060
39	0.656	0.688	1.45	0.33	0.0064
40	0.721	0.755	1.94	0.40	0.0064
41	0.791	0.829	2.36	0.44	0.0059
42	0.868	0.910	2.56	0.44	0.0049
43	0.953	0.999	2.57	0.40	0.0037
44	1.047	1.097	2.31	0.33	0.0025
45	1.149	1.204	1.81	0.23	0.0015

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.31	0.15	0.00081
47	1.385	1.451	0.94	0.10	0.00044
48	1.520	1.592	0.66	0.065	0.00023
49	1.668	1.748	0.54	0.048	0.00014
50	1.832	1.919	0.42	0.034	0.000085
51	2.011	2.107	0.29	0.022	0.000045
52	2.207	2.313	0.19	0.013	0.000022
53	2.423	2.539	0.077	0.0047	0.000007
54	2.660	2.787	0.023	0.0013	0.000001
55	2.920	3.059	0.0042	0.00022	2.11E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

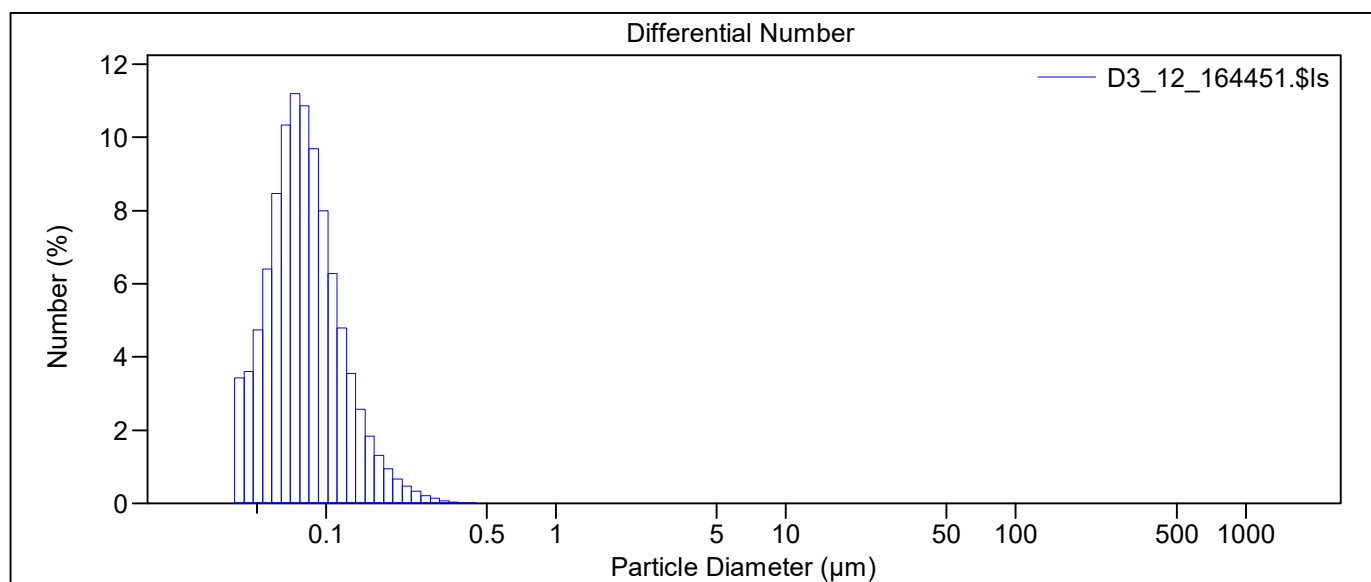
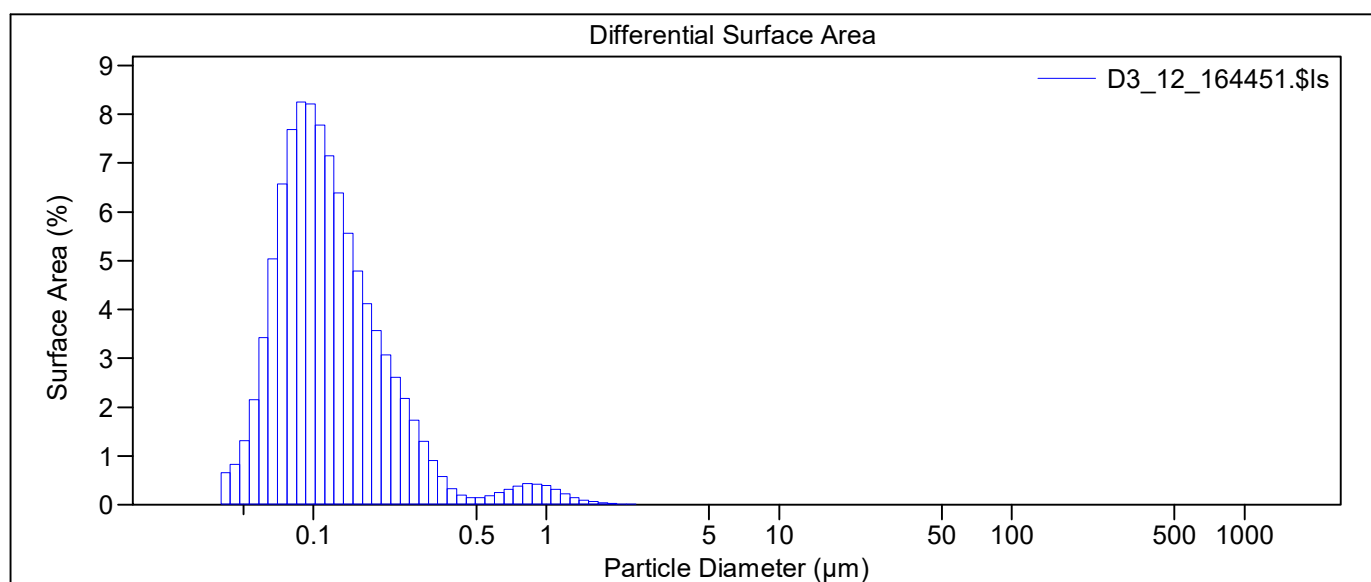
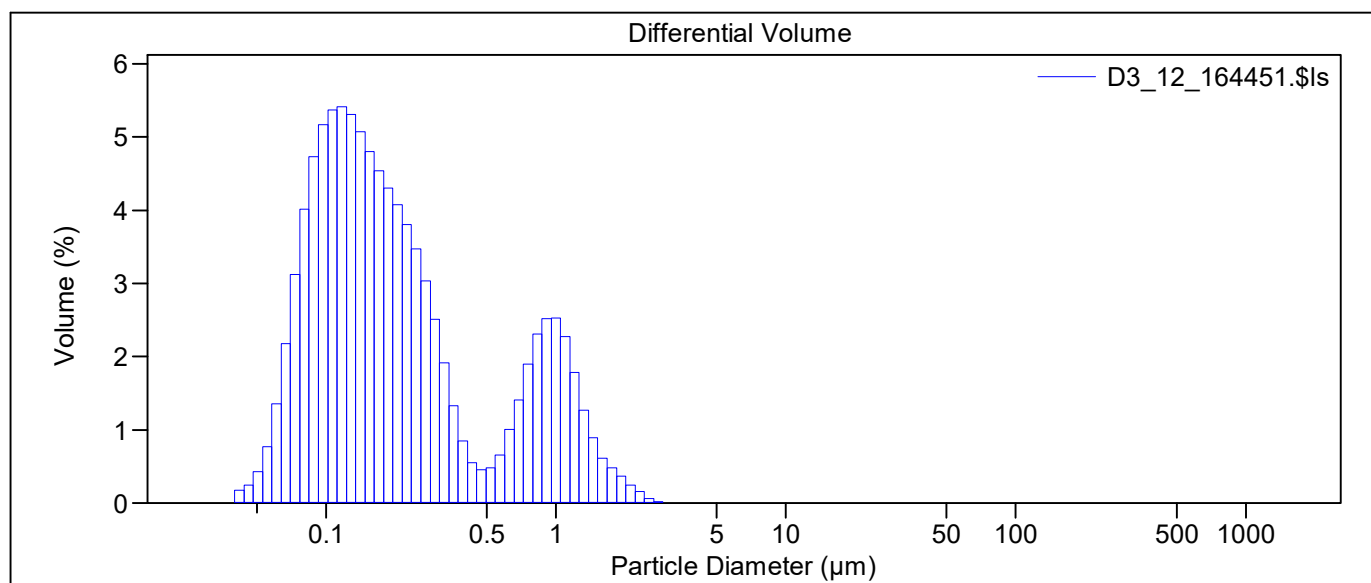
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_12_164451.\$ls		
	D3_12_164451.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.81%		
LS 13 320	Universal Liquid Module		
Start time:	16:43 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_12_164451.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.398 µm
Mean:	0.343 µm		Variance:	0.158 µm ²
Median:	0.168 µm		C.V.:	116%
Mean/Median ratio:	2.039		Skewness:	2.068 Right skewed
Mode:	0.117 µm		Kurtosis:	4.248 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.107 µm	0.168 µm	0.328 µm	0.979 µm

Surface Area Statistics (Arithmetic)			D3_12_164451.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.171 µm
Mean:	0.154 µm		Variance:	0.029 µm ²
Median:	0.109 µm		C.V.:	111%
Mean/Median ratio:	1.413		Skewness:	5.103 Right skewed
Mode:	0.088 µm		Kurtosis:	33.49 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.160 µm	0.244 µm

Number Statistics (Arithmetic)			D3_12_164451.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.5%
Mean/Median ratio:	1.111		Skewness:	5.099 Right skewed
Mode:	0.073 μm		Kurtosis:	86.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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D3.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.25	0.83	3.60
11	0.048	0.050	0.43	1.32	4.73
12	0.053	0.055	0.77	2.15	6.39
13	0.058	0.061	1.35	3.43	8.47
14	0.064	0.067	2.18	5.03	10.3
15	0.070	0.073	3.13	6.57	11.2
16	0.077	0.080	4.01	7.69	10.9
17	0.084	0.088	4.73	8.26	9.69
18	0.093	0.097	5.17	8.22	8.00
19	0.102	0.106	5.37	7.77	6.28
20	0.112	0.117	5.42	7.14	4.79
21	0.122	0.128	5.31	6.38	3.55
22	0.134	0.141	5.08	5.56	2.56
23	0.148	0.155	4.80	4.79	1.83
24	0.162	0.170	4.54	4.12	1.31
25	0.178	0.186	4.31	3.56	0.94
26	0.195	0.205	4.08	3.07	0.67
27	0.214	0.225	3.80	2.61	0.47
28	0.235	0.247	3.48	2.17	0.33
29	0.258	0.271	3.04	1.73	0.22
30	0.284	0.297	2.51	1.30	0.14
31	0.311	0.326	1.91	0.90	0.078
32	0.342	0.358	1.33	0.57	0.041
33	0.375	0.393	0.85	0.33	0.020
34	0.412	0.431	0.55	0.20	0.0097
35	0.452	0.474	0.46	0.15	0.0061
36	0.496	0.520	0.48	0.14	0.0048
37	0.545	0.571	0.66	0.18	0.0050
38	0.598	0.627	1.00	0.25	0.0058
39	0.656	0.688	1.41	0.32	0.0061
40	0.721	0.755	1.89	0.39	0.0062
41	0.791	0.829	2.31	0.43	0.0057
42	0.868	0.910	2.52	0.43	0.0047
43	0.953	0.999	2.53	0.39	0.0036
44	1.047	1.097	2.27	0.32	0.0024
45	1.149	1.204	1.78	0.23	0.0014
46	1.261	1.321	1.27	0.15	0.00078
47	1.385	1.451	0.89	0.095	0.00041
48	1.520	1.592	0.61	0.059	0.00021
49	1.668	1.748	0.48	0.042	0.00013
50	1.832	1.919	0.37	0.030	0.000073
51	2.011	2.107	0.25	0.018	0.000038
52	2.207	2.313	0.16	0.011	0.000018
53	2.423	2.539	0.065	0.0040	0.000006
54	2.660	2.787	0.019	0.0010	0.000001
55	2.920	3.059	0.0036	0.00018	1.79E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

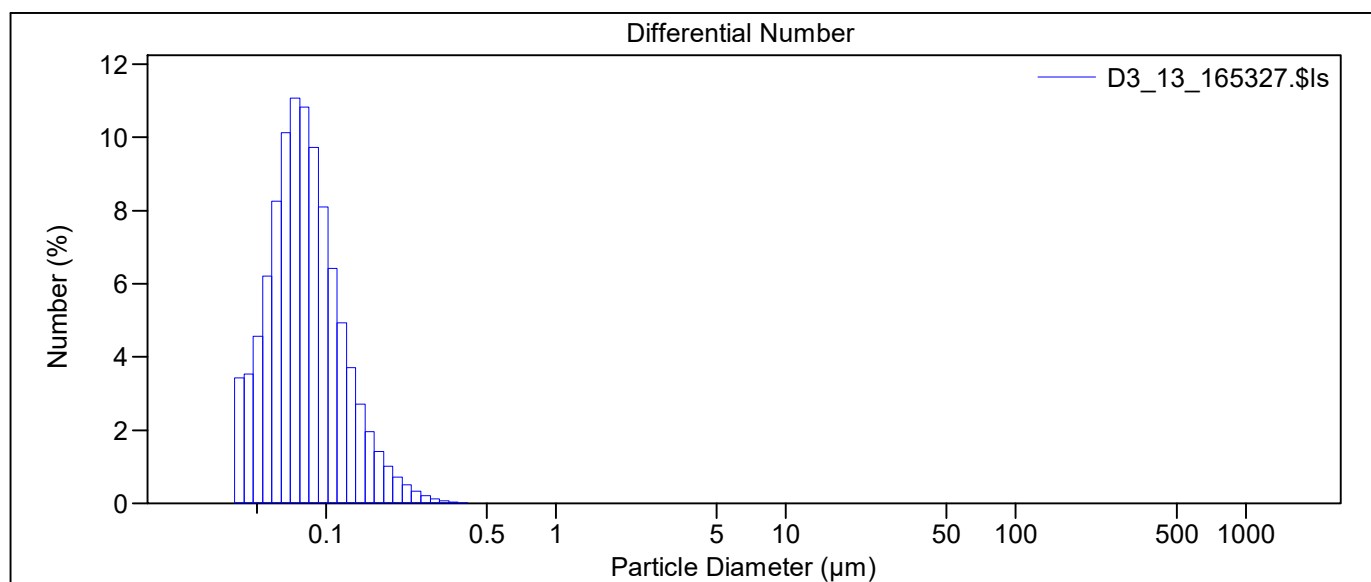
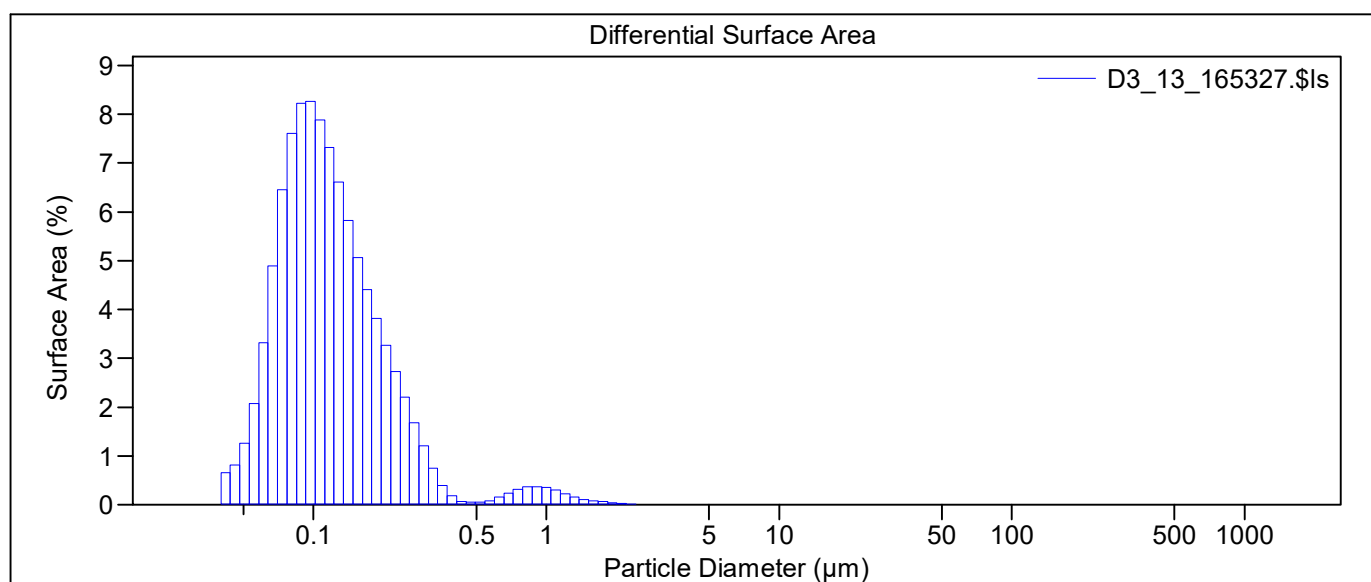
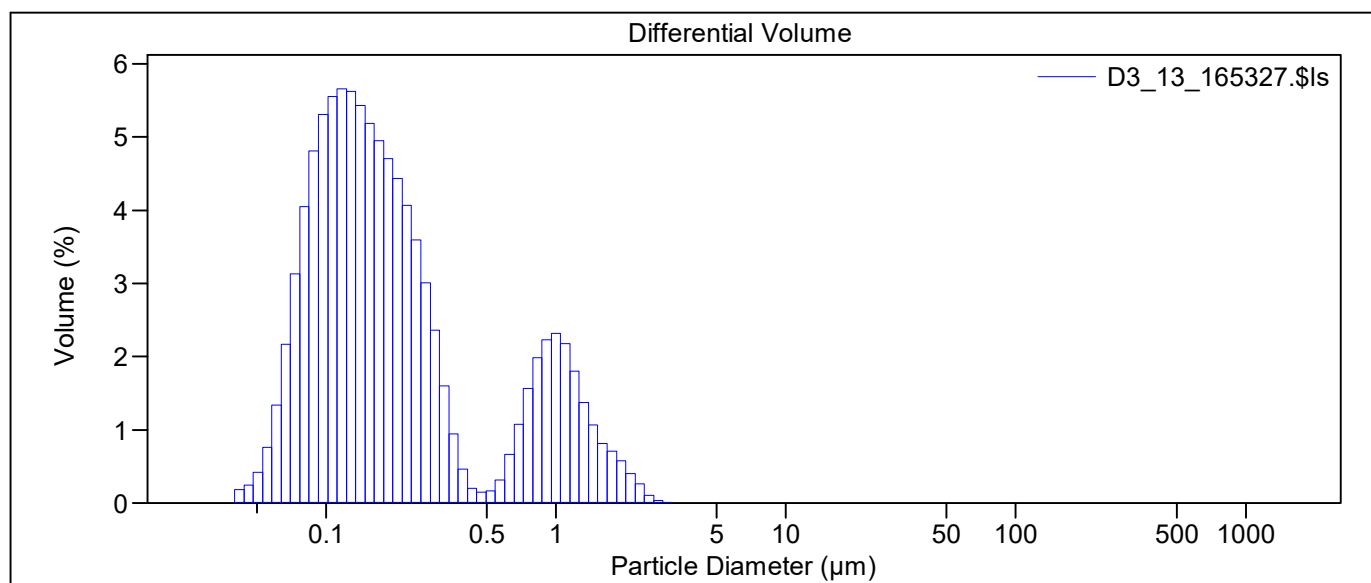
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_13_165327.\$ls		
	D3_13_165327.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.94%		
LS 13 320	Universal Liquid Module		
Start time:	16:51 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	61%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_13_165327.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.427 µm
Mean:	0.345 µm		Variance:	0.182 µm ²
Median:	0.162 µm		C.V.:	124%
Mean/Median ratio:	2.122		Skewness:	2.201 Right skewed
Mode:	0.117 µm		Kurtosis:	4.652 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.162 µm	0.288 µm	1.020 µm

Surface Area Statistics (Arithmetic)			D3_13_165327.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.171 µm
Mean:	0.151 µm		Variance:	0.029 µm ²
Median:	0.110 µm		C.V.:	113%
Mean/Median ratio:	1.377		Skewness:	5.754 Right skewed
Mode:	0.097 µm		Kurtosis:	42.14 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.158 µm	0.231 µm

Number Statistics (Arithmetic)			D3_13_165327.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.5%
Mean/Median ratio:	1.109		Skewness:	4.932 Right skewed
Mode:	0.073 μm		Kurtosis:	93.00 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.42
10	0.044	0.046	0.25	0.81	3.53
11	0.048	0.050	0.42	1.26	4.57
12	0.053	0.055	0.76	2.07	6.21
13	0.058	0.061	1.33	3.31	8.25
14	0.064	0.067	2.17	4.90	10.1
15	0.070	0.073	3.13	6.46	11.1
16	0.077	0.080	4.05	7.61	10.8
17	0.084	0.088	4.81	8.23	9.72
18	0.093	0.097	5.30	8.27	8.10
19	0.102	0.106	5.56	7.89	6.41
20	0.112	0.117	5.66	7.32	4.94
21	0.122	0.128	5.62	6.62	3.71
22	0.134	0.141	5.43	5.83	2.71
23	0.148	0.155	5.18	5.07	1.95
24	0.162	0.170	4.95	4.41	1.41
25	0.178	0.186	4.70	3.81	1.01
26	0.195	0.205	4.43	3.27	0.72
27	0.214	0.225	4.06	2.74	0.50
28	0.235	0.247	3.60	2.20	0.33
29	0.258	0.271	3.01	1.68	0.21
30	0.284	0.297	2.36	1.20	0.13
31	0.311	0.326	1.60	0.74	0.064
32	0.342	0.358	0.95	0.40	0.029
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.20	0.071	0.0035
35	0.452	0.474	0.14	0.046	0.0019
36	0.496	0.520	0.17	0.049	0.0017
37	0.545	0.571	0.32	0.084	0.0024
38	0.598	0.627	0.66	0.16	0.0038
39	0.656	0.688	1.07	0.24	0.0046
40	0.721	0.755	1.57	0.31	0.0051
41	0.791	0.829	1.99	0.36	0.0049
42	0.868	0.910	2.23	0.37	0.0041
43	0.953	0.999	2.32	0.35	0.0032
44	1.047	1.097	2.18	0.30	0.0023
45	1.149	1.204	1.80	0.23	0.0014

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.38	0.16	0.00083
47	1.385	1.451	1.07	0.11	0.00049
48	1.520	1.592	0.82	0.077	0.00028
49	1.668	1.748	0.71	0.061	0.00018
50	1.832	1.919	0.58	0.045	0.00011
51	2.011	2.107	0.41	0.029	0.000061
52	2.207	2.313	0.26	0.017	0.000029
53	2.423	2.539	0.11	0.0063	0.000009
54	2.660	2.787	0.031	0.0017	0.000002
55	2.920	3.059	0.0055	0.00027	2.69E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

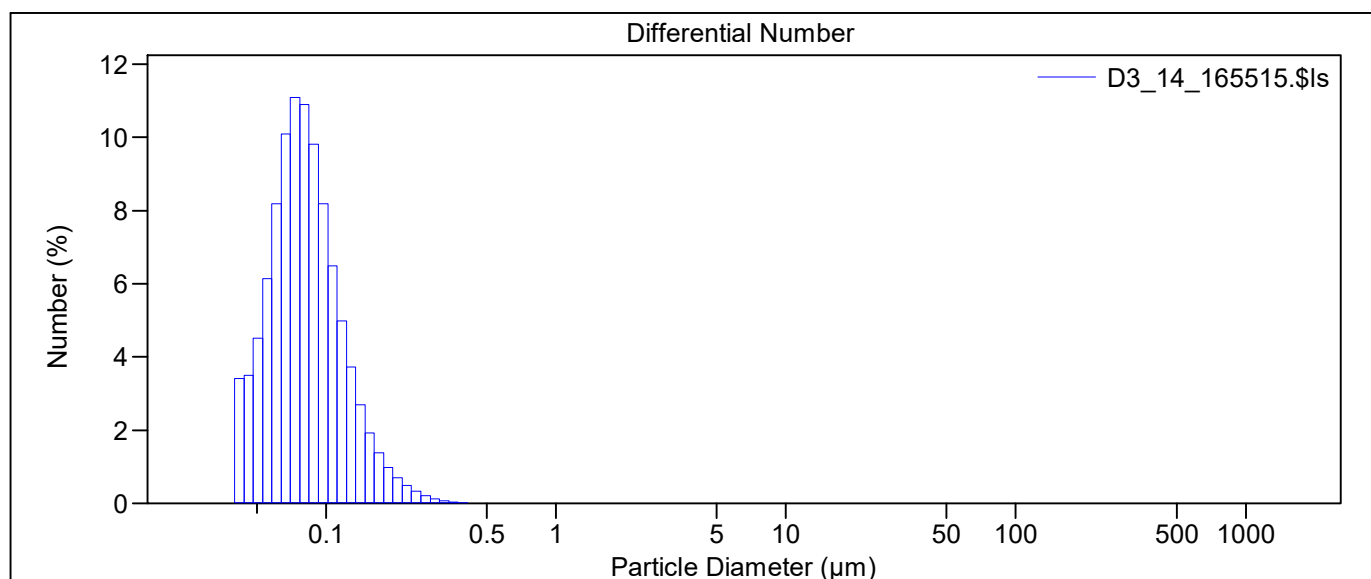
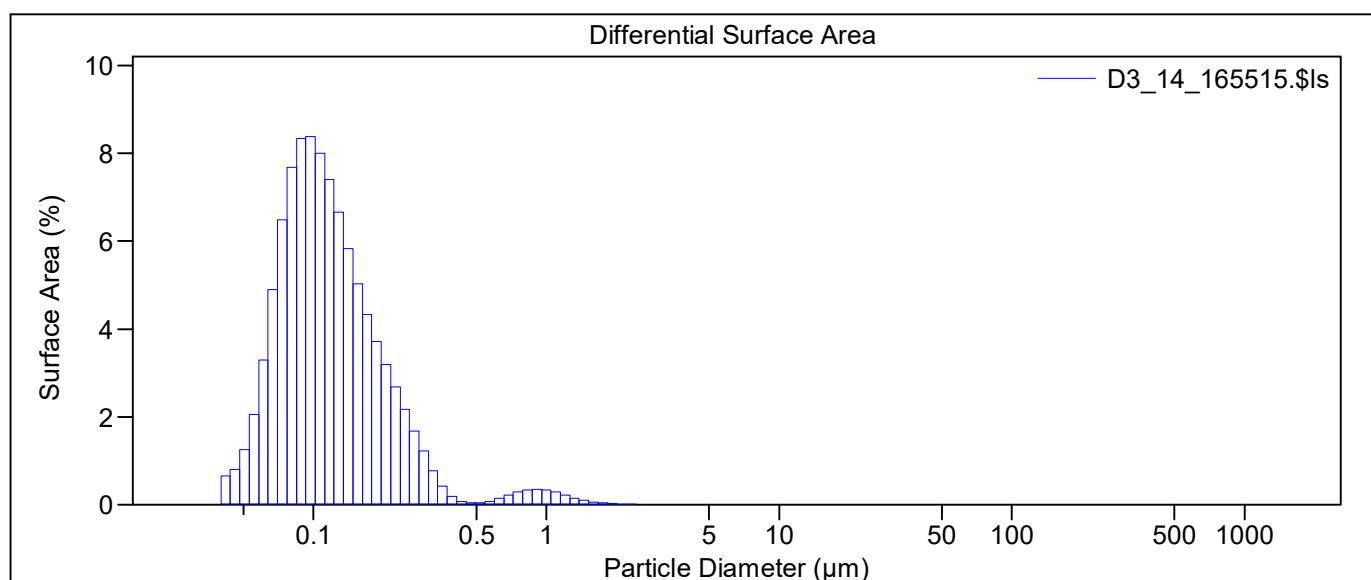
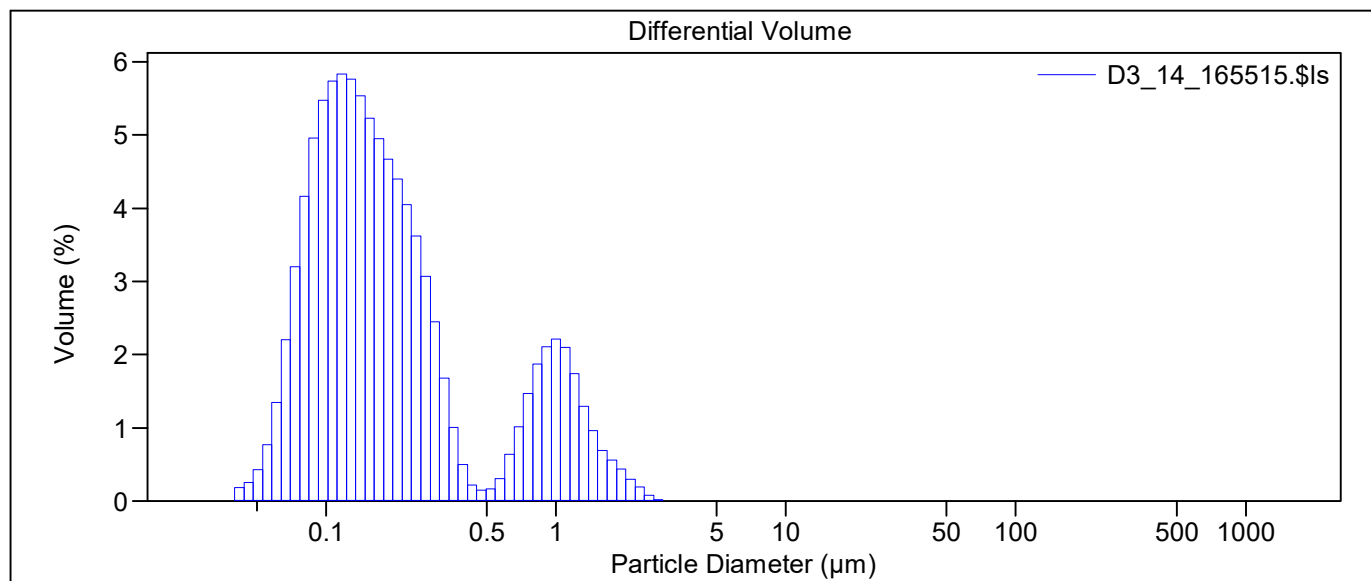
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3_14_165515.\$ls		
	D3_14_165515.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.10%		
LS 13 320	Universal Liquid Module		
Start time:	16:53 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	64%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_14_165515.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.402 μm
Mean:	0.326 μm		Variance:	0.162 μm ²
Median:	0.159 μm		C.V.:	123%
Mean/Median ratio:	2.050		Skewness:	2.283 Right skewed
Mode:	0.117 μm		Kurtosis:	5.125 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.159 μm	0.277 μm	0.978 μm

Surface Area Statistics (Arithmetic)			D3_14_165515.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.162 µm
Mean:	0.148 µm		Variance:	0.026 µm ²
Median:	0.109 µm		C.V.:	109%
Mean/Median ratio:	1.359		Skewness:	5.794 Right skewed
Mode:	0.097 µm		Kurtosis:	43.09 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.230 µm

Number Statistics (Arithmetic)			D3_14_165515.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.1%
Mean/Median ratio:	1.107		Skewness:	4.730 Right skewed
Mode:	0.073 μm		Kurtosis:	85.63 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



Beckman Coulter LS13320

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.81	3.50
11	0.048	0.050	0.43	1.25	4.51
12	0.053	0.055	0.77	2.05	6.14
13	0.058	0.061	1.35	3.30	8.19
14	0.064	0.067	2.20	4.90	10.1
15	0.070	0.073	3.20	6.49	11.1
16	0.077	0.080	4.16	7.68	10.9
17	0.084	0.088	4.96	8.33	9.81
18	0.093	0.097	5.48	8.39	8.19
19	0.102	0.106	5.74	8.00	6.48
20	0.112	0.117	5.83	7.41	4.98
21	0.122	0.128	5.76	6.67	3.72
22	0.134	0.141	5.54	5.83	2.70
23	0.148	0.155	5.23	5.03	1.93
24	0.162	0.170	4.95	4.33	1.38
25	0.178	0.186	4.67	3.72	0.99
26	0.195	0.205	4.40	3.19	0.70
27	0.214	0.225	4.05	2.68	0.49
28	0.235	0.247	3.62	2.18	0.33
29	0.258	0.271	3.07	1.68	0.21
30	0.284	0.297	2.45	1.22	0.13
31	0.311	0.326	1.68	0.77	0.066
32	0.342	0.358	1.01	0.42	0.030
33	0.375	0.393	0.50	0.19	0.011
34	0.412	0.431	0.22	0.074	0.0037
35	0.452	0.474	0.15	0.048	0.0019
36	0.496	0.520	0.17	0.049	0.0017
37	0.545	0.571	0.31	0.080	0.0023
38	0.598	0.627	0.64	0.15	0.0035
39	0.656	0.688	1.01	0.22	0.0043
40	0.721	0.755	1.47	0.29	0.0047
41	0.791	0.829	1.87	0.33	0.0045
42	0.868	0.910	2.11	0.34	0.0038
43	0.953	0.999	2.21	0.33	0.0030
44	1.047	1.097	2.10	0.28	0.0022
45	1.149	1.204	1.74	0.21	0.0014
46	1.261	1.321	1.29	0.14	0.00076
47	1.385	1.451	0.96	0.098	0.00043
48	1.520	1.592	0.69	0.064	0.00023
49	1.668	1.748	0.56	0.048	0.00014
50	1.832	1.919	0.44	0.034	0.000085
51	2.011	2.107	0.30	0.021	0.000044
52	2.207	2.313	0.19	0.012	0.000021
53	2.423	2.539	0.077	0.0045	0.000006
54	2.660	2.787	0.022	0.0012	0.000001
55	2.920	3.059	0.0040	0.00020	1.92E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

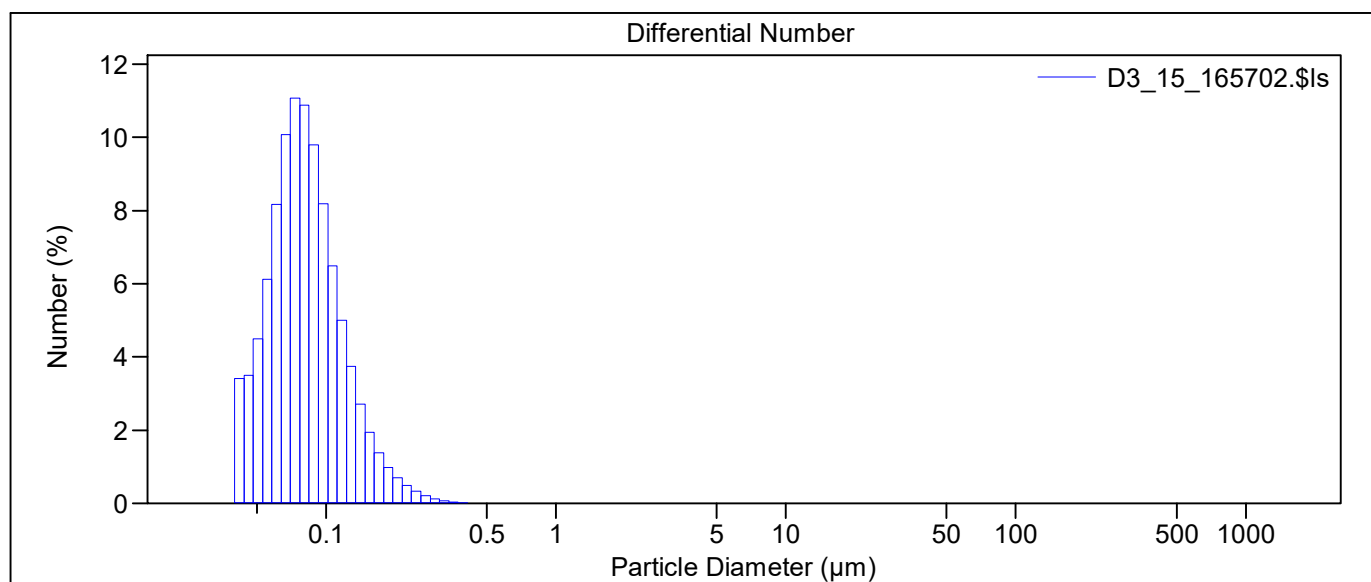
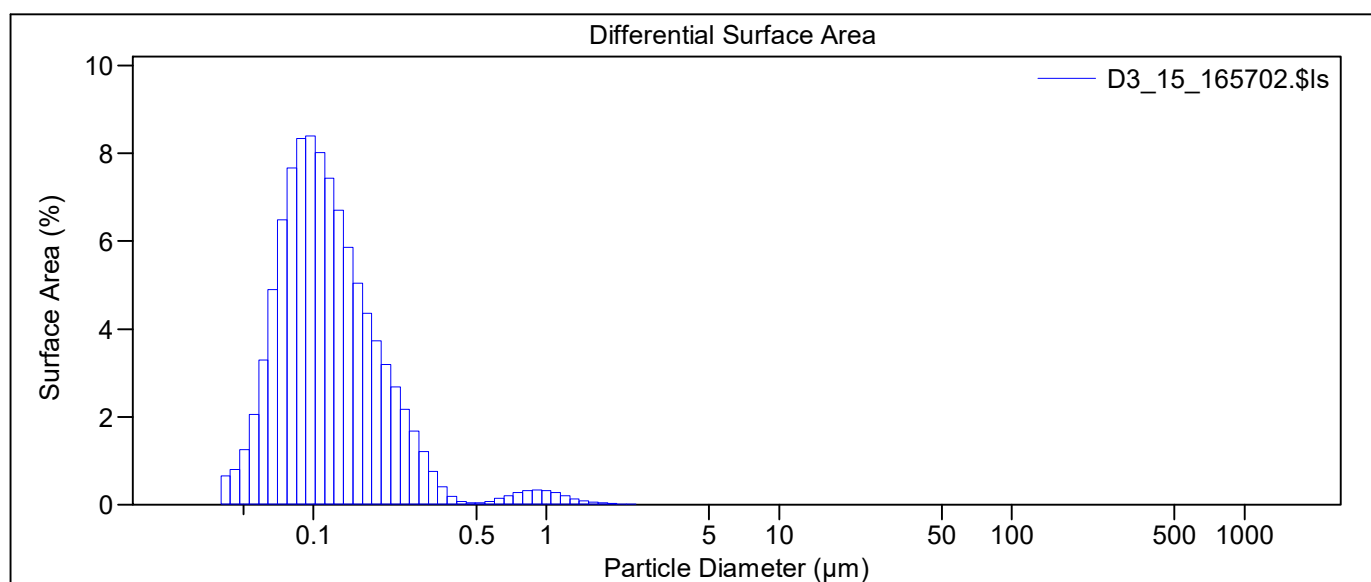
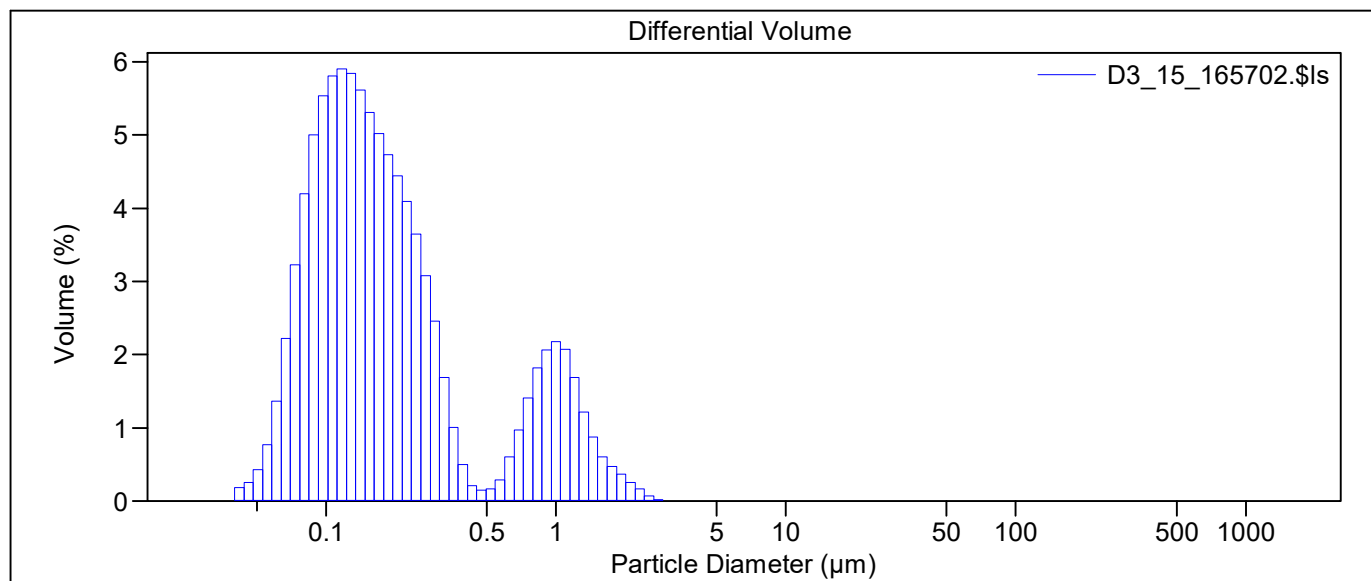
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D3\D3_15_165702.\$ls		
	D3_15_165702.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.17%		
LS 13 320	Universal Liquid Module		
Start time:	16:55 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D3_15_165702.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.389 µm
Mean:	0.316 µm		Variance:	0.151 µm ²
Median:	0.158 µm		C.V.:	123%
Mean/Median ratio:	2.006		Skewness:	2.340 Right skewed
Mode:	0.117 µm		Kurtosis:	5.480 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.158 µm	0.270 µm	0.953 µm

Surface Area Statistics (Arithmetic)			D3_15_165702.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.158 µm
Mean:	0.147 µm		Variance:	0.025 µm ²
Median:	0.109 µm		C.V.:	107%
Mean/Median ratio:	1.346		Skewness:	5.824 Right skewed
Mode:	0.097 µm		Kurtosis:	43.82 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.229 µm

Number Statistics (Arithmetic)			D3_15_165702.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	45.0%
Mean/Median ratio:	1.107		Skewness:	4.592 Right skewed
Mode:	0.073 μm		Kurtosis:	81.02 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.41
10	0.044	0.046	0.25	0.81	3.50
11	0.048	0.050	0.43	1.25	4.50
12	0.053	0.055	0.77	2.05	6.13
13	0.058	0.061	1.36	3.30	8.18
14	0.064	0.067	2.22	4.89	10.1
15	0.070	0.073	3.23	6.48	11.1
16	0.077	0.080	4.20	7.67	10.9
17	0.084	0.088	5.00	8.33	9.80
18	0.093	0.097	5.53	8.39	8.19
19	0.102	0.106	5.80	8.02	6.50
20	0.112	0.117	5.91	7.44	5.00
21	0.122	0.128	5.84	6.70	3.74
22	0.134	0.141	5.62	5.87	2.72
23	0.148	0.155	5.31	5.05	1.94
24	0.162	0.170	5.02	4.35	1.39
25	0.178	0.186	4.73	3.74	0.99
26	0.195	0.205	4.44	3.20	0.70
27	0.214	0.225	4.09	2.68	0.49
28	0.235	0.247	3.64	2.18	0.33
29	0.258	0.271	3.08	1.68	0.21
30	0.284	0.297	2.46	1.22	0.13
31	0.311	0.326	1.68	0.76	0.066
32	0.342	0.358	1.01	0.41	0.030
33	0.375	0.393	0.50	0.19	0.011
34	0.412	0.431	0.21	0.073	0.0036
35	0.452	0.474	0.15	0.046	0.0019
36	0.496	0.520	0.16	0.046	0.0016
37	0.545	0.571	0.29	0.075	0.0021
38	0.598	0.627	0.60	0.14	0.0033
39	0.656	0.688	0.97	0.21	0.0040
40	0.721	0.755	1.41	0.28	0.0044
41	0.791	0.829	1.82	0.32	0.0043
42	0.868	0.910	2.07	0.33	0.0037
43	0.953	0.999	2.18	0.32	0.0030
44	1.047	1.097	2.07	0.28	0.0021
45	1.149	1.204	1.69	0.21	0.0013

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.22	0.14	0.00071
47	1.385	1.451	0.88	0.089	0.00039
48	1.520	1.592	0.60	0.056	0.00020
49	1.668	1.748	0.47	0.040	0.00012
50	1.832	1.919	0.37	0.028	0.000071
51	2.011	2.107	0.25	0.018	0.000037
52	2.207	2.313	0.16	0.010	0.000018
53	2.423	2.539	0.068	0.0039	0.000006
54	2.660	2.787	0.019	0.0010	0.000001
55	2.920	3.059	0.0036	0.00017	1.71E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D3.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\D4\D4.\$av
D4.\$av
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) D4.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.378 µm
Mean:	0.310 µm	Variance:	0.143 µm ²
Median:	0.157 µm	C.V.:	122%
Mean/Median ratio:	1.976	Skewness:	2.363 Right skewed
Mode:	0.117 µm	Kurtosis:	5.705 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.079 µm	0.105 µm	0.157 µm	0.267 µm	0.936 µm

Surface Area Statistics (Arithmetic) D4.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.155 µm
Mean:	0.147 µm	Variance:	0.024 µm ²
Median:	0.109 µm	C.V.:	106%
Mean/Median ratio:	1.341	Skewness:	5.769 Right skewed
Mode:	0.097 µm	Kurtosis:	43.28 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.228 µm

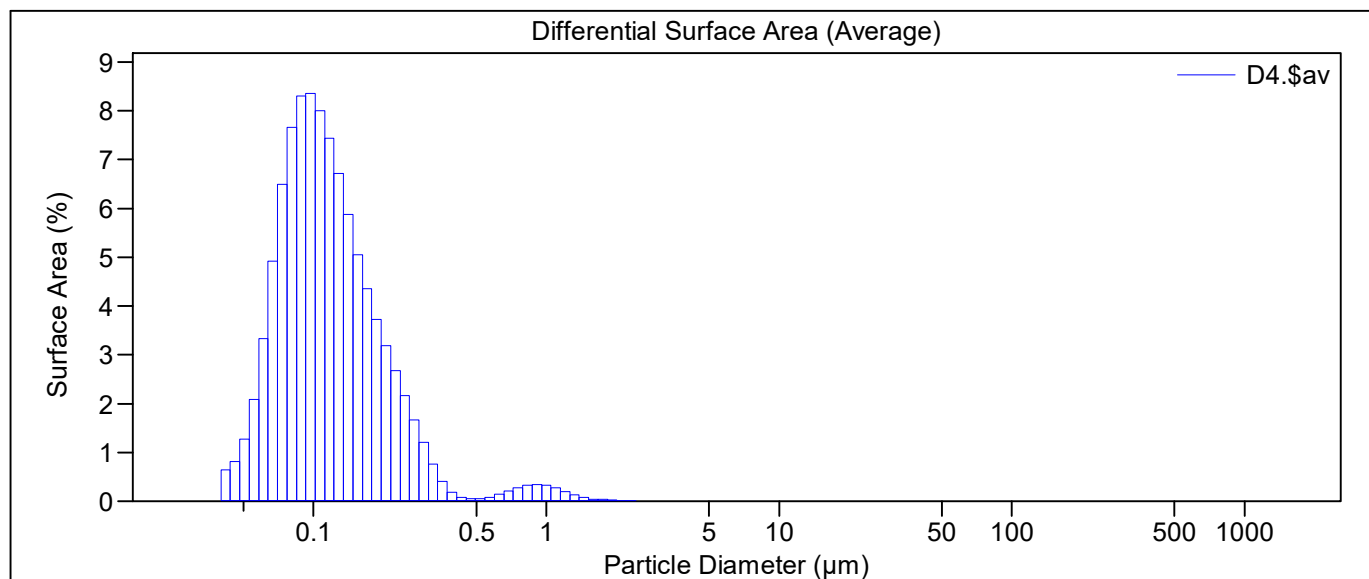
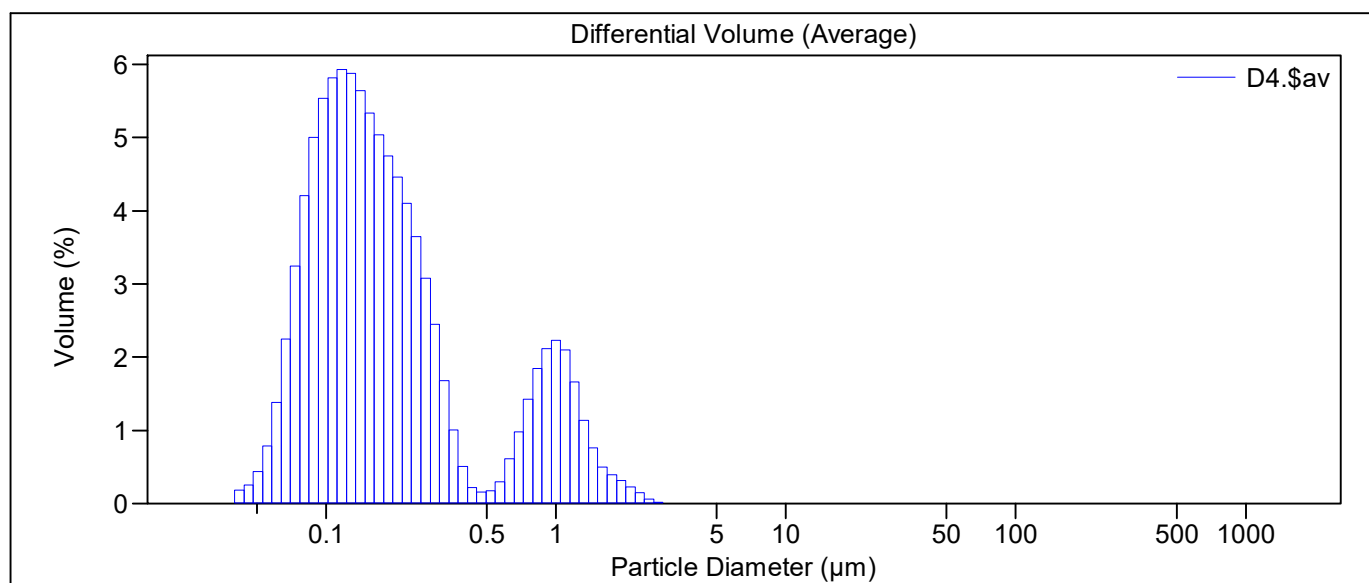
Number Statistics (Arithmetic)

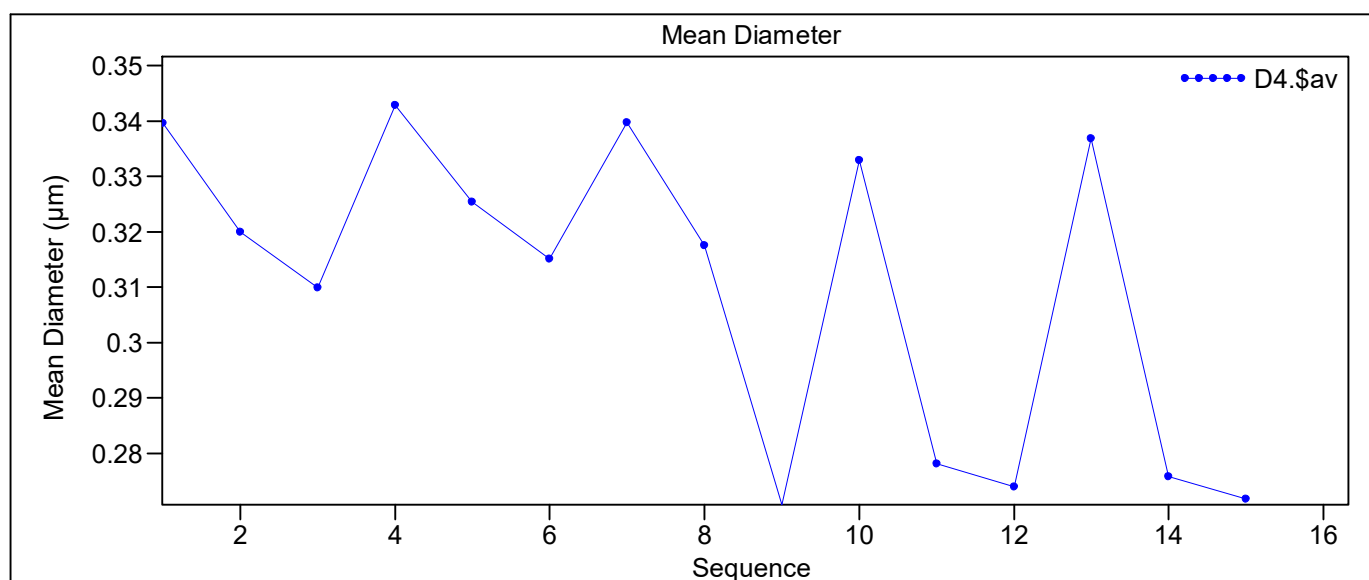
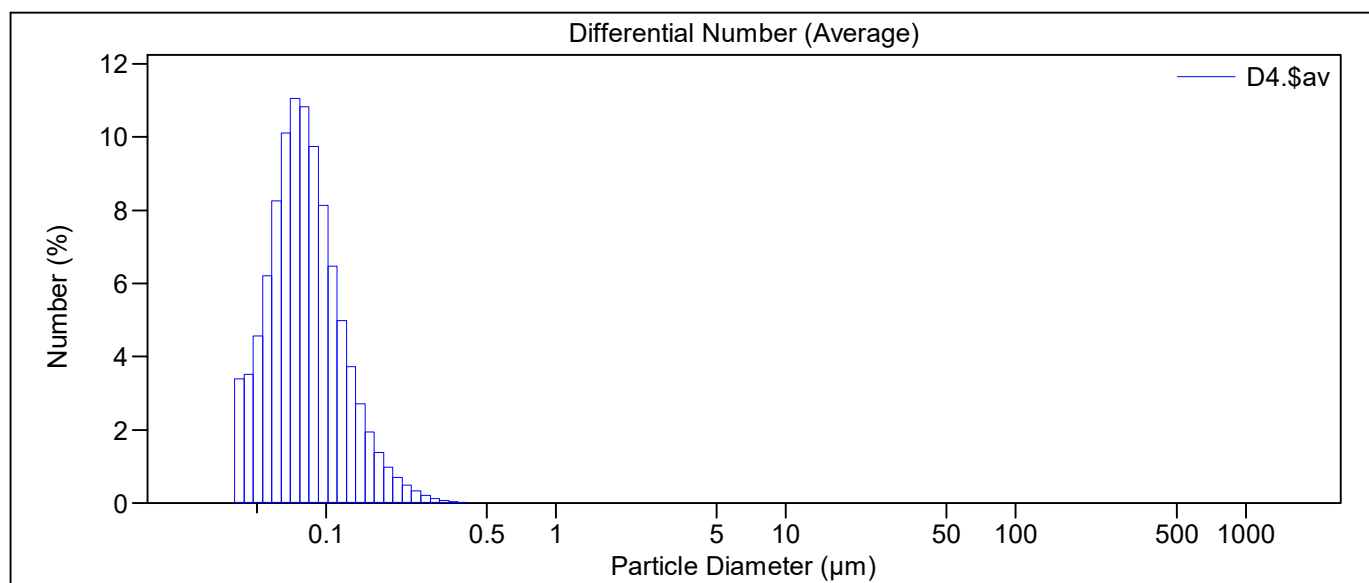
D4.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.039 μm
Mean:	0.087 μm	Variance:	0.0015 μm^2
Median:	0.079 μm	C.V.:	44.9%
Mean/Median ratio:	1.107	Skewness:	4.530 Right skewed
Mode:	0.073 μm	Kurtosis:	77.99 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm





D4.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.39
10	0.044	0.046	0.25	0.81	3.51
11	0.048	0.050	0.44	1.27	4.57
12	0.053	0.055	0.79	2.08	6.20
13	0.058	0.061	1.38	3.33	8.25
14	0.064	0.067	2.25	4.93	10.1
15	0.070	0.073	3.25	6.49	11.1
16	0.077	0.080	4.21	7.66	10.8
17	0.084	0.088	5.01	8.30	9.74

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.53	8.36	8.14
19	0.102	0.106	5.82	8.01	6.47
20	0.112	0.117	5.93	7.44	4.99
21	0.122	0.128	5.88	6.71	3.73
22	0.134	0.141	5.65	5.87	2.71
23	0.148	0.155	5.33	5.05	1.94
24	0.162	0.170	5.04	4.35	1.38
25	0.178	0.186	4.75	3.73	0.98
26	0.195	0.205	4.46	3.19	0.70
27	0.214	0.225	4.10	2.67	0.49
28	0.235	0.247	3.65	2.17	0.33
29	0.258	0.271	3.08	1.67	0.21
30	0.284	0.297	2.45	1.21	0.13
31	0.311	0.326	1.68	0.76	0.065
32	0.342	0.358	1.01	0.41	0.029
33	0.375	0.393	0.50	0.19	0.011
34	0.412	0.431	0.22	0.074	0.0036
35	0.452	0.474	0.16	0.048	0.0020
36	0.496	0.520	0.17	0.049	0.0017
37	0.545	0.571	0.30	0.077	0.0022
38	0.598	0.627	0.61	0.14	0.0034
39	0.656	0.688	0.98	0.21	0.0040
40	0.721	0.755	1.43	0.28	0.0044
41	0.791	0.829	1.85	0.33	0.0044
42	0.868	0.910	2.12	0.34	0.0038
43	0.953	0.999	2.23	0.33	0.0030
44	1.047	1.097	2.10	0.28	0.0021
45	1.149	1.204	1.66	0.20	0.0013
46	1.261	1.321	1.14	0.13	0.00066
47	1.385	1.451	0.76	0.077	0.00033
48	1.520	1.592	0.50	0.046	0.00016
49	1.668	1.748	0.39	0.033	0.000099
50	1.832	1.919	0.32	0.024	0.000061
51	2.011	2.107	0.23	0.016	0.000033
52	2.207	2.313	0.15	0.0096	0.000016
53	2.423	2.539	0.063	0.0036	0.000005
54	2.660	2.787	0.018	0.00096	0.000001
55	2.920	3.059	0.0033	0.00016	1.56E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

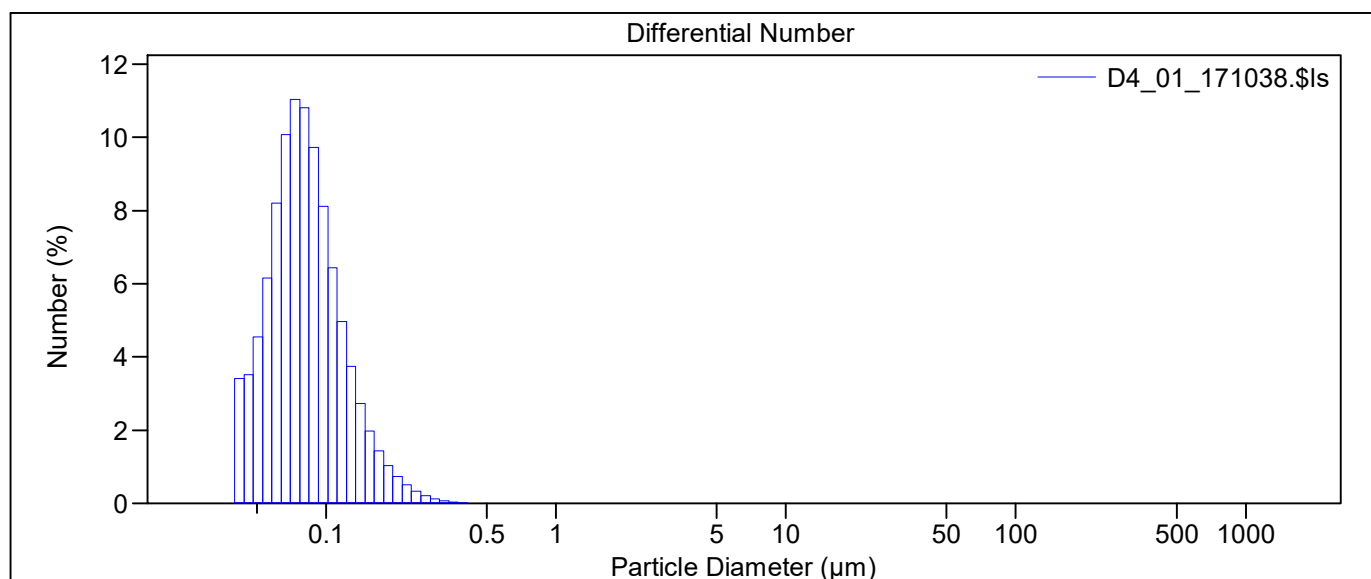
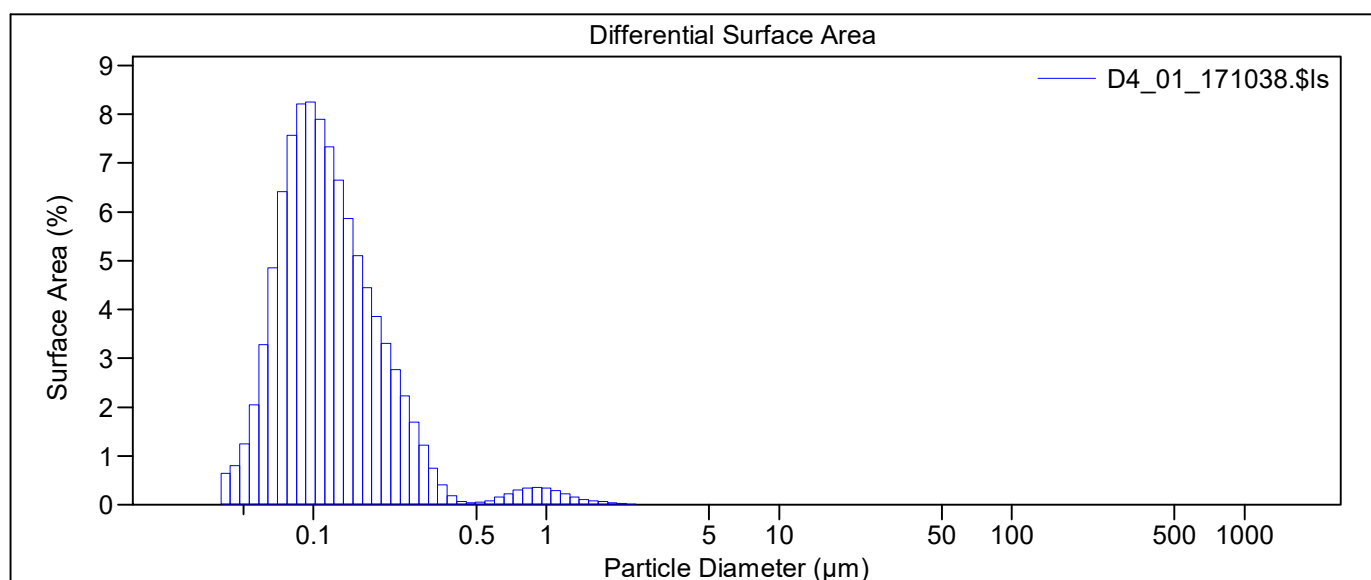
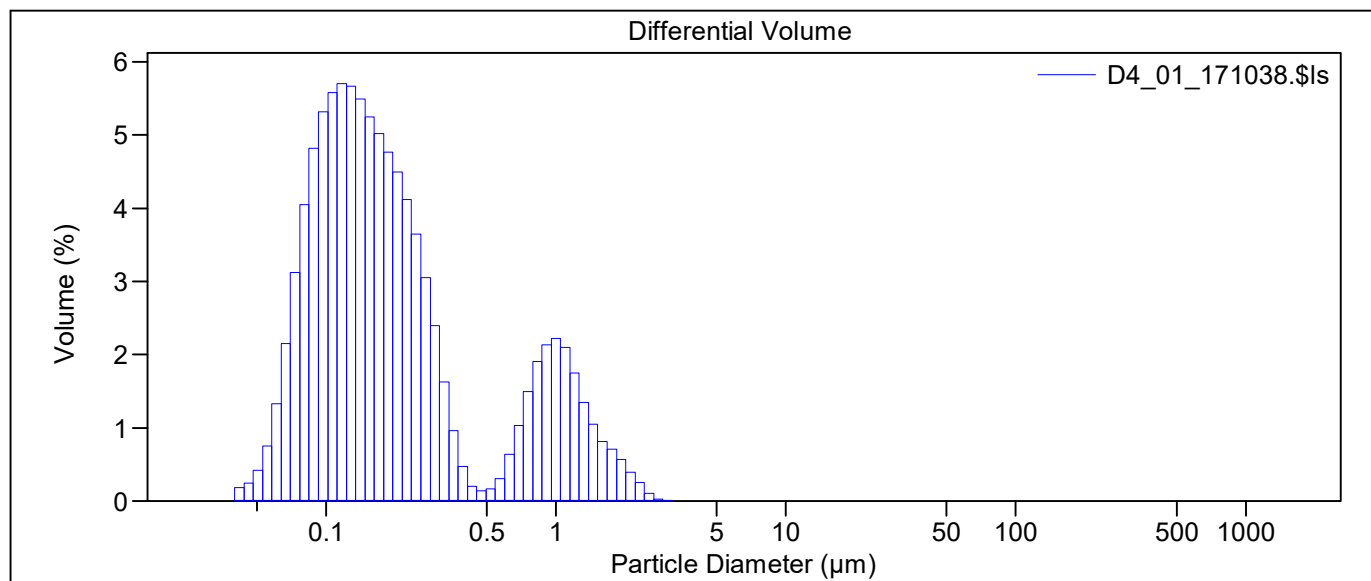
Beckman Coulter LS13320

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Operator:	PP		
Run number:	16		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.95%		
LS 13 320	Universal Liquid Module		
Start time:	17:08 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	61%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_01_171038.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.423 μm
Mean:	0.340 μm		Variance:	0.179 μm ²
Median:	0.162 μm		C.V.:	125%
Mean/Median ratio:	2.099		Skewness:	2.247 Right skewed
Mode:	0.117 μm		Kurtosis:	4.874 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.162 μm	0.282 μm	1.010 μm

Surface Area Statistics (Arithmetic)			D4_01_171038.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.169 µm
Mean:	0.151 µm		Variance:	0.028 µm ²
Median:	0.110 µm		C.V.:	112%
Mean/Median ratio:	1.368		Skewness:	5.836 Right skewed
Mode:	0.097 µm		Kurtosis:	43.50 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.159 µm	0.231 µm

Number Statistics (Arithmetic)			D4_01_171038.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.5%
Mean/Median ratio:	1.109		Skewness:	4.827 Right skewed
Mode:	0.073 μm		Kurtosis:	90.21 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.40
10	0.044	0.046	0.25	0.80	3.51
11	0.048	0.050	0.42	1.25	4.54
12	0.053	0.055	0.75	2.05	6.17
13	0.058	0.061	1.33	3.28	8.21
14	0.064	0.067	2.16	4.86	10.1
15	0.070	0.073	3.12	6.42	11.0
16	0.077	0.080	4.05	7.57	10.8
17	0.084	0.088	4.82	8.21	9.73
18	0.093	0.097	5.32	8.26	8.12
19	0.102	0.106	5.58	7.89	6.44
20	0.112	0.117	5.70	7.34	4.97
21	0.122	0.128	5.67	6.65	3.74
22	0.134	0.141	5.49	5.87	2.74
23	0.148	0.155	5.25	5.11	1.98
24	0.162	0.170	5.02	4.45	1.43
25	0.178	0.186	4.77	3.85	1.03
26	0.195	0.205	4.49	3.31	0.73
27	0.214	0.225	4.12	2.76	0.51
28	0.235	0.247	3.65	2.23	0.34
29	0.258	0.271	3.05	1.70	0.21
30	0.284	0.297	2.40	1.22	0.13
31	0.311	0.326	1.63	0.75	0.065
32	0.342	0.358	0.96	0.40	0.029
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.20	0.071	0.0035
35	0.452	0.474	0.14	0.045	0.0019
36	0.496	0.520	0.16	0.047	0.0016
37	0.545	0.571	0.30	0.080	0.0023
38	0.598	0.627	0.64	0.15	0.0036
39	0.656	0.688	1.03	0.22	0.0044
40	0.721	0.755	1.50	0.30	0.0049
41	0.791	0.829	1.91	0.35	0.0047
42	0.868	0.910	2.14	0.35	0.0040
43	0.953	0.999	2.23	0.34	0.0031
44	1.047	1.097	2.10	0.29	0.0022
45	1.149	1.204	1.75	0.22	0.0014

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.35	0.15	0.00081
47	1.385	1.451	1.05	0.11	0.00048
48	1.520	1.592	0.81	0.077	0.00028
49	1.668	1.748	0.70	0.061	0.00018
50	1.832	1.919	0.57	0.045	0.00011
51	2.011	2.107	0.40	0.028	0.000059
52	2.207	2.313	0.25	0.016	0.000028
53	2.423	2.539	0.10	0.0060	0.000009
54	2.660	2.787	0.029	0.0016	0.000002
55	2.920	3.059	0.0052	0.00025	2.52E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

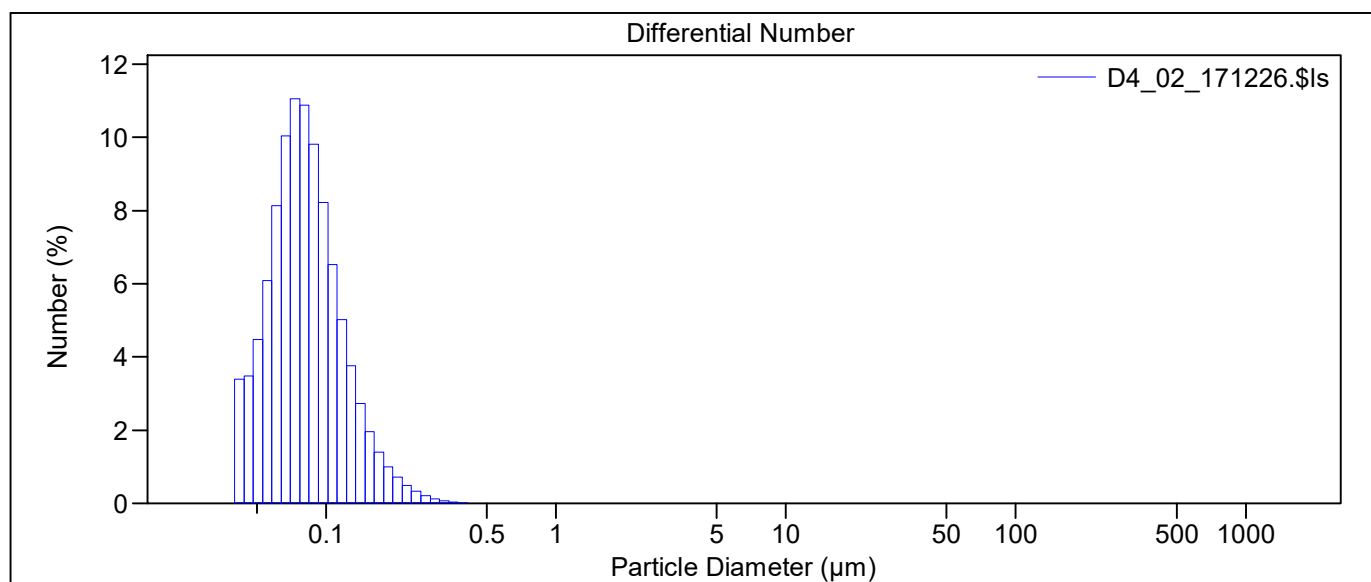
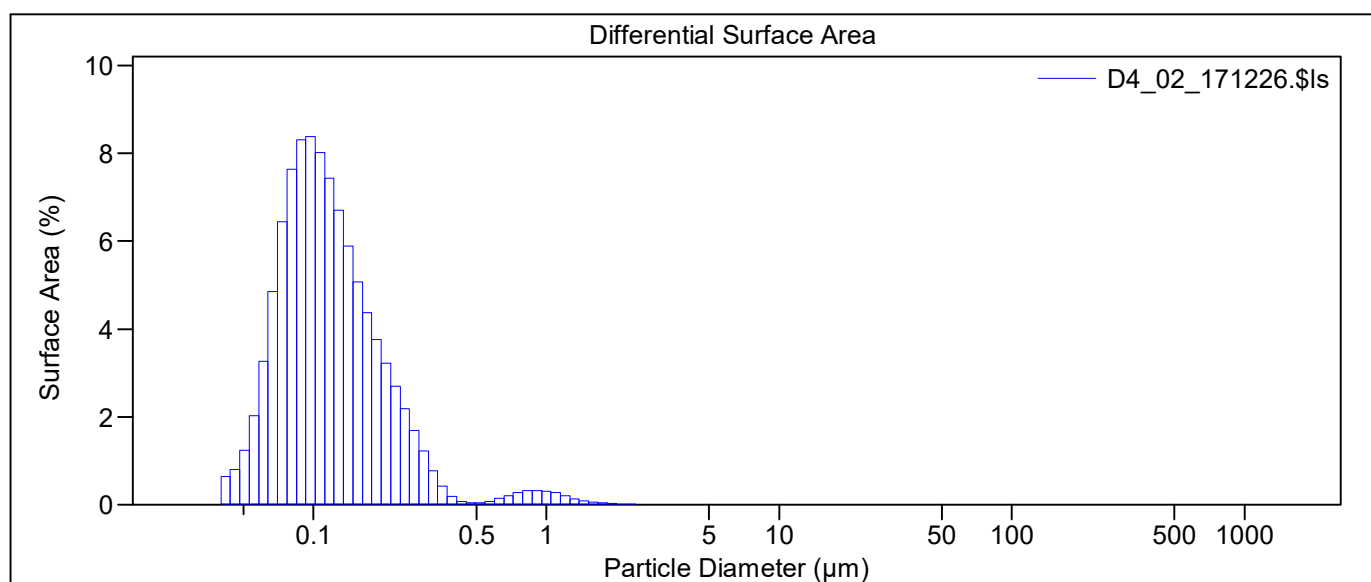
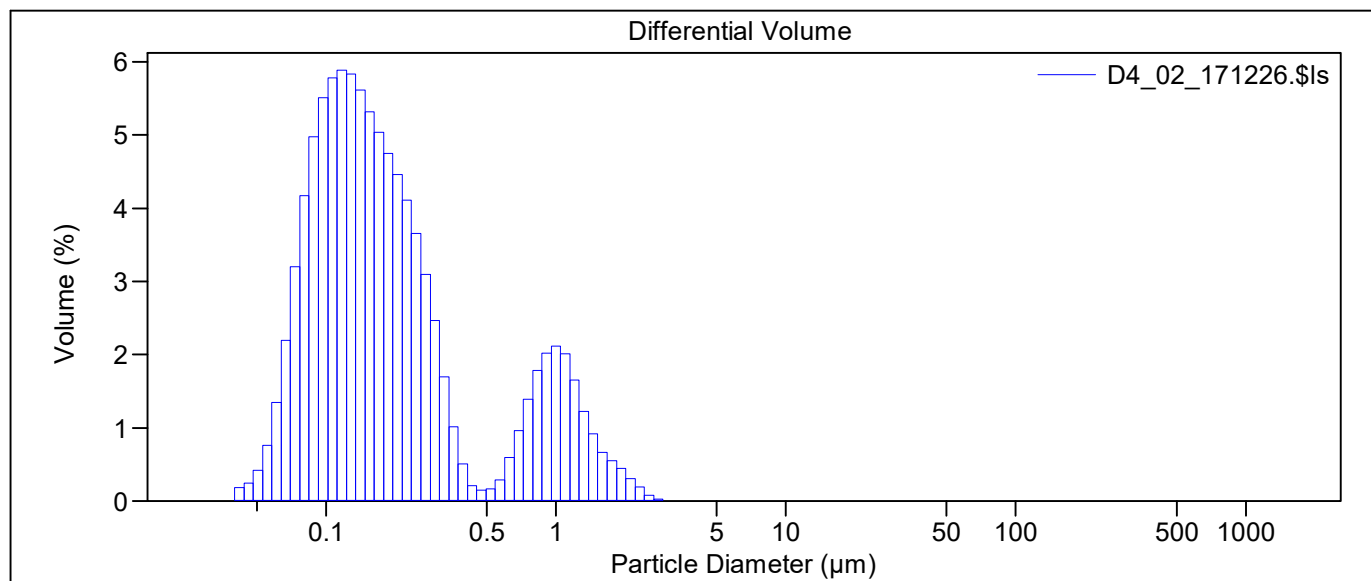
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_02_171226.\$ls		
	D4_02_171226.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	17		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.14%		
LS 13 320	Universal Liquid Module		
Start time:	17:10 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	65%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_02_171226.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.398 μm
Mean:	0.320 μm		Variance:	0.159 μm ²
Median:	0.158 μm		C.V.:	124%
Mean/Median ratio:	2.024		Skewness:	2.363 Right skewed
Mode:	0.117 μm		Kurtosis:	5.572 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.158 μm	0.271 μm	0.962 μm

Surface Area Statistics (Arithmetic)			D4_02_171226.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.160 µm
Mean:	0.148 µm		Variance:	0.025 µm ²
Median:	0.110 µm		C.V.:	108%
Mean/Median ratio:	1.348		Skewness:	5.924 Right skewed
Mode:	0.097 µm		Kurtosis:	45.42 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.157 µm	0.229 µm

Number Statistics (Arithmetic)			D4_02_171226.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.0%
Mean/Median ratio:	1.107		Skewness:	4.609 Right skewed
Mode:	0.073 μm		Kurtosis:	82.72 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.40
10	0.044	0.046	0.25	0.80	3.48
11	0.048	0.050	0.42	1.24	4.47
12	0.053	0.055	0.76	2.03	6.09
13	0.058	0.061	1.35	3.27	8.13
14	0.064	0.067	2.20	4.86	10.0
15	0.070	0.073	3.20	6.45	11.1
16	0.077	0.080	4.17	7.65	10.9
17	0.084	0.088	4.98	8.32	9.82
18	0.093	0.097	5.51	8.39	8.22
19	0.102	0.106	5.78	8.02	6.52
20	0.112	0.117	5.89	7.44	5.02
21	0.122	0.128	5.83	6.71	3.76
22	0.134	0.141	5.61	5.88	2.73
23	0.148	0.155	5.32	5.07	1.96
24	0.162	0.170	5.03	4.38	1.40
25	0.178	0.186	4.75	3.76	1.00
26	0.195	0.205	4.46	3.22	0.71
27	0.214	0.225	4.11	2.70	0.49
28	0.235	0.247	3.66	2.19	0.33
29	0.258	0.271	3.10	1.69	0.21
30	0.284	0.297	2.47	1.23	0.13
31	0.311	0.326	1.69	0.77	0.067
32	0.342	0.358	1.01	0.42	0.030
33	0.375	0.393	0.50	0.19	0.011
34	0.412	0.431	0.21	0.073	0.0036
35	0.452	0.474	0.15	0.046	0.0019
36	0.496	0.520	0.16	0.046	0.0016
37	0.545	0.571	0.29	0.075	0.0021
38	0.598	0.627	0.60	0.14	0.0033
39	0.656	0.688	0.96	0.21	0.0040
40	0.721	0.755	1.39	0.27	0.0044
41	0.791	0.829	1.78	0.32	0.0043
42	0.868	0.910	2.02	0.33	0.0036
43	0.953	0.999	2.12	0.31	0.0029
44	1.047	1.097	2.01	0.27	0.0021
45	1.149	1.204	1.66	0.20	0.0013

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.23	0.14	0.00072
47	1.385	1.451	0.92	0.093	0.00041
48	1.520	1.592	0.67	0.062	0.00023
49	1.668	1.748	0.55	0.047	0.00014
50	1.832	1.919	0.44	0.034	0.000085
51	2.011	2.107	0.30	0.021	0.000044
52	2.207	2.313	0.19	0.012	0.000021
53	2.423	2.539	0.079	0.0046	0.000007
54	2.660	2.787	0.022	0.0012	0.000001
55	2.920	3.059	0.0041	0.00020	1.93E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

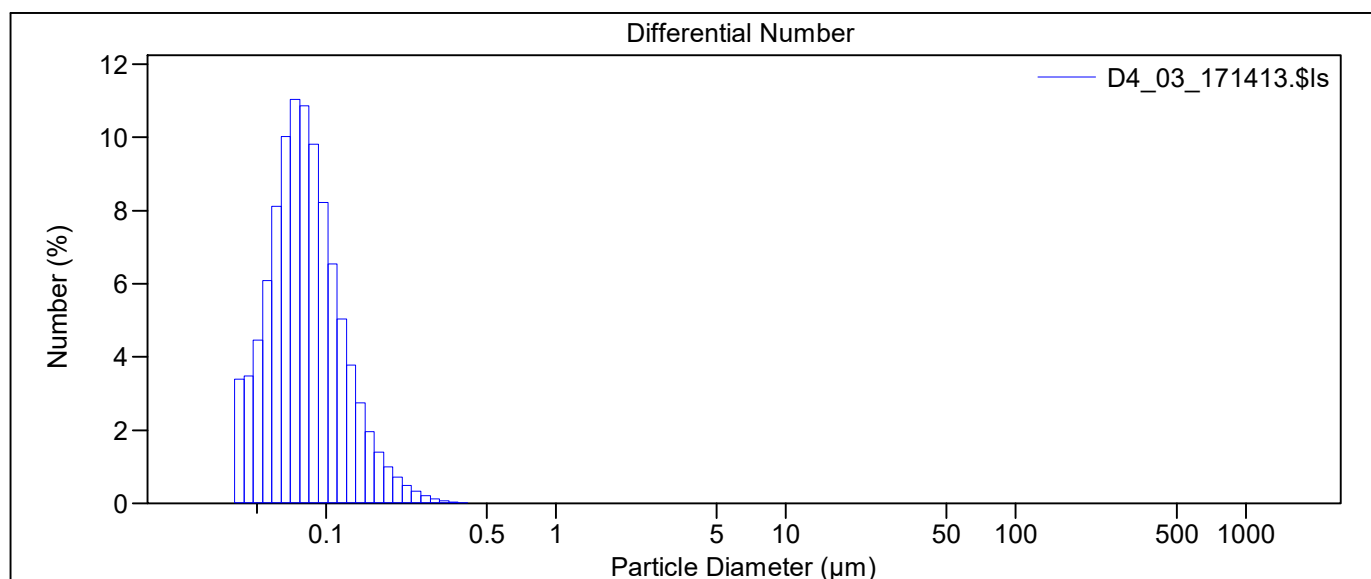
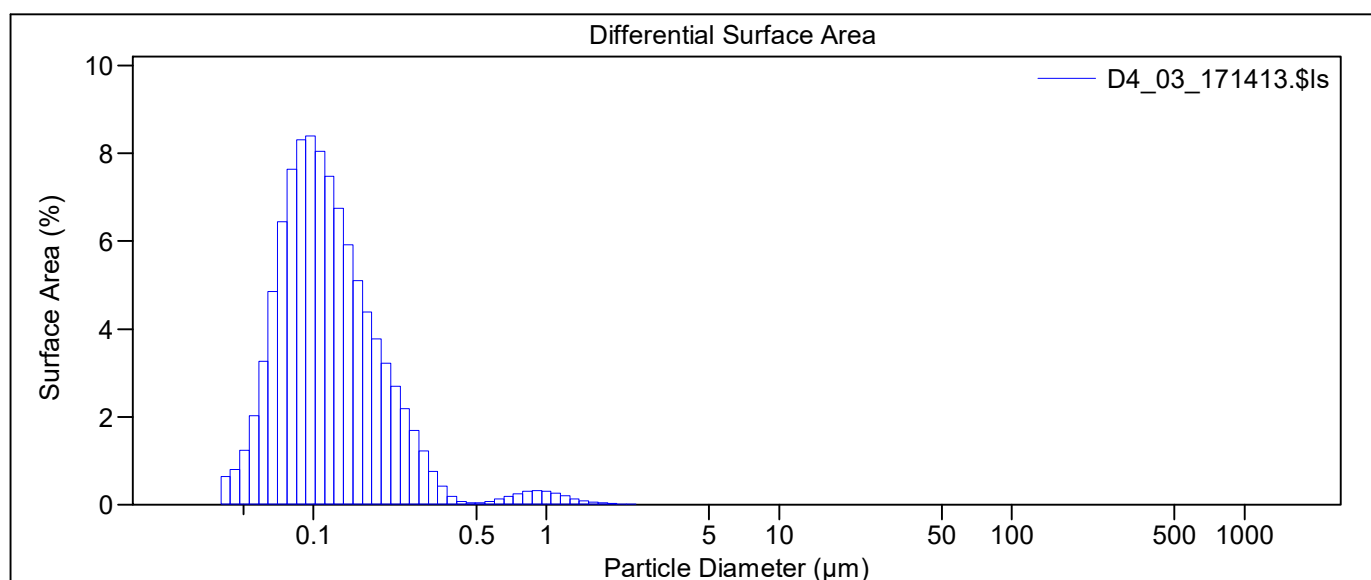
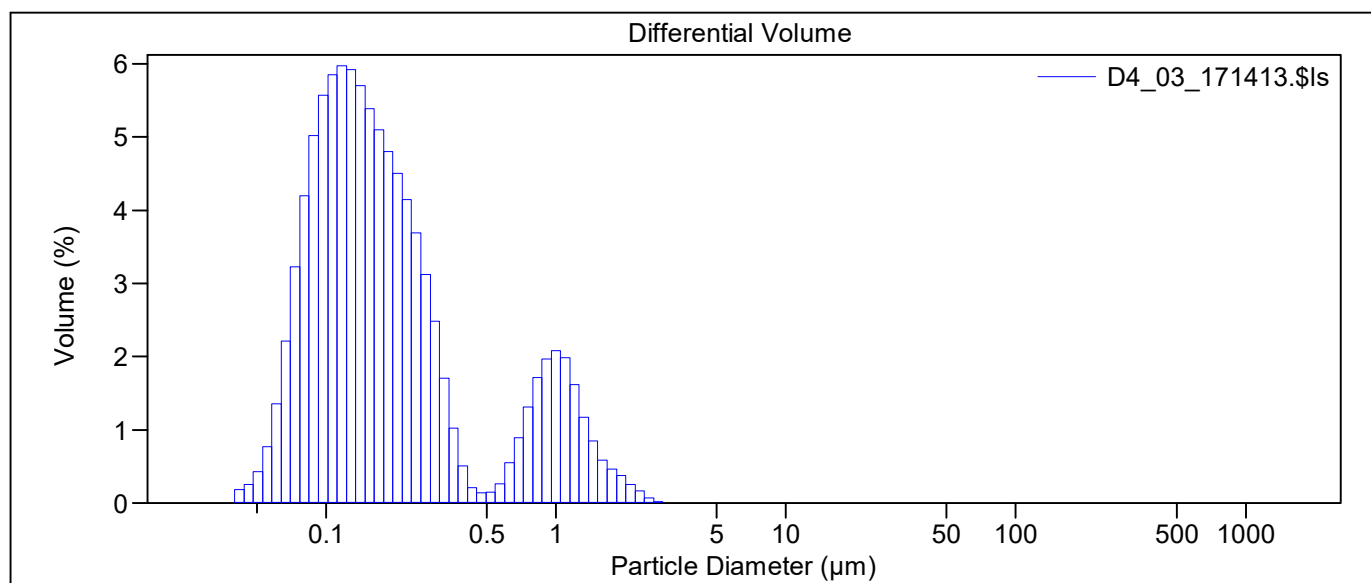
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_03_171413.\$ls		
	D4_03_171413.\$ls		
File ID:	D3		
Operator:	PP		
Run number:	18		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.21%		
LS 13 320	Universal Liquid Module		
Start time:	17:12 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	64%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_03_171413.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.385 μm
Mean:	0.310 μm		Variance:	0.148 μm ²
Median:	0.157 μm		C.V.:	124%
Mean/Median ratio:	1.980		Skewness:	2.421 Right skewed
Mode:	0.117 μm		Kurtosis:	5.939 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.157 μm	0.264 μm	0.938 μm

Surface Area Statistics (Arithmetic)			D4_03_171413.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.155 µm
Mean:	0.146 µm		Variance:	0.024 µm ²
Median:	0.110 µm		C.V.:	106%
Mean/Median ratio:	1.336		Skewness:	5.959 Right skewed
Mode:	0.097 µm		Kurtosis:	46.24 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.157 µm	0.228 µm

Number Statistics (Arithmetic)			D4_03_171413.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.8%
Mean/Median ratio:	1.107		Skewness:	4.471 Right skewed
Mode:	0.073 μm		Kurtosis:	78.20 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.39
10	0.044	0.046	0.25	0.80	3.47
11	0.048	0.050	0.43	1.23	4.46
12	0.053	0.055	0.77	2.03	6.08
13	0.058	0.061	1.36	3.26	8.12
14	0.064	0.067	2.21	4.85	10.0
15	0.070	0.073	3.23	6.44	11.0
16	0.077	0.080	4.20	7.64	10.9
17	0.084	0.088	5.02	8.32	9.82
18	0.093	0.097	5.57	8.40	8.23
19	0.102	0.106	5.85	8.04	6.54
20	0.112	0.117	5.97	7.47	5.04
21	0.122	0.128	5.92	6.75	3.78
22	0.134	0.141	5.70	5.92	2.75
23	0.148	0.155	5.39	5.10	1.97
24	0.162	0.170	5.10	4.39	1.41
25	0.178	0.186	4.80	3.77	1.00
26	0.195	0.205	4.51	3.22	0.71
27	0.214	0.225	4.15	2.70	0.49
28	0.235	0.247	3.69	2.19	0.33
29	0.258	0.271	3.12	1.69	0.21
30	0.284	0.297	2.49	1.22	0.13
31	0.311	0.326	1.71	0.77	0.066
32	0.342	0.358	1.02	0.42	0.030
33	0.375	0.393	0.51	0.19	0.011
34	0.412	0.431	0.21	0.071	0.0035
35	0.452	0.474	0.14	0.044	0.0018
36	0.496	0.520	0.15	0.042	0.0014
37	0.545	0.571	0.26	0.067	0.0019
38	0.598	0.627	0.55	0.13	0.0030
39	0.656	0.688	0.90	0.19	0.0037
40	0.721	0.755	1.32	0.26	0.0041
41	0.791	0.829	1.72	0.30	0.0041
42	0.868	0.910	1.97	0.32	0.0035
43	0.953	0.999	2.08	0.31	0.0028
44	1.047	1.097	1.98	0.26	0.0020
45	1.149	1.204	1.62	0.20	0.0013

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.17	0.13	0.00068
47	1.385	1.451	0.84	0.085	0.00037
48	1.520	1.592	0.59	0.054	0.00020
49	1.668	1.748	0.47	0.039	0.00012
50	1.832	1.919	0.37	0.028	0.000071
51	2.011	2.107	0.26	0.018	0.000037
52	2.207	2.313	0.17	0.011	0.000018
53	2.423	2.539	0.069	0.0040	0.000006
54	2.660	2.787	0.020	0.0010	0.000001
55	2.920	3.059	0.0036	0.00017	1.71E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

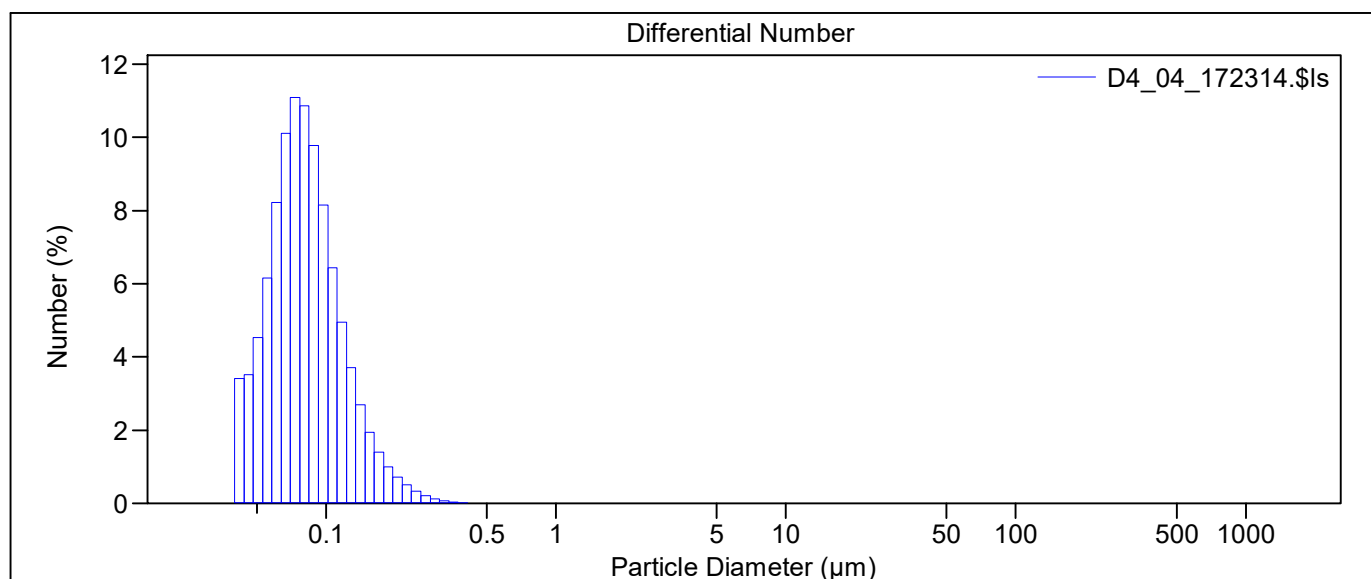
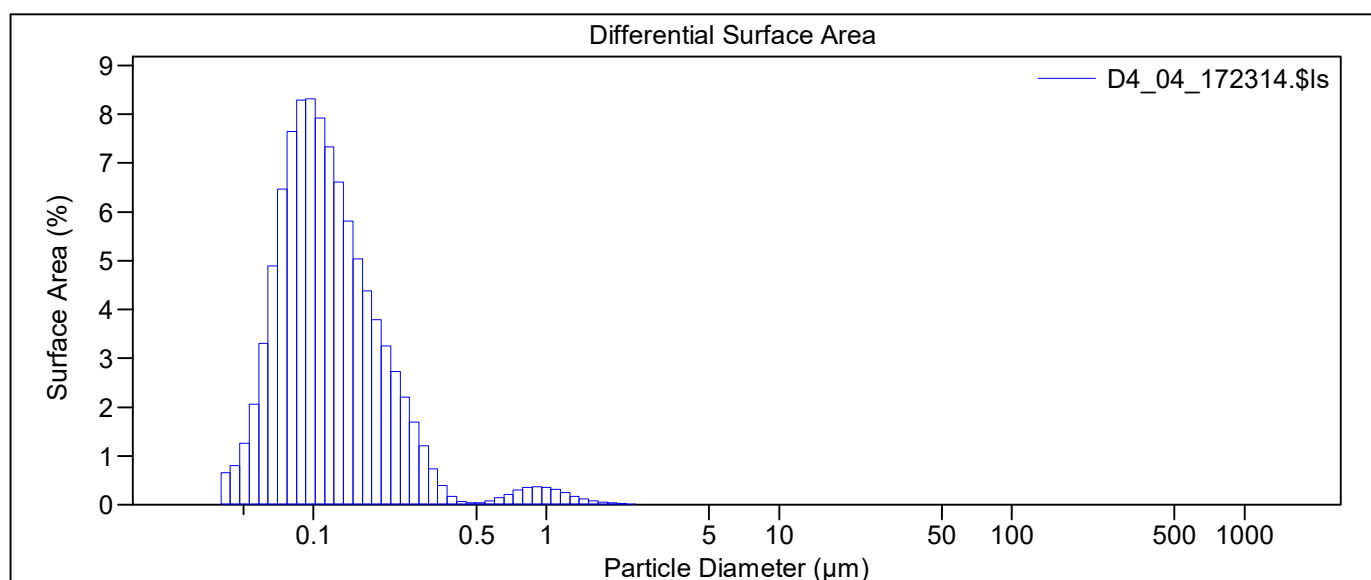
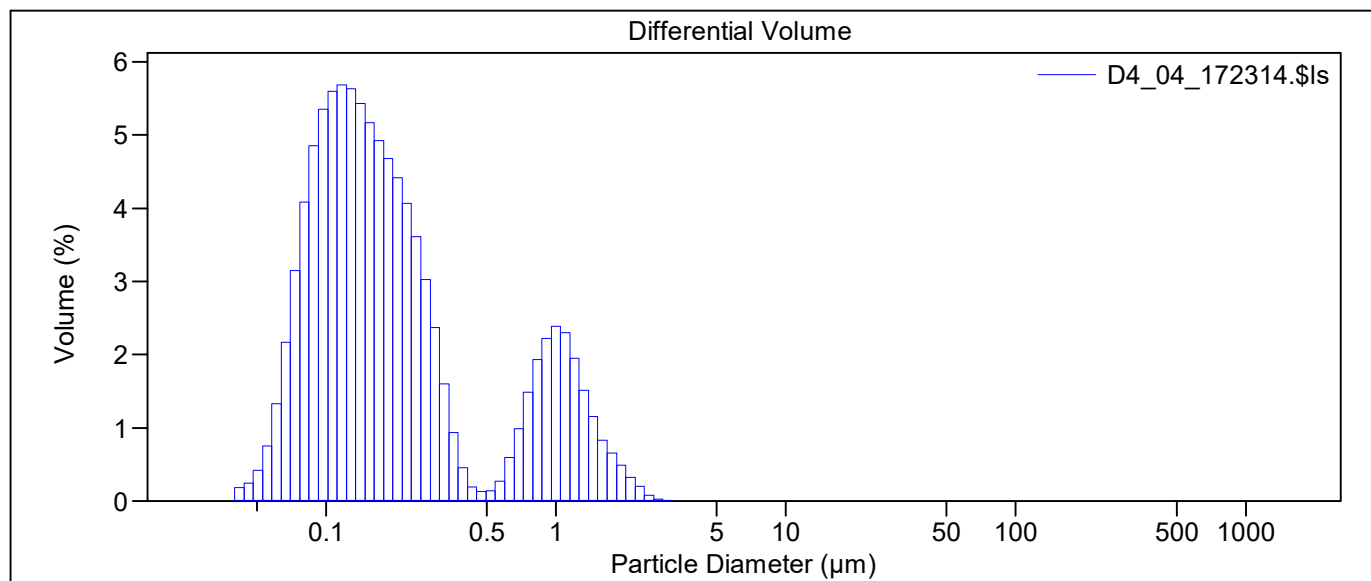
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_04_172314.\$ls		
	D4_04_172314.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.98%		
LS 13 320	Universal Liquid Module		
Start time:	17:21 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_04_172314.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.421 μm
Mean:	0.343 μm		Variance:	0.177 μm ²
Median:	0.162 μm		C.V.:	123%
Mean/Median ratio:	2.117		Skewness:	2.135 Right skewed
Mode:	0.117 μm		Kurtosis:	4.246 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.162 μm	0.286 μm	1.028 μm

Surface Area Statistics (Arithmetic)			D4_04_172314.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.170 μm
Mean:	0.151 μm		Variance:	0.029 μm ²
Median:	0.110 μm		C.V.:	113%
Mean/Median ratio:	1.377		Skewness:	5.661 Right skewed
Mode:	0.097 μm		Kurtosis:	40.21 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.110 μm	0.158 μm	0.231 μm

Number Statistics (Arithmetic)			D4_04_172314.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.4%
Mean/Median ratio:	1.108		Skewness:	4.940 Right skewed
Mode:	0.073 μm		Kurtosis:	92.80 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.81	3.51
11	0.048	0.050	0.42	1.26	4.54
12	0.053	0.055	0.76	2.06	6.17
13	0.058	0.061	1.33	3.30	8.22
14	0.064	0.067	2.17	4.89	10.1
15	0.070	0.073	3.15	6.47	11.1
16	0.077	0.080	4.08	7.65	10.9
17	0.084	0.088	4.86	8.29	9.78
18	0.093	0.097	5.35	8.32	8.15
19	0.102	0.106	5.60	7.93	6.44
20	0.112	0.117	5.69	7.34	4.95
21	0.122	0.128	5.63	6.62	3.70
22	0.134	0.141	5.43	5.81	2.70
23	0.148	0.155	5.17	5.04	1.94
24	0.162	0.170	4.93	4.38	1.40
25	0.178	0.186	4.68	3.79	1.00
26	0.195	0.205	4.41	3.25	0.72
27	0.214	0.225	4.07	2.73	0.50
28	0.235	0.247	3.61	2.21	0.33
29	0.258	0.271	3.03	1.69	0.21
30	0.284	0.297	2.37	1.20	0.13
31	0.311	0.326	1.60	0.74	0.064
32	0.342	0.358	0.93	0.39	0.028
33	0.375	0.393	0.45	0.17	0.010
34	0.412	0.431	0.19	0.066	0.0033
35	0.452	0.474	0.13	0.041	0.0017
36	0.496	0.520	0.14	0.041	0.0014
37	0.545	0.571	0.27	0.072	0.0020
38	0.598	0.627	0.59	0.14	0.0033
39	0.656	0.688	0.99	0.22	0.0042
40	0.721	0.755	1.49	0.30	0.0048
41	0.791	0.829	1.94	0.35	0.0047
42	0.868	0.910	2.22	0.37	0.0041
43	0.953	0.999	2.39	0.36	0.0033
44	1.047	1.097	2.30	0.32	0.0024
45	1.149	1.204	1.95	0.24	0.0016

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.52	0.17	0.00091
47	1.385	1.451	1.15	0.12	0.00052
48	1.520	1.592	0.83	0.078	0.00029
49	1.668	1.748	0.66	0.057	0.00017
50	1.832	1.919	0.49	0.039	0.000096
51	2.011	2.107	0.32	0.023	0.000048
52	2.207	2.313	0.20	0.013	0.000023
53	2.423	2.539	0.081	0.0048	0.000007
54	2.660	2.787	0.024	0.0013	0.000002
55	2.920	3.059	0.0047	0.00023	2.26E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

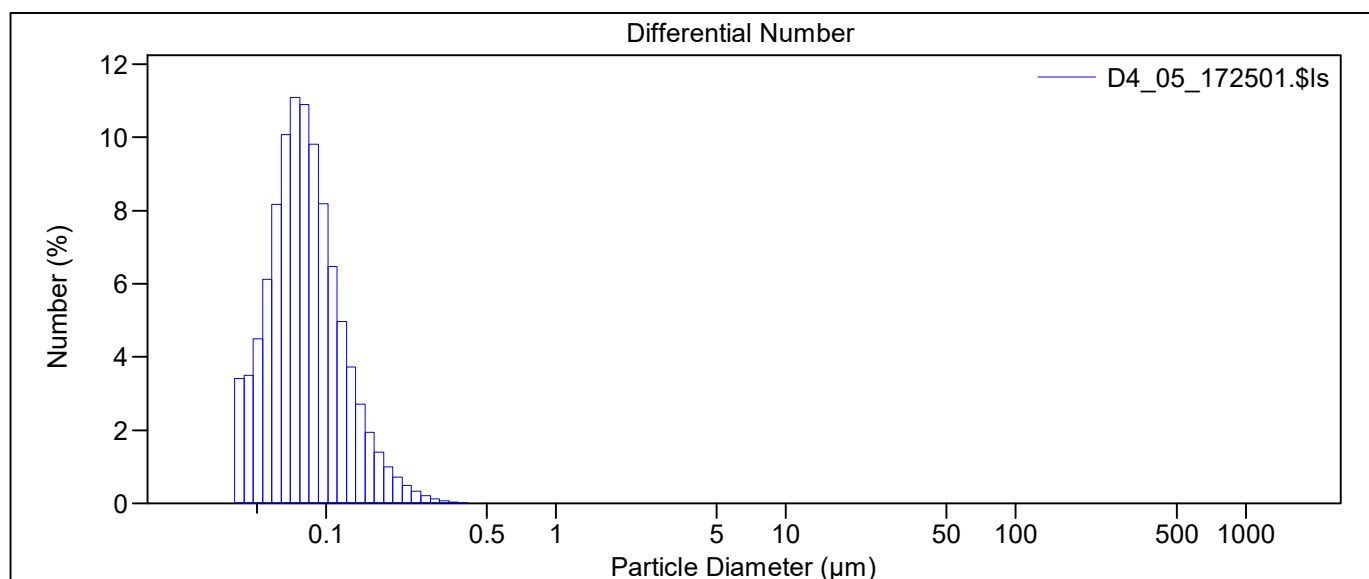
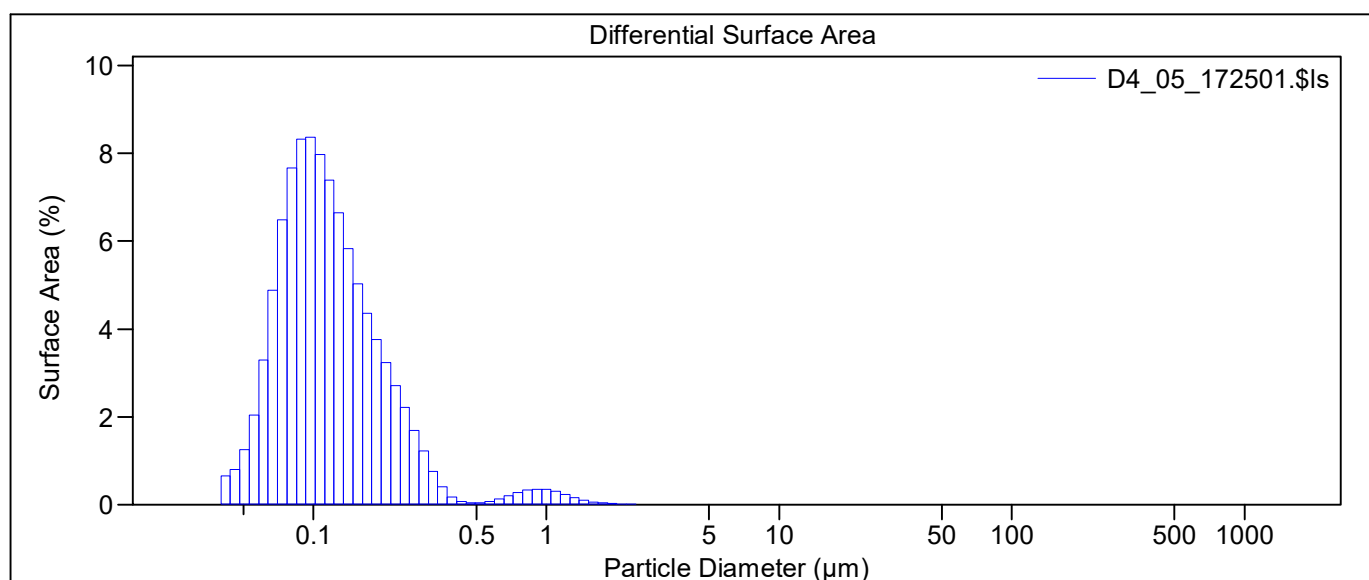
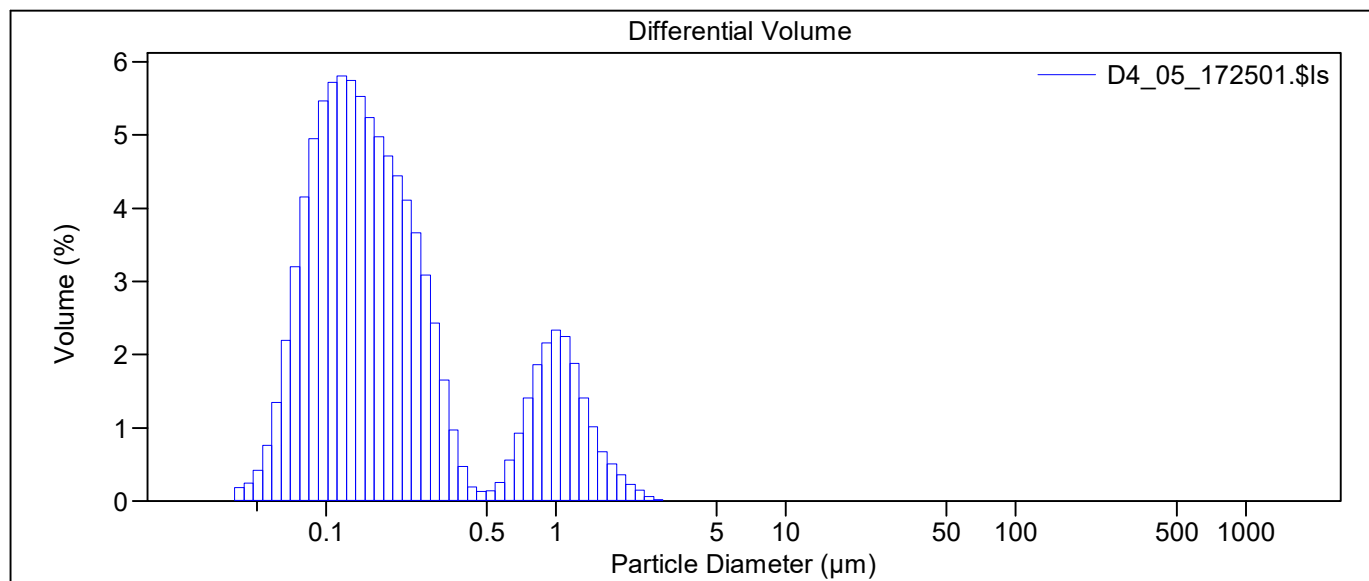
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_05_172501.\$ls		
	D4_05_172501.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.08%		
LS 13 320	Universal Liquid Module		
Start time:	17:23 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	64%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_05_172501.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.397 μm
Mean:	0.325 μm		Variance:	0.158 μm ²
Median:	0.159 μm		C.V.:	122%
Mean/Median ratio:	2.042		Skewness:	2.202 Right skewed
Mode:	0.117 μm		Kurtosis:	4.611 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.159 μm	0.276 μm	0.989 μm

Surface Area Statistics (Arithmetic)			D4_05_172501.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.162 μm
Mean:	0.149 μm		Variance:	0.026 μm ²
Median:	0.109 μm		C.V.:	109%
Mean/Median ratio:	1.359		Skewness:	5.672 Right skewed
Mode:	0.097 μm		Kurtosis:	40.62 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.157 μm	0.230 μm

Number Statistics (Arithmetic)			D4_05_172501.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.1%
Mean/Median ratio:	1.107		Skewness:	4.728 Right skewed
Mode:	0.073 μm		Kurtosis:	84.96 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.41
10	0.044	0.046	0.25	0.80	3.50
11	0.048	0.050	0.42	1.25	4.50
12	0.053	0.055	0.76	2.05	6.13
13	0.058	0.061	1.35	3.29	8.18
14	0.064	0.067	2.20	4.89	10.1
15	0.070	0.073	3.20	6.48	11.1
16	0.077	0.080	4.15	7.67	10.9
17	0.084	0.088	4.95	8.32	9.81
18	0.093	0.097	5.46	8.37	8.19
19	0.102	0.106	5.72	7.98	6.48
20	0.112	0.117	5.81	7.39	4.97
21	0.122	0.128	5.75	6.65	3.72
22	0.134	0.141	5.53	5.83	2.70
23	0.148	0.155	5.24	5.04	1.94
24	0.162	0.170	4.98	4.36	1.39
25	0.178	0.186	4.71	3.76	1.00
26	0.195	0.205	4.45	3.23	0.71
27	0.214	0.225	4.11	2.72	0.50
28	0.235	0.247	3.66	2.21	0.33
29	0.258	0.271	3.09	1.70	0.21
30	0.284	0.297	2.44	1.22	0.13
31	0.311	0.326	1.65	0.75	0.065
32	0.342	0.358	0.97	0.40	0.029
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.19	0.067	0.0033
35	0.452	0.474	0.13	0.040	0.0016
36	0.496	0.520	0.14	0.039	0.0013
37	0.545	0.571	0.25	0.066	0.0019
38	0.598	0.627	0.56	0.13	0.0031
39	0.656	0.688	0.93	0.20	0.0039
40	0.721	0.755	1.41	0.28	0.0045
41	0.791	0.829	1.87	0.33	0.0045
42	0.868	0.910	2.16	0.35	0.0039
43	0.953	0.999	2.33	0.35	0.0032
44	1.047	1.097	2.25	0.30	0.0023
45	1.149	1.204	1.88	0.23	0.0015

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.41	0.16	0.00084
47	1.385	1.451	1.02	0.10	0.00046
48	1.520	1.592	0.68	0.063	0.00023
49	1.668	1.748	0.50	0.043	0.00013
50	1.832	1.919	0.36	0.028	0.000070
51	2.011	2.107	0.23	0.016	0.000033
52	2.207	2.313	0.14	0.0093	0.000016
53	2.423	2.539	0.059	0.0034	0.000005
54	2.660	2.787	0.017	0.00090	0.000001
55	2.920	3.059	0.0036	0.00018	1.74E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

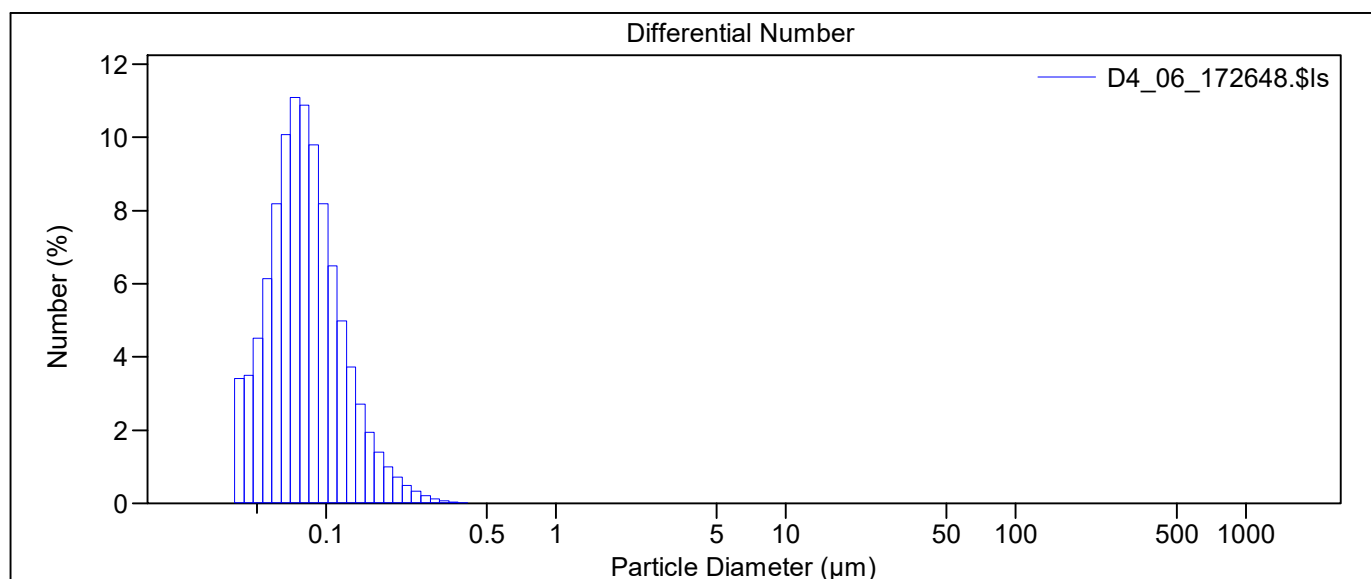
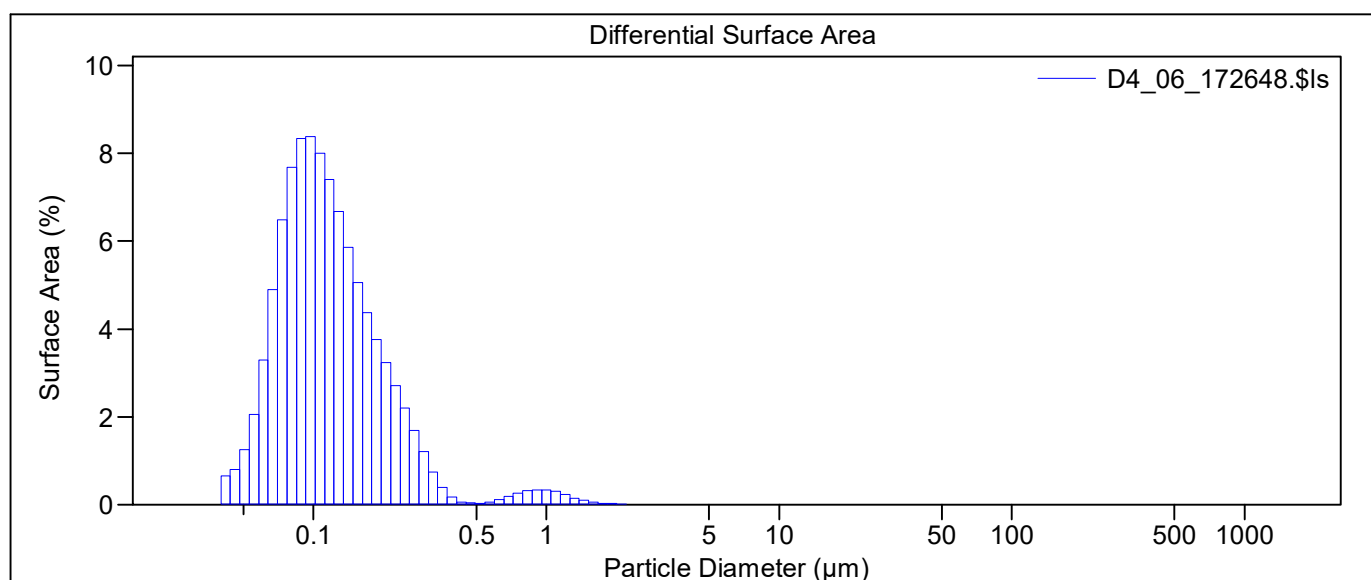
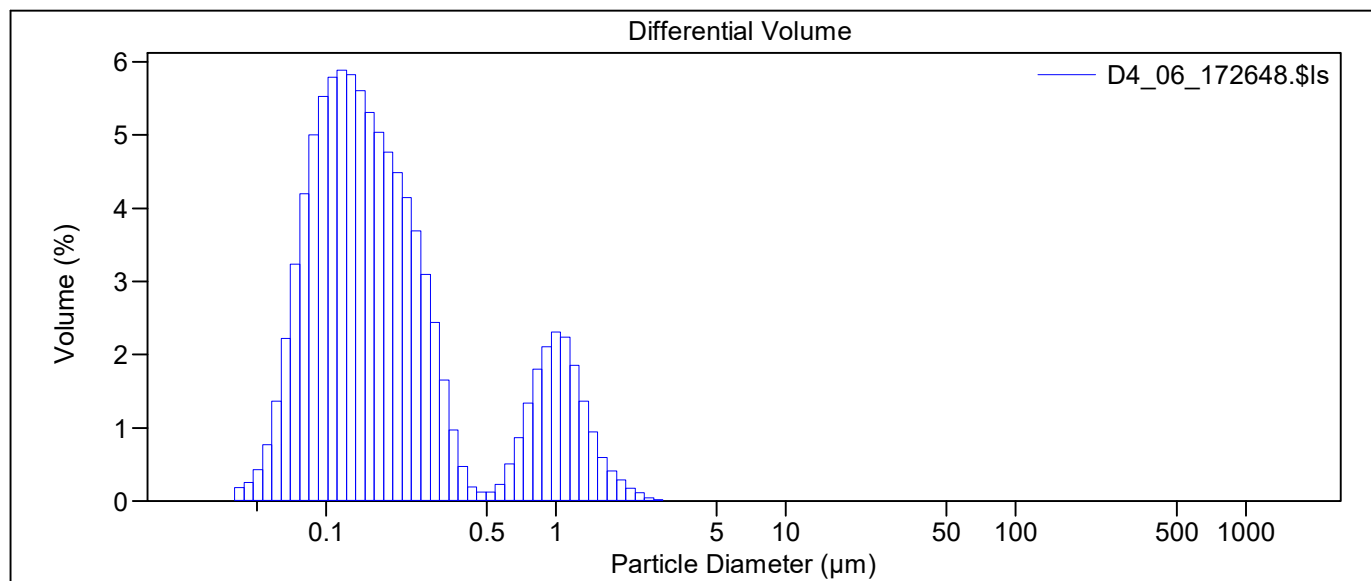
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_06_172648.\$ls		
	D4_06_172648.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.15%		
LS 13 320	Universal Liquid Module		
Start time:	17:25 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_06_172648.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.383 μm
Mean:	0.315 μm		Variance:	0.147 μm ²
Median:	0.158 μm		C.V.:	122%
Mean/Median ratio:	1.999		Skewness:	2.235 Right skewed
Mode:	0.117 μm		Kurtosis:	4.767 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.158 μm	0.269 μm	0.968 μm

Surface Area Statistics (Arithmetic)			D4_06_172648.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.157 μm
Mean:	0.147 μm		Variance:	0.025 μm ²
Median:	0.109 μm		C.V.:	107%
Mean/Median ratio:	1.346		Skewness:	5.687 Right skewed
Mode:	0.097 μm		Kurtosis:	40.87 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.157 μm	0.228 μm

Number Statistics (Arithmetic)			D4_06_172648.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	45.0%
Mean/Median ratio:	1.107		Skewness:	4.595 Right skewed
Mode:	0.073 μm		Kurtosis:	80.60 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.41
10	0.044	0.046	0.25	0.81	3.50
11	0.048	0.050	0.43	1.25	4.51
12	0.053	0.055	0.77	2.05	6.13
13	0.058	0.061	1.36	3.30	8.18
14	0.064	0.067	2.22	4.90	10.1
15	0.070	0.073	3.23	6.49	11.1
16	0.077	0.080	4.20	7.68	10.9
17	0.084	0.088	5.01	8.33	9.80
18	0.093	0.097	5.53	8.39	8.19
19	0.102	0.106	5.79	8.00	6.48
20	0.112	0.117	5.89	7.41	4.98
21	0.122	0.128	5.82	6.68	3.73
22	0.134	0.141	5.60	5.85	2.71
23	0.148	0.155	5.31	5.05	1.94
24	0.162	0.170	5.04	4.37	1.39
25	0.178	0.186	4.77	3.76	1.00
26	0.195	0.205	4.49	3.23	0.71
27	0.214	0.225	4.14	2.71	0.49
28	0.235	0.247	3.69	2.20	0.33
29	0.258	0.271	3.10	1.69	0.21
30	0.284	0.297	2.44	1.21	0.13
31	0.311	0.326	1.65	0.74	0.064
32	0.342	0.358	0.97	0.40	0.029
33	0.375	0.393	0.47	0.18	0.010
34	0.412	0.431	0.19	0.064	0.0032
35	0.452	0.474	0.12	0.038	0.0015
36	0.496	0.520	0.12	0.035	0.0012
37	0.545	0.571	0.23	0.059	0.0017
38	0.598	0.627	0.51	0.12	0.0028
39	0.656	0.688	0.86	0.18	0.0036
40	0.721	0.755	1.33	0.26	0.0042
41	0.791	0.829	1.80	0.32	0.0043
42	0.868	0.910	2.11	0.34	0.0038
43	0.953	0.999	2.31	0.34	0.0031
44	1.047	1.097	2.24	0.30	0.0023
45	1.149	1.204	1.86	0.23	0.0014

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.36	0.15	0.00080
47	1.385	1.451	0.95	0.096	0.00042
48	1.520	1.592	0.59	0.055	0.00020
49	1.668	1.748	0.41	0.035	0.00010
50	1.832	1.919	0.29	0.022	0.000055
51	2.011	2.107	0.18	0.012	0.000025
52	2.207	2.313	0.11	0.0073	0.000012
53	2.423	2.539	0.047	0.0027	0.000004
54	2.660	2.787	0.014	0.00072	0.000001
55	2.920	3.059	0.0032	0.00015	1.5E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

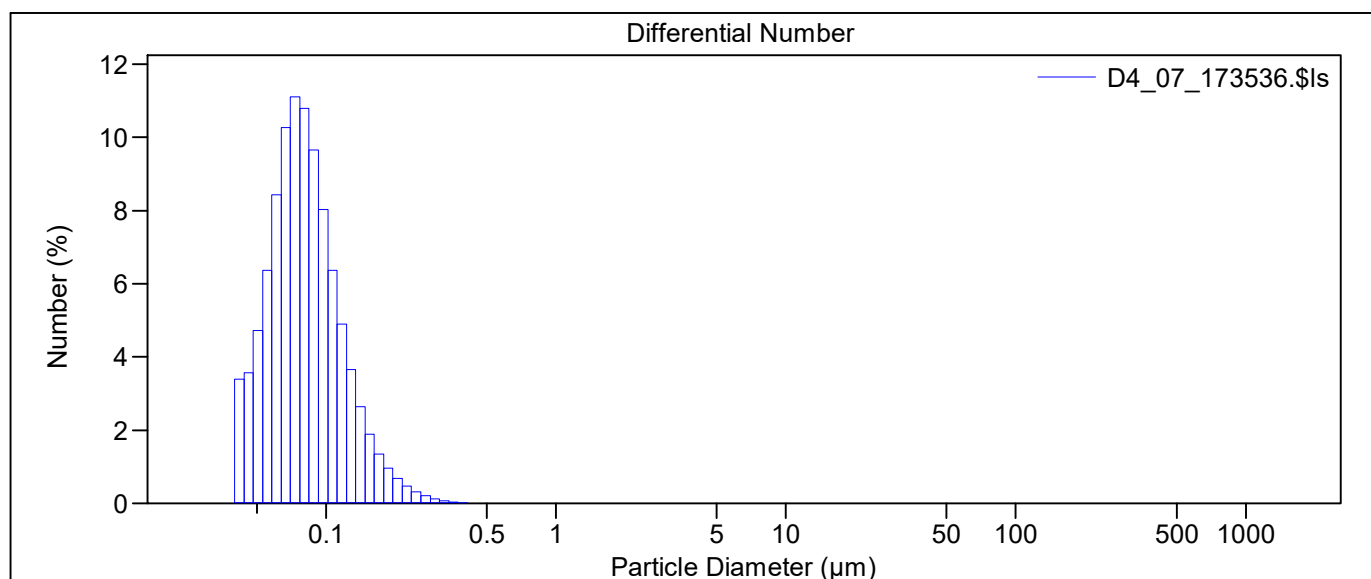
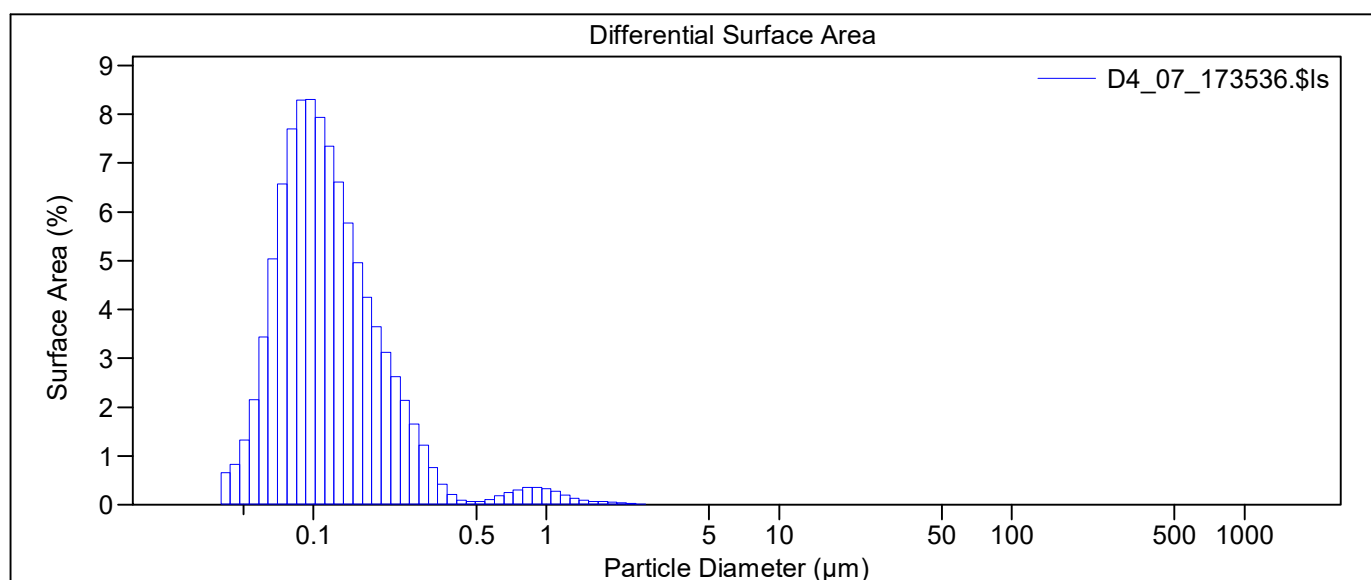
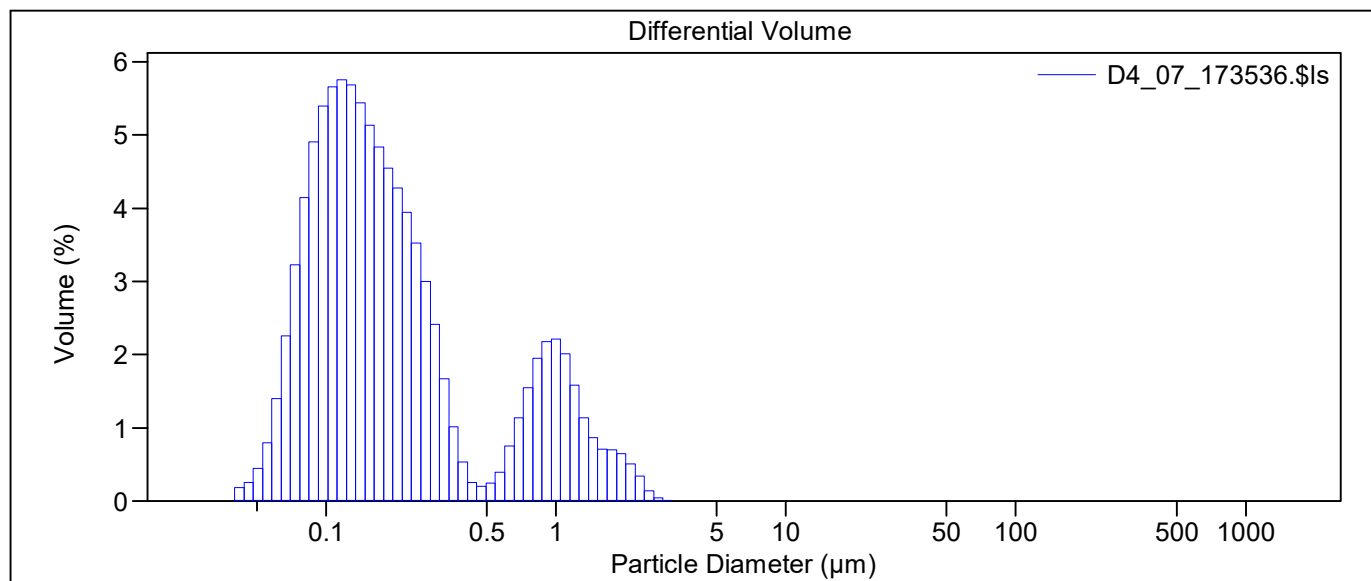
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_07_173536.\$ls		
	D4_07_173536.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.09%		
LS 13 320	Universal Liquid Module		
Start time:	17:33 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	0%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_07_173536.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.429 µm
Mean:	0.340 µm		Variance:	0.184 µm ²
Median:	0.160 µm		C.V.:	126%
Mean/Median ratio:	2.122		Skewness:	2.346 Right skewed
Mode:	0.117 µm		Kurtosis:	5.533 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.105 µm	0.160 µm	0.286 µm	0.992 µm

Surface Area Statistics (Arithmetic)			D4_07_173536.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.169 μm
Mean:	0.149 μm		Variance:	0.028 μm ²
Median:	0.109 μm		C.V.:	113%
Mean/Median ratio:	1.373		Skewness:	5.973 Right skewed
Mode:	0.097 μm		Kurtosis:	46.58 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.156 μm	0.231 μm

Number Statistics (Arithmetic)			D4_07_173536.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.3%
Mean/Median ratio:	1.109		Skewness:	4.907 Right skewed
Mode:	0.073 μm		Kurtosis:	92.91 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.39
10	0.044	0.046	0.26	0.83	3.57
11	0.048	0.050	0.45	1.32	4.72
12	0.053	0.055	0.80	2.15	6.37
13	0.058	0.061	1.40	3.43	8.43
14	0.064	0.067	2.25	5.04	10.3
15	0.070	0.073	3.22	6.57	11.1
16	0.077	0.080	4.15	7.70	10.8
17	0.084	0.088	4.91	8.29	9.66
18	0.093	0.097	5.39	8.31	8.03
19	0.102	0.106	5.66	7.94	6.36
20	0.112	0.117	5.75	7.35	4.89
21	0.122	0.128	5.68	6.62	3.65
22	0.134	0.141	5.44	5.77	2.64
23	0.148	0.155	5.13	4.96	1.88
24	0.162	0.170	4.84	4.26	1.34
25	0.178	0.186	4.55	3.65	0.95
26	0.195	0.205	4.28	3.12	0.68
27	0.214	0.225	3.94	2.62	0.47
28	0.235	0.247	3.52	2.13	0.32
29	0.258	0.271	3.00	1.66	0.21
30	0.284	0.297	2.42	1.21	0.13
31	0.311	0.326	1.67	0.77	0.066
32	0.342	0.358	1.02	0.42	0.030
33	0.375	0.393	0.54	0.20	0.012
34	0.412	0.431	0.26	0.088	0.0043
35	0.452	0.474	0.20	0.064	0.0026
36	0.496	0.520	0.24	0.070	0.0023
37	0.545	0.571	0.40	0.10	0.0029
38	0.598	0.627	0.75	0.18	0.0041
39	0.656	0.688	1.13	0.25	0.0047
40	0.721	0.755	1.55	0.31	0.0049
41	0.791	0.829	1.95	0.35	0.0046
42	0.868	0.910	2.18	0.36	0.0039
43	0.953	0.999	2.21	0.33	0.0030
44	1.047	1.097	2.01	0.27	0.0021
45	1.149	1.204	1.58	0.20	0.0012

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.13	0.13	0.00067
47	1.385	1.451	0.87	0.089	0.00039
48	1.520	1.592	0.71	0.066	0.00024
49	1.668	1.748	0.70	0.060	0.00018
50	1.832	1.919	0.65	0.051	0.00012
51	2.011	2.107	0.51	0.036	0.000074
52	2.207	2.313	0.34	0.022	0.000038
53	2.423	2.539	0.14	0.0085	0.000012
54	2.660	2.787	0.042	0.0022	0.000003
55	2.920	3.059	0.0069	0.00034	3.29E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

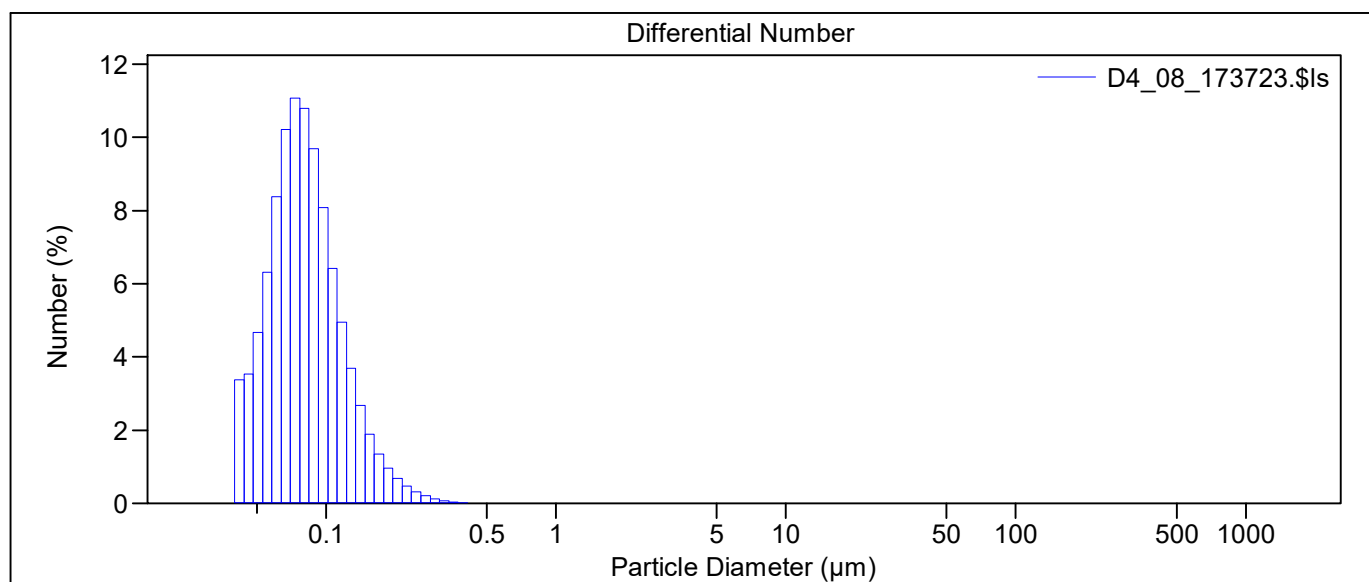
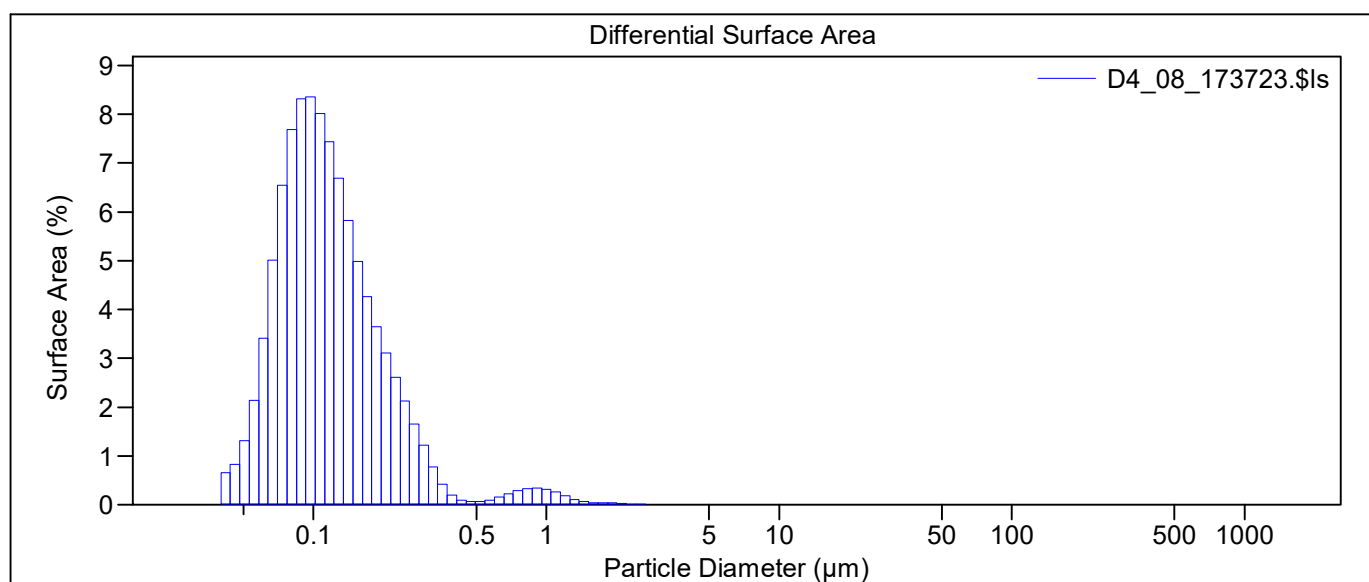
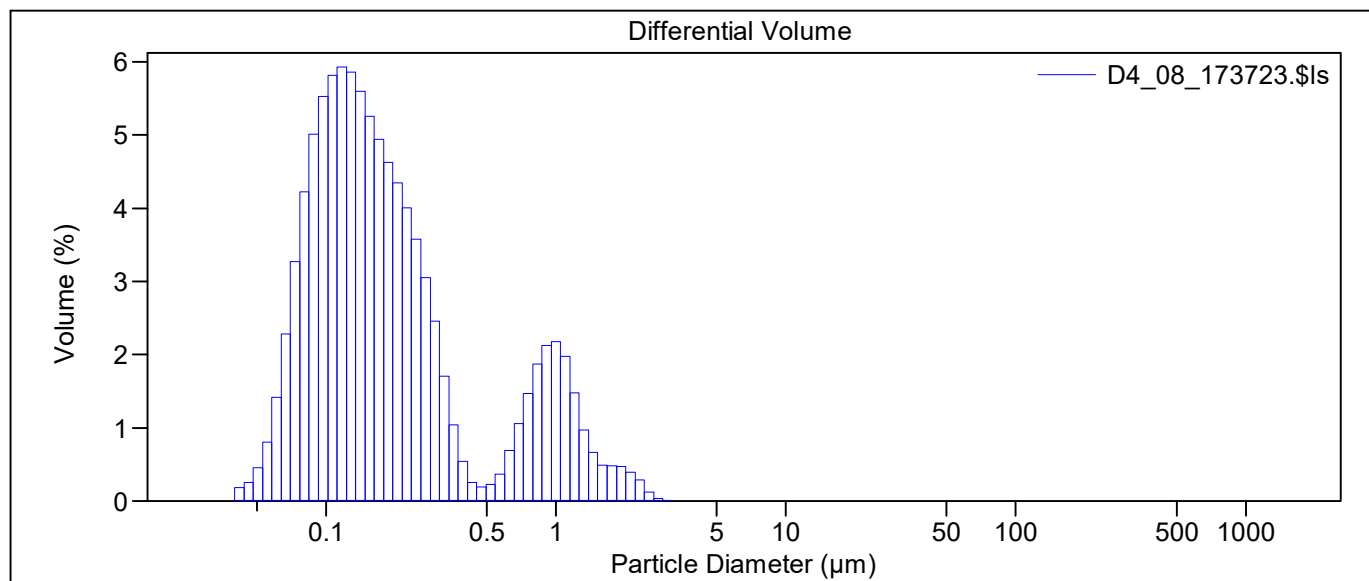
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_08_173723.\$ls		
	D4_08_173723.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.21%		
LS 13 320	Universal Liquid Module		
Start time:	17:35 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-3%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_08_173723.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.399 μm
Mean:	0.317 μm		Variance:	0.159 μm ²
Median:	0.157 μm		C.V.:	126%
Mean/Median ratio:	2.024		Skewness:	2.510 Right skewed
Mode:	0.117 μm		Kurtosis:	6.713 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.104 μm	0.157 μm	0.272 μm	0.936 μm

Surface Area Statistics (Arithmetic)			D4_08_173723.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.158 µm
Mean:	0.147 µm		Variance:	0.025 µm ²
Median:	0.109 µm		C.V.:	108%
Mean/Median ratio:	1.348		Skewness:	6.048 Right skewed
Mode:	0.097 µm		Kurtosis:	48.97 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.229 µm

Number Statistics (Arithmetic)			D4_08_173723.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	45.0%
Mean/Median ratio:	1.108		Skewness:	4.623 Right skewed
Mode:	0.073 μm		Kurtosis:	82.68 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.131 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.37
10	0.044	0.046	0.26	0.82	3.54
11	0.048	0.050	0.45	1.31	4.67
12	0.053	0.055	0.81	2.13	6.32
13	0.058	0.061	1.41	3.41	8.38
14	0.064	0.067	2.28	5.01	10.2
15	0.070	0.073	3.27	6.55	11.1
16	0.077	0.080	4.22	7.69	10.8
17	0.084	0.088	5.01	8.32	9.68
18	0.093	0.097	5.53	8.36	8.08
19	0.102	0.106	5.82	8.01	6.42
20	0.112	0.117	5.93	7.44	4.95
21	0.122	0.128	5.86	6.69	3.70
22	0.134	0.141	5.60	5.83	2.67
23	0.148	0.155	5.26	4.99	1.90
24	0.162	0.170	4.94	4.27	1.35
25	0.178	0.186	4.63	3.64	0.95
26	0.195	0.205	4.34	3.11	0.68
27	0.214	0.225	4.00	2.61	0.47
28	0.235	0.247	3.58	2.13	0.32
29	0.258	0.271	3.05	1.65	0.21
30	0.284	0.297	2.46	1.21	0.13
31	0.311	0.326	1.71	0.77	0.066
32	0.342	0.358	1.04	0.42	0.030
33	0.375	0.393	0.54	0.20	0.012
34	0.412	0.431	0.25	0.085	0.0042
35	0.452	0.474	0.19	0.060	0.0024
36	0.496	0.520	0.22	0.063	0.0021
37	0.545	0.571	0.36	0.094	0.0026
38	0.598	0.627	0.69	0.16	0.0038
39	0.656	0.688	1.06	0.23	0.0043
40	0.721	0.755	1.47	0.28	0.0045
41	0.791	0.829	1.87	0.33	0.0044
42	0.868	0.910	2.12	0.34	0.0038
43	0.953	0.999	2.18	0.32	0.0029
44	1.047	1.097	1.98	0.26	0.0020
45	1.149	1.204	1.47	0.18	0.0011

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.97	0.11	0.00056
47	1.385	1.451	0.67	0.067	0.00029
48	1.520	1.592	0.49	0.045	0.00016
49	1.668	1.748	0.48	0.041	0.00012
50	1.832	1.919	0.47	0.036	0.000089
51	2.011	2.107	0.39	0.027	0.000056
52	2.207	2.313	0.29	0.019	0.000032
53	2.423	2.539	0.13	0.0073	0.000010
54	2.660	2.787	0.037	0.0019	0.000002
55	2.920	3.059	0.0063	0.00030	2.93E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

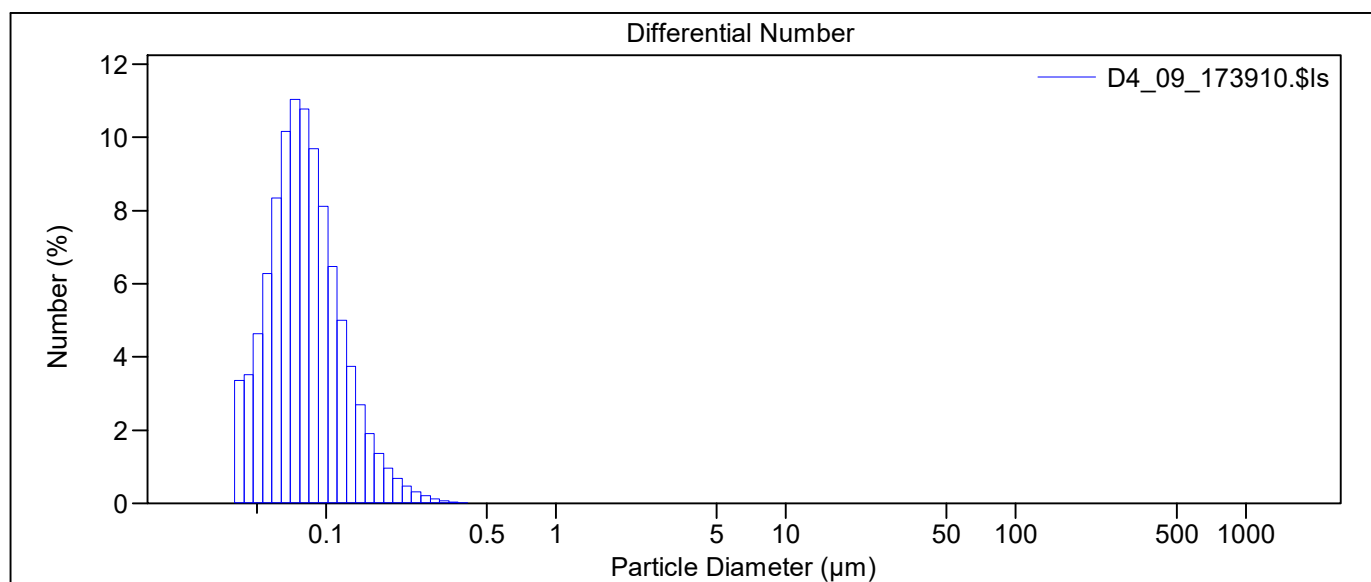
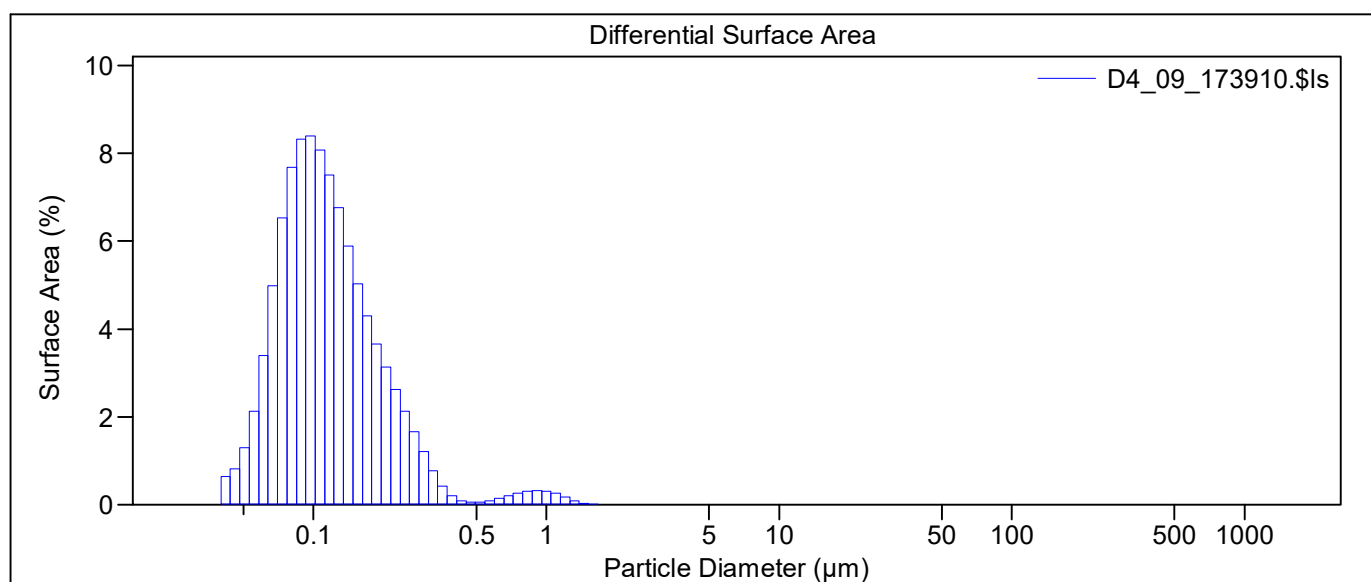
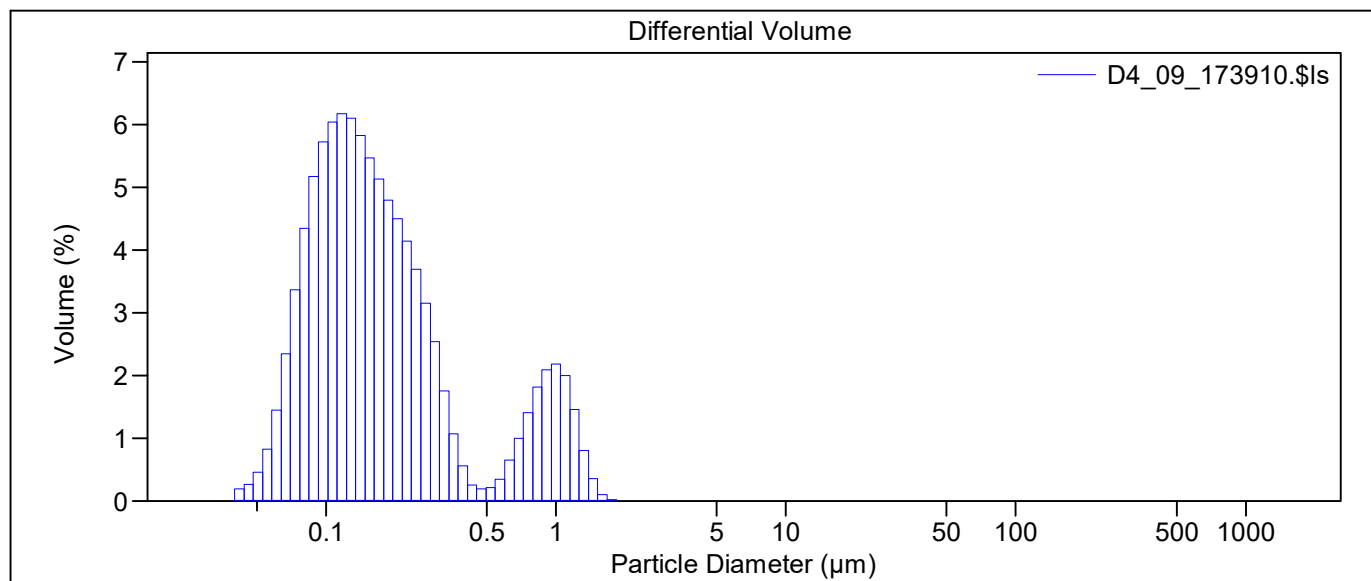
Beckman Coulter LS13320

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	D4_09_173910.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	9		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.29%		
LS 13 320	Universal Liquid Module		
Start time:	17:37 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	-3%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_09_173910.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.302 μm
Mean:	0.271 μm		Variance:	0.091 μm ²
Median:	0.152 μm		C.V.:	111%
Mean/Median ratio:	1.779		Skewness:	2.135 Right skewed
Mode:	0.117 μm		Kurtosis:	3.570 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.152 μm	0.252 μm	0.827 μm

Surface Area Statistics (Arithmetic)			D4_09_173910.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.135 µm
Mean:	0.142 µm		Variance:	0.018 µm ²
Median:	0.109 µm		C.V.:	95.0%
Mean/Median ratio:	1.308		Skewness:	5.141 Right skewed
Mode:	0.097 µm		Kurtosis:	32.42 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.155 µm	0.226 µm

Number Statistics (Arithmetic)			D4_09_173910.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.6%
Mean/Median ratio:	1.107		Skewness:	4.096 Right skewed
Mode:	0.073 μm		Kurtosis:	59.02 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.35
10	0.044	0.046	0.26	0.82	3.51
11	0.048	0.050	0.46	1.30	4.64
12	0.053	0.055	0.83	2.12	6.29
13	0.058	0.061	1.45	3.40	8.34
14	0.064	0.067	2.34	4.99	10.2
15	0.070	0.073	3.36	6.53	11.0
16	0.077	0.080	4.35	7.68	10.8
17	0.084	0.088	5.17	8.32	9.69
18	0.093	0.097	5.72	8.39	8.11
19	0.102	0.106	6.04	8.07	6.47
20	0.112	0.117	6.17	7.51	5.00
21	0.122	0.128	6.10	6.77	3.74
22	0.134	0.141	5.83	5.89	2.70
23	0.148	0.155	5.47	5.03	1.91
24	0.162	0.170	5.13	4.30	1.36
25	0.178	0.186	4.80	3.66	0.96
26	0.195	0.205	4.50	3.13	0.68
27	0.214	0.225	4.14	2.62	0.47
28	0.235	0.247	3.70	2.13	0.32
29	0.258	0.271	3.15	1.66	0.21
30	0.284	0.297	2.54	1.21	0.13
31	0.311	0.326	1.76	0.77	0.066
32	0.342	0.358	1.07	0.42	0.030
33	0.375	0.393	0.56	0.20	0.012
34	0.412	0.431	0.25	0.084	0.0041
35	0.452	0.474	0.19	0.058	0.0023
36	0.496	0.520	0.22	0.060	0.0020
37	0.545	0.571	0.34	0.086	0.0024
38	0.598	0.627	0.66	0.15	0.0035
39	0.656	0.688	1.00	0.21	0.0040
40	0.721	0.755	1.40	0.26	0.0042
41	0.791	0.829	1.82	0.31	0.0041
42	0.868	0.910	2.10	0.33	0.0036
43	0.953	0.999	2.19	0.31	0.0028
44	1.047	1.097	2.00	0.26	0.0020
45	1.149	1.204	1.46	0.17	0.0011

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.81	0.087	0.00045
47	1.385	1.451	0.36	0.035	0.00015
48	1.520	1.592	0.10	0.0093	0.000033
49	1.668	1.748	0.018	0.0014	0.000004
50	1.832	1.919	0.0024	0.00018	4.4E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

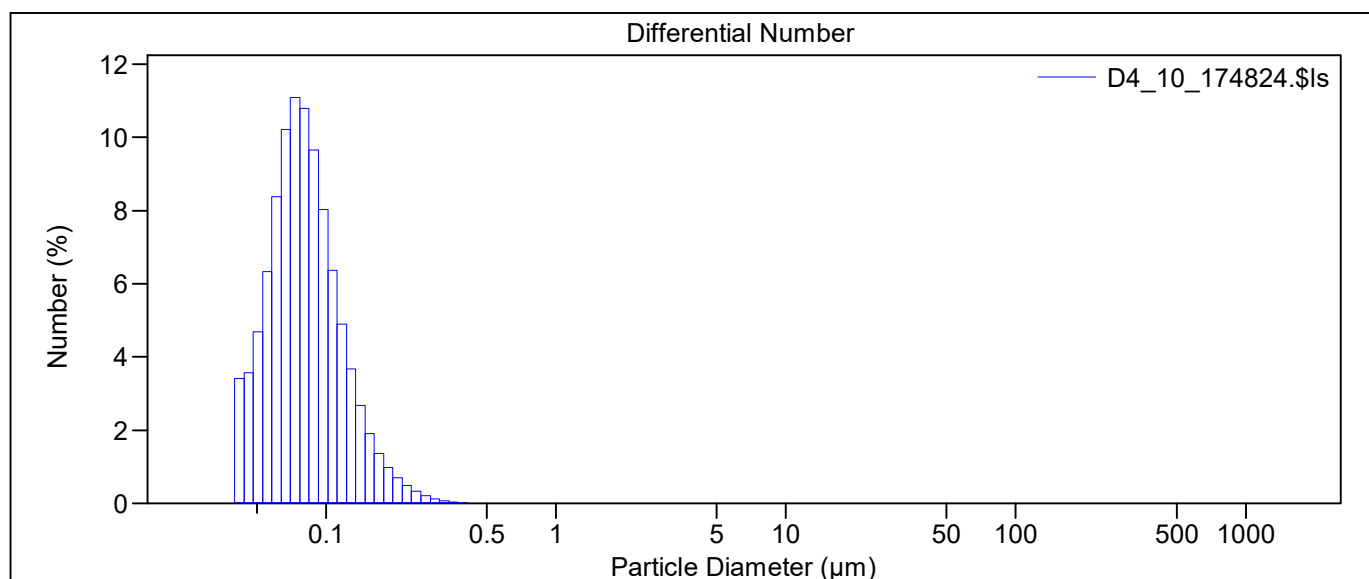
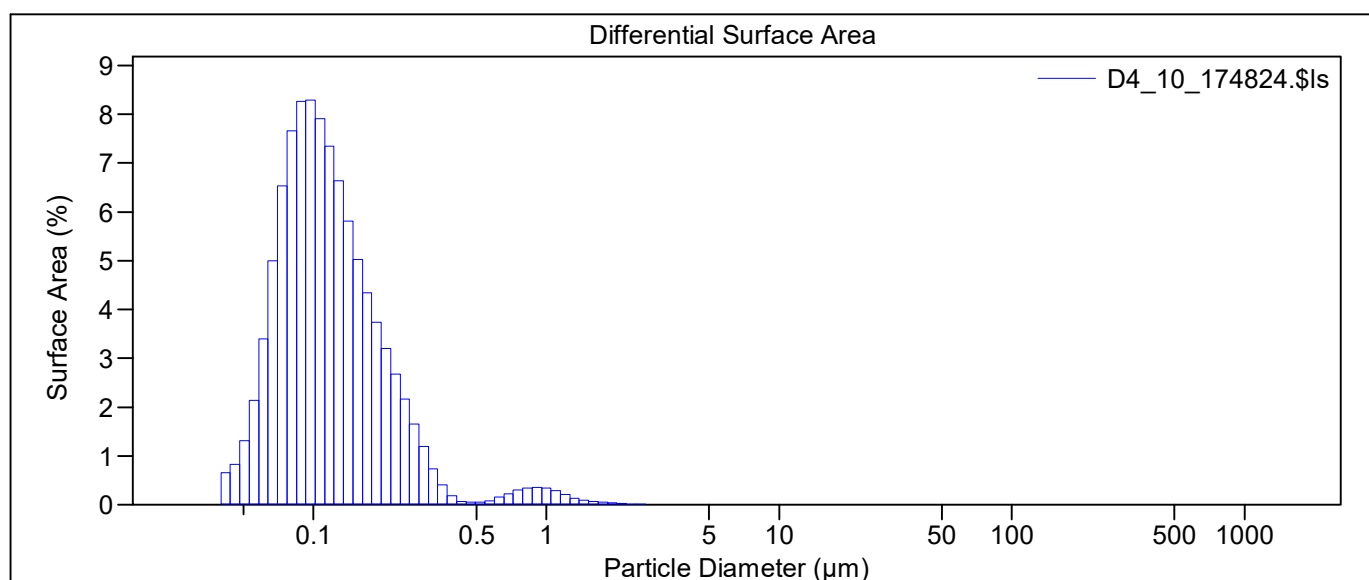
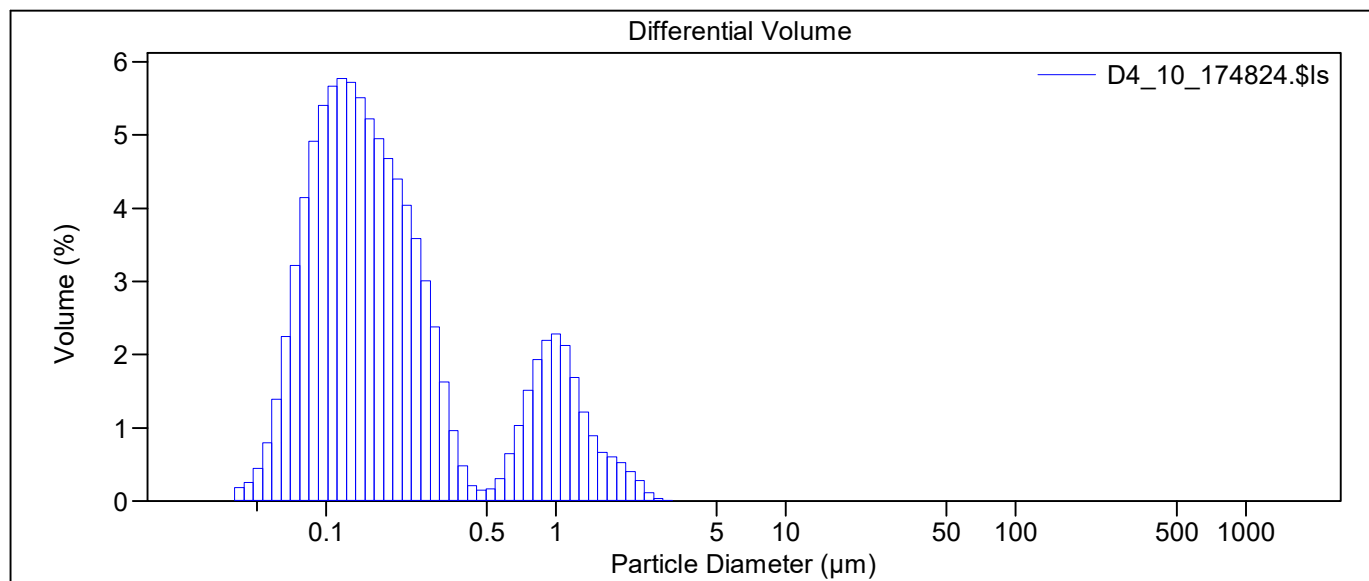
Beckman Coulter LS13320

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	D4_10_174824.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	10		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.08%		
LS 13 320	Universal Liquid Module		
Start time:	17:46 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_10_174824.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.416 μm
Mean:	0.333 μm		Variance:	0.173 μm ²
Median:	0.160 μm		C.V.:	125%
Mean/Median ratio:	2.086		Skewness:	2.323 Right skewed
Mode:	0.117 μm		Kurtosis:	5.425 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.105 μm	0.160 μm	0.279 μm	0.988 μm

Surface Area Statistics (Arithmetic)			D4_10_174824.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.165 µm
Mean:	0.149 µm		Variance:	0.027 µm ²
Median:	0.109 µm		C.V.:	111%
Mean/Median ratio:	1.364		Skewness:	5.901 Right skewed
Mode:	0.097 µm		Kurtosis:	45.15 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.229 µm

Number Statistics (Arithmetic)			D4_10_174824.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.3%
Mean/Median ratio:	1.109		Skewness:	4.805 Right skewed
Mode:	0.073 μm		Kurtosis:	89.27 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.41
10	0.044	0.046	0.26	0.83	3.56
11	0.048	0.050	0.44	1.31	4.68
12	0.053	0.055	0.79	2.13	6.33
13	0.058	0.061	1.39	3.40	8.38
14	0.064	0.067	2.25	5.00	10.2
15	0.070	0.073	3.22	6.54	11.1
16	0.077	0.080	4.15	7.67	10.8
17	0.084	0.088	4.91	8.27	9.65
18	0.093	0.097	5.40	8.29	8.03
19	0.102	0.106	5.67	7.92	6.37
20	0.112	0.117	5.78	7.35	4.90
21	0.122	0.128	5.72	6.63	3.67
22	0.134	0.141	5.51	5.81	2.67
23	0.148	0.155	5.22	5.02	1.92
24	0.162	0.170	4.95	4.34	1.37
25	0.178	0.186	4.68	3.73	0.98
26	0.195	0.205	4.40	3.20	0.70
27	0.214	0.225	4.04	2.68	0.48
28	0.235	0.247	3.58	2.16	0.32
29	0.258	0.271	3.01	1.65	0.21
30	0.284	0.297	2.38	1.19	0.12
31	0.311	0.326	1.62	0.74	0.063
32	0.342	0.358	0.96	0.40	0.029
33	0.375	0.393	0.48	0.18	0.011
34	0.412	0.431	0.21	0.071	0.0035
35	0.452	0.474	0.15	0.046	0.0019
36	0.496	0.520	0.17	0.048	0.0016
37	0.545	0.571	0.31	0.081	0.0023
38	0.598	0.627	0.64	0.15	0.0035
39	0.656	0.688	1.03	0.22	0.0043
40	0.721	0.755	1.51	0.30	0.0048
41	0.791	0.829	1.94	0.35	0.0046
42	0.868	0.910	2.19	0.36	0.0039
43	0.953	0.999	2.29	0.34	0.0031
44	1.047	1.097	2.12	0.29	0.0022
45	1.149	1.204	1.68	0.21	0.0013

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.22	0.14	0.00072
47	1.385	1.451	0.89	0.092	0.00040
48	1.520	1.592	0.67	0.062	0.00022
49	1.668	1.748	0.61	0.052	0.00015
50	1.832	1.919	0.53	0.041	0.00010
51	2.011	2.107	0.40	0.028	0.000058
52	2.207	2.313	0.28	0.018	0.000030
53	2.423	2.539	0.12	0.0068	0.000010
54	2.660	2.787	0.034	0.0018	0.000002
55	2.920	3.059	0.0061	0.00030	2.89E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

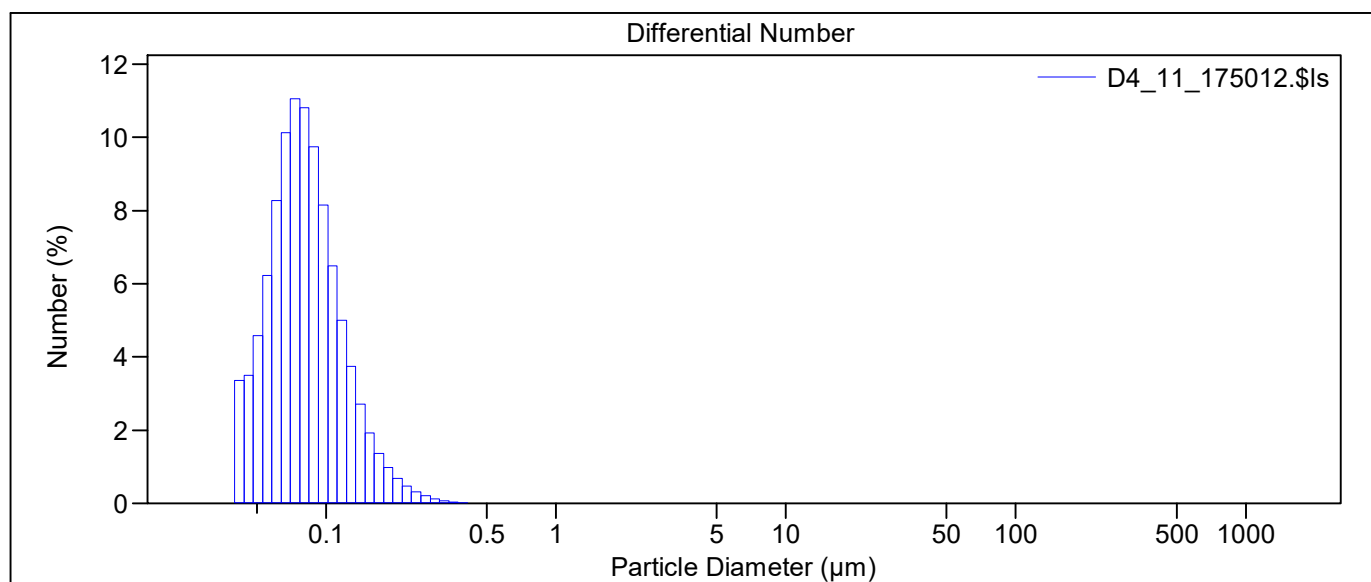
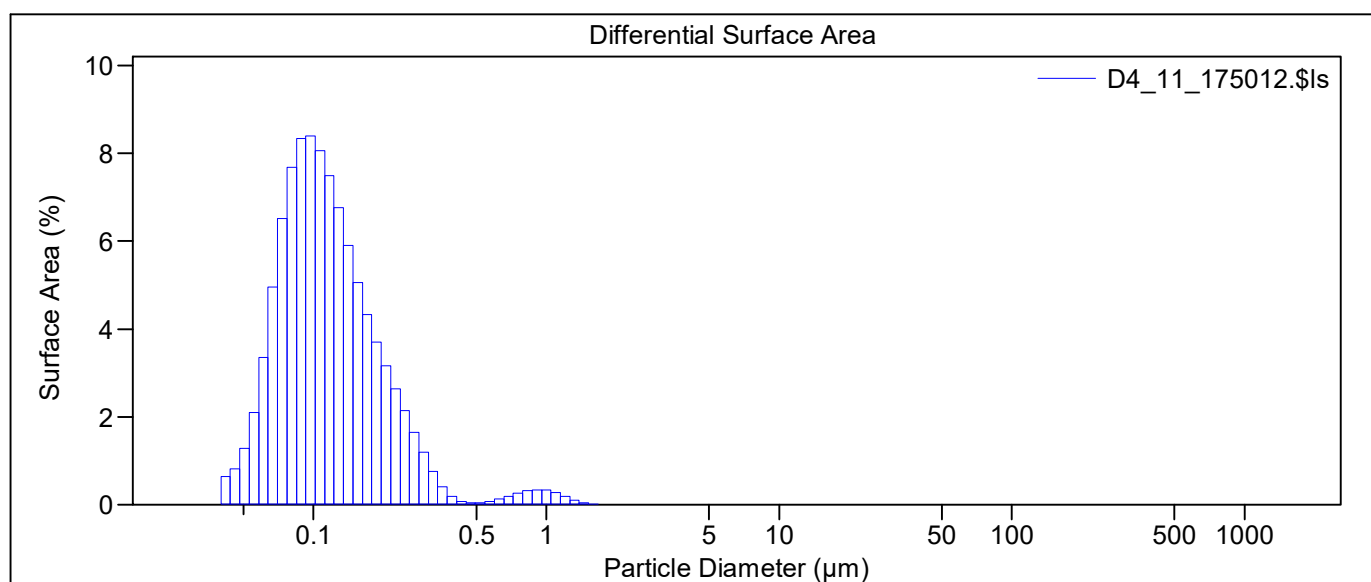
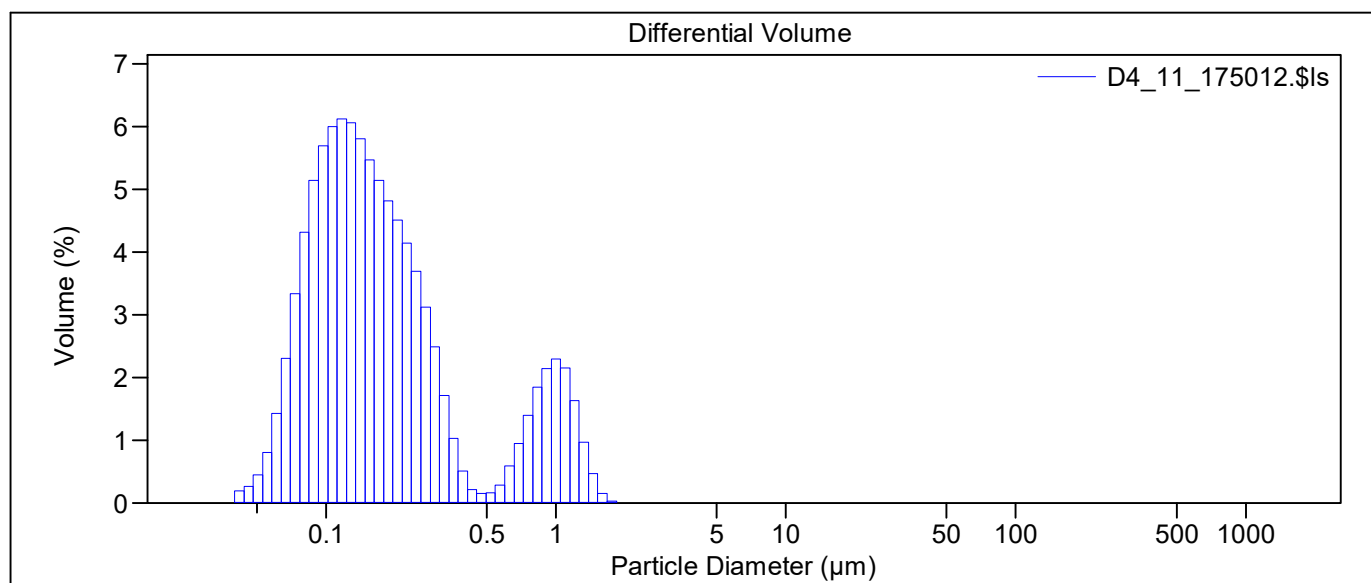
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_11_175012.\$ls		
	D4_11_175012.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.25%		
LS 13 320	Universal Liquid Module		
Start time:	17:48 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_11_175012.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.314 μm
Mean:	0.278 μm		Variance:	0.098 μm ²
Median:	0.153 μm		C.V.:	113%
Mean/Median ratio:	1.817		Skewness:	2.090 Right skewed
Mode:	0.117 μm		Kurtosis:	3.320 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.153 μm	0.254 μm	0.862 μm

Surface Area Statistics (Arithmetic)			D4_11_175012.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.139 µm
Mean:	0.143 µm		Variance:	0.019 µm ²
Median:	0.109 µm		C.V.:	97.1%
Mean/Median ratio:	1.314		Skewness:	5.186 Right skewed
Mode:	0.097 µm		Kurtosis:	32.61 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.155 µm	0.226 µm

Number Statistics (Arithmetic)			D4_11_175012.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.6%
Mean/Median ratio:	1.107		Skewness:	4.187 Right skewed
Mode:	0.073 μm		Kurtosis:	62.66 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



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D4.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.36
10	0.044	0.046	0.26	0.81	3.50
11	0.048	0.050	0.45	1.28	4.59
12	0.053	0.055	0.81	2.09	6.22
13	0.058	0.061	1.43	3.36	8.27
14	0.064	0.067	2.31	4.95	10.1
15	0.070	0.073	3.33	6.51	11.0
16	0.077	0.080	4.32	7.68	10.8
17	0.084	0.088	5.14	8.33	9.74
18	0.093	0.097	5.69	8.40	8.14
19	0.102	0.106	6.00	8.06	6.49
20	0.112	0.117	6.12	7.50	5.00
21	0.122	0.128	6.06	6.76	3.75
22	0.134	0.141	5.81	5.90	2.71
23	0.148	0.155	5.47	5.06	1.93
24	0.162	0.170	5.14	4.34	1.37
25	0.178	0.186	4.82	3.70	0.97
26	0.195	0.205	4.51	3.16	0.69
27	0.214	0.225	4.15	2.64	0.48
28	0.235	0.247	3.69	2.14	0.32
29	0.258	0.271	3.12	1.65	0.21
30	0.284	0.297	2.49	1.20	0.12
31	0.311	0.326	1.71	0.75	0.064
32	0.342	0.358	1.03	0.41	0.029
33	0.375	0.393	0.51	0.19	0.011
34	0.412	0.431	0.22	0.072	0.0035
35	0.452	0.474	0.15	0.045	0.0018
36	0.496	0.520	0.16	0.044	0.0015
37	0.545	0.571	0.28	0.071	0.0020
38	0.598	0.627	0.59	0.13	0.0031
39	0.656	0.688	0.94	0.20	0.0038
40	0.721	0.755	1.40	0.27	0.0042
41	0.791	0.829	1.85	0.32	0.0042
42	0.868	0.910	2.14	0.34	0.0037
43	0.953	0.999	2.29	0.33	0.0030
44	1.047	1.097	2.15	0.28	0.0021
45	1.149	1.204	1.63	0.19	0.0012
46	1.261	1.321	0.97	0.11	0.00055
47	1.385	1.451	0.46	0.046	0.00020
48	1.520	1.592	0.15	0.013	0.000048
49	1.668	1.748	0.031	0.0025	0.000008
50	1.832	1.919	0.0045	0.00033	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

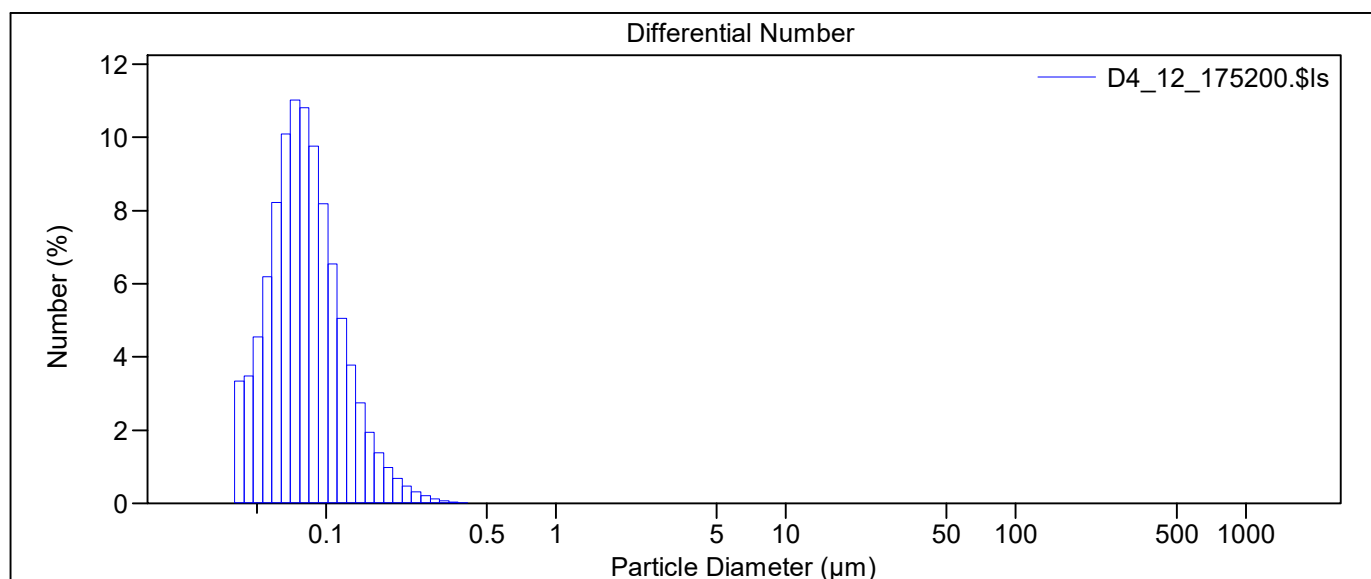
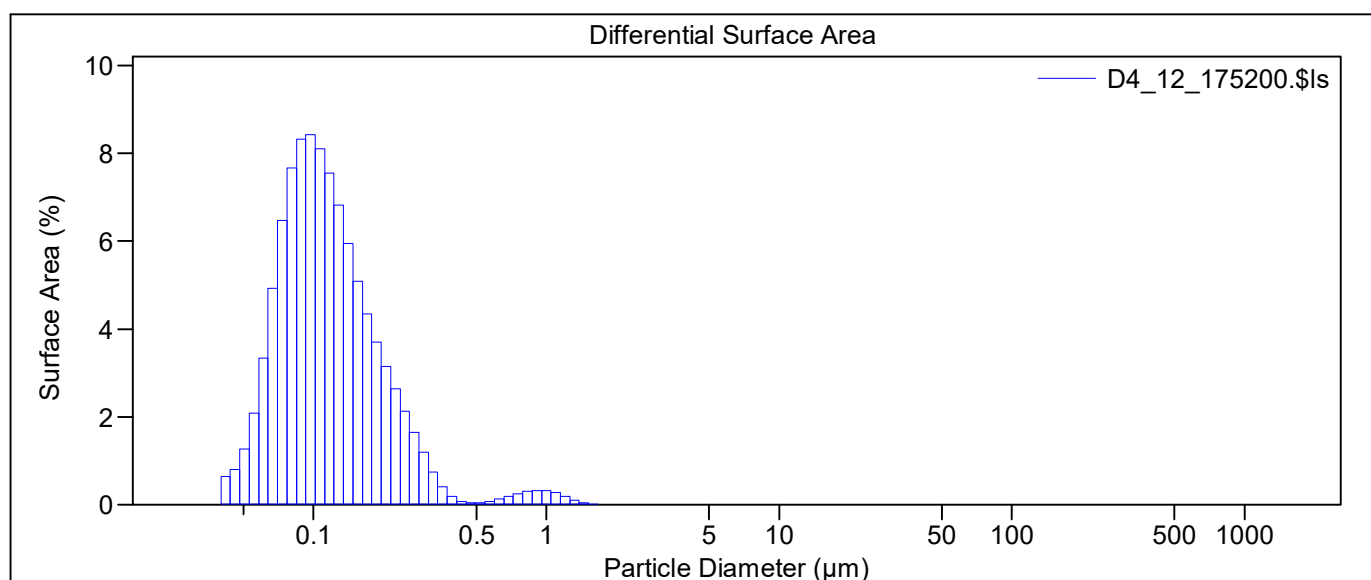
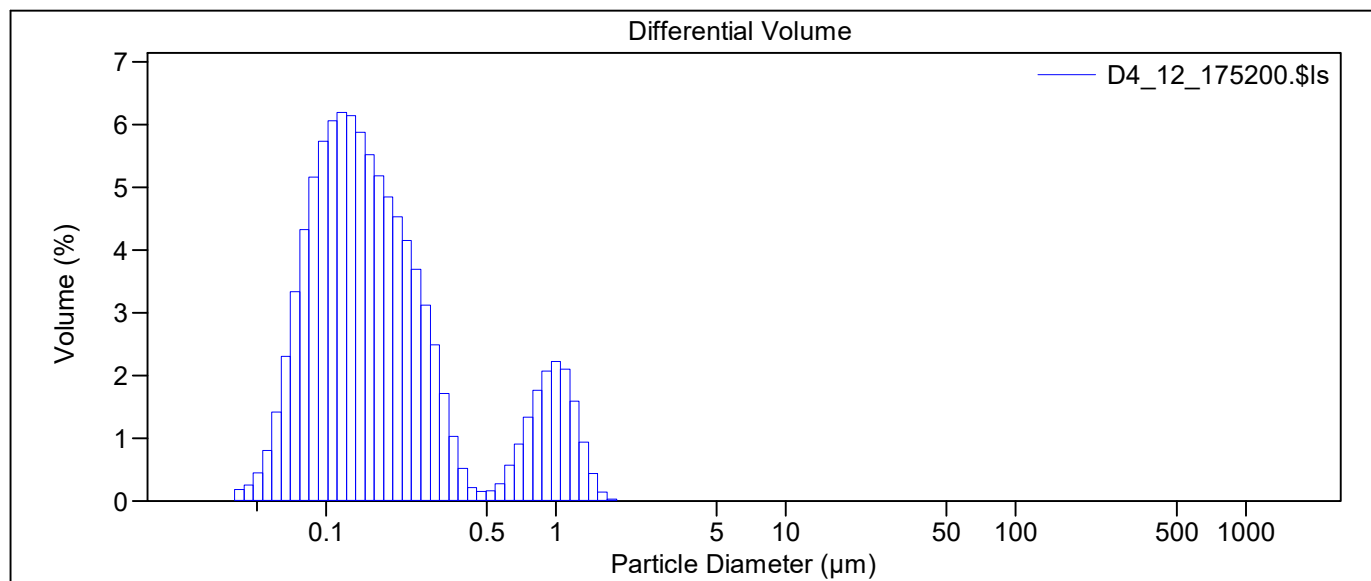
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_12_175200.\$ls		
	D4_12_175200.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.32%		
LS 13 320	Universal Liquid Module		
Start time:	17:50 12	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_12_175200.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.309 μm
Mean:	0.274 μm		Variance:	0.096 μm ²
Median:	0.152 μm		C.V.:	113%
Mean/Median ratio:	1.800		Skewness:	2.136 Right skewed
Mode:	0.117 μm		Kurtosis:	3.538 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.152 μm	0.251 μm	0.848 μm

Surface Area Statistics (Arithmetic)			D4_12_175200.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.137 μm
Mean:	0.143 μm		Variance:	0.019 μm ²
Median:	0.109 μm		C.V.:	96.0%
Mean/Median ratio:	1.307		Skewness:	5.240 Right skewed
Mode:	0.097 μm		Kurtosis:	33.48 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.155 μm	0.225 μm

Number Statistics (Arithmetic)			D4_12_175200.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.4%
Mean/Median ratio:	1.106		Skewness:	4.114 Right skewed
Mode:	0.073 μm		Kurtosis:	60.99 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.64	3.34
10	0.044	0.046	0.26	0.80	3.47
11	0.048	0.050	0.45	1.27	4.56
12	0.053	0.055	0.81	2.08	6.18
13	0.058	0.061	1.42	3.33	8.23
14	0.064	0.067	2.31	4.92	10.1
15	0.070	0.073	3.33	6.48	11.0
16	0.077	0.080	4.33	7.66	10.8
17	0.084	0.088	5.17	8.33	9.75
18	0.093	0.097	5.73	8.42	8.18
19	0.102	0.106	6.06	8.11	6.54
20	0.112	0.117	6.20	7.55	5.05
21	0.122	0.128	6.14	6.82	3.79
22	0.134	0.141	5.88	5.95	2.74
23	0.148	0.155	5.52	5.09	1.94
24	0.162	0.170	5.18	4.35	1.38
25	0.178	0.186	4.84	3.70	0.98
26	0.195	0.205	4.53	3.15	0.69
27	0.214	0.225	4.15	2.64	0.48
28	0.235	0.247	3.69	2.13	0.32
29	0.258	0.271	3.12	1.64	0.21
30	0.284	0.297	2.49	1.20	0.12
31	0.311	0.326	1.72	0.75	0.064
32	0.342	0.358	1.03	0.41	0.029
33	0.375	0.393	0.52	0.19	0.011
34	0.412	0.431	0.22	0.072	0.0035
35	0.452	0.474	0.15	0.046	0.0019
36	0.496	0.520	0.16	0.045	0.0015
37	0.545	0.571	0.28	0.069	0.0019
38	0.598	0.627	0.57	0.13	0.0030
39	0.656	0.688	0.91	0.19	0.0036
40	0.721	0.755	1.34	0.25	0.0041
41	0.791	0.829	1.77	0.30	0.0040
42	0.868	0.910	2.07	0.32	0.0036
43	0.953	0.999	2.23	0.32	0.0029
44	1.047	1.097	2.10	0.27	0.0021
45	1.149	1.204	1.59	0.19	0.0012

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.94	0.10	0.00053
47	1.385	1.451	0.44	0.043	0.00019
48	1.520	1.592	0.14	0.012	0.000045
49	1.668	1.748	0.027	0.0022	0.000007
50	1.832	1.919	0.0037	0.00027	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

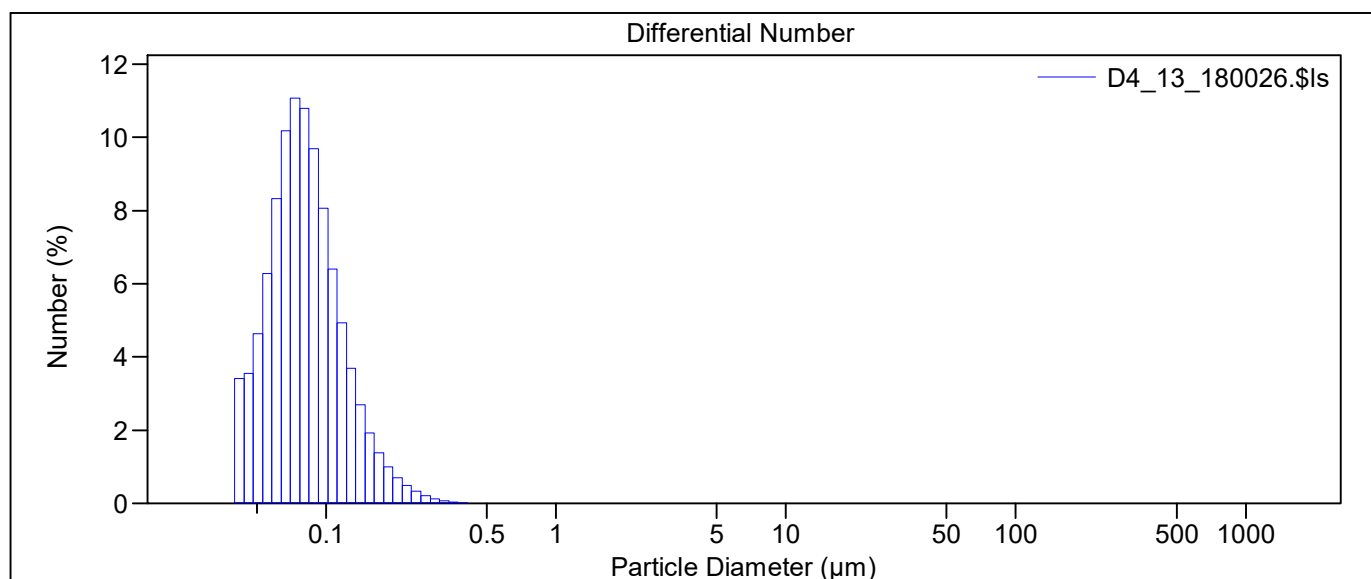
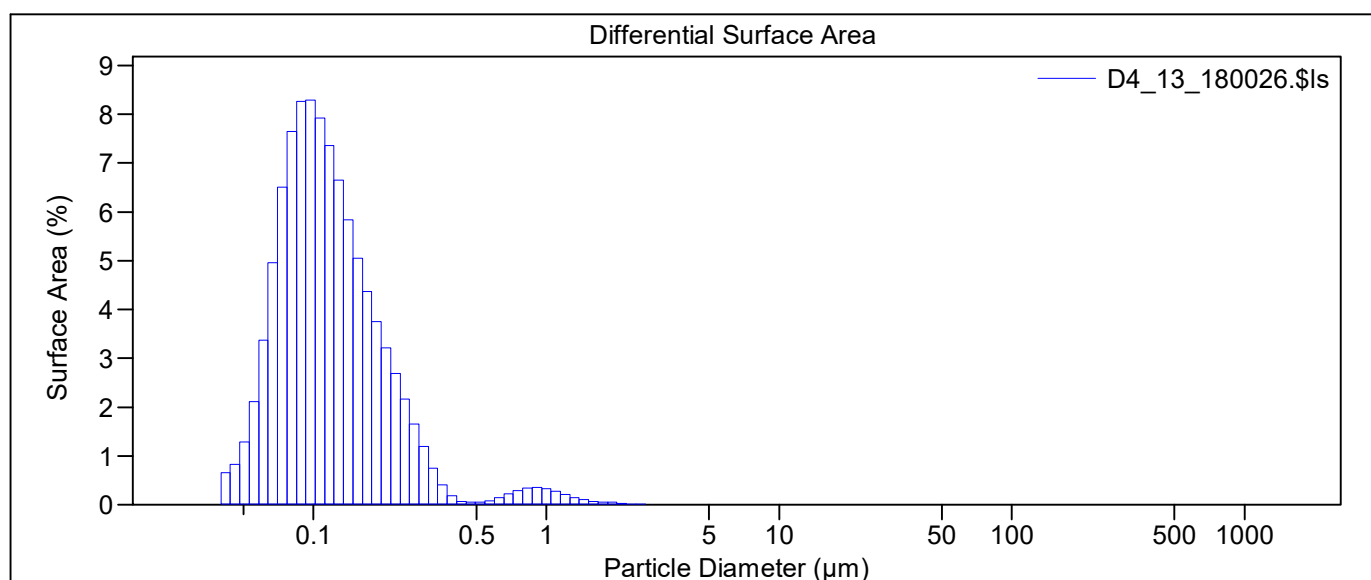
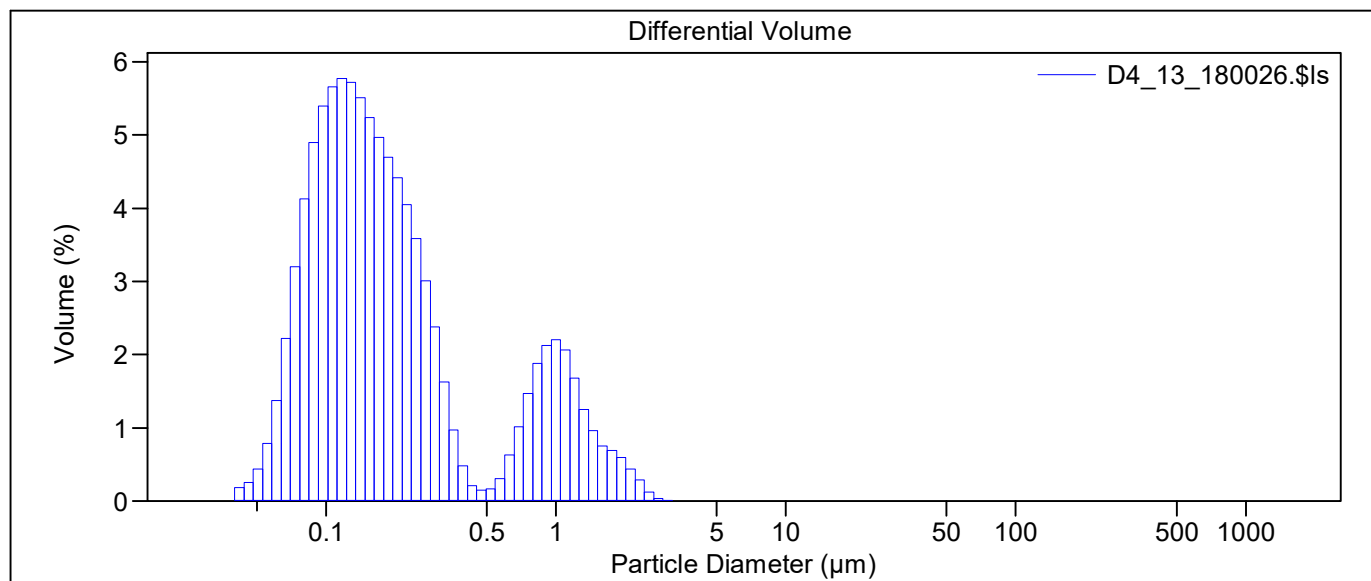
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_13_180026.\$ls		
	D4_13_180026.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.08%		
LS 13 320	Universal Liquid Module		
Start time:	17:58 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_13_180026.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.424 μm
Mean:	0.337 μm		Variance:	0.180 μm ²
Median:	0.160 μm		C.V.:	126%
Mean/Median ratio:	2.106		Skewness:	2.313 Right skewed
Mode:	0.117 μm		Kurtosis:	5.275 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.160 μm	0.279 μm	1.000 μm

Surface Area Statistics (Arithmetic)			D4_13_180026.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.167 µm
Mean:	0.149 µm		Variance:	0.028 µm ²
Median:	0.109 µm		C.V.:	112%
Mean/Median ratio:	1.365		Skewness:	5.965 Right skewed
Mode:	0.097 µm		Kurtosis:	45.88 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.229 µm

Number Statistics (Arithmetic)			D4_13_180026.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.3%
Mean/Median ratio:	1.109		Skewness:	4.824 Right skewed
Mode:	0.073 μm		Kurtosis:	91.13 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



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D4.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.42
10	0.044	0.046	0.25	0.82	3.55
11	0.048	0.050	0.44	1.29	4.63
12	0.053	0.055	0.78	2.11	6.28
13	0.058	0.061	1.37	3.37	8.32
14	0.064	0.067	2.22	4.96	10.2
15	0.070	0.073	3.20	6.51	11.1
16	0.077	0.080	4.13	7.65	10.8
17	0.084	0.088	4.89	8.26	9.68
18	0.093	0.097	5.39	8.29	8.06
19	0.102	0.106	5.66	7.92	6.39
20	0.112	0.117	5.77	7.36	4.93
21	0.122	0.128	5.72	6.65	3.70
22	0.134	0.141	5.51	5.84	2.69
23	0.148	0.155	5.24	5.05	1.93
24	0.162	0.170	4.97	4.37	1.39
25	0.178	0.186	4.70	3.76	0.99
26	0.195	0.205	4.41	3.22	0.70
27	0.214	0.225	4.05	2.69	0.49
28	0.235	0.247	3.59	2.17	0.33
29	0.258	0.271	3.01	1.66	0.21
30	0.284	0.297	2.38	1.20	0.12
31	0.311	0.326	1.62	0.74	0.064
32	0.342	0.358	0.97	0.40	0.029
33	0.375	0.393	0.48	0.18	0.011
34	0.412	0.431	0.21	0.071	0.0035
35	0.452	0.474	0.15	0.046	0.0019
36	0.496	0.520	0.17	0.048	0.0016
37	0.545	0.571	0.30	0.079	0.0022
38	0.598	0.627	0.63	0.15	0.0035
39	0.656	0.688	1.01	0.22	0.0042
40	0.721	0.755	1.47	0.29	0.0047
41	0.791	0.829	1.88	0.34	0.0045
42	0.868	0.910	2.12	0.35	0.0038
43	0.953	0.999	2.21	0.33	0.0030
44	1.047	1.097	2.07	0.28	0.0021
45	1.149	1.204	1.68	0.21	0.0013
46	1.261	1.321	1.25	0.14	0.00074
47	1.385	1.451	0.96	0.099	0.00043
48	1.520	1.592	0.75	0.071	0.00026
49	1.668	1.748	0.69	0.059	0.00018
50	1.832	1.919	0.60	0.046	0.00012
51	2.011	2.107	0.44	0.031	0.000064
52	2.207	2.313	0.29	0.019	0.000032
53	2.423	2.539	0.12	0.0071	0.000010
54	2.660	2.787	0.035	0.0019	0.000002
55	2.920	3.059	0.0061	0.00030	2.89E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

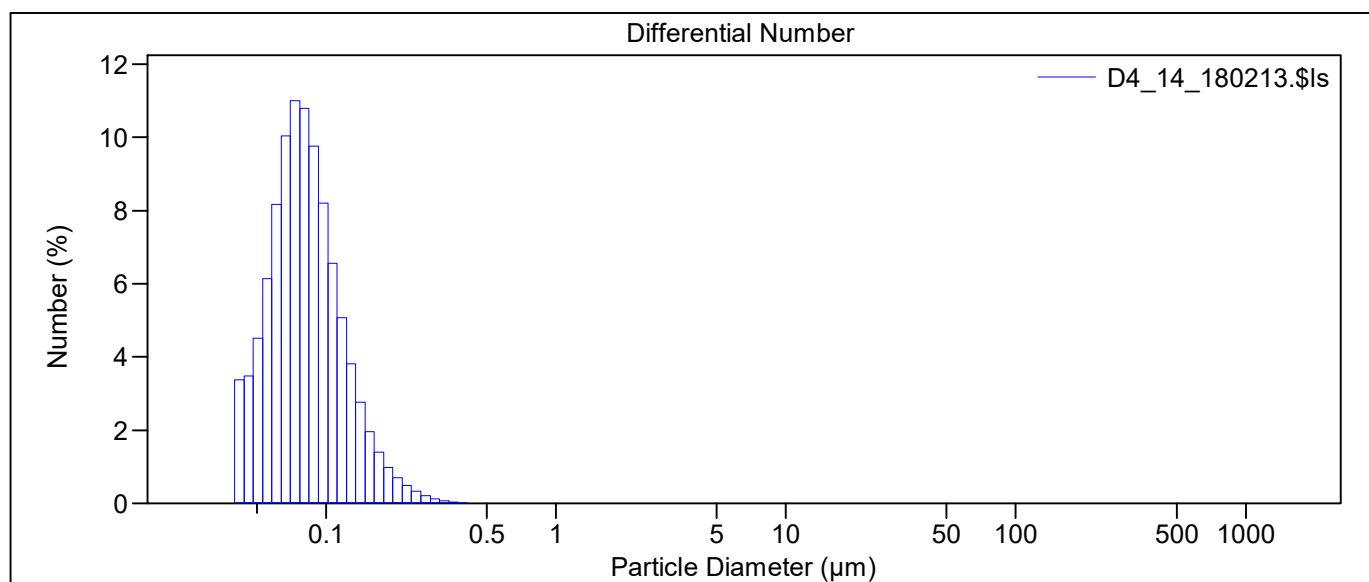
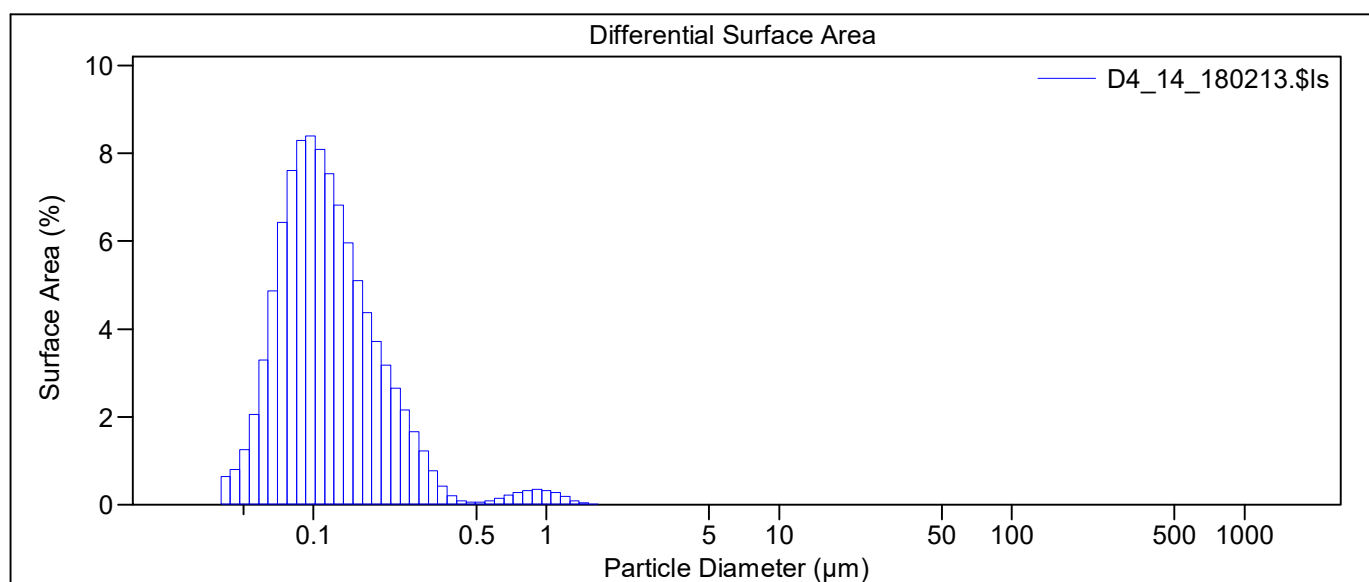
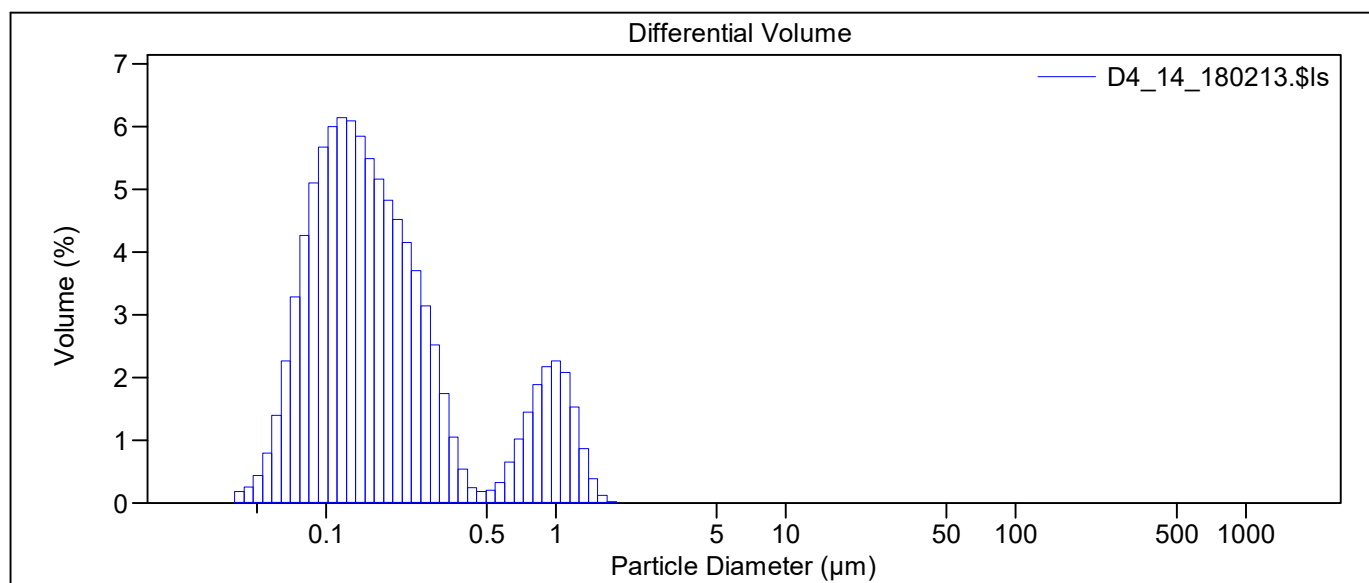
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_14_180213.\$ls		
	D4_14_180213.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.21%		
LS 13 320	Universal Liquid Module		
Start time:	18:00 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_14_180213.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.307 μm
Mean:	0.276 μm		Variance:	0.094 μm ²
Median:	0.154 μm		C.V.:	111%
Mean/Median ratio:	1.796		Skewness:	2.088 Right skewed
Mode:	0.117 μm		Kurtosis:	3.334 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.104 μm	0.154 μm	0.255 μm	0.846 μm

Surface Area Statistics (Arithmetic)			D4_14_180213.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.138 µm
Mean:	0.144 µm		Variance:	0.019 µm ²
Median:	0.109 µm		C.V.:	95.9%
Mean/Median ratio:	1.312		Skewness:	5.103 Right skewed
Mode:	0.097 µm		Kurtosis:	31.69 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.227 µm

Number Statistics (Arithmetic)			D4_14_180213.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.7%
Mean/Median ratio:	1.107		Skewness:	4.141 Right skewed
Mode:	0.073 μm		Kurtosis:	60.42 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.64	3.37
10	0.044	0.046	0.26	0.80	3.47
11	0.048	0.050	0.44	1.25	4.51
12	0.053	0.055	0.79	2.05	6.14
13	0.058	0.061	1.39	3.29	8.18
14	0.064	0.067	2.27	4.87	10.0
15	0.070	0.073	3.28	6.43	11.0
16	0.077	0.080	4.27	7.61	10.8
17	0.084	0.088	5.10	8.29	9.76
18	0.093	0.097	5.67	8.39	8.20
19	0.102	0.106	6.00	8.09	6.56
20	0.112	0.117	6.14	7.54	5.07
21	0.122	0.128	6.09	6.82	3.81
22	0.134	0.141	5.85	5.96	2.76
23	0.148	0.155	5.49	5.10	1.96
24	0.162	0.170	5.16	4.37	1.39
25	0.178	0.186	4.83	3.72	0.99
26	0.195	0.205	4.52	3.17	0.70
27	0.214	0.225	4.15	2.66	0.48
28	0.235	0.247	3.70	2.16	0.33
29	0.258	0.271	3.14	1.67	0.21
30	0.284	0.297	2.52	1.22	0.13
31	0.311	0.326	1.74	0.77	0.066
32	0.342	0.358	1.05	0.42	0.030
33	0.375	0.393	0.54	0.20	0.012
34	0.412	0.431	0.24	0.081	0.0040
35	0.452	0.474	0.18	0.054	0.0022
36	0.496	0.520	0.20	0.056	0.0019
37	0.545	0.571	0.33	0.083	0.0024
38	0.598	0.627	0.65	0.15	0.0035
39	0.656	0.688	1.02	0.21	0.0041
40	0.721	0.755	1.45	0.28	0.0044
41	0.791	0.829	1.89	0.33	0.0044
42	0.868	0.910	2.17	0.34	0.0038
43	0.953	0.999	2.27	0.33	0.0030
44	1.047	1.097	2.08	0.27	0.0021
45	1.149	1.204	1.53	0.18	0.0012

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.86	0.094	0.00049
47	1.385	1.451	0.39	0.039	0.00017
48	1.520	1.592	0.12	0.011	0.000039
49	1.668	1.748	0.021	0.0018	0.000005
50	1.832	1.919	0.0031	0.00023	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

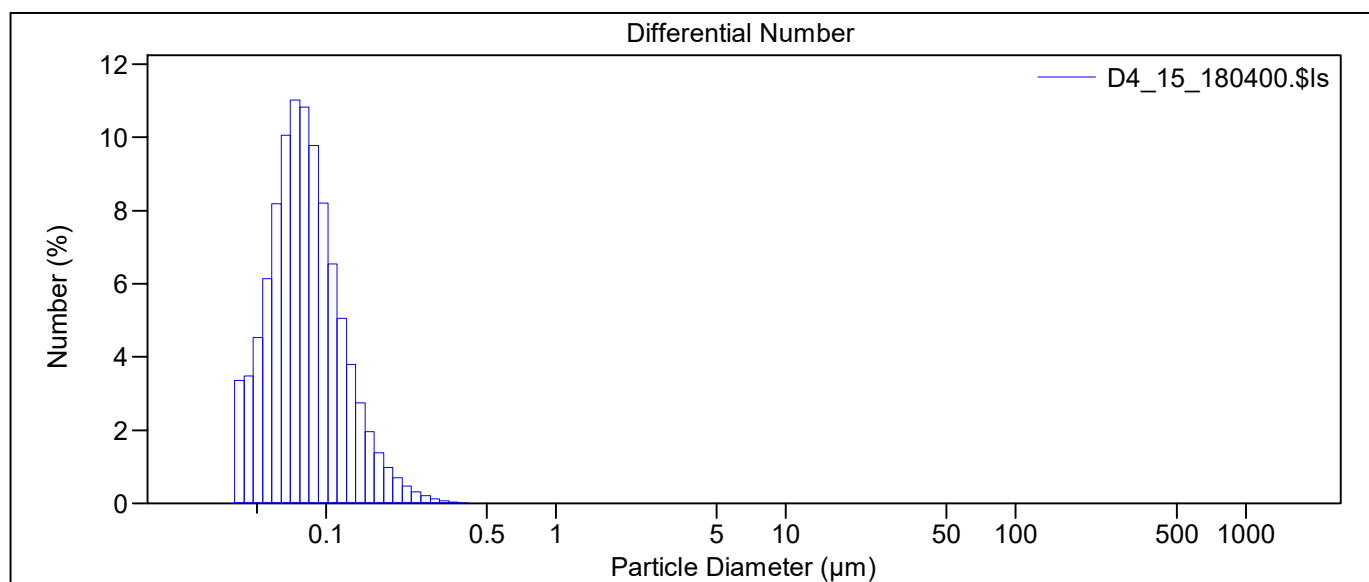
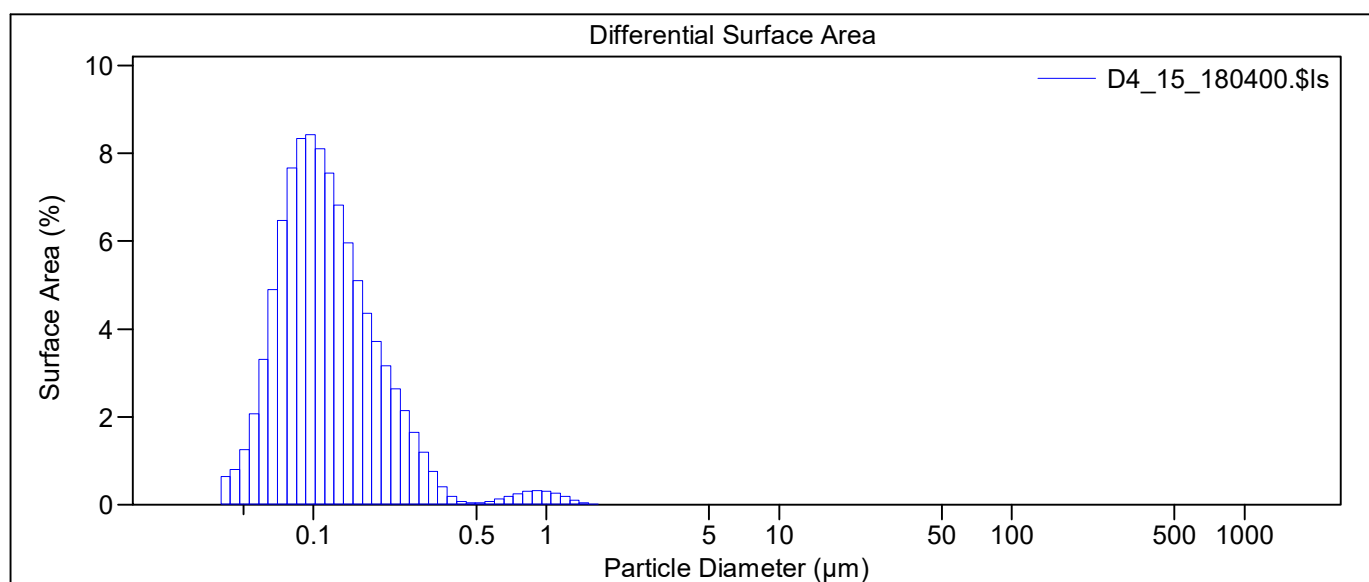
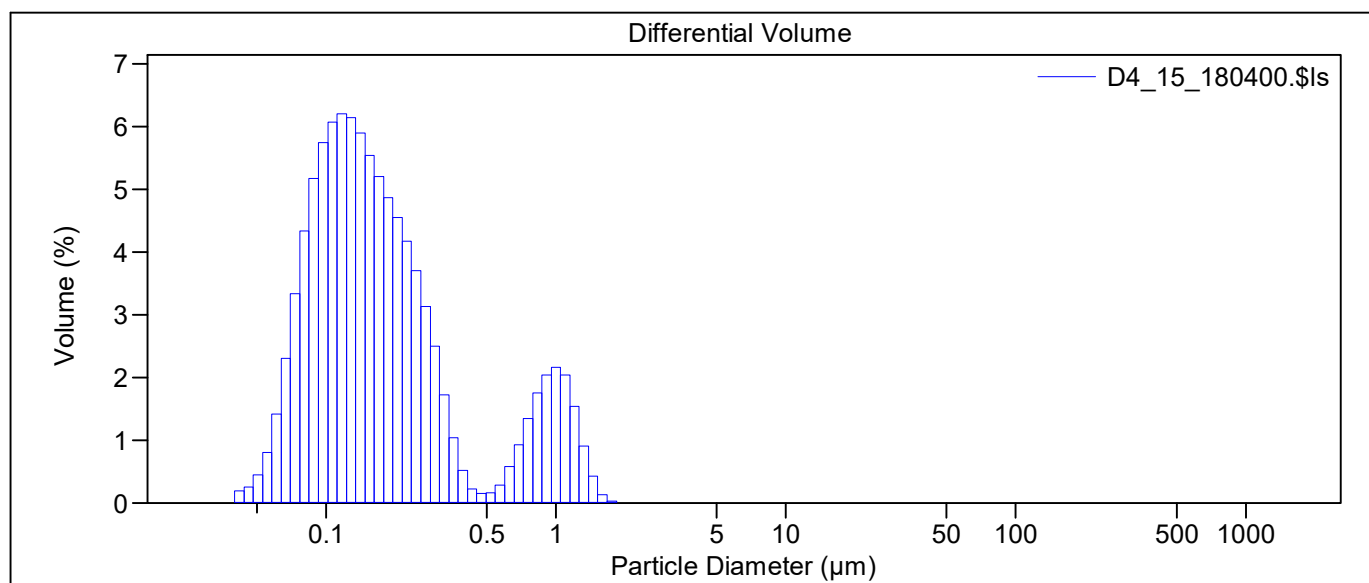
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\D4\D4_15_180400.\$ls		
	D4_15_180400.\$ls		
File ID:	D4		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.32%		
LS 13 320	Universal Liquid Module		
Start time:	18:02 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			D4_15_180400.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.306 μm
Mean:	0.272 μm		Variance:	0.094 μm ²
Median:	0.152 μm		C.V.:	113%
Mean/Median ratio:	1.788		Skewness:	2.160 Right skewed
Mode:	0.117 μm		Kurtosis:	3.674 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.152 μm	0.250 μm	0.837 μm

Surface Area Statistics (Arithmetic)			D4_15_180400.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.136 μm
Mean:	0.142 μm		Variance:	0.018 μm ²
Median:	0.109 μm		C.V.:	95.4%
Mean/Median ratio:	1.304		Skewness:	5.247 Right skewed
Mode:	0.097 μm		Kurtosis:	33.74 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.155 μm	0.225 μm

Number Statistics (Arithmetic)			D4_15_180400.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.4%
Mean/Median ratio:	1.106		Skewness:	4.076 Right skewed
Mode:	0.073 μm		Kurtosis:	59.82 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.64	3.36
10	0.044	0.046	0.26	0.80	3.47
11	0.048	0.050	0.45	1.26	4.52
12	0.053	0.055	0.80	2.06	6.15
13	0.058	0.061	1.42	3.31	8.19
14	0.064	0.067	2.30	4.90	10.1
15	0.070	0.073	3.33	6.47	11.0
16	0.077	0.080	4.33	7.66	10.8
17	0.084	0.088	5.18	8.34	9.77
18	0.093	0.097	5.75	8.43	8.20
19	0.102	0.106	6.07	8.11	6.55
20	0.112	0.117	6.20	7.55	5.06
21	0.122	0.128	6.15	6.82	3.79
22	0.134	0.141	5.89	5.96	2.75
23	0.148	0.155	5.54	5.10	1.95
24	0.162	0.170	5.20	4.36	1.39
25	0.178	0.186	4.87	3.72	0.98
26	0.195	0.205	4.55	3.16	0.69
27	0.214	0.225	4.17	2.64	0.48
28	0.235	0.247	3.70	2.14	0.32
29	0.258	0.271	3.13	1.65	0.21
30	0.284	0.297	2.50	1.20	0.12
31	0.311	0.326	1.72	0.75	0.065
32	0.342	0.358	1.04	0.41	0.030
33	0.375	0.393	0.52	0.19	0.011
34	0.412	0.431	0.22	0.073	0.0036
35	0.452	0.474	0.15	0.046	0.0019
36	0.496	0.520	0.17	0.046	0.0016
37	0.545	0.571	0.29	0.071	0.0020
38	0.598	0.627	0.58	0.13	0.0031
39	0.656	0.688	0.93	0.19	0.0037
40	0.721	0.755	1.35	0.25	0.0041
41	0.791	0.829	1.76	0.30	0.0040
42	0.868	0.910	2.04	0.32	0.0035
43	0.953	0.999	2.16	0.31	0.0028
44	1.047	1.097	2.04	0.26	0.0020
45	1.149	1.204	1.54	0.18	0.0012

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.91	0.098	0.00051
47	1.385	1.451	0.43	0.042	0.00018
48	1.520	1.592	0.14	0.012	0.000044
49	1.668	1.748	0.027	0.0022	0.000007
50	1.832	1.919	0.0039	0.00029	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

D4.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M01\M01.\$av
M01.\$av
File ID: M01
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M01.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.470 µm
Mean:	0.366 µm	Variance:	0.221 µm ²
Median:	0.162 µm	C.V.:	128%
Mean/Median ratio:	2.255	Skewness:	2.284 Right skewed
Mode:	0.106 µm	Kurtosis:	5.928 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.083 µm	0.108 µm	0.162 µm	0.284 µm	1.106 µm

Surface Area Statistics (Arithmetic) M01.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.181 µm
Mean:	0.154 µm	Variance:	0.033 µm ²
Median:	0.112 µm	C.V.:	117%
Mean/Median ratio:	1.378	Skewness:	6.093 Right skewed
Mode:	0.097 µm	Kurtosis:	47.80 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.069 µm	0.086 µm	0.112 µm	0.159 µm	0.229 µm

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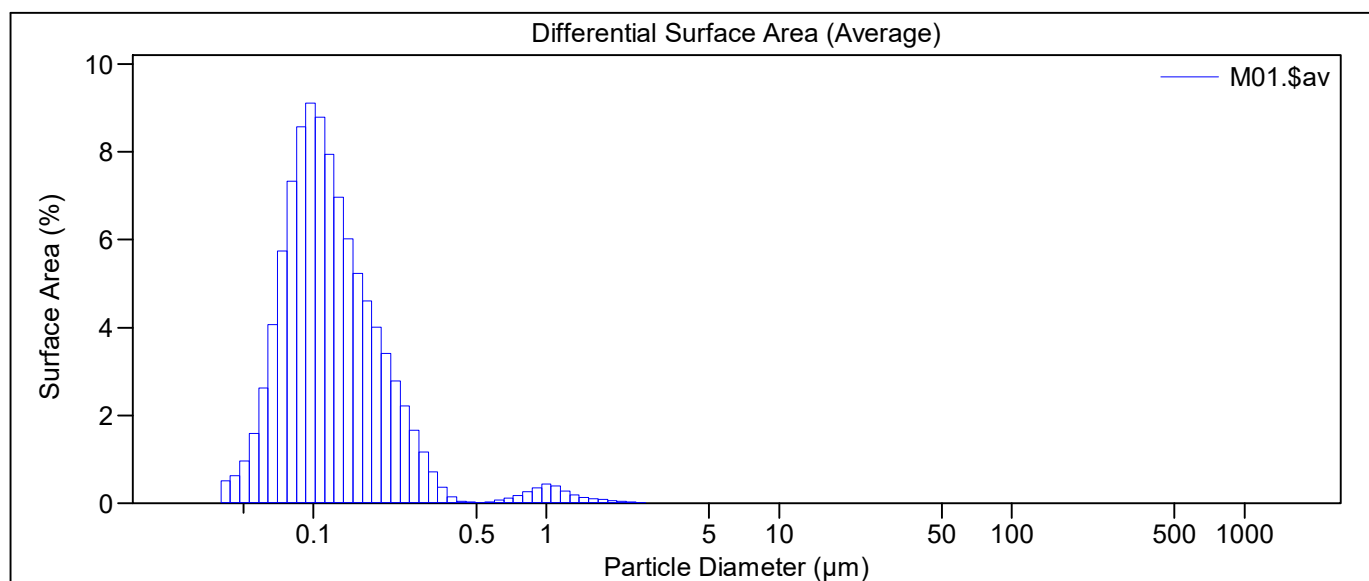
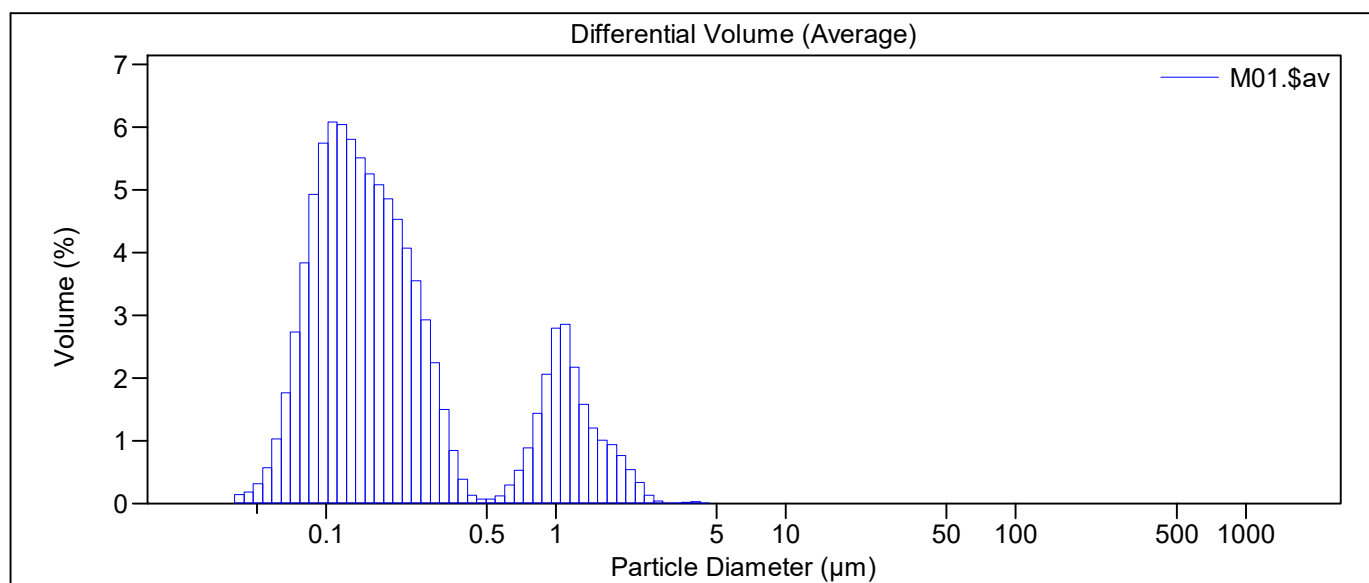
Number Statistics (Arithmetic)

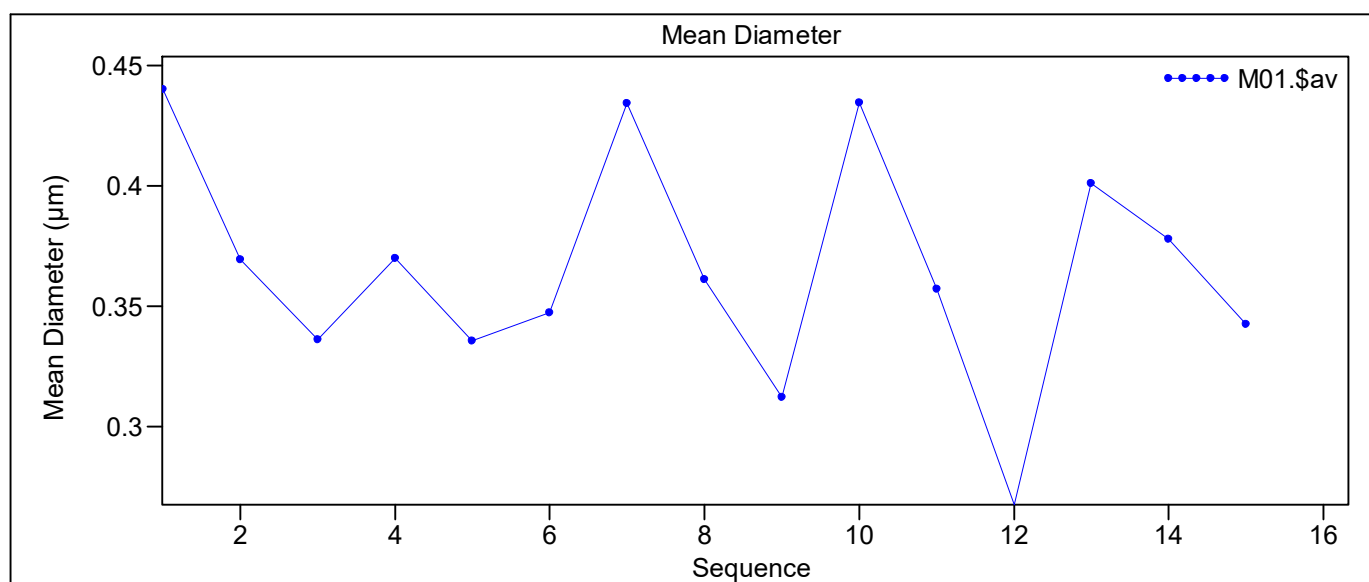
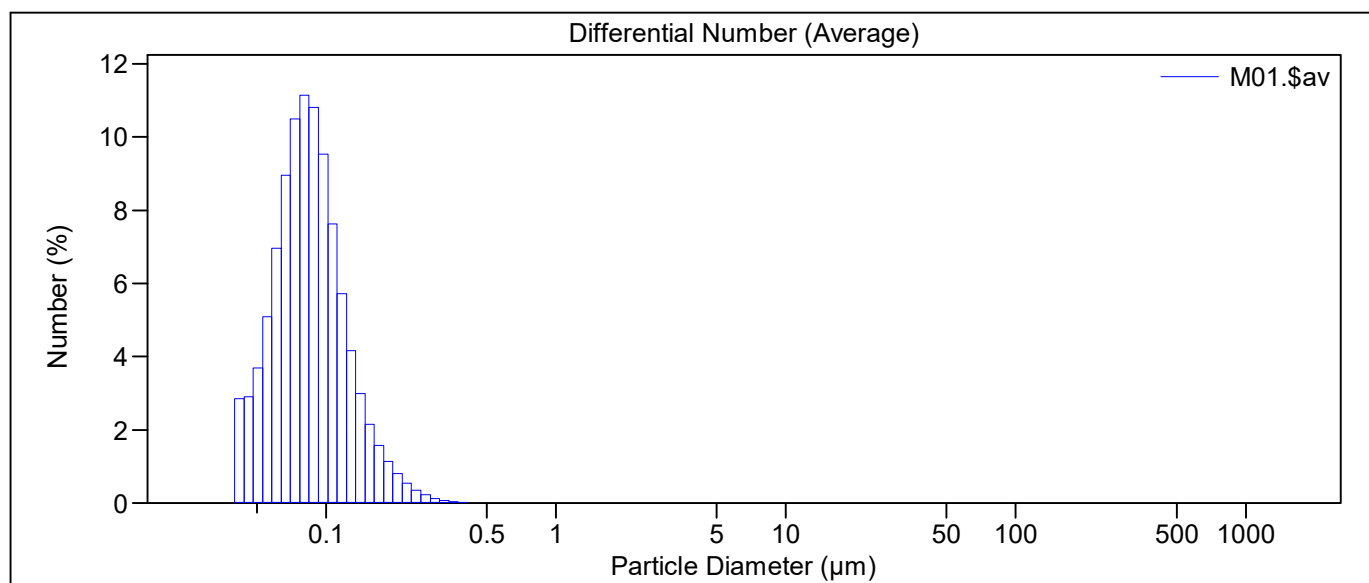
M01.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%			
Mean:	0.091 μm	S.D.:	0.040 μm	
Median:	0.083 μm	Variance:	0.0016 μm^2	
Mean/Median ratio:	1.094	C.V.:	44.1%	
Mode:	0.080 μm	Skewness:	5.133 Right skewed	
		Kurtosis:	108.4 Leptokurtic	

<10%	<25%	<50%	<75%	<90%
0.053 μm	0.066 μm	0.083 μm	0.105 μm	0.135 μm





M01.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.14	0.51	2.86
10	0.044	0.046	0.19	0.62	2.90
11	0.048	0.050	0.31	0.96	3.70
12	0.053	0.055	0.57	1.59	5.09
13	0.058	0.061	1.04	2.62	6.96
14	0.064	0.067	1.76	4.06	8.96
15	0.070	0.073	2.73	5.74	10.5
16	0.077	0.080	3.84	7.34	11.1
17	0.084	0.088	4.93	8.58	10.8

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M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.74	9.11	9.53
19	0.102	0.106	6.09	8.79	7.63
20	0.112	0.117	6.04	7.95	5.73
21	0.122	0.128	5.81	6.96	4.16
22	0.134	0.141	5.51	6.02	2.98
23	0.148	0.155	5.26	5.23	2.15
24	0.162	0.170	5.08	4.61	1.57
25	0.178	0.186	4.85	4.01	1.14
26	0.195	0.205	4.53	3.40	0.80
27	0.214	0.225	4.07	2.79	0.54
28	0.235	0.247	3.55	2.21	0.36
29	0.258	0.271	2.93	1.66	0.22
30	0.284	0.297	2.24	1.16	0.13
31	0.311	0.326	1.50	0.71	0.066
32	0.342	0.358	0.85	0.37	0.028
33	0.375	0.393	0.39	0.15	0.0096
34	0.412	0.431	0.14	0.048	0.0026
35	0.452	0.474	0.072	0.023	0.0010
36	0.496	0.520	0.067	0.020	0.00073
37	0.545	0.571	0.12	0.033	0.0010
38	0.598	0.627	0.30	0.073	0.0018
39	0.656	0.688	0.53	0.12	0.0025
40	0.721	0.755	0.89	0.18	0.0031
41	0.791	0.829	1.44	0.27	0.0038
42	0.868	0.910	2.06	0.35	0.0041
43	0.953	0.999	2.79	0.43	0.0042
44	1.047	1.097	2.86	0.40	0.0033
45	1.149	1.204	2.18	0.28	0.0019
46	1.261	1.321	1.58	0.18	0.0010
47	1.385	1.451	1.21	0.13	0.00060
48	1.520	1.592	1.01	0.098	0.00038
49	1.668	1.748	0.93	0.082	0.00026
50	1.832	1.919	0.77	0.061	0.00016
51	2.011	2.107	0.54	0.040	0.000088
52	2.207	2.313	0.33	0.022	0.000041
53	2.423	2.539	0.13	0.0080	0.000012
54	2.660	2.787	0.038	0.0021	0.000003
55	2.920	3.059	0.0088	0.00044	4.64E-7
56	3.205	3.358	0.010	0.00048	4.16E-7
57	3.519	3.687	0.024	0.00100	0.000001
58	3.863	4.047	0.026	0.00098	0.000001
59	4.240	4.443	0.012	0.00040	2.01E-7
60	4.655	4.877	0.0031	0.000097	4.01E-8
61	5.110	5.354	0.00021	0.000006	2.1E-9
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

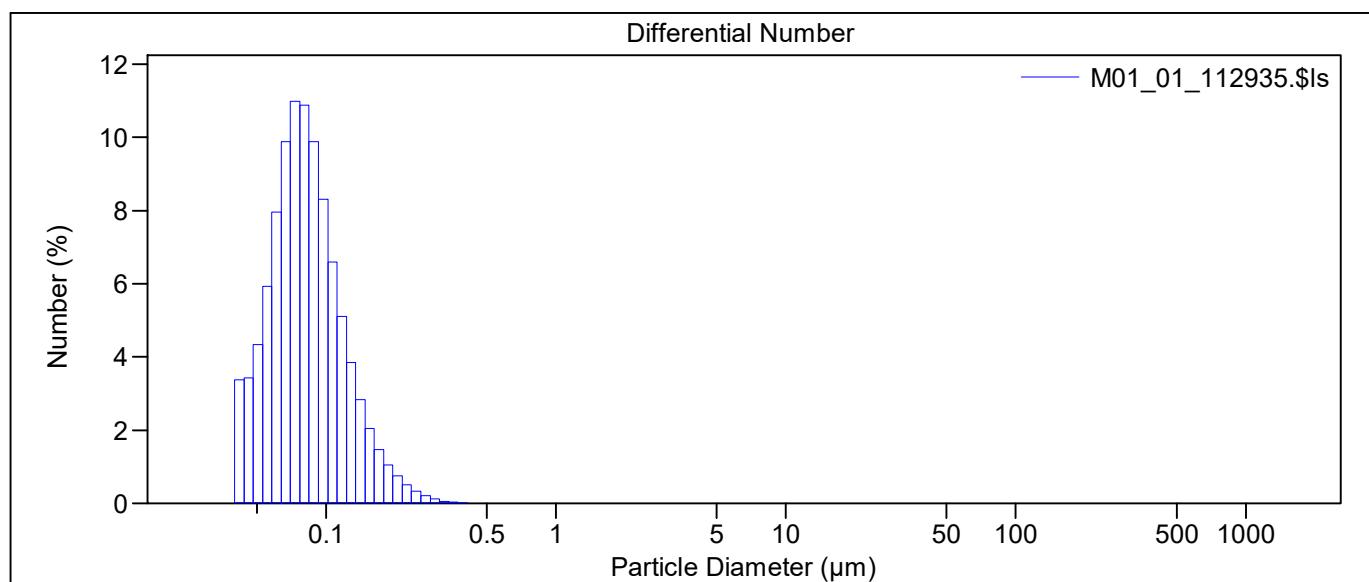
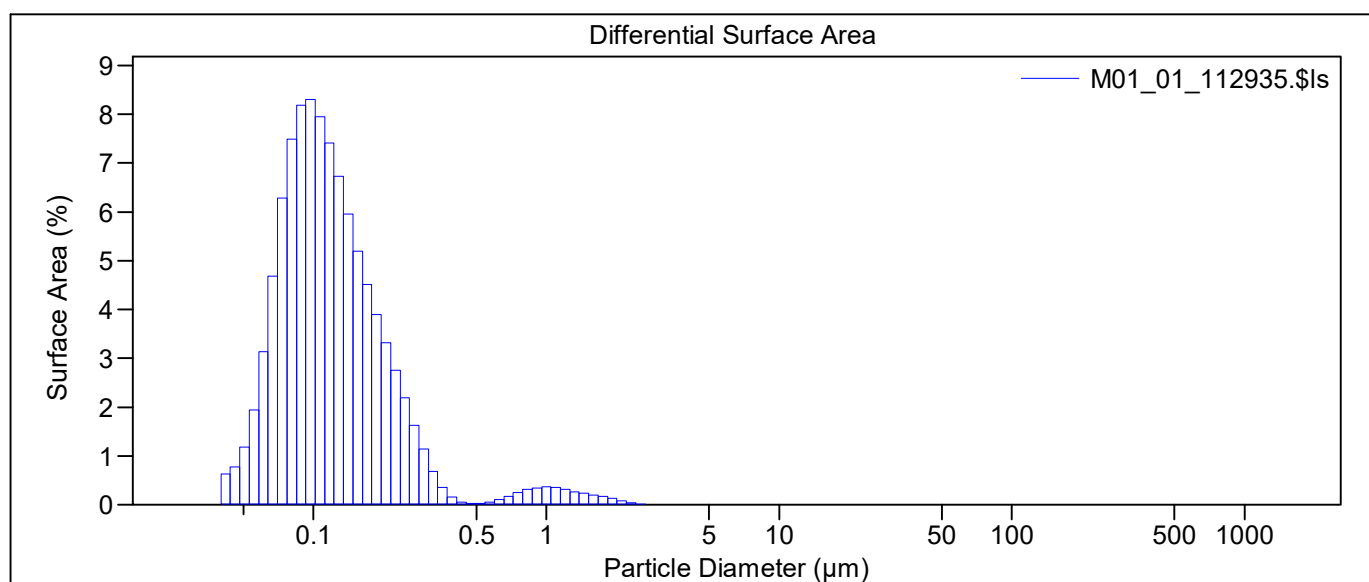
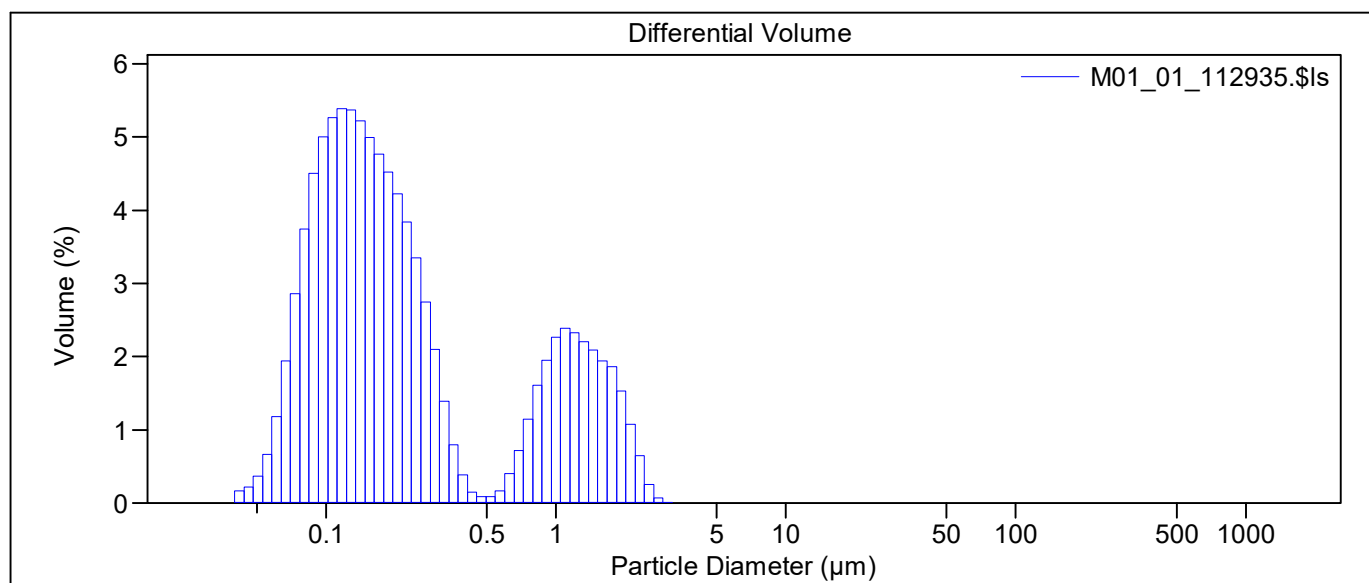
Beckman Coulter LS13320

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	M01_01_112935.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.03%		
LS 13 320	Universal Liquid Module		
Start time:	11:27 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	70%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_01_112935.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.550 μm
Mean:	0.440 μm		Variance:	0.303 μm ²
Median:	0.172 μm		C.V.:	125%
Mean/Median ratio:	2.555		Skewness:	1.729 Right skewed
Mode:	0.117 μm		Kurtosis:	1.997 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 μm	0.110 μm	0.172 μm	0.410 μm	1.356 μm

Surface Area Statistics (Arithmetic)			M01_01_112935.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.212 μm
Mean:	0.161 μm		Variance:	0.045 μm ²
Median:	0.111 μm		C.V.:	132%
Mean/Median ratio:	1.451		Skewness:	5.670 Right skewed
Mode:	0.097 μm		Kurtosis:	37.58 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.111 μm	0.160 μm	0.233 μm

Number Statistics (Arithmetic)			M01_01_112935.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.9%
Mean/Median ratio:	1.107		Skewness:	5.972 Right skewed
Mode:	0.073 μm		Kurtosis:	142.6 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.16	0.63	3.38
10	0.044	0.046	0.22	0.77	3.42
11	0.048	0.050	0.37	1.18	4.34
12	0.053	0.055	0.67	1.94	5.94
13	0.058	0.061	1.18	3.13	7.96
14	0.064	0.067	1.95	4.69	9.88
15	0.070	0.073	2.86	6.28	11.0
16	0.077	0.080	3.75	7.49	10.9
17	0.084	0.088	4.50	8.19	9.87
18	0.093	0.097	5.01	8.30	8.30
19	0.102	0.106	5.27	7.96	6.60
20	0.112	0.117	5.39	7.42	5.11
21	0.122	0.128	5.37	6.74	3.85
22	0.134	0.141	5.22	5.96	2.83
23	0.148	0.155	4.99	5.19	2.04
24	0.162	0.170	4.77	4.52	1.48
25	0.178	0.186	4.52	3.90	1.06
26	0.195	0.205	4.22	3.32	0.75
27	0.214	0.225	3.84	2.75	0.51
28	0.235	0.247	3.35	2.19	0.34
29	0.258	0.271	2.74	1.63	0.21
30	0.284	0.297	2.10	1.14	0.12
31	0.311	0.326	1.39	0.68	0.061
32	0.342	0.358	0.80	0.36	0.026
33	0.375	0.393	0.38	0.16	0.0095
34	0.412	0.431	0.15	0.055	0.0028
35	0.452	0.474	0.088	0.030	0.0013
36	0.496	0.520	0.088	0.027	0.00095
37	0.545	0.571	0.17	0.048	0.0014
38	0.598	0.627	0.40	0.10	0.0025
39	0.656	0.688	0.71	0.17	0.0033
40	0.721	0.755	1.15	0.24	0.0040
41	0.791	0.829	1.61	0.31	0.0043
42	0.868	0.910	1.95	0.35	0.0039
43	0.953	0.999	2.26	0.36	0.0034
44	1.047	1.097	2.39	0.35	0.0027
45	1.149	1.204	2.33	0.31	0.0020

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	2.21	0.27	0.0014
47	1.385	1.451	2.09	0.23	0.0010
48	1.520	1.592	1.94	0.20	0.00073
49	1.668	1.748	1.86	0.17	0.00053
50	1.832	1.919	1.53	0.13	0.00033
51	2.011	2.107	1.07	0.082	0.00017
52	2.207	2.313	0.64	0.045	0.000079
53	2.423	2.539	0.25	0.016	0.000023
54	2.660	2.787	0.072	0.0042	0.000005
55	2.920	3.059	0.012	0.00063	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

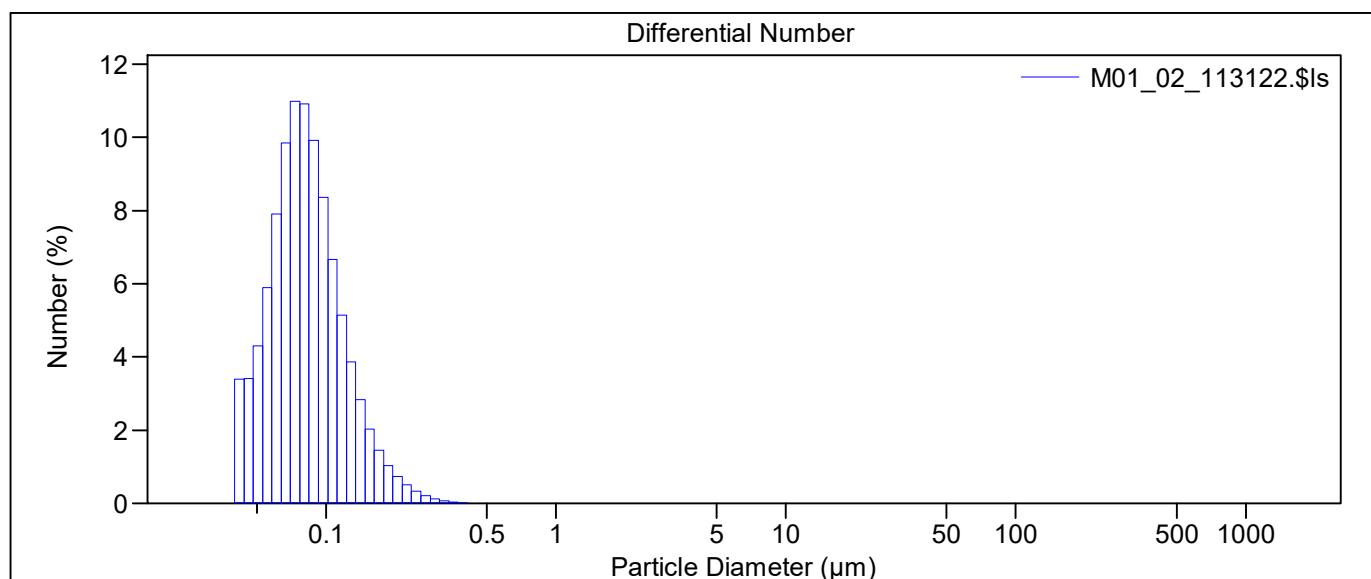
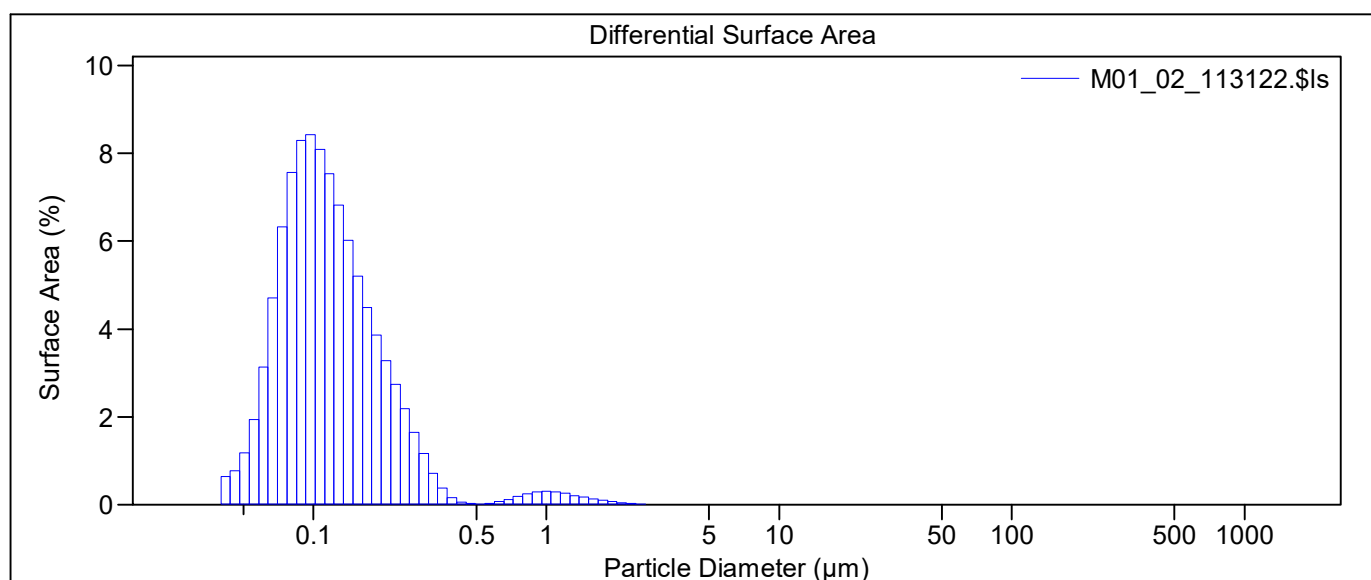
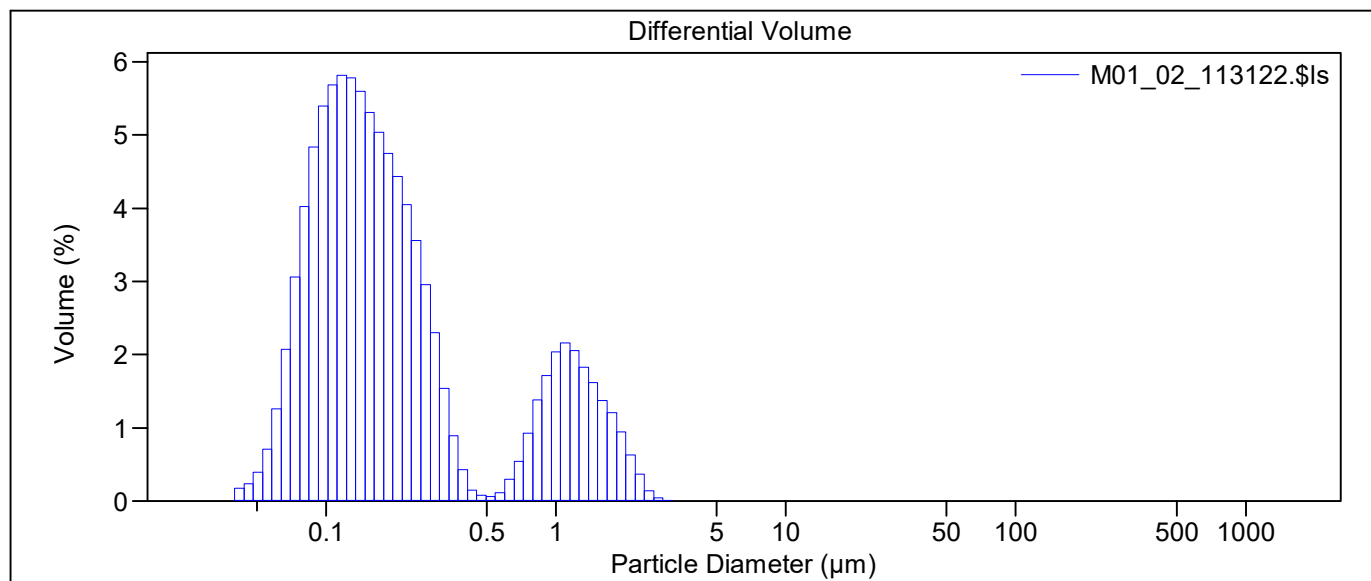
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_02_113122.\$ls		
	M01_02_113122.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.29%		
LS 13 320	Universal Liquid Module		
Start time:	11:29 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	72%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_02_113122.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.479 μm
Mean:	0.369 μm		Variance:	0.230 μm ²
Median:	0.161 μm		C.V.:	130%
Mean/Median ratio:	2.294		Skewness:	2.087 Right skewed
Mode:	0.117 μm		Kurtosis:	3.624 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.107 μm	0.161 μm	0.282 μm	1.161 μm

Surface Area Statistics (Arithmetic)			M01_02_113122.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.182 μm
Mean:	0.152 μm		Variance:	0.033 μm ²
Median:	0.110 μm		C.V.:	120%
Mean/Median ratio:	1.374		Skewness:	6.168 Right skewed
Mode:	0.097 μm		Kurtosis:	46.11 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.110 μm	0.157 μm	0.227 μm

Number Statistics (Arithmetic)			M01_02_113122.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	44.9%
Mean/Median ratio:	1.105		Skewness:	5.092 Right skewed
Mode:	0.073 μm		Kurtosis:	110.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.39
10	0.044	0.046	0.23	0.77	3.41
11	0.048	0.050	0.39	1.17	4.30
12	0.053	0.055	0.71	1.94	5.89
13	0.058	0.061	1.26	3.14	7.91
14	0.064	0.067	2.08	4.71	9.85
15	0.070	0.073	3.06	6.33	11.0
16	0.077	0.080	4.02	7.57	10.9
17	0.084	0.088	4.84	8.30	9.92
18	0.093	0.097	5.40	8.43	8.36
19	0.102	0.106	5.68	8.09	6.66
20	0.112	0.117	5.81	7.53	5.15
21	0.122	0.128	5.78	6.83	3.87
22	0.134	0.141	5.59	6.02	2.83
23	0.148	0.155	5.31	5.20	2.03
24	0.162	0.170	5.04	4.50	1.46
25	0.178	0.186	4.75	3.86	1.04
26	0.195	0.205	4.44	3.29	0.73
27	0.214	0.225	4.05	2.73	0.51
28	0.235	0.247	3.56	2.19	0.34
29	0.258	0.271	2.95	1.65	0.21
30	0.284	0.297	2.30	1.17	0.12
31	0.311	0.326	1.54	0.71	0.063
32	0.342	0.358	0.89	0.38	0.028
33	0.375	0.393	0.43	0.17	0.010
34	0.412	0.431	0.15	0.053	0.0027
35	0.452	0.474	0.081	0.026	0.0011
36	0.496	0.520	0.065	0.019	0.00065
37	0.545	0.571	0.11	0.030	0.00085
38	0.598	0.627	0.30	0.072	0.0017
39	0.656	0.688	0.55	0.12	0.0024
40	0.721	0.755	0.92	0.19	0.0030
41	0.791	0.829	1.38	0.25	0.0034
42	0.868	0.910	1.72	0.29	0.0032
43	0.953	0.999	2.04	0.31	0.0029
44	1.047	1.097	2.16	0.30	0.0023
45	1.149	1.204	2.06	0.26	0.0017

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.83	0.21	0.0011
47	1.385	1.451	1.62	0.17	0.00075
48	1.520	1.592	1.37	0.13	0.00048
49	1.668	1.748	1.21	0.10	0.00032
50	1.832	1.919	0.94	0.074	0.00019
51	2.011	2.107	0.63	0.045	0.000096
52	2.207	2.313	0.37	0.024	0.000042
53	2.423	2.539	0.14	0.0086	0.000012
54	2.660	2.787	0.040	0.0022	0.000003
55	2.920	3.059	0.0067	0.00033	3.32E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

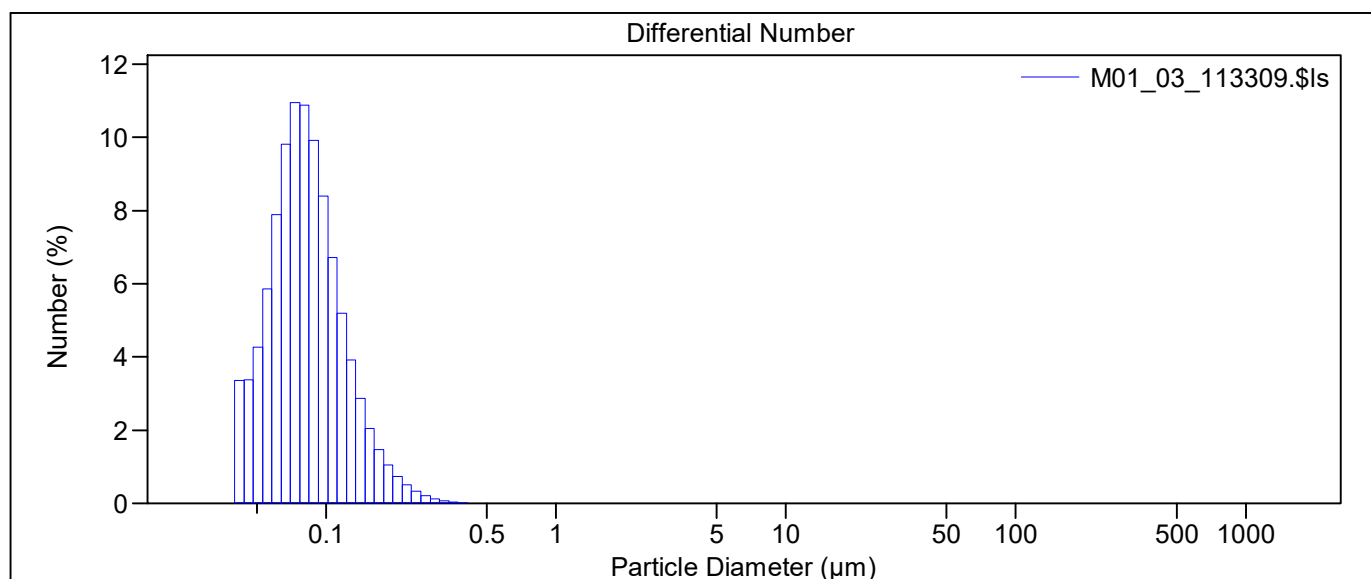
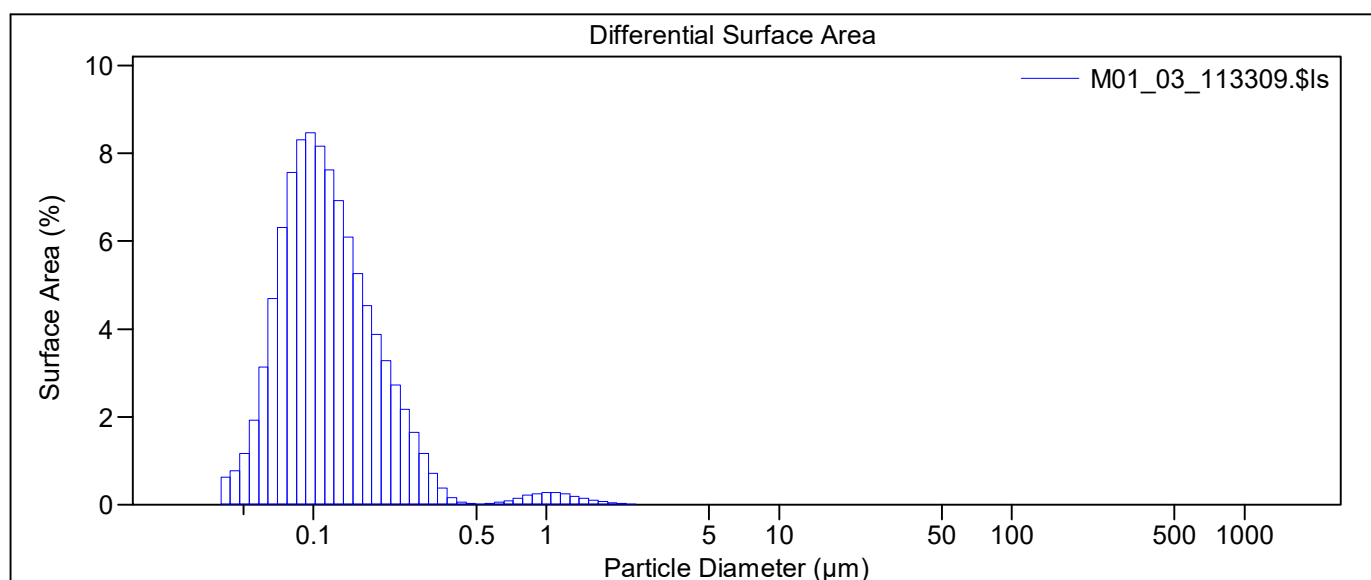
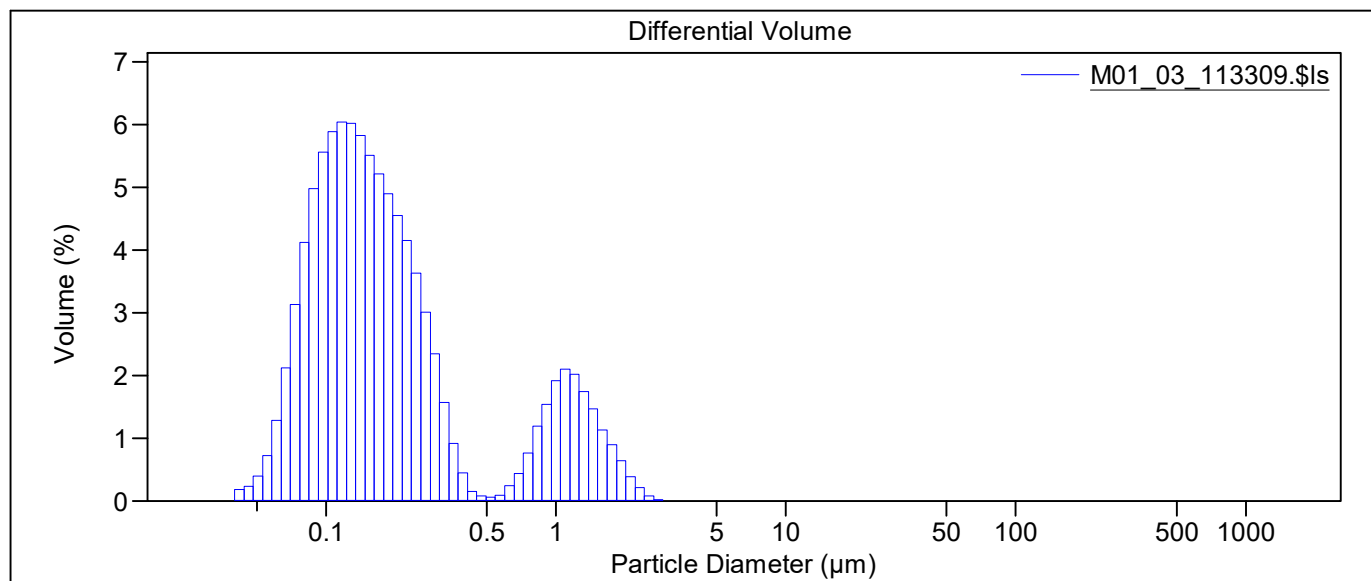
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_03_113309.\$ls		
	M01_03_113309.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.49%		
LS 13 320	Universal Liquid Module		
Start time:	11:31 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	1%	PIDS Obscur:	71%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_03_113309.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.437 μm
Mean:	0.336 μm		Variance:	0.191 μm ²
Median:	0.157 μm		C.V.:	130%
Mean/Median ratio:	2.145		Skewness:	2.241 Right skewed
Mode:	0.117 μm		Kurtosis:	4.386 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.157 μm	0.263 μm	1.082 μm

Surface Area Statistics (Arithmetic)			M01_03_113309.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.167 µm
Mean:	0.148 µm		Variance:	0.028 µm ²
Median:	0.110 µm		C.V.:	113%
Mean/Median ratio:	1.339		Skewness:	6.315 Right skewed
Mode:	0.097 µm		Kurtosis:	48.90 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.224 µm

Number Statistics (Arithmetic)		M01_03_113309.\$ls		
Calculations from 0.017 μm to 2000 μm				
Number:	100%			
Mean:	0.088 μm	S.D.:	0.039 μm	
Median:	0.080 μm	Variance:	0.0015 μm ²	
Mean/Median ratio:	1.104	C.V.:	44.4%	
Mode:	0.073 μm	Skewness:	4.671 Right skewed	
		Kurtosis:	94.56 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.63	3.36
10	0.044	0.046	0.24	0.77	3.38
11	0.048	0.050	0.40	1.17	4.28
12	0.053	0.055	0.73	1.93	5.86
13	0.058	0.061	1.29	3.13	7.88
14	0.064	0.067	2.12	4.69	9.81
15	0.070	0.073	3.14	6.31	10.9
16	0.077	0.080	4.12	7.56	10.9
17	0.084	0.088	4.98	8.31	9.92
18	0.093	0.097	5.57	8.46	8.39
19	0.102	0.106	5.89	8.16	6.71
20	0.112	0.117	6.04	7.62	5.20
21	0.122	0.128	6.02	6.92	3.92
22	0.134	0.141	5.82	6.10	2.87
23	0.148	0.155	5.51	5.26	2.05
24	0.162	0.170	5.21	4.53	1.47
25	0.178	0.186	4.90	3.88	1.04
26	0.195	0.205	4.56	3.29	0.73
27	0.214	0.225	4.15	2.73	0.50
28	0.235	0.247	3.64	2.18	0.33
29	0.258	0.271	3.01	1.64	0.21
30	0.284	0.297	2.34	1.16	0.12
31	0.311	0.326	1.57	0.71	0.062
32	0.342	0.358	0.92	0.38	0.027
33	0.375	0.393	0.44	0.17	0.010
34	0.412	0.431	0.16	0.054	0.0027
35	0.452	0.474	0.084	0.026	0.0011
36	0.496	0.520	0.061	0.017	0.00060
37	0.545	0.571	0.093	0.024	0.00069
38	0.598	0.627	0.24	0.057	0.0014
39	0.656	0.688	0.44	0.095	0.0019
40	0.721	0.755	0.76	0.15	0.0024
41	0.791	0.829	1.19	0.21	0.0029
42	0.868	0.910	1.55	0.25	0.0028
43	0.953	0.999	1.92	0.28	0.0026
44	1.047	1.097	2.10	0.28	0.0022
45	1.149	1.204	2.02	0.25	0.0016
46	1.261	1.321	1.75	0.20	0.0010
47	1.385	1.451	1.47	0.15	0.00066
48	1.520	1.592	1.14	0.11	0.00039
49	1.668	1.748	0.89	0.075	0.00023
50	1.832	1.919	0.64	0.049	0.00012
51	2.011	2.107	0.39	0.027	0.000058
52	2.207	2.313	0.21	0.014	0.000024
53	2.423	2.539	0.080	0.0047	0.000007
54	2.660	2.787	0.020	0.0011	0.000001
55	2.920	3.059	0.0035	0.00017	1.66E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M01.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

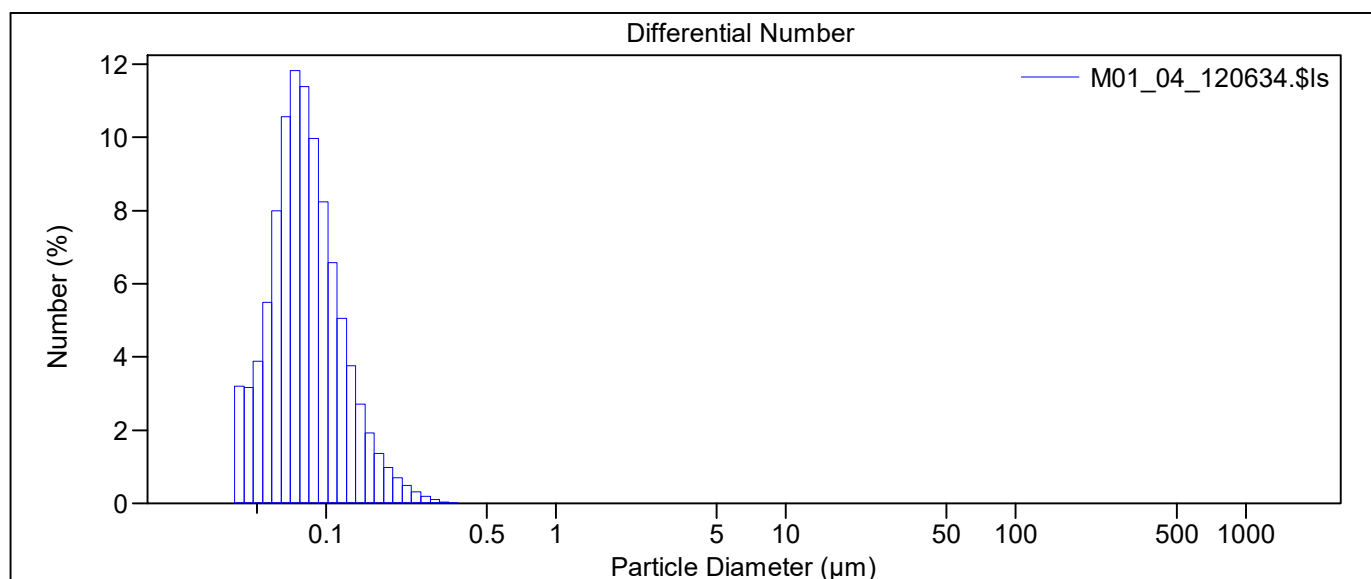
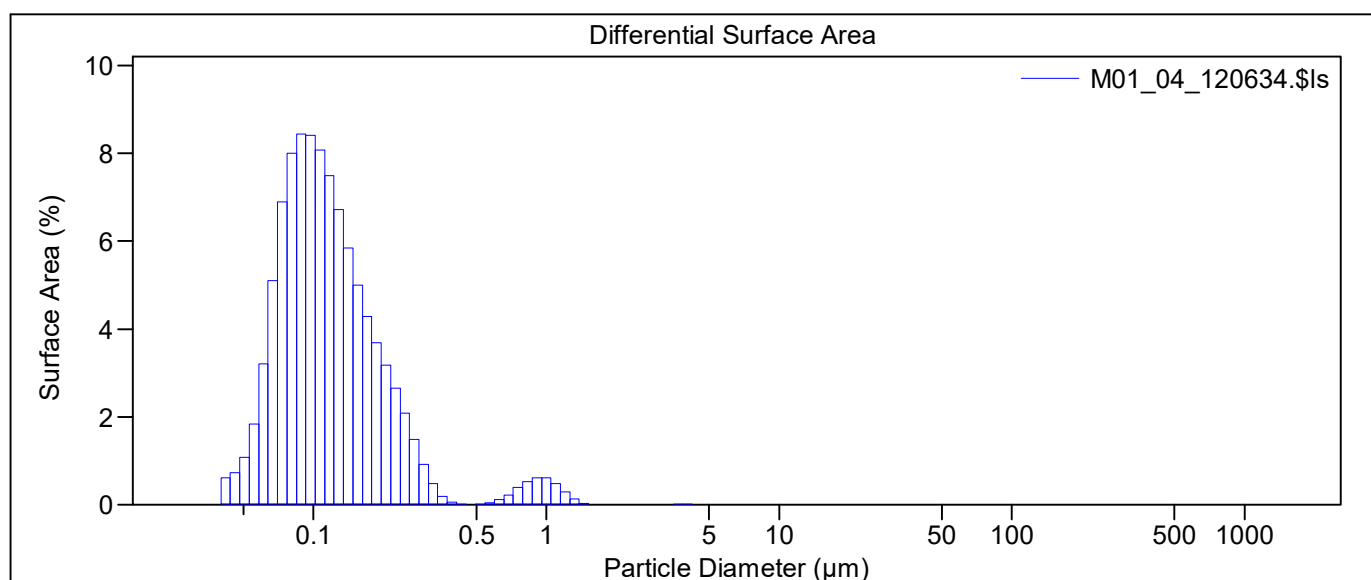
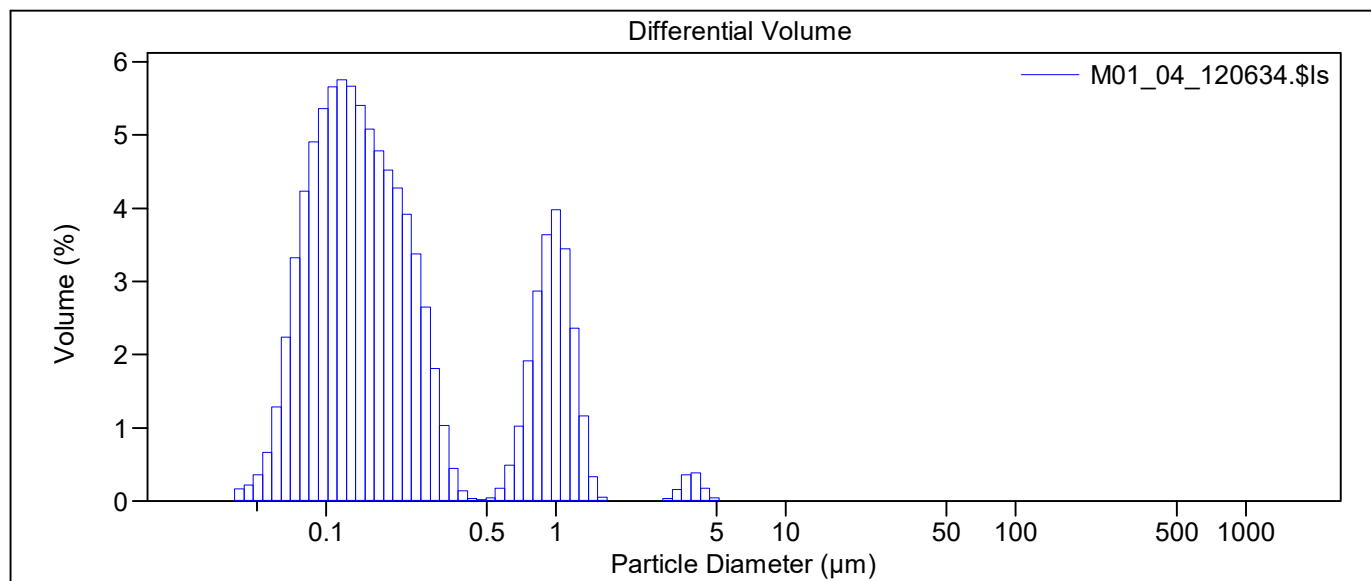
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_04_120634.\$ls		
	M01_04_120634.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.45%		
LS 13 320	Universal Liquid Module		
Start time:	12:04 12	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_04_120634.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.525 µm
Mean:	0.370 µm		Variance:	0.276 µm ²
Median:	0.161 µm		C.V.:	142%
Mean/Median ratio:	2.296		Skewness:	4.062 Right skewed
Mode:	0.117 µm		Kurtosis:	23.67 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.161 µm	0.301 µm	1.012 µm

Surface Area Statistics (Arithmetic)			M01_04_120634.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.182 µm
Mean:	0.152 µm		Variance:	0.033 µm ²
Median:	0.109 µm		C.V.:	120%
Mean/Median ratio:	1.400		Skewness:	7.313 Right skewed
Mode:	0.088 µm		Kurtosis:	98.73 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.082 µm	0.109 µm	0.155 µm	0.226 µm

Number Statistics (Arithmetic)			M01_04_120634.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.6%
Mean/Median ratio:	1.105		Skewness:	5.445 Right skewed
Mode:	0.073 μm		Kurtosis:	114.5 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.053 μm	0.065 μm	0.079 μm	0.101 μm	0.131 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.61	3.19
10	0.044	0.046	0.22	0.73	3.16
11	0.048	0.050	0.36	1.07	3.88
12	0.053	0.055	0.67	1.83	5.50
13	0.058	0.061	1.28	3.21	8.00
14	0.064	0.067	2.24	5.11	10.6
15	0.070	0.073	3.32	6.89	11.8
16	0.077	0.080	4.23	8.00	11.4
17	0.084	0.088	4.90	8.44	9.97
18	0.093	0.097	5.36	8.41	8.24
19	0.102	0.106	5.66	8.08	6.57
20	0.112	0.117	5.76	7.49	5.06
21	0.122	0.128	5.66	6.71	3.76
22	0.134	0.141	5.41	5.84	2.71
23	0.148	0.155	5.08	5.00	1.93
24	0.162	0.170	4.78	4.29	1.37
25	0.178	0.186	4.52	3.69	0.98
26	0.195	0.205	4.27	3.18	0.70
27	0.214	0.225	3.92	2.66	0.49
28	0.235	0.247	3.38	2.08	0.32
29	0.258	0.271	2.65	1.49	0.19
30	0.284	0.297	1.81	0.93	0.097
31	0.311	0.326	1.03	0.48	0.042
32	0.342	0.358	0.45	0.19	0.014
33	0.375	0.393	0.14	0.056	0.0033
34	0.412	0.431	0.034	0.012	0.00060
35	0.452	0.474	0.020	0.0063	0.00026
36	0.496	0.520	0.048	0.014	0.00048
37	0.545	0.571	0.18	0.047	0.0013
38	0.598	0.627	0.49	0.12	0.0028
39	0.656	0.688	1.02	0.23	0.0044
40	0.721	0.755	1.92	0.39	0.0063
41	0.791	0.829	2.87	0.53	0.0071
42	0.868	0.910	3.64	0.61	0.0068
43	0.953	0.999	3.98	0.61	0.0056
44	1.047	1.097	3.45	0.48	0.0037
45	1.149	1.204	2.36	0.30	0.0019

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.17	0.13	0.00071
47	1.385	1.451	0.33	0.034	0.00015
48	1.520	1.592	0.057	0.0054	0.000020
49	1.668	1.748	0.0031	0.00027	0.000001
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0.0020	0.00011	1.32E-7
55	2.920	3.059	0.037	0.0018	0.000002
56	3.205	3.358	0.16	0.0071	0.000006
57	3.519	3.687	0.36	0.015	0.000010
58	3.863	4.047	0.39	0.015	0.000008
59	4.240	4.443	0.17	0.0060	0.000003
60	4.655	4.877	0.046	0.0014	0.000001
61	5.110	5.354	0.0032	0.000091	2.92E-8
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

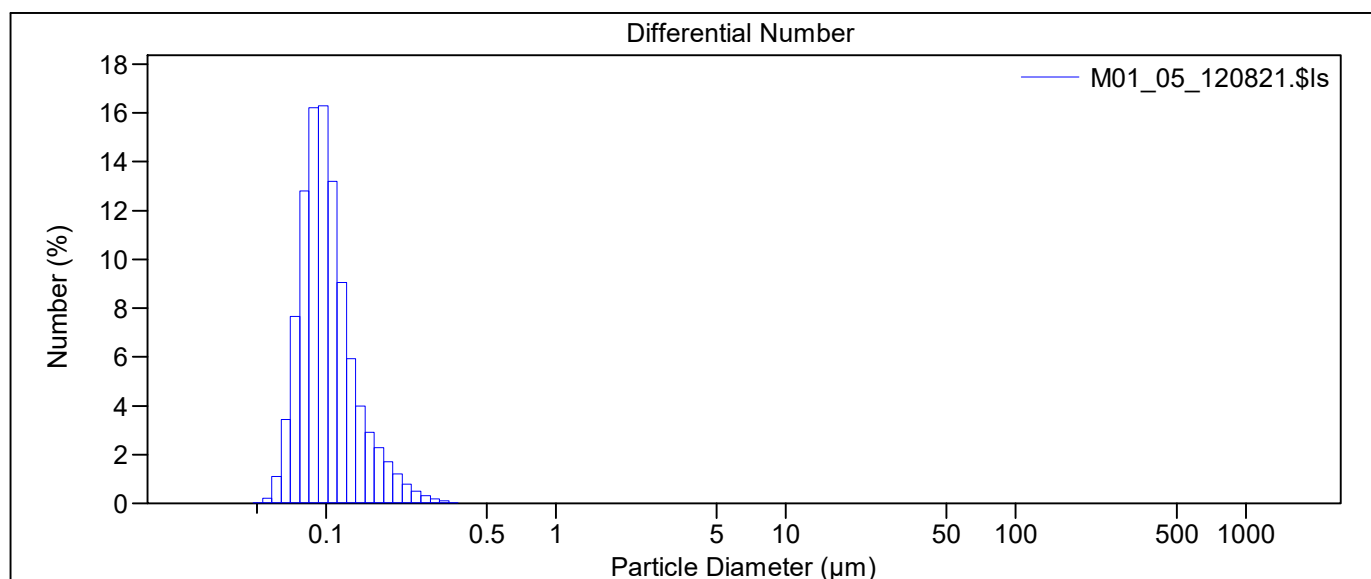
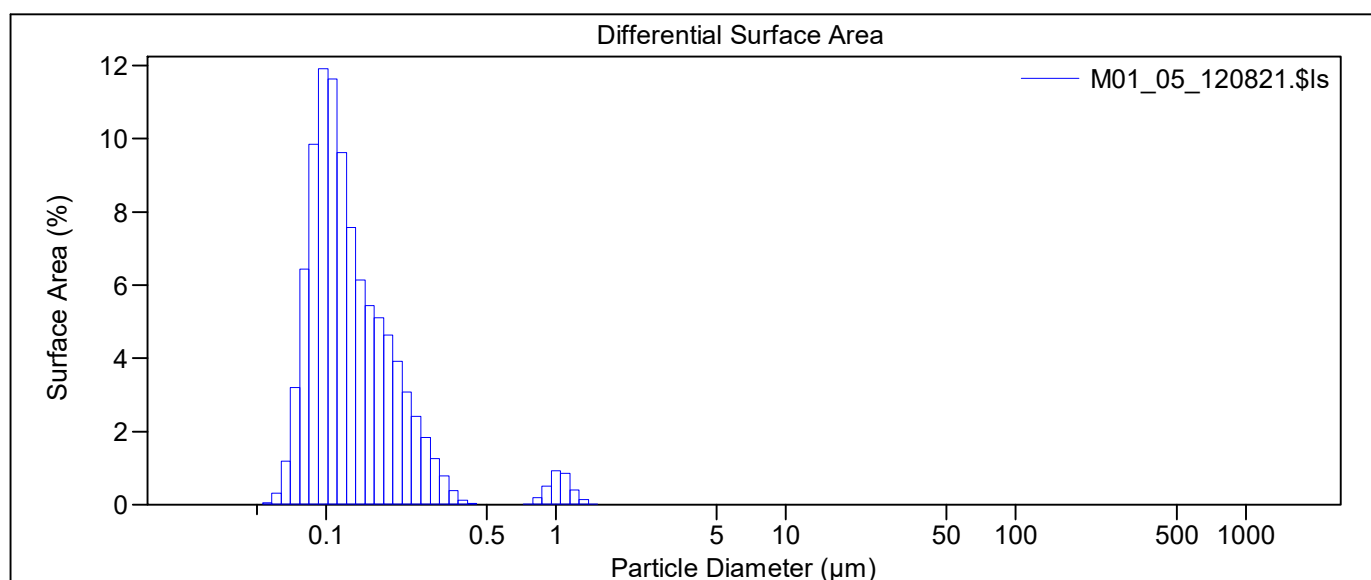
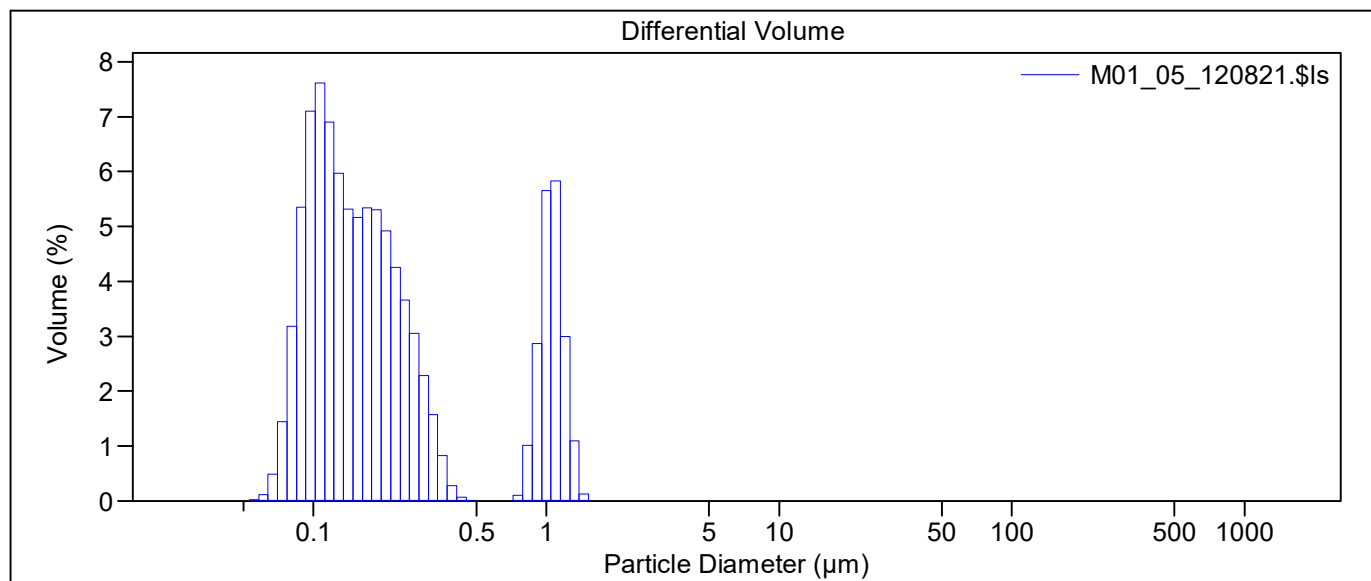
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_05_120821.\$ls		
	M01_05_120821.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.25%		
LS 13 320	Universal Liquid Module		
Start time:	12:06 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_05_120821.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.367 μm
Mean:	0.336 μm		Variance:	0.135 μm ²
Median:	0.166 μm		C.V.:	109%
Mean/Median ratio:	2.022		Skewness:	1.514 Right skewed
Mode:	0.106 μm		Kurtosis:	0.592 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.092 μm	0.111 μm	0.166 μm	0.282 μm	1.048 μm

Surface Area Statistics (Arithmetic)			M01_05_120821.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.168 µm
Mean:	0.163 µm		Variance:	0.028 µm ²
Median:	0.118 µm		C.V.:	103%
Mean/Median ratio:	1.382		Skewness:	4.703 Right skewed
Mode:	0.097 µm		Kurtosis:	23.23 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.083 µm	0.096 µm	0.118 µm	0.167 µm	0.235 µm

Number Statistics (Arithmetic)			M01_05_120821.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.106 μm		Variance:	0.0016 μm ²
Median:	0.097 μm		C.V.:	37.1%
Mean/Median ratio:	1.093		Skewness:	6.440 Right skewed
Mode:	0.097 μm		Kurtosis:	121.9 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.075 μm	0.084 μm	0.097 μm	0.116 μm	0.148 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0.000066	0.00023	0.0014
11	0.048	0.050	0.0017	0.0055	0.028
12	0.053	0.055	0.018	0.053	0.22
13	0.058	0.061	0.12	0.31	1.09
14	0.064	0.067	0.49	1.19	3.43
15	0.070	0.073	1.44	3.20	7.65
16	0.077	0.080	3.19	6.44	12.8
17	0.084	0.088	5.35	9.85	16.2
18	0.093	0.097	7.11	11.9	16.3
19	0.102	0.106	7.61	11.6	13.2
20	0.112	0.117	6.91	9.62	9.05
21	0.122	0.128	5.97	7.57	5.92
22	0.134	0.141	5.32	6.14	3.98
23	0.148	0.155	5.17	5.44	2.92
24	0.162	0.170	5.34	5.11	2.28
25	0.178	0.186	5.31	4.63	1.72
26	0.195	0.205	4.92	3.91	1.20
27	0.214	0.225	4.26	3.09	0.79
28	0.235	0.247	3.66	2.41	0.51
29	0.258	0.271	3.05	1.83	0.32
30	0.284	0.297	2.29	1.25	0.18
31	0.311	0.326	1.58	0.79	0.095
32	0.342	0.358	0.83	0.38	0.038
33	0.375	0.393	0.28	0.12	0.0098
34	0.412	0.431	0.075	0.028	0.0020
35	0.452	0.474	0.0078	0.0027	0.00015
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.11	0.023	0.00051
41	0.791	0.829	1.02	0.20	0.0037
42	0.868	0.910	2.87	0.51	0.0080
43	0.953	0.999	5.66	0.92	0.012
44	1.047	1.097	5.83	0.87	0.0093
45	1.149	1.204	2.99	0.40	0.0036

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.09	0.13	0.00099
47	1.385	1.451	0.13	0.015	0.000089
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

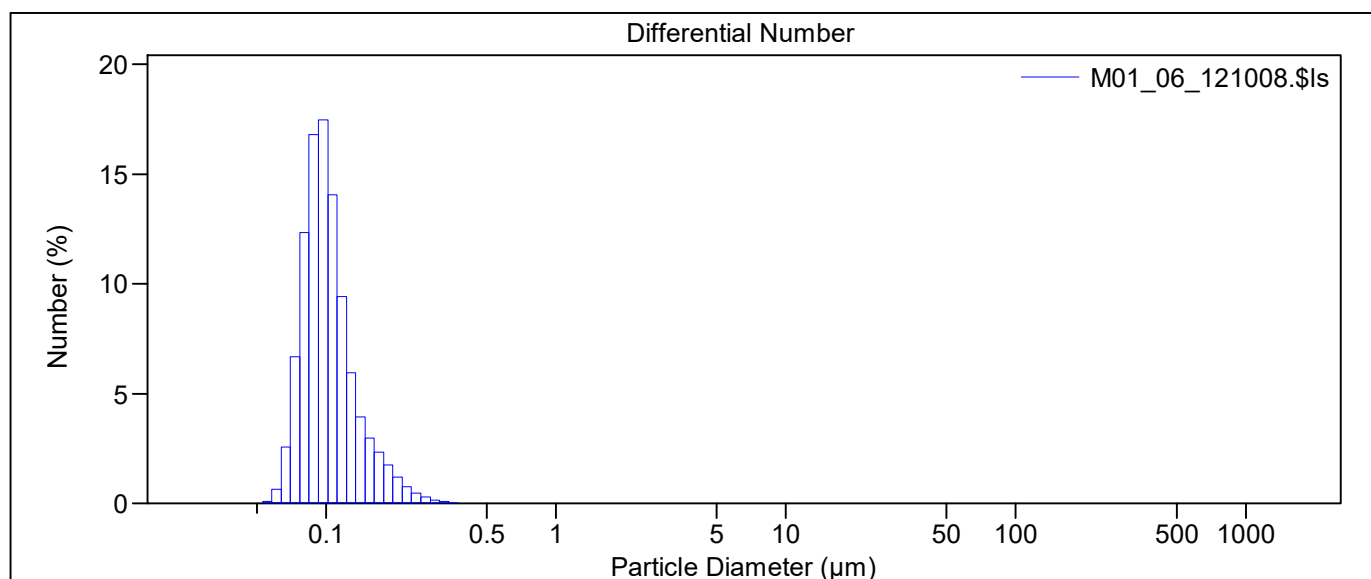
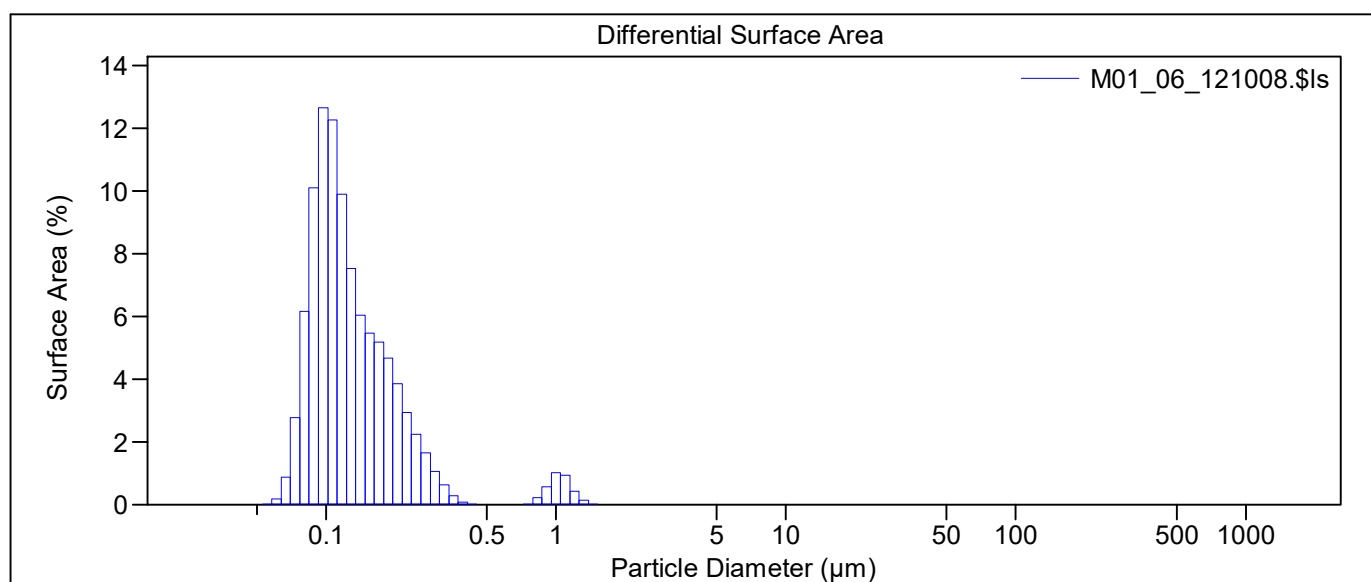
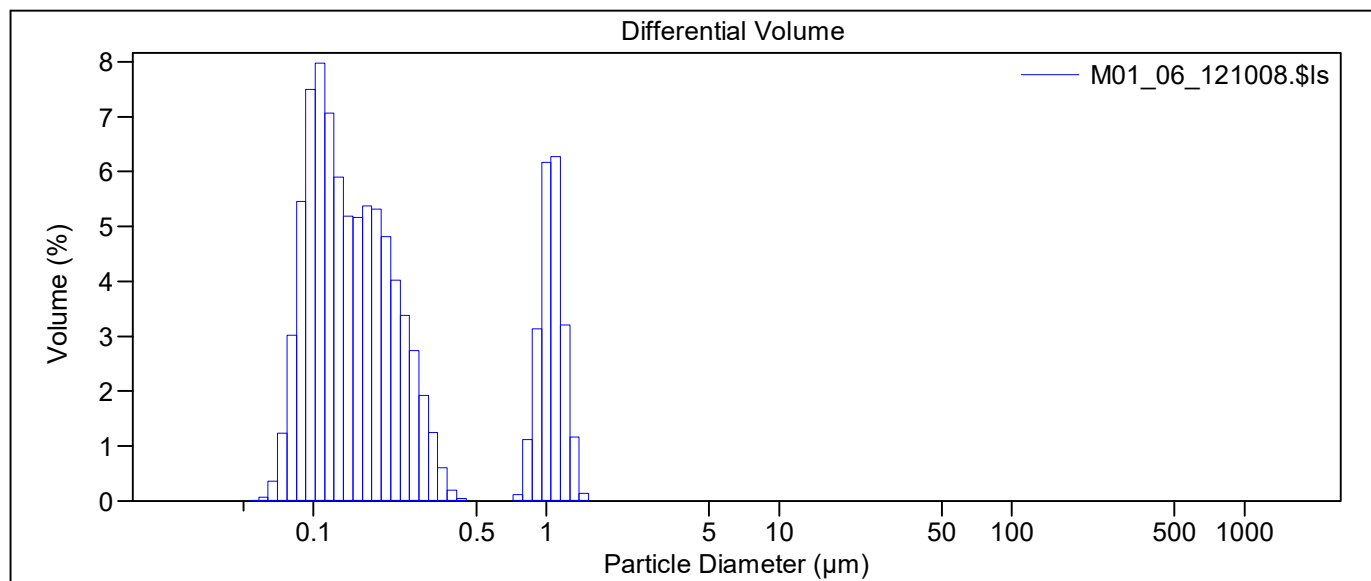
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_06_121008.\$ls		
	M01_06_121008.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.27%		
LS 13 320	Universal Liquid Module		
Start time:	12:08 12	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_06_121008.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.378 μm
Mean:	0.347 μm		Variance:	0.143 μm ²
Median:	0.165 μm		C.V.:	109%
Mean/Median ratio:	2.104		Skewness:	1.407 Right skewed
Mode:	0.106 μm		Kurtosis:	0.245 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.092 μm	0.111 μm	0.165 μm	0.289 μm	1.059 μm

Surface Area Statistics (Arithmetic)			M01_06_121008.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.173 µm
Mean:	0.164 µm		Variance:	0.030 µm ²
Median:	0.117 µm		C.V.:	106%
Mean/Median ratio:	1.400		Skewness:	4.603 Right skewed
Mode:	0.097 µm		Kurtosis:	21.79 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.084 µm	0.096 µm	0.117 µm	0.165 µm	0.231 µm

Number Statistics (Arithmetic)			M01_06_121008.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.107 μm		Variance:	0.0015 μm ²
Median:	0.098 μm		C.V.:	36.2%
Mean/Median ratio:	1.090		Skewness:	7.076 Right skewed
Mode:	0.097 μm		Kurtosis:	140.8 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.077 μm	0.086 μm	0.098 μm	0.117 μm	0.148 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00031	0.0010	0.0051
12	0.053	0.055	0.0077	0.023	0.097
13	0.058	0.061	0.069	0.18	0.65
14	0.064	0.067	0.36	0.88	2.56
15	0.070	0.073	1.24	2.77	6.69
16	0.077	0.080	3.03	6.16	12.3
17	0.084	0.088	5.46	10.1	16.8
18	0.093	0.097	7.50	12.7	17.5
19	0.102	0.106	7.98	12.3	14.0
20	0.112	0.117	7.07	9.90	9.40
21	0.122	0.128	5.91	7.54	5.94
22	0.134	0.141	5.19	6.04	3.95
23	0.148	0.155	5.17	5.47	2.97
24	0.162	0.170	5.38	5.19	2.34
25	0.178	0.186	5.32	4.67	1.75
26	0.195	0.205	4.82	3.86	1.20
27	0.214	0.225	4.03	2.94	0.76
28	0.235	0.247	3.39	2.25	0.48
29	0.258	0.271	2.74	1.66	0.29
30	0.284	0.297	1.93	1.06	0.16
31	0.311	0.326	1.24	0.62	0.076
32	0.342	0.358	0.61	0.28	0.028
33	0.375	0.393	0.19	0.080	0.0067
34	0.412	0.431	0.051	0.019	0.0013
35	0.452	0.474	0.0056	0.0019	0.00011
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.12	0.026	0.00059
41	0.791	0.829	1.12	0.22	0.0042
42	0.868	0.910	3.14	0.56	0.0089
43	0.953	0.999	6.17	1.01	0.013
44	1.047	1.097	6.27	0.94	0.010
45	1.149	1.204	3.21	0.44	0.0039

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.16	0.14	0.0011
47	1.385	1.451	0.13	0.015	0.000094
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

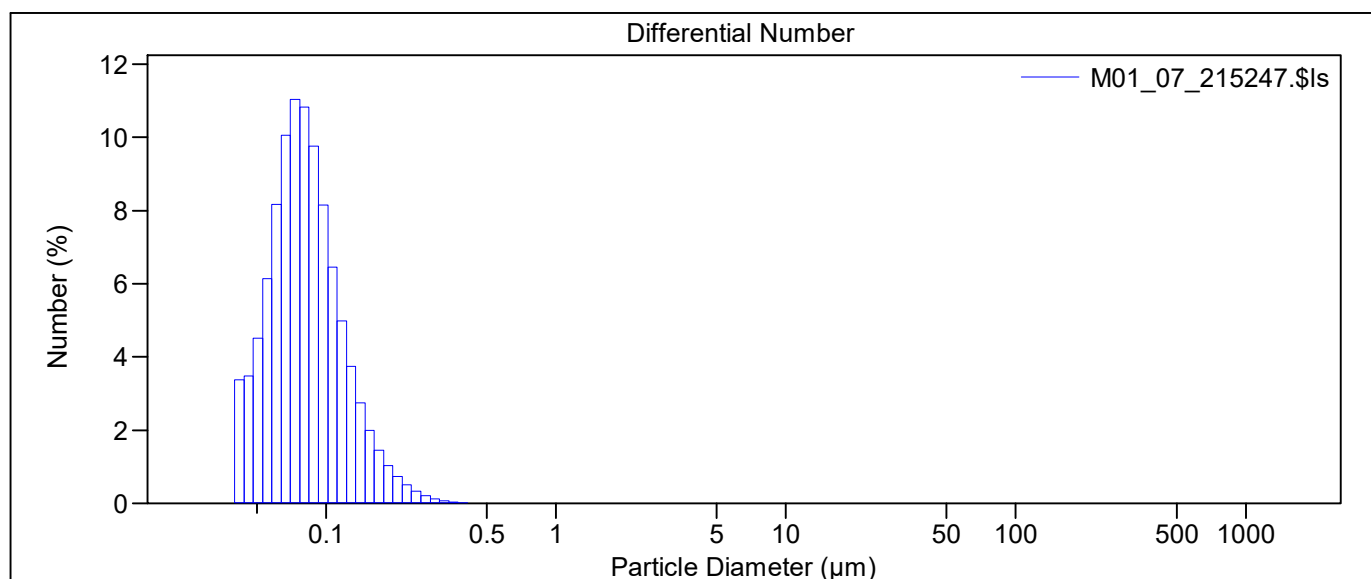
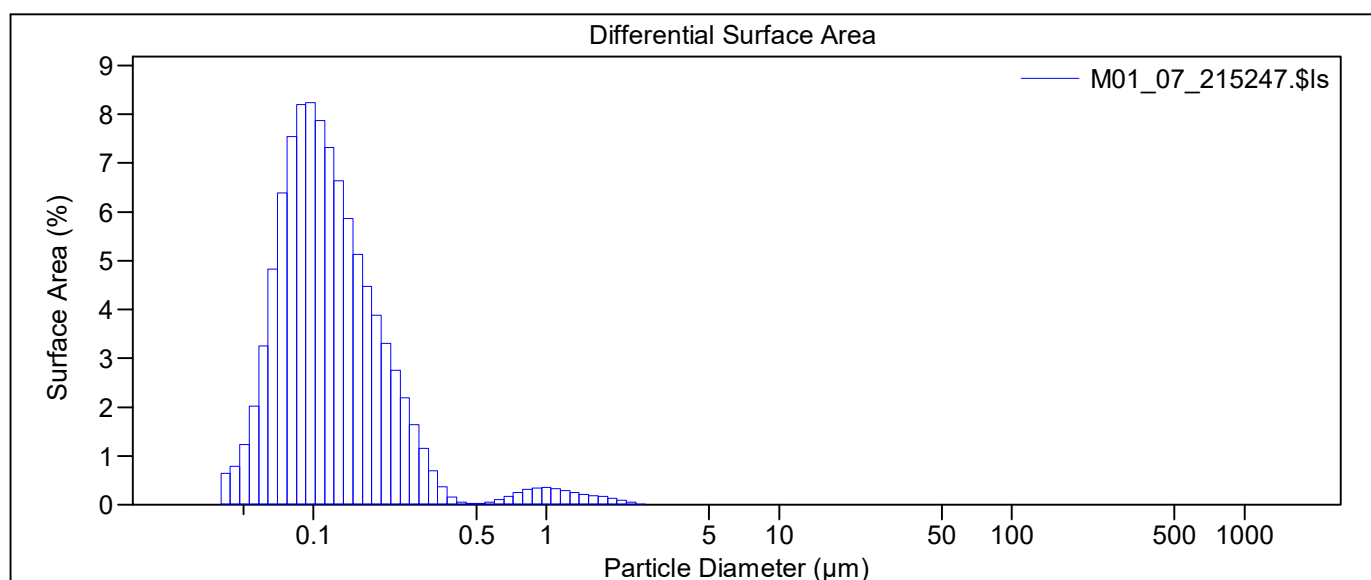
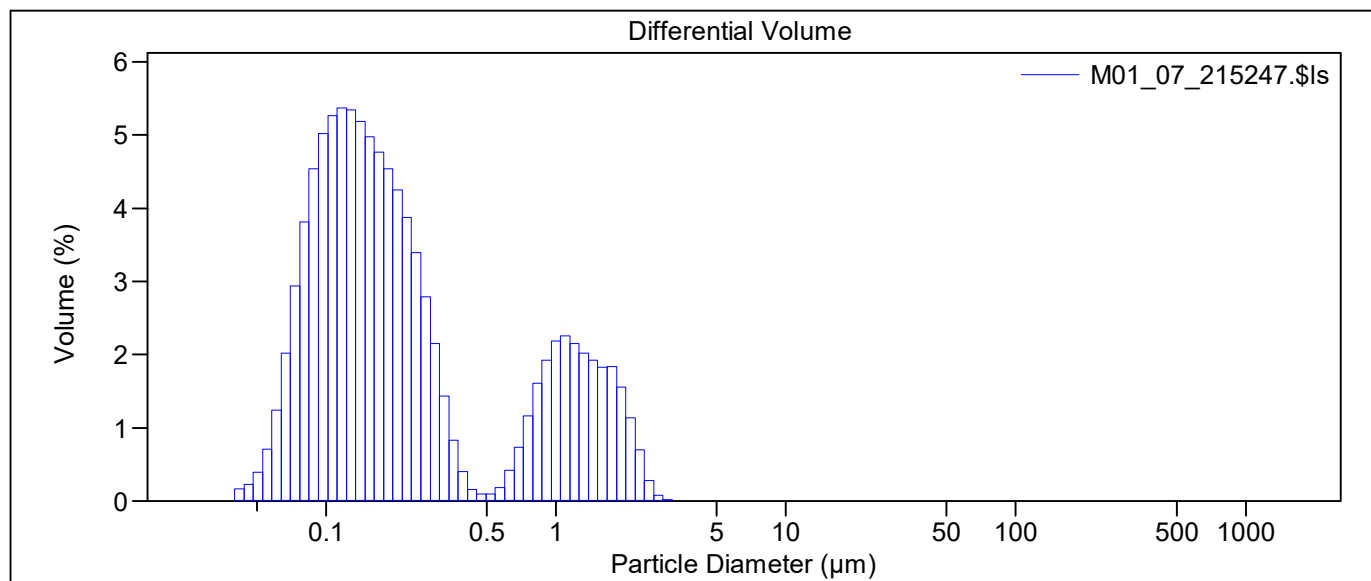
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_07_215247.\$ls		
	M01_07_215247.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.92%		
LS 13 320	Universal Liquid Module		
Start time:	21:51 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_07_215247.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.550 µm
Mean:	0.434 µm		Variance:	0.303 µm ²
Median:	0.171 µm		C.V.:	127%
Mean/Median ratio:	2.536		Skewness:	1.793 Right skewed
Mode:	0.117 µm		Kurtosis:	2.255 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.109 µm	0.171 µm	0.365 µm	1.345 µm

Surface Area Statistics (Arithmetic)			M01_07_215247.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.209 µm
Mean:	0.159 µm		Variance:	0.044 µm ²
Median:	0.110 µm		C.V.:	131%
Mean/Median ratio:	1.445		Skewness:	5.808 Right skewed
Mode:	0.097 µm		Kurtosis:	39.77 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.159 µm	0.232 µm

Number Statistics (Arithmetic)			M01_07_215247.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.9%
Mean/Median ratio:	1.109		Skewness:	5.881 Right skewed
Mode:	0.073 μm		Kurtosis:	140.4 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.38
10	0.044	0.046	0.23	0.79	3.49
11	0.048	0.050	0.39	1.24	4.51
12	0.053	0.055	0.70	2.03	6.13
13	0.058	0.061	1.24	3.25	8.17
14	0.064	0.067	2.02	4.82	10.1
15	0.070	0.073	2.94	6.38	11.0
16	0.077	0.080	3.81	7.55	10.8
17	0.084	0.088	4.54	8.19	9.76
18	0.093	0.097	5.02	8.24	8.15
19	0.102	0.106	5.26	7.88	6.46
20	0.112	0.117	5.37	7.32	4.98
21	0.122	0.128	5.34	6.64	3.75
22	0.134	0.141	5.19	5.87	2.75
23	0.148	0.155	4.97	5.13	1.99
24	0.162	0.170	4.77	4.47	1.44
25	0.178	0.186	4.54	3.88	1.04
26	0.195	0.205	4.25	3.31	0.74
27	0.214	0.225	3.88	2.75	0.51
28	0.235	0.247	3.40	2.19	0.34
29	0.258	0.271	2.79	1.64	0.21
30	0.284	0.297	2.16	1.16	0.12
31	0.311	0.326	1.43	0.70	0.061
32	0.342	0.358	0.83	0.37	0.027
33	0.375	0.393	0.40	0.16	0.0098
34	0.412	0.431	0.16	0.058	0.0029
35	0.452	0.474	0.095	0.032	0.0013
36	0.496	0.520	0.096	0.029	0.0010
37	0.545	0.571	0.18	0.051	0.0014
38	0.598	0.627	0.42	0.11	0.0025
39	0.656	0.688	0.73	0.17	0.0033
40	0.721	0.755	1.17	0.25	0.0040
41	0.791	0.829	1.61	0.31	0.0042
42	0.868	0.910	1.92	0.34	0.0038
43	0.953	0.999	2.19	0.35	0.0033
44	1.047	1.097	2.26	0.33	0.0025
45	1.149	1.204	2.15	0.29	0.0018
46	1.261	1.321	2.02	0.24	0.0013
47	1.385	1.451	1.92	0.21	0.00093
48	1.520	1.592	1.83	0.18	0.00067
49	1.668	1.748	1.83	0.17	0.00051
50	1.832	1.919	1.56	0.13	0.00033
51	2.011	2.107	1.14	0.086	0.00018
52	2.207	2.313	0.70	0.048	0.000084
53	2.423	2.539	0.28	0.018	0.000025
54	2.660	2.787	0.082	0.0047	0.000006
55	2.920	3.059	0.014	0.00071	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M01.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

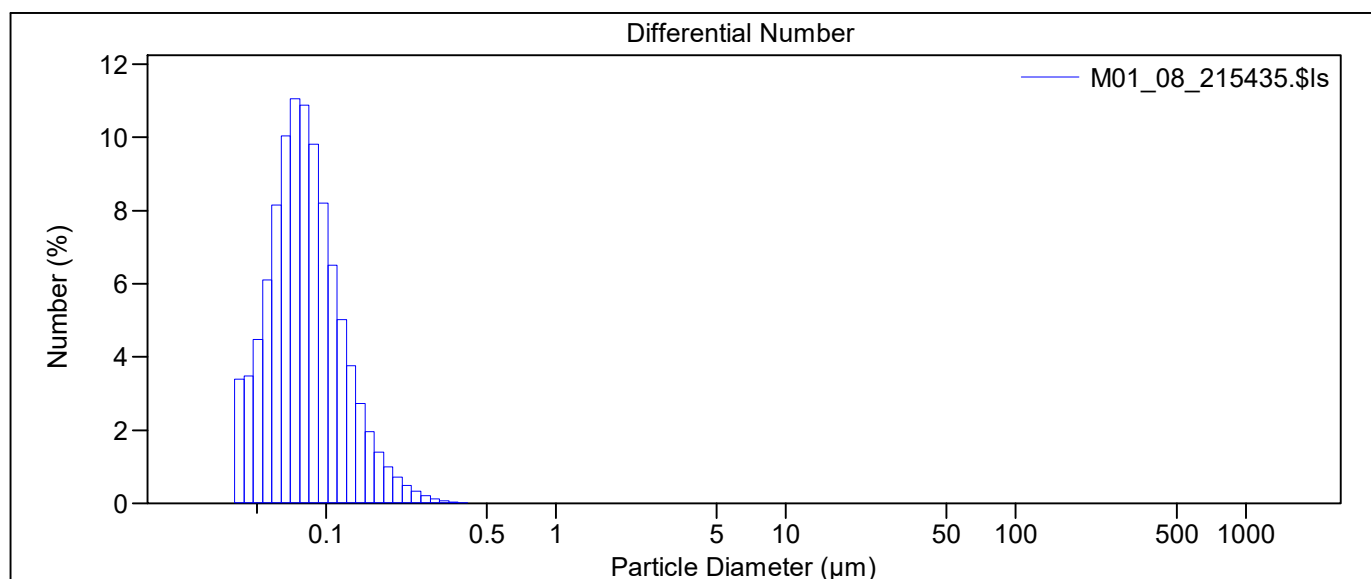
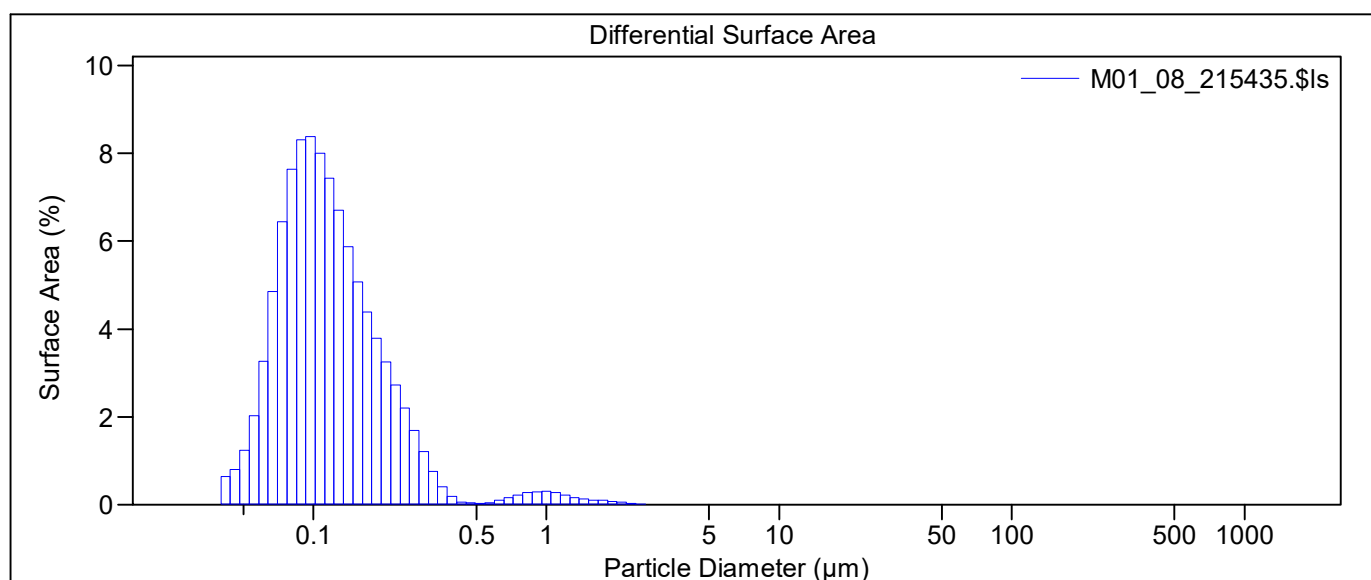
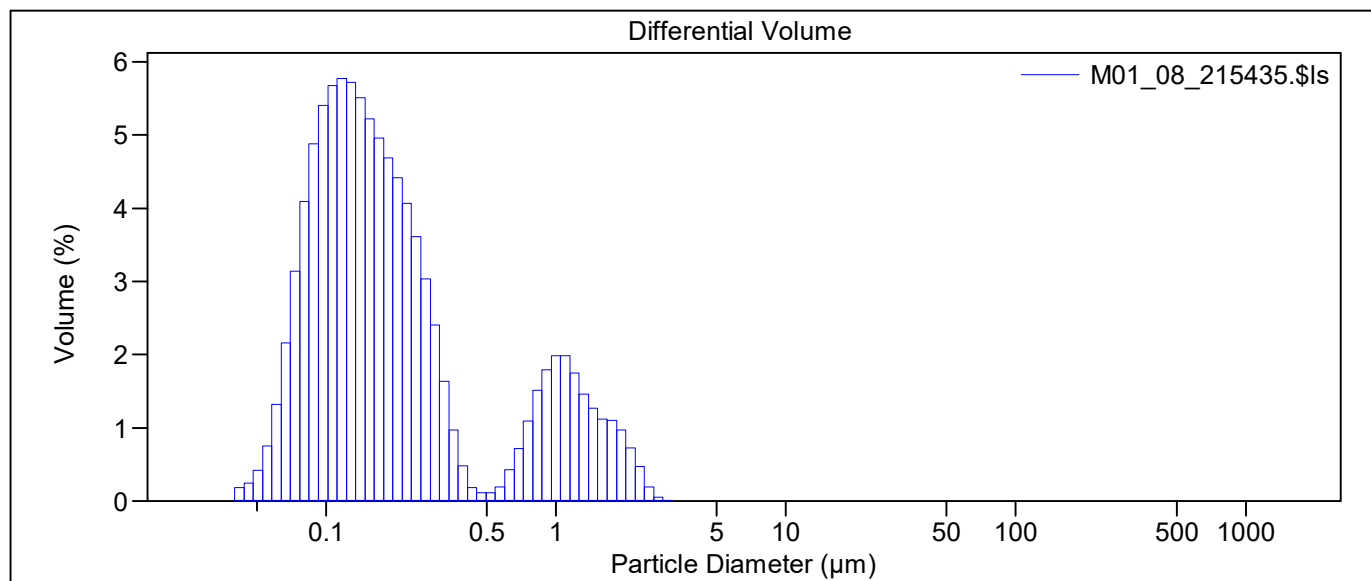
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_08_215435.\$ls		
	M01_08_215435.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.17%		
LS 13 320	Universal Liquid Module		
Start time:	21:52 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_08_215435.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.474 µm
Mean:	0.361 µm		Variance:	0.225 µm ²
Median:	0.161 µm		C.V.:	131%
Mean/Median ratio:	2.248		Skewness:	2.238 Right skewed
Mode:	0.117 µm		Kurtosis:	4.502 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.161 µm	0.281 µm	1.104 µm

Surface Area Statistics (Arithmetic)			M01_08_215435.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.178 µm
Mean:	0.150 µm		Variance:	0.032 µm ²
Median:	0.110 µm		C.V.:	118%
Mean/Median ratio:	1.373		Skewness:	6.336 Right skewed
Mode:	0.097 µm		Kurtosis:	50.11 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.157 µm	0.229 µm

Number Statistics (Arithmetic)			M01_08_215435.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.1%
Mean/Median ratio:	1.107		Skewness:	4.998 Right skewed
Mode:	0.073 μm		Kurtosis:	105.7 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M01.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.39
10	0.044	0.046	0.24	0.80	3.48
11	0.048	0.050	0.42	1.24	4.48
12	0.053	0.055	0.75	2.03	6.10
13	0.058	0.061	1.32	3.27	8.15
14	0.064	0.067	2.16	4.86	10.0
15	0.070	0.073	3.14	6.45	11.1
16	0.077	0.080	4.09	7.64	10.9
17	0.084	0.088	4.88	8.31	9.81
18	0.093	0.097	5.41	8.38	8.21
19	0.102	0.106	5.67	8.01	6.51
20	0.112	0.117	5.78	7.43	5.01
21	0.122	0.128	5.72	6.70	3.75
22	0.134	0.141	5.51	5.88	2.73
23	0.148	0.155	5.22	5.08	1.96
24	0.162	0.170	4.96	4.39	1.40
25	0.178	0.186	4.69	3.78	1.00
26	0.195	0.205	4.42	3.25	0.72
27	0.214	0.225	4.07	2.72	0.50
28	0.235	0.247	3.61	2.20	0.33
29	0.258	0.271	3.03	1.69	0.21
30	0.284	0.297	2.40	1.22	0.13
31	0.311	0.326	1.63	0.75	0.065
32	0.342	0.358	0.97	0.41	0.029
33	0.375	0.393	0.48	0.18	0.011
34	0.412	0.431	0.19	0.065	0.0032
35	0.452	0.474	0.12	0.037	0.0015
36	0.496	0.520	0.11	0.032	0.0011
37	0.545	0.571	0.19	0.050	0.0014
38	0.598	0.627	0.43	0.10	0.0024
39	0.656	0.688	0.71	0.16	0.0030
40	0.721	0.755	1.10	0.22	0.0035
41	0.791	0.829	1.52	0.27	0.0037
42	0.868	0.910	1.79	0.30	0.0033
43	0.953	0.999	1.99	0.30	0.0028
44	1.047	1.097	1.99	0.27	0.0021
45	1.149	1.204	1.75	0.22	0.0014

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.46	0.17	0.00088
47	1.385	1.451	1.27	0.13	0.00057
48	1.520	1.592	1.12	0.11	0.00038
49	1.668	1.748	1.10	0.095	0.00029
50	1.832	1.919	0.97	0.076	0.00019
51	2.011	2.107	0.73	0.052	0.00011
52	2.207	2.313	0.47	0.030	0.000053
53	2.423	2.539	0.19	0.011	0.000016
54	2.660	2.787	0.056	0.0030	0.000004
55	2.920	3.059	0.0094	0.00046	4.58E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

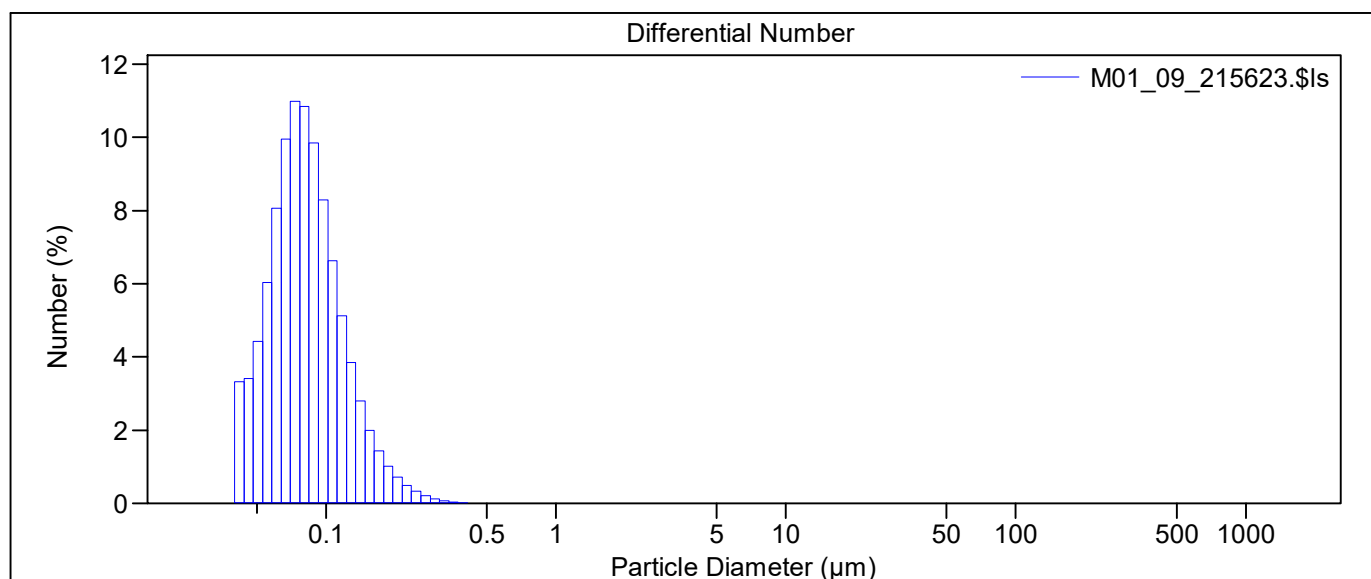
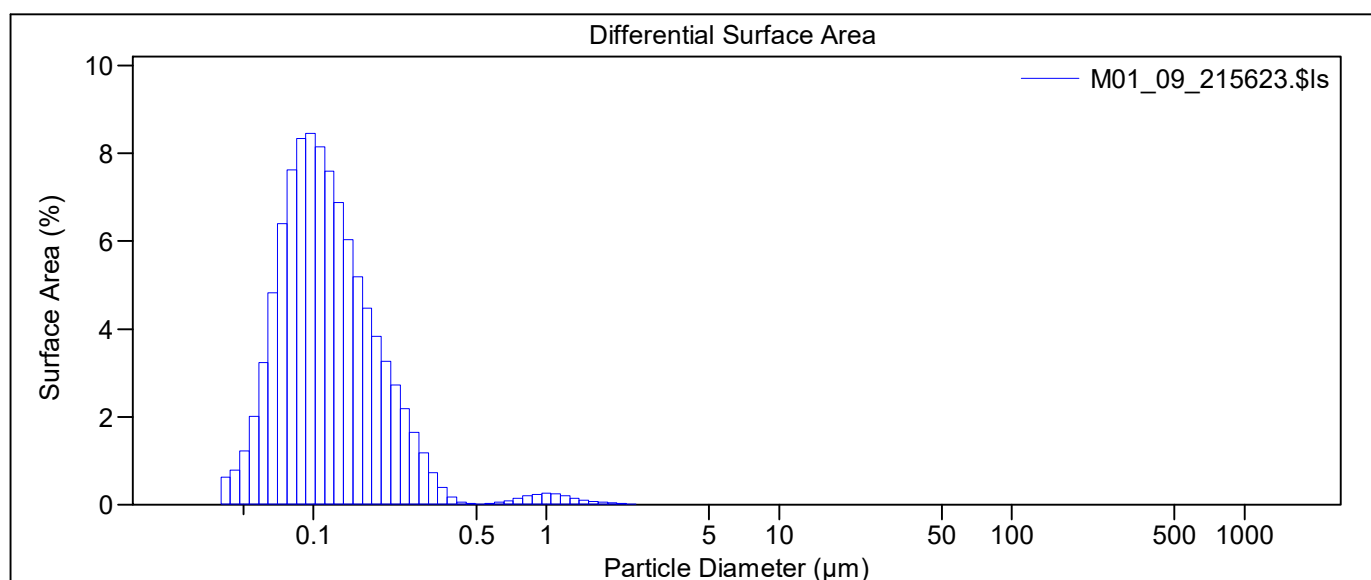
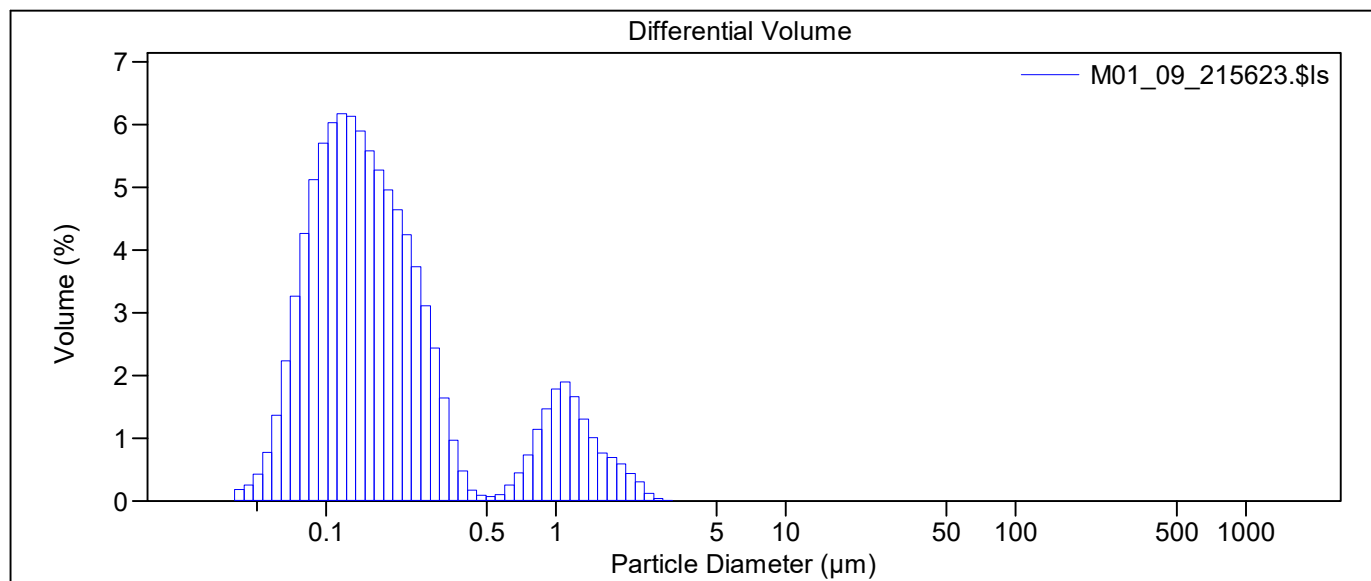
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_09_215623.\$ls		
	M01_09_215623.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.51%		
LS 13 320	Universal Liquid Module		
Start time:	21:54 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_09_215623.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.416 µm
Mean:	0.312 µm		Variance:	0.173 µm ²
Median:	0.153 µm		C.V.:	133%
Mean/Median ratio:	2.038		Skewness:	2.588 Right skewed
Mode:	0.117 µm		Kurtosis:	6.582 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.153 µm	0.251 µm	0.985 µm

Surface Area Statistics (Arithmetic)			M01_09_215623.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.156 µm
Mean:	0.144 µm		Variance:	0.024 µm ²
Median:	0.110 µm		C.V.:	108%
Mean/Median ratio:	1.314		Skewness:	6.777 Right skewed
Mode:	0.097 µm		Kurtosis:	59.22 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.155 µm	0.222 µm

Number Statistics (Arithmetic)			M01_09_215623.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.2%
Mean/Median ratio:	1.105		Skewness:	4.339 Right skewed
Mode:	0.073 μm		Kurtosis:	83.83 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.101 μm	0.132 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.63	3.32
10	0.044	0.046	0.25	0.78	3.42
11	0.048	0.050	0.43	1.22	4.42
12	0.053	0.055	0.77	2.01	6.03
13	0.058	0.061	1.37	3.24	8.06
14	0.064	0.067	2.24	4.82	9.96
15	0.070	0.073	3.26	6.41	11.0
16	0.077	0.080	4.27	7.63	10.8
17	0.084	0.088	5.12	8.34	9.84
18	0.093	0.097	5.70	8.46	8.29
19	0.102	0.106	6.03	8.15	6.62
20	0.112	0.117	6.17	7.60	5.12
21	0.122	0.128	6.13	6.87	3.85
22	0.134	0.141	5.90	6.03	2.80
23	0.148	0.155	5.58	5.19	2.00
24	0.162	0.170	5.27	4.47	1.43
25	0.178	0.186	4.96	3.83	1.02
26	0.195	0.205	4.64	3.26	0.72
27	0.214	0.225	4.24	2.72	0.50
28	0.235	0.247	3.73	2.18	0.33
29	0.258	0.271	3.11	1.65	0.21
30	0.284	0.297	2.44	1.18	0.12
31	0.311	0.326	1.64	0.72	0.063
32	0.342	0.358	0.97	0.39	0.028
33	0.375	0.393	0.48	0.17	0.010
34	0.412	0.431	0.17	0.056	0.0028
35	0.452	0.474	0.095	0.029	0.0012
36	0.496	0.520	0.074	0.020	0.00069
37	0.545	0.571	0.11	0.027	0.00075
38	0.598	0.627	0.26	0.059	0.0014
39	0.656	0.688	0.44	0.093	0.0018
40	0.721	0.755	0.74	0.14	0.0023
41	0.791	0.829	1.15	0.20	0.0027
42	0.868	0.910	1.47	0.23	0.0026
43	0.953	0.999	1.79	0.26	0.0024
44	1.047	1.097	1.90	0.25	0.0019
45	1.149	1.204	1.66	0.20	0.0013

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.30	0.14	0.00075
47	1.385	1.451	1.01	0.100	0.00044
48	1.520	1.592	0.76	0.069	0.00025
49	1.668	1.748	0.69	0.057	0.00017
50	1.832	1.919	0.59	0.044	0.00011
51	2.011	2.107	0.44	0.030	0.000062
52	2.207	2.313	0.30	0.019	0.000032
53	2.423	2.539	0.13	0.0072	0.000010
54	2.660	2.787	0.038	0.0019	0.000002
55	2.920	3.059	0.0068	0.00032	3.15E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

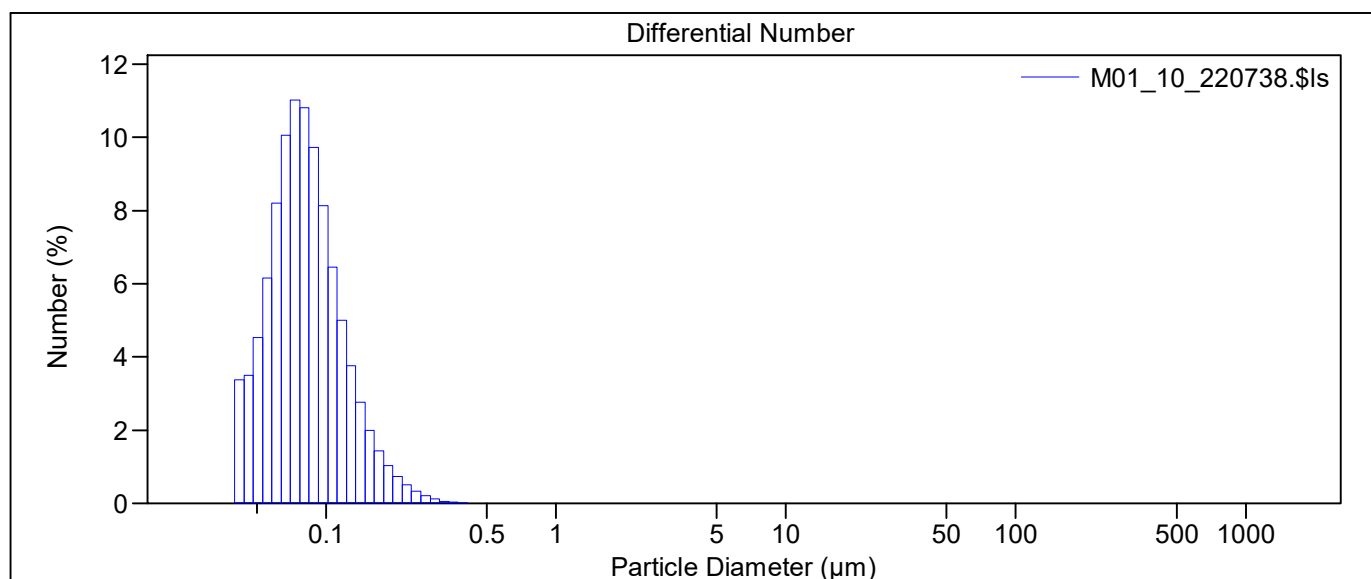
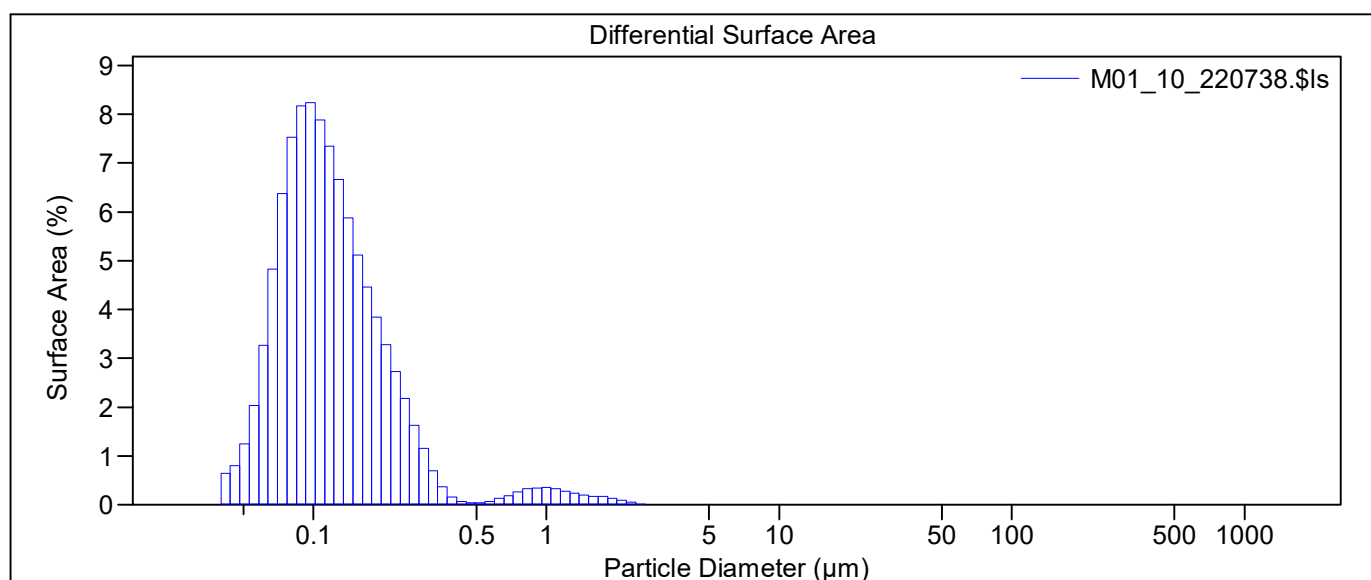
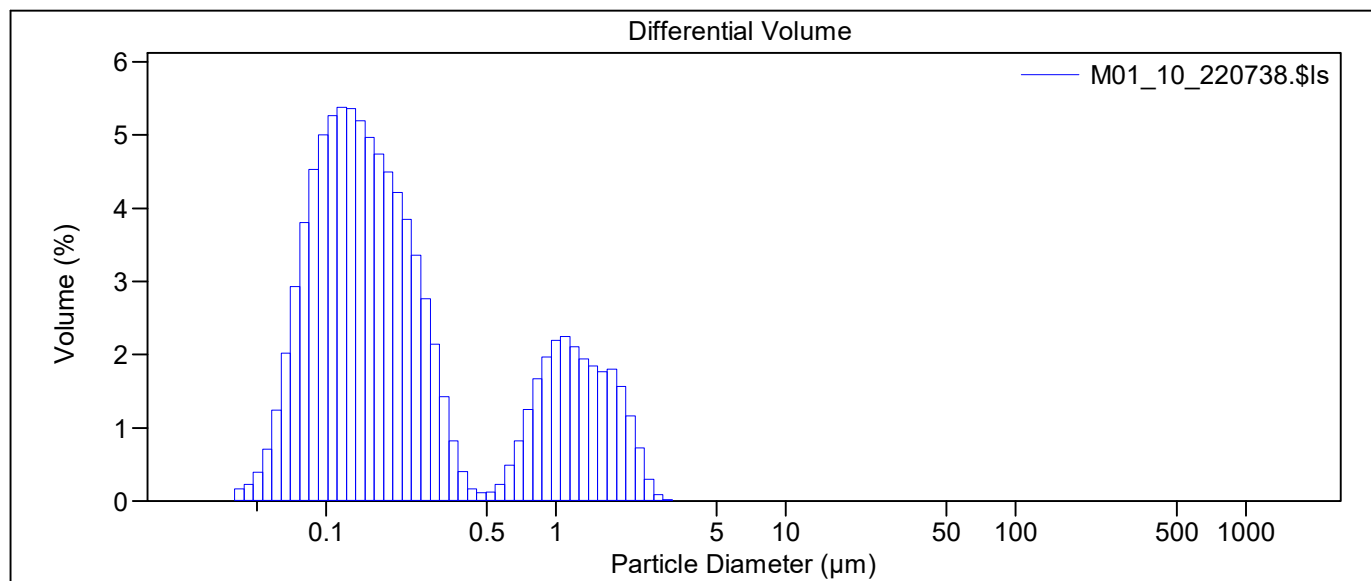
Beckman Coulter LS13320

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File ID:	M01		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.01%		
LS 13 320	Universal Liquid Module		
Start time:	22:05 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_10_220738.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.550 µm
Mean:	0.435 µm		Variance:	0.303 µm ²
Median:	0.171 µm		C.V.:	127%
Mean/Median ratio:	2.536		Skewness:	1.804 Right skewed
Mode:	0.117 µm		Kurtosis:	2.323 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.109 µm	0.171 µm	0.375 µm	1.338 µm

Surface Area Statistics (Arithmetic)			M01_10_220738.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.209 µm
Mean:	0.160 µm		Variance:	0.044 µm ²
Median:	0.110 µm		C.V.:	131%
Mean/Median ratio:	1.446		Skewness:	5.803 Right skewed
Mode:	0.097 µm		Kurtosis:	39.87 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.159 µm	0.233 µm

Number Statistics (Arithmetic)			M01_10_220738.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.9%
Mean/Median ratio:	1.109		Skewness:	5.896 Right skewed
Mode:	0.073 μm		Kurtosis:	140.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.38
10	0.044	0.046	0.23	0.80	3.50
11	0.048	0.050	0.39	1.24	4.54
12	0.053	0.055	0.71	2.04	6.16
13	0.058	0.061	1.25	3.26	8.20
14	0.064	0.067	2.02	4.83	10.1
15	0.070	0.073	2.93	6.38	11.0
16	0.077	0.080	3.80	7.54	10.8
17	0.084	0.088	4.53	8.18	9.73
18	0.093	0.097	5.01	8.23	8.13
19	0.102	0.106	5.26	7.88	6.46
20	0.112	0.117	5.38	7.34	5.00
21	0.122	0.128	5.36	6.66	3.76
22	0.134	0.141	5.20	5.88	2.76
23	0.148	0.155	4.97	5.12	1.99
24	0.162	0.170	4.74	4.45	1.44
25	0.178	0.186	4.49	3.84	1.03
26	0.195	0.205	4.21	3.29	0.73
27	0.214	0.225	3.84	2.73	0.50
28	0.235	0.247	3.36	2.18	0.33
29	0.258	0.271	2.77	1.63	0.21
30	0.284	0.297	2.14	1.15	0.12
31	0.311	0.326	1.42	0.70	0.061
32	0.342	0.358	0.83	0.37	0.027
33	0.375	0.393	0.40	0.16	0.0098
34	0.412	0.431	0.16	0.060	0.0030
35	0.452	0.474	0.11	0.037	0.0015
36	0.496	0.520	0.12	0.037	0.0013
37	0.545	0.571	0.22	0.063	0.0018
38	0.598	0.627	0.49	0.13	0.0030
39	0.656	0.688	0.82	0.19	0.0037
40	0.721	0.755	1.25	0.26	0.0043
41	0.791	0.829	1.67	0.32	0.0044
42	0.868	0.910	1.97	0.35	0.0039
43	0.953	0.999	2.20	0.35	0.0033
44	1.047	1.097	2.24	0.33	0.0025
45	1.149	1.204	2.11	0.28	0.0018

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.94	0.23	0.0012
47	1.385	1.451	1.84	0.20	0.00089
48	1.520	1.592	1.77	0.18	0.00065
49	1.668	1.748	1.80	0.16	0.00050
50	1.832	1.919	1.57	0.13	0.00033
51	2.011	2.107	1.16	0.088	0.00018
52	2.207	2.313	0.73	0.050	0.000087
53	2.423	2.539	0.29	0.018	0.000027
54	2.660	2.787	0.085	0.0049	0.000006
55	2.920	3.059	0.014	0.00074	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

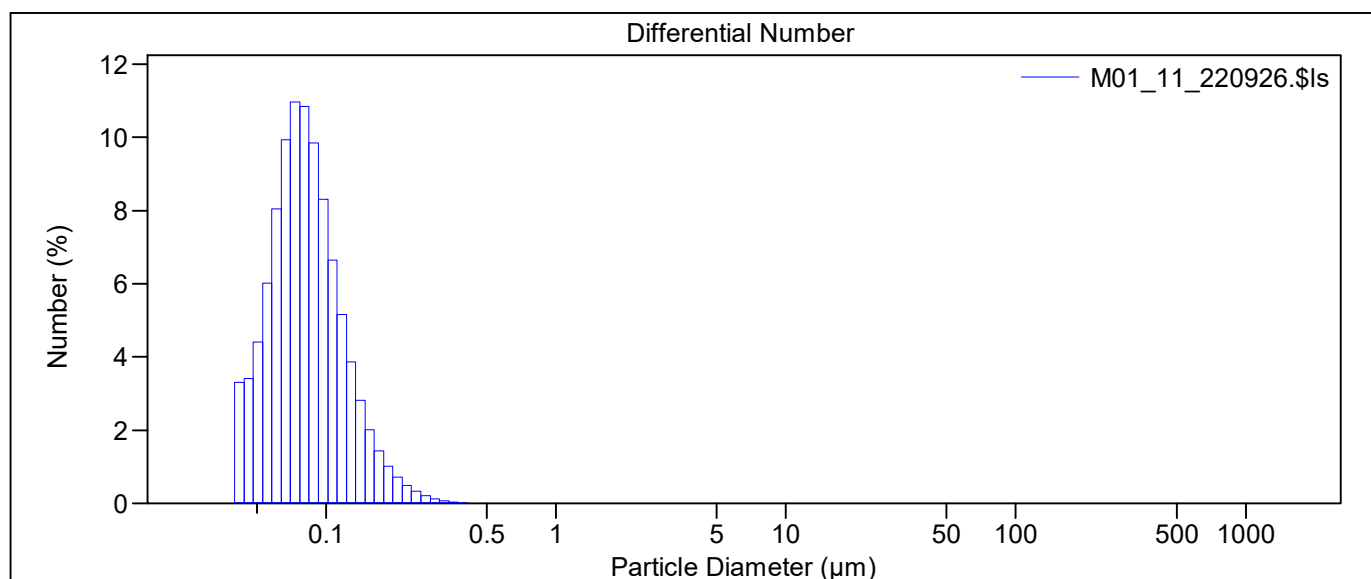
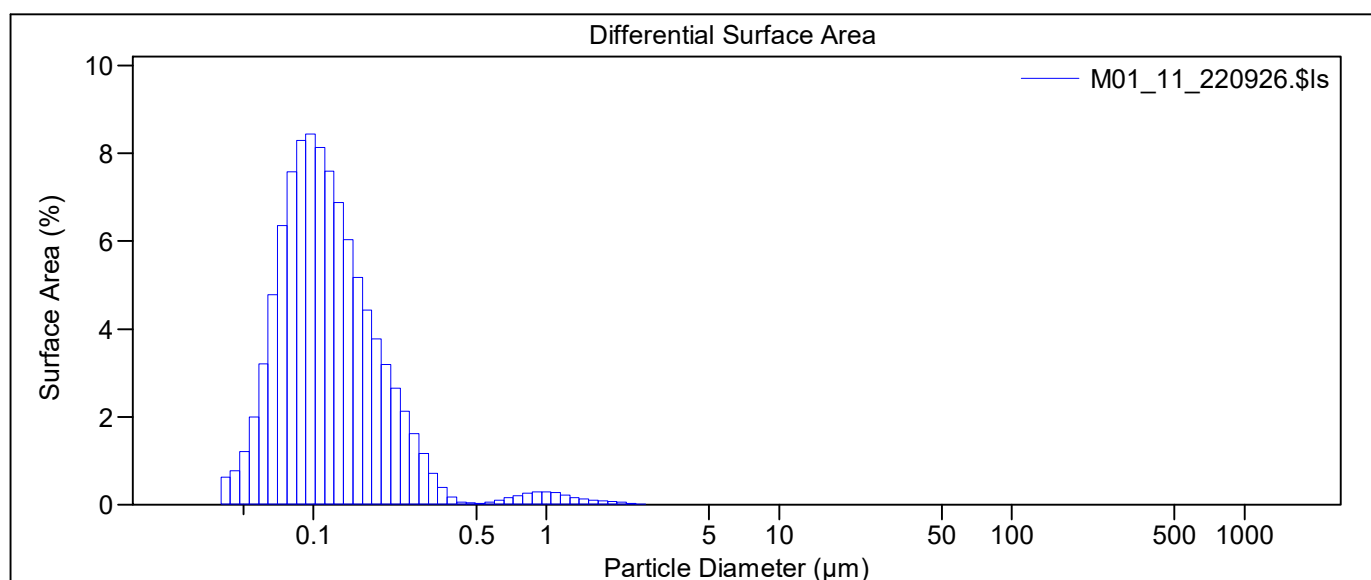
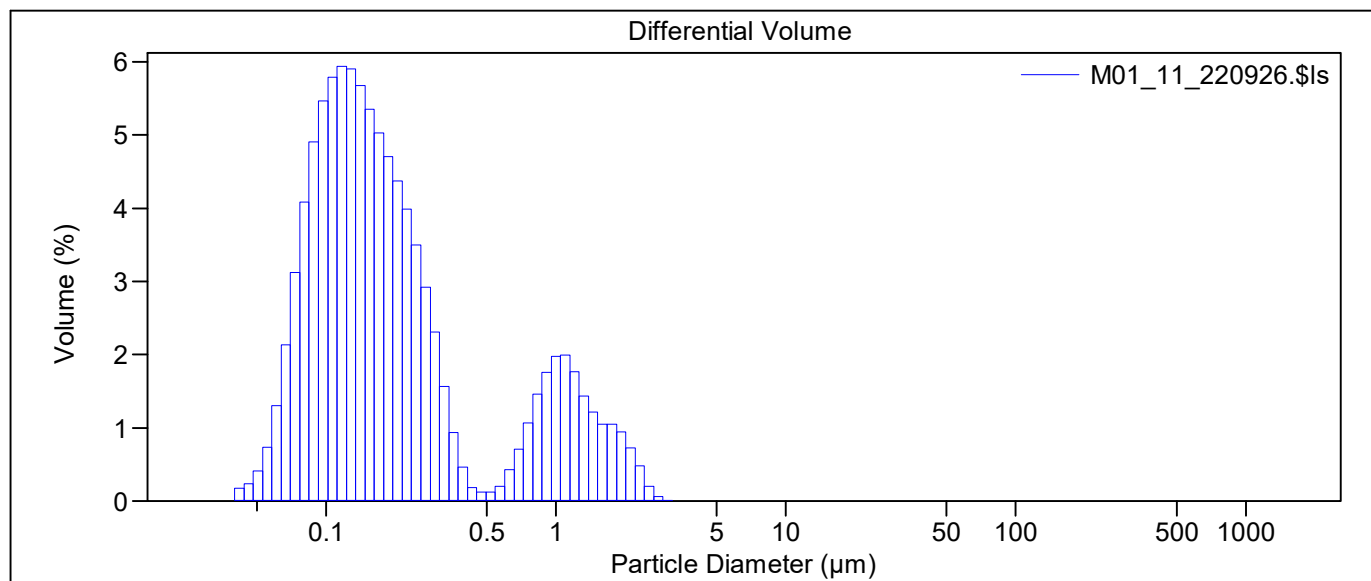
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_11_220926.\$ls		
	M01_11_220926.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.38%		
LS 13 320	Universal Liquid Module		
Start time:	22:07 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_11_220926.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.472 μm
Mean:	0.357 μm		Variance:	0.223 μm ²
Median:	0.159 μm		C.V.:	132%
Mean/Median ratio:	2.251		Skewness:	2.275 Right skewed
Mode:	0.117 μm		Kurtosis:	4.709 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.159 μm	0.277 μm	1.095 μm

Surface Area Statistics (Arithmetic)			M01_11_220926.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.176 µm
Mean:	0.150 µm		Variance:	0.031 µm ²
Median:	0.110 µm		C.V.:	118%
Mean/Median ratio:	1.362		Skewness:	6.422 Right skewed
Mode:	0.097 µm		Kurtosis:	51.61 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.226 µm

Number Statistics (Arithmetic)			M01_11_220926.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.7%
Mean/Median ratio:	1.105		Skewness:	4.953 Right skewed
Mode:	0.073 μm		Kurtosis:	105.4 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.132 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.63	3.31
10	0.044	0.046	0.24	0.78	3.40
11	0.048	0.050	0.41	1.21	4.41
12	0.053	0.055	0.74	1.99	6.01
13	0.058	0.061	1.31	3.21	8.04
14	0.064	0.067	2.14	4.78	9.94
15	0.070	0.073	3.12	6.36	11.0
16	0.077	0.080	4.08	7.58	10.8
17	0.084	0.088	4.90	8.30	9.85
18	0.093	0.097	5.47	8.43	8.31
19	0.102	0.106	5.79	8.14	6.65
20	0.112	0.117	5.94	7.60	5.16
21	0.122	0.128	5.90	6.88	3.87
22	0.134	0.141	5.68	6.03	2.82
23	0.148	0.155	5.35	5.18	2.01
24	0.162	0.170	5.03	4.43	1.43
25	0.178	0.186	4.70	3.78	1.01
26	0.195	0.205	4.38	3.20	0.71
27	0.214	0.225	3.99	2.65	0.49
28	0.235	0.247	3.50	2.12	0.32
29	0.258	0.271	2.92	1.61	0.20
30	0.284	0.297	2.31	1.16	0.12
31	0.311	0.326	1.57	0.72	0.063
32	0.342	0.358	0.93	0.39	0.028
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.18	0.064	0.0032
35	0.452	0.474	0.12	0.038	0.0016
36	0.496	0.520	0.12	0.035	0.0012
37	0.545	0.571	0.20	0.053	0.0015
38	0.598	0.627	0.43	0.10	0.0024
39	0.656	0.688	0.71	0.15	0.0030
40	0.721	0.755	1.07	0.21	0.0034
41	0.791	0.829	1.46	0.26	0.0036
42	0.868	0.910	1.76	0.29	0.0032
43	0.953	0.999	1.98	0.30	0.0027
44	1.047	1.097	2.00	0.27	0.0021
45	1.149	1.204	1.76	0.22	0.0014
46	1.261	1.321	1.44	0.16	0.00086
47	1.385	1.451	1.21	0.12	0.00055
48	1.520	1.592	1.05	0.099	0.00036
49	1.668	1.748	1.05	0.090	0.00027
50	1.832	1.919	0.94	0.074	0.00019
51	2.011	2.107	0.73	0.052	0.00011
52	2.207	2.313	0.48	0.031	0.000054
53	2.423	2.539	0.20	0.012	0.000017
54	2.660	2.787	0.059	0.0032	0.000004
55	2.920	3.059	0.0100	0.00049	4.82E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M01.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

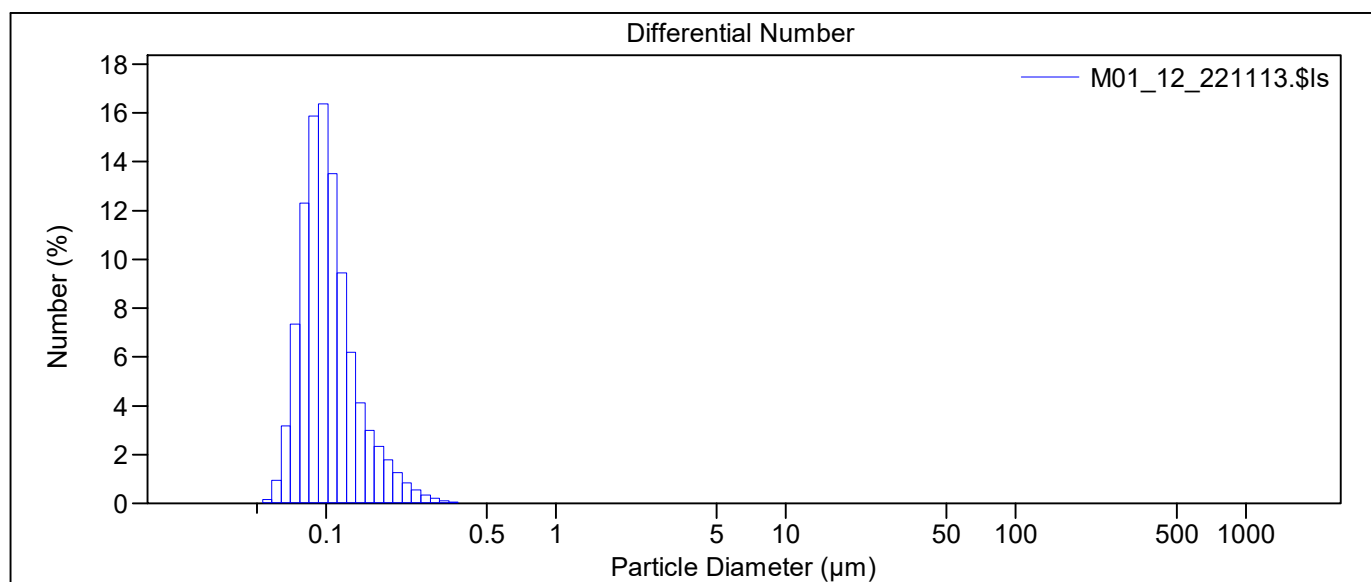
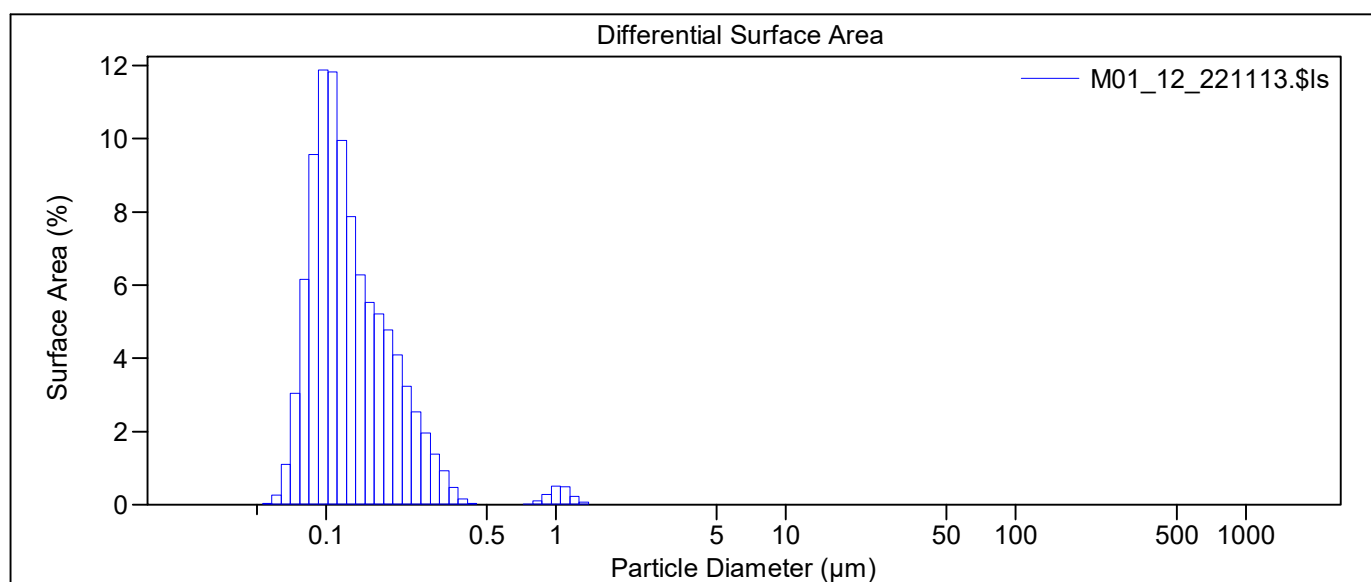
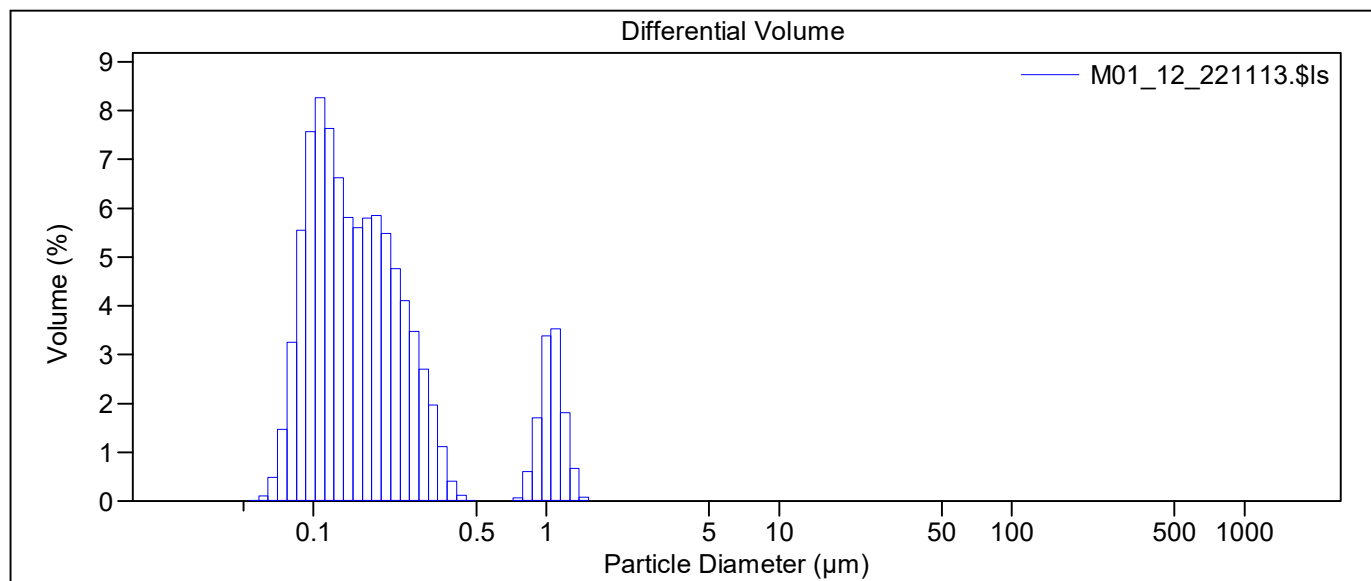
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_12_221113.\$ls		
	M01_12_221113.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.06%		
LS 13 320	Universal Liquid Module		
Start time:	22:09 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_12_221113.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.300 µm
Mean:	0.267 µm		Variance:	0.090 µm ²
Median:	0.156 µm		C.V.:	112%
Mean/Median ratio:	1.715		Skewness:	2.252 Right skewed
Mode:	0.106 µm		Kurtosis:	3.648 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.091 µm	0.110 µm	0.156 µm	0.239 µm	0.927 µm

Surface Area Statistics (Arithmetic)			M01_12_221113.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.132 µm
Mean:	0.152 µm		Variance:	0.018 µm ²
Median:	0.118 µm		C.V.:	86.9%
Mean/Median ratio:	1.288		Skewness:	5.633 Right skewed
Mode:	0.097 µm		Kurtosis:	36.89 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.084 µm	0.096 µm	0.118 µm	0.167 µm	0.230 µm

Number Statistics (Arithmetic)			M01_12_221113.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.107 μm		Variance:	0.0015 μm ²
Median:	0.098 μm		C.V.:	35.6%
Mean/Median ratio:	1.093		Skewness:	4.864 Right skewed
Mode:	0.097 μm		Kurtosis:	80.82 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.075 μm	0.085 μm	0.098 μm	0.118 μm	0.150 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00065	0.0020	0.0100
12	0.053	0.055	0.014	0.040	0.17
13	0.058	0.061	0.11	0.27	0.94
14	0.064	0.067	0.48	1.10	3.18
15	0.070	0.073	1.46	3.04	7.34
16	0.077	0.080	3.25	6.15	12.3
17	0.084	0.088	5.55	9.56	15.9
18	0.093	0.097	7.57	11.9	16.4
19	0.102	0.106	8.26	11.8	13.5
20	0.112	0.117	7.63	9.95	9.44
21	0.122	0.128	6.63	7.87	6.20
22	0.134	0.141	5.81	6.29	4.11
23	0.148	0.155	5.60	5.52	2.99
24	0.162	0.170	5.80	5.21	2.34
25	0.178	0.186	5.85	4.78	1.78
26	0.195	0.205	5.49	4.09	1.27
27	0.214	0.225	4.76	3.23	0.83
28	0.235	0.247	4.10	2.53	0.54
29	0.258	0.271	3.48	1.96	0.35
30	0.284	0.297	2.70	1.38	0.20
31	0.311	0.326	1.97	0.92	0.11
32	0.342	0.358	1.12	0.48	0.048
33	0.375	0.393	0.40	0.16	0.013
34	0.412	0.431	0.11	0.040	0.0028
35	0.452	0.474	0.012	0.0040	0.00023
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.060	0.012	0.00028
41	0.791	0.829	0.60	0.11	0.0021
42	0.868	0.910	1.71	0.29	0.0045
43	0.953	0.999	3.38	0.52	0.0067
44	1.047	1.097	3.53	0.49	0.0053
45	1.149	1.204	1.82	0.23	0.0021

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.67	0.077	0.00057
47	1.385	1.451	0.082	0.0086	0.000053
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

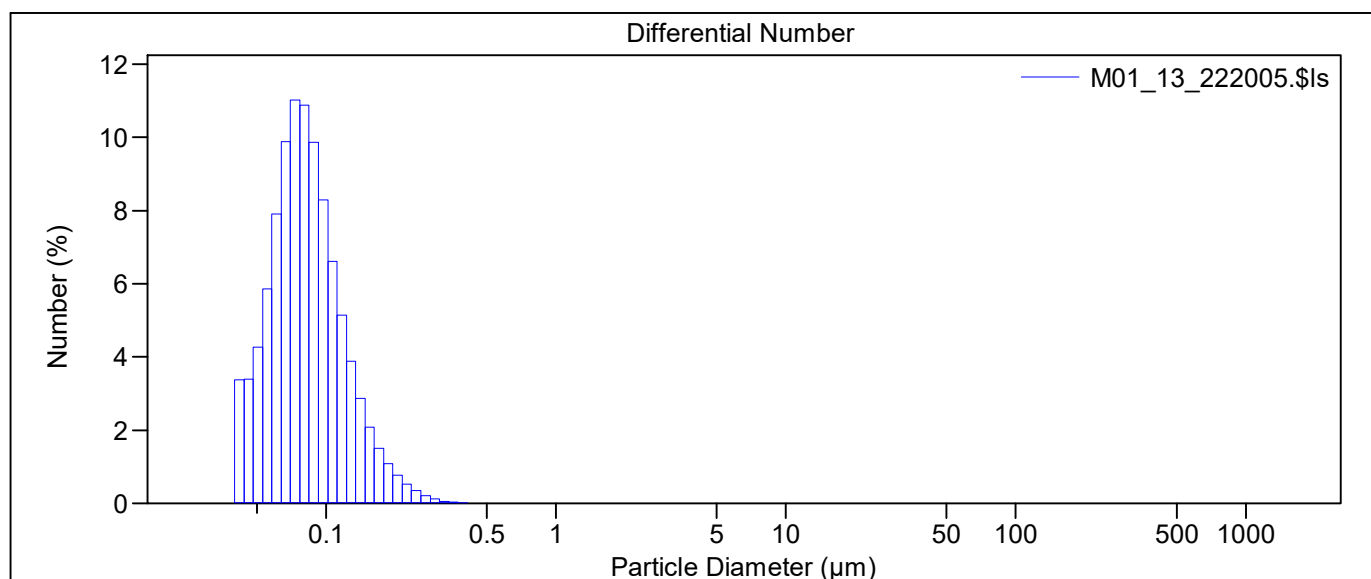
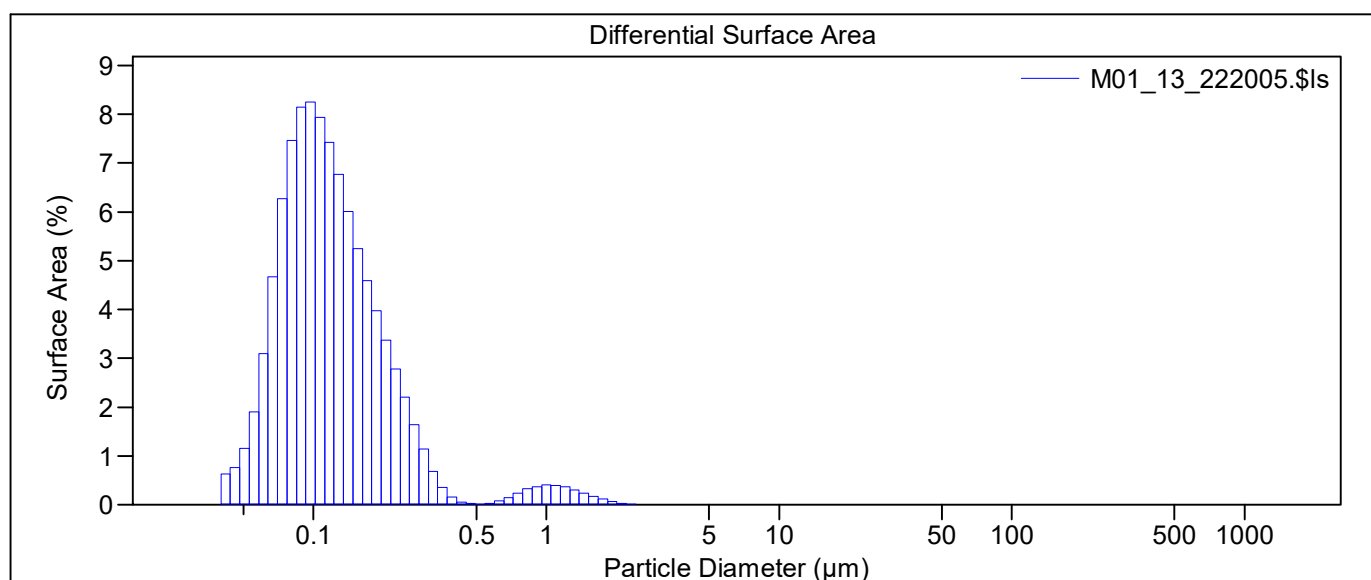
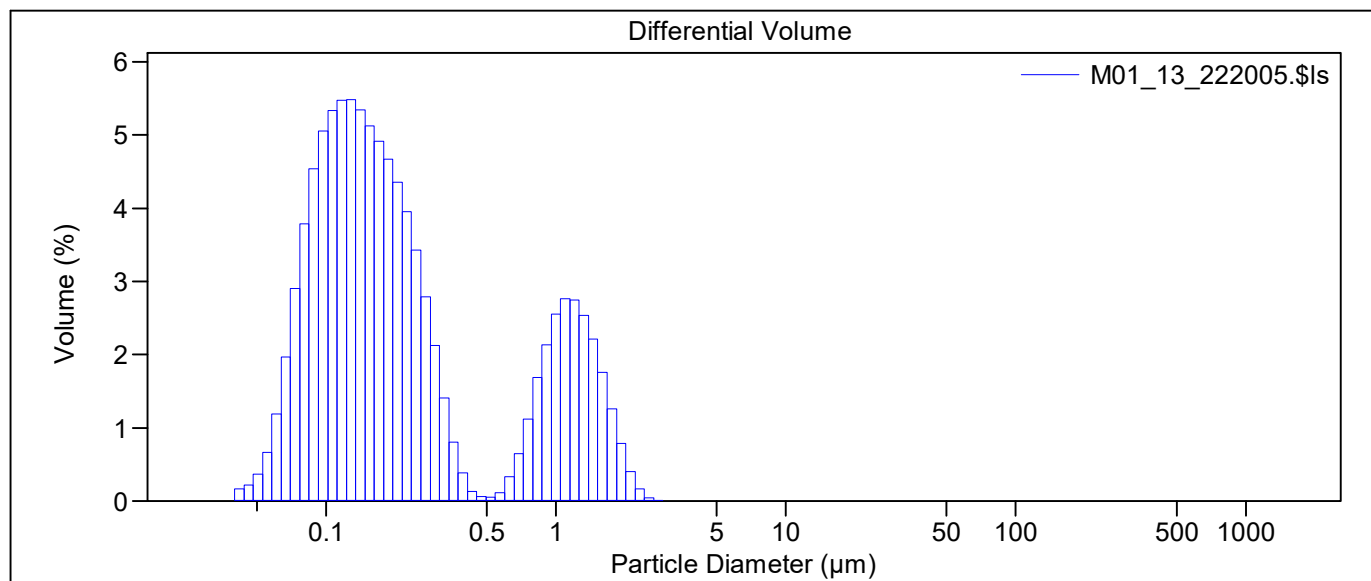
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_13_222005.\$ls		
	M01_13_222005.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.54%		
LS 13 320	Universal Liquid Module		
Start time:	22:18 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	70%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_13_222005.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.483 µm
Mean:	0.401 µm		Variance:	0.234 µm ²
Median:	0.170 µm		C.V.:	121%
Mean/Median ratio:	2.364		Skewness:	1.683 Right skewed
Mode:	0.128 µm		Kurtosis:	1.754 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 µm	0.109 µm	0.170 µm	0.336 µm	1.227 µm

Surface Area Statistics (Arithmetic)			M01_13_222005.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.196 μm
Mean:	0.158 μm		Variance:	0.038 μm ²
Median:	0.111 μm		C.V.:	124%
Mean/Median ratio:	1.424		Skewness:	5.339 Right skewed
Mode:	0.097 μm		Kurtosis:	32.81 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.111 μm	0.160 μm	0.232 μm

Number Statistics (Arithmetic)			M01_13_222005.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	45.8%
Mean/Median ratio:	1.108		Skewness:	5.610 Right skewed
Mode:	0.073 μm		Kurtosis:	120.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.63	3.37
10	0.044	0.046	0.22	0.76	3.39
11	0.048	0.050	0.37	1.15	4.27
12	0.053	0.055	0.67	1.90	5.86
13	0.058	0.061	1.19	3.10	7.91
14	0.064	0.067	1.97	4.67	9.88
15	0.070	0.073	2.90	6.27	11.0
16	0.077	0.080	3.79	7.46	10.9
17	0.084	0.088	4.54	8.14	9.86
18	0.093	0.097	5.06	8.26	8.30
19	0.102	0.106	5.34	7.94	6.62
20	0.112	0.117	5.48	7.42	5.14
21	0.122	0.128	5.48	6.77	3.88
22	0.134	0.141	5.34	6.01	2.86
23	0.148	0.155	5.13	5.25	2.08
24	0.162	0.170	4.91	4.59	1.50
25	0.178	0.186	4.67	3.97	1.08
26	0.195	0.205	4.36	3.37	0.76
27	0.214	0.225	3.95	2.79	0.52
28	0.235	0.247	3.43	2.20	0.34
29	0.258	0.271	2.79	1.63	0.21
30	0.284	0.297	2.13	1.14	0.12
31	0.311	0.326	1.41	0.69	0.061
32	0.342	0.358	0.81	0.36	0.026
33	0.375	0.393	0.38	0.15	0.0095
34	0.412	0.431	0.13	0.048	0.0024
35	0.452	0.474	0.064	0.021	0.00090
36	0.496	0.520	0.055	0.017	0.00058
37	0.545	0.571	0.11	0.031	0.00091
38	0.598	0.627	0.33	0.084	0.0020
39	0.656	0.688	0.65	0.15	0.0030
40	0.721	0.755	1.12	0.24	0.0039
41	0.791	0.829	1.69	0.32	0.0044
42	0.868	0.910	2.14	0.37	0.0042
43	0.953	0.999	2.56	0.41	0.0038
44	1.047	1.097	2.76	0.40	0.0031
45	1.149	1.204	2.75	0.36	0.0024
46	1.261	1.321	2.53	0.30	0.0016
47	1.385	1.451	2.22	0.24	0.0011
48	1.520	1.592	1.76	0.17	0.00065
49	1.668	1.748	1.26	0.11	0.00035
50	1.832	1.919	0.79	0.065	0.00017
51	2.011	2.107	0.40	0.030	0.000064
52	2.207	2.313	0.16	0.011	0.000020
53	2.423	2.539	0.047	0.0029	0.000004
54	2.660	2.787	0.0081	0.00046	0.000001
55	2.920	3.059	0.00075	0.000039	3.95E-8
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

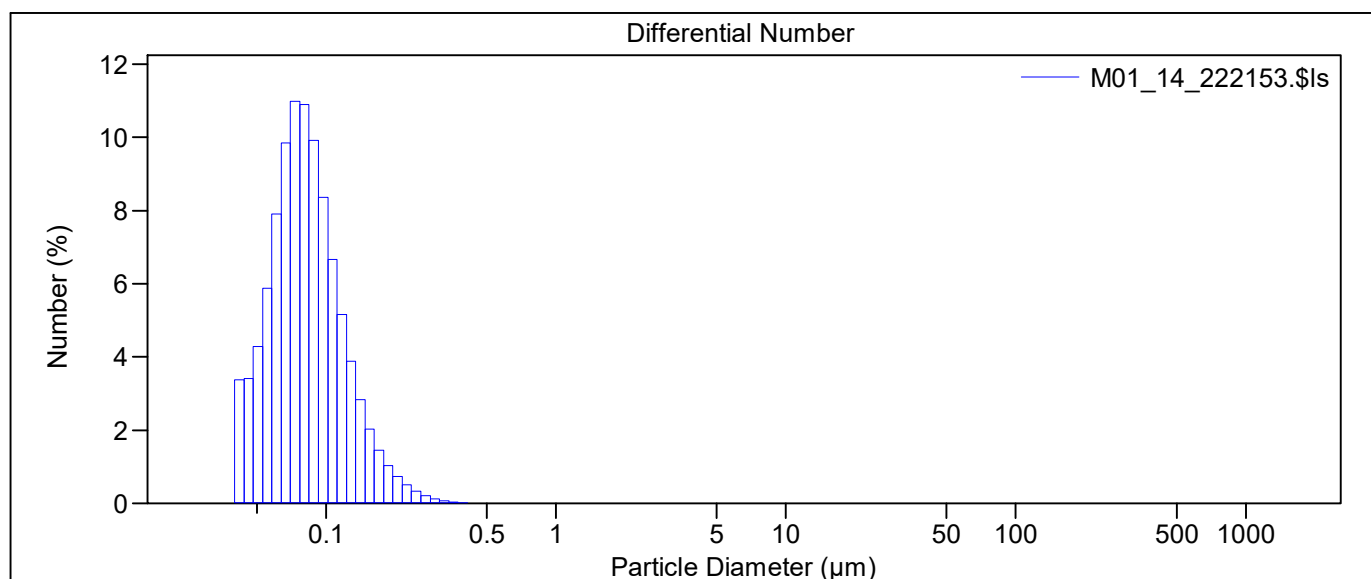
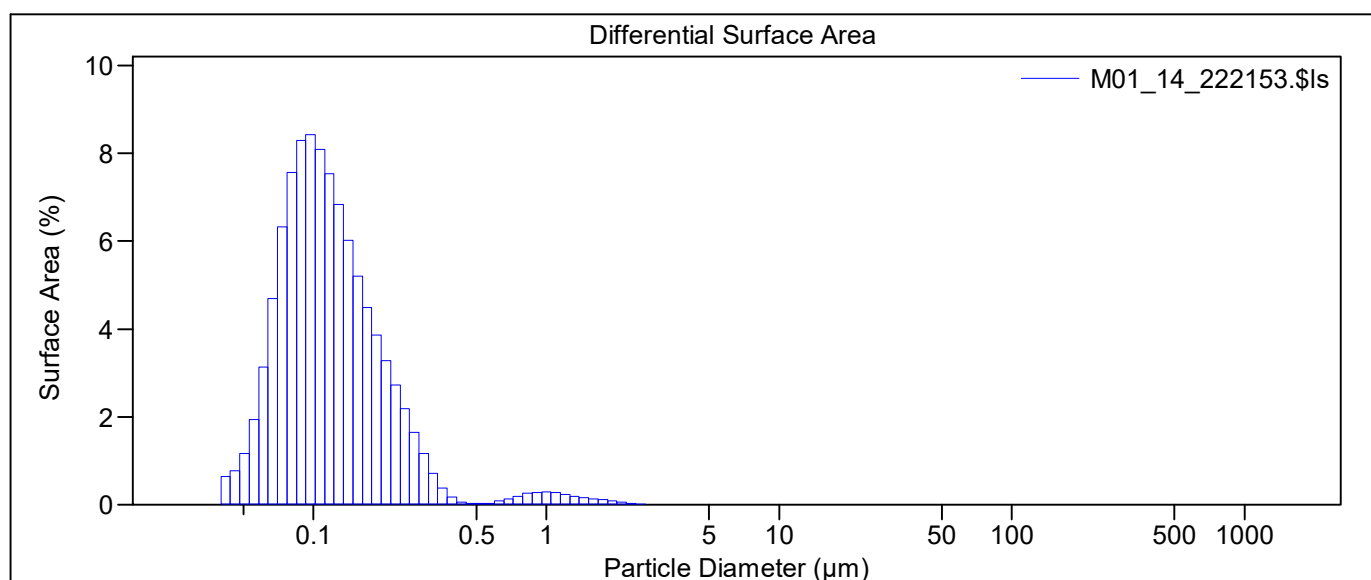
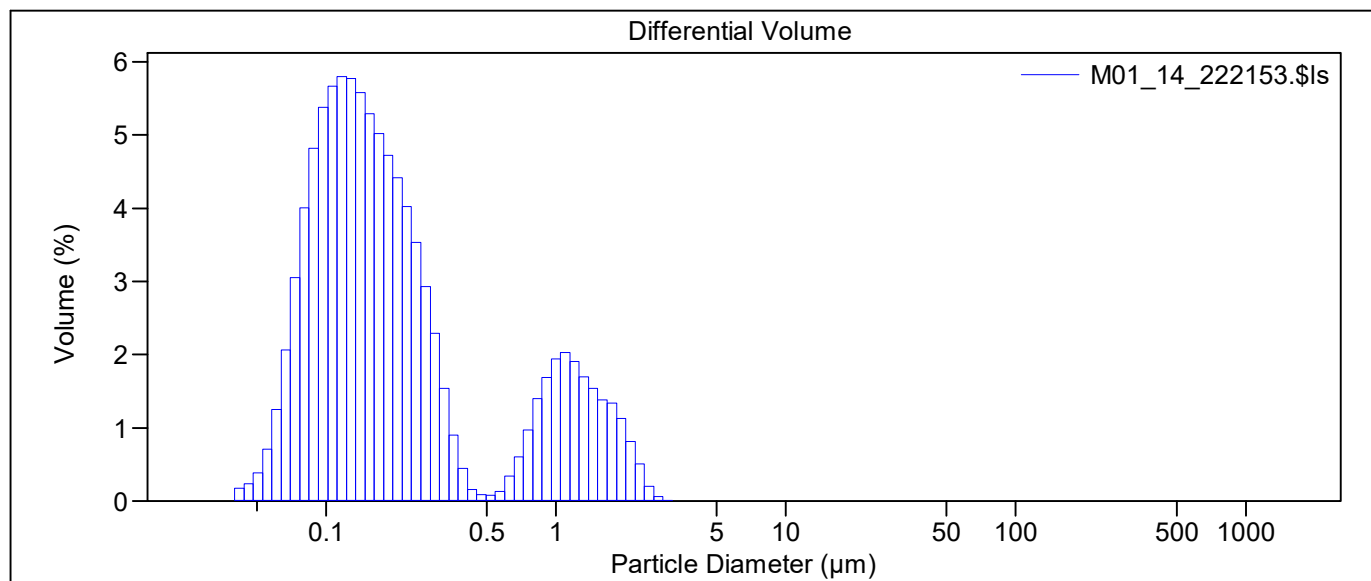
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_14_222153.\$ls		
	M01_14_222153.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.25%		
LS 13 320	Universal Liquid Module		
Start time:	22:20 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	72%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_14_222153.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.497 μm
Mean:	0.378 μm		Variance:	0.247 μm ²
Median:	0.162 μm		C.V.:	132%
Mean/Median ratio:	2.340		Skewness:	2.109 Right skewed
Mode:	0.117 μm		Kurtosis:	3.715 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.107 μm	0.162 μm	0.286 μm	1.183 μm

Surface Area Statistics (Arithmetic)			M01_14_222153.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.185 µm
Mean:	0.152 µm		Variance:	0.034 µm ²
Median:	0.110 µm		C.V.:	122%
Mean/Median ratio:	1.379		Skewness:	6.303 Right skewed
Mode:	0.097 µm		Kurtosis:	48.31 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.157 µm	0.227 µm

Number Statistics (Arithmetic)			M01_14_222153.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.080 μm		C.V.:	44.9%
Mean/Median ratio:	1.105		Skewness:	5.158 Right skewed
Mode:	0.073 μm		Kurtosis:	115.1 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.38
10	0.044	0.046	0.23	0.77	3.40
11	0.048	0.050	0.39	1.17	4.29
12	0.053	0.055	0.71	1.93	5.88
13	0.058	0.061	1.25	3.13	7.91
14	0.064	0.067	2.06	4.70	9.84
15	0.070	0.073	3.05	6.32	11.0
16	0.077	0.080	4.00	7.56	10.9
17	0.084	0.088	4.82	8.30	9.93
18	0.093	0.097	5.38	8.43	8.37
19	0.102	0.106	5.67	8.09	6.67
20	0.112	0.117	5.80	7.54	5.16
21	0.122	0.128	5.77	6.84	3.88
22	0.134	0.141	5.58	6.02	2.84
23	0.148	0.155	5.29	5.21	2.03
24	0.162	0.170	5.02	4.50	1.46
25	0.178	0.186	4.73	3.86	1.04
26	0.195	0.205	4.41	3.28	0.73
27	0.214	0.225	4.03	2.73	0.51
28	0.235	0.247	3.53	2.18	0.34
29	0.258	0.271	2.93	1.65	0.21
30	0.284	0.297	2.29	1.17	0.12
31	0.311	0.326	1.54	0.72	0.063
32	0.342	0.358	0.90	0.38	0.028
33	0.375	0.393	0.44	0.17	0.010
34	0.412	0.431	0.16	0.055	0.0028
35	0.452	0.474	0.089	0.028	0.0012
36	0.496	0.520	0.078	0.023	0.00079
37	0.545	0.571	0.13	0.036	0.0010
38	0.598	0.627	0.34	0.082	0.0020
39	0.656	0.688	0.60	0.13	0.0026
40	0.721	0.755	0.97	0.19	0.0032
41	0.791	0.829	1.40	0.26	0.0035
42	0.868	0.910	1.69	0.28	0.0032
43	0.953	0.999	1.94	0.30	0.0028
44	1.047	1.097	2.03	0.28	0.0022
45	1.149	1.204	1.90	0.24	0.0015

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.69	0.19	0.0010
47	1.385	1.451	1.54	0.16	0.00071
48	1.520	1.592	1.38	0.13	0.00049
49	1.668	1.748	1.33	0.12	0.00035
50	1.832	1.919	1.13	0.090	0.00023
51	2.011	2.107	0.82	0.059	0.00012
52	2.207	2.313	0.51	0.033	0.000058
53	2.423	2.539	0.20	0.012	0.000018
54	2.660	2.787	0.059	0.0032	0.000004
55	2.920	3.059	0.0099	0.00049	4.91E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

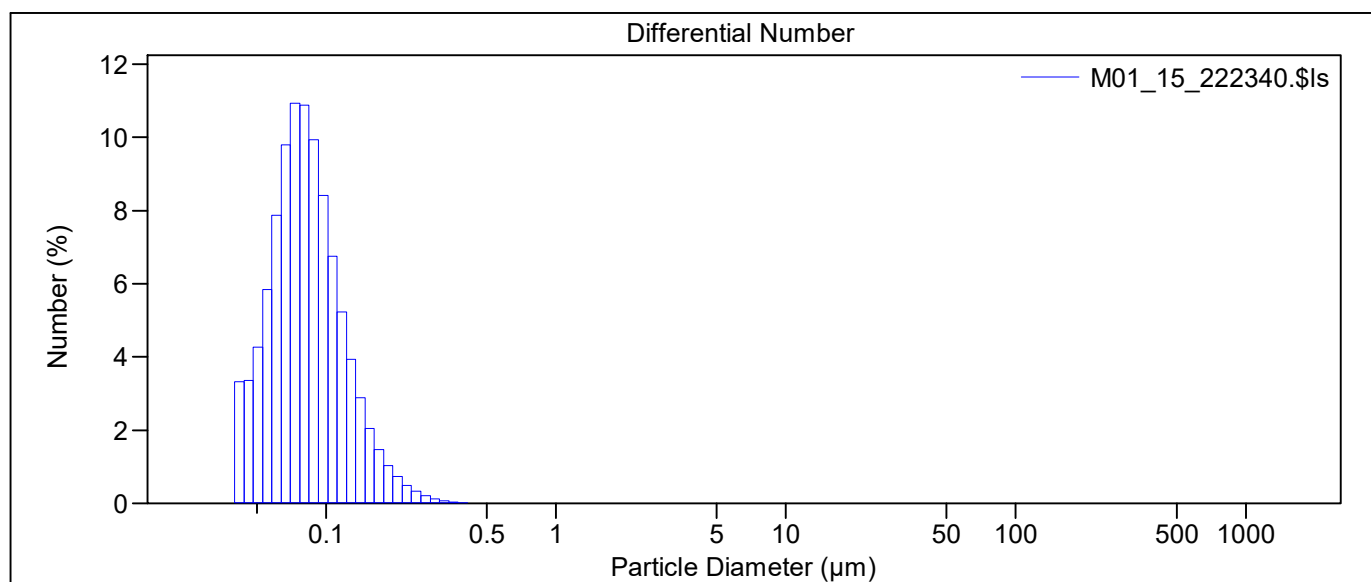
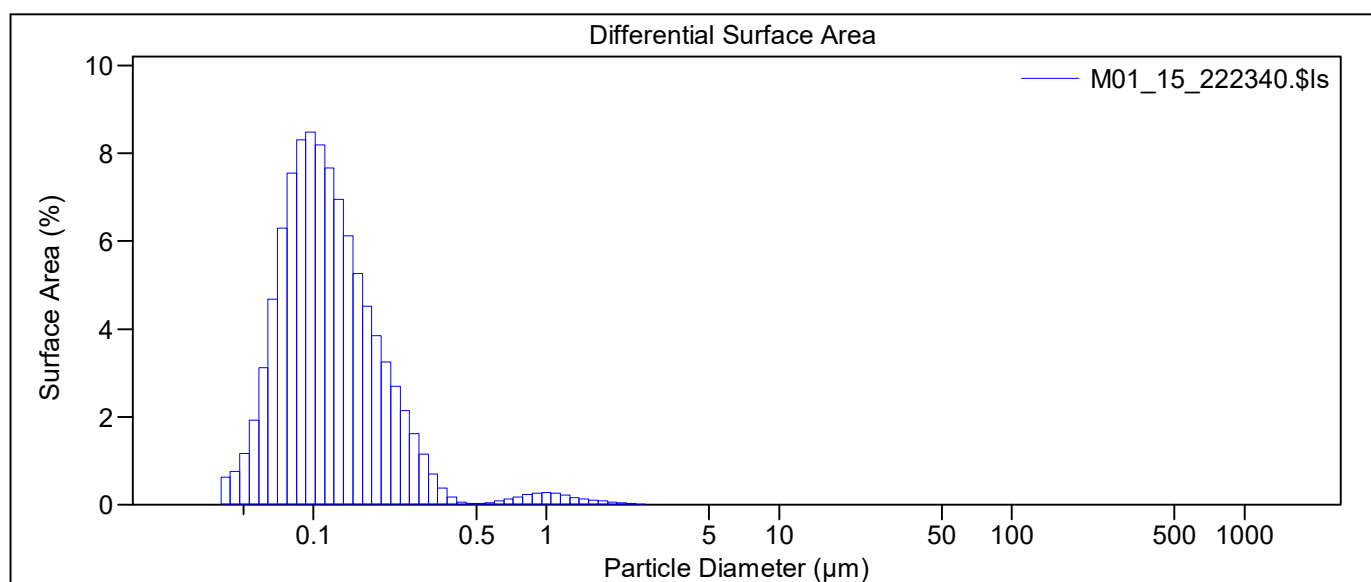
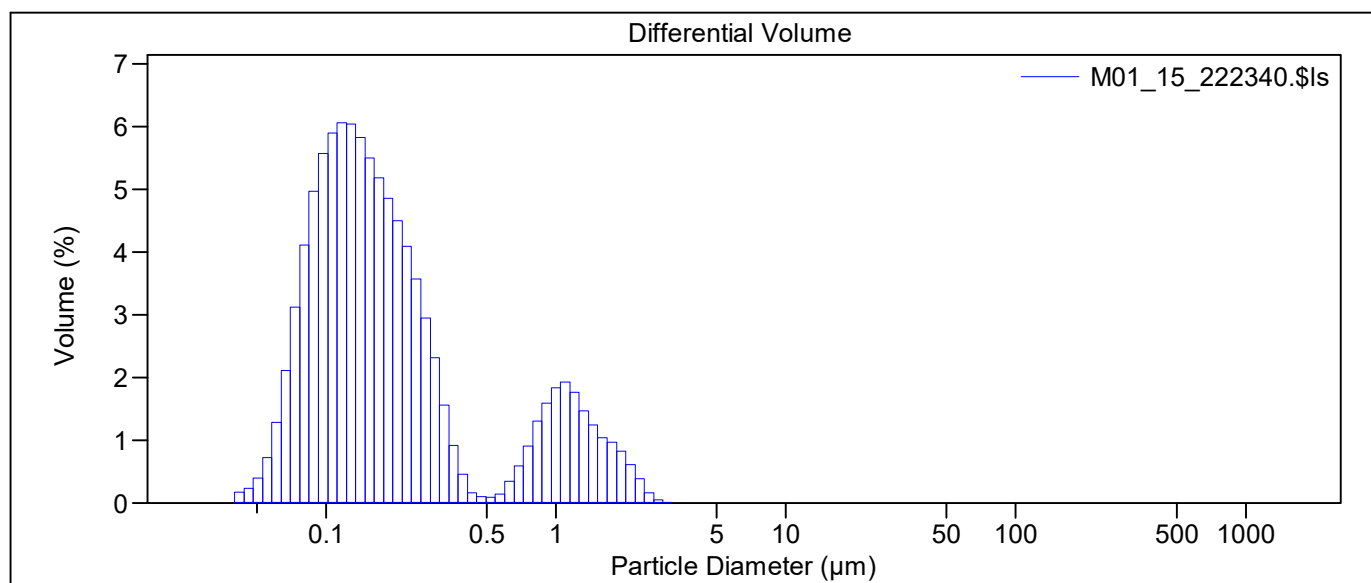
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M01\M01_15_222340.\$ls		
	M01_15_222340.\$ls		
File ID:	M01		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.46%		
LS 13 320	Universal Liquid Module		
Start time:	22:21 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	70%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M01_15_222340.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.455 µm
Mean:	0.342 µm		Variance:	0.207 µm ²
Median:	0.157 µm		C.V.:	133%
Mean/Median ratio:	2.186		Skewness:	2.349 Right skewed
Mode:	0.117 µm		Kurtosis:	5.074 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.157 µm	0.265 µm	1.071 µm

Surface Area Statistics (Arithmetic)			M01_15_222340.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.170 µm
Mean:	0.148 µm		Variance:	0.029 µm ²
Median:	0.110 µm		C.V.:	115%
Mean/Median ratio:	1.342		Skewness:	6.555 Right skewed
Mode:	0.097 µm		Kurtosis:	53.81 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.224 µm

Number Statistics (Arithmetic)			M01_15_222340.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.4%
Mean/Median ratio:	1.104		Skewness:	4.722 Right skewed
Mode:	0.073 μm		Kurtosis:	98.40 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.63	3.33
10	0.044	0.046	0.24	0.76	3.36
11	0.048	0.050	0.40	1.16	4.26
12	0.053	0.055	0.72	1.92	5.85
13	0.058	0.061	1.28	3.12	7.86
14	0.064	0.067	2.11	4.68	9.79
15	0.070	0.073	3.12	6.29	10.9
16	0.077	0.080	4.11	7.55	10.9
17	0.084	0.088	4.97	8.31	9.94
18	0.093	0.097	5.57	8.49	8.42
19	0.102	0.106	5.90	8.20	6.75
20	0.112	0.117	6.06	7.67	5.24
21	0.122	0.128	6.04	6.96	3.94
22	0.134	0.141	5.83	6.12	2.88
23	0.148	0.155	5.50	5.26	2.05
24	0.162	0.170	5.19	4.52	1.46
25	0.178	0.186	4.85	3.85	1.04
26	0.195	0.205	4.50	3.26	0.73
27	0.214	0.225	4.09	2.69	0.50
28	0.235	0.247	3.57	2.14	0.33
29	0.258	0.271	2.95	1.61	0.21
30	0.284	0.297	2.32	1.15	0.12
31	0.311	0.326	1.56	0.71	0.062
32	0.342	0.358	0.92	0.38	0.028
33	0.375	0.393	0.46	0.17	0.010
34	0.412	0.431	0.16	0.056	0.0028
35	0.452	0.474	0.097	0.030	0.0013
36	0.496	0.520	0.091	0.026	0.00089
37	0.545	0.571	0.15	0.038	0.0011
38	0.598	0.627	0.35	0.081	0.0019
39	0.656	0.688	0.59	0.13	0.0025
40	0.721	0.755	0.91	0.18	0.0029
41	0.791	0.829	1.31	0.23	0.0032
42	0.868	0.910	1.60	0.26	0.0029
43	0.953	0.999	1.84	0.27	0.0026
44	1.047	1.097	1.93	0.26	0.0020
45	1.149	1.204	1.77	0.22	0.0014

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.47	0.16	0.00088
47	1.385	1.451	1.24	0.13	0.00056
48	1.520	1.592	1.04	0.097	0.00036
49	1.668	1.748	0.97	0.082	0.00025
50	1.832	1.919	0.83	0.064	0.00016
51	2.011	2.107	0.61	0.043	0.000090
52	2.207	2.313	0.39	0.025	0.000044
53	2.423	2.539	0.16	0.0093	0.000014
54	2.660	2.787	0.047	0.0025	0.000003
55	2.920	3.059	0.0079	0.00038	3.83E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M01.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M02\M02.\$av
M02.\$av
File ID: M02
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M02.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.459 µm
Mean:	0.346 µm	Variance:	0.211 µm ²
Median:	0.157 µm	C.V.:	133%
Mean/Median ratio:	2.205	Skewness:	2.310 Right skewed
Mode:	0.117 µm	Kurtosis:	4.857 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.157 µm	0.267 µm	1.091 µm

Surface Area Statistics (Arithmetic) M02.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.171 µm
Mean:	0.148 µm	Variance:	0.029 µm ²
Median:	0.110 µm	C.V.:	116%
Mean/Median ratio:	1.345	Skewness:	6.504 Right skewed
Mode:	0.097 µm	Kurtosis:	52.69 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.225 µm

Beckman Coulter LS13320

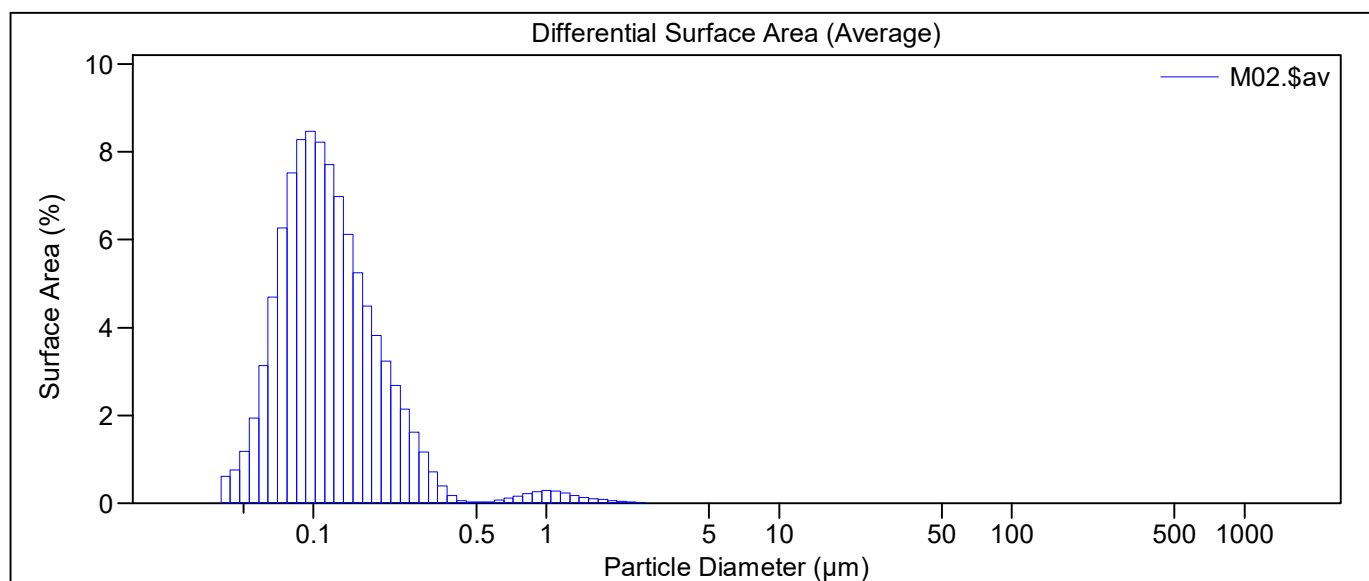
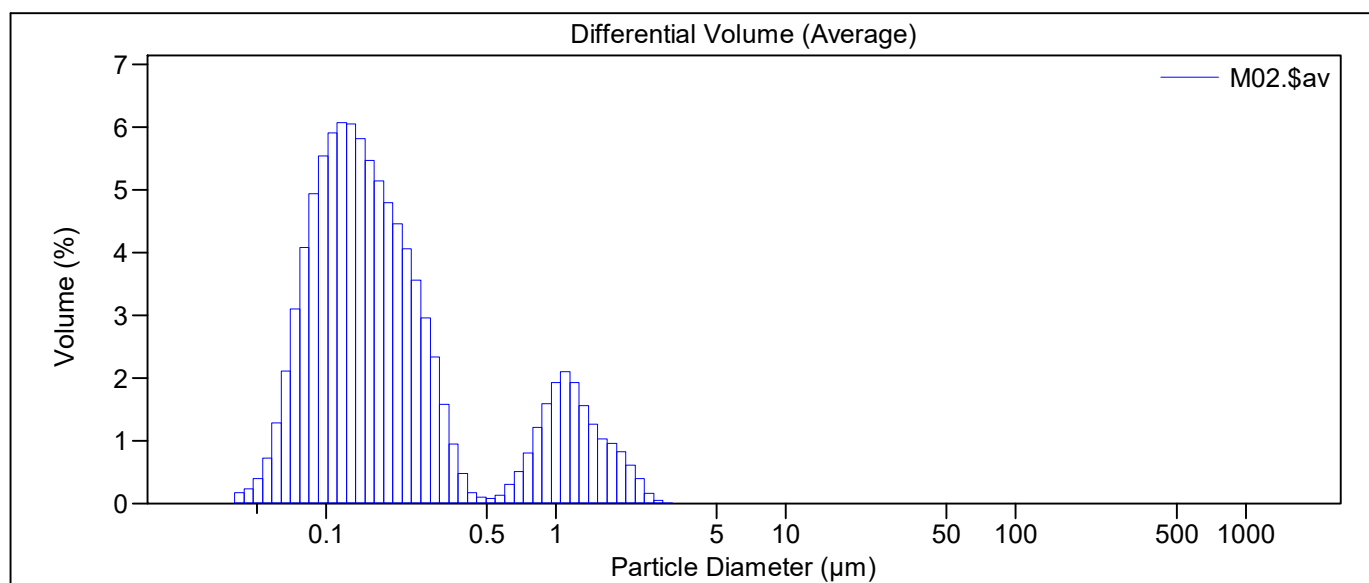
Number Statistics (Arithmetic)

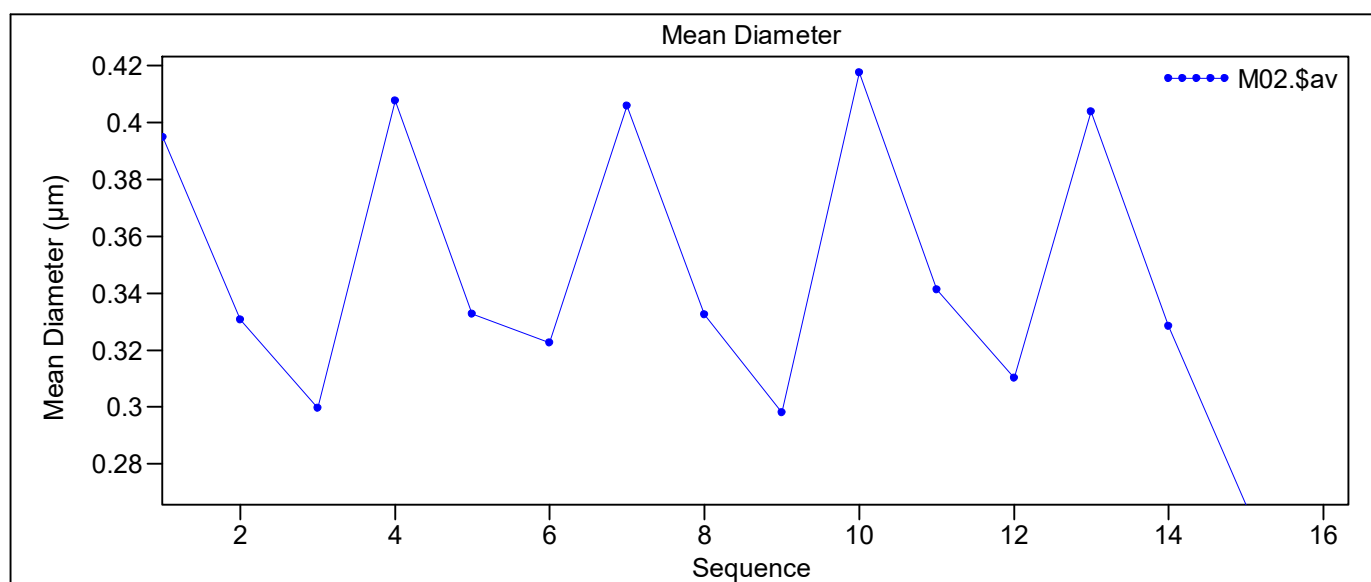
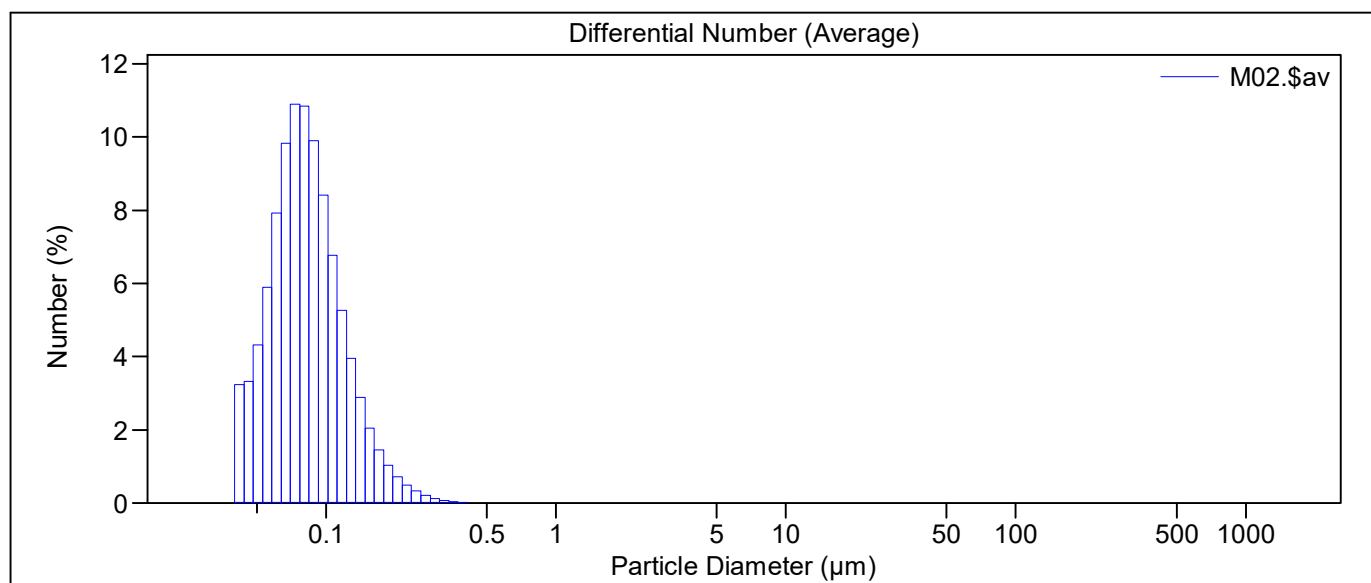
M02.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.039 μm
Mean:	0.088 μm	Variance:	0.0015 μm^2
Median:	0.080 μm	C.V.:	44.4%
Mean/Median ratio:	1.104	Skewness:	4.779 Right skewed
Mode:	0.073 μm	Kurtosis:	100.4 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm





M02.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.61	3.24
10	0.044	0.046	0.23	0.75	3.33
11	0.048	0.050	0.40	1.18	4.31
12	0.053	0.055	0.73	1.94	5.90
13	0.058	0.061	1.29	3.14	7.92
14	0.064	0.067	2.12	4.69	9.82
15	0.070	0.073	3.10	6.28	10.9
16	0.077	0.080	4.08	7.52	10.8
17	0.084	0.088	4.94	8.29	9.91

Beckman Coulter LS13320

M02.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.54	8.47	8.41
19	0.102	0.106	5.91	8.22	6.77
20	0.112	0.117	6.08	7.70	5.26
21	0.122	0.128	6.05	6.99	3.96
22	0.134	0.141	5.82	6.12	2.88
23	0.148	0.155	5.47	5.24	2.05
24	0.162	0.170	5.14	4.49	1.45
25	0.178	0.186	4.80	3.82	1.03
26	0.195	0.205	4.46	3.23	0.72
27	0.214	0.225	4.06	2.68	0.50
28	0.235	0.247	3.56	2.14	0.33
29	0.258	0.271	2.96	1.62	0.21
30	0.284	0.297	2.34	1.17	0.12
31	0.311	0.326	1.59	0.72	0.063
32	0.342	0.358	0.95	0.39	0.029
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.17	0.060	0.0030
35	0.452	0.474	0.098	0.031	0.0013
36	0.496	0.520	0.086	0.025	0.00085
37	0.545	0.571	0.13	0.035	0.00100
38	0.598	0.627	0.30	0.072	0.0017
39	0.656	0.688	0.51	0.11	0.0022
40	0.721	0.755	0.81	0.16	0.0026
41	0.791	0.829	1.21	0.22	0.0029
42	0.868	0.910	1.59	0.26	0.0029
43	0.953	0.999	1.93	0.29	0.0027
44	1.047	1.097	2.10	0.28	0.0022
45	1.149	1.204	1.93	0.24	0.0015
46	1.261	1.321	1.56	0.18	0.00094
47	1.385	1.451	1.27	0.13	0.00057
48	1.520	1.592	1.03	0.096	0.00035
49	1.668	1.748	0.96	0.082	0.00025
50	1.832	1.919	0.82	0.064	0.00016
51	2.011	2.107	0.61	0.043	0.000090
52	2.207	2.313	0.40	0.026	0.000045
53	2.423	2.539	0.16	0.0096	0.000014
54	2.660	2.787	0.048	0.0025	0.000003
55	2.920	3.059	0.0081	0.00039	3.91E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

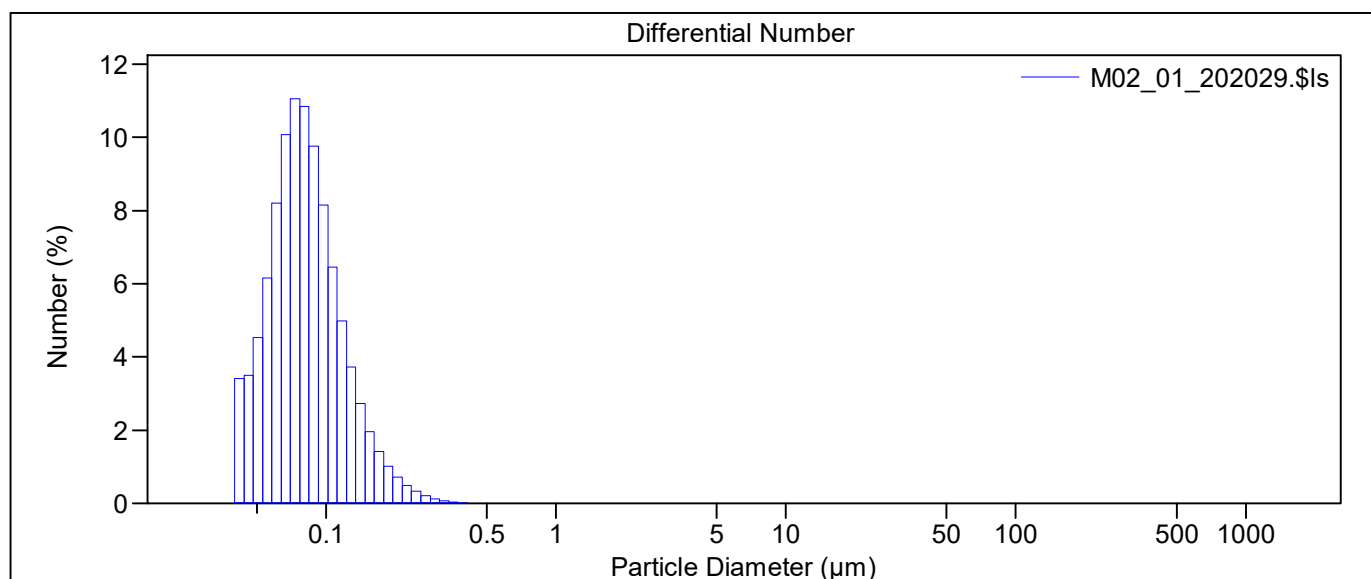
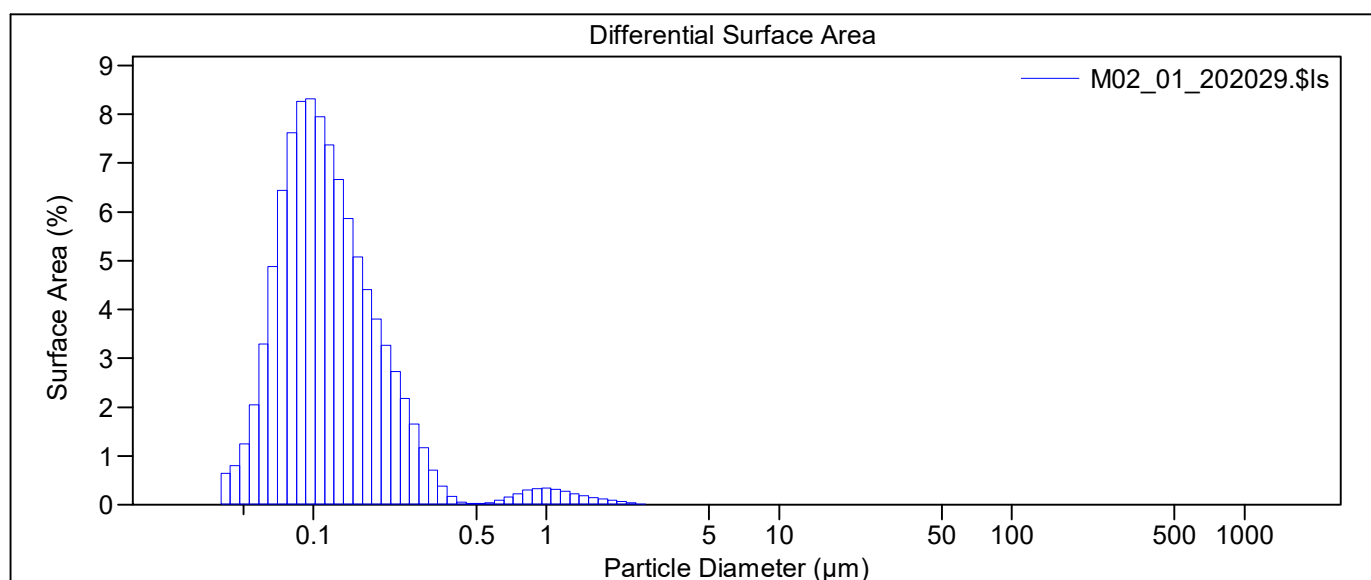
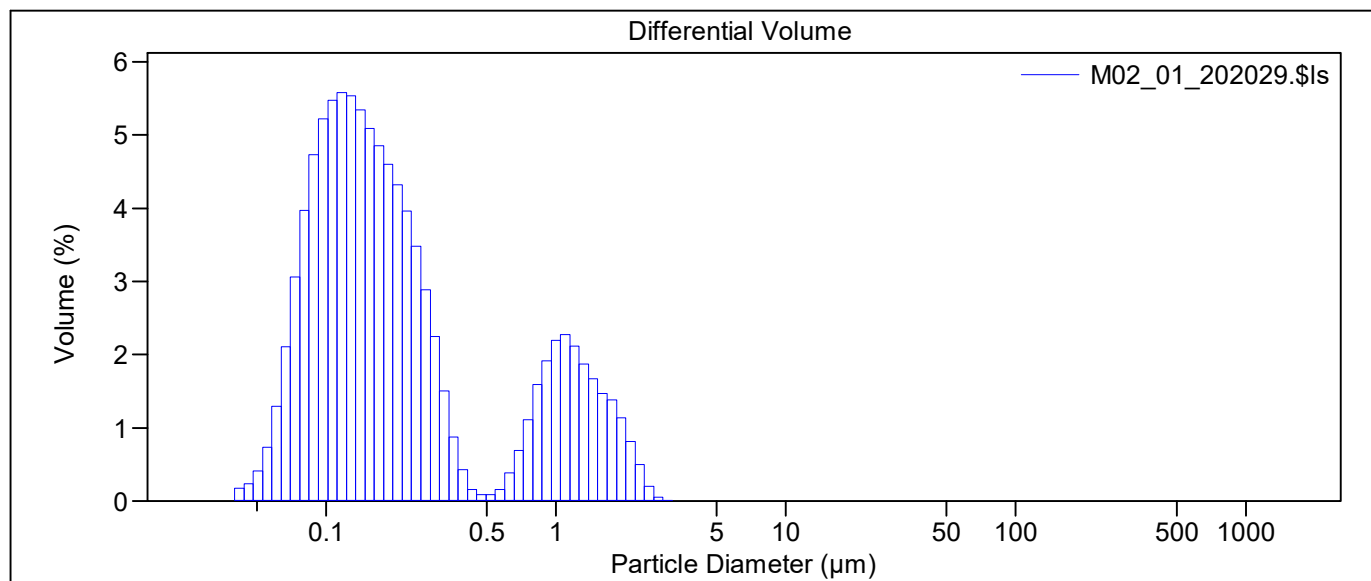
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_01_202029.\$ls		
	M02_01_202029.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.15%		
LS 13 320	Universal Liquid Module		
Start time:	20:18 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_01_202029.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.506 μm
Mean:	0.395 μm		Variance:	0.256 μm ²
Median:	0.165 μm		C.V.:	128%
Mean/Median ratio:	2.387		Skewness:	1.966 Right skewed
Mode:	0.117 μm		Kurtosis:	3.093 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.107 μm	0.165 μm	0.307 μm	1.214 μm

Surface Area Statistics (Arithmetic)			M02_01_202029.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.193 µm
Mean:	0.154 µm		Variance:	0.037 µm ²
Median:	0.110 µm		C.V.:	125%
Mean/Median ratio:	1.408		Skewness:	5.969 Right skewed
Mode:	0.097 µm		Kurtosis:	42.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.158 µm	0.230 µm

Number Statistics (Arithmetic)			M02_01_202029.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.4%
Mean/Median ratio:	1.108		Skewness:	5.454 Right skewed
Mode:	0.073 μm		Kurtosis:	122.2 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



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M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.40
10	0.044	0.046	0.24	0.80	3.50
11	0.048	0.050	0.41	1.25	4.53
12	0.053	0.055	0.74	2.05	6.16
13	0.058	0.061	1.30	3.29	8.20
14	0.064	0.067	2.11	4.88	10.1
15	0.070	0.073	3.06	6.45	11.1
16	0.077	0.080	3.97	7.62	10.8
17	0.084	0.088	4.73	8.27	9.77
18	0.093	0.097	5.22	8.32	8.15
19	0.102	0.106	5.48	7.94	6.46
20	0.112	0.117	5.58	7.37	4.98
21	0.122	0.128	5.54	6.66	3.73
22	0.134	0.141	5.34	5.86	2.72
23	0.148	0.155	5.09	5.08	1.96
24	0.162	0.170	4.85	4.41	1.41
25	0.178	0.186	4.60	3.81	1.01
26	0.195	0.205	4.32	3.26	0.72
27	0.214	0.225	3.96	2.72	0.50
28	0.235	0.247	3.48	2.18	0.33
29	0.258	0.271	2.89	1.65	0.21
30	0.284	0.297	2.24	1.17	0.12
31	0.311	0.326	1.50	0.71	0.062
32	0.342	0.358	0.87	0.38	0.027
33	0.375	0.393	0.43	0.17	0.0100
34	0.412	0.431	0.15	0.055	0.0027
35	0.452	0.474	0.091	0.030	0.0012
36	0.496	0.520	0.085	0.025	0.00086
37	0.545	0.571	0.15	0.042	0.0012
38	0.598	0.627	0.39	0.095	0.0022
39	0.656	0.688	0.69	0.15	0.0030
40	0.721	0.755	1.11	0.23	0.0037
41	0.791	0.829	1.59	0.30	0.0040
42	0.868	0.910	1.92	0.33	0.0036
43	0.953	0.999	2.20	0.34	0.0031
44	1.047	1.097	2.27	0.32	0.0025
45	1.149	1.204	2.11	0.27	0.0017

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.87	0.22	0.0012
47	1.385	1.451	1.67	0.18	0.00078
48	1.520	1.592	1.47	0.14	0.00052
49	1.668	1.748	1.38	0.12	0.00037
50	1.832	1.919	1.14	0.092	0.00023
51	2.011	2.107	0.81	0.059	0.00012
52	2.207	2.313	0.50	0.033	0.000057
53	2.423	2.539	0.20	0.012	0.000017
54	2.660	2.787	0.057	0.0031	0.000004
55	2.920	3.059	0.0096	0.00048	4.77E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

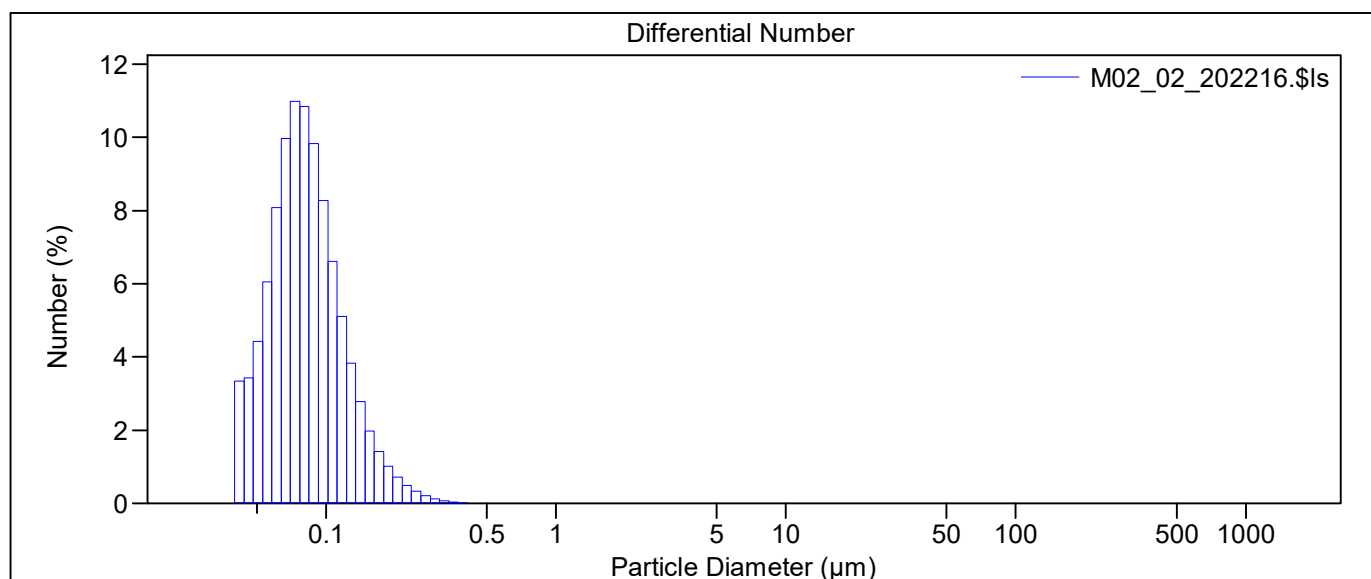
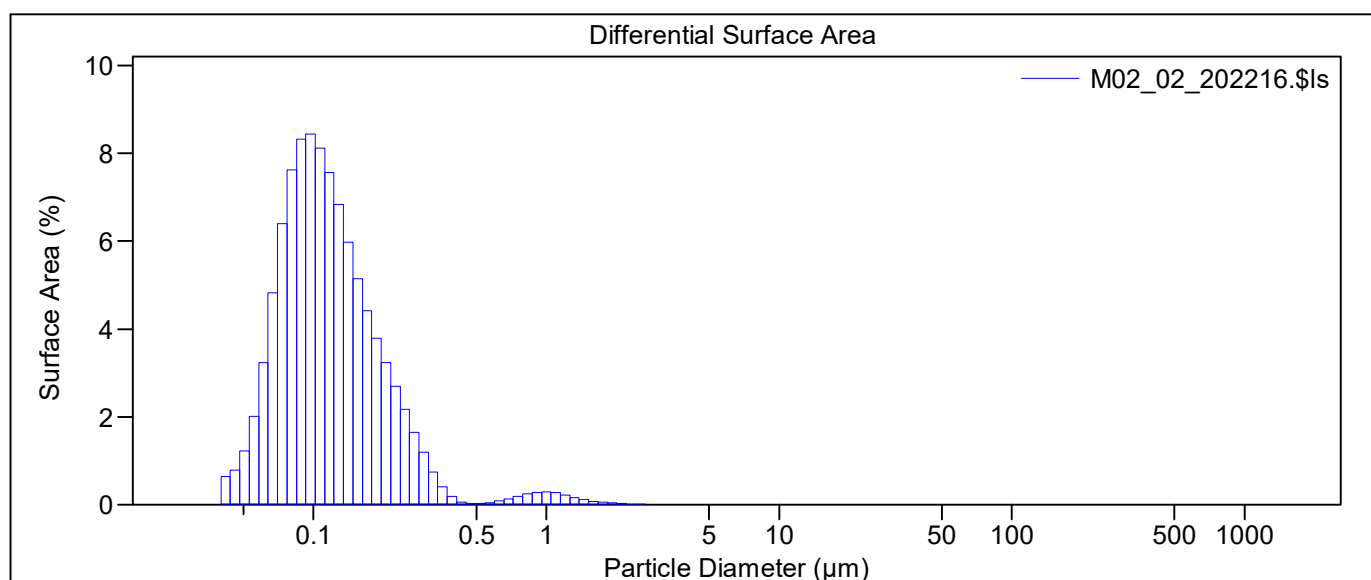
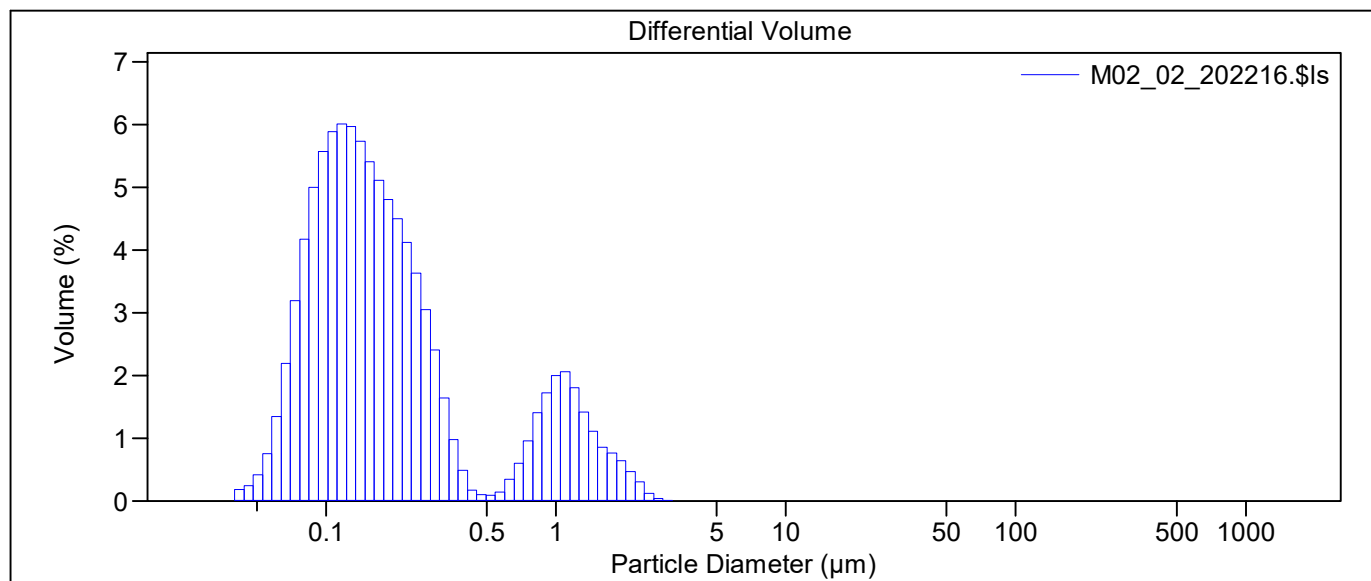
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_02_202216.\$ls		
	M02_02_202216.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.45%		
LS 13 320	Universal Liquid Module		
Start time:	20:20 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_02_202216.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.431 µm
Mean:	0.331 µm		Variance:	0.186 µm ²
Median:	0.156 µm		C.V.:	130%
Mean/Median ratio:	2.114		Skewness:	2.386 Right skewed
Mode:	0.117 µm		Kurtosis:	5.432 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.156 µm	0.264 µm	1.028 µm

Surface Area Statistics (Arithmetic)			M02_02_202216.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.164 µm
Mean:	0.147 µm		Variance:	0.027 µm ²
Median:	0.110 µm		C.V.:	112%
Mean/Median ratio:	1.341		Skewness:	6.386 Right skewed
Mode:	0.097 µm		Kurtosis:	51.80 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.156 µm	0.225 µm

Number Statistics (Arithmetic)			M02_02_202216.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.6%
Mean/Median ratio:	1.105		Skewness:	4.642 Right skewed
Mode:	0.073 μm		Kurtosis:	91.44 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.101 μm	0.132 μm



M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.34
10	0.044	0.046	0.25	0.79	3.43
11	0.048	0.050	0.42	1.22	4.43
12	0.053	0.055	0.76	2.01	6.05
13	0.058	0.061	1.34	3.24	8.08
14	0.064	0.067	2.19	4.82	9.97
15	0.070	0.073	3.20	6.40	11.0
16	0.077	0.080	4.17	7.62	10.9
17	0.084	0.088	5.01	8.32	9.84
18	0.093	0.097	5.57	8.44	8.28
19	0.102	0.106	5.88	8.12	6.61
20	0.112	0.117	6.01	7.56	5.11
21	0.122	0.128	5.97	6.83	3.83
22	0.134	0.141	5.73	5.98	2.78
23	0.148	0.155	5.41	5.14	1.98
24	0.162	0.170	5.11	4.42	1.42
25	0.178	0.186	4.80	3.79	1.01
26	0.195	0.205	4.50	3.23	0.71
27	0.214	0.225	4.12	2.69	0.49
28	0.235	0.247	3.64	2.17	0.33
29	0.258	0.271	3.05	1.65	0.21
30	0.284	0.297	2.41	1.19	0.12
31	0.311	0.326	1.64	0.74	0.064
32	0.342	0.358	0.98	0.40	0.029
33	0.375	0.393	0.49	0.18	0.011
34	0.412	0.431	0.18	0.060	0.0030
35	0.452	0.474	0.10	0.032	0.0013
36	0.496	0.520	0.093	0.026	0.00089
37	0.545	0.571	0.14	0.037	0.0011
38	0.598	0.627	0.35	0.082	0.0019
39	0.656	0.688	0.60	0.13	0.0025
40	0.721	0.755	0.96	0.19	0.0030
41	0.791	0.829	1.41	0.25	0.0034
42	0.868	0.910	1.73	0.28	0.0031
43	0.953	0.999	2.00	0.29	0.0027
44	1.047	1.097	2.06	0.28	0.0021
45	1.149	1.204	1.80	0.22	0.0014

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.42	0.16	0.00083
47	1.385	1.451	1.11	0.11	0.00049
48	1.520	1.592	0.86	0.079	0.00029
49	1.668	1.748	0.76	0.064	0.00019
50	1.832	1.919	0.64	0.049	0.00012
51	2.011	2.107	0.47	0.033	0.000068
52	2.207	2.313	0.31	0.019	0.000034
53	2.423	2.539	0.13	0.0073	0.000011
54	2.660	2.787	0.037	0.0019	0.000002
55	2.920	3.059	0.0064	0.00031	3.02E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

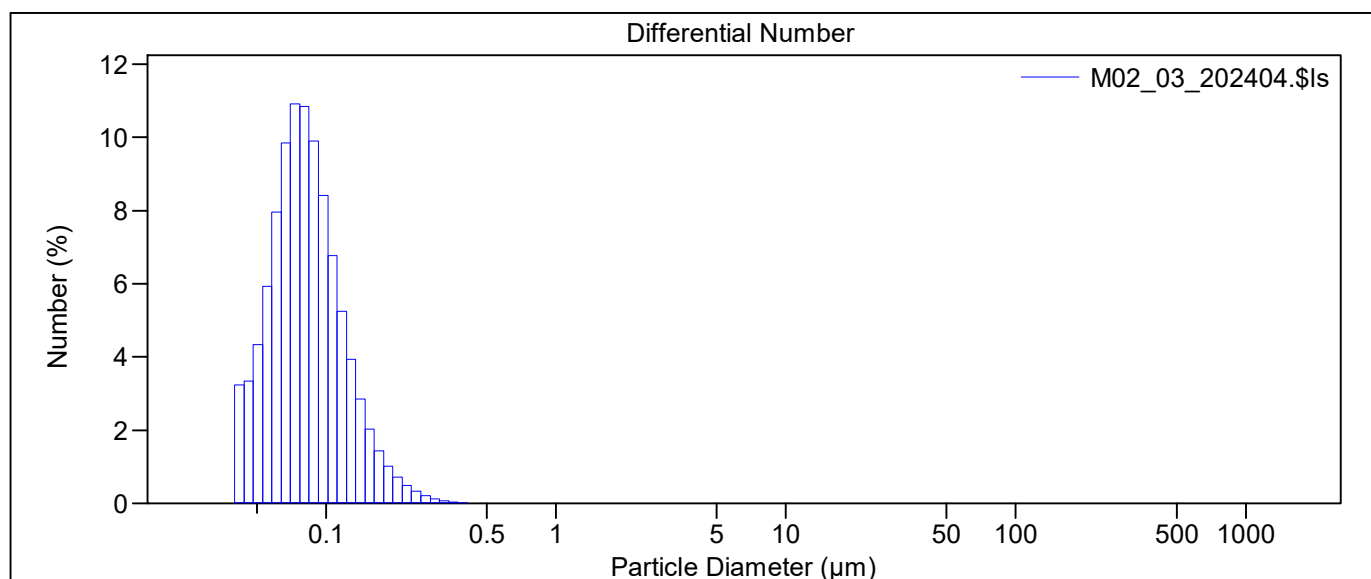
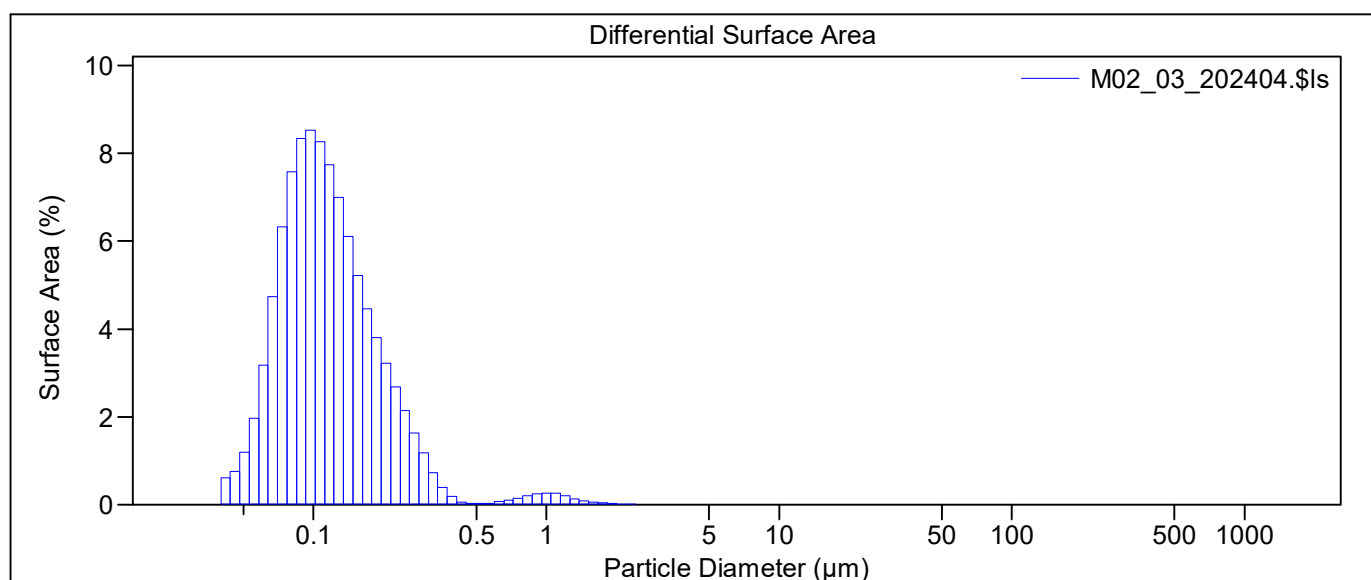
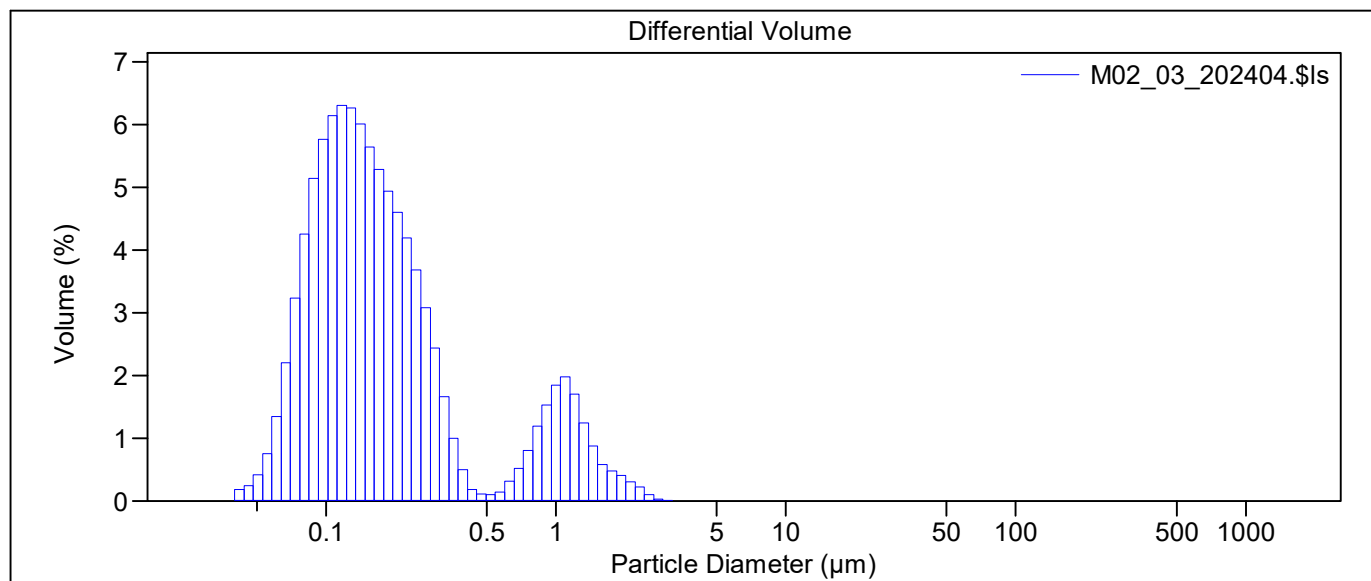
Beckman Coulter LS13320

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File ID:	M02		
Operator:	PP		
Run number:	3		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.69%		
LS 13 320	Universal Liquid Module		
Start time:	20:22 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	61%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_03_202404.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.389 μm
Mean:	0.300 μm		Variance:	0.152 μm ²
Median:	0.152 μm		C.V.:	130%
Mean/Median ratio:	1.971		Skewness:	2.629 Right skewed
Mode:	0.117 μm		Kurtosis:	7.038 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.104 μm	0.152 μm	0.248 μm	0.942 μm

Surface Area Statistics (Arithmetic)			M02_03_202404.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.150 µm
Mean:	0.143 µm		Variance:	0.022 µm ²
Median:	0.110 µm		C.V.:	104%
Mean/Median ratio:	1.305		Skewness:	6.574 Right skewed
Mode:	0.097 µm		Kurtosis:	56.51 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.155 µm	0.222 µm

Number Statistics (Arithmetic)			M02_03_202404.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.0%
Mean/Median ratio:	1.104		Skewness:	4.227 Right skewed
Mode:	0.073 μm		Kurtosis:	77.00 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.132 μm



M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.61	3.24
10	0.044	0.046	0.24	0.76	3.34
11	0.048	0.050	0.42	1.19	4.33
12	0.053	0.055	0.76	1.96	5.93
13	0.058	0.061	1.35	3.17	7.95
14	0.064	0.067	2.21	4.74	9.85
15	0.070	0.073	3.23	6.32	10.9
16	0.077	0.080	4.25	7.57	10.8
17	0.084	0.088	5.14	8.34	9.91
18	0.093	0.097	5.77	8.52	8.41
19	0.102	0.106	6.14	8.27	6.77
20	0.112	0.117	6.31	7.73	5.25
21	0.122	0.128	6.27	7.00	3.94
22	0.134	0.141	6.01	6.11	2.86
23	0.148	0.155	5.64	5.23	2.03
24	0.162	0.170	5.29	4.47	1.44
25	0.178	0.186	4.94	3.80	1.01
26	0.195	0.205	4.60	3.22	0.71
27	0.214	0.225	4.19	2.68	0.49
28	0.235	0.247	3.69	2.14	0.33
29	0.258	0.271	3.08	1.63	0.21
30	0.284	0.297	2.44	1.18	0.12
31	0.311	0.326	1.66	0.73	0.064
32	0.342	0.358	1.00	0.40	0.029
33	0.375	0.393	0.50	0.18	0.011
34	0.412	0.431	0.18	0.060	0.0030
35	0.452	0.474	0.11	0.033	0.0014
36	0.496	0.520	0.099	0.027	0.00094
37	0.545	0.571	0.14	0.036	0.0010
38	0.598	0.627	0.32	0.072	0.0017
39	0.656	0.688	0.52	0.11	0.0021
40	0.721	0.755	0.80	0.15	0.0025
41	0.791	0.829	1.20	0.21	0.0028
42	0.868	0.910	1.54	0.24	0.0027
43	0.953	0.999	1.85	0.26	0.0025
44	1.047	1.097	1.98	0.26	0.0020
45	1.149	1.204	1.71	0.20	0.0013

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.25	0.14	0.00072
47	1.385	1.451	0.88	0.087	0.00038
48	1.520	1.592	0.58	0.052	0.00019
49	1.668	1.748	0.48	0.040	0.00012
50	1.832	1.919	0.41	0.030	0.000076
51	2.011	2.107	0.30	0.021	0.000043
52	2.207	2.313	0.23	0.014	0.000024
53	2.423	2.539	0.098	0.0055	0.000008
54	2.660	2.787	0.029	0.0015	0.000002
55	2.920	3.059	0.0053	0.00025	2.45E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

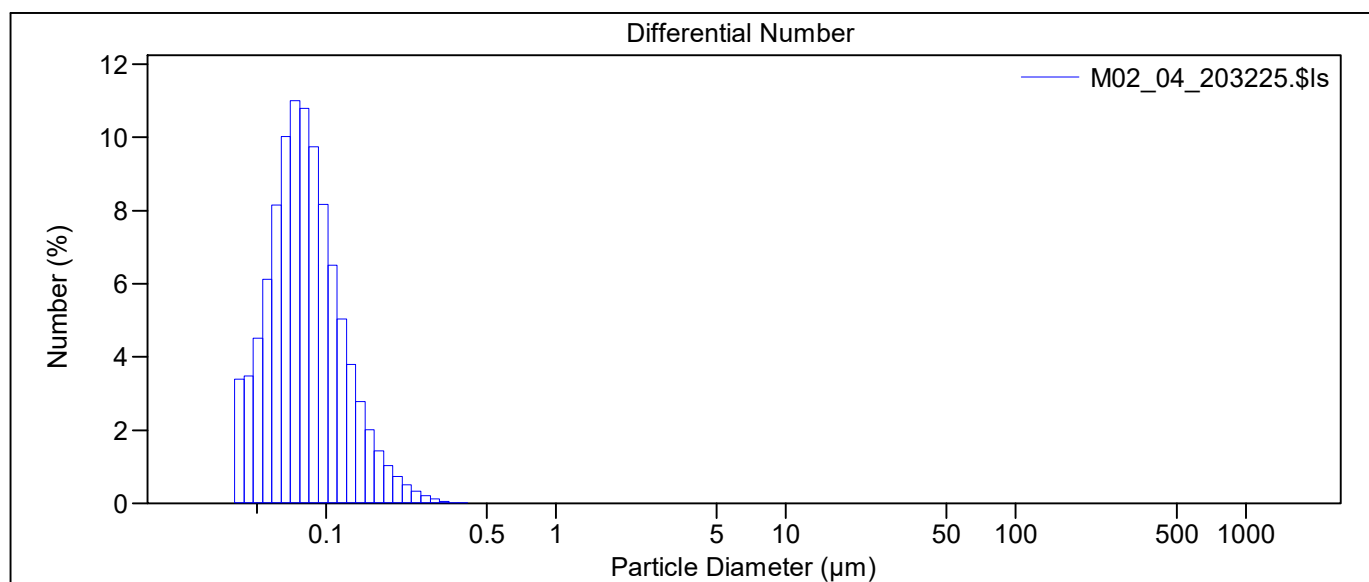
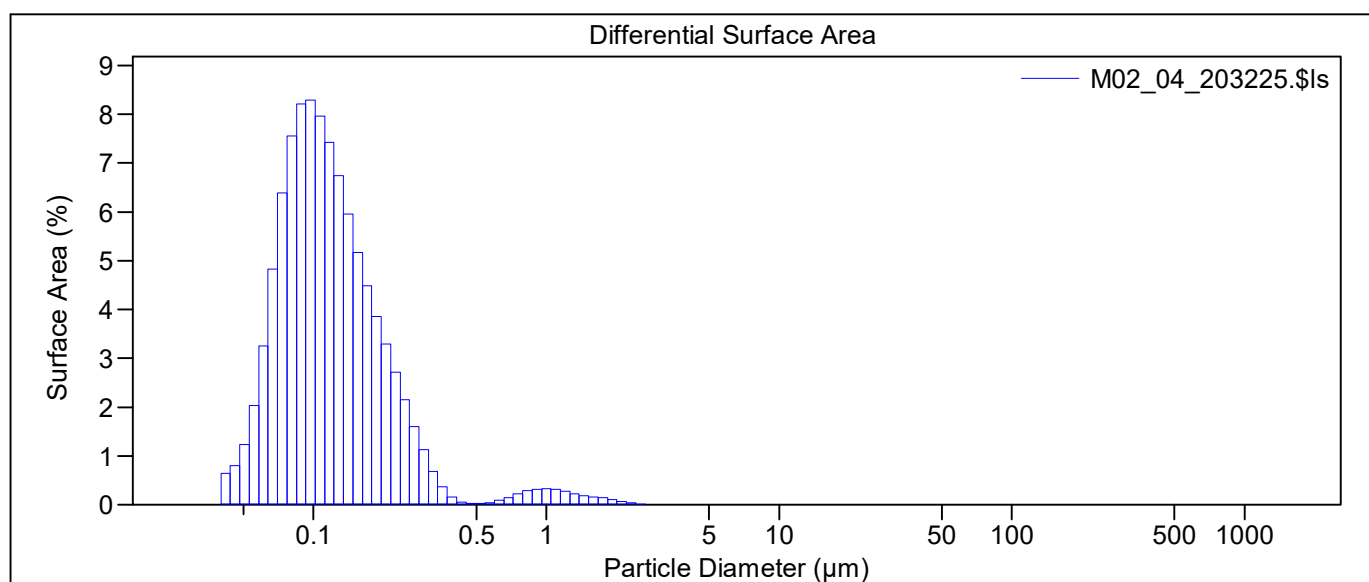
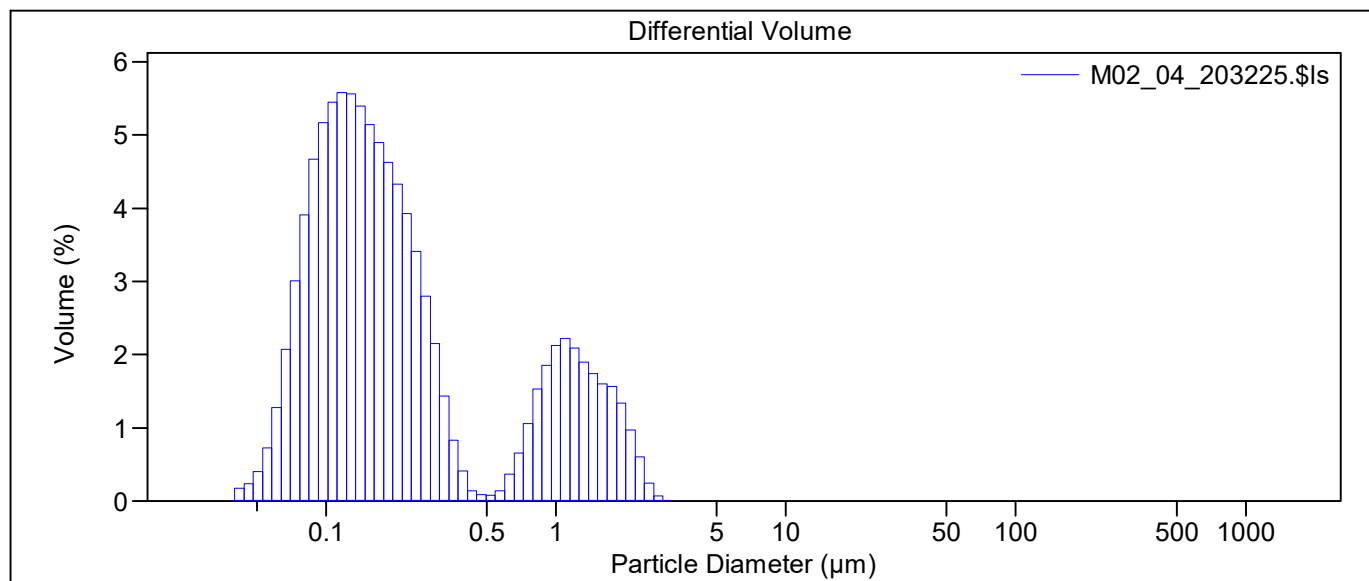
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_04_203225.\$ls		
	M02_04_203225.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.18%		
LS 13 320	Universal Liquid Module		
Start time:	20:30 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_04_203225.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.526 μm
Mean:	0.408 μm		Variance:	0.276 μm ²
Median:	0.166 μm		C.V.:	129%
Mean/Median ratio:	2.457		Skewness:	1.924 Right skewed
Mode:	0.117 μm		Kurtosis:	2.839 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.108 μm	0.166 μm	0.313 μm	1.263 μm

Surface Area Statistics (Arithmetic)			M02_04_203225.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.198 µm
Mean:	0.155 µm		Variance:	0.039 µm ²
Median:	0.110 µm		C.V.:	127%
Mean/Median ratio:	1.412		Skewness:	6.022 Right skewed
Mode:	0.097 µm		Kurtosis:	43.30 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.158 µm	0.229 µm

Number Statistics (Arithmetic)			M02_04_203225.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.4%
Mean/Median ratio:	1.108		Skewness:	5.559 Right skewed
Mode:	0.073 μm		Kurtosis:	129.4 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.39
10	0.044	0.046	0.24	0.80	3.49
11	0.048	0.050	0.40	1.24	4.51
12	0.053	0.055	0.72	2.03	6.13
13	0.058	0.061	1.28	3.26	8.16
14	0.064	0.067	2.07	4.83	10.0
15	0.070	0.073	3.01	6.38	11.0
16	0.077	0.080	3.91	7.55	10.8
17	0.084	0.088	4.67	8.21	9.74
18	0.093	0.097	5.17	8.29	8.16
19	0.102	0.106	5.45	7.96	6.50
20	0.112	0.117	5.58	7.42	5.03
21	0.122	0.128	5.57	6.74	3.79
22	0.134	0.141	5.39	5.95	2.78
23	0.148	0.155	5.15	5.17	2.00
24	0.162	0.170	4.90	4.49	1.44
25	0.178	0.186	4.63	3.86	1.03
26	0.195	0.205	4.33	3.29	0.73
27	0.214	0.225	3.93	2.72	0.50
28	0.235	0.247	3.41	2.15	0.33
29	0.258	0.271	2.79	1.61	0.20
30	0.284	0.297	2.16	1.13	0.12
31	0.311	0.326	1.43	0.68	0.059
32	0.342	0.358	0.83	0.36	0.026
33	0.375	0.393	0.41	0.16	0.0097
34	0.412	0.431	0.14	0.052	0.0026
35	0.452	0.474	0.084	0.028	0.0011
36	0.496	0.520	0.080	0.024	0.00082
37	0.545	0.571	0.14	0.039	0.0011
38	0.598	0.627	0.37	0.091	0.0021
39	0.656	0.688	0.65	0.15	0.0029
40	0.721	0.755	1.06	0.22	0.0035
41	0.791	0.829	1.53	0.29	0.0039
42	0.868	0.910	1.85	0.32	0.0035
43	0.953	0.999	2.13	0.33	0.0031
44	1.047	1.097	2.22	0.31	0.0024
45	1.149	1.204	2.09	0.27	0.0017

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.89	0.22	0.0012
47	1.385	1.451	1.74	0.19	0.00082
48	1.520	1.592	1.60	0.16	0.00057
49	1.668	1.748	1.57	0.14	0.00042
50	1.832	1.919	1.33	0.11	0.00027
51	2.011	2.107	0.97	0.072	0.00015
52	2.207	2.313	0.60	0.041	0.000070
53	2.423	2.539	0.24	0.015	0.000021
54	2.660	2.787	0.070	0.0039	0.000005
55	2.920	3.059	0.011	0.00058	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

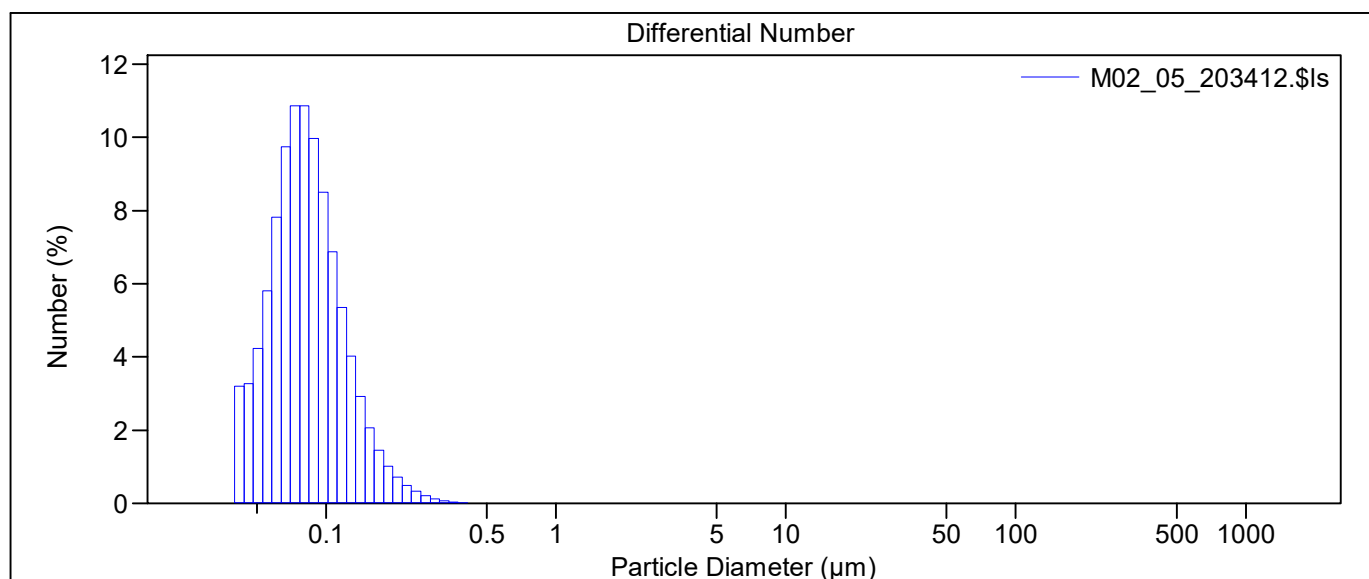
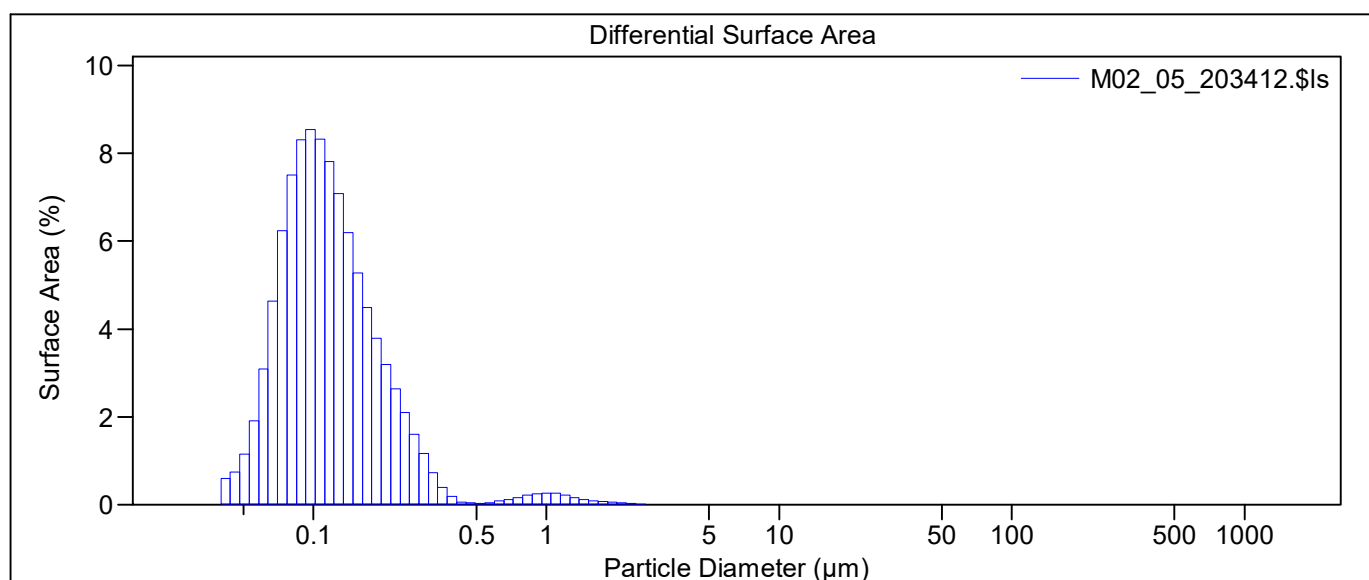
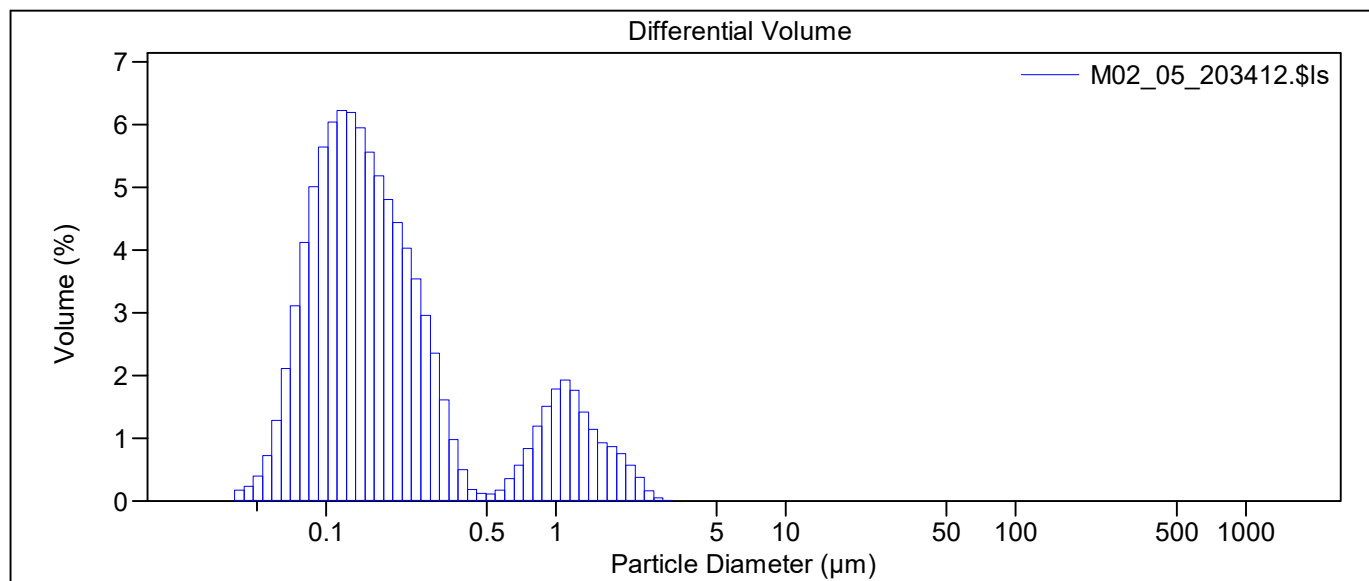
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_05_203412.\$ls		
	M02_05_203412.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.63%		
LS 13 320	Universal Liquid Module		
Start time:	20:32 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_05_203412.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.444 µm
Mean:	0.333 µm		Variance:	0.197 µm ²
Median:	0.155 µm		C.V.:	133%
Mean/Median ratio:	2.149		Skewness:	2.437 Right skewed
Mode:	0.117 µm		Kurtosis:	5.608 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.155 µm	0.260 µm	1.044 µm

Surface Area Statistics (Arithmetic)			M02_05_203412.\$Is	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.165 μm
Mean:	0.147 μm		Variance:	0.027 μm ²
Median:	0.110 μm		C.V.:	113%
Mean/Median ratio:	1.330		Skewness:	6.658 Right skewed
Mode:	0.097 μm		Kurtosis:	56.10 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.110 μm	0.155 μm	0.223 μm

Number Statistics (Arithmetic)			M02_05_203412.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.089 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.1%
Mean/Median ratio:	1.102		Skewness:	4.610 Right skewed
Mode:	0.073 μm		Kurtosis:	94.44 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.103 μm	0.133 μm



M02.\$av

Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.60	3.20
10	0.044	0.046	0.23	0.74	3.28
11	0.048	0.050	0.40	1.15	4.24
12	0.053	0.055	0.72	1.91	5.81
13	0.058	0.061	1.28	3.09	7.83
14	0.064	0.067	2.11	4.64	9.75
15	0.070	0.073	3.12	6.23	10.9
16	0.077	0.080	4.12	7.51	10.9
17	0.084	0.088	5.01	8.31	9.97
18	0.093	0.097	5.65	8.54	8.50
19	0.102	0.106	6.04	8.32	6.87
20	0.112	0.117	6.22	7.81	5.35
21	0.122	0.128	6.20	7.09	4.03
22	0.134	0.141	5.95	6.20	2.92
23	0.148	0.155	5.56	5.28	2.07
24	0.162	0.170	5.19	4.48	1.46
25	0.178	0.186	4.81	3.78	1.02
26	0.195	0.205	4.44	3.19	0.71
27	0.214	0.225	4.03	2.63	0.49
28	0.235	0.247	3.54	2.11	0.32
29	0.258	0.271	2.96	1.60	0.21
30	0.284	0.297	2.36	1.16	0.12
31	0.311	0.326	1.61	0.73	0.064
32	0.342	0.358	0.98	0.40	0.029
33	0.375	0.393	0.50	0.18	0.011
34	0.412	0.431	0.19	0.064	0.0032
35	0.452	0.474	0.12	0.037	0.0015
36	0.496	0.520	0.12	0.033	0.0011
37	0.545	0.571	0.17	0.045	0.0013
38	0.598	0.627	0.36	0.084	0.0020
39	0.656	0.688	0.57	0.12	0.0024
40	0.721	0.755	0.84	0.16	0.0027
41	0.791	0.829	1.20	0.21	0.0029
42	0.868	0.910	1.51	0.24	0.0028
43	0.953	0.999	1.79	0.26	0.0025
44	1.047	1.097	1.92	0.26	0.0020
45	1.149	1.204	1.77	0.22	0.0014

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.41	0.16	0.00084
47	1.385	1.451	1.14	0.12	0.00051
48	1.520	1.592	0.93	0.085	0.00032
49	1.668	1.748	0.86	0.072	0.00022
50	1.832	1.919	0.75	0.058	0.00015
51	2.011	2.107	0.57	0.040	0.000084
52	2.207	2.313	0.38	0.024	0.000042
53	2.423	2.539	0.16	0.0092	0.000013
54	2.660	2.787	0.046	0.0024	0.000003
55	2.920	3.059	0.0078	0.00037	3.73E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

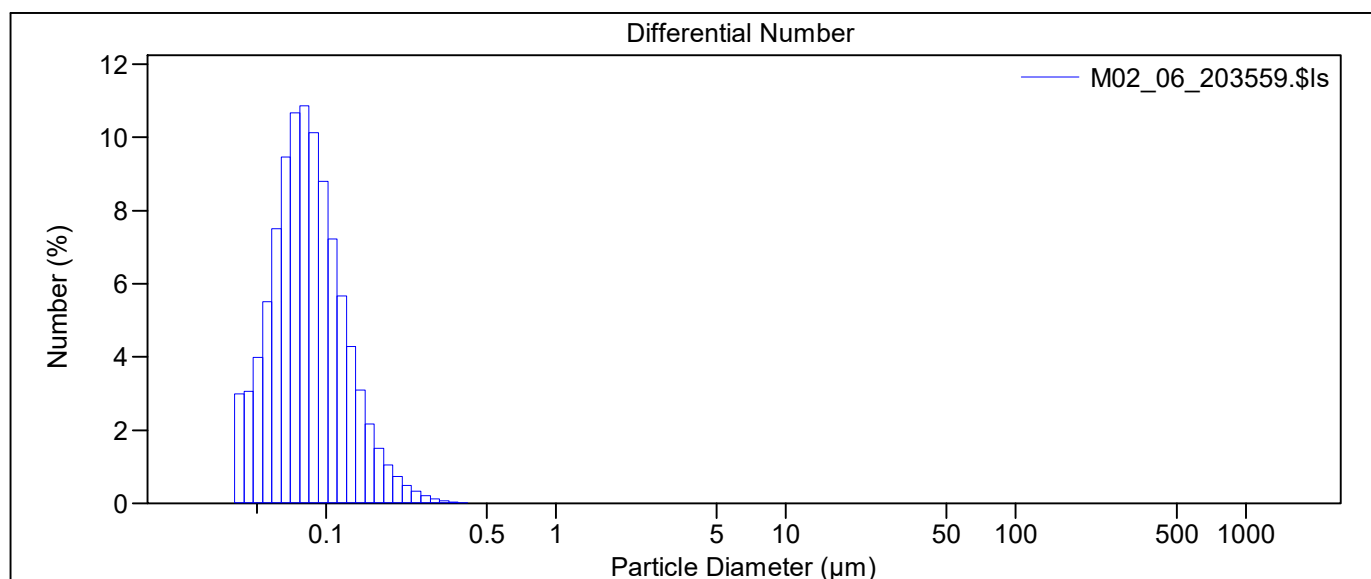
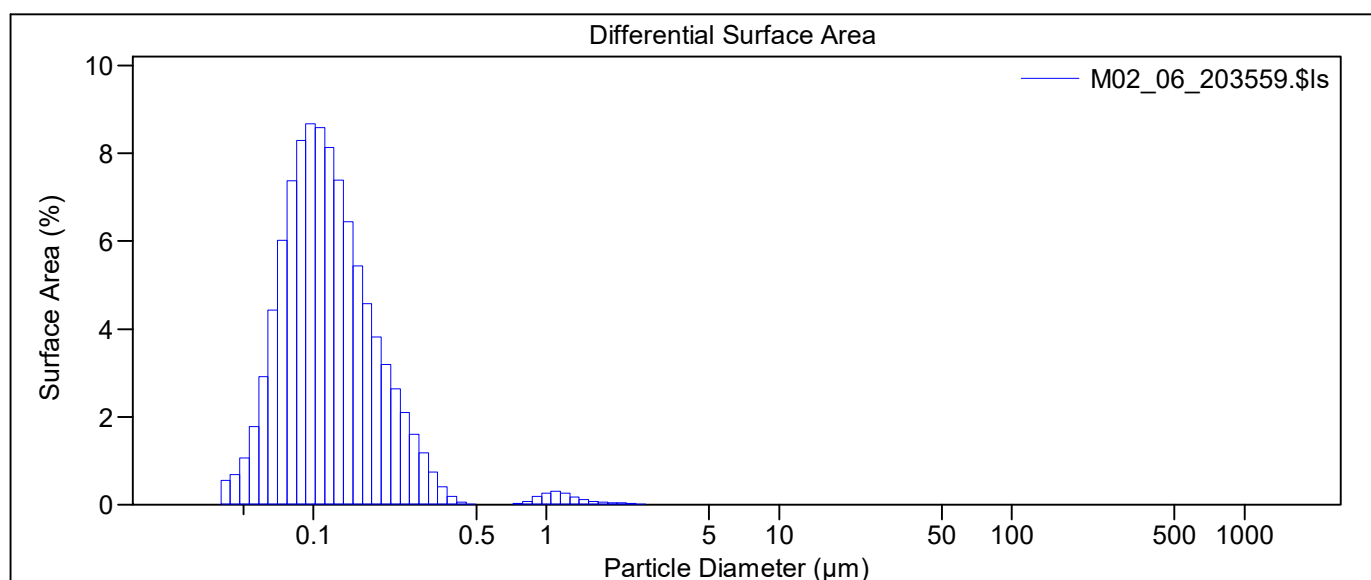
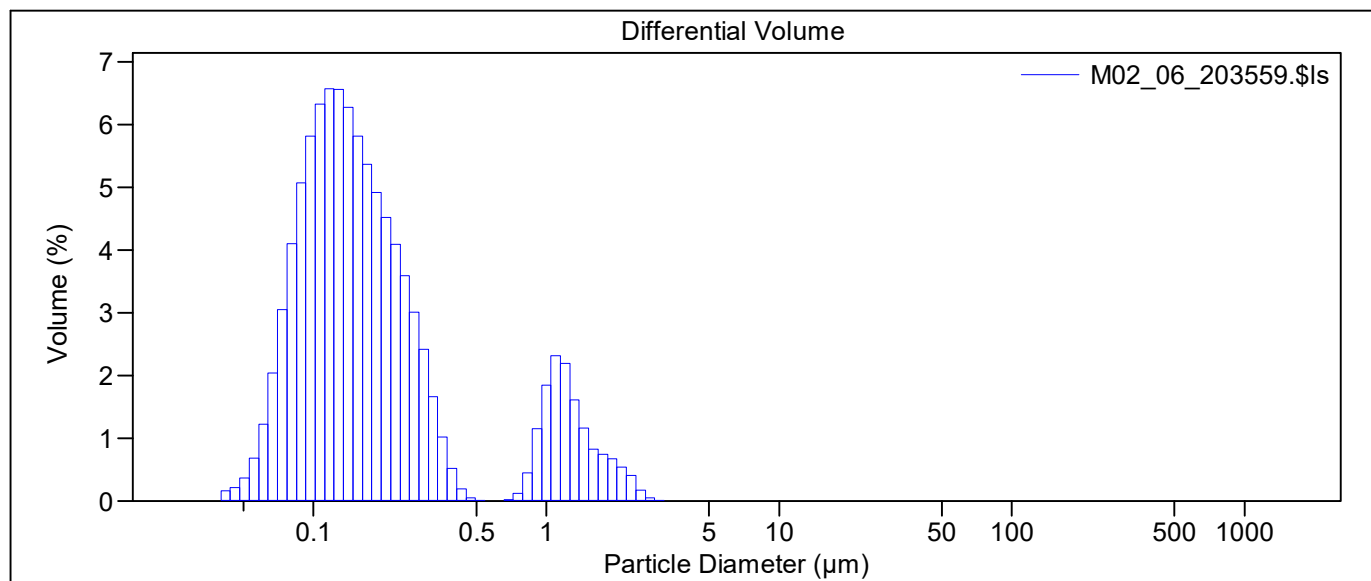
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_06_203559.\$ls		
	M02_06_203559.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.87%		
LS 13 320	Universal Liquid Module		
Start time:	20:34 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_06_203559.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.443 µm
Mean:	0.323 µm		Variance:	0.196 µm ²
Median:	0.151 µm		C.V.:	137%
Mean/Median ratio:	2.131		Skewness:	2.524 Right skewed
Mode:	0.117 µm		Kurtosis:	5.985 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.105 µm	0.151 µm	0.247 µm	1.079 µm

Surface Area Statistics (Arithmetic)			M02_06_203559.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.160 µm
Mean:	0.145 µm		Variance:	0.026 µm ²
Median:	0.111 µm		C.V.:	111%
Mean/Median ratio:	1.301		Skewness:	7.085 Right skewed
Mode:	0.097 µm		Kurtosis:	62.68 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.068 µm	0.085 µm	0.111 µm	0.155 µm	0.219 µm

Number Statistics (Arithmetic)			M02_06_203559.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.090 μm		Variance:	0.0015 μm ²
Median:	0.082 μm		C.V.:	43.3%
Mean/Median ratio:	1.099		Skewness:	4.370 Right skewed
Mode:	0.080 μm		Kurtosis:	92.63 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.053 μm	0.065 μm	0.082 μm	0.104 μm	0.134 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.16	0.55	2.99
10	0.044	0.046	0.22	0.68	3.07
11	0.048	0.050	0.37	1.07	3.99
12	0.053	0.055	0.68	1.78	5.52
13	0.058	0.061	1.23	2.92	7.51
14	0.064	0.067	2.04	4.42	9.46
15	0.070	0.073	3.05	6.02	10.7
16	0.077	0.080	4.11	7.38	10.9
17	0.084	0.088	5.07	8.30	10.1
18	0.093	0.097	5.82	8.68	8.79
19	0.102	0.106	6.32	8.59	7.22
20	0.112	0.117	6.57	8.13	5.67
21	0.122	0.128	6.56	7.39	4.28
22	0.134	0.141	6.28	6.44	3.10
23	0.148	0.155	5.81	5.44	2.17
24	0.162	0.170	5.36	4.57	1.51
25	0.178	0.186	4.92	3.82	1.05
26	0.195	0.205	4.52	3.19	0.73
27	0.214	0.225	4.09	2.64	0.50
28	0.235	0.247	3.59	2.10	0.33
29	0.258	0.271	3.01	1.61	0.21
30	0.284	0.297	2.42	1.18	0.13
31	0.311	0.326	1.67	0.74	0.066
32	0.342	0.358	1.02	0.41	0.031
33	0.375	0.393	0.52	0.19	0.012
34	0.412	0.431	0.19	0.065	0.0033
35	0.452	0.474	0.054	0.016	0.00070
36	0.496	0.520	0.0082	0.0023	0.000080
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0.017	0.0036	0.000072
40	0.721	0.755	0.12	0.024	0.00039
41	0.791	0.829	0.45	0.078	0.0011
42	0.868	0.910	1.16	0.18	0.0021
43	0.953	0.999	1.85	0.27	0.0026
44	1.047	1.097	2.32	0.31	0.0024
45	1.149	1.204	2.20	0.26	0.0017

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.62	0.18	0.00097
47	1.385	1.451	1.16	0.12	0.00053
48	1.520	1.592	0.82	0.075	0.00028
49	1.668	1.748	0.75	0.062	0.00019
50	1.832	1.919	0.68	0.051	0.00013
51	2.011	2.107	0.54	0.037	0.000080
52	2.207	2.313	0.41	0.026	0.000046
53	2.423	2.539	0.18	0.010	0.000015
54	2.660	2.787	0.053	0.0027	0.000003
55	2.920	3.059	0.0091	0.00043	4.38E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

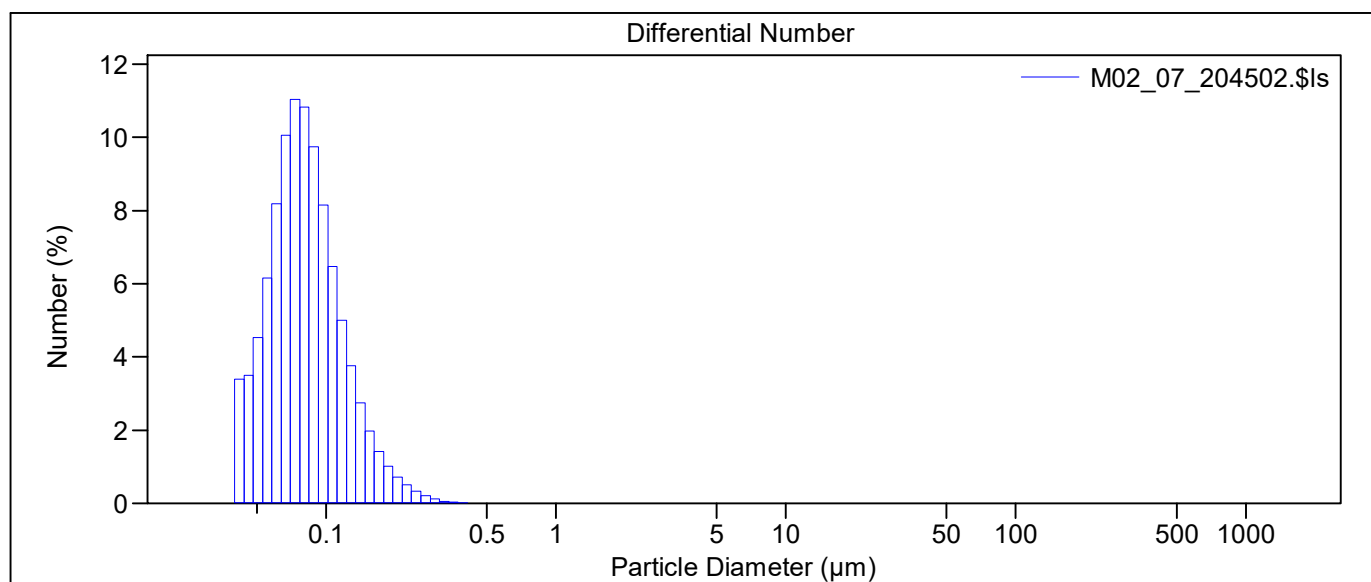
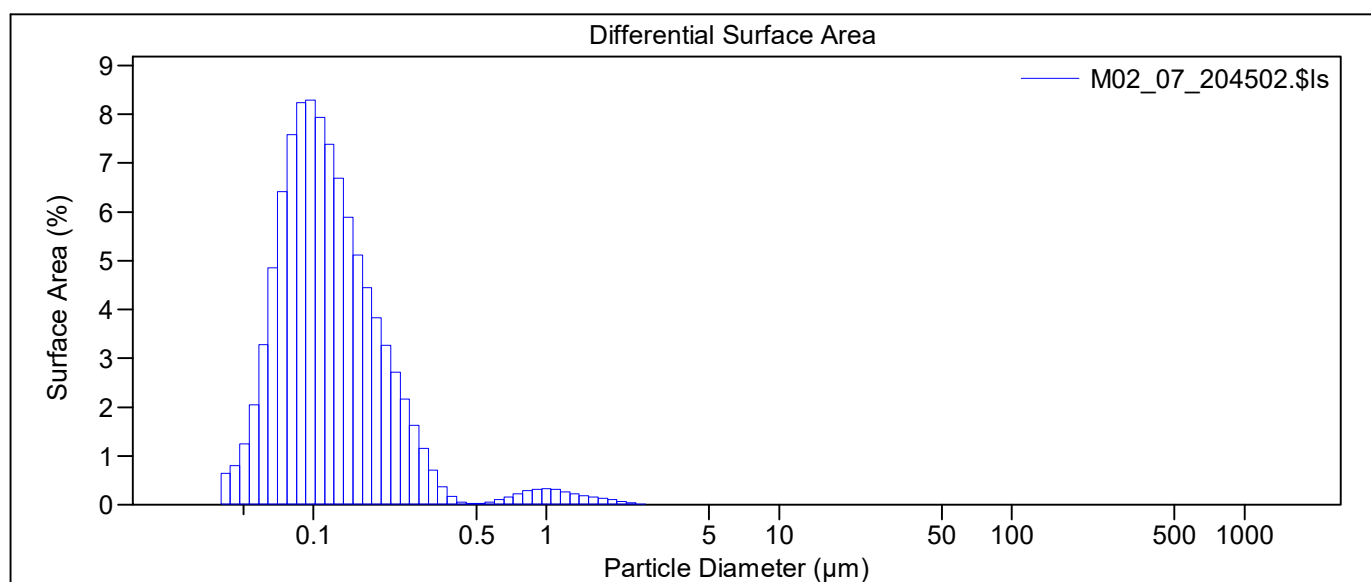
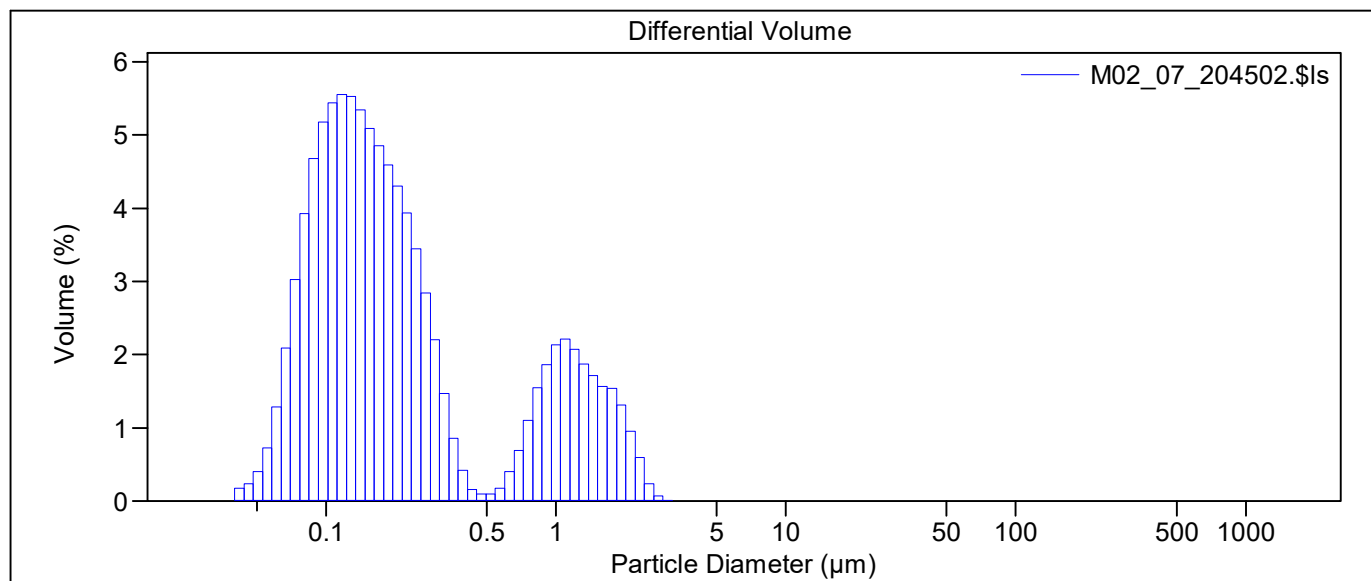
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_07_204502.\$ls		
	M02_07_204502.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.16%		
LS 13 320	Universal Liquid Module		
Start time:	20:43 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	61%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_07_204502.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.522 µm
Mean:	0.406 µm		Variance:	0.273 µm ²
Median:	0.166 µm		C.V.:	129%
Mean/Median ratio:	2.440		Skewness:	1.935 Right skewed
Mode:	0.117 µm		Kurtosis:	2.904 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.108 µm	0.166 µm	0.314 µm	1.253 µm

Surface Area Statistics (Arithmetic)			M02_07_204502.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.197 µm
Mean:	0.155 µm		Variance:	0.039 µm ²
Median:	0.110 µm		C.V.:	127%
Mean/Median ratio:	1.415		Skewness:	6.004 Right skewed
Mode:	0.097 µm		Kurtosis:	43.20 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.158 µm	0.230 µm

Number Statistics (Arithmetic)			M02_07_204502.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.5%
Mean/Median ratio:	1.108		Skewness:	5.553 Right skewed
Mode:	0.073 μm		Kurtosis:	128.0 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.39
10	0.044	0.046	0.24	0.80	3.50
11	0.048	0.050	0.41	1.25	4.53
12	0.053	0.055	0.73	2.04	6.15
13	0.058	0.061	1.28	3.28	8.19
14	0.064	0.067	2.09	4.86	10.1
15	0.070	0.073	3.03	6.42	11.0
16	0.077	0.080	3.93	7.58	10.8
17	0.084	0.088	4.68	8.23	9.75
18	0.093	0.097	5.18	8.30	8.15
19	0.102	0.106	5.44	7.94	6.48
20	0.112	0.117	5.56	7.39	5.00
21	0.122	0.128	5.52	6.69	3.76
22	0.134	0.141	5.34	5.89	2.75
23	0.148	0.155	5.09	5.12	1.98
24	0.162	0.170	4.85	4.44	1.43
25	0.178	0.186	4.59	3.83	1.02
26	0.195	0.205	4.31	3.27	0.72
27	0.214	0.225	3.93	2.72	0.50
28	0.235	0.247	3.44	2.17	0.33
29	0.258	0.271	2.84	1.63	0.21
30	0.284	0.297	2.21	1.15	0.12
31	0.311	0.326	1.47	0.70	0.061
32	0.342	0.358	0.86	0.37	0.027
33	0.375	0.393	0.42	0.17	0.0100
34	0.412	0.431	0.16	0.057	0.0028
35	0.452	0.474	0.098	0.032	0.0013
36	0.496	0.520	0.096	0.029	0.00099
37	0.545	0.571	0.17	0.047	0.0013
38	0.598	0.627	0.40	0.10	0.0024
39	0.656	0.688	0.69	0.16	0.0031
40	0.721	0.755	1.10	0.23	0.0037
41	0.791	0.829	1.55	0.29	0.0039
42	0.868	0.910	1.86	0.32	0.0036
43	0.953	0.999	2.13	0.33	0.0031
44	1.047	1.097	2.21	0.31	0.0024
45	1.149	1.204	2.07	0.27	0.0017

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.87	0.22	0.0012
47	1.385	1.451	1.71	0.18	0.00081
48	1.520	1.592	1.57	0.15	0.00056
49	1.668	1.748	1.54	0.14	0.00041
50	1.832	1.919	1.31	0.11	0.00027
51	2.011	2.107	0.95	0.070	0.00015
52	2.207	2.313	0.59	0.040	0.000069
53	2.423	2.539	0.24	0.015	0.000021
54	2.660	2.787	0.068	0.0038	0.000005
55	2.920	3.059	0.011	0.00058	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

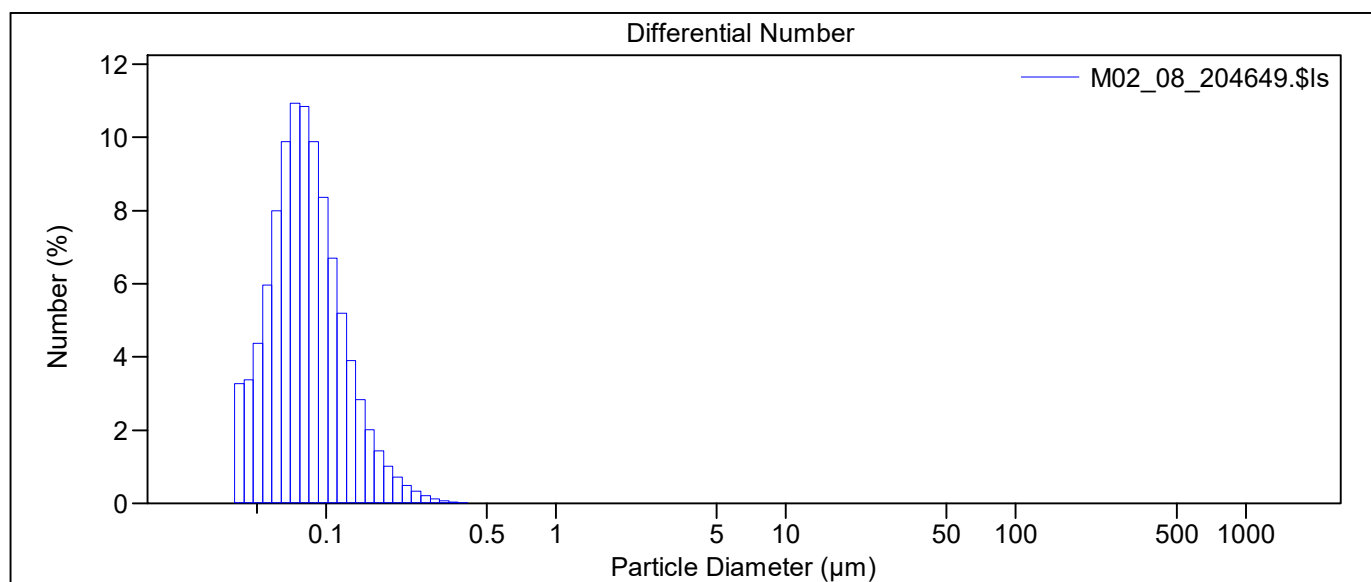
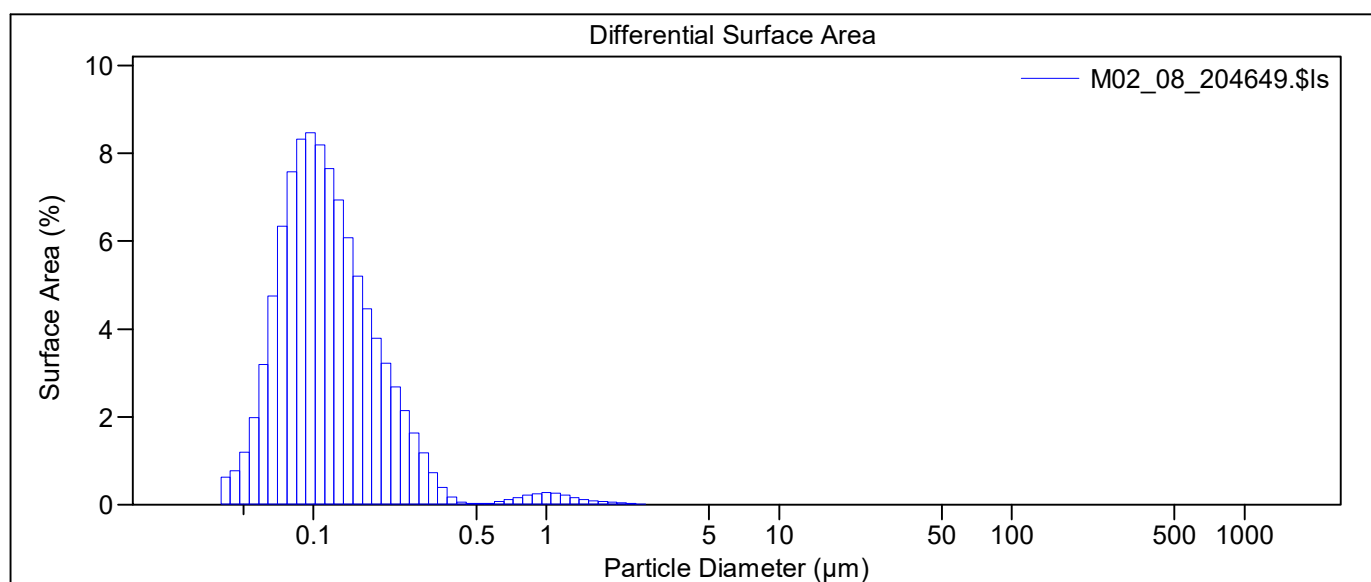
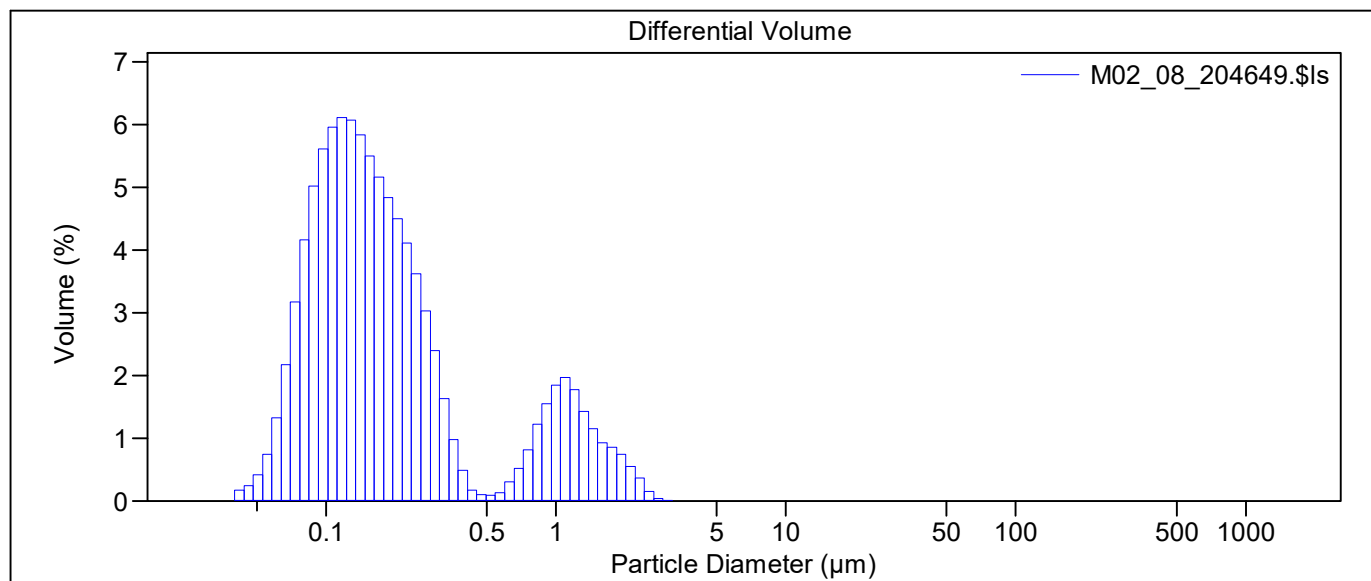
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_08_204649.\$ls		
	M02_08_204649.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.54%		
LS 13 320	Universal Liquid Module		
Start time:	20:45 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_08_204649.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.443 µm
Mean:	0.333 µm		Variance:	0.196 µm ²
Median:	0.155 µm		C.V.:	133%
Mean/Median ratio:	2.140		Skewness:	2.427 Right skewed
Mode:	0.117 µm		Kurtosis:	5.553 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.155 µm	0.260 µm	1.045 µm

Surface Area Statistics (Arithmetic)			M02_08_204649.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.165 µm
Mean:	0.146 µm		Variance:	0.027 µm ²
Median:	0.110 µm		C.V.:	113%
Mean/Median ratio:	1.333		Skewness:	6.631 Right skewed
Mode:	0.097 µm		Kurtosis:	55.63 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.224 µm

Number Statistics (Arithmetic)			M02_08_204649.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.3%
Mean/Median ratio:	1.104		Skewness:	4.608 Right skewed
Mode:	0.073 μm		Kurtosis:	93.82 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.132 μm



M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.62	3.28
10	0.044	0.046	0.24	0.77	3.37
11	0.048	0.050	0.41	1.20	4.37
12	0.053	0.055	0.75	1.98	5.97
13	0.058	0.061	1.33	3.19	7.99
14	0.064	0.067	2.17	4.76	9.89
15	0.070	0.073	3.18	6.34	10.9
16	0.077	0.080	4.17	7.58	10.8
17	0.084	0.088	5.02	8.32	9.88
18	0.093	0.097	5.61	8.47	8.35
19	0.102	0.106	5.96	8.20	6.70
20	0.112	0.117	6.11	7.66	5.20
21	0.122	0.128	6.08	6.93	3.91
22	0.134	0.141	5.84	6.07	2.84
23	0.148	0.155	5.50	5.20	2.02
24	0.162	0.170	5.17	4.46	1.43
25	0.178	0.186	4.83	3.80	1.01
26	0.195	0.205	4.50	3.22	0.71
27	0.214	0.225	4.11	2.68	0.49
28	0.235	0.247	3.62	2.15	0.33
29	0.258	0.271	3.03	1.64	0.21
30	0.284	0.297	2.40	1.18	0.12
31	0.311	0.326	1.63	0.73	0.064
32	0.342	0.358	0.98	0.40	0.029
33	0.375	0.393	0.49	0.18	0.011
34	0.412	0.431	0.18	0.060	0.0030
35	0.452	0.474	0.10	0.032	0.0013
36	0.496	0.520	0.090	0.025	0.00087
37	0.545	0.571	0.13	0.034	0.00097
38	0.598	0.627	0.31	0.072	0.0017
39	0.656	0.688	0.52	0.11	0.0022
40	0.721	0.755	0.82	0.16	0.0026
41	0.791	0.829	1.22	0.22	0.0029
42	0.868	0.910	1.55	0.25	0.0028
43	0.953	0.999	1.84	0.27	0.0025
44	1.047	1.097	1.97	0.26	0.0020
45	1.149	1.204	1.77	0.22	0.0014

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.42	0.16	0.00084
47	1.385	1.451	1.15	0.12	0.00051
48	1.520	1.592	0.93	0.085	0.00031
49	1.668	1.748	0.86	0.072	0.00022
50	1.832	1.919	0.74	0.057	0.00014
51	2.011	2.107	0.55	0.038	0.000080
52	2.207	2.313	0.37	0.023	0.000040
53	2.423	2.539	0.15	0.0088	0.000013
54	2.660	2.787	0.045	0.0023	0.000003
55	2.920	3.059	0.0077	0.00037	3.66E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

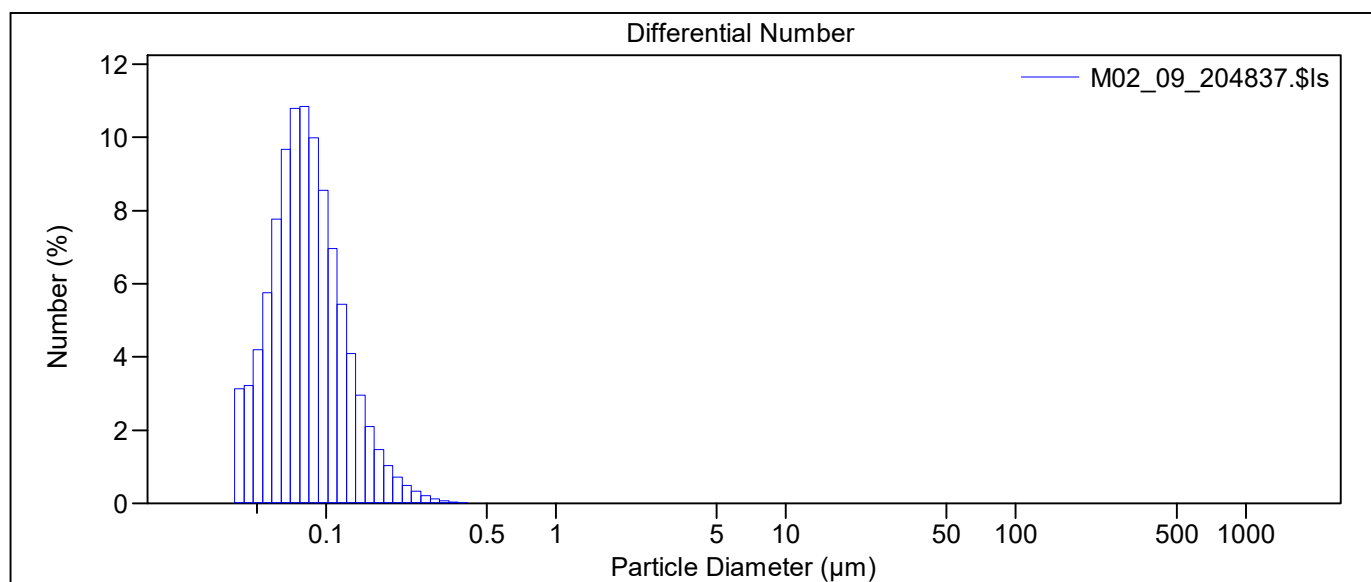
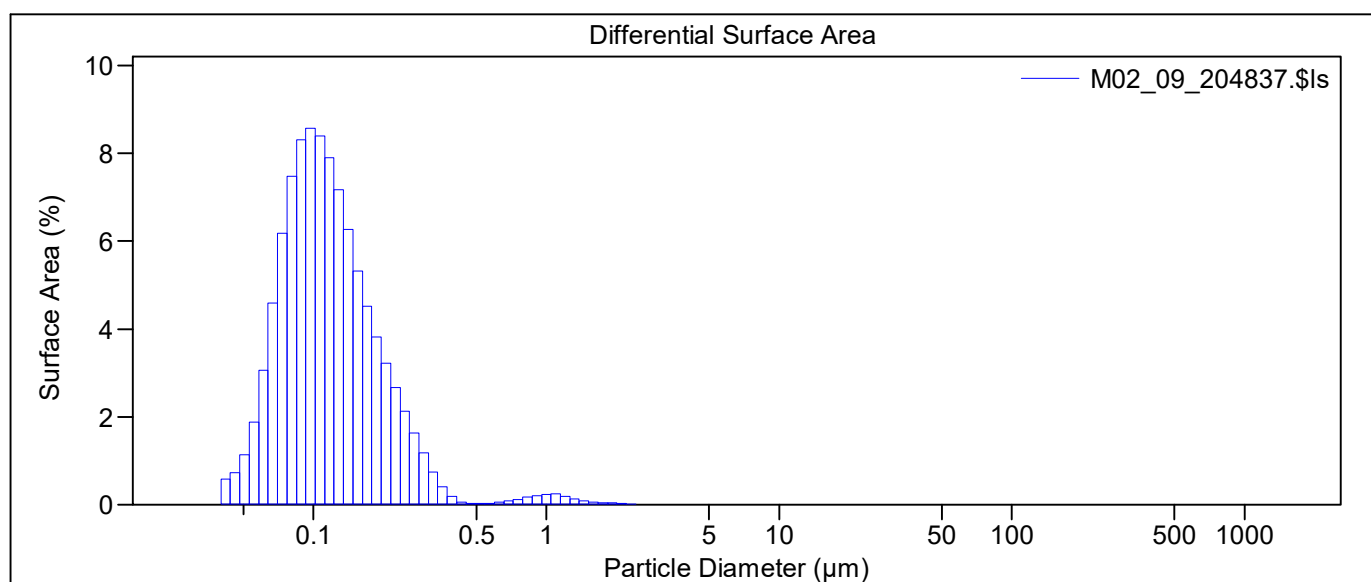
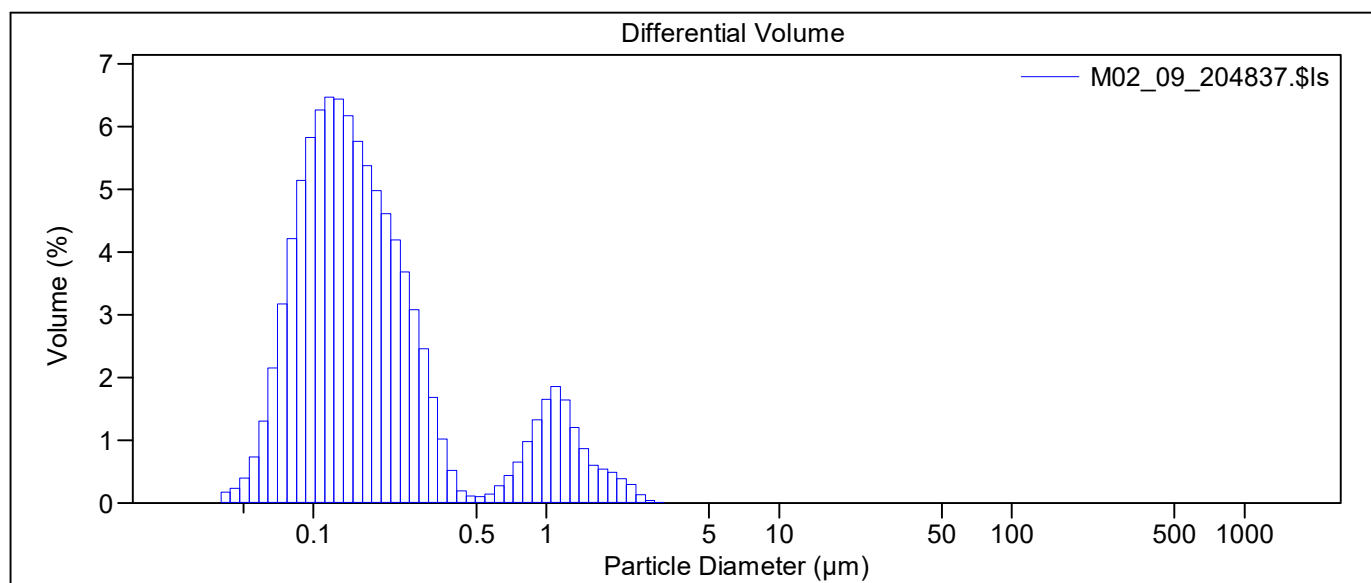
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_09_204837.\$ls		
	M02_09_204837.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.77%		
LS 13 320	Universal Liquid Module		
Start time:	20:46 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_09_204837.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.399 µm
Mean:	0.298 µm		Variance:	0.159 µm ²
Median:	0.151 µm		C.V.:	134%
Mean/Median ratio:	1.975		Skewness:	2.760 Right skewed
Mode:	0.117 µm		Kurtosis:	7.778 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.104 µm	0.151 µm	0.244 µm	0.936 µm

Surface Area Statistics (Arithmetic)			M02_09_204837.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.149 µm
Mean:	0.143 µm		Variance:	0.022 µm ²
Median:	0.110 µm		C.V.:	104%
Mean/Median ratio:	1.293		Skewness:	6.957 Right skewed
Mode:	0.097 µm		Kurtosis:	63.69 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.084 µm	0.110 µm	0.155 µm	0.221 µm

Number Statistics (Arithmetic)			M02_09_204837.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.089 μm		Variance:	0.0015 μm ²
Median:	0.081 μm		C.V.:	43.7%
Mean/Median ratio:	1.102		Skewness:	4.127 Right skewed
Mode:	0.080 μm		Kurtosis:	77.12 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.081 μm	0.103 μm	0.133 μm



Beckman Coulter LS13320

M02.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.58	3.13
10	0.044	0.046	0.23	0.73	3.22
11	0.048	0.050	0.40	1.14	4.19
12	0.053	0.055	0.73	1.88	5.76
13	0.058	0.061	1.30	3.06	7.77
14	0.064	0.067	2.15	4.60	9.68
15	0.070	0.073	3.17	6.18	10.8
16	0.077	0.080	4.21	7.48	10.8
17	0.084	0.088	5.14	8.31	10.00
18	0.093	0.097	5.82	8.58	8.56
19	0.102	0.106	6.26	8.40	6.96
20	0.112	0.117	6.47	7.90	5.43
21	0.122	0.128	6.44	7.17	4.09
22	0.134	0.141	6.17	6.26	2.96
23	0.148	0.155	5.76	5.33	2.09
24	0.162	0.170	5.37	4.52	1.47
25	0.178	0.186	4.98	3.82	1.03
26	0.195	0.205	4.61	3.22	0.72
27	0.214	0.225	4.19	2.67	0.50
28	0.235	0.247	3.68	2.14	0.33
29	0.258	0.271	3.09	1.63	0.21
30	0.284	0.297	2.46	1.18	0.13
31	0.311	0.326	1.68	0.74	0.065
32	0.342	0.358	1.02	0.41	0.030
33	0.375	0.393	0.52	0.19	0.011
34	0.412	0.431	0.19	0.063	0.0032
35	0.452	0.474	0.12	0.035	0.0015
36	0.496	0.520	0.11	0.029	0.0010
37	0.545	0.571	0.14	0.035	0.0010
38	0.598	0.627	0.28	0.063	0.0015
39	0.656	0.688	0.44	0.091	0.0018
40	0.721	0.755	0.65	0.12	0.0020
41	0.791	0.829	0.98	0.17	0.0023
42	0.868	0.910	1.32	0.21	0.0024
43	0.953	0.999	1.65	0.24	0.0022
44	1.047	1.097	1.86	0.24	0.0019
45	1.149	1.204	1.64	0.20	0.0013
46	1.261	1.321	1.21	0.13	0.00070
47	1.385	1.451	0.86	0.085	0.00038
48	1.520	1.592	0.60	0.054	0.00020
49	1.668	1.748	0.55	0.045	0.00014
50	1.832	1.919	0.49	0.036	0.000093
51	2.011	2.107	0.39	0.026	0.000056
52	2.207	2.313	0.30	0.018	0.000032
53	2.423	2.539	0.13	0.0073	0.000011
54	2.660	2.787	0.039	0.0020	0.000002
55	2.920	3.059	0.0068	0.00032	3.2E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

Beckman Coulter LS13320

M02.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

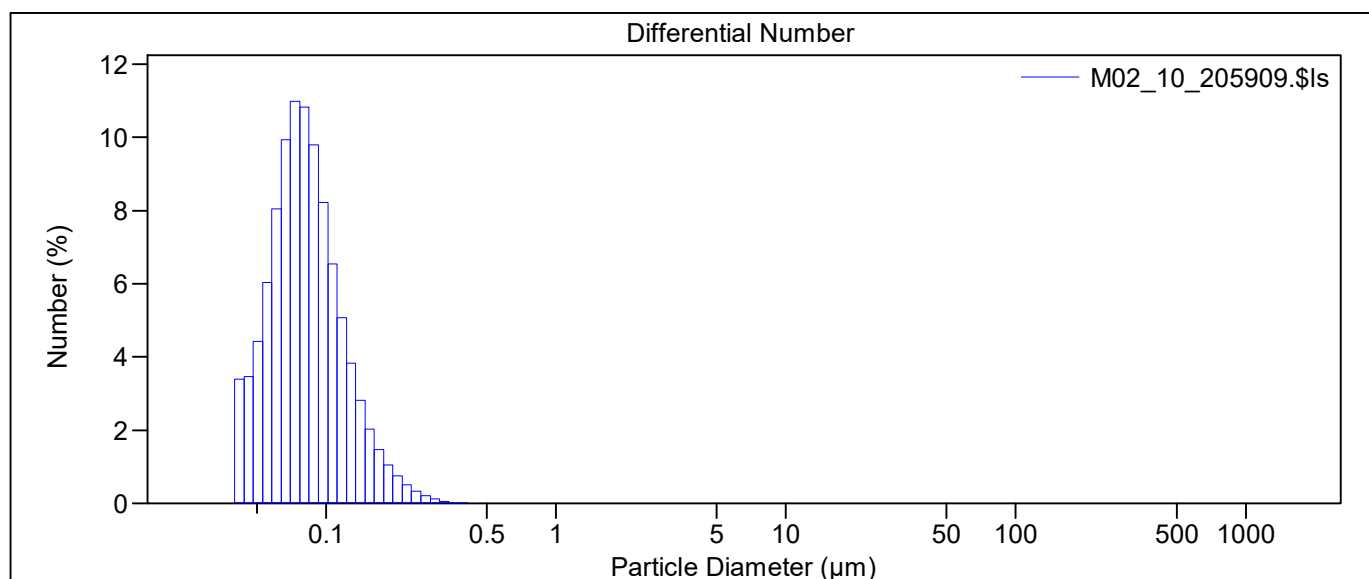
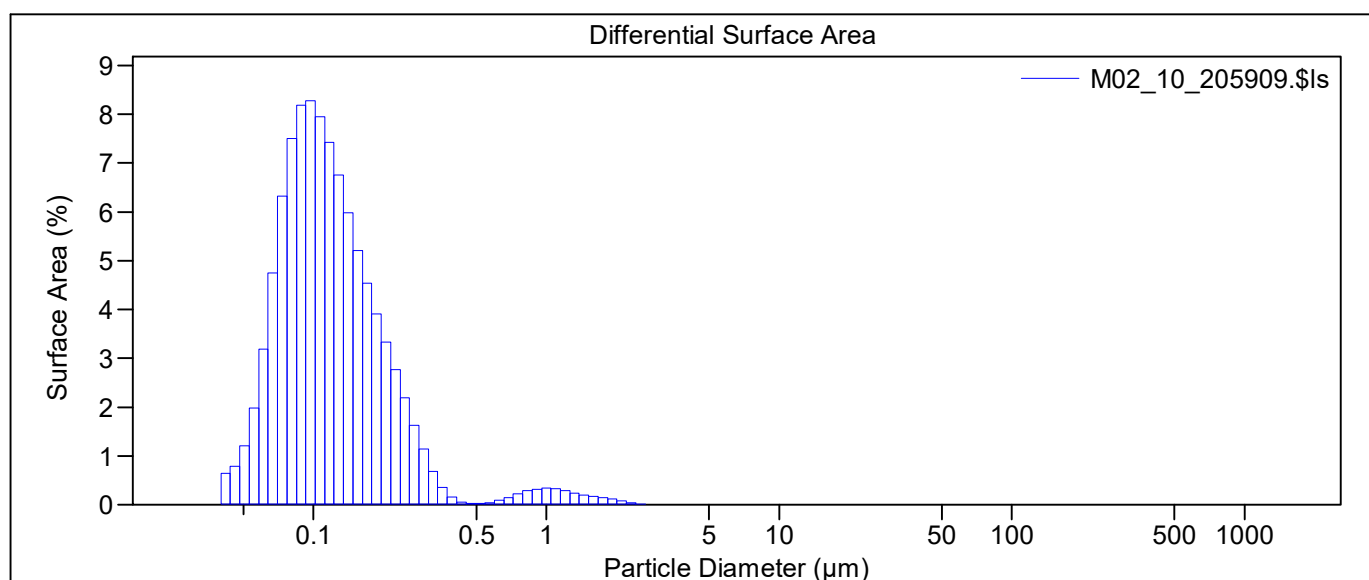
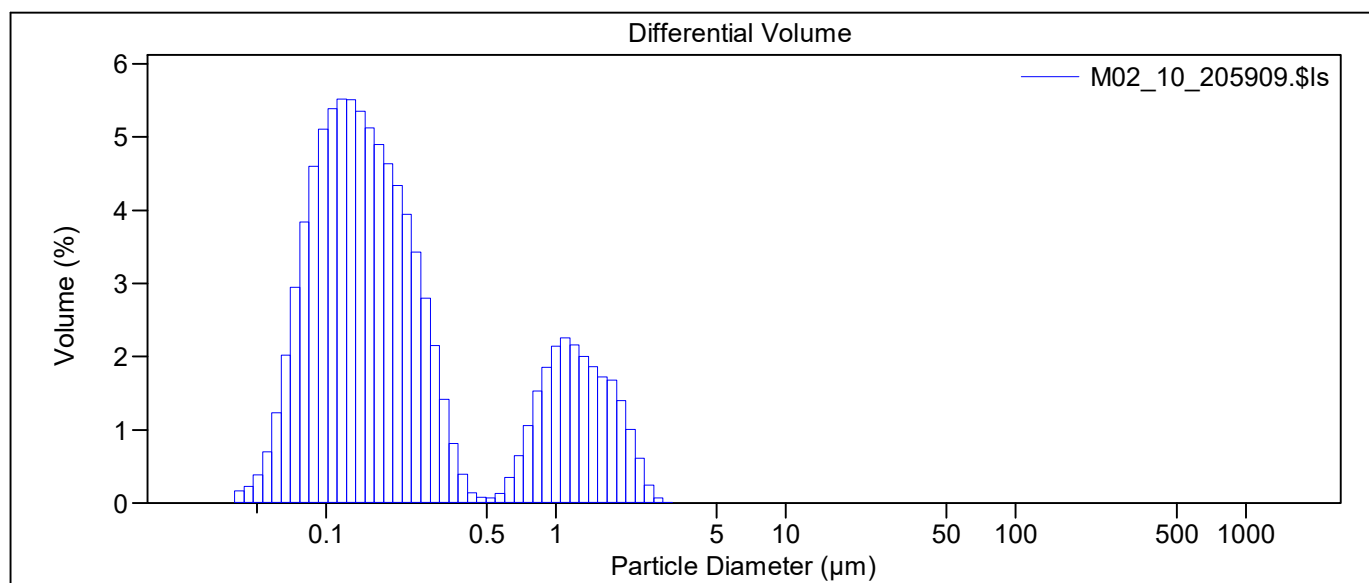
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_10_205909.\$ls		
	M02_10_205909.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.12%		
LS 13 320	Universal Liquid Module		
Start time:	20:57 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	66%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_10_205909.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.534 μm
Mean:	0.418 μm		Variance:	0.285 μm ²
Median:	0.168 μm		C.V.:	128%
Mean/Median ratio:	2.485		Skewness:	1.862 Right skewed
Mode:	0.117 μm		Kurtosis:	2.547 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.109 μm	0.168 μm	0.326 μm	1.299 μm

Surface Area Statistics (Arithmetic)			M02_10_205909.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.202 µm
Mean:	0.157 µm		Variance:	0.041 µm ²
Median:	0.111 µm		C.V.:	129%
Mean/Median ratio:	1.422		Skewness:	5.925 Right skewed
Mode:	0.097 µm		Kurtosis:	41.58 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.111 µm	0.159 µm	0.230 µm

Number Statistics (Arithmetic)			M02_10_205909.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.6%
Mean/Median ratio:	1.108		Skewness:	5.655 Right skewed
Mode:	0.073 μm		Kurtosis:	132.8 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.102 μm	0.133 μm



M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.39
10	0.044	0.046	0.23	0.78	3.46
11	0.048	0.050	0.39	1.21	4.42
12	0.053	0.055	0.70	1.98	6.03
13	0.058	0.061	1.24	3.19	8.05
14	0.064	0.067	2.02	4.75	9.94
15	0.070	0.073	2.95	6.32	11.0
16	0.077	0.080	3.84	7.51	10.8
17	0.084	0.088	4.60	8.18	9.79
18	0.093	0.097	5.11	8.28	8.22
19	0.102	0.106	5.38	7.95	6.55
20	0.112	0.117	5.52	7.42	5.07
21	0.122	0.128	5.51	6.75	3.83
22	0.134	0.141	5.36	5.98	2.81
23	0.148	0.155	5.12	5.21	2.04
24	0.162	0.170	4.90	4.53	1.47
25	0.178	0.186	4.64	3.91	1.05
26	0.195	0.205	4.34	3.34	0.74
27	0.214	0.225	3.95	2.76	0.51
28	0.235	0.247	3.43	2.19	0.34
29	0.258	0.271	2.80	1.63	0.21
30	0.284	0.297	2.15	1.14	0.12
31	0.311	0.326	1.42	0.68	0.060
32	0.342	0.358	0.82	0.36	0.026
33	0.375	0.393	0.39	0.16	0.0095
34	0.412	0.431	0.14	0.050	0.0025
35	0.452	0.474	0.078	0.026	0.0011
36	0.496	0.520	0.073	0.022	0.00076
37	0.545	0.571	0.14	0.037	0.0011
38	0.598	0.627	0.35	0.089	0.0021
39	0.656	0.688	0.64	0.15	0.0029
40	0.721	0.755	1.06	0.22	0.0036
41	0.791	0.829	1.53	0.29	0.0040
42	0.868	0.910	1.86	0.32	0.0036
43	0.953	0.999	2.15	0.34	0.0032
44	1.047	1.097	2.25	0.32	0.0025
45	1.149	1.204	2.16	0.28	0.0018

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	2.00	0.24	0.0013
47	1.385	1.451	1.87	0.20	0.00090
48	1.520	1.592	1.73	0.17	0.00063
49	1.668	1.748	1.68	0.15	0.00046
50	1.832	1.919	1.40	0.11	0.00029
51	2.011	2.107	1.00	0.075	0.00016
52	2.207	2.313	0.61	0.042	0.000073
53	2.423	2.539	0.24	0.015	0.000022
54	2.660	2.787	0.070	0.0039	0.000005
55	2.920	3.059	0.012	0.00059	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

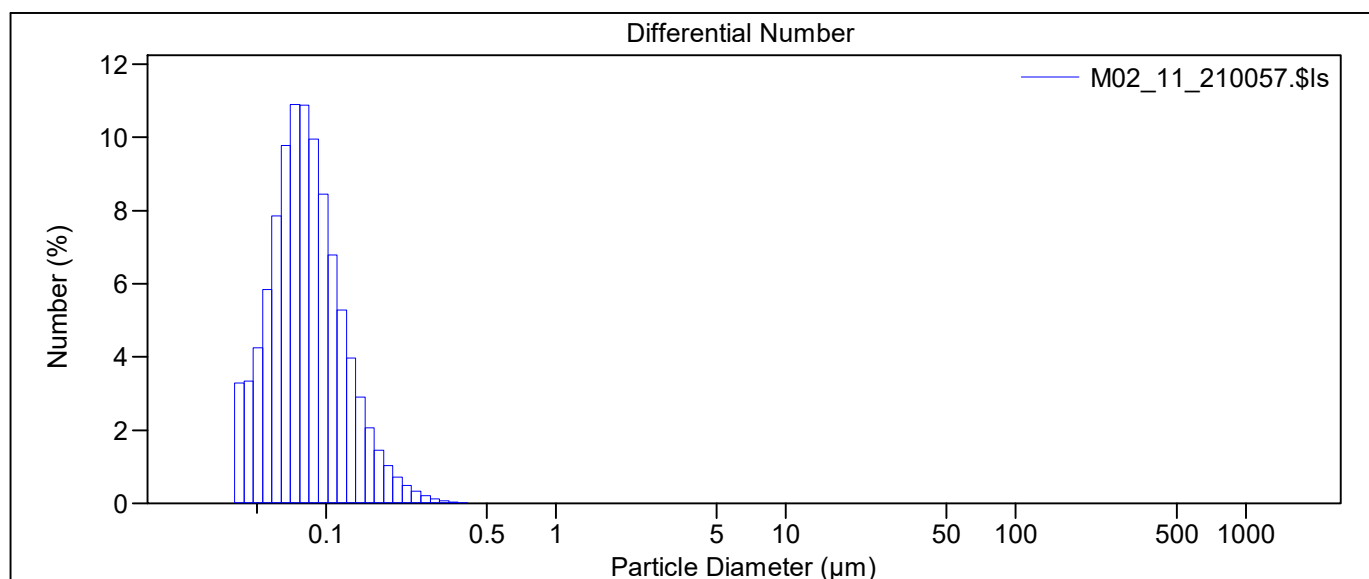
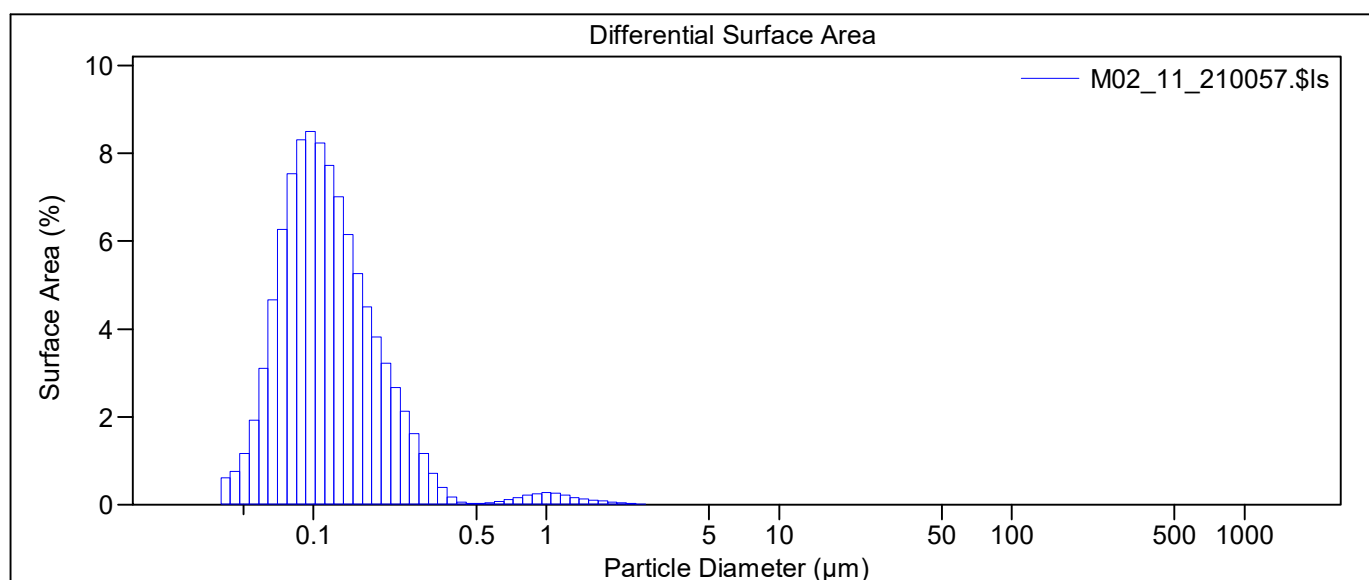
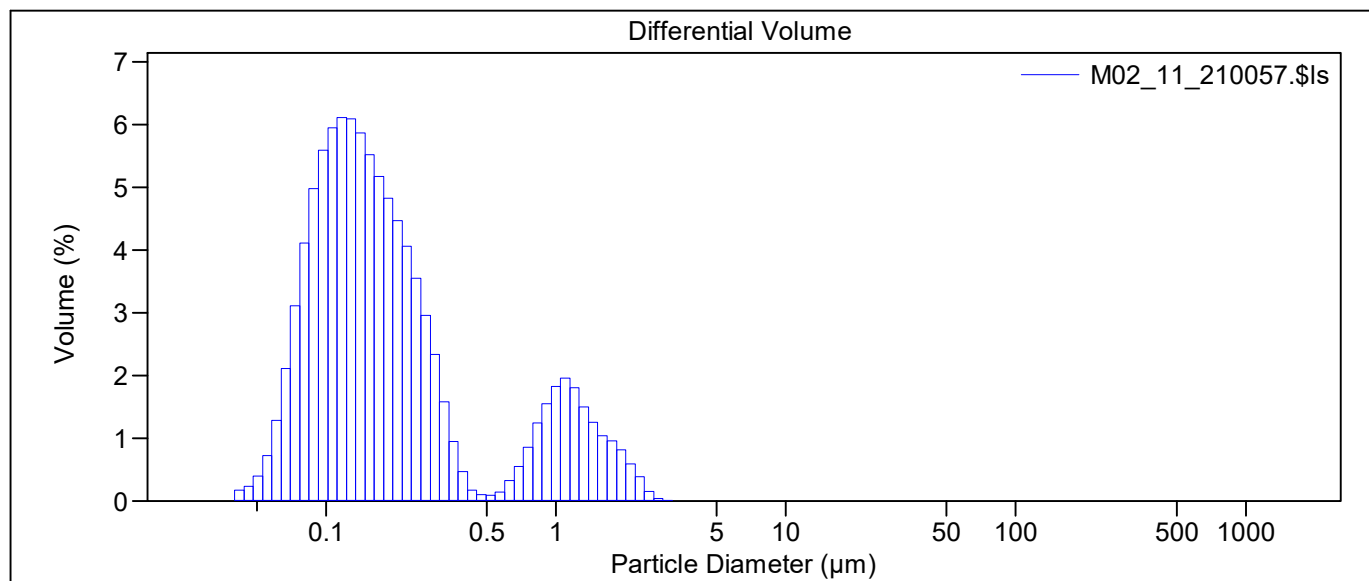
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_11_210057.\$ls		
	M02_11_210057.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.54%		
LS 13 320	Universal Liquid Module		
Start time:	20:59 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	68%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_11_210057.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.454 µm
Mean:	0.341 µm		Variance:	0.206 µm ²
Median:	0.156 µm		C.V.:	133%
Mean/Median ratio:	2.185		Skewness:	2.353 Right skewed
Mode:	0.117 µm		Kurtosis:	5.084 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.156 µm	0.264 µm	1.074 µm

Surface Area Statistics (Arithmetic)			M02_11_210057.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.169 µm
Mean:	0.148 µm		Variance:	0.029 µm ²
Median:	0.110 µm		C.V.:	114%
Mean/Median ratio:	1.339		Skewness:	6.572 Right skewed
Mode:	0.097 µm		Kurtosis:	54.03 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.224 µm

Number Statistics (Arithmetic)			M02_11_210057.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.3%
Mean/Median ratio:	1.103		Skewness:	4.710 Right skewed
Mode:	0.073 μm		Kurtosis:	98.23 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



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M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.62	3.28
10	0.044	0.046	0.24	0.75	3.33
11	0.048	0.050	0.40	1.16	4.25
12	0.053	0.055	0.72	1.92	5.83
13	0.058	0.061	1.28	3.11	7.85
14	0.064	0.067	2.11	4.67	9.78
15	0.070	0.073	3.12	6.27	10.9
16	0.077	0.080	4.11	7.54	10.9
17	0.084	0.088	4.98	8.31	9.95
18	0.093	0.097	5.59	8.51	8.45
19	0.102	0.106	5.95	8.24	6.79
20	0.112	0.117	6.11	7.72	5.28
21	0.122	0.128	6.09	7.00	3.98
22	0.134	0.141	5.87	6.15	2.90
23	0.148	0.155	5.52	5.27	2.06
24	0.162	0.170	5.18	4.50	1.46
25	0.178	0.186	4.82	3.82	1.03
26	0.195	0.205	4.47	3.22	0.72
27	0.214	0.225	4.06	2.67	0.49
28	0.235	0.247	3.55	2.13	0.33
29	0.258	0.271	2.96	1.61	0.21
30	0.284	0.297	2.34	1.16	0.12
31	0.311	0.326	1.59	0.72	0.063
32	0.342	0.358	0.95	0.39	0.028
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.17	0.059	0.0029
35	0.452	0.474	0.10	0.032	0.0013
36	0.496	0.520	0.093	0.026	0.00091
37	0.545	0.571	0.14	0.037	0.0011
38	0.598	0.627	0.33	0.077	0.0018
39	0.656	0.688	0.55	0.12	0.0023
40	0.721	0.755	0.85	0.17	0.0027
41	0.791	0.829	1.25	0.22	0.0030
42	0.868	0.910	1.55	0.25	0.0028
43	0.953	0.999	1.83	0.27	0.0025
44	1.047	1.097	1.95	0.26	0.0020
45	1.149	1.204	1.81	0.22	0.0014
46	1.261	1.321	1.50	0.17	0.00090
47	1.385	1.451	1.25	0.13	0.00057
48	1.520	1.592	1.04	0.096	0.00035
49	1.668	1.748	0.96	0.081	0.00025
50	1.832	1.919	0.81	0.063	0.00016
51	2.011	2.107	0.60	0.042	0.000088
52	2.207	2.313	0.38	0.024	0.000043
53	2.423	2.539	0.16	0.0091	0.000013
54	2.660	2.787	0.045	0.0024	0.000003
55	2.920	3.059	0.0077	0.00037	3.7E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M02.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

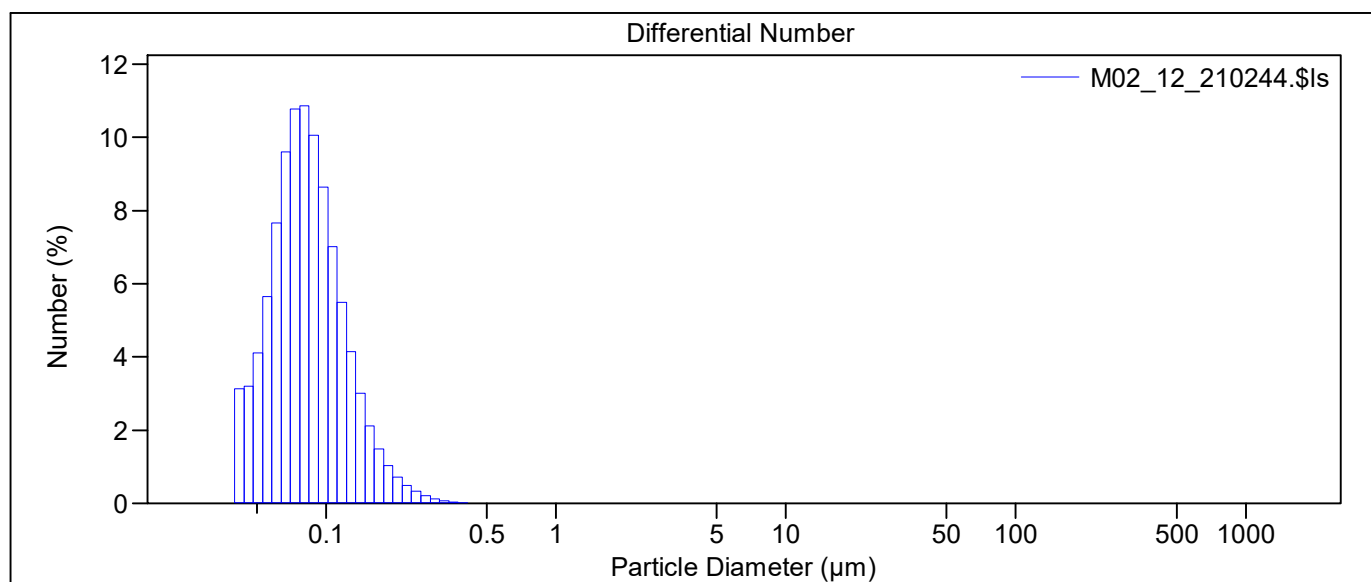
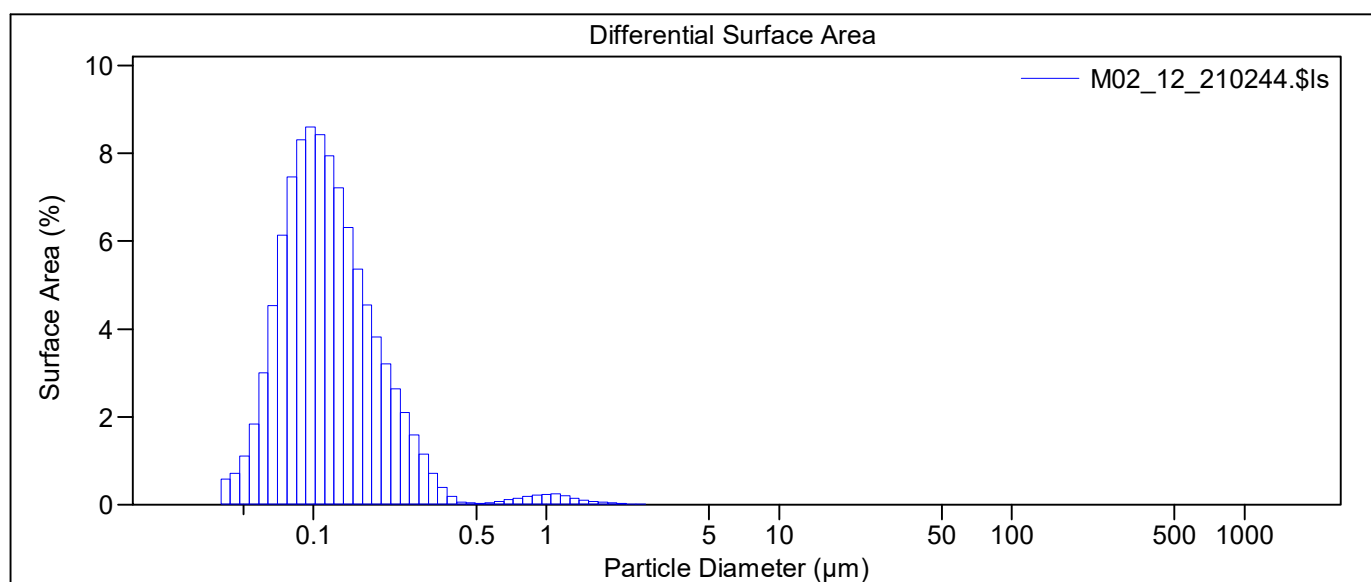
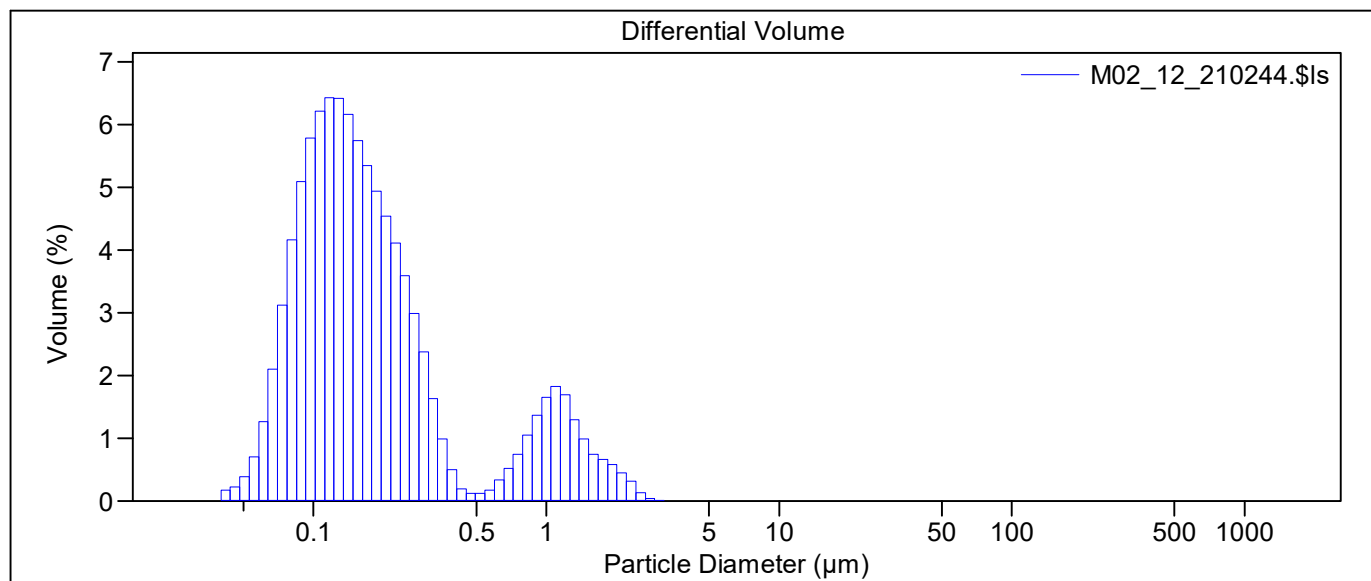
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_12_210244.\$ls		
	M02_12_210244.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.77%		
LS 13 320	Universal Liquid Module		
Start time:	21:01 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	66%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_12_210244.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.415 μm
Mean:	0.310 μm		Variance:	0.172 μm ²
Median:	0.152 μm		C.V.:	134%
Mean/Median ratio:	2.040		Skewness:	2.629 Right skewed
Mode:	0.117 μm		Kurtosis:	6.840 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.152 μm	0.249 μm	0.976 μm

Surface Area Statistics (Arithmetic)			M02_12_210244.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.155 µm
Mean:	0.144 µm		Variance:	0.024 µm ²
Median:	0.111 µm		C.V.:	107%
Mean/Median ratio:	1.304		Skewness:	6.849 Right skewed
Mode:	0.097 µm		Kurtosis:	60.64 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.068 µm	0.084 µm	0.111 µm	0.155 µm	0.221 µm

Number Statistics (Arithmetic)			M02_12_210244.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.089 μm		Variance:	0.0015 μm ²
Median:	0.081 μm		C.V.:	43.7%
Mean/Median ratio:	1.101		Skewness:	4.294 Right skewed
Mode:	0.080 μm		Kurtosis:	83.37 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.065 μm	0.081 μm	0.103 μm	0.133 μm



M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.58	3.14
10	0.044	0.046	0.23	0.72	3.20
11	0.048	0.050	0.39	1.11	4.11
12	0.053	0.055	0.71	1.84	5.66
13	0.058	0.061	1.27	3.00	7.66
14	0.064	0.067	2.10	4.54	9.60
15	0.070	0.073	3.12	6.14	10.8
16	0.077	0.080	4.16	7.46	10.9
17	0.084	0.088	5.09	8.32	10.1
18	0.093	0.097	5.78	8.60	8.63
19	0.102	0.106	6.22	8.43	7.02
20	0.112	0.117	6.43	7.94	5.49
21	0.122	0.128	6.41	7.22	4.14
22	0.134	0.141	6.16	6.31	3.00
23	0.148	0.155	5.75	5.36	2.12
24	0.162	0.170	5.34	4.54	1.49
25	0.178	0.186	4.93	3.82	1.04
26	0.195	0.205	4.54	3.20	0.72
27	0.214	0.225	4.11	2.64	0.49
28	0.235	0.247	3.59	2.10	0.33
29	0.258	0.271	2.99	1.60	0.21
30	0.284	0.297	2.38	1.16	0.12
31	0.311	0.326	1.63	0.72	0.064
32	0.342	0.358	0.99	0.40	0.029
33	0.375	0.393	0.50	0.18	0.011
34	0.412	0.431	0.19	0.063	0.0032
35	0.452	0.474	0.12	0.037	0.0015
36	0.496	0.520	0.12	0.033	0.0012
37	0.545	0.571	0.17	0.044	0.0013
38	0.598	0.627	0.34	0.077	0.0019
39	0.656	0.688	0.52	0.11	0.0022
40	0.721	0.755	0.75	0.14	0.0024
41	0.791	0.829	1.05	0.18	0.0025
42	0.868	0.910	1.37	0.22	0.0025
43	0.953	0.999	1.65	0.24	0.0023
44	1.047	1.097	1.83	0.24	0.0019
45	1.149	1.204	1.69	0.20	0.0013

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.30	0.14	0.00077
47	1.385	1.451	0.99	0.099	0.00044
48	1.520	1.592	0.74	0.067	0.00025
49	1.668	1.748	0.67	0.055	0.00017
50	1.832	1.919	0.58	0.044	0.00011
51	2.011	2.107	0.45	0.031	0.000065
52	2.207	2.313	0.31	0.019	0.000034
53	2.423	2.539	0.13	0.0076	0.000011
54	2.660	2.787	0.039	0.0020	0.000002
55	2.920	3.059	0.0067	0.00032	3.21E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

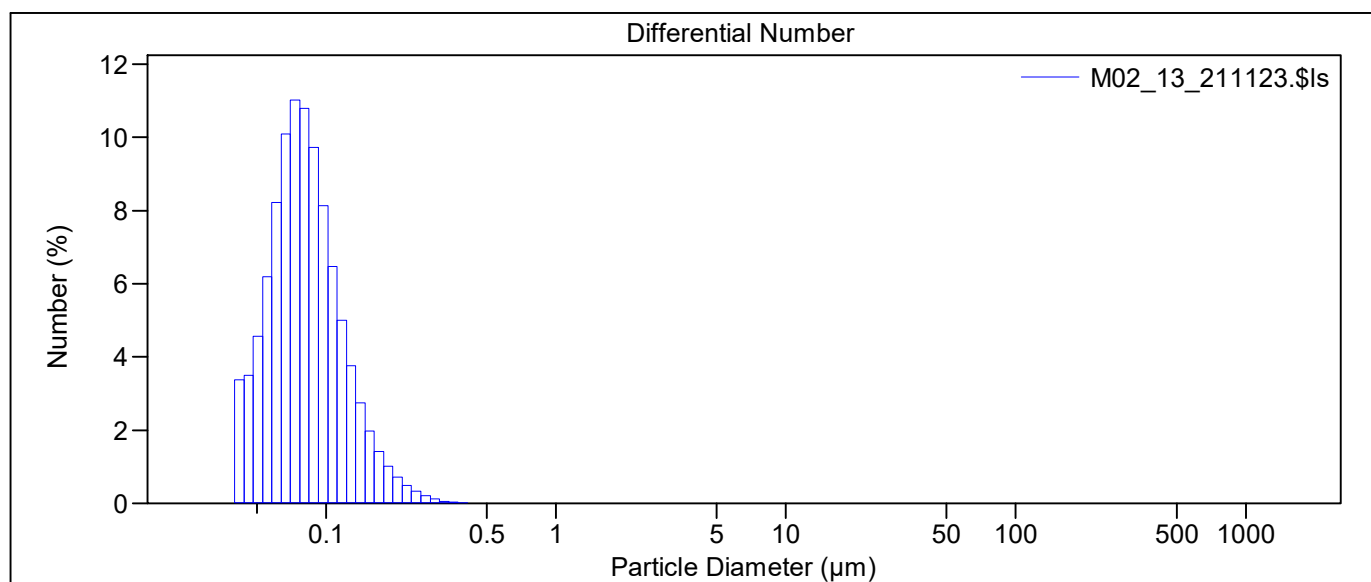
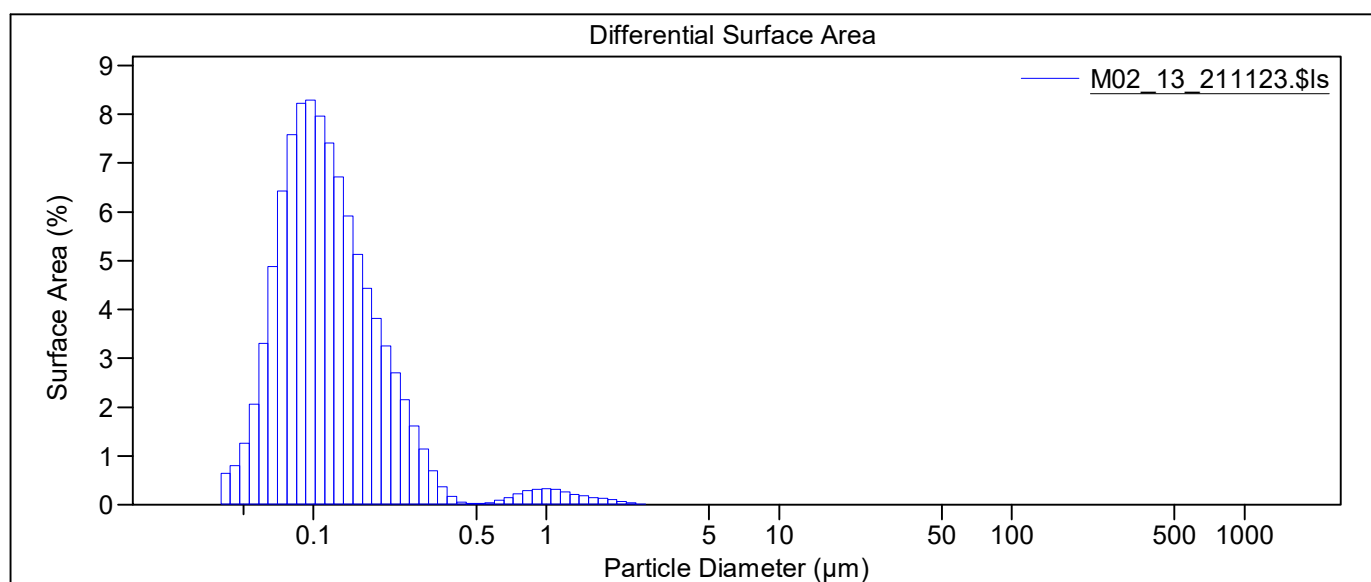
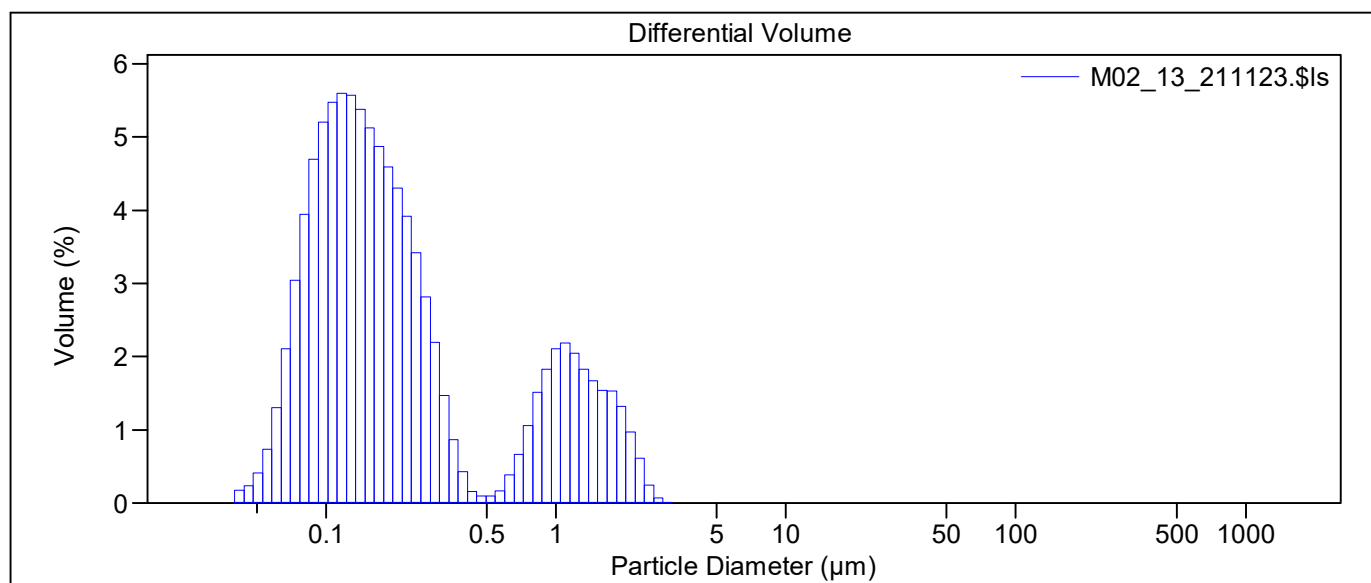
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_13_211123.\$ls		
	M02_13_211123.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.20%		
LS 13 320	Universal Liquid Module		
Start time:	21:09 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_13_211123.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.523 µm
Mean:	0.404 µm		Variance:	0.274 µm ²
Median:	0.165 µm		C.V.:	129%
Mean/Median ratio:	2.444		Skewness:	1.956 Right skewed
Mode:	0.117 µm		Kurtosis:	2.990 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.107 µm	0.165 µm	0.310 µm	1.251 µm

Surface Area Statistics (Arithmetic)			M02_13_211123.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.196 µm
Mean:	0.155 µm		Variance:	0.039 µm ²
Median:	0.110 µm		C.V.:	127%
Mean/Median ratio:	1.410		Skewness:	6.072 Right skewed
Mode:	0.097 µm		Kurtosis:	44.23 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.157 µm	0.229 µm

Number Statistics (Arithmetic)			M02_13_211123.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.4%
Mean/Median ratio:	1.108		Skewness:	5.524 Right skewed
Mode:	0.073 μm		Kurtosis:	128.0 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



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M02.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.38
10	0.044	0.046	0.24	0.80	3.50
11	0.048	0.050	0.41	1.26	4.56
12	0.053	0.055	0.74	2.06	6.19
13	0.058	0.061	1.30	3.30	8.23
14	0.064	0.067	2.11	4.88	10.1
15	0.070	0.073	3.05	6.43	11.0
16	0.077	0.080	3.95	7.59	10.8
17	0.084	0.088	4.70	8.23	9.72
18	0.093	0.097	5.20	8.30	8.13
19	0.102	0.106	5.48	7.96	6.47
20	0.112	0.117	5.60	7.41	5.00
21	0.122	0.128	5.57	6.72	3.76
22	0.134	0.141	5.38	5.91	2.75
23	0.148	0.155	5.12	5.12	1.98
24	0.162	0.170	4.87	4.44	1.42
25	0.178	0.186	4.59	3.82	1.01
26	0.195	0.205	4.30	3.25	0.72
27	0.214	0.225	3.92	2.70	0.49
28	0.235	0.247	3.42	2.15	0.33
29	0.258	0.271	2.82	1.61	0.20
30	0.284	0.297	2.19	1.14	0.12
31	0.311	0.326	1.47	0.70	0.060
32	0.342	0.358	0.86	0.37	0.027
33	0.375	0.393	0.43	0.17	0.0100
34	0.412	0.431	0.16	0.057	0.0028
35	0.452	0.474	0.097	0.032	0.0013
36	0.496	0.520	0.094	0.028	0.00096
37	0.545	0.571	0.16	0.044	0.0012
38	0.598	0.627	0.39	0.096	0.0023
39	0.656	0.688	0.67	0.15	0.0029
40	0.721	0.755	1.06	0.22	0.0035
41	0.791	0.829	1.51	0.28	0.0038
42	0.868	0.910	1.83	0.31	0.0035
43	0.953	0.999	2.10	0.33	0.0030
44	1.047	1.097	2.19	0.31	0.0024
45	1.149	1.204	2.05	0.26	0.0017
46	1.261	1.321	1.83	0.21	0.0011
47	1.385	1.451	1.67	0.18	0.00078
48	1.520	1.592	1.54	0.15	0.00054
49	1.668	1.748	1.53	0.14	0.00041
50	1.832	1.919	1.32	0.11	0.00027
51	2.011	2.107	0.97	0.072	0.00015
52	2.207	2.313	0.61	0.041	0.000070
53	2.423	2.539	0.25	0.015	0.000021
54	2.660	2.787	0.071	0.0039	0.000005
55	2.920	3.059	0.012	0.00059	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M02.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

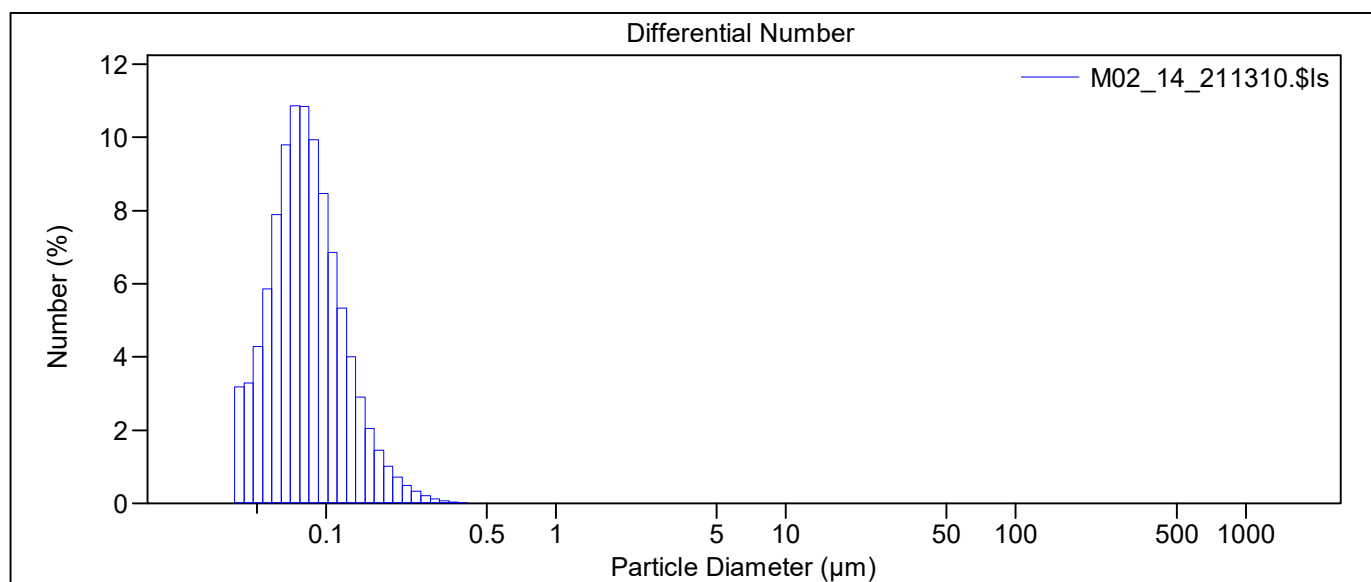
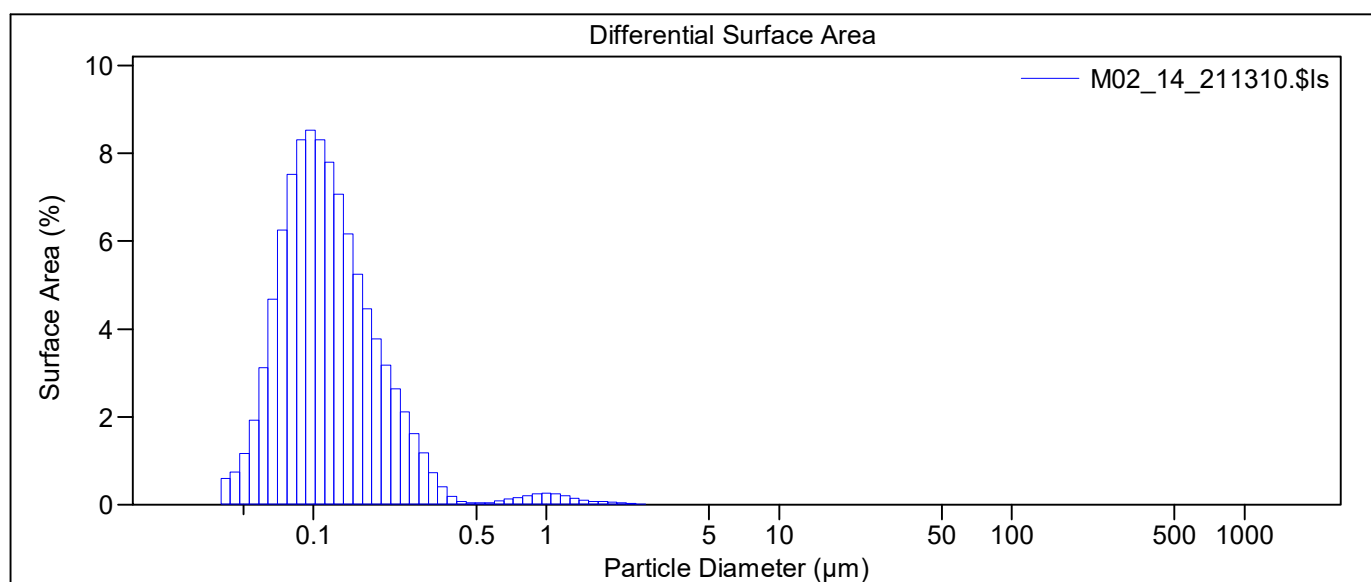
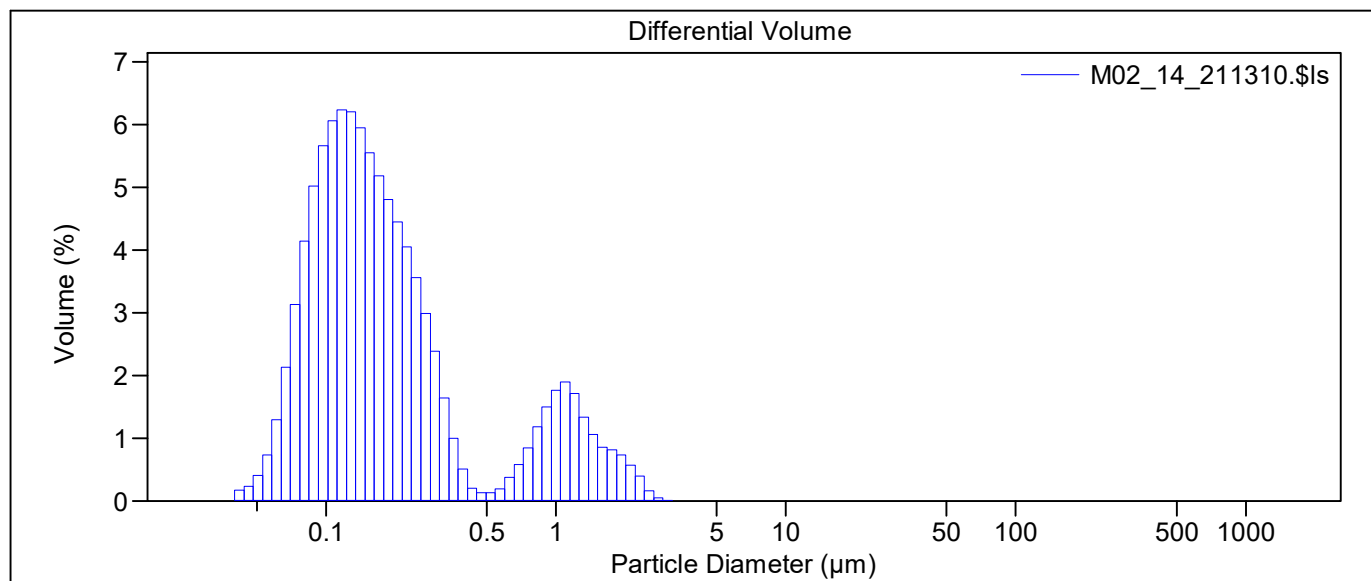
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_14_211310.\$ls		
	M02_14_211310.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.63%		
LS 13 320	Universal Liquid Module		
Start time:	21:11 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_14_211310.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.440 µm
Mean:	0.329 µm		Variance:	0.193 µm ²
Median:	0.154 µm		C.V.:	134%
Mean/Median ratio:	2.128		Skewness:	2.496 Right skewed
Mode:	0.117 µm		Kurtosis:	5.988 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.154 µm	0.259 µm	1.025 µm

Surface Area Statistics (Arithmetic)			M02_14_211310.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.163 µm
Mean:	0.146 µm		Variance:	0.027 µm ²
Median:	0.110 µm		C.V.:	112%
Mean/Median ratio:	1.327		Skewness:	6.721 Right skewed
Mode:	0.097 µm		Kurtosis:	57.71 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.155 µm	0.223 µm

Number Statistics (Arithmetic)		M02_14_211310.\$ls		
Calculations from 0.017 μm to 2000 μm				
Number:	100%			
Mean:	0.088 μm	S.D.:	0.039 μm	
Median:	0.080 μm	Variance:	0.0015 μm ²	
Mean/Median ratio:	1.103	C.V.:	44.1%	
Mode:	0.073 μm	Skewness:	4.555 Right skewed	
		Kurtosis:	92.20 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.103 μm	0.133 μm



M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.60	3.18
10	0.044	0.046	0.23	0.74	3.28
11	0.048	0.050	0.40	1.17	4.28
12	0.053	0.055	0.73	1.93	5.87
13	0.058	0.061	1.30	3.12	7.89
14	0.064	0.067	2.14	4.67	9.79
15	0.070	0.073	3.13	6.25	10.9
16	0.077	0.080	4.14	7.52	10.8
17	0.084	0.088	5.02	8.31	9.94
18	0.093	0.097	5.66	8.53	8.47
19	0.102	0.106	6.06	8.32	6.85
20	0.112	0.117	6.24	7.80	5.34
21	0.122	0.128	6.21	7.07	4.01
22	0.134	0.141	5.94	6.17	2.90
23	0.148	0.155	5.55	5.25	2.05
24	0.162	0.170	5.18	4.46	1.45
25	0.178	0.186	4.80	3.77	1.01
26	0.195	0.205	4.45	3.18	0.71
27	0.214	0.225	4.05	2.64	0.49
28	0.235	0.247	3.56	2.11	0.32
29	0.258	0.271	2.99	1.61	0.21
30	0.284	0.297	2.39	1.18	0.12
31	0.311	0.326	1.64	0.73	0.065
32	0.342	0.358	0.99	0.41	0.030
33	0.375	0.393	0.51	0.19	0.011
34	0.412	0.431	0.20	0.068	0.0034
35	0.452	0.474	0.13	0.041	0.0017
36	0.496	0.520	0.13	0.037	0.0013
37	0.545	0.571	0.19	0.049	0.0014
38	0.598	0.627	0.38	0.088	0.0021
39	0.656	0.688	0.58	0.12	0.0025
40	0.721	0.755	0.85	0.16	0.0027
41	0.791	0.829	1.18	0.21	0.0028
42	0.868	0.910	1.50	0.24	0.0027
43	0.953	0.999	1.77	0.26	0.0024
44	1.047	1.097	1.90	0.25	0.0020
45	1.149	1.204	1.71	0.21	0.0013

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.33	0.15	0.00079
47	1.385	1.451	1.06	0.11	0.00047
48	1.520	1.592	0.85	0.078	0.00029
49	1.668	1.748	0.82	0.068	0.00021
50	1.832	1.919	0.74	0.056	0.00014
51	2.011	2.107	0.57	0.040	0.000084
52	2.207	2.313	0.39	0.025	0.000043
53	2.423	2.539	0.17	0.0095	0.000014
54	2.660	2.787	0.049	0.0026	0.000003
55	2.920	3.059	0.0082	0.00039	3.9E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

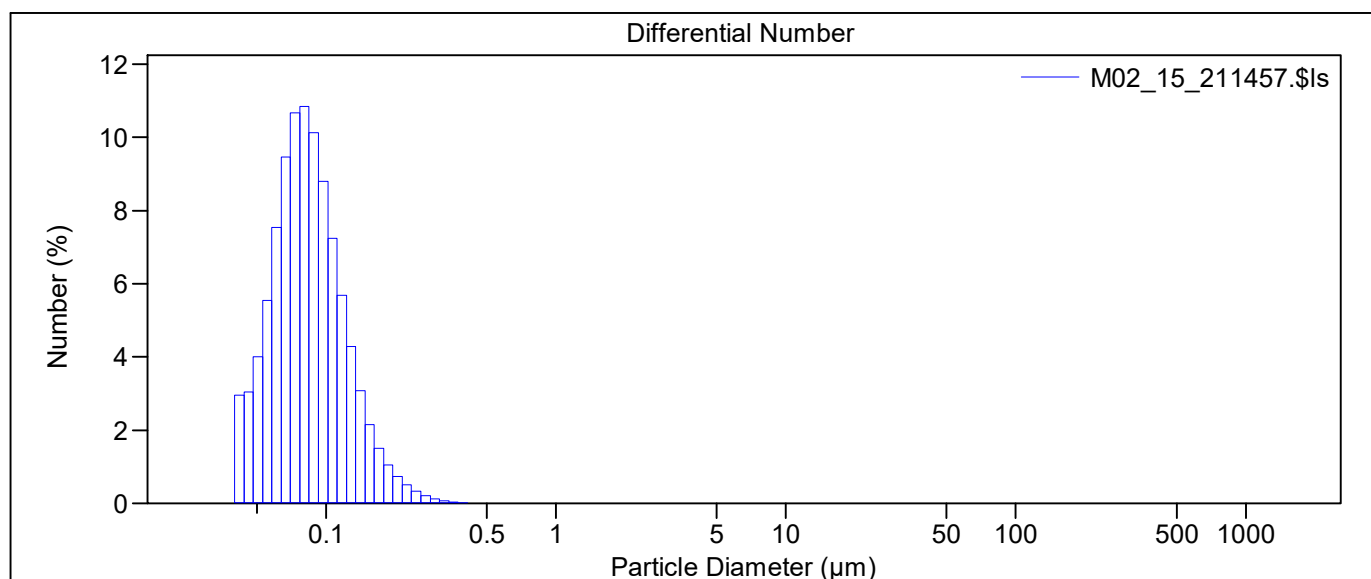
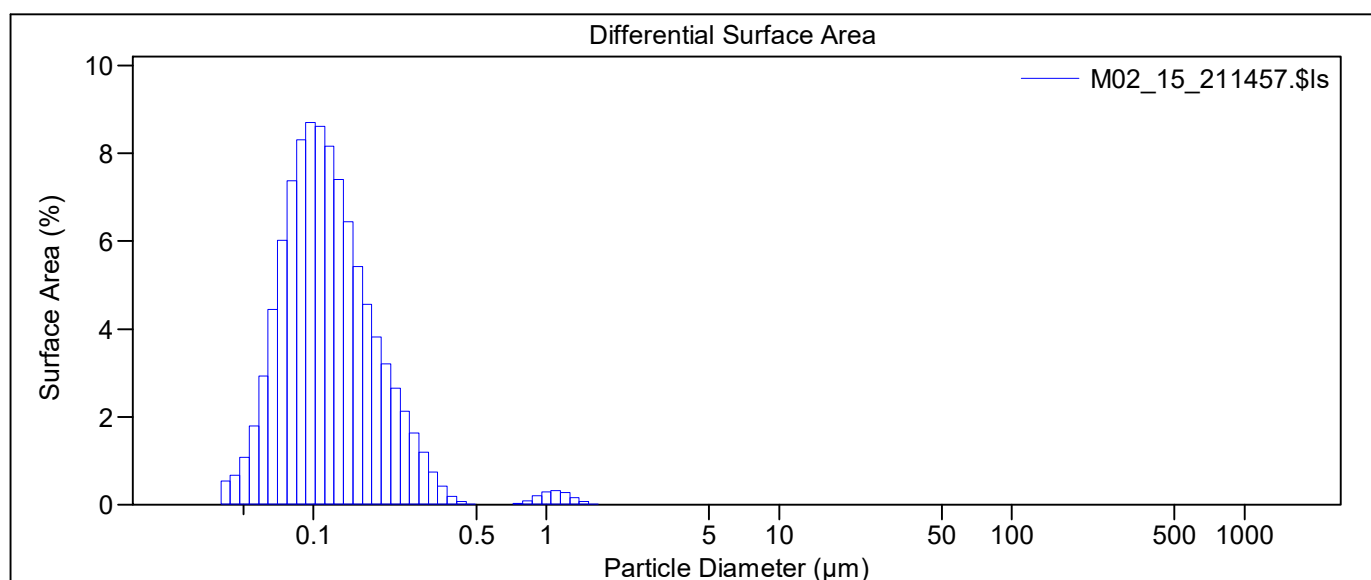
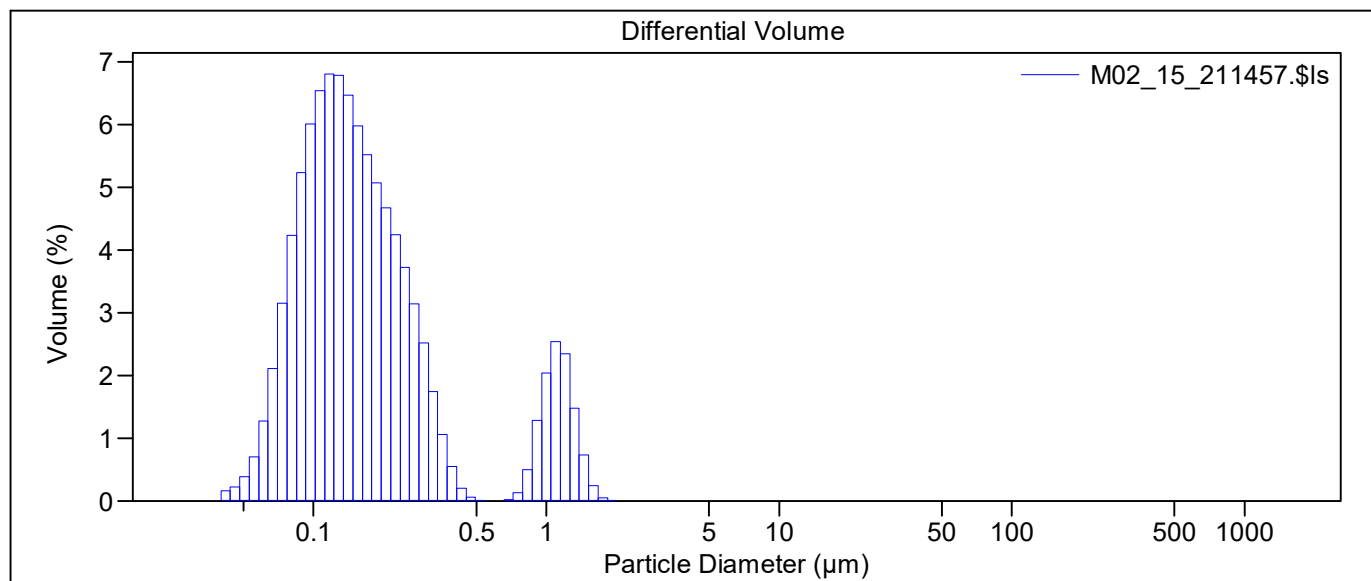
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M02\M02_15_211457.\$ls		
	M02_15_211457.\$ls		
File ID:	M02		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.89%		
LS 13 320	Universal Liquid Module		
Start time:	21:13 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M02_15_211457.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.323 µm
Mean:	0.266 µm		Variance:	0.104 µm ²
Median:	0.147 µm		C.V.:	122%
Mean/Median ratio:	1.803		Skewness:	2.407 Right skewed
Mode:	0.117 µm		Kurtosis:	4.571 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.104 µm	0.147 µm	0.232 µm	0.917 µm

Surface Area Statistics (Arithmetic)			M02_15_211457.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%			
Mean:	0.140 µm	S.D.:	0.133 µm	
Median:	0.111 µm	Variance:	0.018 µm ²	
Mean/Median ratio:	1.263	C.V.:	94.6%	
Mode:	0.097 µm	Skewness:	6.169 Right skewed	
		Kurtosis:	46.04 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.068 µm	0.084 µm	0.111 µm	0.154 µm	0.218 µm

Number Statistics (Arithmetic)			M02_15_211457.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.090 μm		Variance:	0.0015 μm ²
Median:	0.082 μm		C.V.:	43.0%
Mean/Median ratio:	1.099		Skewness:	3.768 Right skewed
Mode:	0.080 μm		Kurtosis:	61.03 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.053 μm	0.065 μm	0.082 μm	0.104 μm	0.134 μm



M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.16	0.54	2.95
10	0.044	0.046	0.22	0.68	3.05
11	0.048	0.050	0.39	1.07	4.01
12	0.053	0.055	0.71	1.79	5.54
13	0.058	0.061	1.27	2.93	7.53
14	0.064	0.067	2.11	4.44	9.47
15	0.070	0.073	3.15	6.02	10.7
16	0.077	0.080	4.24	7.38	10.8
17	0.084	0.088	5.24	8.31	10.1
18	0.093	0.097	6.02	8.70	8.79
19	0.102	0.106	6.55	8.62	7.23
20	0.112	0.117	6.80	8.16	5.68
21	0.122	0.128	6.78	7.41	4.28
22	0.134	0.141	6.47	6.44	3.09
23	0.148	0.155	5.98	5.43	2.16
24	0.162	0.170	5.52	4.56	1.51
25	0.178	0.186	5.07	3.82	1.05
26	0.195	0.205	4.67	3.20	0.73
27	0.214	0.225	4.25	2.65	0.50
28	0.235	0.247	3.73	2.12	0.33
29	0.258	0.271	3.14	1.63	0.21
30	0.284	0.297	2.52	1.19	0.13
31	0.311	0.326	1.74	0.75	0.067
32	0.342	0.358	1.07	0.42	0.031
33	0.375	0.393	0.55	0.20	0.012
34	0.412	0.431	0.20	0.066	0.0034
35	0.452	0.474	0.056	0.017	0.00071
36	0.496	0.520	0.0085	0.0023	0.000080
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0.018	0.0038	0.000076
40	0.721	0.755	0.14	0.025	0.00042
41	0.791	0.829	0.50	0.084	0.0012
42	0.868	0.910	1.28	0.20	0.0023
43	0.953	0.999	2.05	0.29	0.0027
44	1.047	1.097	2.54	0.33	0.0026
45	1.149	1.204	2.35	0.27	0.0018

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.48	0.16	0.00086
47	1.385	1.451	0.74	0.071	0.00032
48	1.520	1.592	0.24	0.021	0.000080
49	1.668	1.748	0.048	0.0038	0.000012
50	1.832	1.919	0.0064	0.00047	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M02.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M03\M03.\$av
M03.\$av
File ID: M03
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M03.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.453 µm
Mean:	0.349 µm	Variance:	0.206 µm ²
Median:	0.159 µm	C.V.:	130%
Mean/Median ratio:	2.195	Skewness:	2.260 Right skewed
Mode:	0.117 µm	Kurtosis:	4.691 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.159 µm	0.277 µm	1.077 µm

Surface Area Statistics (Arithmetic) M03.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.173 µm
Mean:	0.149 µm	Variance:	0.030 µm ²
Median:	0.110 µm	C.V.:	116%
Mean/Median ratio:	1.361	Skewness:	6.249 Right skewed
Mode:	0.097 µm	Kurtosis:	48.93 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.157 µm	0.228 µm

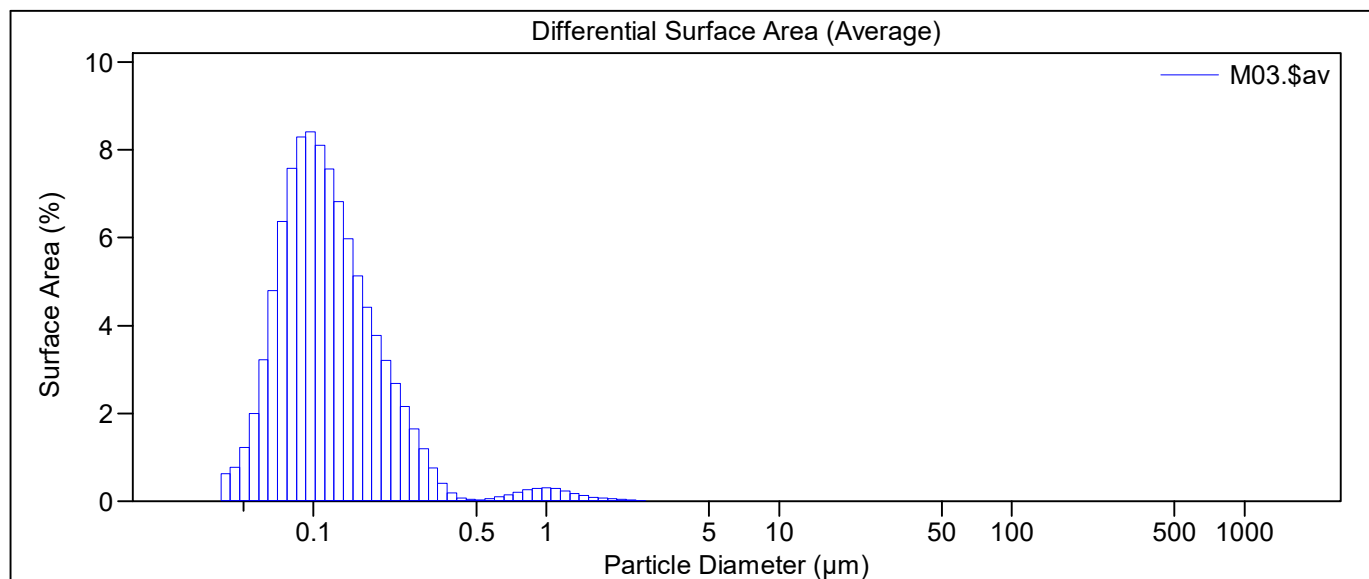
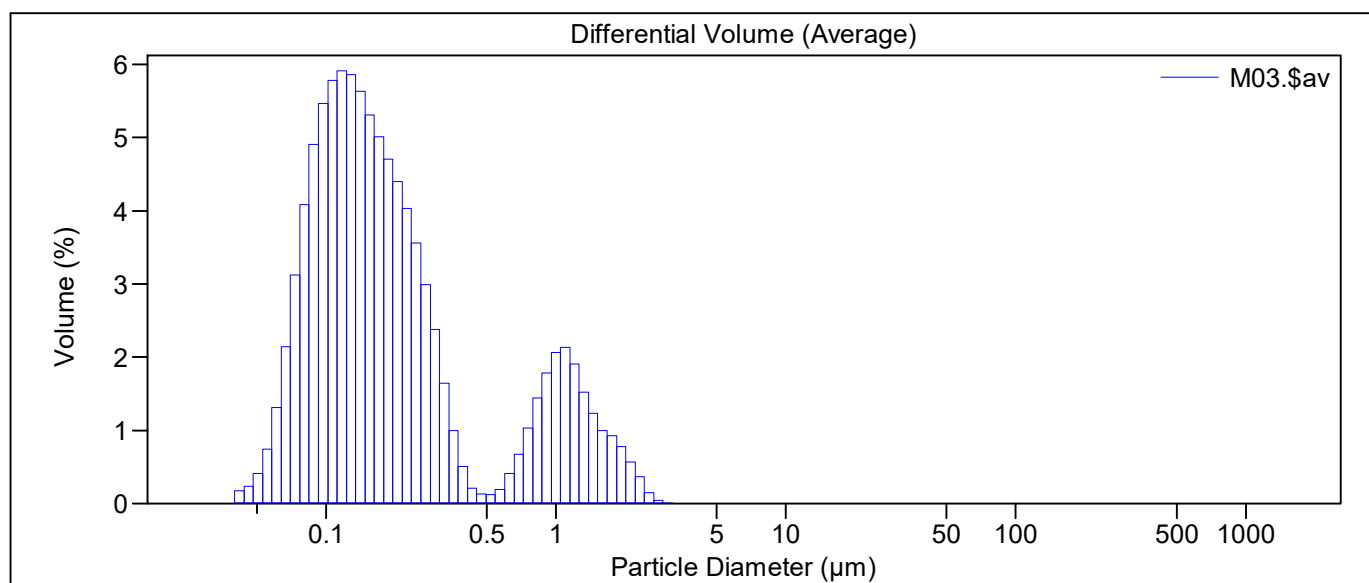
Number Statistics (Arithmetic)

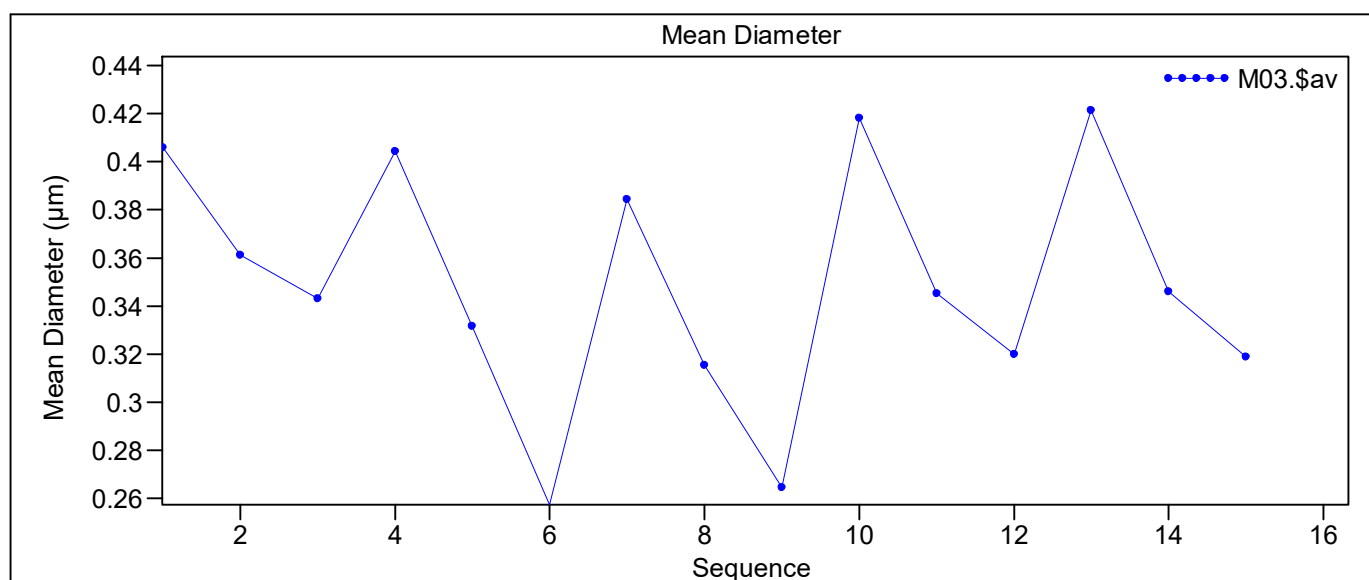
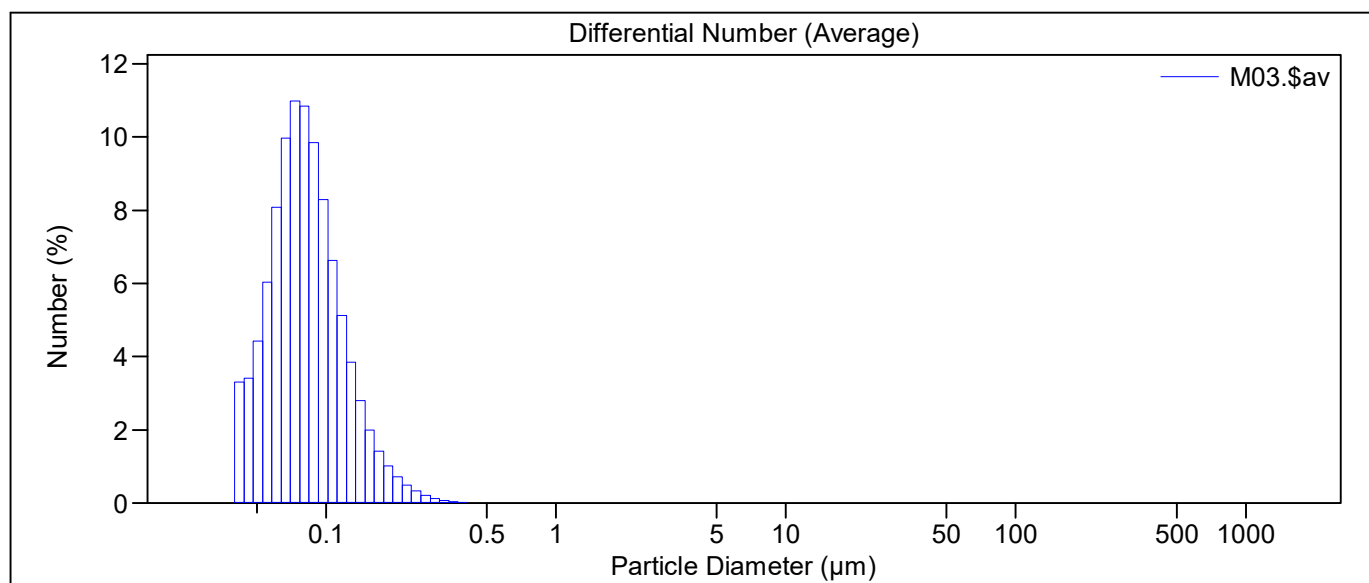
M03.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.039 μm
Mean:	0.088 μm	Variance:	0.0016 μm^2
Median:	0.079 μm	C.V.:	44.8%
Mean/Median ratio:	1.106	Skewness:	4.885 Right skewed
Mode:	0.073 μm	Kurtosis:	99.83 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.101 μm	0.132 μm





M03.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.62	3.30
10	0.044	0.046	0.24	0.78	3.41
11	0.048	0.050	0.41	1.22	4.43
12	0.053	0.055	0.74	2.00	6.04
13	0.058	0.061	1.31	3.23	8.08
14	0.064	0.067	2.14	4.80	9.97
15	0.070	0.073	3.12	6.37	11.0
16	0.077	0.080	4.08	7.58	10.8
17	0.084	0.088	4.90	8.29	9.84

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M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.46	8.42	8.29
19	0.102	0.106	5.78	8.11	6.63
20	0.112	0.117	5.91	7.56	5.13
21	0.122	0.128	5.86	6.83	3.84
22	0.134	0.141	5.63	5.97	2.79
23	0.148	0.155	5.31	5.13	1.99
24	0.162	0.170	5.01	4.41	1.42
25	0.178	0.186	4.70	3.77	1.01
26	0.195	0.205	4.40	3.21	0.71
27	0.214	0.225	4.03	2.68	0.49
28	0.235	0.247	3.56	2.16	0.33
29	0.258	0.271	2.99	1.65	0.21
30	0.284	0.297	2.38	1.20	0.13
31	0.311	0.326	1.64	0.75	0.066
32	0.342	0.358	0.99	0.41	0.030
33	0.375	0.393	0.51	0.19	0.012
34	0.412	0.431	0.21	0.072	0.0036
35	0.452	0.474	0.13	0.040	0.0017
36	0.496	0.520	0.12	0.035	0.0012
37	0.545	0.571	0.20	0.051	0.0015
38	0.598	0.627	0.41	0.098	0.0023
39	0.656	0.688	0.68	0.15	0.0029
40	0.721	0.755	1.03	0.20	0.0033
41	0.791	0.829	1.45	0.26	0.0035
42	0.868	0.910	1.79	0.29	0.0033
43	0.953	0.999	2.06	0.31	0.0029
44	1.047	1.097	2.14	0.29	0.0022
45	1.149	1.204	1.91	0.24	0.0015
46	1.261	1.321	1.53	0.17	0.00092
47	1.385	1.451	1.23	0.13	0.00056
48	1.520	1.592	1.00	0.094	0.00034
49	1.668	1.748	0.92	0.079	0.00024
50	1.832	1.919	0.78	0.061	0.00015
51	2.011	2.107	0.57	0.040	0.000084
52	2.207	2.313	0.36	0.023	0.000041
53	2.423	2.539	0.15	0.0087	0.000013
54	2.660	2.787	0.043	0.0023	0.000003
55	2.920	3.059	0.0072	0.00035	3.48E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

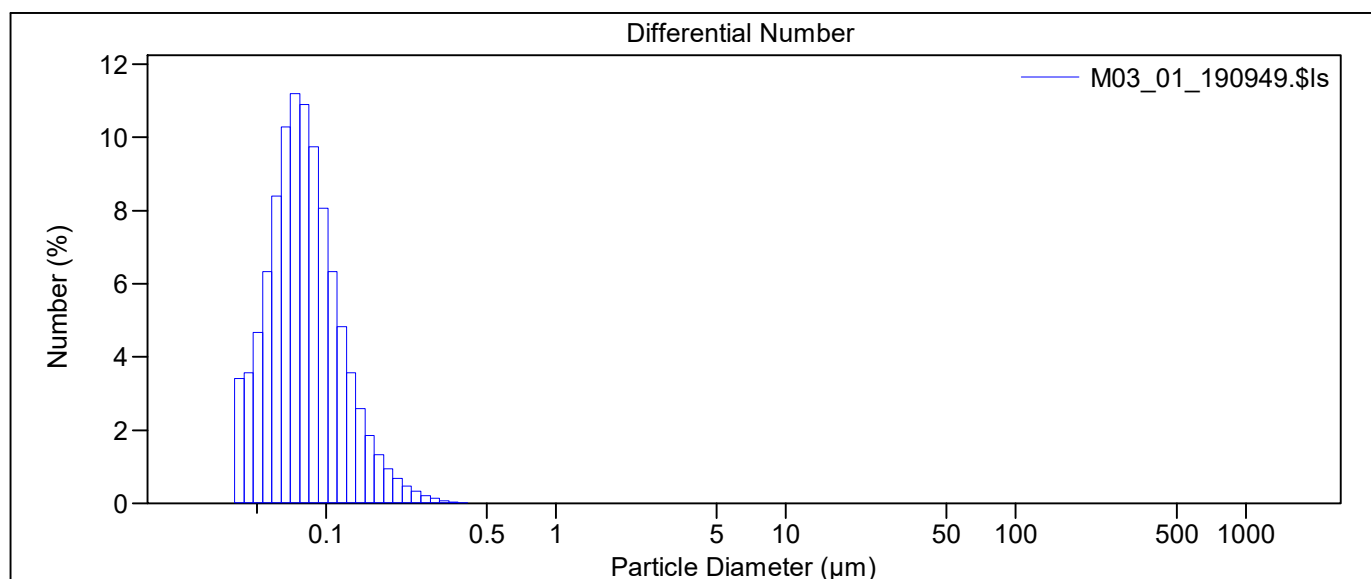
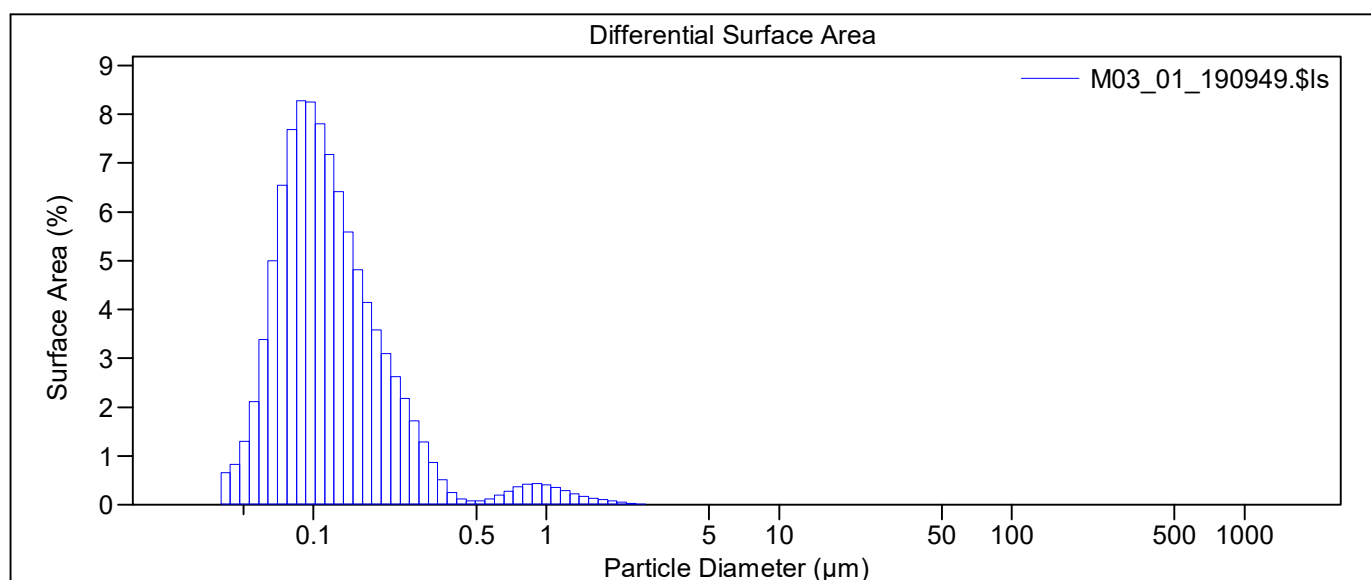
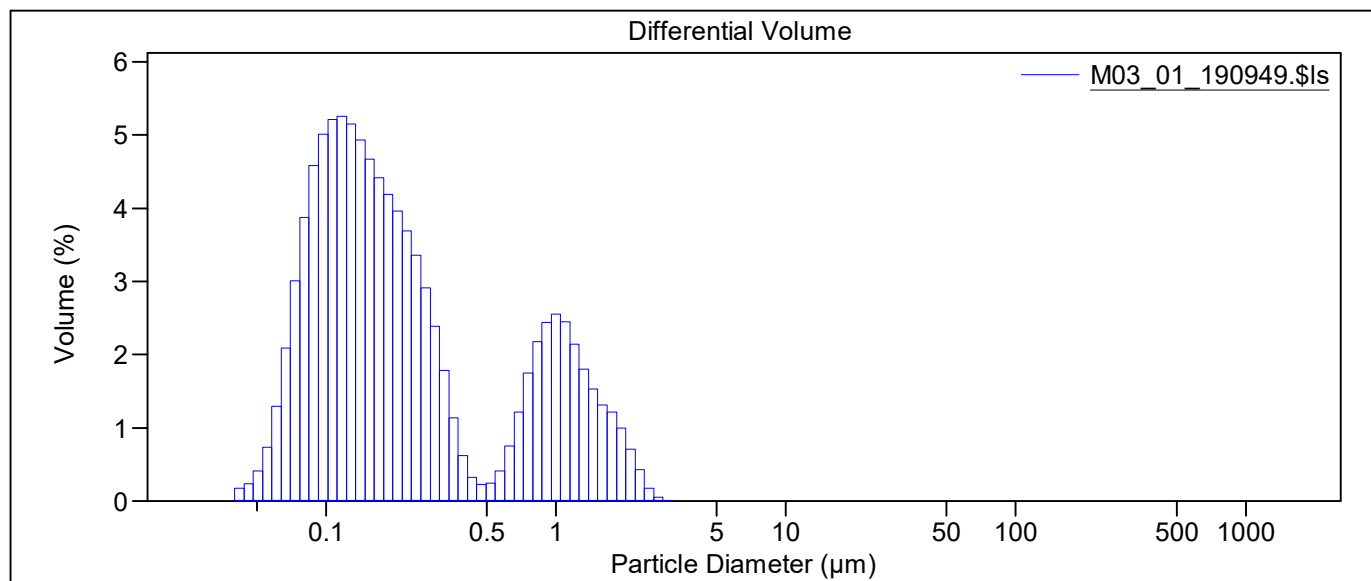
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_01_190949.\$ls		
	M03_01_190949.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.83%		
LS 13 320	Universal Liquid Module		
Start time:	19:08 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_01_190949.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.492 µm
Mean:	0.406 µm		Variance:	0.242 µm ²
Median:	0.174 µm		C.V.:	121%
Mean/Median ratio:	2.331		Skewness:	1.871 Right skewed
Mode:	0.117 µm		Kurtosis:	2.907 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.108 µm	0.174 µm	0.406 µm	1.168 µm

Surface Area Statistics (Arithmetic)			M03_01_190949.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.198 µm
Mean:	0.160 µm		Variance:	0.039 µm ²
Median:	0.109 µm		C.V.:	124%
Mean/Median ratio:	1.461		Skewness:	5.387 Right skewed
Mode:	0.088 µm		Kurtosis:	35.62 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.160 µm	0.243 µm

Number Statistics (Arithmetic)			M03_01_190949.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.6%
Mean/Median ratio:	1.110		Skewness:	5.780 Right skewed
Mode:	0.073 μm		Kurtosis:	120.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.65	3.41
10	0.044	0.046	0.24	0.82	3.57
11	0.048	0.050	0.41	1.30	4.67
12	0.053	0.055	0.73	2.12	6.33
13	0.058	0.061	1.29	3.39	8.40
14	0.064	0.067	2.09	4.99	10.3
15	0.070	0.073	3.01	6.55	11.2
16	0.077	0.080	3.88	7.68	10.9
17	0.084	0.088	4.58	8.27	9.74
18	0.093	0.097	5.01	8.25	8.06
19	0.102	0.106	5.21	7.81	6.33
20	0.112	0.117	5.26	7.17	4.82
21	0.122	0.128	5.15	6.41	3.58
22	0.134	0.141	4.93	5.58	2.59
23	0.148	0.155	4.67	4.82	1.85
24	0.162	0.170	4.42	4.15	1.32
25	0.178	0.186	4.19	3.59	0.95
26	0.195	0.205	3.96	3.09	0.68
27	0.214	0.225	3.69	2.62	0.48
28	0.235	0.247	3.36	2.17	0.33
29	0.258	0.271	2.92	1.72	0.22
30	0.284	0.297	2.39	1.28	0.13
31	0.311	0.326	1.78	0.87	0.075
32	0.342	0.358	1.14	0.51	0.036
33	0.375	0.393	0.62	0.25	0.015
34	0.412	0.431	0.33	0.12	0.0060
35	0.452	0.474	0.22	0.076	0.0031
36	0.496	0.520	0.24	0.074	0.0025
37	0.545	0.571	0.41	0.11	0.0032
38	0.598	0.627	0.75	0.19	0.0045
39	0.656	0.688	1.21	0.28	0.0055
40	0.721	0.755	1.75	0.37	0.0060
41	0.791	0.829	2.18	0.42	0.0056
42	0.868	0.910	2.44	0.43	0.0048
43	0.953	0.999	2.55	0.41	0.0038
44	1.047	1.097	2.45	0.36	0.0027
45	1.149	1.204	2.14	0.28	0.0018
46	1.261	1.321	1.80	0.22	0.0011
47	1.385	1.451	1.53	0.17	0.00074
48	1.520	1.592	1.31	0.13	0.00048
49	1.668	1.748	1.21	0.11	0.00033
50	1.832	1.919	0.99	0.083	0.00021
51	2.011	2.107	0.71	0.053	0.00011
52	2.207	2.313	0.43	0.030	0.000051
53	2.423	2.539	0.17	0.011	0.000015
54	2.660	2.787	0.050	0.0028	0.000003
55	2.920	3.059	0.0084	0.00044	4.29E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M03.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

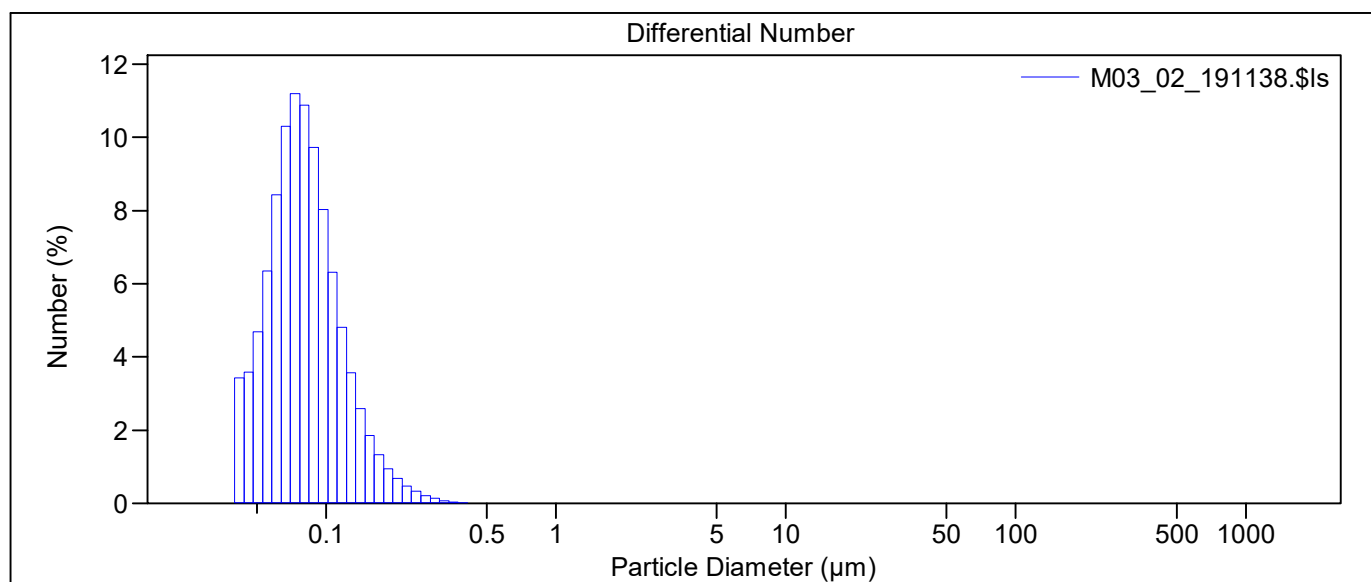
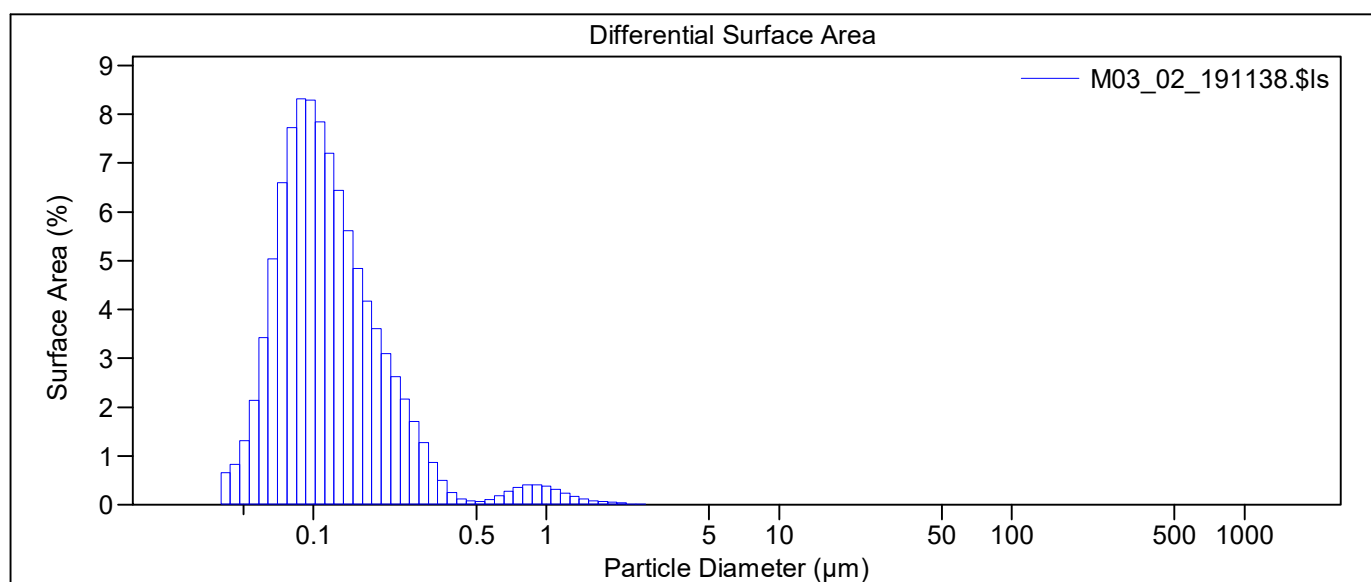
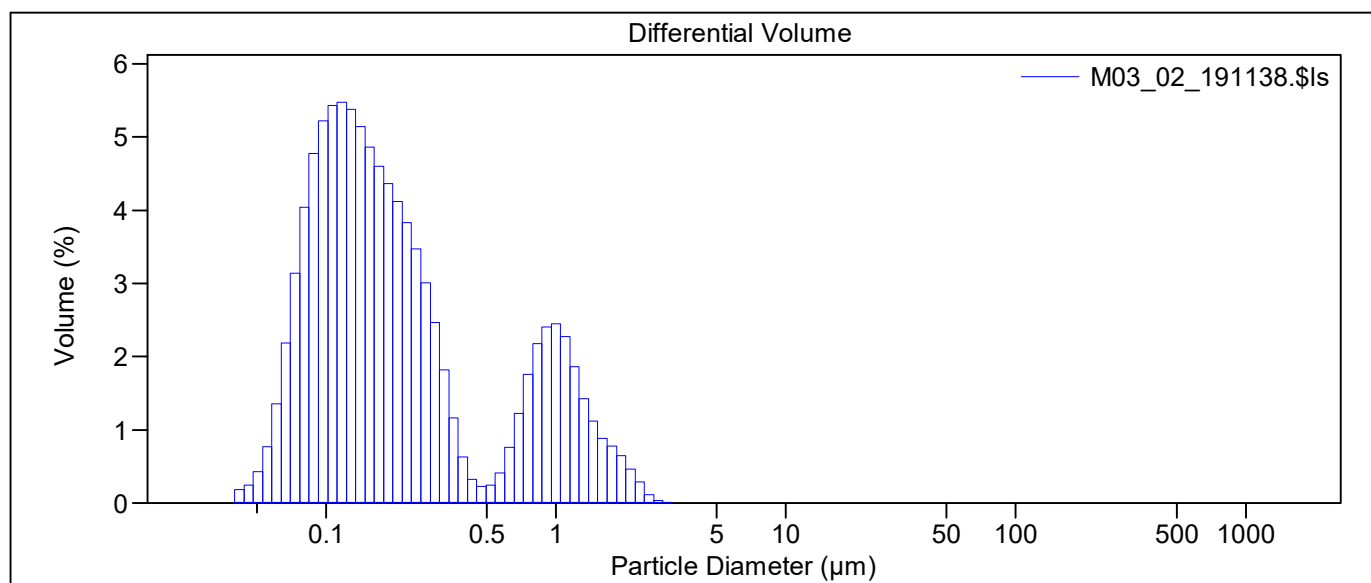
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_02_191138.\$ls		
	M03_02_191138.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.91%		
LS 13 320	Universal Liquid Module		
Start time:	19:09 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_02_191138.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.440 μm
Mean:	0.361 μm		Variance:	0.193 μm ²
Median:	0.167 μm		C.V.:	122%
Mean/Median ratio:	2.168		Skewness:	2.093 Right skewed
Mode:	0.117 μm		Kurtosis:	4.148 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.167 μm	0.319 μm	1.042 μm

Surface Area Statistics (Arithmetic)			M03_02_191138.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.179 µm
Mean:	0.154 µm		Variance:	0.032 µm ²
Median:	0.109 µm		C.V.:	116%
Mean/Median ratio:	1.413		Skewness:	5.516 Right skewed
Mode:	0.088 µm		Kurtosis:	38.65 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.238 µm

Number Statistics (Arithmetic)			M03_02_191138.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.0%
Mean/Median ratio:	1.109		Skewness:	5.252 Right skewed
Mode:	0.073 μm		Kurtosis:	99.95 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.43
10	0.044	0.046	0.25	0.83	3.58
11	0.048	0.050	0.43	1.31	4.69
12	0.053	0.055	0.77	2.14	6.35
13	0.058	0.061	1.35	3.42	8.43
14	0.064	0.067	2.19	5.03	10.3
15	0.070	0.073	3.14	6.59	11.2
16	0.077	0.080	4.04	7.73	10.9
17	0.084	0.088	4.78	8.32	9.72
18	0.093	0.097	5.23	8.29	8.04
19	0.102	0.106	5.43	7.84	6.31
20	0.112	0.117	5.48	7.21	4.81
21	0.122	0.128	5.37	6.44	3.57
22	0.134	0.141	5.14	5.61	2.58
23	0.148	0.155	4.86	4.84	1.85
24	0.162	0.170	4.60	4.17	1.32
25	0.178	0.186	4.36	3.60	0.95
26	0.195	0.205	4.12	3.10	0.68
27	0.214	0.225	3.83	2.62	0.47
28	0.235	0.247	3.47	2.17	0.33
29	0.258	0.271	3.01	1.71	0.21
30	0.284	0.297	2.46	1.28	0.13
31	0.311	0.326	1.82	0.86	0.074
32	0.342	0.358	1.16	0.50	0.036
33	0.375	0.393	0.63	0.25	0.015
34	0.412	0.431	0.32	0.11	0.0056
35	0.452	0.474	0.22	0.073	0.0030
36	0.496	0.520	0.24	0.071	0.0024
37	0.545	0.571	0.41	0.11	0.0031
38	0.598	0.627	0.76	0.19	0.0044
39	0.656	0.688	1.22	0.27	0.0053
40	0.721	0.755	1.75	0.36	0.0057
41	0.791	0.829	2.18	0.40	0.0054
42	0.868	0.910	2.41	0.41	0.0045
43	0.953	0.999	2.45	0.38	0.0035
44	1.047	1.097	2.27	0.32	0.0024
45	1.149	1.204	1.86	0.24	0.0015

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.43	0.17	0.00087
47	1.385	1.451	1.12	0.12	0.00051
48	1.520	1.592	0.88	0.085	0.00031
49	1.668	1.748	0.78	0.069	0.00021
50	1.832	1.919	0.64	0.052	0.00013
51	2.011	2.107	0.46	0.034	0.000069
52	2.207	2.313	0.29	0.019	0.000033
53	2.423	2.539	0.12	0.0071	0.000010
54	2.660	2.787	0.034	0.0019	0.000002
55	2.920	3.059	0.0059	0.00030	2.9E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

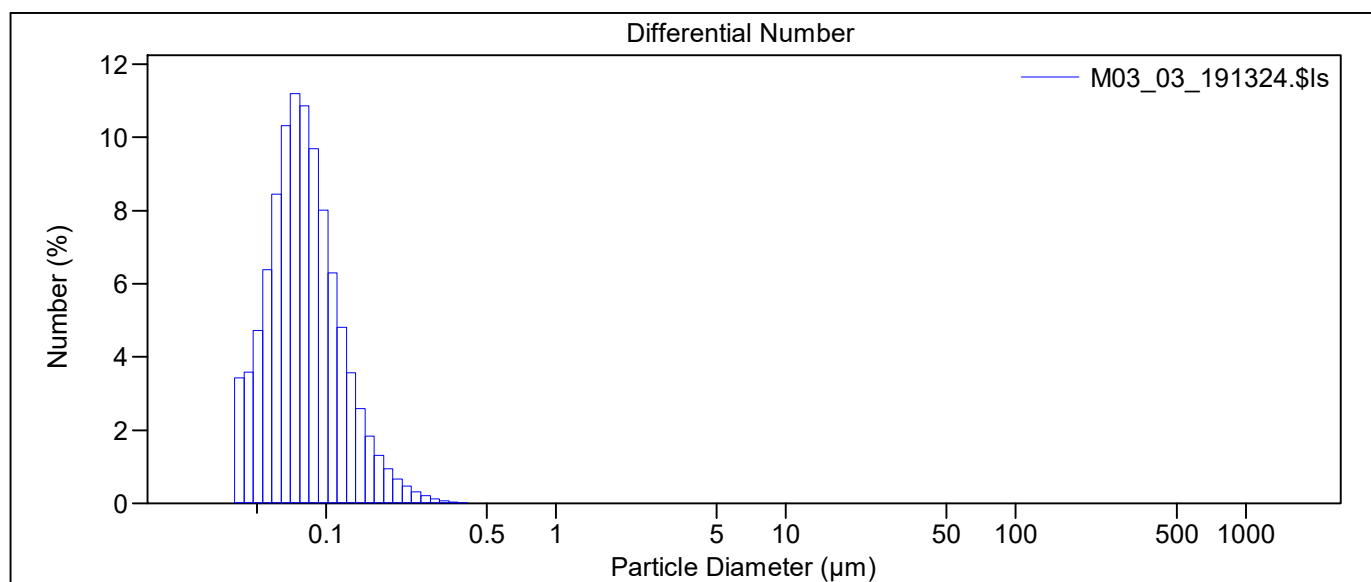
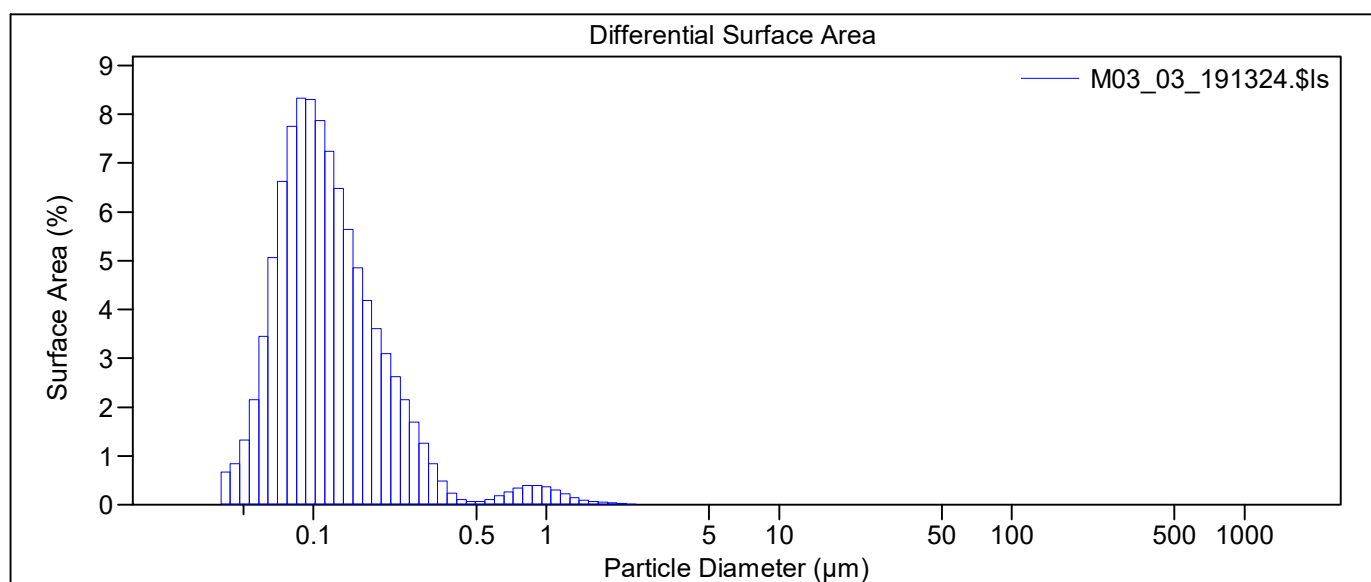
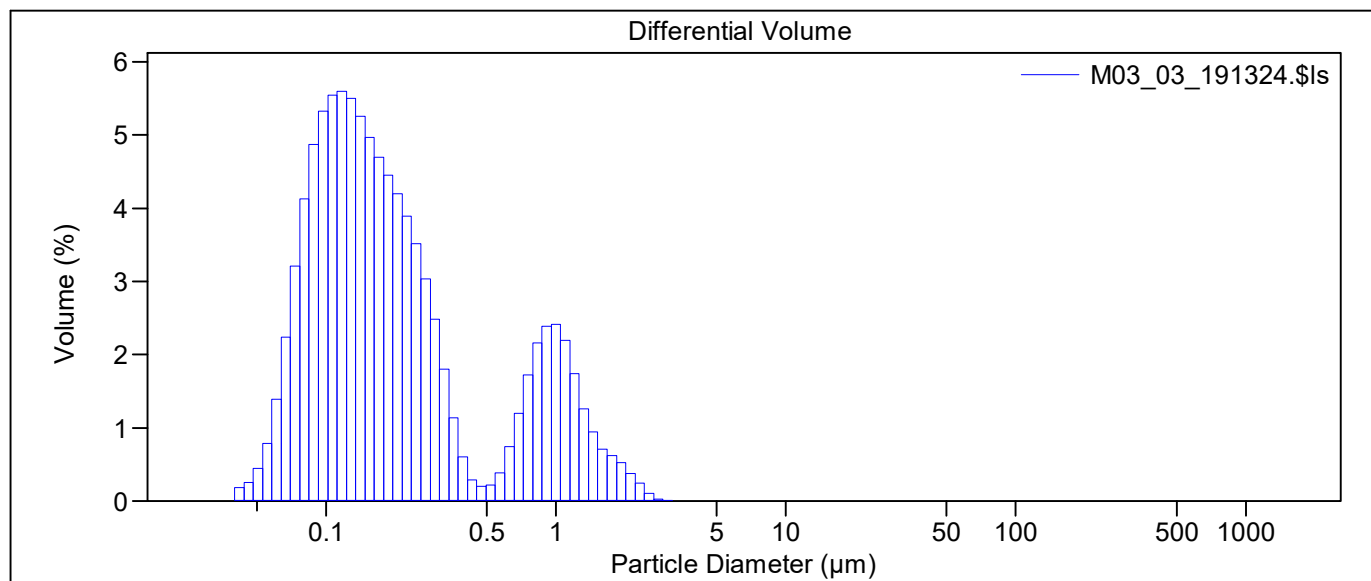
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_03_191324.\$ls		
	M03_03_191324.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.99%		
LS 13 320	Universal Liquid Module		
Start time:	19:11 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_03_191324.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.418 μm
Mean:	0.343 μm		Variance:	0.175 μm ²
Median:	0.163 μm		C.V.:	122%
Mean/Median ratio:	2.105		Skewness:	2.194 Right skewed
Mode:	0.117 μm		Kurtosis:	4.767 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.163 μm	0.300 μm	0.999 μm

Surface Area Statistics (Arithmetic)			M03_03_191324.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.170 µm
Mean:	0.151 µm		Variance:	0.029 µm ²
Median:	0.109 µm		C.V.:	113%
Mean/Median ratio:	1.392		Skewness:	5.582 Right skewed
Mode:	0.088 µm		Kurtosis:	40.15 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.235 µm

Number Statistics (Arithmetic)			M03_03_191324.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.7%
Mean/Median ratio:	1.109		Skewness:	5.032 Right skewed
Mode:	0.073 μm		Kurtosis:	92.35 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.44
10	0.044	0.046	0.25	0.84	3.59
11	0.048	0.050	0.44	1.32	4.72
12	0.053	0.055	0.79	2.16	6.38
13	0.058	0.061	1.39	3.44	8.45
14	0.064	0.067	2.24	5.06	10.3
15	0.070	0.073	3.21	6.62	11.2
16	0.077	0.080	4.13	7.75	10.9
17	0.084	0.088	4.87	8.33	9.70
18	0.093	0.097	5.33	8.30	8.02
19	0.102	0.106	5.54	7.87	6.30
20	0.112	0.117	5.60	7.24	4.81
21	0.122	0.128	5.50	6.47	3.57
22	0.134	0.141	5.25	5.64	2.58
23	0.148	0.155	4.97	4.85	1.84
24	0.162	0.170	4.70	4.18	1.32
25	0.178	0.186	4.45	3.61	0.94
26	0.195	0.205	4.20	3.10	0.67
27	0.214	0.225	3.89	2.62	0.47
28	0.235	0.247	3.52	2.16	0.32
29	0.258	0.271	3.04	1.70	0.21
30	0.284	0.297	2.48	1.26	0.13
31	0.311	0.326	1.80	0.84	0.071
32	0.342	0.358	1.13	0.48	0.034
33	0.375	0.393	0.60	0.23	0.014
34	0.412	0.431	0.29	0.10	0.0050
35	0.452	0.474	0.20	0.065	0.0026
36	0.496	0.520	0.22	0.064	0.0022
37	0.545	0.571	0.38	0.10	0.0028
38	0.598	0.627	0.75	0.18	0.0042
39	0.656	0.688	1.20	0.26	0.0051
40	0.721	0.755	1.72	0.34	0.0055
41	0.791	0.829	2.16	0.39	0.0052
42	0.868	0.910	2.39	0.40	0.0043
43	0.953	0.999	2.41	0.36	0.0033
44	1.047	1.097	2.20	0.30	0.0023
45	1.149	1.204	1.74	0.22	0.0014
46	1.261	1.321	1.26	0.14	0.00075
47	1.385	1.451	0.94	0.098	0.00042
48	1.520	1.592	0.71	0.067	0.00024
49	1.668	1.748	0.62	0.054	0.00016
50	1.832	1.919	0.52	0.041	0.00010
51	2.011	2.107	0.38	0.027	0.000056
52	2.207	2.313	0.25	0.016	0.000027
53	2.423	2.539	0.10	0.0060	0.000009
54	2.660	2.787	0.029	0.0016	0.000002
55	2.920	3.059	0.0051	0.00025	2.47E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M03.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

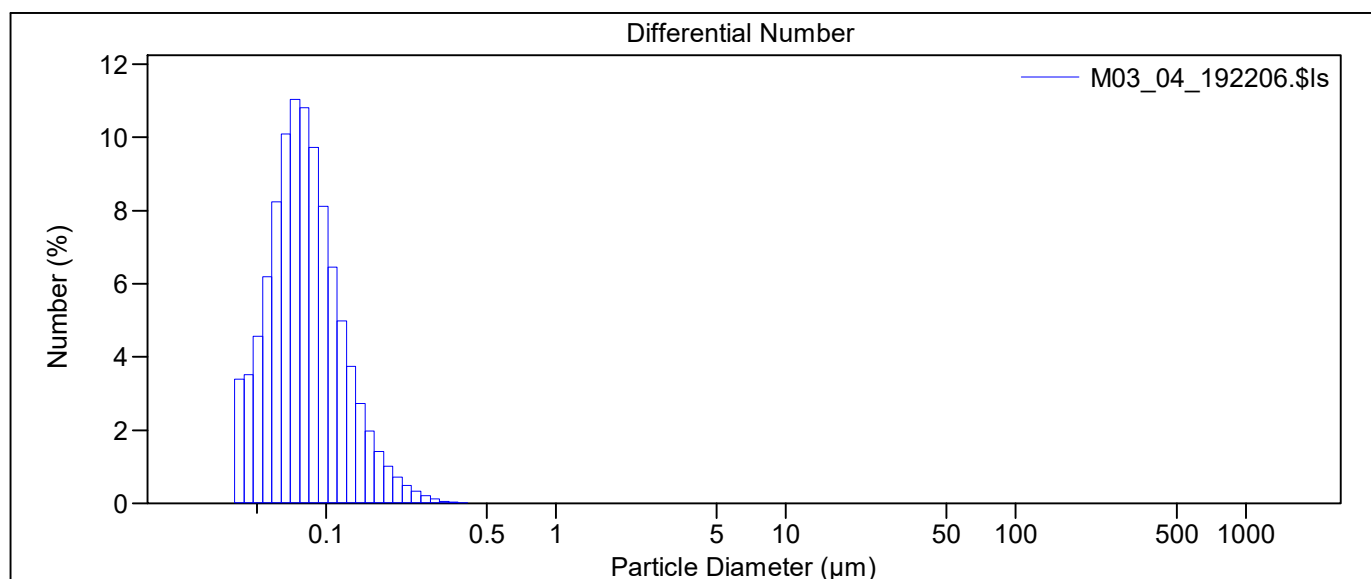
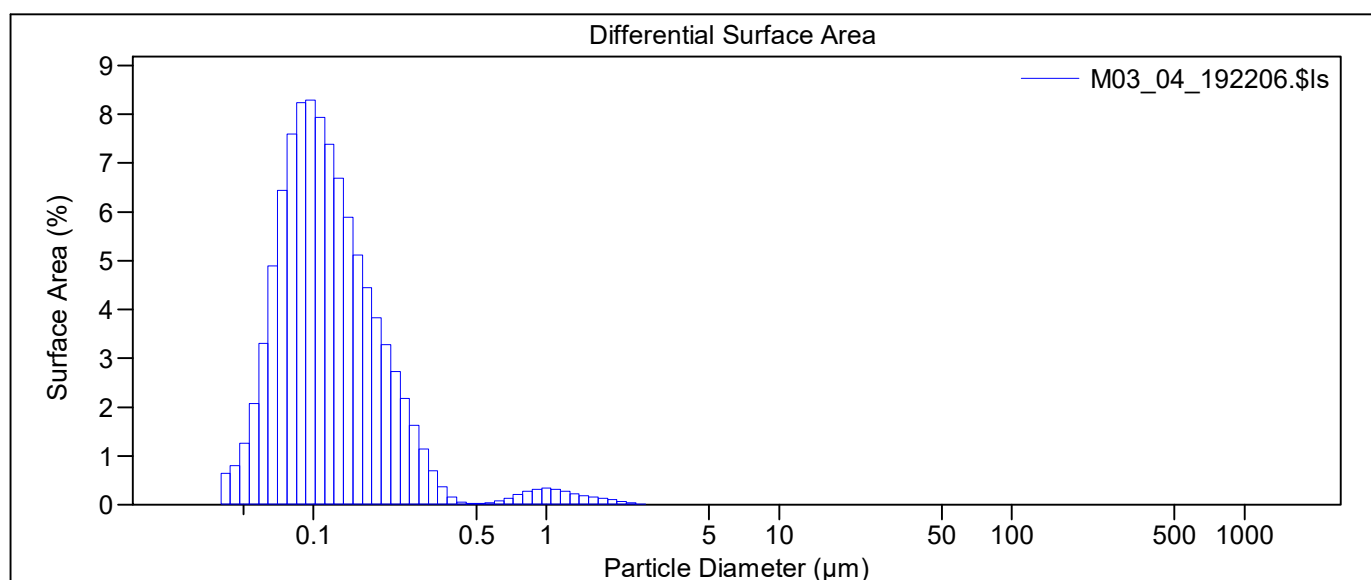
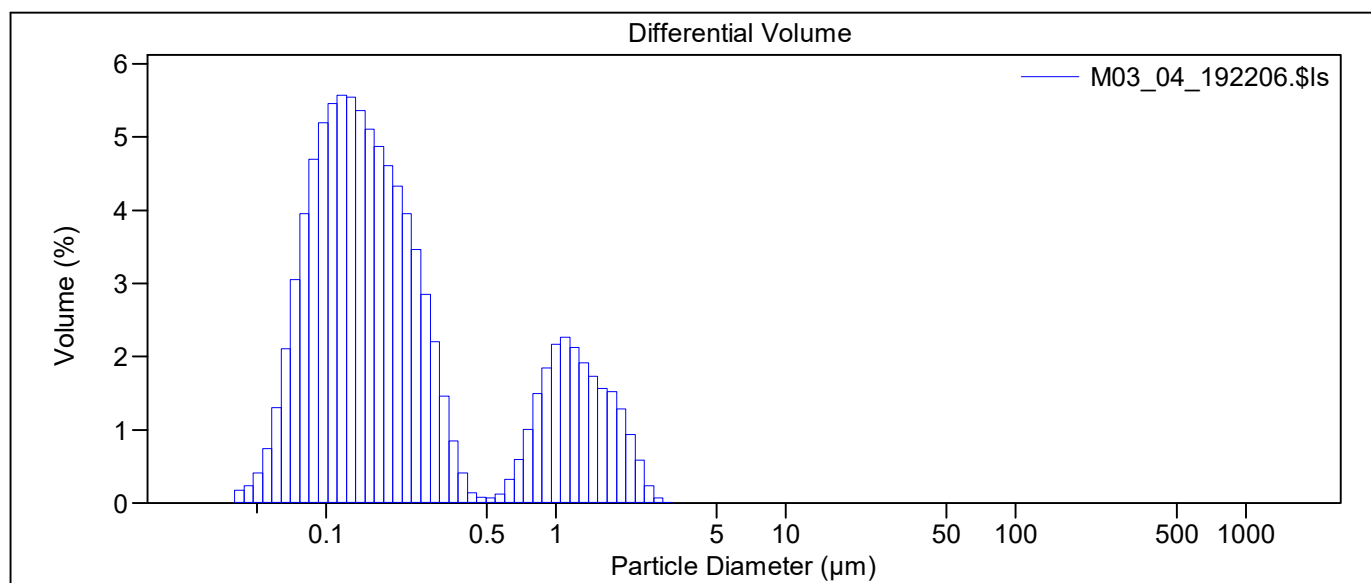
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_04_192206.\$ls		
	M03_04_192206.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.16%		
LS 13 320	Universal Liquid Module		
Start time:	19:20 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	-3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_04_192206.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.522 μm
Mean:	0.404 μm		Variance:	0.272 μm ²
Median:	0.166 μm		C.V.:	129%
Mean/Median ratio:	2.442		Skewness:	1.935 Right skewed
Mode:	0.117 μm		Kurtosis:	2.895 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.107 μm	0.166 μm	0.309 μm	1.253 μm

Surface Area Statistics (Arithmetic)			M03_04_192206.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.197 µm
Mean:	0.155 µm		Variance:	0.039 µm ²
Median:	0.110 µm		C.V.:	127%
Mean/Median ratio:	1.411		Skewness:	6.034 Right skewed
Mode:	0.097 µm		Kurtosis:	43.52 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.158 µm	0.229 µm

Number Statistics (Arithmetic)			M03_04_192206.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.4%
Mean/Median ratio:	1.108		Skewness:	5.532 Right skewed
Mode:	0.073 μm		Kurtosis:	128.1 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.65	3.39
10	0.044	0.046	0.24	0.81	3.51
11	0.048	0.050	0.41	1.26	4.57
12	0.053	0.055	0.74	2.07	6.20
13	0.058	0.061	1.30	3.31	8.24
14	0.064	0.067	2.11	4.89	10.1
15	0.070	0.073	3.05	6.44	11.0
16	0.077	0.080	3.95	7.60	10.8
17	0.084	0.088	4.70	8.24	9.72
18	0.093	0.097	5.19	8.29	8.12
19	0.102	0.106	5.46	7.93	6.45
20	0.112	0.117	5.57	7.38	4.98
21	0.122	0.128	5.54	6.69	3.74
22	0.134	0.141	5.36	5.89	2.73
23	0.148	0.155	5.11	5.11	1.97
24	0.162	0.170	4.87	4.44	1.42
25	0.178	0.186	4.61	3.83	1.02
26	0.195	0.205	4.33	3.28	0.72
27	0.214	0.225	3.95	2.73	0.50
28	0.235	0.247	3.46	2.17	0.33
29	0.258	0.271	2.85	1.63	0.21
30	0.284	0.297	2.20	1.15	0.12
31	0.311	0.326	1.46	0.69	0.060
32	0.342	0.358	0.85	0.37	0.026
33	0.375	0.393	0.41	0.16	0.0096
34	0.412	0.431	0.14	0.051	0.0025
35	0.452	0.474	0.080	0.026	0.0011
36	0.496	0.520	0.069	0.021	0.00070
37	0.545	0.571	0.12	0.034	0.00095
38	0.598	0.627	0.33	0.081	0.0019
39	0.656	0.688	0.60	0.13	0.0026
40	0.721	0.755	1.01	0.21	0.0033
41	0.791	0.829	1.50	0.28	0.0037
42	0.868	0.910	1.85	0.31	0.0035
43	0.953	0.999	2.17	0.34	0.0031
44	1.047	1.097	2.27	0.32	0.0025
45	1.149	1.204	2.12	0.27	0.0017

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.91	0.22	0.0012
47	1.385	1.451	1.73	0.19	0.00081
48	1.520	1.592	1.57	0.15	0.00055
49	1.668	1.748	1.52	0.13	0.00041
50	1.832	1.919	1.29	0.10	0.00026
51	2.011	2.107	0.93	0.069	0.00014
52	2.207	2.313	0.58	0.039	0.000067
53	2.423	2.539	0.23	0.014	0.000020
54	2.660	2.787	0.067	0.0037	0.000004
55	2.920	3.059	0.011	0.00057	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

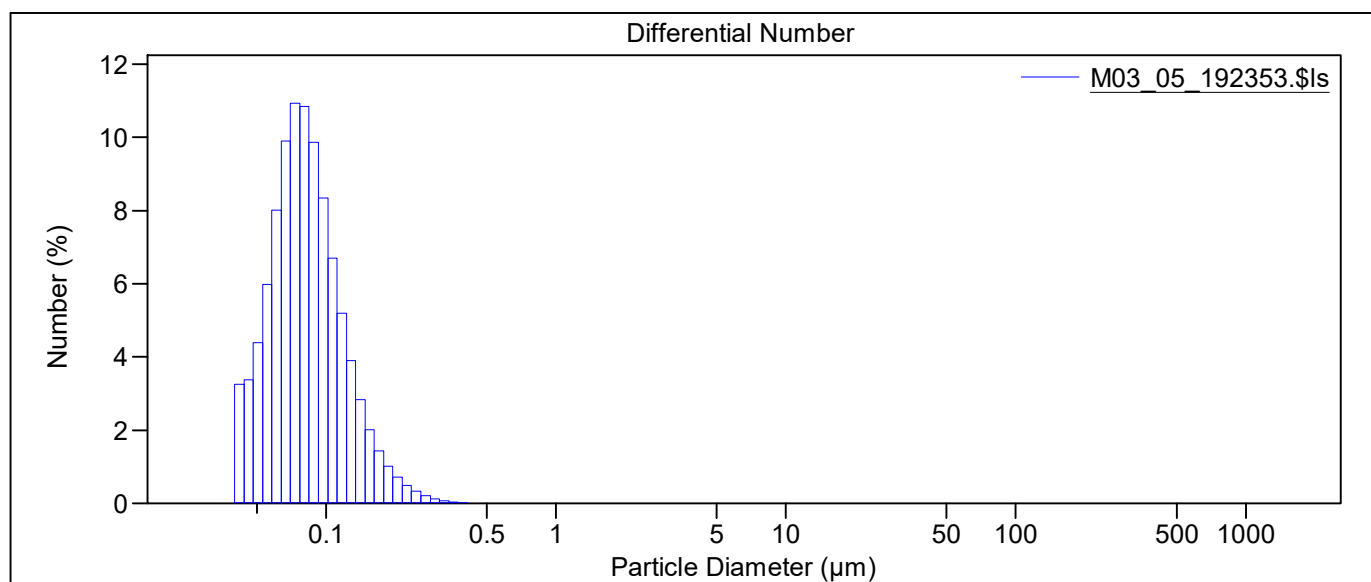
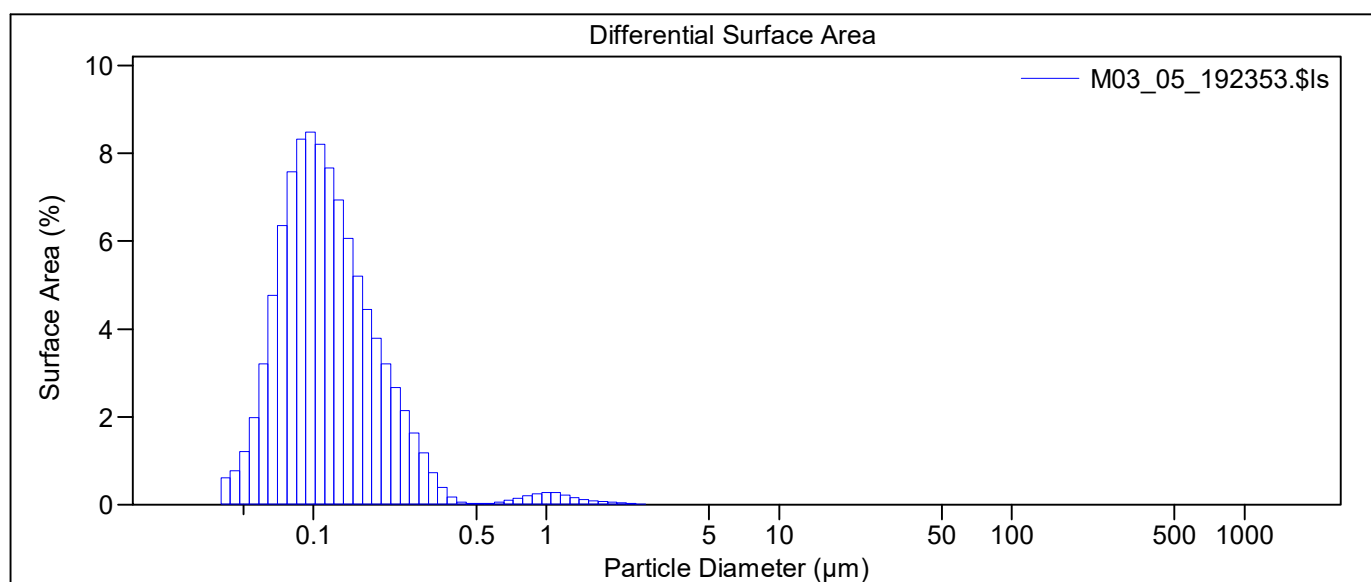
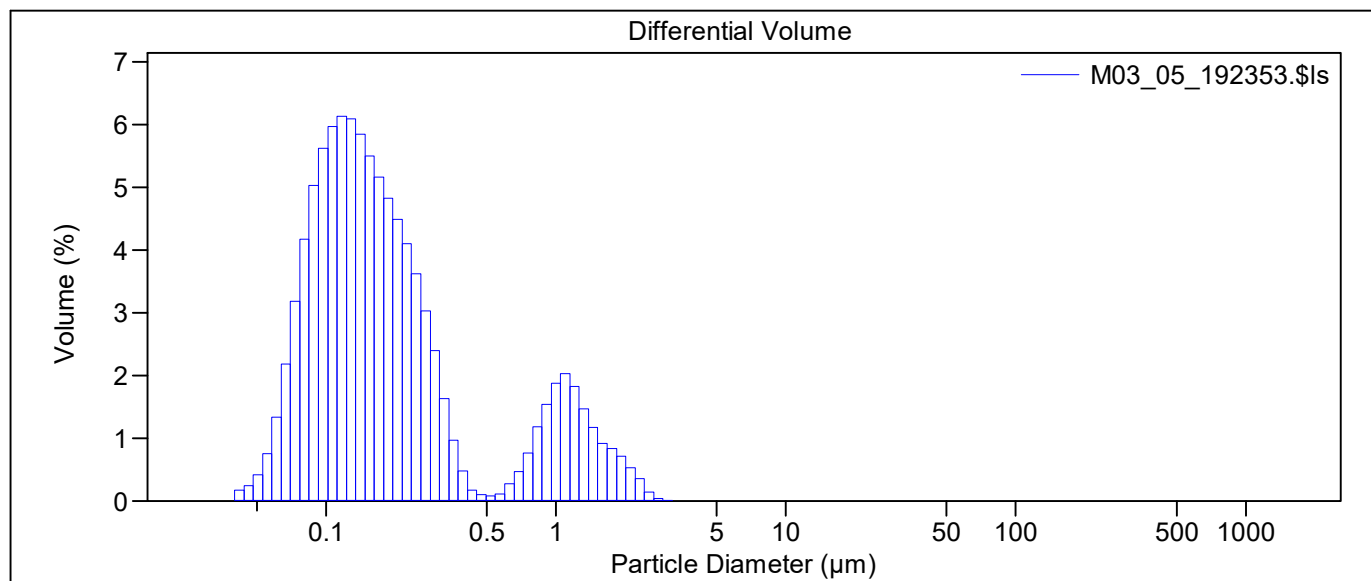
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_05_192353.\$ls		
	M03_05_192353.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.54%		
LS 13 320	Universal Liquid Module		
Start time:	19:22 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_05_192353.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.441 µm
Mean:	0.332 µm		Variance:	0.195 µm ²
Median:	0.155 µm		C.V.:	133%
Mean/Median ratio:	2.139		Skewness:	2.416 Right skewed
Mode:	0.117 µm		Kurtosis:	5.490 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.155 µm	0.260 µm	1.049 µm

Surface Area Statistics (Arithmetic)			M03_05_192353.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.165 µm
Mean:	0.146 µm		Variance:	0.027 µm ²
Median:	0.110 µm		C.V.:	113%
Mean/Median ratio:	1.332		Skewness:	6.614 Right skewed
Mode:	0.097 µm		Kurtosis:	55.21 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.155 µm	0.224 µm

Number Statistics (Arithmetic)			M03_05_192353.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.3%
Mean/Median ratio:	1.104		Skewness:	4.606 Right skewed
Mode:	0.073 μm		Kurtosis:	93.76 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.132 μm



Beckman Coulter LS13320

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.62	3.26
10	0.044	0.046	0.24	0.77	3.37
11	0.048	0.050	0.42	1.21	4.39
12	0.053	0.055	0.75	1.99	5.99
13	0.058	0.061	1.33	3.20	8.02
14	0.064	0.067	2.18	4.77	9.91
15	0.070	0.073	3.18	6.35	10.9
16	0.077	0.080	4.17	7.58	10.8
17	0.084	0.088	5.03	8.32	9.87
18	0.093	0.097	5.62	8.48	8.35
19	0.102	0.106	5.97	8.20	6.70
20	0.112	0.117	6.13	7.67	5.20
21	0.122	0.128	6.09	6.94	3.90
22	0.134	0.141	5.85	6.07	2.83
23	0.148	0.155	5.50	5.20	2.01
24	0.162	0.170	5.16	4.45	1.43
25	0.178	0.186	4.82	3.79	1.01
26	0.195	0.205	4.49	3.21	0.71
27	0.214	0.225	4.11	2.67	0.49
28	0.235	0.247	3.62	2.15	0.33
29	0.258	0.271	3.03	1.64	0.21
30	0.284	0.297	2.40	1.18	0.12
31	0.311	0.326	1.63	0.73	0.064
32	0.342	0.358	0.97	0.40	0.029
33	0.375	0.393	0.48	0.18	0.011
34	0.412	0.431	0.17	0.059	0.0029
35	0.452	0.474	0.10	0.031	0.0013
36	0.496	0.520	0.082	0.023	0.00079
37	0.545	0.571	0.12	0.030	0.00085
38	0.598	0.627	0.28	0.065	0.0015
39	0.656	0.688	0.47	0.10	0.0020
40	0.721	0.755	0.77	0.15	0.0024
41	0.791	0.829	1.19	0.21	0.0028
42	0.868	0.910	1.54	0.25	0.0028
43	0.953	0.999	1.88	0.28	0.0026
44	1.047	1.097	2.03	0.27	0.0021
45	1.149	1.204	1.83	0.22	0.0014
46	1.261	1.321	1.47	0.16	0.00086
47	1.385	1.451	1.17	0.12	0.00052
48	1.520	1.592	0.92	0.085	0.00031
49	1.668	1.748	0.84	0.070	0.00021
50	1.832	1.919	0.71	0.054	0.00014
51	2.011	2.107	0.53	0.037	0.000077
52	2.207	2.313	0.35	0.022	0.000039
53	2.423	2.539	0.15	0.0085	0.000012
54	2.660	2.787	0.043	0.0023	0.000003
55	2.920	3.059	0.0075	0.00036	3.56E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M03.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

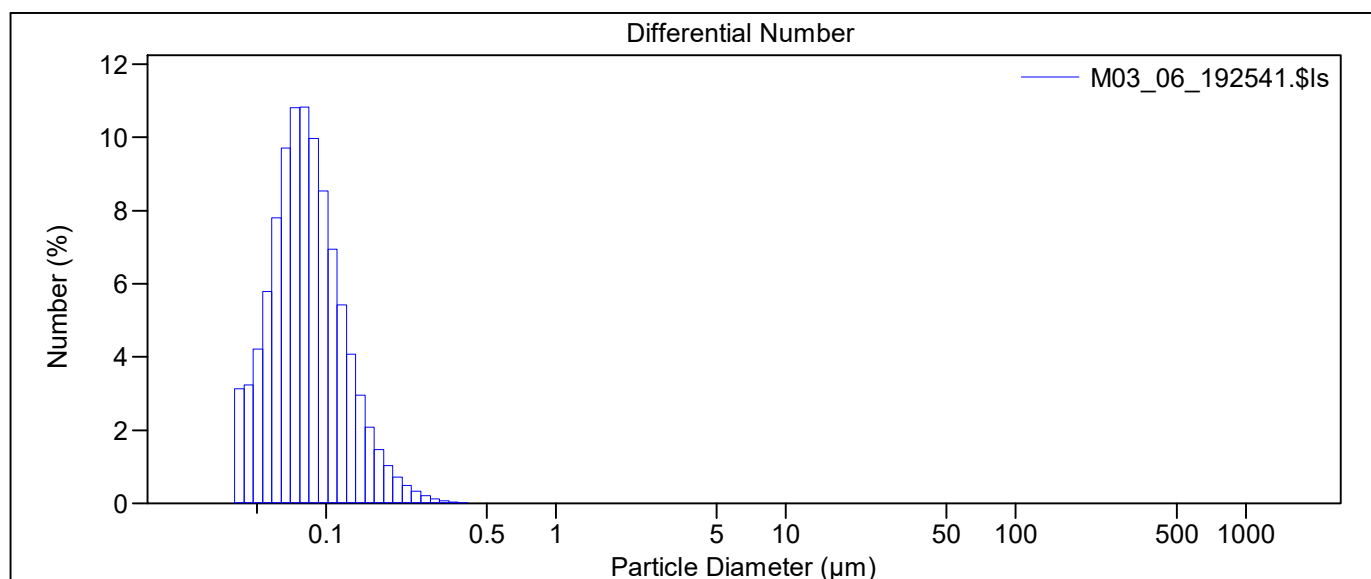
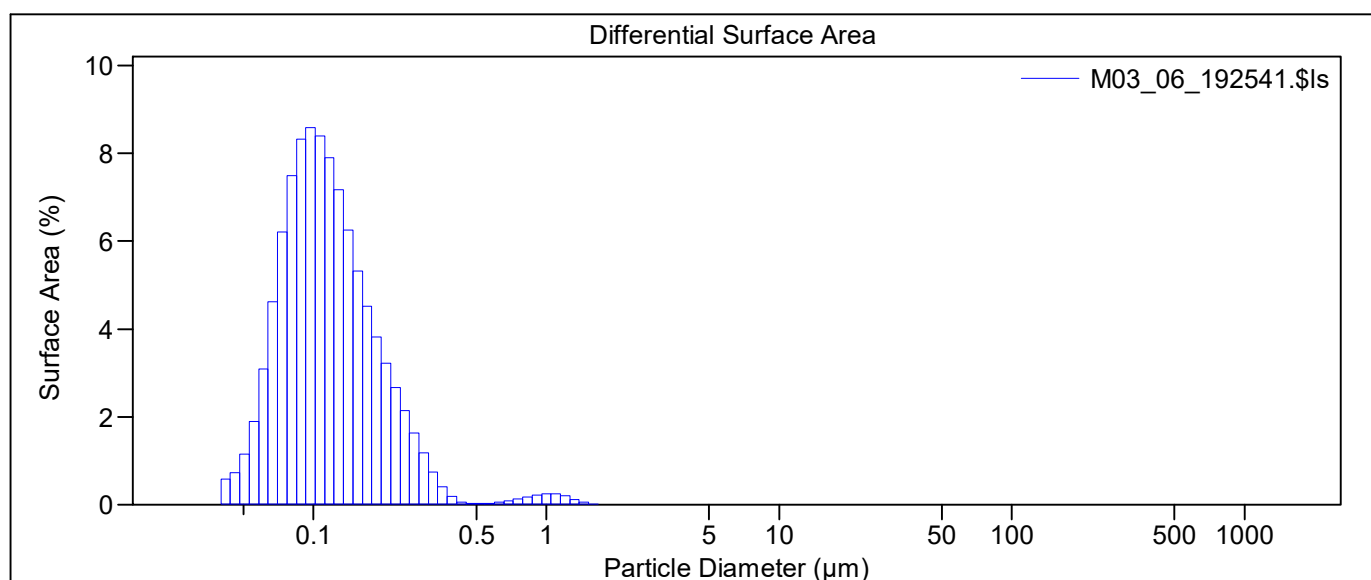
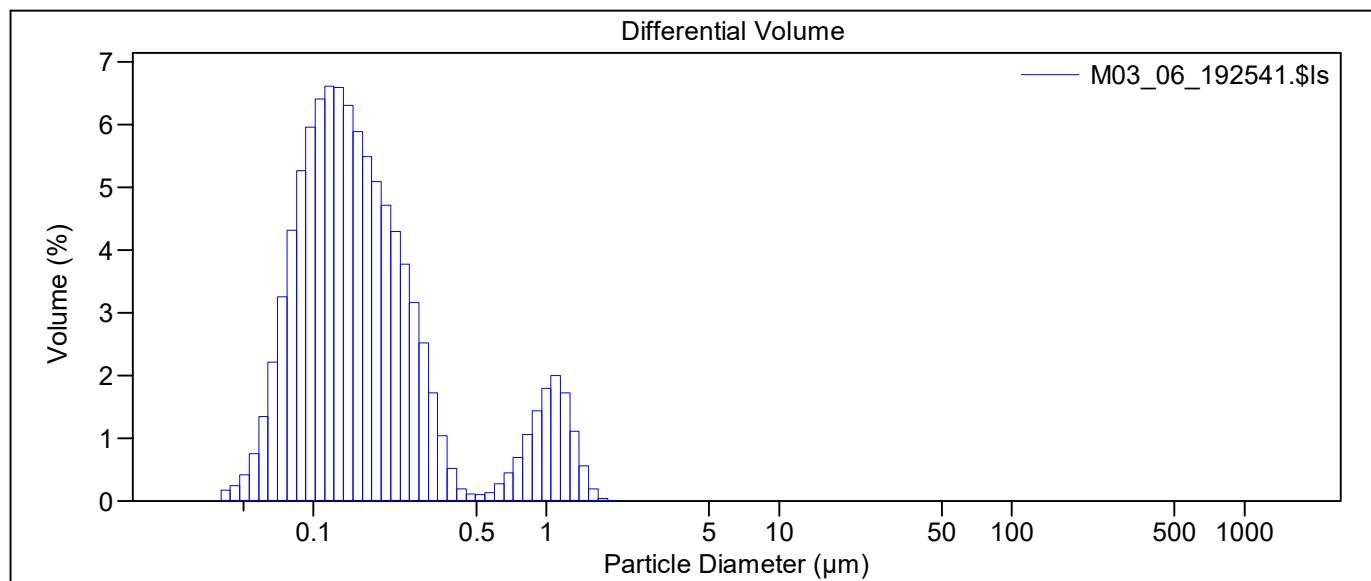
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_06_192541.\$ls		
	M03_06_192541.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.74%		
LS 13 320	Universal Liquid Module		
Start time:	19:24 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-1%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_06_192541.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.302 µm
Mean:	0.257 µm		Variance:	0.091 µm ²
Median:	0.148 µm		C.V.:	117%
Mean/Median ratio:	1.740		Skewness:	2.470 Right skewed
Mode:	0.117 µm		Kurtosis:	5.157 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.103 µm	0.148 µm	0.234 µm	0.785 µm

Surface Area Statistics (Arithmetic)		M03_06_192541.\$ls		
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%			
Mean:	0.140 µm	S.D.:	0.128 µm	
Median:	0.110 µm	Variance:	0.016 µm ²	
Mean/Median ratio:	1.267	C.V.:	91.8%	
Mode:	0.097 µm	Skewness:	5.885 Right skewed	
		Kurtosis:	43.39 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.084 µm	0.110 µm	0.155 µm	0.220 µm

Number Statistics (Arithmetic)		M03_06_192541.\$ls		
Calculations from 0.017 μm to 2000 μm				
Number:	100%	S.D.:	0.039 μm	
Mean:	0.089 μm	Variance:	0.0015 μm ²	
Median:	0.081 μm	C.V.:	43.5%	
Mean/Median ratio:	1.102	Skewness:	3.714 Right skewed	
Mode:	0.080 μm	Kurtosis:	55.12 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.081 μm	0.103 μm	0.133 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.59	3.12
10	0.044	0.046	0.24	0.73	3.23
11	0.048	0.050	0.42	1.15	4.22
12	0.053	0.055	0.75	1.90	5.79
13	0.058	0.061	1.34	3.09	7.80
14	0.064	0.067	2.21	4.63	9.71
15	0.070	0.073	3.26	6.21	10.8
16	0.077	0.080	4.32	7.49	10.8
17	0.084	0.088	5.26	8.32	9.97
18	0.093	0.097	5.96	8.58	8.54
19	0.102	0.106	6.40	8.40	6.94
20	0.112	0.117	6.62	7.91	5.42
21	0.122	0.128	6.59	7.17	4.08
22	0.134	0.141	6.31	6.26	2.95
23	0.148	0.155	5.89	5.32	2.08
24	0.162	0.170	5.49	4.52	1.47
25	0.178	0.186	5.09	3.82	1.03
26	0.195	0.205	4.72	3.22	0.72
27	0.214	0.225	4.30	2.67	0.50
28	0.235	0.247	3.78	2.14	0.33
29	0.258	0.271	3.17	1.63	0.21
30	0.284	0.297	2.52	1.19	0.13
31	0.311	0.326	1.72	0.74	0.065
32	0.342	0.358	1.04	0.41	0.030
33	0.375	0.393	0.52	0.19	0.011
34	0.412	0.431	0.19	0.062	0.0031
35	0.452	0.474	0.12	0.034	0.0014
36	0.496	0.520	0.10	0.028	0.00095
37	0.545	0.571	0.14	0.033	0.00095
38	0.598	0.627	0.28	0.063	0.0015
39	0.656	0.688	0.45	0.092	0.0018
40	0.721	0.755	0.69	0.13	0.0021
41	0.791	0.829	1.06	0.18	0.0024
42	0.868	0.910	1.44	0.22	0.0025
43	0.953	0.999	1.80	0.25	0.0024
44	1.047	1.097	2.00	0.25	0.0020
45	1.149	1.204	1.73	0.20	0.0013

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.11	0.12	0.00063
47	1.385	1.451	0.56	0.054	0.00024
48	1.520	1.592	0.19	0.017	0.000062
49	1.668	1.748	0.041	0.0033	0.000010
50	1.832	1.919	0.0057	0.00041	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

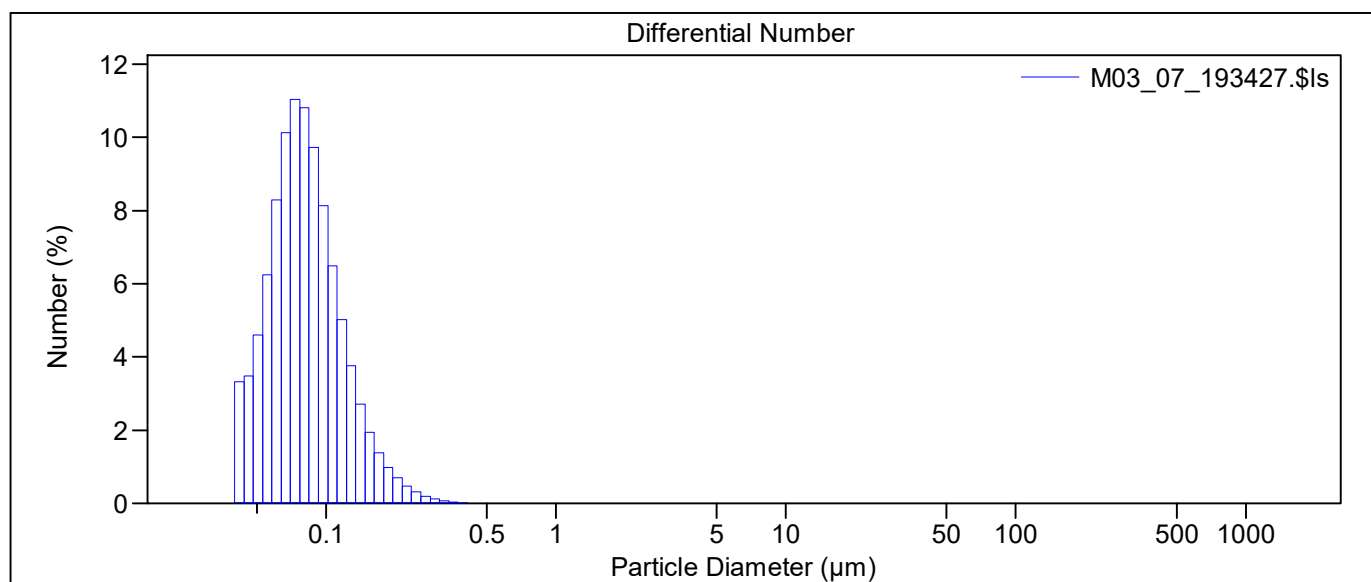
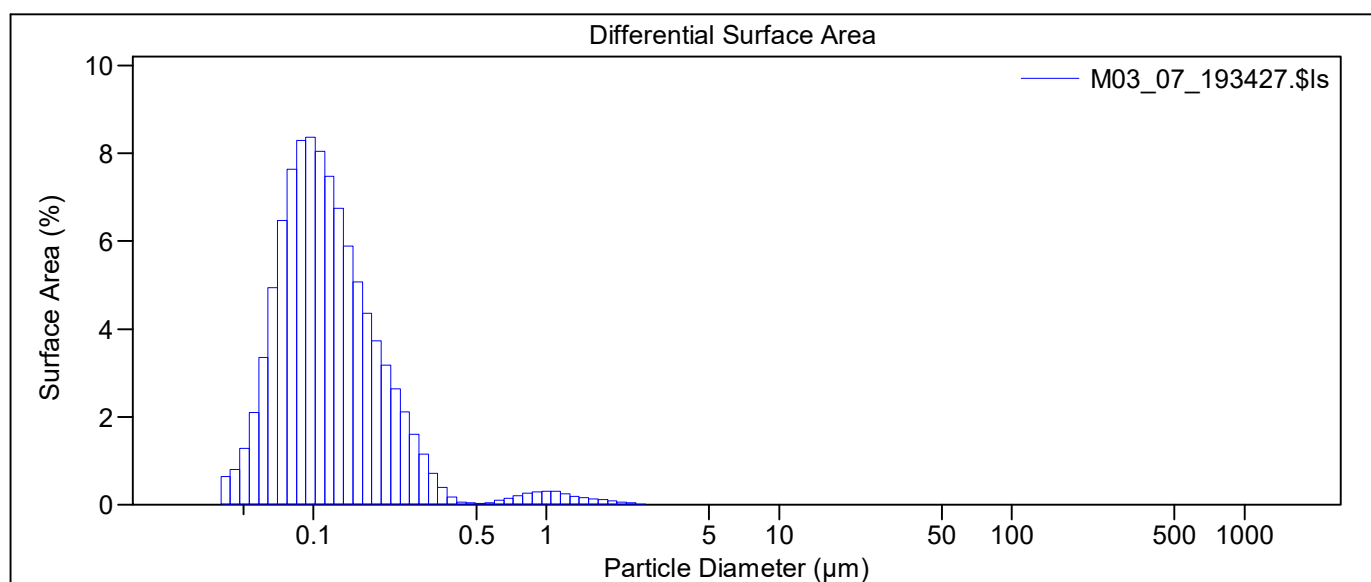
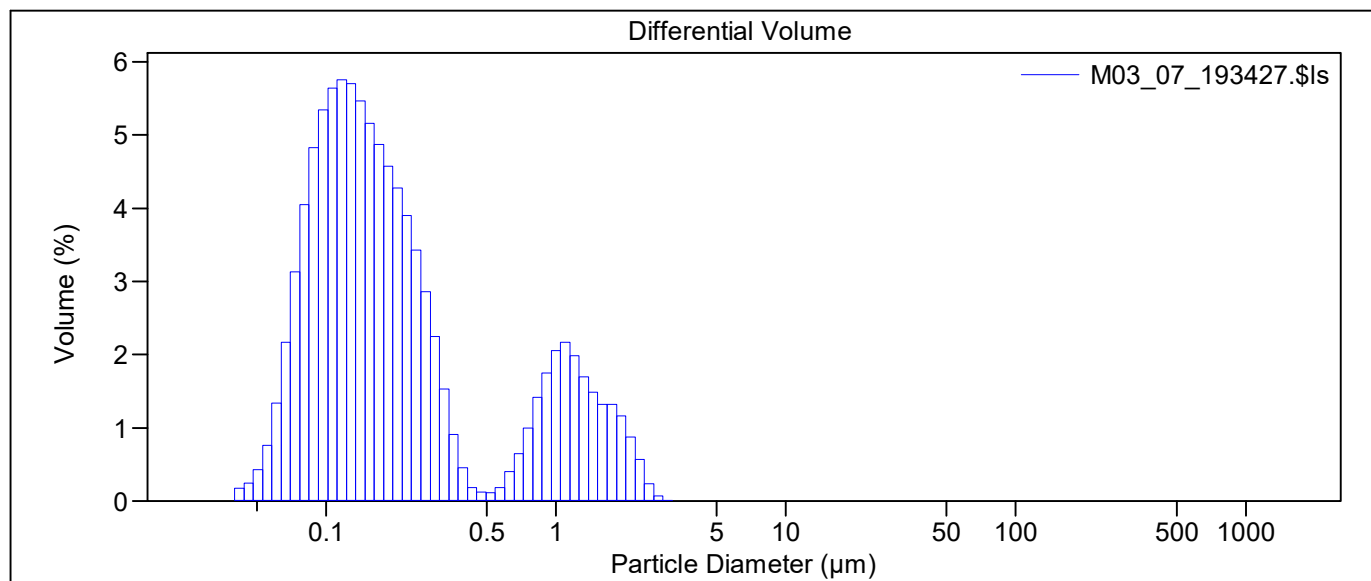
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_07_193427.\$ls		
	M03_07_193427.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.33%		
LS 13 320	Universal Liquid Module		
Start time:	19:32 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_07_193427.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.504 µm
Mean:	0.384 µm		Variance:	0.254 µm ²
Median:	0.161 µm		C.V.:	131%
Mean/Median ratio:	2.381		Skewness:	2.080 Right skewed
Mode:	0.117 µm		Kurtosis:	3.616 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.161 µm	0.295 µm	1.190 µm

Surface Area Statistics (Arithmetic)			M03_07_193427.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.188 µm
Mean:	0.152 µm		Variance:	0.035 µm ²
Median:	0.109 µm		C.V.:	124%
Mean/Median ratio:	1.391		Skewness:	6.246 Right skewed
Mode:	0.097 µm		Kurtosis:	47.54 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.227 µm

Number Statistics (Arithmetic)			M03_07_193427.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	45.0%
Mean/Median ratio:	1.107		Skewness:	5.320 Right skewed
Mode:	0.073 μm		Kurtosis:	120.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.33
10	0.044	0.046	0.24	0.81	3.49
11	0.048	0.050	0.43	1.28	4.60
12	0.053	0.055	0.76	2.09	6.24
13	0.058	0.061	1.34	3.35	8.28
14	0.064	0.067	2.17	4.94	10.1
15	0.070	0.073	3.13	6.48	11.0
16	0.077	0.080	4.05	7.65	10.8
17	0.084	0.088	4.83	8.30	9.73
18	0.093	0.097	5.35	8.37	8.14
19	0.102	0.106	5.64	8.04	6.49
20	0.112	0.117	5.76	7.48	5.01
21	0.122	0.128	5.70	6.75	3.75
22	0.134	0.141	5.47	5.90	2.72
23	0.148	0.155	5.16	5.07	1.94
24	0.162	0.170	4.87	4.36	1.38
25	0.178	0.186	4.57	3.72	0.98
26	0.195	0.205	4.27	3.17	0.69
27	0.214	0.225	3.90	2.64	0.48
28	0.235	0.247	3.43	2.11	0.32
29	0.258	0.271	2.86	1.60	0.20
30	0.284	0.297	2.25	1.15	0.12
31	0.311	0.326	1.53	0.71	0.061
32	0.342	0.358	0.91	0.39	0.028
33	0.375	0.393	0.46	0.18	0.010
34	0.412	0.431	0.18	0.064	0.0031
35	0.452	0.474	0.12	0.038	0.0016
36	0.496	0.520	0.12	0.034	0.0012
37	0.545	0.571	0.19	0.050	0.0014
38	0.598	0.627	0.40	0.097	0.0023
39	0.656	0.688	0.65	0.14	0.0028
40	0.721	0.755	1.00	0.20	0.0032
41	0.791	0.829	1.42	0.26	0.0035
42	0.868	0.910	1.75	0.29	0.0032
43	0.953	0.999	2.05	0.31	0.0029
44	1.047	1.097	2.17	0.30	0.0023
45	1.149	1.204	1.98	0.25	0.0016

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.70	0.19	0.0010
47	1.385	1.451	1.48	0.16	0.00068
48	1.520	1.592	1.32	0.13	0.00046
49	1.668	1.748	1.32	0.11	0.00034
50	1.832	1.919	1.16	0.092	0.00023
51	2.011	2.107	0.88	0.063	0.00013
52	2.207	2.313	0.57	0.037	0.000064
53	2.423	2.539	0.23	0.014	0.000020
54	2.660	2.787	0.067	0.0037	0.000004
55	2.920	3.059	0.011	0.00056	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

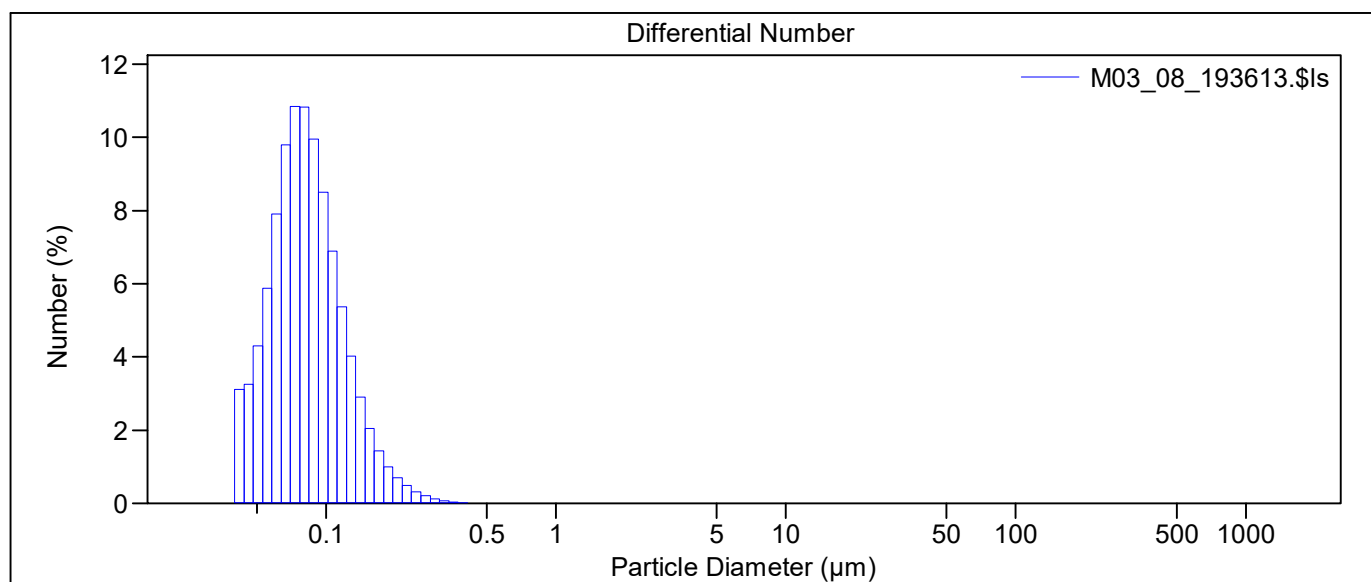
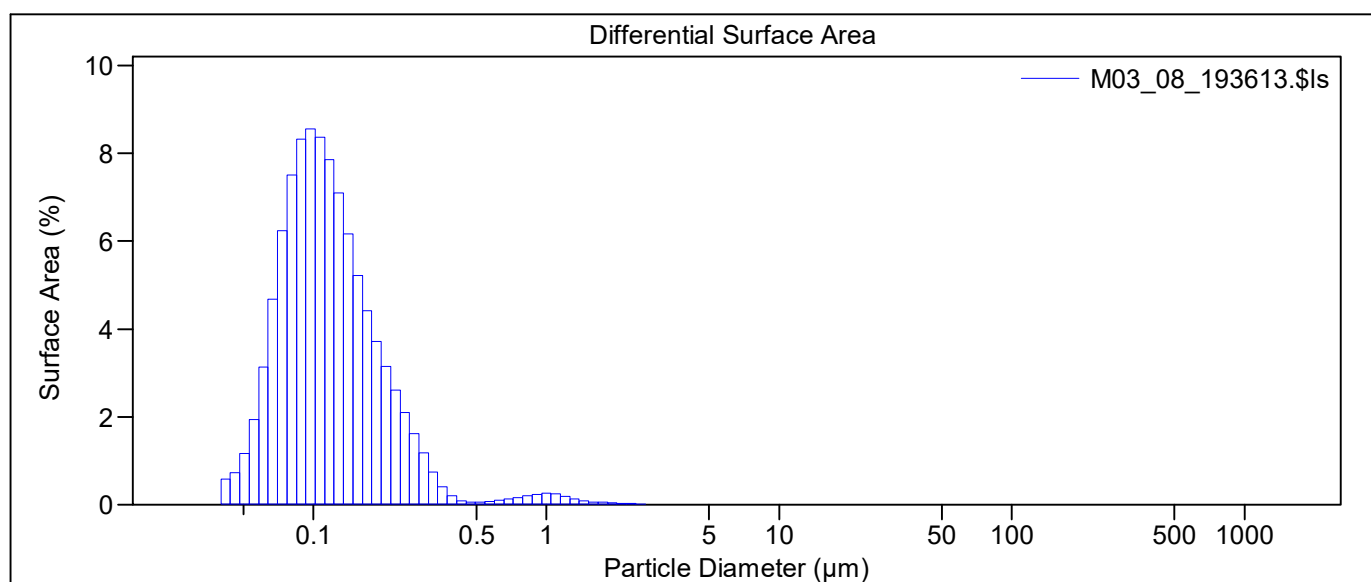
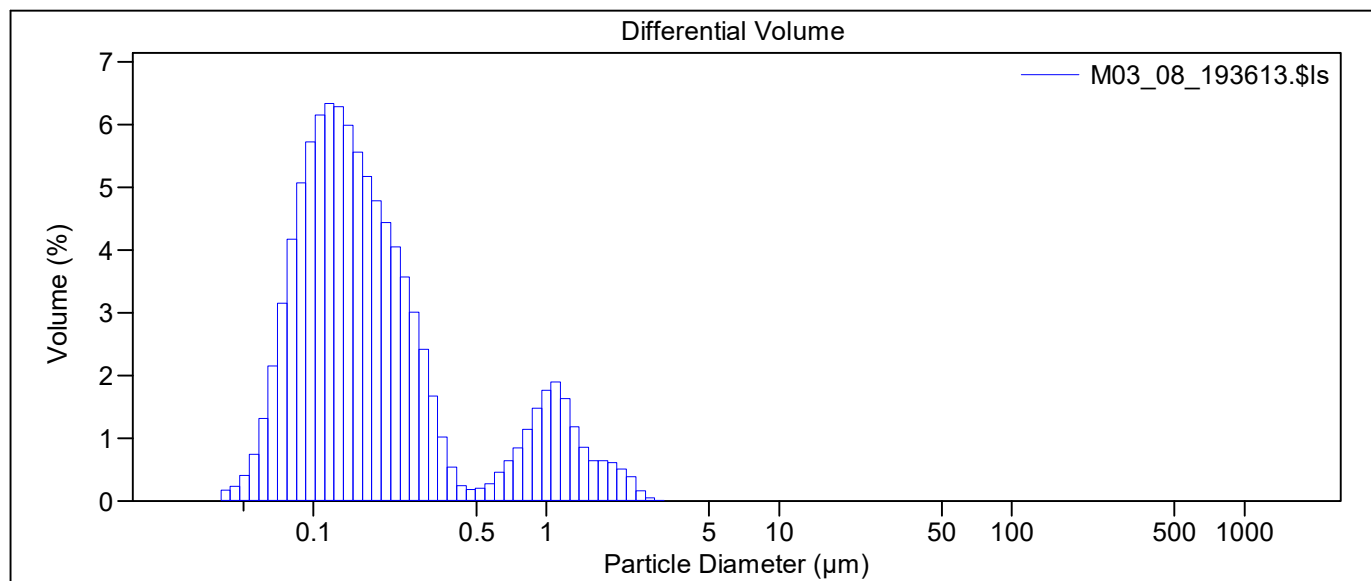
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_08_193613.\$ls		
	M03_08_193613.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.65%		
LS 13 320	Universal Liquid Module		
Start time:	19:34 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_08_193613.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.421 μm
Mean:	0.315 μm		Variance:	0.177 μm ²
Median:	0.153 μm		C.V.:	133%
Mean/Median ratio:	2.061		Skewness:	2.640 Right skewed
Mode:	0.117 μm		Kurtosis:	7.044 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.153 μm	0.255 μm	0.973 μm

Surface Area Statistics (Arithmetic)			M03_08_193613.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.157 µm
Mean:	0.145 µm		Variance:	0.025 µm ²
Median:	0.110 µm		C.V.:	108%
Mean/Median ratio:	1.317		Skewness:	6.772 Right skewed
Mode:	0.097 µm		Kurtosis:	60.15 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.155 µm	0.223 µm

Number Statistics (Arithmetic)			M03_08_193613.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.0%
Mean/Median ratio:	1.102		Skewness:	4.416 Right skewed
Mode:	0.073 μm		Kurtosis:	85.45 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.103 μm	0.133 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.58	3.11
10	0.044	0.046	0.23	0.74	3.25
11	0.048	0.050	0.41	1.17	4.30
12	0.053	0.055	0.74	1.94	5.88
13	0.058	0.061	1.32	3.13	7.91
14	0.064	0.067	2.16	4.68	9.79
15	0.070	0.073	3.16	6.24	10.8
16	0.077	0.080	4.17	7.51	10.8
17	0.084	0.088	5.07	8.32	9.95
18	0.093	0.097	5.73	8.56	8.50
19	0.102	0.106	6.15	8.37	6.90
20	0.112	0.117	6.34	7.86	5.37
21	0.122	0.128	6.29	7.10	4.03
22	0.134	0.141	5.99	6.16	2.90
23	0.148	0.155	5.57	5.22	2.04
24	0.162	0.170	5.17	4.42	1.43
25	0.178	0.186	4.78	3.72	1.00
26	0.195	0.205	4.44	3.15	0.70
27	0.214	0.225	4.05	2.61	0.48
28	0.235	0.247	3.57	2.10	0.32
29	0.258	0.271	3.01	1.61	0.21
30	0.284	0.297	2.42	1.18	0.12
31	0.311	0.326	1.67	0.74	0.065
32	0.342	0.358	1.02	0.41	0.030
33	0.375	0.393	0.55	0.20	0.012
34	0.412	0.431	0.25	0.083	0.0041
35	0.452	0.474	0.19	0.057	0.0024
36	0.496	0.520	0.21	0.058	0.0020
37	0.545	0.571	0.28	0.071	0.0020
38	0.598	0.627	0.46	0.11	0.0025
39	0.656	0.688	0.64	0.14	0.0027
40	0.721	0.755	0.84	0.16	0.0027
41	0.791	0.829	1.15	0.20	0.0027
42	0.868	0.910	1.48	0.24	0.0027
43	0.953	0.999	1.77	0.26	0.0024
44	1.047	1.097	1.90	0.25	0.0020
45	1.149	1.204	1.63	0.20	0.0013

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.18	0.13	0.00069
47	1.385	1.451	0.86	0.086	0.00038
48	1.520	1.592	0.65	0.059	0.00022
49	1.668	1.748	0.64	0.053	0.00016
50	1.832	1.919	0.61	0.046	0.00012
51	2.011	2.107	0.51	0.035	0.000075
52	2.207	2.313	0.39	0.024	0.000042
53	2.423	2.539	0.17	0.0095	0.000014
54	2.660	2.787	0.050	0.0026	0.000003
55	2.920	3.059	0.0084	0.00040	3.96E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

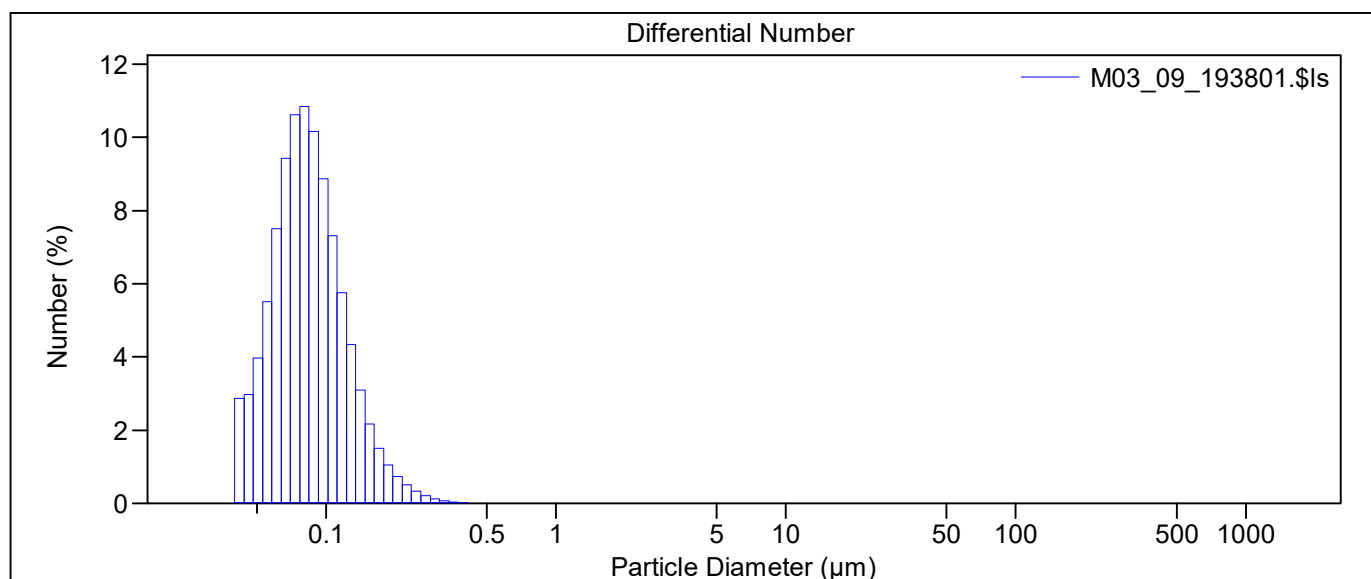
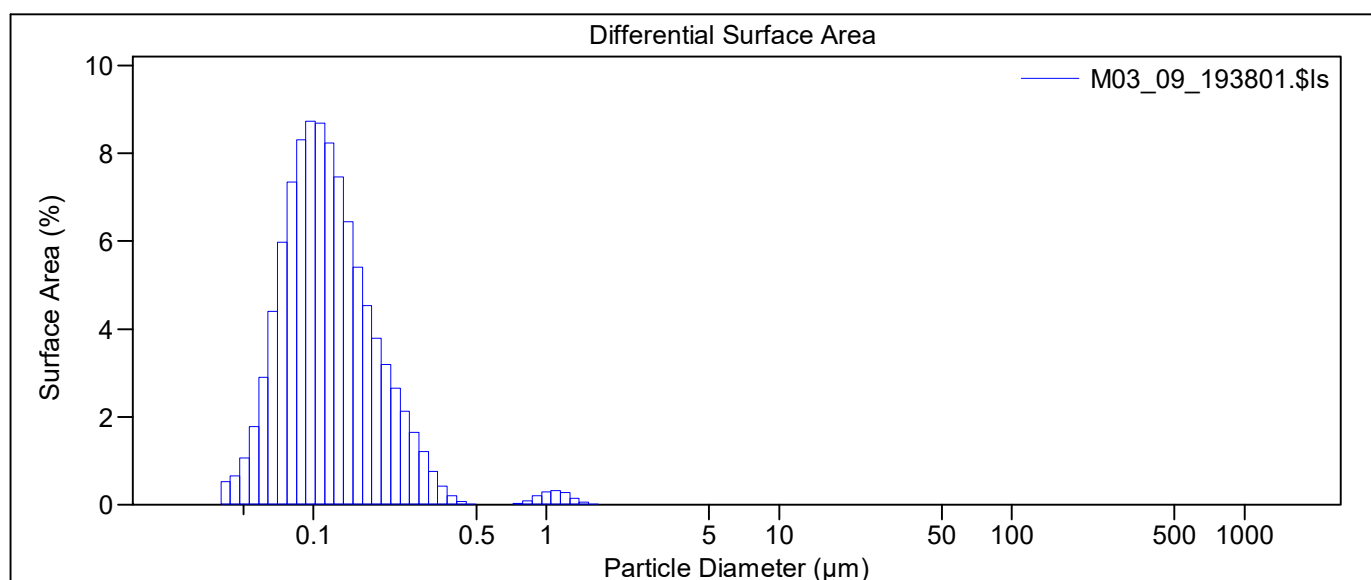
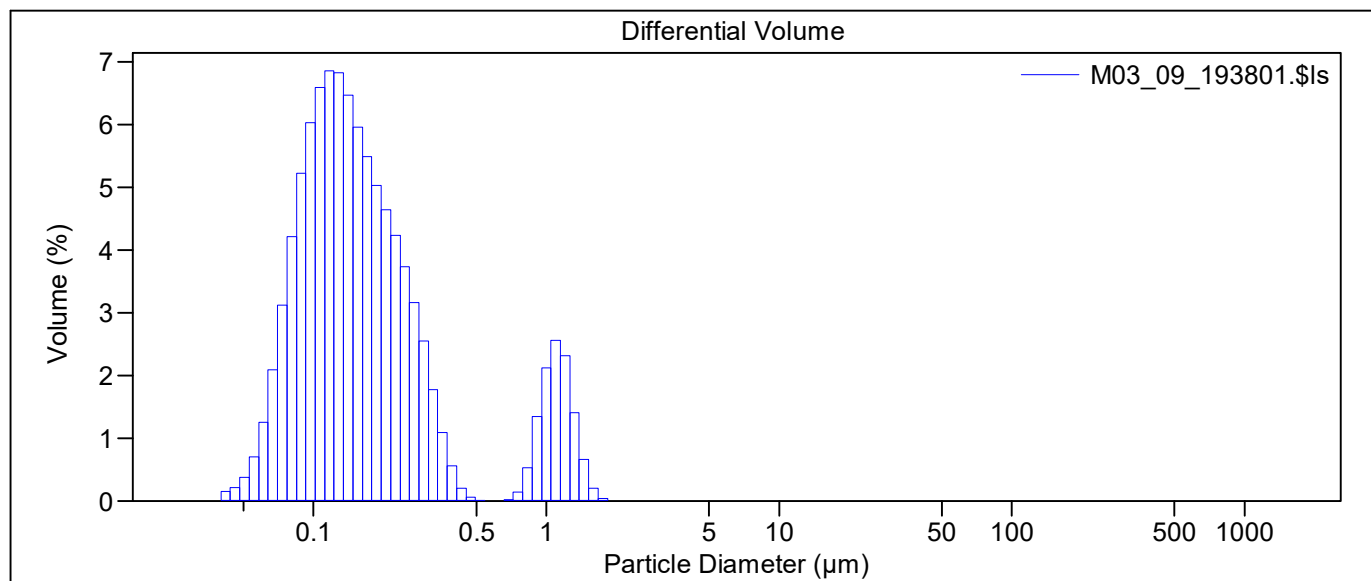
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_09_193801.\$ls		
	M03_09_193801.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.85%		
LS 13 320	Universal Liquid Module		
Start time:	19:36 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_09_193801.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.320 µm
Mean:	0.265 µm		Variance:	0.102 µm ²
Median:	0.147 µm		C.V.:	121%
Mean/Median ratio:	1.796		Skewness:	2.403 Right skewed
Mode:	0.117 µm		Kurtosis:	4.550 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.104 µm	0.147 µm	0.233 µm	0.910 µm

Surface Area Statistics (Arithmetic)			M03_09_193801.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.132 µm
Mean:	0.140 µm		Variance:	0.017 µm ²
Median:	0.111 µm		C.V.:	94.1%
Mean/Median ratio:	1.263		Skewness:	6.117 Right skewed
Mode:	0.097 µm		Kurtosis:	45.32 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.068 µm	0.085 µm	0.111 µm	0.154 µm	0.219 µm

Number Statistics (Arithmetic)			M03_09_193801.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.090 μm		Variance:	0.0015 μm ²
Median:	0.082 μm		C.V.:	42.9%
Mean/Median ratio:	1.099		Skewness:	3.765 Right skewed
Mode:	0.080 μm		Kurtosis:	60.39 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.053 μm	0.065 μm	0.082 μm	0.105 μm	0.134 μm



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M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.16	0.53	2.86
10	0.044	0.046	0.22	0.66	2.98
11	0.048	0.050	0.38	1.06	3.97
12	0.053	0.055	0.70	1.77	5.51
13	0.058	0.061	1.26	2.91	7.50
14	0.064	0.067	2.10	4.40	9.43
15	0.070	0.073	3.12	5.98	10.6
16	0.077	0.080	4.21	7.35	10.8
17	0.084	0.088	5.23	8.31	10.2
18	0.093	0.097	6.03	8.73	8.86
19	0.102	0.106	6.59	8.69	7.32
20	0.112	0.117	6.85	8.23	5.75
21	0.122	0.128	6.82	7.46	4.33
22	0.134	0.141	6.47	6.45	3.10
23	0.148	0.155	5.96	5.41	2.16
24	0.162	0.170	5.49	4.54	1.50
25	0.178	0.186	5.03	3.79	1.04
26	0.195	0.205	4.65	3.19	0.73
27	0.214	0.225	4.23	2.65	0.50
28	0.235	0.247	3.73	2.13	0.33
29	0.258	0.271	3.16	1.64	0.21
30	0.284	0.297	2.55	1.21	0.13
31	0.311	0.326	1.77	0.76	0.068
32	0.342	0.358	1.09	0.43	0.032
33	0.375	0.393	0.56	0.20	0.012
34	0.412	0.431	0.21	0.068	0.0035
35	0.452	0.474	0.058	0.017	0.00073
36	0.496	0.520	0.0087	0.0023	0.000083
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0.020	0.0040	0.000081
40	0.721	0.755	0.14	0.027	0.00045
41	0.791	0.829	0.53	0.089	0.0012
42	0.868	0.910	1.35	0.21	0.0024
43	0.953	0.999	2.12	0.30	0.0029
44	1.047	1.097	2.56	0.33	0.0026
45	1.149	1.204	2.31	0.27	0.0018
46	1.261	1.321	1.41	0.15	0.00082
47	1.385	1.451	0.67	0.064	0.00029
48	1.520	1.592	0.21	0.018	0.000069
49	1.668	1.748	0.036	0.0029	0.000009
50	1.832	1.919	0.0043	0.00031	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M03.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

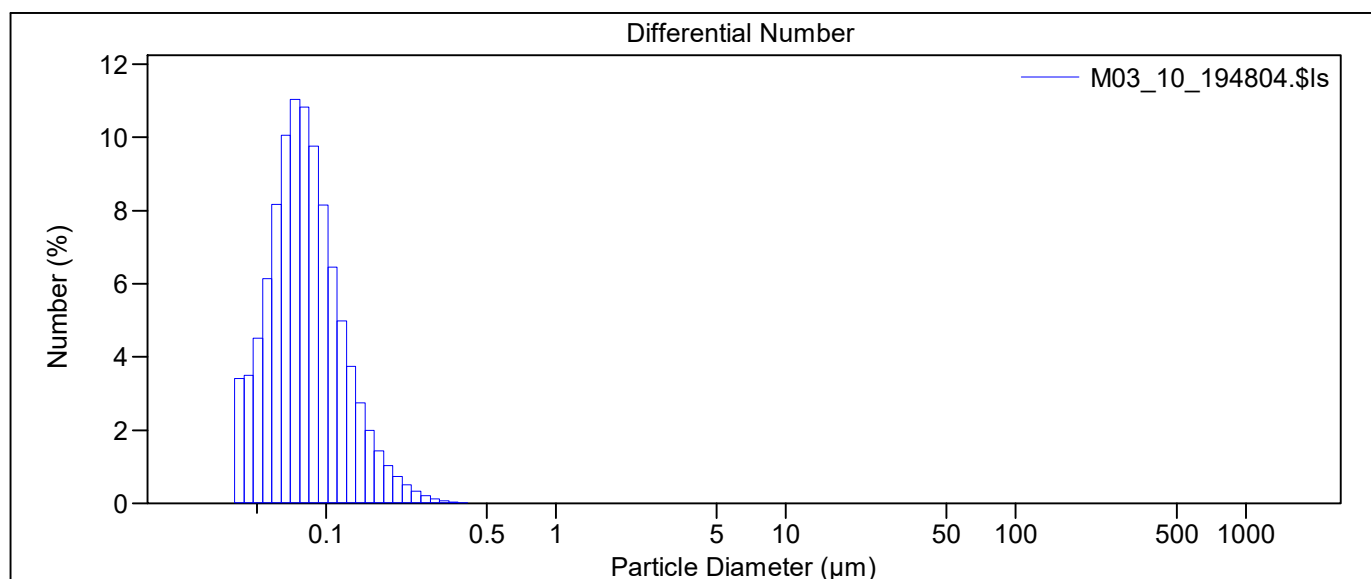
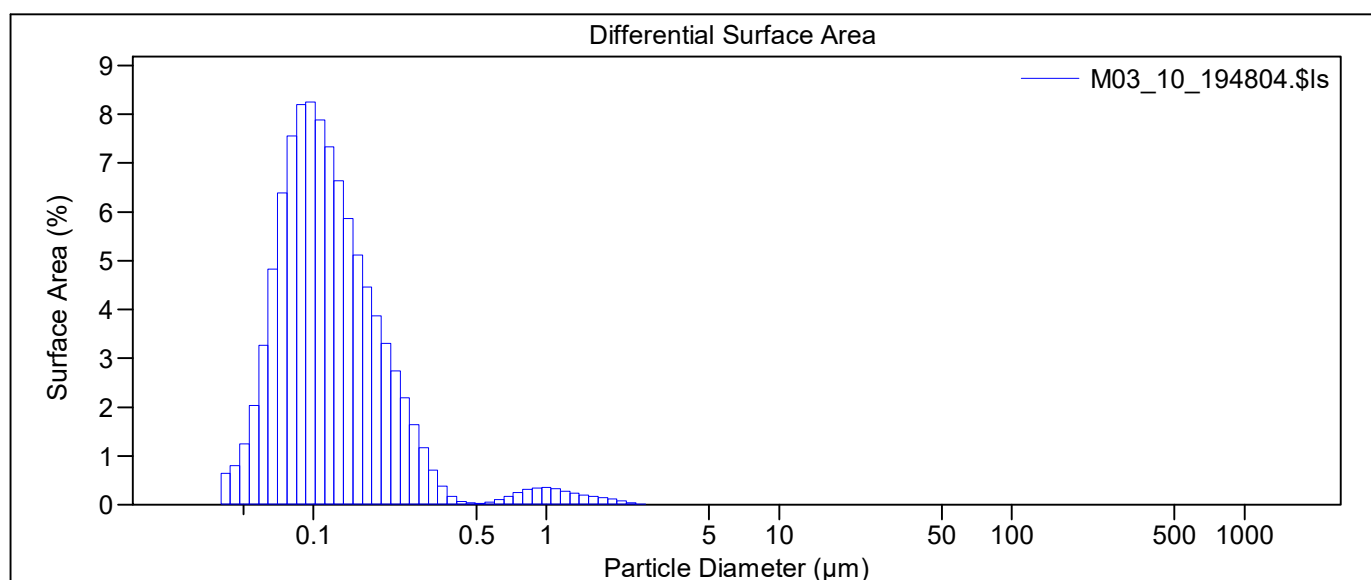
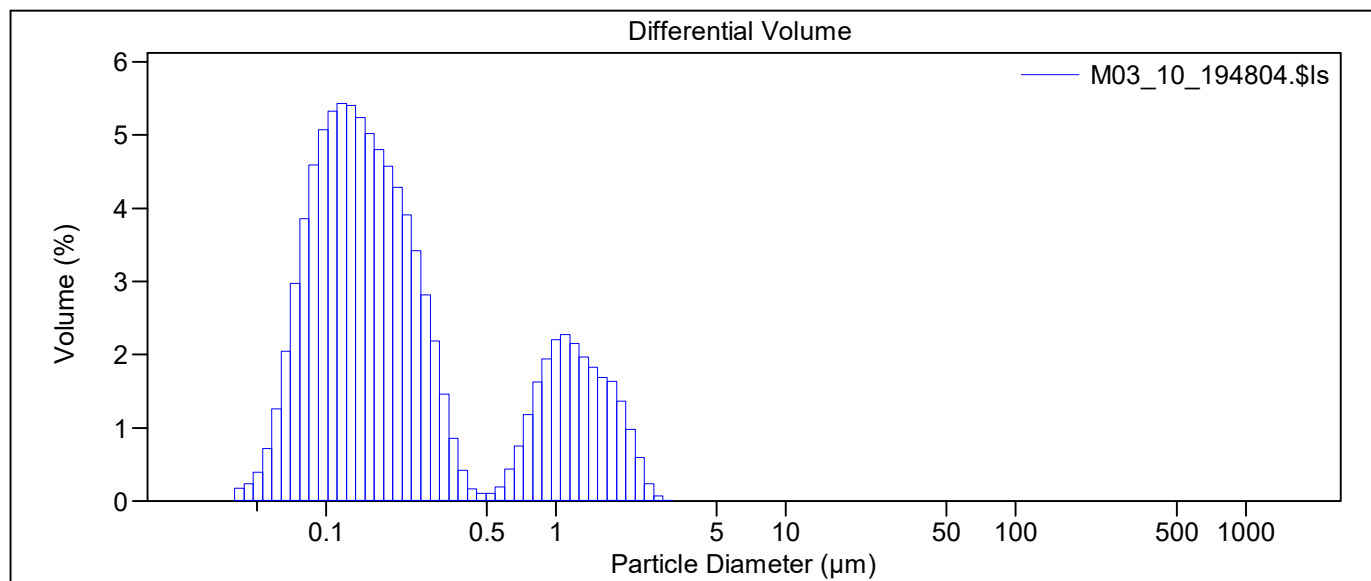
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_10_194804.\$ls		
	M03_10_194804.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.01%		
LS 13 320	Universal Liquid Module		
Start time:	19:46 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_10_194804.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.530 μm
Mean:	0.418 μm		Variance:	0.281 μm ²
Median:	0.169 μm		C.V.:	127%
Mean/Median ratio:	2.467		Skewness:	1.856 Right skewed
Mode:	0.117 μm		Kurtosis:	2.561 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.108 μm	0.169 μm	0.337 μm	1.285 μm

Surface Area Statistics (Arithmetic)			M03_10_194804.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.203 µm
Mean:	0.158 µm		Variance:	0.041 µm ²
Median:	0.110 µm		C.V.:	128%
Mean/Median ratio:	1.431		Skewness:	5.835 Right skewed
Mode:	0.097 µm		Kurtosis:	40.52 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.159 µm	0.232 µm

Number Statistics (Arithmetic)			M03_10_194804.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.8%
Mean/Median ratio:	1.109		Skewness:	5.707 Right skewed
Mode:	0.073 μm		Kurtosis:	131.9 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.64	3.41
10	0.044	0.046	0.23	0.80	3.50
11	0.048	0.050	0.40	1.24	4.52
12	0.053	0.055	0.71	2.03	6.14
13	0.058	0.061	1.26	3.26	8.18
14	0.064	0.067	2.05	4.83	10.1
15	0.070	0.073	2.97	6.39	11.0
16	0.077	0.080	3.86	7.56	10.8
17	0.084	0.088	4.60	8.20	9.75
18	0.093	0.097	5.08	8.26	8.15
19	0.102	0.106	5.33	7.89	6.46
20	0.112	0.117	5.44	7.33	4.98
21	0.122	0.128	5.41	6.64	3.75
22	0.134	0.141	5.24	5.87	2.75
23	0.148	0.155	5.02	5.12	1.99
24	0.162	0.170	4.81	4.46	1.44
25	0.178	0.186	4.57	3.87	1.03
26	0.195	0.205	4.29	3.30	0.73
27	0.214	0.225	3.91	2.75	0.51
28	0.235	0.247	3.42	2.19	0.33
29	0.258	0.271	2.82	1.64	0.21
30	0.284	0.297	2.19	1.16	0.12
31	0.311	0.326	1.46	0.71	0.062
32	0.342	0.358	0.85	0.38	0.027
33	0.375	0.393	0.42	0.17	0.010
34	0.412	0.431	0.17	0.060	0.0030
35	0.452	0.474	0.10	0.034	0.0014
36	0.496	0.520	0.10	0.032	0.0011
37	0.545	0.571	0.19	0.053	0.0015
38	0.598	0.627	0.44	0.11	0.0026
39	0.656	0.688	0.75	0.17	0.0034
40	0.721	0.755	1.18	0.25	0.0040
41	0.791	0.829	1.63	0.31	0.0042
42	0.868	0.910	1.94	0.34	0.0038
43	0.953	0.999	2.21	0.35	0.0032
44	1.047	1.097	2.28	0.33	0.0025
45	1.149	1.204	2.15	0.28	0.0018

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.97	0.23	0.0012
47	1.385	1.451	1.83	0.20	0.00088
48	1.520	1.592	1.69	0.17	0.00061
49	1.668	1.748	1.64	0.15	0.00045
50	1.832	1.919	1.37	0.11	0.00028
51	2.011	2.107	0.98	0.073	0.00015
52	2.207	2.313	0.59	0.041	0.000070
53	2.423	2.539	0.24	0.015	0.000021
54	2.660	2.787	0.068	0.0038	0.000005
55	2.920	3.059	0.011	0.00058	0.000001
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

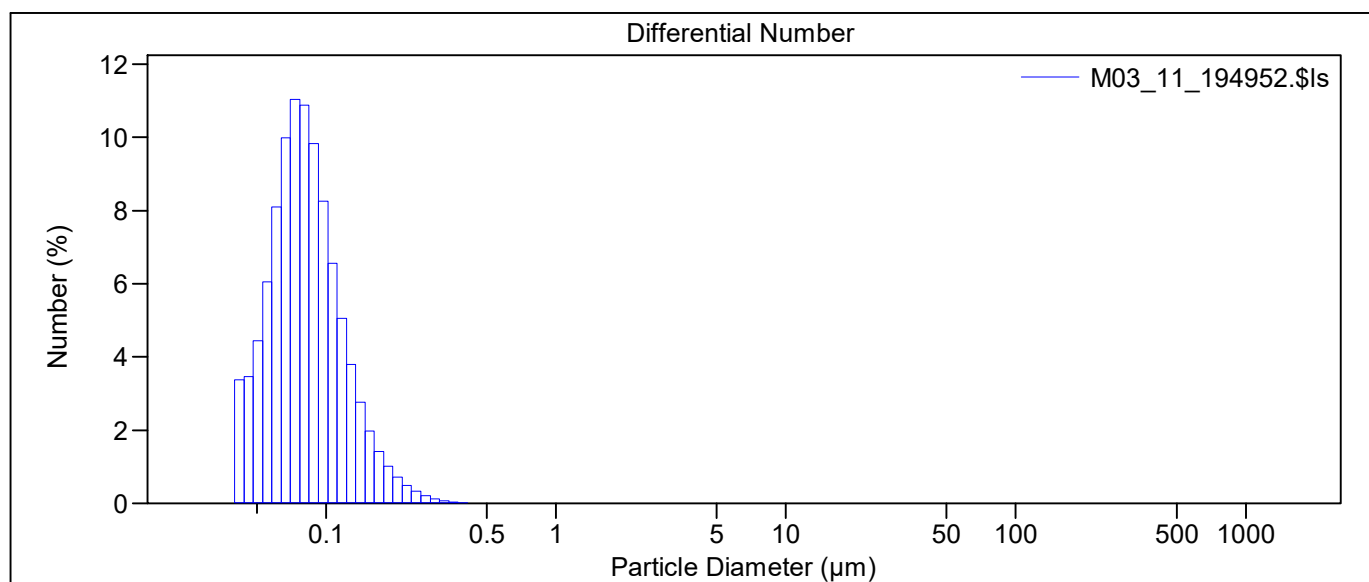
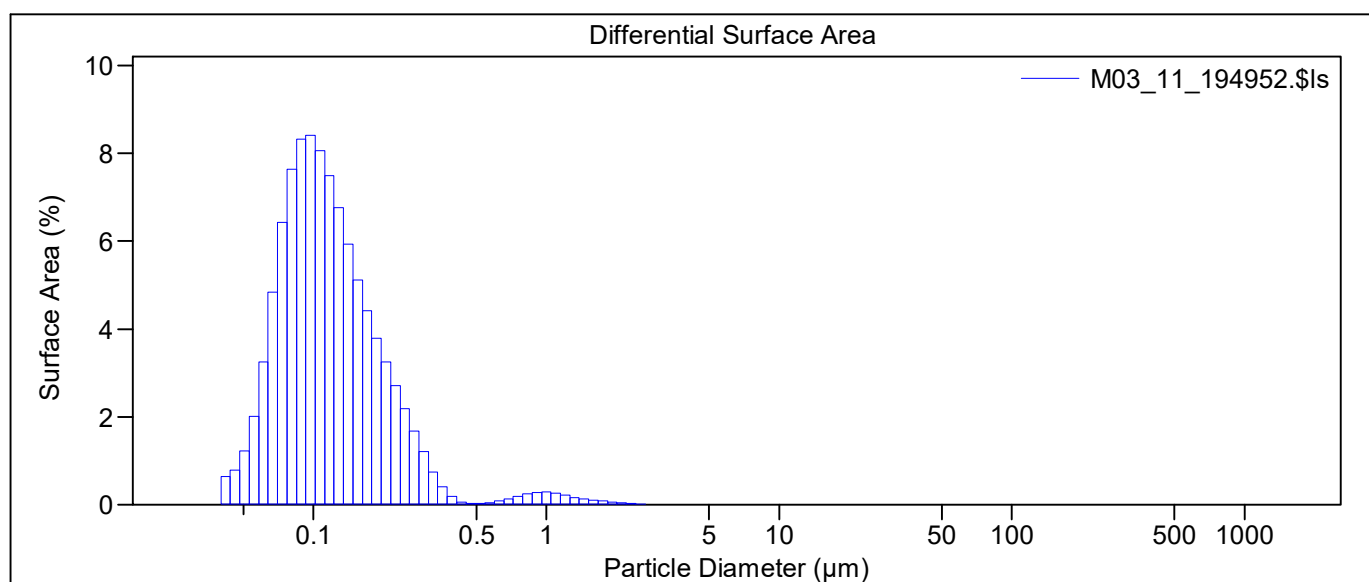
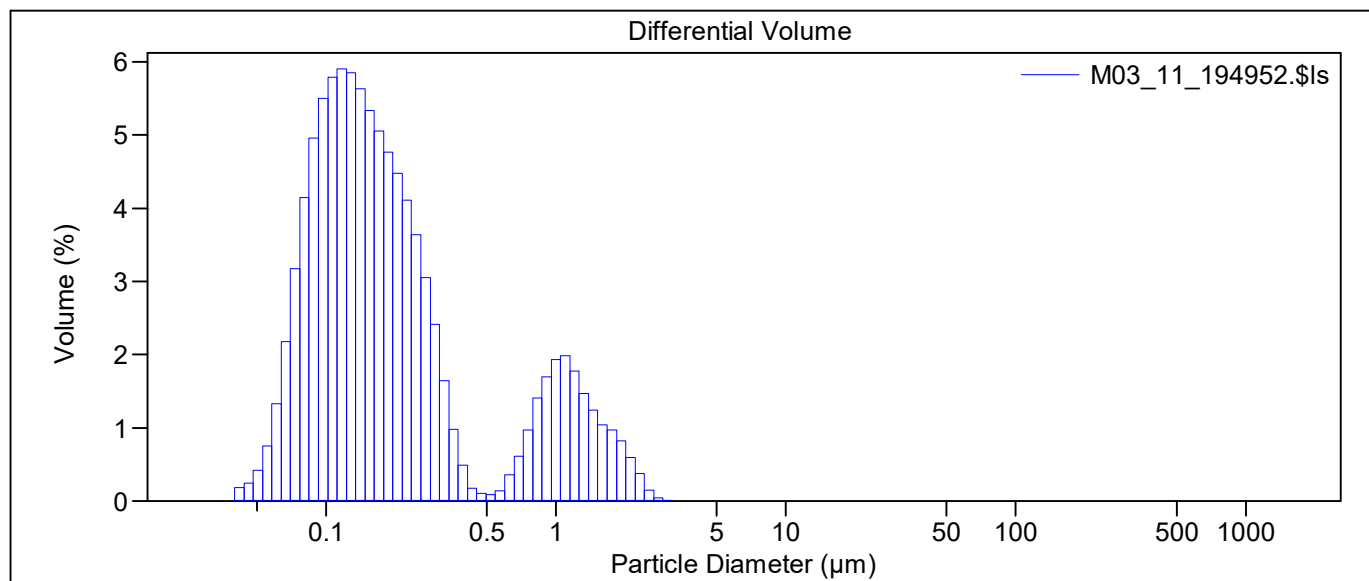
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_11_194952.\$ls		
	M03_11_194952.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.36%		
LS 13 320	Universal Liquid Module		
Start time:	19:48 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	64%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_11_194952.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.454 µm
Mean:	0.345 µm		Variance:	0.206 µm ²
Median:	0.158 µm		C.V.:	132%
Mean/Median ratio:	2.182		Skewness:	2.312 Right skewed
Mode:	0.117 µm		Kurtosis:	4.904 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.158 µm	0.271 µm	1.071 µm

Surface Area Statistics (Arithmetic)			M03_11_194952.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.171 µm
Mean:	0.148 µm		Variance:	0.029 µm ²
Median:	0.110 µm		C.V.:	115%
Mean/Median ratio:	1.354		Skewness:	6.416 Right skewed
Mode:	0.097 µm		Kurtosis:	51.64 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.157 µm	0.227 µm

Number Statistics (Arithmetic)			M03_11_194952.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.7%
Mean/Median ratio:	1.106		Skewness:	4.797 Right skewed
Mode:	0.073 μm		Kurtosis:	98.64 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.38
10	0.044	0.046	0.25	0.79	3.46
11	0.048	0.050	0.42	1.23	4.44
12	0.053	0.055	0.75	2.02	6.06
13	0.058	0.061	1.33	3.25	8.09
14	0.064	0.067	2.18	4.83	10.00
15	0.070	0.073	3.18	6.43	11.0
16	0.077	0.080	4.15	7.64	10.9
17	0.084	0.088	4.96	8.33	9.84
18	0.093	0.097	5.51	8.42	8.25
19	0.102	0.106	5.79	8.07	6.56
20	0.112	0.117	5.91	7.49	5.06
21	0.122	0.128	5.85	6.76	3.79
22	0.134	0.141	5.63	5.93	2.76
23	0.148	0.155	5.33	5.12	1.97
24	0.162	0.170	5.05	4.42	1.41
25	0.178	0.186	4.77	3.80	1.01
26	0.195	0.205	4.48	3.25	0.72
27	0.214	0.225	4.11	2.72	0.50
28	0.235	0.247	3.64	2.19	0.33
29	0.258	0.271	3.05	1.67	0.21
30	0.284	0.297	2.41	1.21	0.13
31	0.311	0.326	1.64	0.75	0.065
32	0.342	0.358	0.98	0.41	0.029
33	0.375	0.393	0.49	0.18	0.011
34	0.412	0.431	0.17	0.060	0.0030
35	0.452	0.474	0.10	0.032	0.0013
36	0.496	0.520	0.089	0.025	0.00087
37	0.545	0.571	0.14	0.037	0.0011
38	0.598	0.627	0.35	0.084	0.0020
39	0.656	0.688	0.61	0.13	0.0026
40	0.721	0.755	0.97	0.19	0.0031
41	0.791	0.829	1.41	0.25	0.0034
42	0.868	0.910	1.70	0.28	0.0031
43	0.953	0.999	1.93	0.29	0.0027
44	1.047	1.097	1.98	0.27	0.0021
45	1.149	1.204	1.78	0.22	0.0014
46	1.261	1.321	1.47	0.17	0.00087
47	1.385	1.451	1.24	0.13	0.00056
48	1.520	1.592	1.04	0.097	0.00035
49	1.668	1.748	0.97	0.082	0.00025
50	1.832	1.919	0.82	0.063	0.00016
51	2.011	2.107	0.59	0.042	0.000086
52	2.207	2.313	0.37	0.024	0.000041
53	2.423	2.539	0.15	0.0089	0.000013
54	2.660	2.787	0.043	0.0023	0.000003
55	2.920	3.059	0.0074	0.00036	3.52E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M03.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

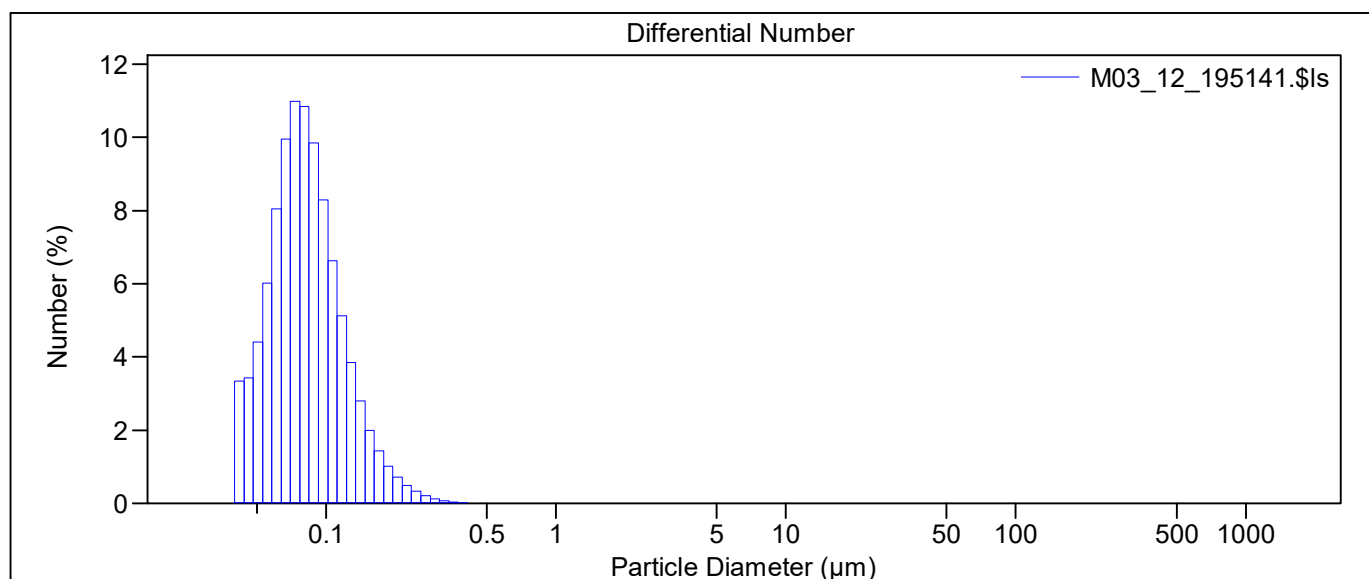
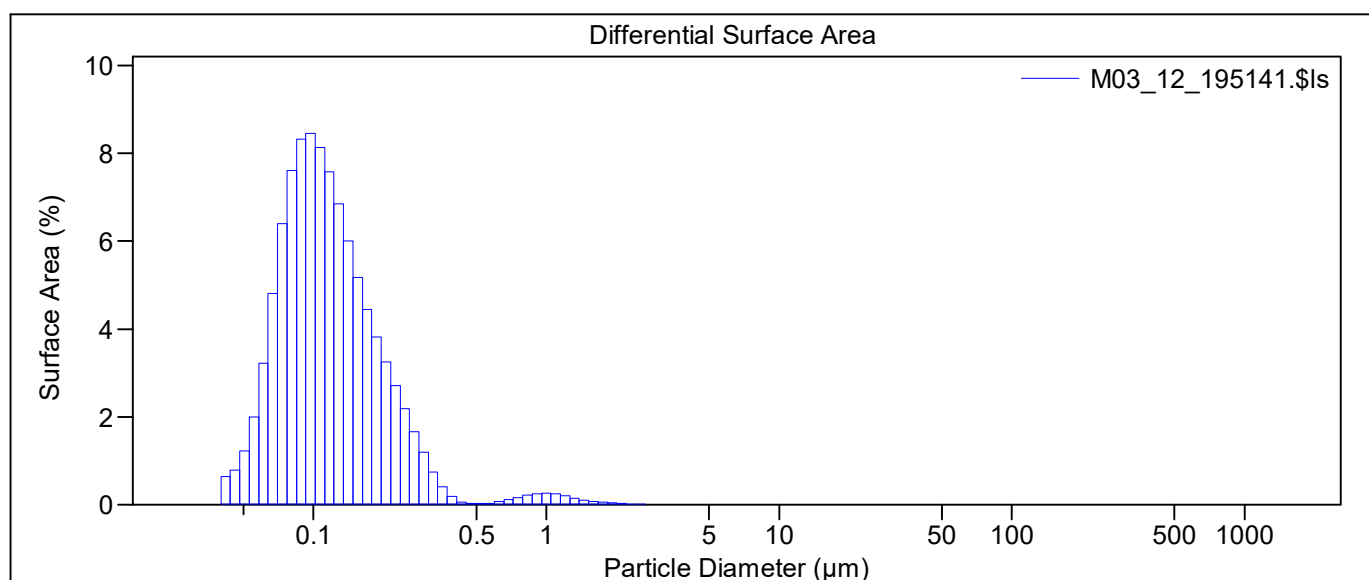
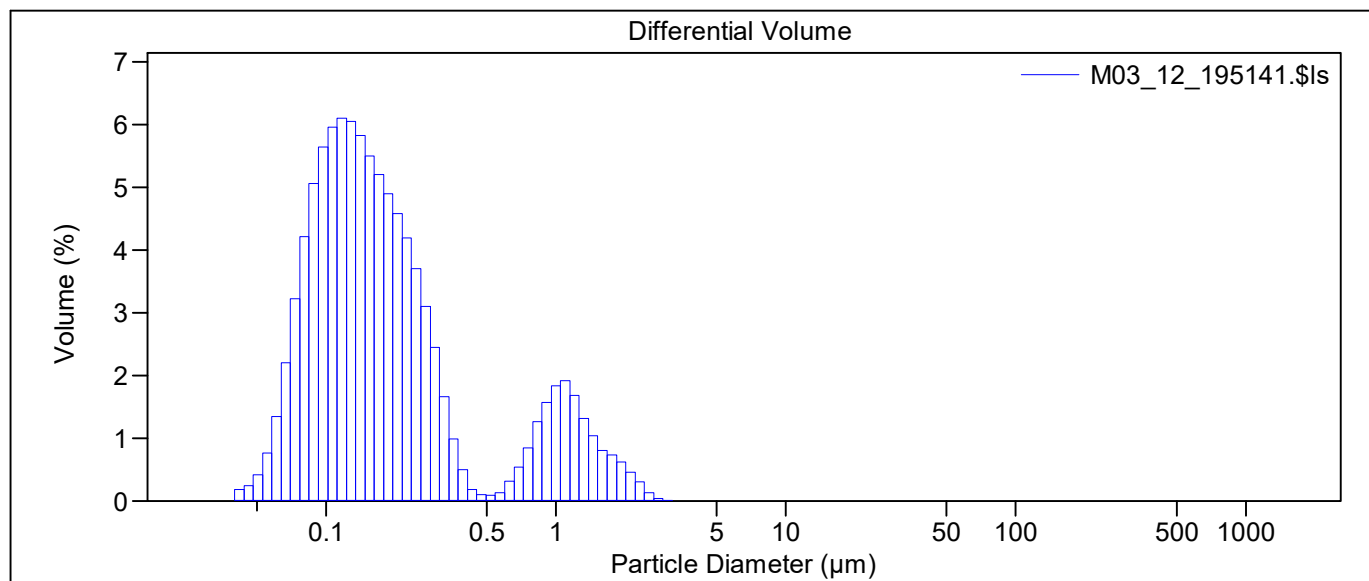
Beckman Coulter LS13320

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	M03_12_195141.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.54%		
LS 13 320	Universal Liquid Module		
Start time:	19:49 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_12_195141.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.423 µm
Mean:	0.320 µm		Variance:	0.179 µm ²
Median:	0.155 µm		C.V.:	132%
Mean/Median ratio:	2.067		Skewness:	2.513 Right skewed
Mode:	0.117 µm		Kurtosis:	6.144 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.104 µm	0.155 µm	0.256 µm	0.999 µm

Surface Area Statistics (Arithmetic)			M03_12_195141.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.159 µm
Mean:	0.145 µm		Variance:	0.025 µm ²
Median:	0.110 µm		C.V.:	110%
Mean/Median ratio:	1.325		Skewness:	6.620 Right skewed
Mode:	0.097 µm		Kurtosis:	56.28 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.224 µm

Number Statistics (Arithmetic)			M03_12_195141.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.4%
Mean/Median ratio:	1.105		Skewness:	4.456 Right skewed
Mode:	0.073 μm		Kurtosis:	86.56 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.101 μm	0.132 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.34
10	0.044	0.046	0.25	0.78	3.42
11	0.048	0.050	0.42	1.22	4.41
12	0.053	0.055	0.76	2.00	6.02
13	0.058	0.061	1.35	3.23	8.05
14	0.064	0.067	2.21	4.80	9.95
15	0.070	0.073	3.23	6.39	11.0
16	0.077	0.080	4.22	7.61	10.9
17	0.084	0.088	5.06	8.33	9.85
18	0.093	0.097	5.64	8.45	8.29
19	0.102	0.106	5.96	8.13	6.62
20	0.112	0.117	6.10	7.58	5.12
21	0.122	0.128	6.05	6.85	3.84
22	0.134	0.141	5.83	6.01	2.80
23	0.148	0.155	5.50	5.17	2.00
24	0.162	0.170	5.20	4.45	1.43
25	0.178	0.186	4.89	3.82	1.01
26	0.195	0.205	4.58	3.25	0.72
27	0.214	0.225	4.20	2.71	0.50
28	0.235	0.247	3.70	2.18	0.33
29	0.258	0.271	3.10	1.66	0.21
30	0.284	0.297	2.45	1.20	0.13
31	0.311	0.326	1.67	0.74	0.064
32	0.342	0.358	0.99	0.40	0.029
33	0.375	0.393	0.50	0.18	0.011
34	0.412	0.431	0.18	0.060	0.0030
35	0.452	0.474	0.10	0.032	0.0013
36	0.496	0.520	0.089	0.025	0.00085
37	0.545	0.571	0.13	0.034	0.00096
38	0.598	0.627	0.32	0.073	0.0017
39	0.656	0.688	0.54	0.11	0.0022
40	0.721	0.755	0.85	0.16	0.0027
41	0.791	0.829	1.27	0.22	0.0030
42	0.868	0.910	1.58	0.25	0.0028
43	0.953	0.999	1.84	0.27	0.0025
44	1.047	1.097	1.92	0.25	0.0020
45	1.149	1.204	1.68	0.20	0.0013

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.31	0.14	0.00076
47	1.385	1.451	1.04	0.10	0.00046
48	1.520	1.592	0.81	0.074	0.00027
49	1.668	1.748	0.73	0.061	0.00018
50	1.832	1.919	0.63	0.047	0.00012
51	2.011	2.107	0.46	0.032	0.000066
52	2.207	2.313	0.31	0.019	0.000033
53	2.423	2.539	0.13	0.0073	0.000011
54	2.660	2.787	0.037	0.0019	0.000002
55	2.920	3.059	0.0064	0.00031	3.01E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M03.\$av

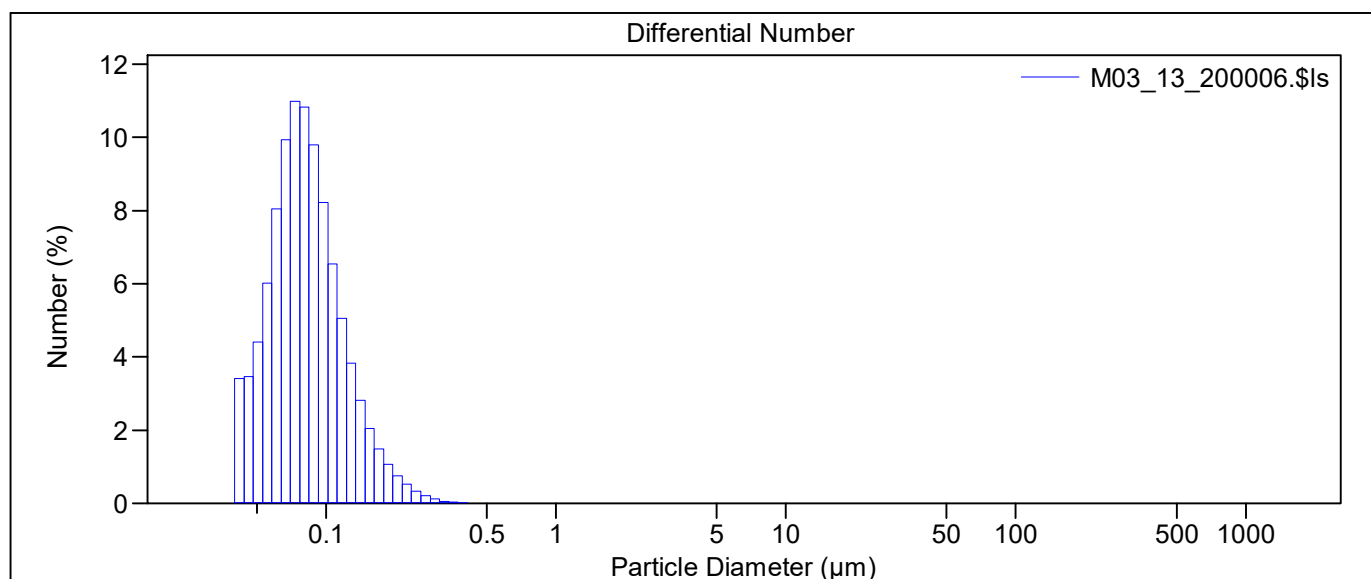
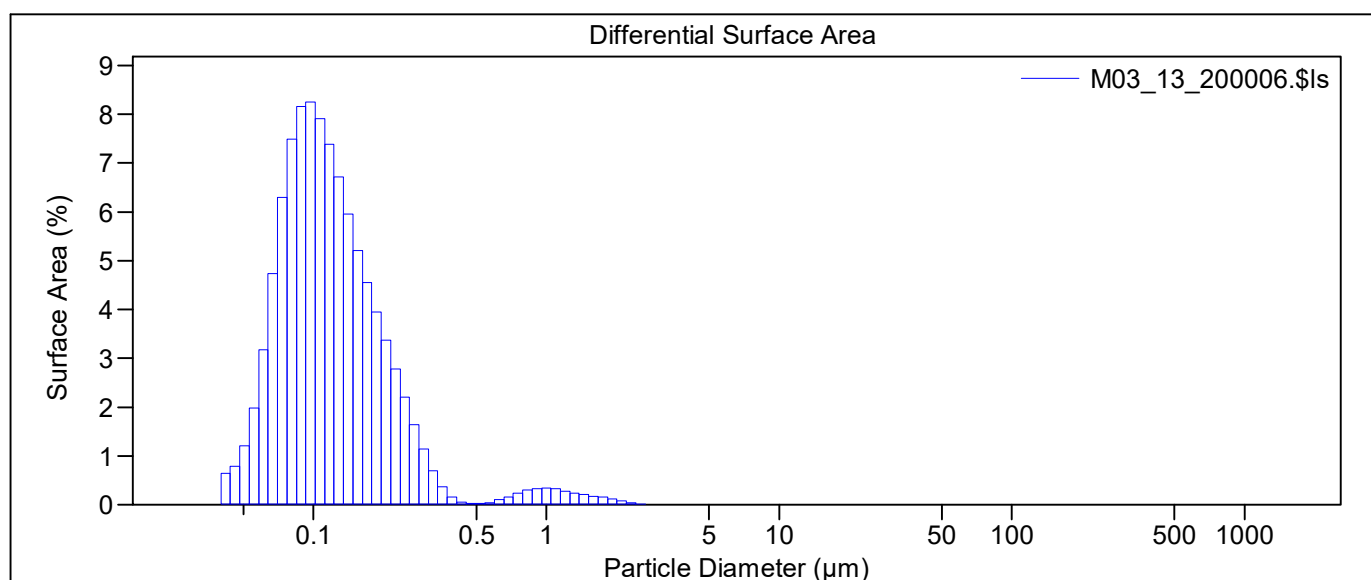
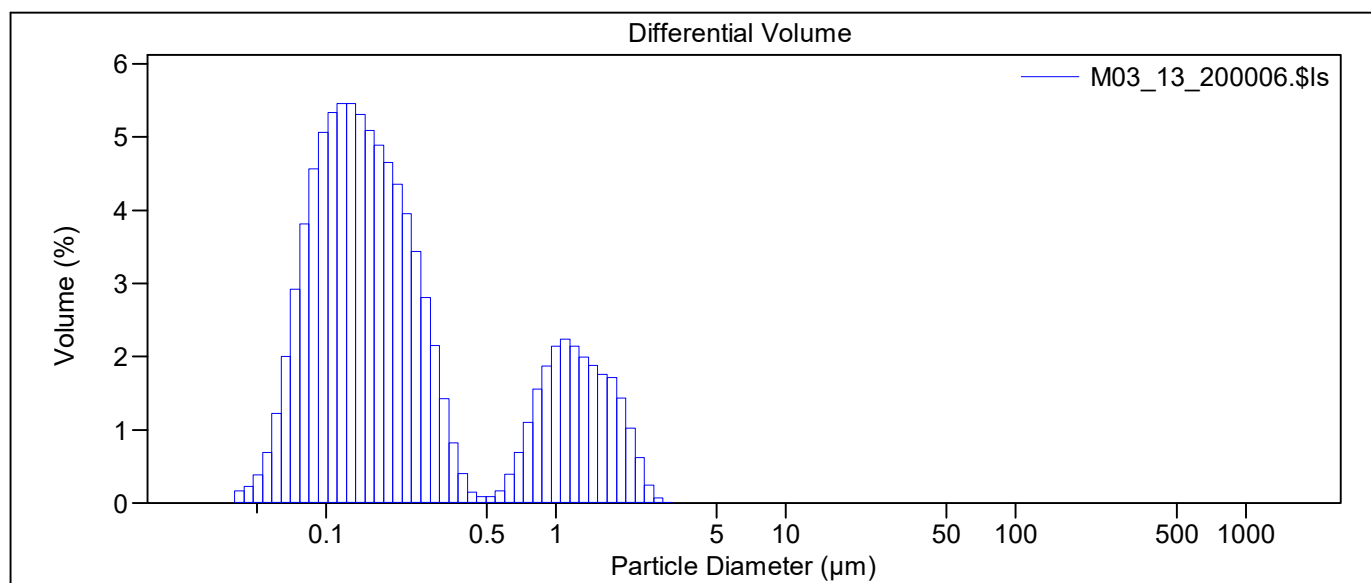
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

File name:	D:\PP_PROFARB\POMIARY\M03\M03_13_200006.\$ls		
	M03_13_200006.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.02%		
LS 13 320	Universal Liquid Module		
Start time:	19:58 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	67%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_13_200006.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.537 μm
Mean:	0.421 μm		Variance:	0.288 μm ²
Median:	0.169 μm		C.V.:	127%
Mean/Median ratio:	2.487		Skewness:	1.846 Right skewed
Mode:	0.117 μm		Kurtosis:	2.479 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 μm	0.109 μm	0.169 μm	0.334 μm	1.309 μm

Surface Area Statistics (Arithmetic)			M03_13_200006.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.204 µm
Mean:	0.158 µm		Variance:	0.042 µm ²
Median:	0.111 µm		C.V.:	129%
Mean/Median ratio:	1.427		Skewness:	5.881 Right skewed
Mode:	0.097 µm		Kurtosis:	40.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.111 µm	0.160 µm	0.231 µm

Number Statistics (Arithmetic)			M03_13_200006.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.7%
Mean/Median ratio:	1.108		Skewness:	5.687 Right skewed
Mode:	0.073 μm		Kurtosis:	133.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.102 μm	0.133 μm



M03.\$av						18:27
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %	
1	0.017	0.018	0	0	0	
2	0.019	0.020	0	0	0	
3	0.021	0.022	0	0	0	
4	0.023	0.025	0	0	0	
5	0.026	0.028	0	0	0	
6	0.029	0.031	0	0	0	
7	0.032	0.034	0	0	0	
8	0.036	0.038	0	0	0	
9	0.040	0.042	0.17	0.64	3.40	
10	0.044	0.046	0.23	0.78	3.46	
11	0.048	0.050	0.38	1.20	4.41	
12	0.053	0.055	0.69	1.97	6.02	
13	0.058	0.061	1.22	3.18	8.04	
14	0.064	0.067	2.00	4.73	9.94	
15	0.070	0.073	2.92	6.30	11.0	
16	0.077	0.080	3.81	7.49	10.8	
17	0.084	0.088	4.56	8.16	9.80	
18	0.093	0.097	5.07	8.26	8.22	
19	0.102	0.106	5.33	7.91	6.54	
20	0.112	0.117	5.46	7.39	5.06	
21	0.122	0.128	5.45	6.72	3.82	
22	0.134	0.141	5.31	5.96	2.81	
23	0.148	0.155	5.09	5.21	2.04	
24	0.162	0.170	4.89	4.55	1.48	
25	0.178	0.186	4.65	3.94	1.06	
26	0.195	0.205	4.35	3.37	0.75	
27	0.214	0.225	3.96	2.79	0.52	
28	0.235	0.247	3.44	2.21	0.34	
29	0.258	0.271	2.81	1.64	0.21	
30	0.284	0.297	2.15	1.15	0.12	
31	0.311	0.326	1.43	0.69	0.061	
32	0.342	0.358	0.82	0.36	0.027	
33	0.375	0.393	0.40	0.16	0.0098	
34	0.412	0.431	0.15	0.055	0.0028	
35	0.452	0.474	0.090	0.030	0.0013	
36	0.496	0.520	0.088	0.027	0.00093	
37	0.545	0.571	0.16	0.045	0.0013	
38	0.598	0.627	0.39	0.099	0.0024	
39	0.656	0.688	0.69	0.16	0.0031	
40	0.721	0.755	1.10	0.23	0.0038	
41	0.791	0.829	1.55	0.30	0.0040	
42	0.868	0.910	1.87	0.32	0.0037	
43	0.953	0.999	2.14	0.34	0.0032	
44	1.047	1.097	2.24	0.32	0.0025	
45	1.149	1.204	2.14	0.28	0.0018	
46	1.261	1.321	2.00	0.24	0.0013	
47	1.385	1.451	1.88	0.21	0.00091	
48	1.520	1.592	1.76	0.17	0.00064	
49	1.668	1.748	1.72	0.16	0.00048	
50	1.832	1.919	1.44	0.12	0.00030	
51	2.011	2.107	1.03	0.077	0.00016	
52	2.207	2.313	0.62	0.043	0.000075	
53	2.423	2.539	0.25	0.015	0.000022	
54	2.660	2.787	0.071	0.0040	0.000005	
55	2.920	3.059	0.012	0.00060	0.000001	
56	3.205	3.358	0	0	0	
57	3.519	3.687	0	0	0	
58	3.863	4.047	0	0	0	
59	4.240	4.443	0	0	0	
60	4.655	4.877	0	0	0	
61	5.110	5.354	0	0	0	
62	5.610	5.878	0	0	0	
63	6.158	6.452	0	0	0	
64	6.760	7.083	0	0	0	
65	7.421	7.775	0	0	0	

Beckman Coulter LS13320

M03.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

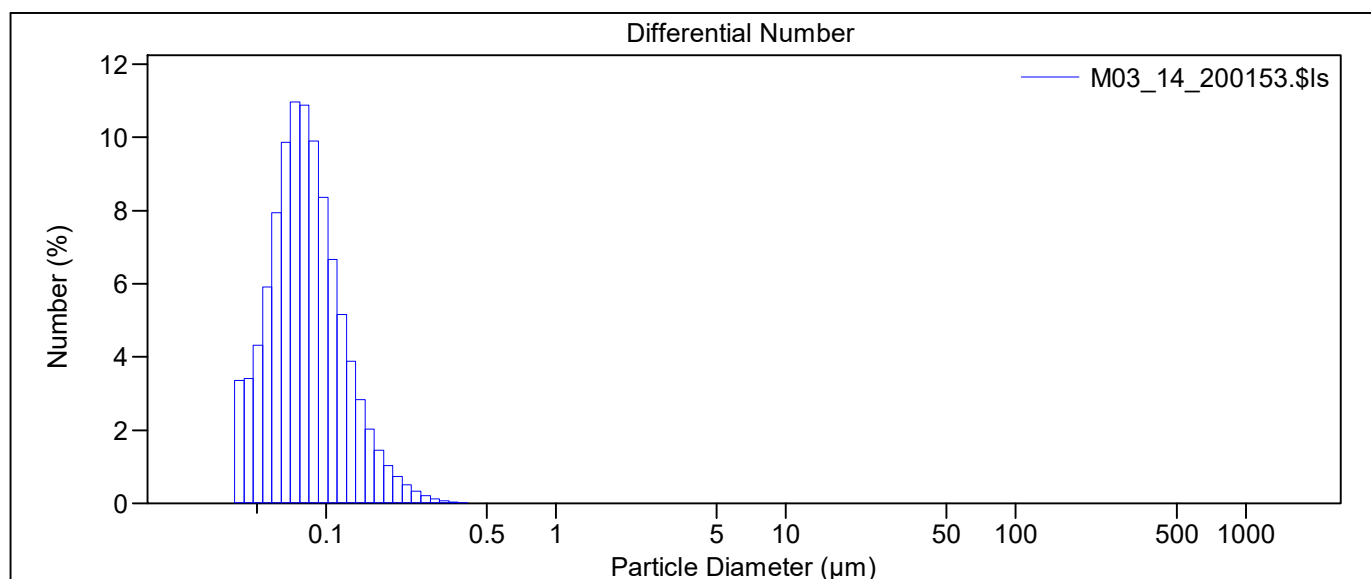
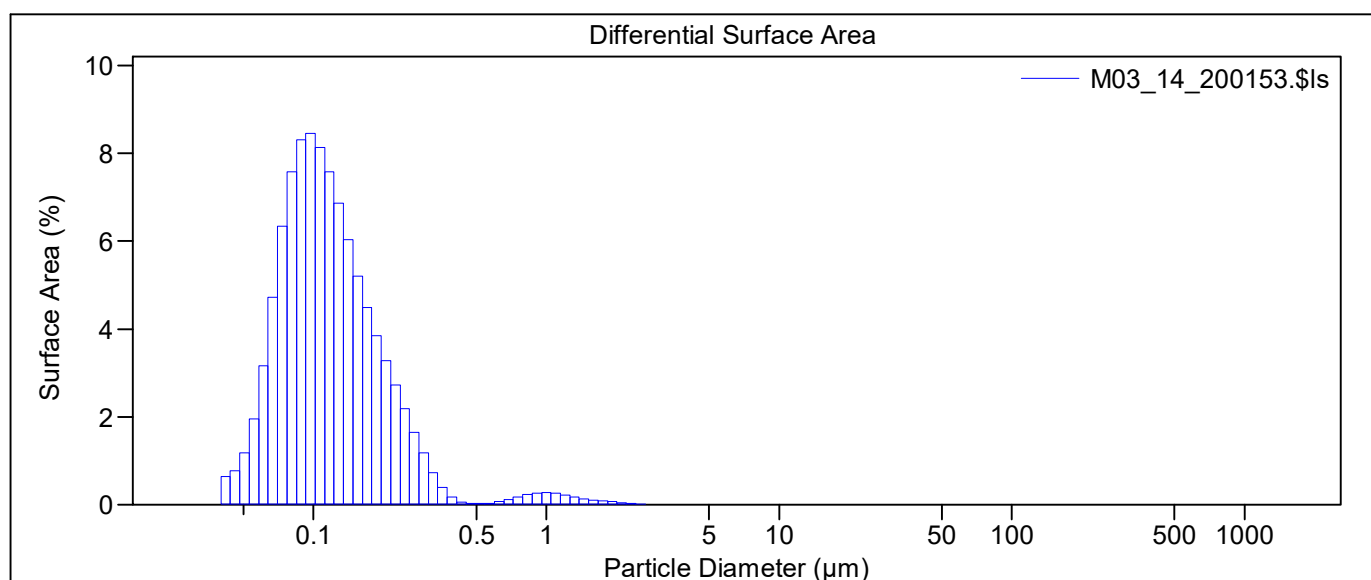
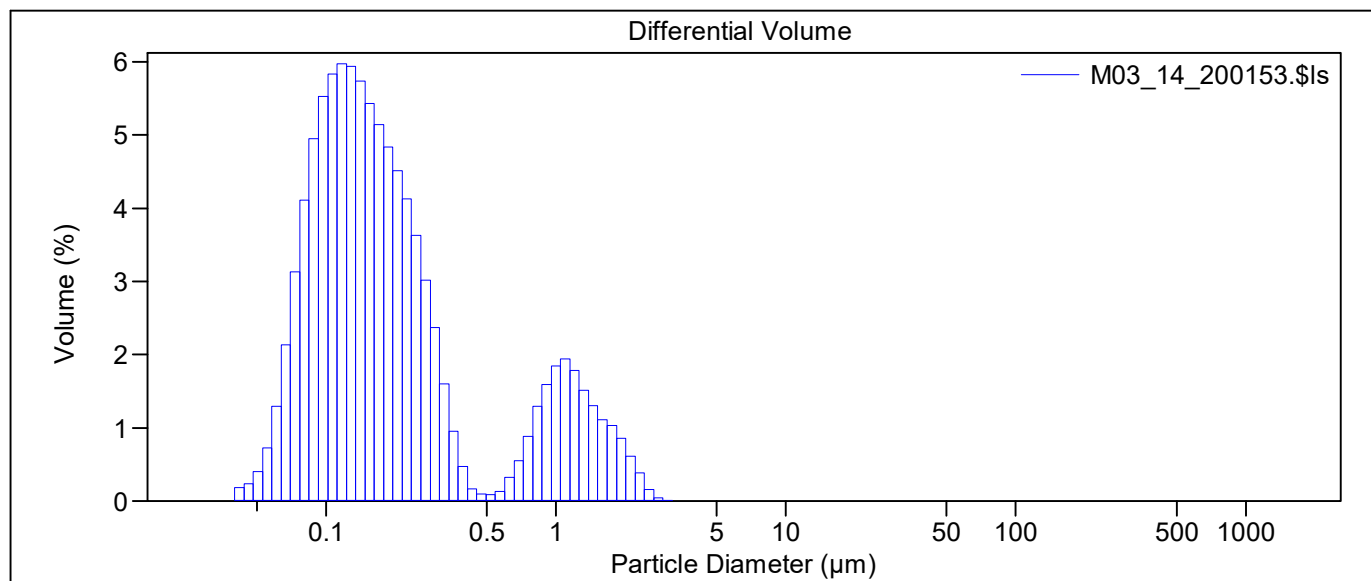
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_14_200153.\$ls		
	M03_14_200153.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.42%		
LS 13 320	Universal Liquid Module		
Start time:	20:00 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	69%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_14_200153.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.459 µm
Mean:	0.346 µm		Variance:	0.211 µm ²
Median:	0.158 µm		C.V.:	133%
Mean/Median ratio:	2.195		Skewness:	2.312 Right skewed
Mode:	0.117 µm		Kurtosis:	4.833 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.158 µm	0.268 µm	1.086 µm

Surface Area Statistics (Arithmetic)			M03_14_200153.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.171 µm
Mean:	0.148 µm		Variance:	0.029 µm ²
Median:	0.110 µm		C.V.:	115%
Mean/Median ratio:	1.348		Skewness:	6.511 Right skewed
Mode:	0.097 µm		Kurtosis:	52.82 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.157 µm	0.225 µm

Number Statistics (Arithmetic)			M03_14_200153.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.6%
Mean/Median ratio:	1.105		Skewness:	4.762 Right skewed
Mode:	0.073 μm		Kurtosis:	99.54 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.37
10	0.044	0.046	0.24	0.77	3.40
11	0.048	0.050	0.40	1.18	4.32
12	0.053	0.055	0.73	1.95	5.92
13	0.058	0.061	1.30	3.16	7.94
14	0.064	0.067	2.13	4.73	9.86
15	0.070	0.073	3.13	6.34	11.0
16	0.077	0.080	4.11	7.58	10.9
17	0.084	0.088	4.95	8.31	9.90
18	0.093	0.097	5.53	8.45	8.35
19	0.102	0.106	5.84	8.13	6.67
20	0.112	0.117	5.97	7.58	5.16
21	0.122	0.128	5.94	6.87	3.88
22	0.134	0.141	5.74	6.04	2.83
23	0.148	0.155	5.43	5.21	2.03
24	0.162	0.170	5.14	4.49	1.45
25	0.178	0.186	4.84	3.85	1.03
26	0.195	0.205	4.52	3.27	0.73
27	0.214	0.225	4.13	2.72	0.50
28	0.235	0.247	3.63	2.18	0.33
29	0.258	0.271	3.02	1.65	0.21
30	0.284	0.297	2.37	1.18	0.12
31	0.311	0.326	1.60	0.73	0.064
32	0.342	0.358	0.95	0.39	0.029
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.17	0.058	0.0029
35	0.452	0.474	0.097	0.030	0.0013
36	0.496	0.520	0.083	0.024	0.00082
37	0.545	0.571	0.13	0.034	0.00097
38	0.598	0.627	0.32	0.076	0.0018
39	0.656	0.688	0.55	0.12	0.0024
40	0.721	0.755	0.88	0.17	0.0028
41	0.791	0.829	1.29	0.23	0.0031
42	0.868	0.910	1.59	0.26	0.0029
43	0.953	0.999	1.85	0.27	0.0026
44	1.047	1.097	1.94	0.26	0.0020
45	1.149	1.204	1.79	0.22	0.0014

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.51	0.17	0.00091
47	1.385	1.451	1.30	0.13	0.00059
48	1.520	1.592	1.11	0.10	0.00038
49	1.668	1.748	1.03	0.087	0.00027
50	1.832	1.919	0.86	0.067	0.00017
51	2.011	2.107	0.62	0.043	0.000091
52	2.207	2.313	0.38	0.025	0.000043
53	2.423	2.539	0.16	0.0091	0.000013
54	2.660	2.787	0.044	0.0023	0.000003
55	2.920	3.059	0.0074	0.00036	3.58E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

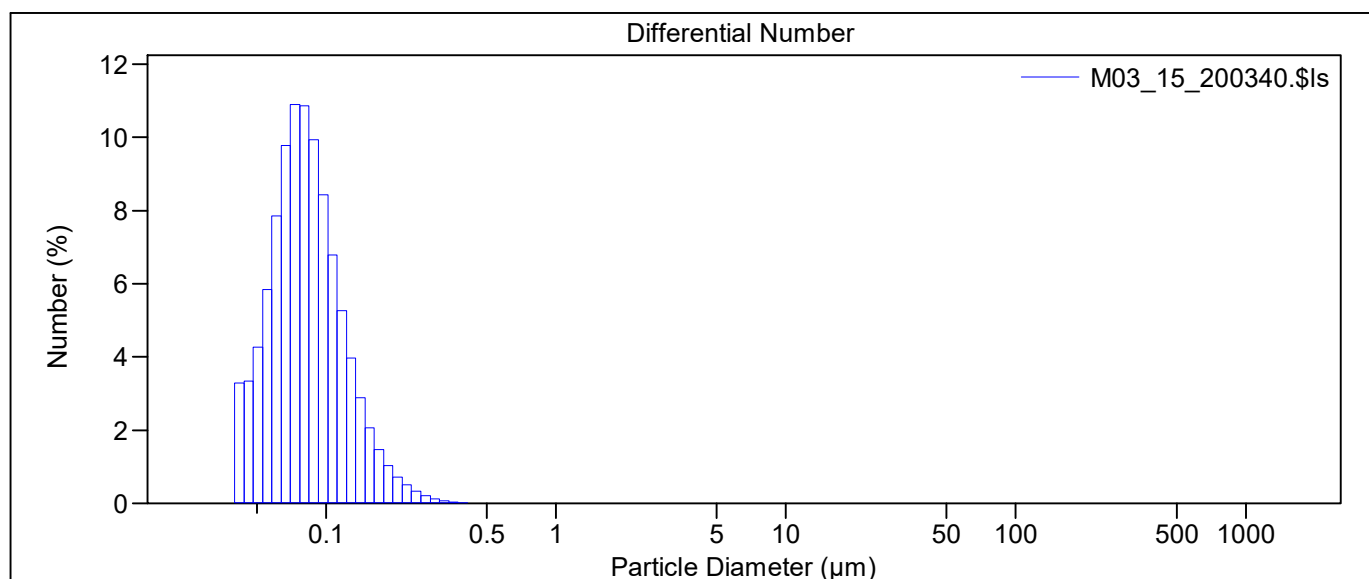
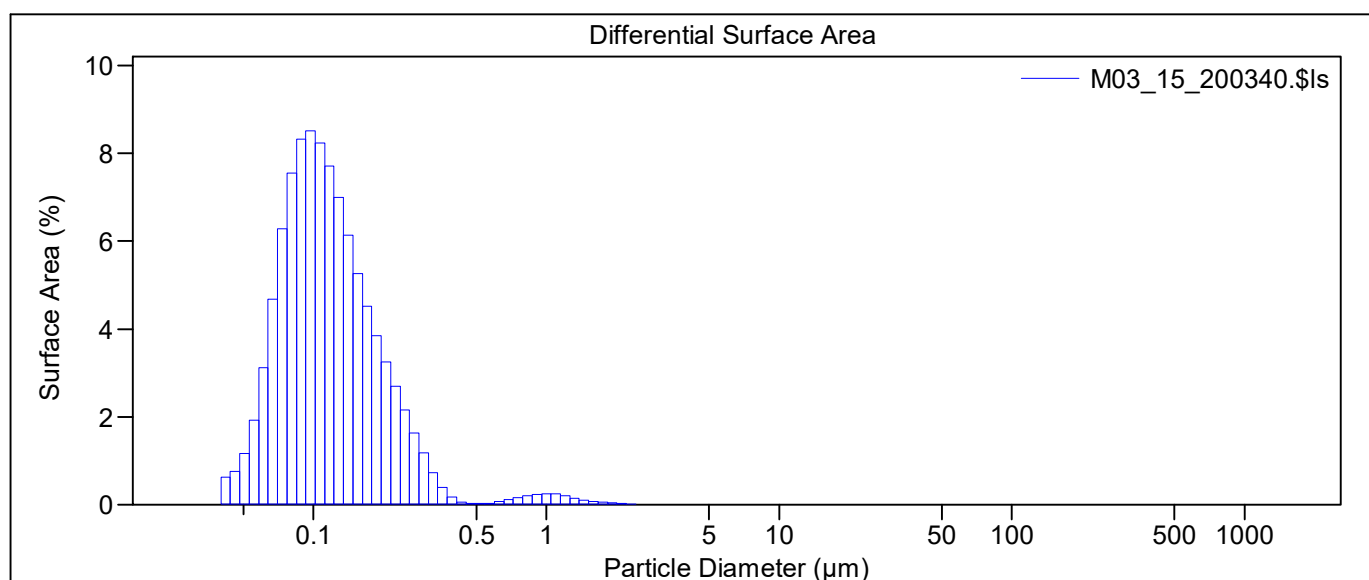
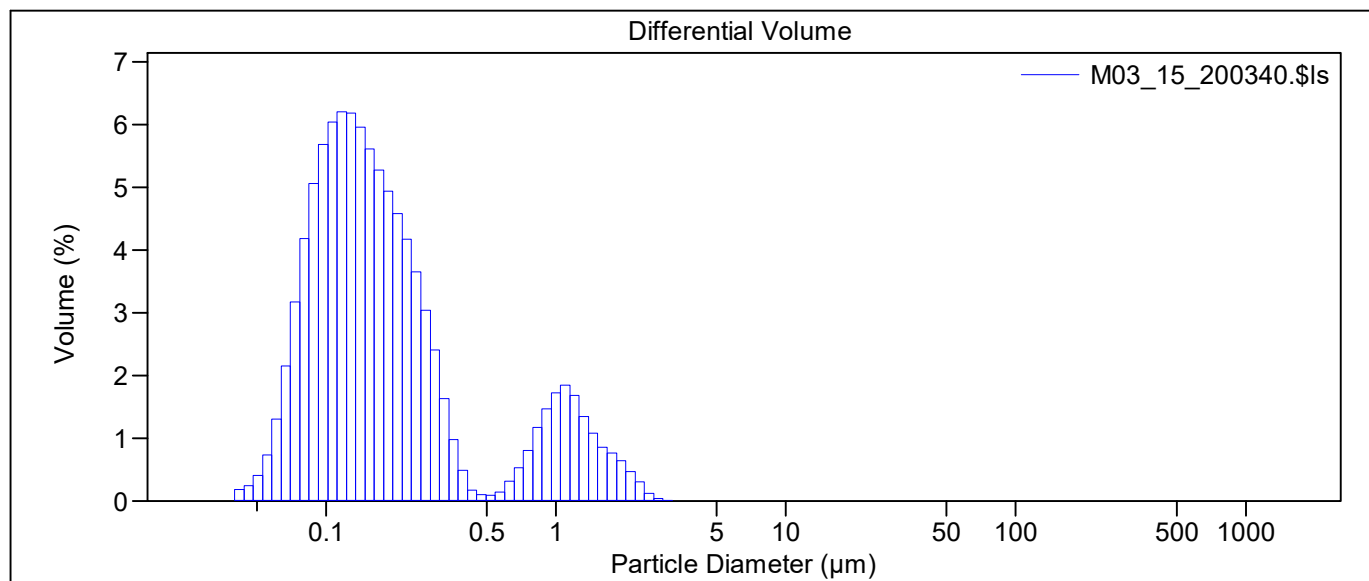
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M03\M03_15_200340.\$ls		
	M03_15_200340.\$ls		
File ID:	M03		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.61%		
LS 13 320	Universal Liquid Module		
Start time:	20:01 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	68%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M03_15_200340.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.424 µm
Mean:	0.319 µm		Variance:	0.180 µm ²
Median:	0.154 µm		C.V.:	133%
Mean/Median ratio:	2.070		Skewness:	2.526 Right skewed
Mode:	0.117 µm		Kurtosis:	6.150 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.154 µm	0.254 µm	1.002 µm

Surface Area Statistics (Arithmetic)			M03_15_200340.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.159 µm
Mean:	0.145 µm		Variance:	0.025 µm ²
Median:	0.110 µm		C.V.:	109%
Mean/Median ratio:	1.318		Skewness:	6.709 Right skewed
Mode:	0.097 µm		Kurtosis:	57.55 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.223 µm

Number Statistics (Arithmetic)			M03_15_200340.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.1%
Mean/Median ratio:	1.104		Skewness:	4.414 Right skewed
Mode:	0.073 μm		Kurtosis:	86.63 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M03.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.62	3.29
10	0.044	0.046	0.24	0.76	3.34
11	0.048	0.050	0.40	1.16	4.26
12	0.053	0.055	0.73	1.92	5.85
13	0.058	0.061	1.31	3.12	7.86
14	0.064	0.067	2.15	4.68	9.78
15	0.070	0.073	3.17	6.28	10.9
16	0.077	0.080	4.18	7.55	10.9
17	0.084	0.088	5.06	8.32	9.94
18	0.093	0.097	5.68	8.51	8.44
19	0.102	0.106	6.04	8.24	6.78
20	0.112	0.117	6.21	7.71	5.27
21	0.122	0.128	6.18	6.99	3.96
22	0.134	0.141	5.96	6.14	2.89
23	0.148	0.155	5.61	5.27	2.06
24	0.162	0.170	5.28	4.52	1.46
25	0.178	0.186	4.93	3.85	1.03
26	0.195	0.205	4.58	3.25	0.73
27	0.214	0.225	4.17	2.70	0.50
28	0.235	0.247	3.66	2.15	0.33
29	0.258	0.271	3.04	1.63	0.21
30	0.284	0.297	2.41	1.18	0.12
31	0.311	0.326	1.63	0.73	0.064
32	0.342	0.358	0.98	0.40	0.029
33	0.375	0.393	0.49	0.18	0.011
34	0.412	0.431	0.18	0.060	0.0030
35	0.452	0.474	0.11	0.032	0.0013
36	0.496	0.520	0.096	0.027	0.00092
37	0.545	0.571	0.14	0.036	0.0010
38	0.598	0.627	0.32	0.074	0.0018
39	0.656	0.688	0.53	0.11	0.0022
40	0.721	0.755	0.81	0.16	0.0025
41	0.791	0.829	1.18	0.21	0.0028
42	0.868	0.910	1.47	0.24	0.0026
43	0.953	0.999	1.73	0.25	0.0024
44	1.047	1.097	1.85	0.24	0.0019
45	1.149	1.204	1.68	0.20	0.0013
46	1.261	1.321	1.34	0.15	0.00079
47	1.385	1.451	1.08	0.11	0.00048
48	1.520	1.592	0.86	0.078	0.00029
49	1.668	1.748	0.77	0.064	0.00019
50	1.832	1.919	0.65	0.049	0.00012
51	2.011	2.107	0.47	0.032	0.000068
52	2.207	2.313	0.31	0.019	0.000033
53	2.423	2.539	0.13	0.0072	0.000010
54	2.660	2.787	0.036	0.0019	0.000002
55	2.920	3.059	0.0061	0.00029	2.89E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M03.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M04\M04.\$av
M04.\$av
File ID: M04
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M04.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.360 µm
Mean:	0.286 µm	Variance:	0.129 µm ²
Median:	0.152 µm	C.V.:	126%
Mean/Median ratio:	1.882	Skewness:	2.580 Right skewed
Mode:	0.117 µm	Kurtosis:	6.571 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.082 µm	0.105 µm	0.152 µm	0.243 µm	0.934 µm

Surface Area Statistics (Arithmetic) M04.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.143 µm
Mean:	0.144 µm	Variance:	0.020 µm ²
Median:	0.111 µm	C.V.:	99.4%
Mean/Median ratio:	1.291	Skewness:	6.365 Right skewed
Mode:	0.097 µm	Kurtosis:	52.01 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.069 µm	0.085 µm	0.111 µm	0.157 µm	0.223 µm

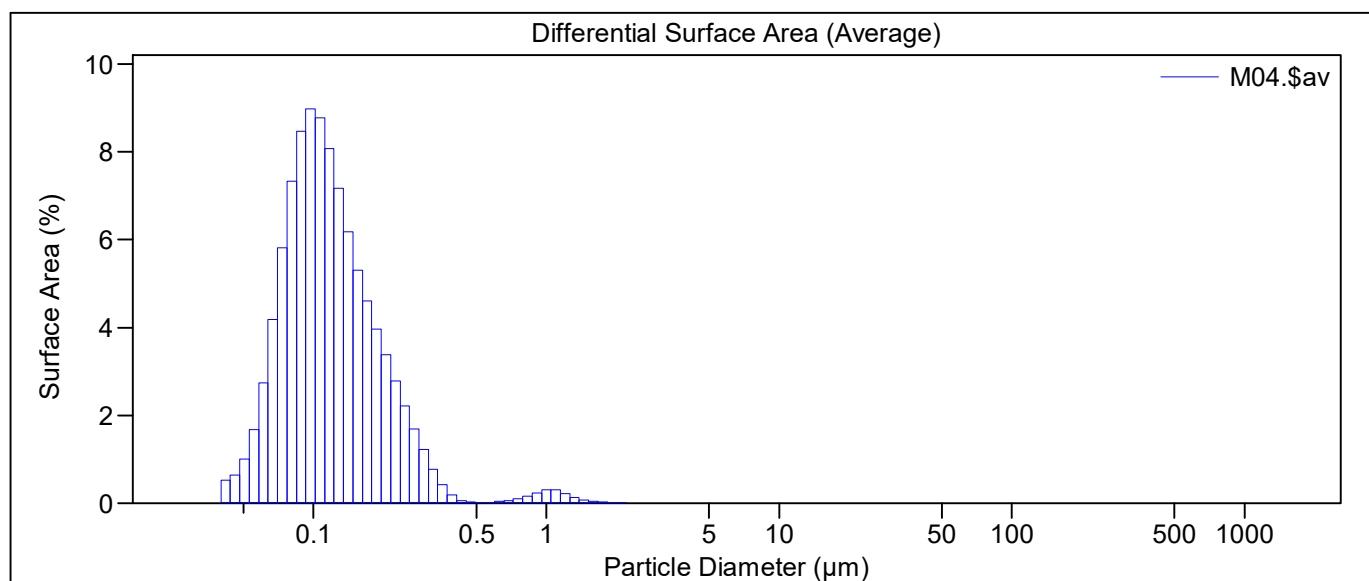
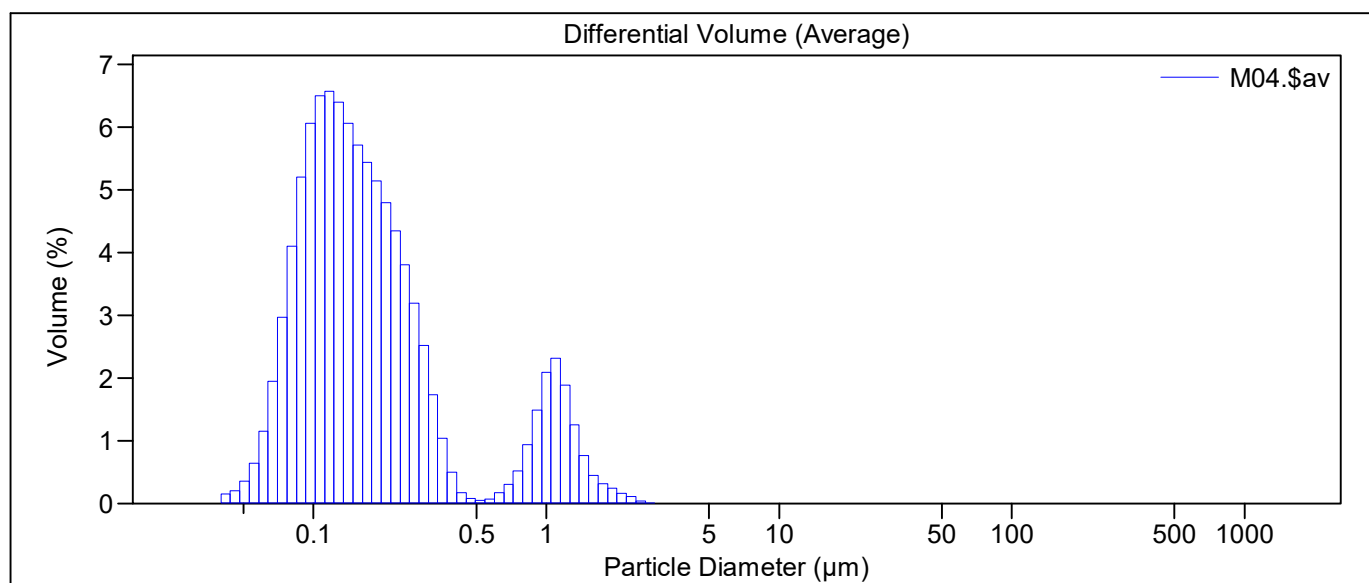
Number Statistics (Arithmetic)

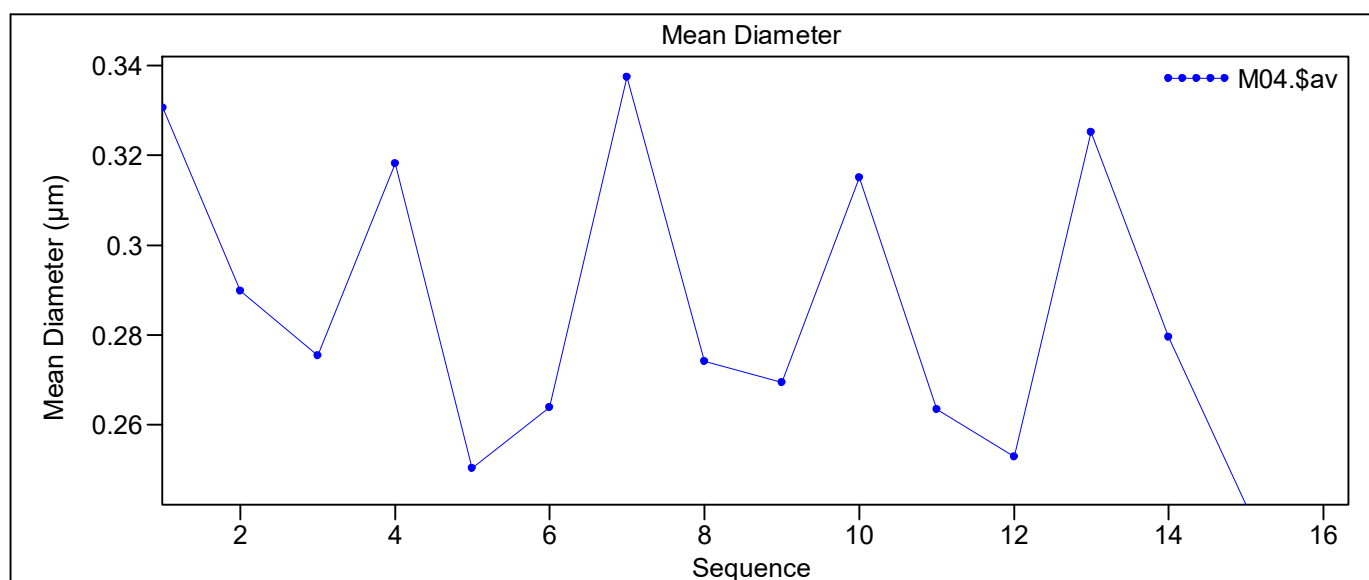
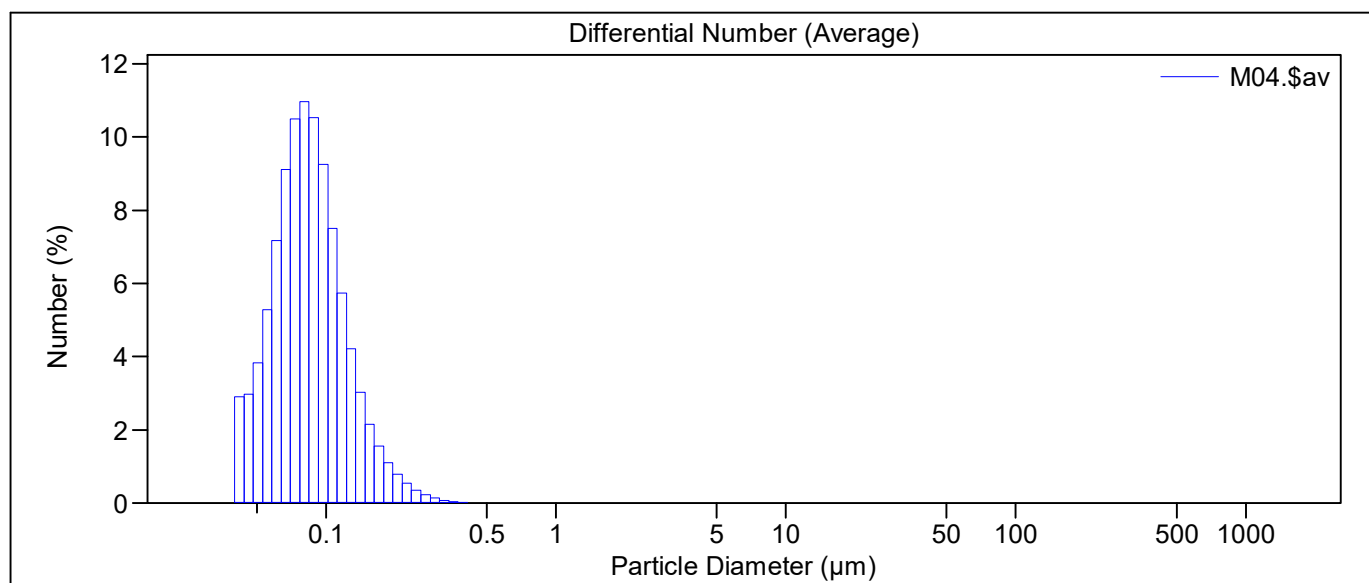
M04.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.039 μm
Mean:	0.090 μm	Variance:	0.0015 μm^2
Median:	0.082 μm	C.V.:	43.3%
Mean/Median ratio:	1.096	Skewness:	4.019 Right skewed
Mode:	0.080 μm	Kurtosis:	69.18 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.053 μm	0.066 μm	0.082 μm	0.105 μm	0.134 μm





M04.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.15	0.53	2.91
10	0.044	0.046	0.21	0.65	2.97
11	0.048	0.050	0.35	1.01	3.83
12	0.053	0.055	0.64	1.67	5.28
13	0.058	0.061	1.16	2.73	7.17
14	0.064	0.067	1.94	4.19	9.11
15	0.070	0.073	2.97	5.82	10.5
16	0.077	0.080	4.10	7.33	11.0
17	0.084	0.088	5.21	8.47	10.5

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M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	6.06	8.98	9.26
19	0.102	0.106	6.50	8.77	7.51
20	0.112	0.117	6.57	8.08	5.74
21	0.122	0.128	6.40	7.17	4.22
22	0.134	0.141	6.06	6.19	3.02
23	0.148	0.155	5.71	5.31	2.15
24	0.162	0.170	5.44	4.61	1.55
25	0.178	0.186	5.14	3.97	1.11
26	0.195	0.205	4.80	3.38	0.78
27	0.214	0.225	4.35	2.79	0.54
28	0.235	0.247	3.81	2.22	0.35
29	0.258	0.271	3.19	1.70	0.22
30	0.284	0.297	2.52	1.22	0.13
31	0.311	0.326	1.74	0.77	0.070
32	0.342	0.358	1.04	0.42	0.032
33	0.375	0.393	0.50	0.18	0.011
34	0.412	0.431	0.18	0.059	0.0031
35	0.452	0.474	0.078	0.024	0.0010
36	0.496	0.520	0.056	0.015	0.00055
37	0.545	0.571	0.075	0.019	0.00056
38	0.598	0.627	0.18	0.040	0.00099
39	0.656	0.688	0.30	0.063	0.0013
40	0.721	0.755	0.52	0.099	0.0017
41	0.791	0.829	0.93	0.16	0.0023
42	0.868	0.910	1.49	0.23	0.0028
43	0.953	0.999	2.09	0.30	0.0029
44	1.047	1.097	2.32	0.30	0.0025
45	1.149	1.204	1.88	0.23	0.0015
46	1.261	1.321	1.25	0.14	0.00076
47	1.385	1.451	0.77	0.076	0.00035
48	1.520	1.592	0.45	0.041	0.00016
49	1.668	1.748	0.32	0.026	0.000084
50	1.832	1.919	0.24	0.018	0.000048
51	2.011	2.107	0.16	0.011	0.000024
52	2.207	2.313	0.11	0.0067	0.000012
53	2.423	2.539	0.045	0.0025	0.000004
54	2.660	2.787	0.013	0.00065	0.000001
55	2.920	3.059	0.0023	0.00011	1.13E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

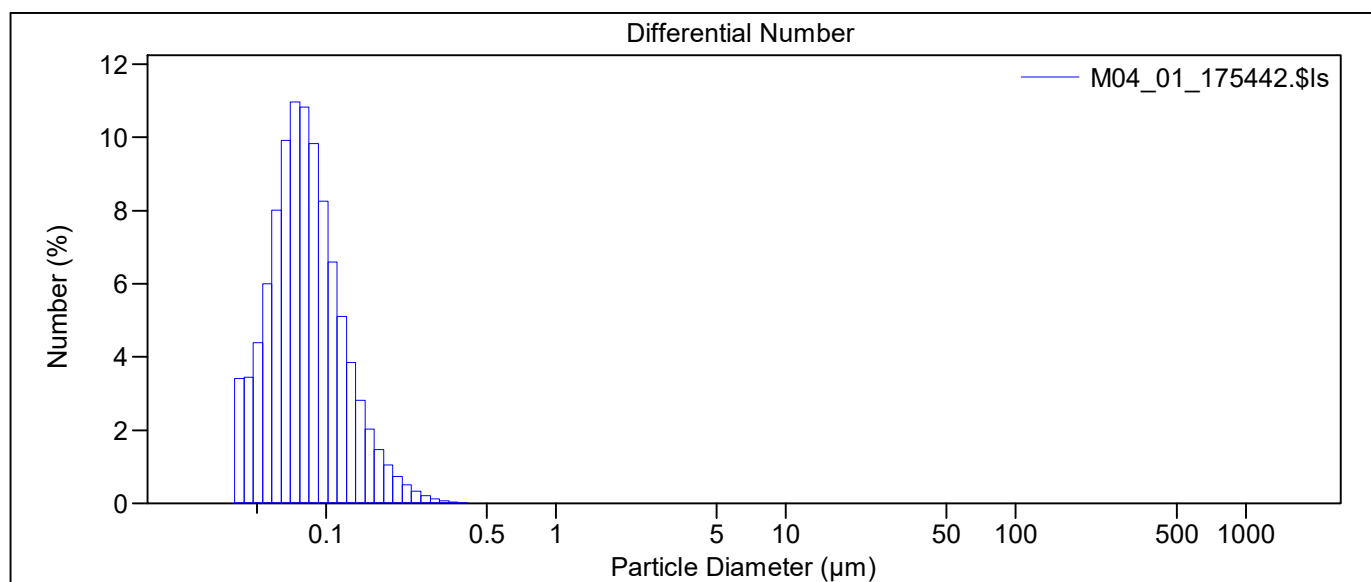
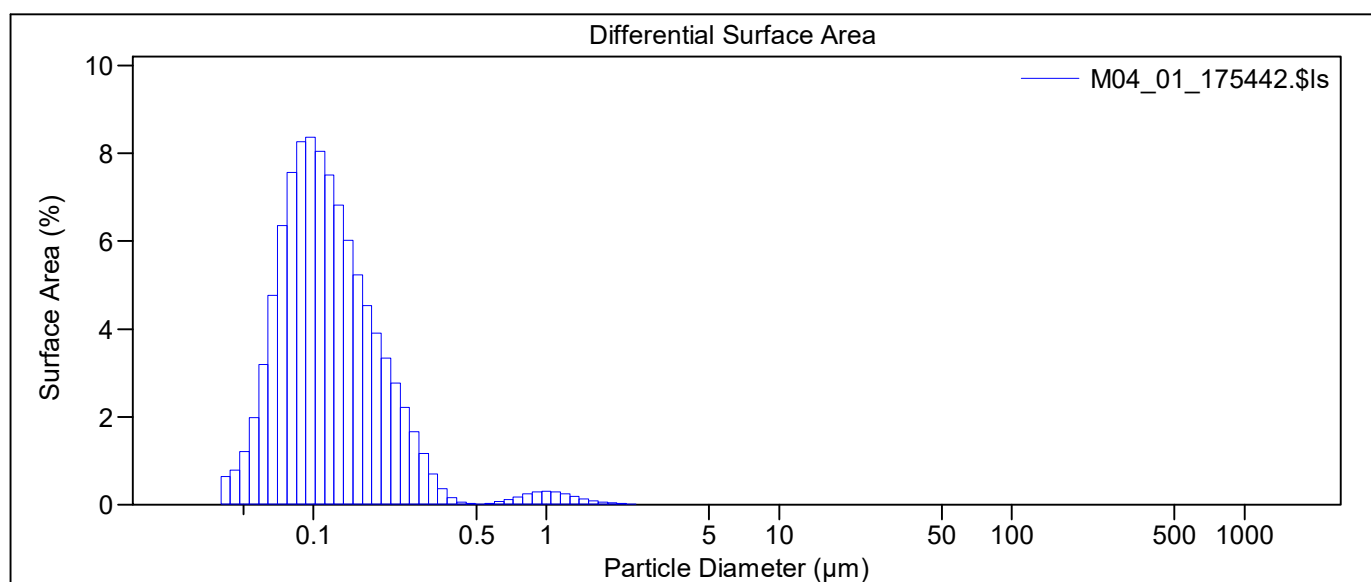
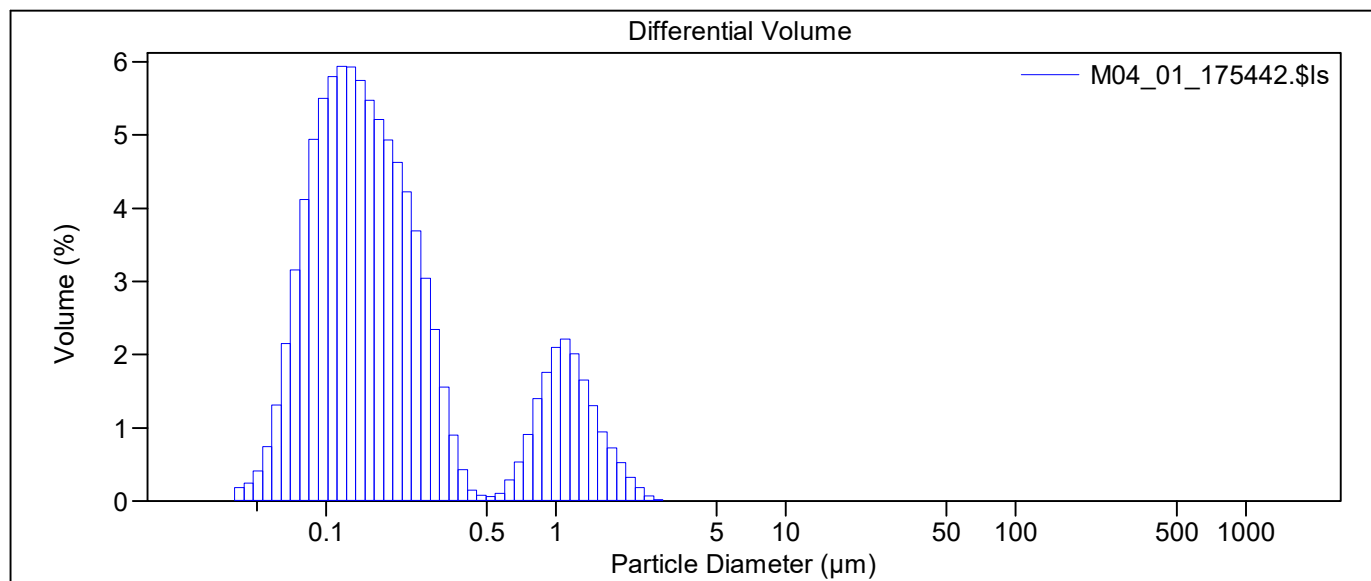
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_01_175442.\$ls		
	M04_01_175442.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.49%		
LS 13 320	Universal Liquid Module		
Start time:	17:53 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	68%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_01_175442.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.422 µm
Mean:	0.331 µm		Variance:	0.178 µm ²
Median:	0.158 µm		C.V.:	128%
Mean/Median ratio:	2.097		Skewness:	2.246 Right skewed
Mode:	0.117 µm		Kurtosis:	4.547 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.158 µm	0.264 µm	1.046 µm

Surface Area Statistics (Arithmetic)			M04_01_175442.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.164 µm
Mean:	0.148 µm		Variance:	0.027 µm ²
Median:	0.110 µm		C.V.:	111%
Mean/Median ratio:	1.341		Skewness:	6.130 Right skewed
Mode:	0.097 µm		Kurtosis:	46.57 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.157 µm	0.225 µm

Number Statistics (Arithmetic)			M04_01_175442.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.7%
Mean/Median ratio:	1.106		Skewness:	4.633 Right skewed
Mode:	0.073 μm		Kurtosis:	89.77 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.64	3.41
10	0.044	0.046	0.24	0.79	3.45
11	0.048	0.050	0.41	1.20	4.39
12	0.053	0.055	0.74	1.98	5.99
13	0.058	0.061	1.32	3.19	8.01
14	0.064	0.067	2.15	4.76	9.91
15	0.070	0.073	3.15	6.35	11.0
16	0.077	0.080	4.12	7.56	10.8
17	0.084	0.088	4.94	8.26	9.82
18	0.093	0.097	5.50	8.37	8.26
19	0.102	0.106	5.80	8.04	6.59
20	0.112	0.117	5.94	7.51	5.10
21	0.122	0.128	5.93	6.82	3.85
22	0.134	0.141	5.74	6.02	2.82
23	0.148	0.155	5.47	5.23	2.03
24	0.162	0.170	5.22	4.54	1.46
25	0.178	0.186	4.94	3.91	1.05
26	0.195	0.205	4.62	3.34	0.74
27	0.214	0.225	4.22	2.78	0.51
28	0.235	0.247	3.69	2.21	0.34
29	0.258	0.271	3.04	1.66	0.21
30	0.284	0.297	2.34	1.17	0.12
31	0.311	0.326	1.55	0.70	0.061
32	0.342	0.358	0.90	0.37	0.027
33	0.375	0.393	0.43	0.16	0.0098
34	0.412	0.431	0.15	0.052	0.0026
35	0.452	0.474	0.081	0.025	0.0010
36	0.496	0.520	0.064	0.018	0.00062
37	0.545	0.571	0.11	0.028	0.00079
38	0.598	0.627	0.29	0.068	0.0016
39	0.656	0.688	0.53	0.11	0.0022
40	0.721	0.755	0.91	0.18	0.0029
41	0.791	0.829	1.40	0.25	0.0034
42	0.868	0.910	1.76	0.29	0.0032
43	0.953	0.999	2.10	0.31	0.0029
44	1.047	1.097	2.21	0.30	0.0023
45	1.149	1.204	2.01	0.25	0.0016
46	1.261	1.321	1.65	0.18	0.00098
47	1.385	1.451	1.30	0.13	0.00059
48	1.520	1.592	0.95	0.088	0.00032
49	1.668	1.748	0.73	0.062	0.00019
50	1.832	1.919	0.52	0.040	0.00010
51	2.011	2.107	0.32	0.023	0.000047
52	2.207	2.313	0.19	0.012	0.000021
53	2.423	2.539	0.073	0.0042	0.000006
54	2.660	2.787	0.019	0.0010	0.000001
55	2.920	3.059	0.0037	0.00018	1.78E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

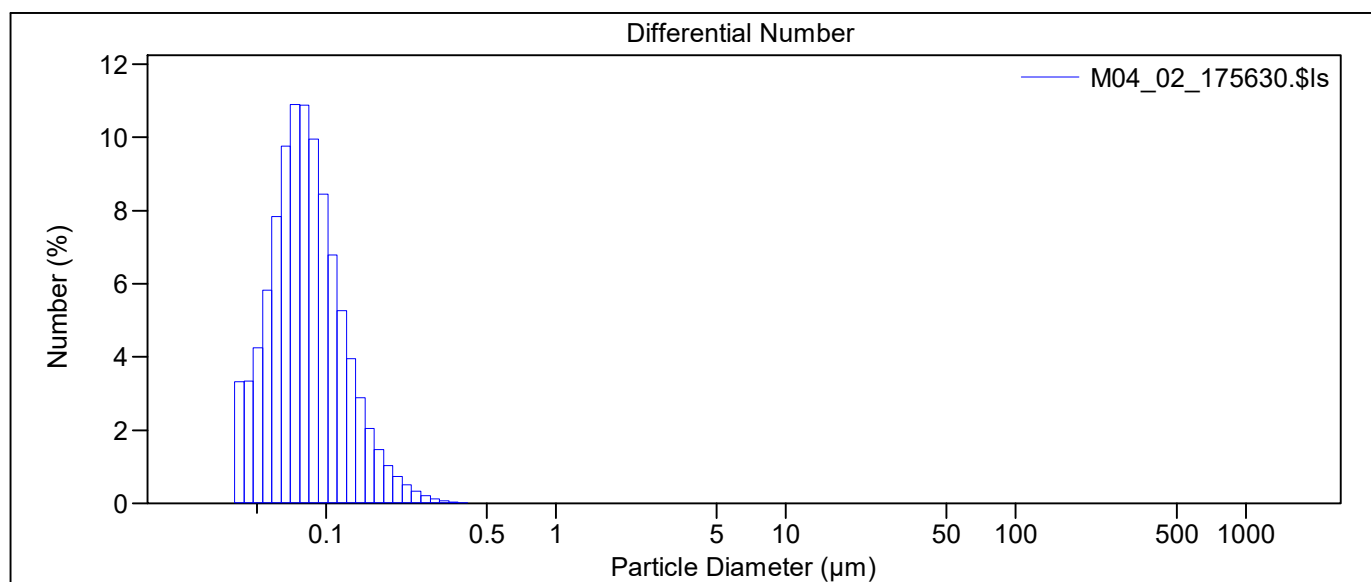
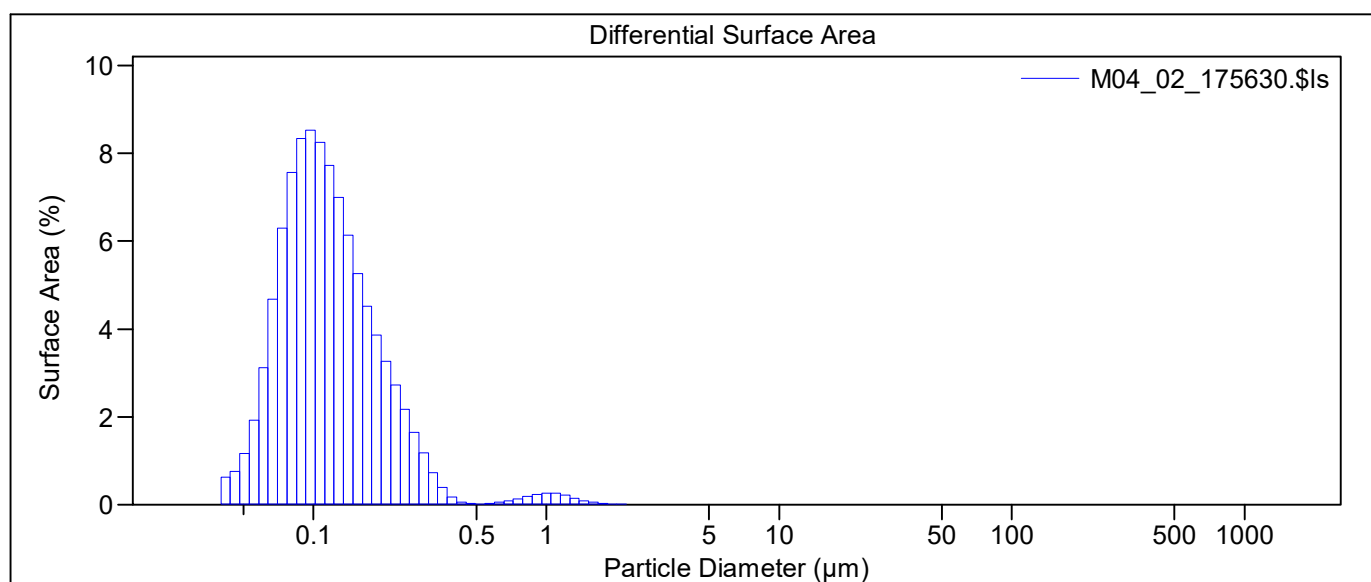
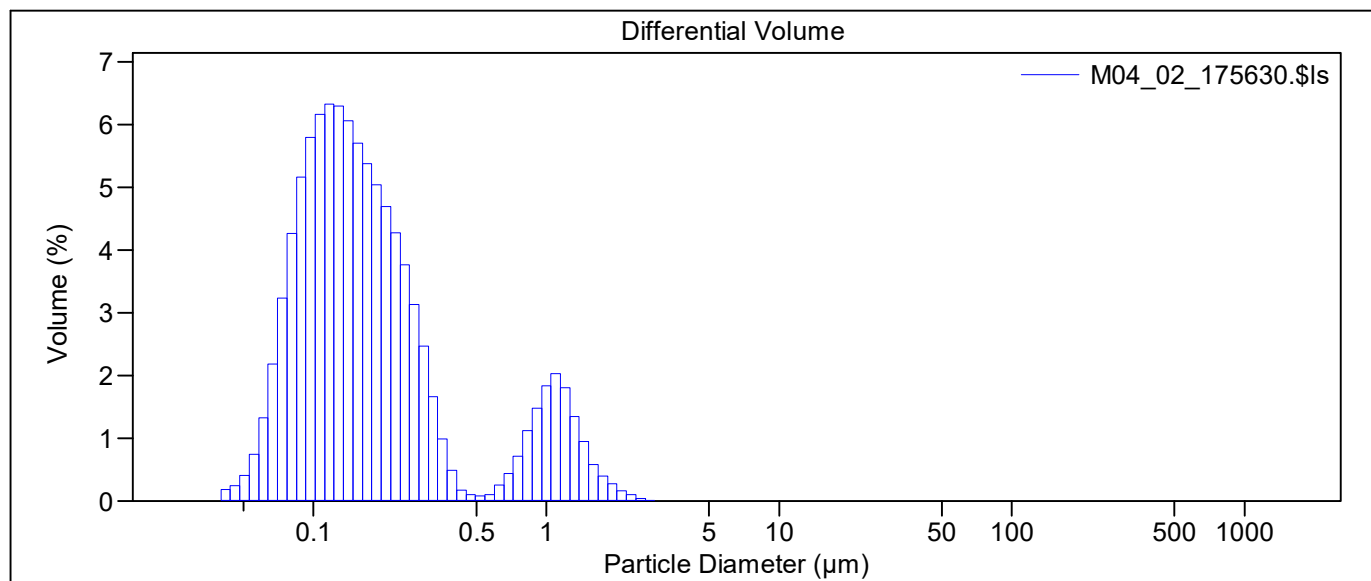
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_02_175630.\$ls		
	M04_02_175630.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.84%		
LS 13 320	Universal Liquid Module		
Start time:	17:54 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	70%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_02_175630.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.367 μm
Mean:	0.290 μm		Variance:	0.135 μm ²
Median:	0.152 μm		C.V.:	127%
Mean/Median ratio:	1.911		Skewness:	2.542 Right skewed
Mode:	0.117 μm		Kurtosis:	6.272 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.104 μm	0.152 μm	0.245 μm	0.927 μm

Surface Area Statistics (Arithmetic)			M04_02_175630.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.145 µm
Mean:	0.143 µm		Variance:	0.021 µm ²
Median:	0.110 µm		C.V.:	102%
Mean/Median ratio:	1.297		Skewness:	6.364 Right skewed
Mode:	0.097 µm		Kurtosis:	51.87 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.222 µm

Number Statistics (Arithmetic)			M04_02_175630.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	43.9%
Mean/Median ratio:	1.103		Skewness:	4.096 Right skewed
Mode:	0.073 μm		Kurtosis:	71.31 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.62	3.32
10	0.044	0.046	0.24	0.76	3.35
11	0.048	0.050	0.41	1.16	4.24
12	0.053	0.055	0.75	1.92	5.83
13	0.058	0.061	1.33	3.11	7.84
14	0.064	0.067	2.19	4.68	9.77
15	0.070	0.073	3.23	6.29	10.9
16	0.077	0.080	4.27	7.56	10.9
17	0.084	0.088	5.16	8.34	9.95
18	0.093	0.097	5.80	8.53	8.45
19	0.102	0.106	6.16	8.26	6.78
20	0.112	0.117	6.32	7.72	5.27
21	0.122	0.128	6.29	7.00	3.96
22	0.134	0.141	6.06	6.14	2.88
23	0.148	0.155	5.71	5.27	2.05
24	0.162	0.170	5.38	4.52	1.46
25	0.178	0.186	5.04	3.86	1.03
26	0.195	0.205	4.69	3.27	0.73
27	0.214	0.225	4.28	2.72	0.50
28	0.235	0.247	3.76	2.18	0.33
29	0.258	0.271	3.14	1.65	0.21
30	0.284	0.297	2.47	1.18	0.13
31	0.311	0.326	1.67	0.73	0.064
32	0.342	0.358	0.99	0.39	0.029
33	0.375	0.393	0.49	0.18	0.011
34	0.412	0.431	0.18	0.058	0.0029
35	0.452	0.474	0.099	0.030	0.0012
36	0.496	0.520	0.078	0.022	0.00074
37	0.545	0.571	0.11	0.027	0.00076
38	0.598	0.627	0.25	0.058	0.0014
39	0.656	0.688	0.43	0.090	0.0018
40	0.721	0.755	0.71	0.13	0.0022
41	0.791	0.829	1.12	0.19	0.0026
42	0.868	0.910	1.48	0.23	0.0026
43	0.953	0.999	1.84	0.26	0.0025
44	1.047	1.097	2.03	0.26	0.0020
45	1.149	1.204	1.80	0.21	0.0014

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M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.35	0.15	0.00078
47	1.385	1.451	0.95	0.094	0.00042
48	1.520	1.592	0.58	0.052	0.00019
49	1.668	1.748	0.40	0.032	0.000098
50	1.832	1.919	0.27	0.020	0.000051
51	2.011	2.107	0.16	0.011	0.000023
52	2.207	2.313	0.11	0.0065	0.000011
53	2.423	2.539	0.044	0.0024	0.000004
54	2.660	2.787	0.012	0.00059	0.000001
55	2.920	3.059	0.0025	0.00012	1.17E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

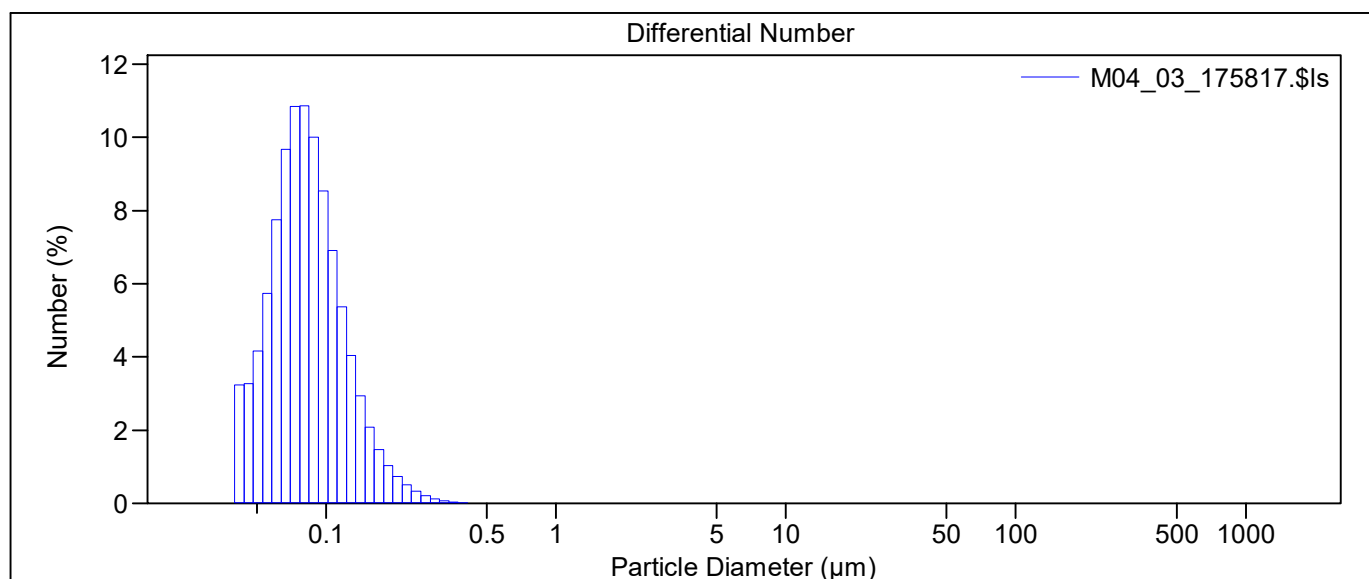
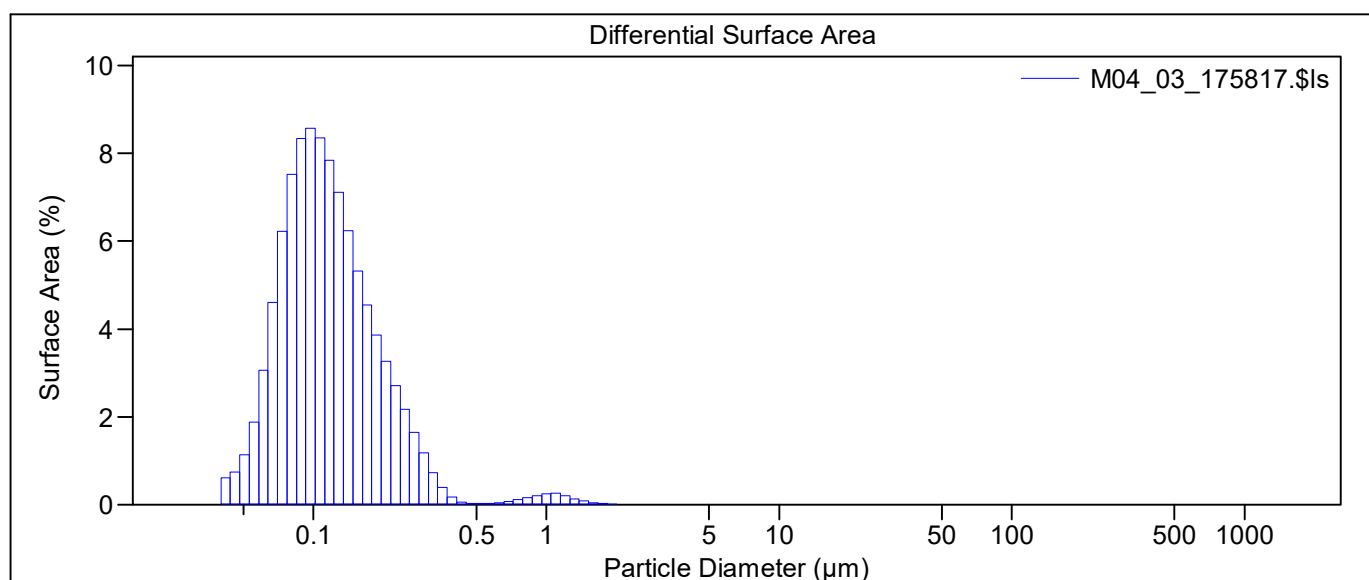
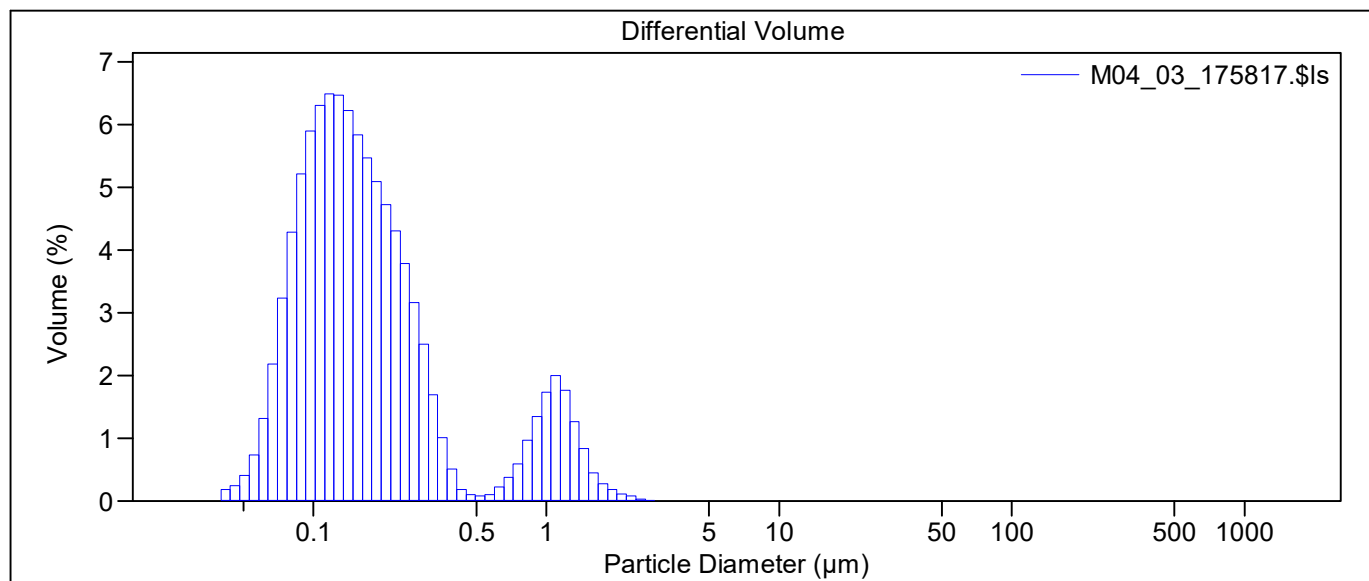
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_03_175817.\$ls		
	M04_03_175817.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.97%		
LS 13 320	Universal Liquid Module		
Start time:	17:56 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	69%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_03_175817.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.346 µm
Mean:	0.275 µm		Variance:	0.120 µm ²
Median:	0.150 µm		C.V.:	126%
Mean/Median ratio:	1.841		Skewness:	2.651 Right skewed
Mode:	0.117 µm		Kurtosis:	6.934 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.104 µm	0.150 µm	0.238 µm	0.874 µm

Surface Area Statistics (Arithmetic)			M04_03_175817.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.138 µm
Mean:	0.141 µm		Variance:	0.019 µm ²
Median:	0.110 µm		C.V.:	97.5%
Mean/Median ratio:	1.279		Skewness:	6.424 Right skewed
Mode:	0.097 µm		Kurtosis:	53.43 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.084 µm	0.110 µm	0.155 µm	0.220 µm

Number Statistics (Arithmetic)			M04_03_175817.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.089 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	43.6%
Mean/Median ratio:	1.102		Skewness:	3.887 Right skewed
Mode:	0.080 μm		Kurtosis:	64.54 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.103 μm	0.133 μm



M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.61	3.24
10	0.044	0.046	0.24	0.74	3.28
11	0.048	0.050	0.41	1.13	4.17
12	0.053	0.055	0.74	1.88	5.74
13	0.058	0.061	1.32	3.06	7.74
14	0.064	0.067	2.18	4.61	9.68
15	0.070	0.073	3.23	6.22	10.8
16	0.077	0.080	4.29	7.52	10.9
17	0.084	0.088	5.22	8.34	10.0
18	0.093	0.097	5.90	8.58	8.54
19	0.102	0.106	6.30	8.35	6.90
20	0.112	0.117	6.49	7.84	5.38
21	0.122	0.128	6.47	7.11	4.05
22	0.134	0.141	6.22	6.23	2.94
23	0.148	0.155	5.83	5.32	2.09
24	0.162	0.170	5.47	4.54	1.48
25	0.178	0.186	5.09	3.86	1.04
26	0.195	0.205	4.73	3.26	0.73
27	0.214	0.225	4.31	2.71	0.50
28	0.235	0.247	3.78	2.17	0.33
29	0.258	0.271	3.16	1.65	0.21
30	0.284	0.297	2.50	1.19	0.13
31	0.311	0.326	1.70	0.73	0.065
32	0.342	0.358	1.01	0.40	0.029
33	0.375	0.393	0.51	0.18	0.011
34	0.412	0.431	0.18	0.060	0.0030
35	0.452	0.474	0.10	0.031	0.0013
36	0.496	0.520	0.084	0.023	0.00079
37	0.545	0.571	0.10	0.025	0.00072
38	0.598	0.627	0.23	0.051	0.0012
39	0.656	0.688	0.37	0.077	0.0015
40	0.721	0.755	0.60	0.11	0.0018
41	0.791	0.829	0.97	0.17	0.0023
42	0.868	0.910	1.34	0.21	0.0024
43	0.953	0.999	1.73	0.24	0.0023
44	1.047	1.097	2.00	0.26	0.0020
45	1.149	1.204	1.77	0.21	0.0013
46	1.261	1.321	1.27	0.14	0.00073
47	1.385	1.451	0.83	0.081	0.00036
48	1.520	1.592	0.45	0.040	0.00015
49	1.668	1.748	0.28	0.022	0.000068
50	1.832	1.919	0.18	0.013	0.000034
51	2.011	2.107	0.11	0.0073	0.000015
52	2.207	2.313	0.080	0.0049	0.000009
53	2.423	2.539	0.035	0.0020	0.000003
54	2.660	2.787	0.0094	0.00048	0.000001
55	2.920	3.059	0.0023	0.00010	1.05E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

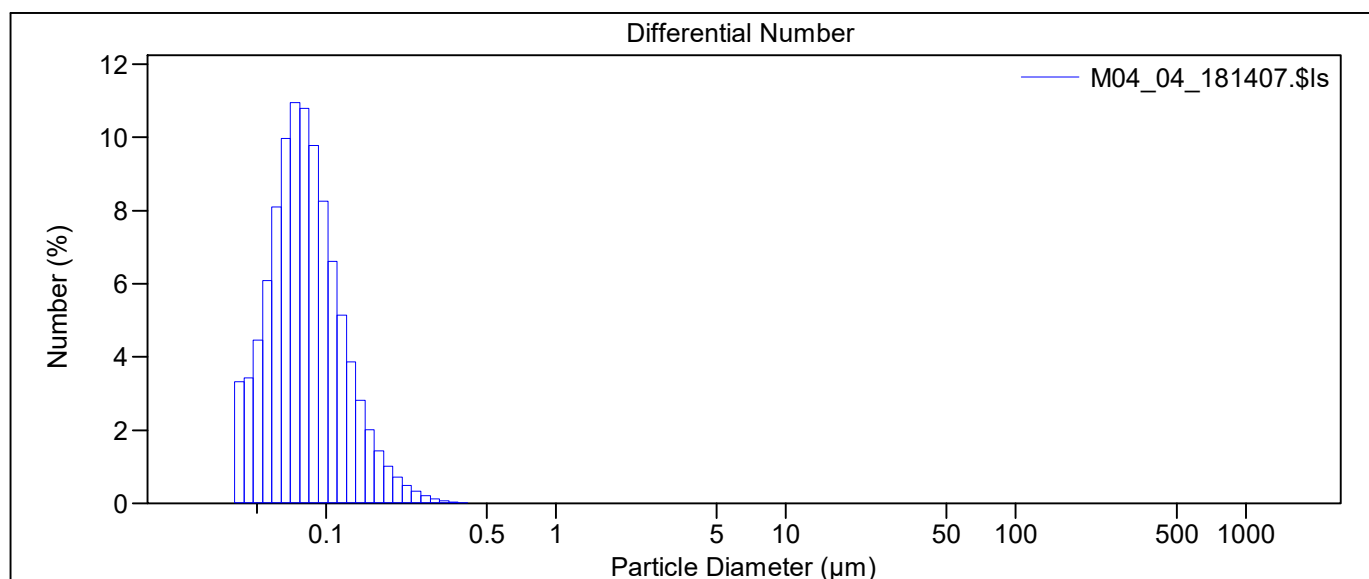
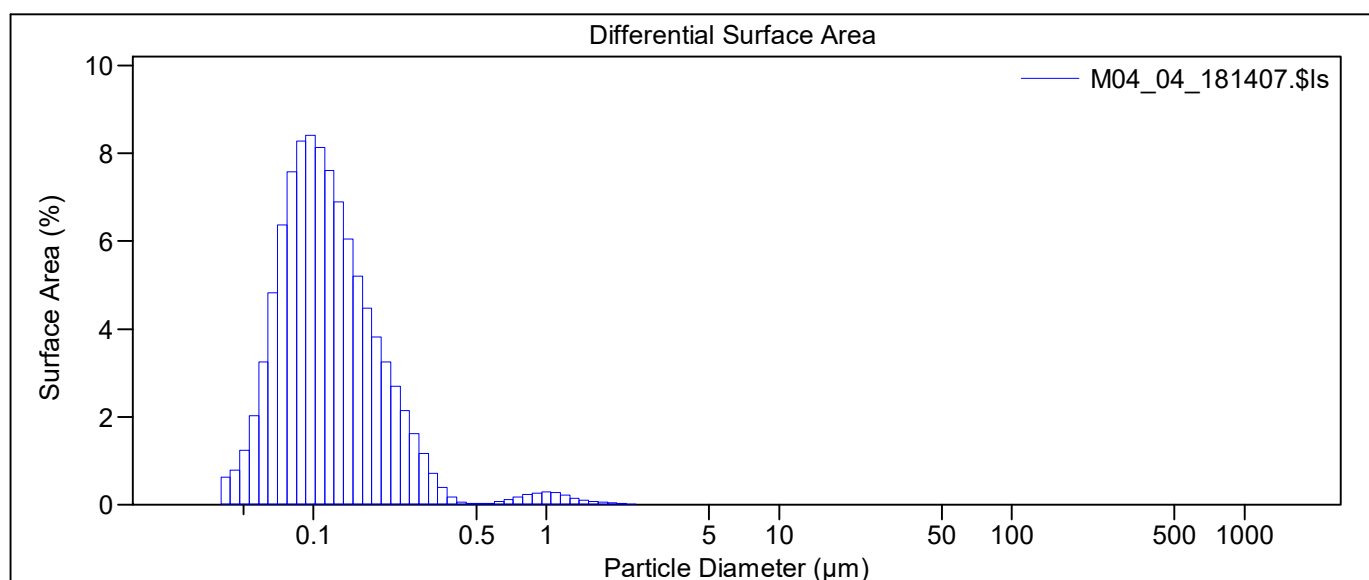
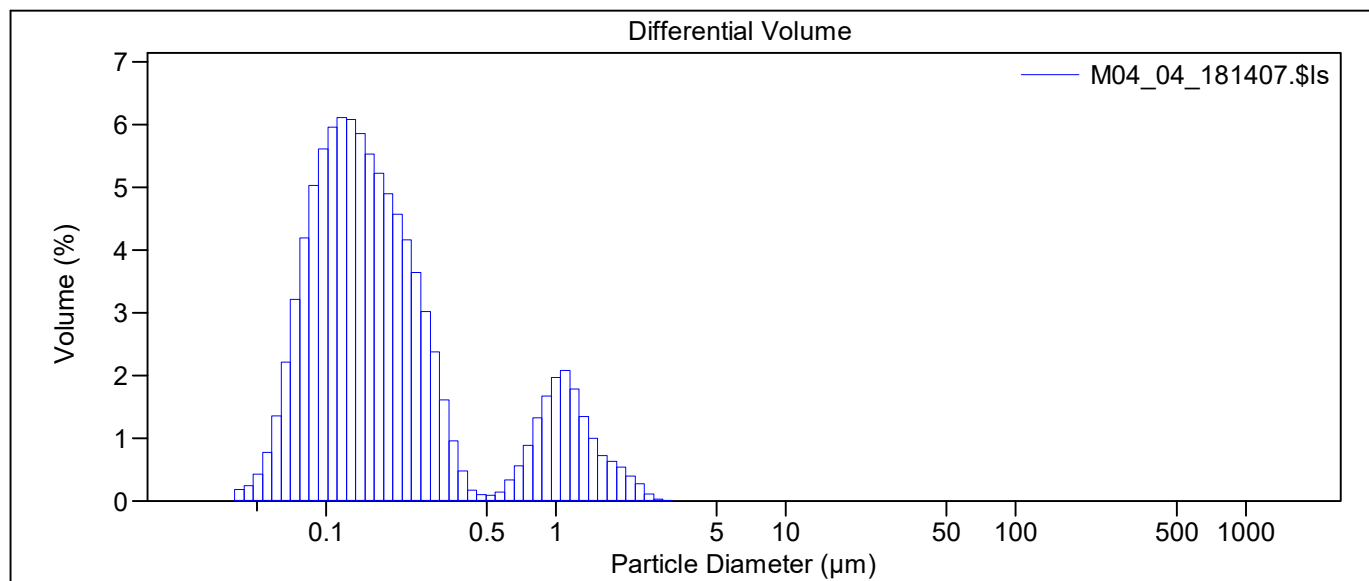
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File ID:	M04		
Operator:	PP		
Run number:	4		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.69%		
LS 13 320	Universal Liquid Module		
Start time:	18:12 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_04_181407.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.415 μm
Mean:	0.318 μm		Variance:	0.172 μm ²
Median:	0.155 μm		C.V.:	130%
Mean/Median ratio:	2.057		Skewness:	2.477 Right skewed
Mode:	0.117 μm		Kurtosis:	6.021 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.105 μm	0.155 μm	0.256 μm	0.997 μm

Surface Area Statistics (Arithmetic)			M04_04_181407.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.158 µm
Mean:	0.145 µm		Variance:	0.025 µm ²
Median:	0.110 µm		C.V.:	109%
Mean/Median ratio:	1.325		Skewness:	6.460 Right skewed
Mode:	0.097 µm		Kurtosis:	53.59 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.083 µm	0.110 µm	0.156 µm	0.224 µm

Number Statistics (Arithmetic)			M04_04_181407.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.4%
Mean/Median ratio:	1.106		Skewness:	4.469 Right skewed
Mode:	0.073 μm		Kurtosis:	85.48 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.63	3.32
10	0.044	0.046	0.25	0.79	3.43
11	0.048	0.050	0.43	1.23	4.46
12	0.053	0.055	0.77	2.03	6.08
13	0.058	0.061	1.36	3.25	8.11
14	0.064	0.067	2.21	4.82	9.97
15	0.070	0.073	3.22	6.38	10.9
16	0.077	0.080	4.20	7.58	10.8
17	0.084	0.088	5.03	8.28	9.78
18	0.093	0.097	5.61	8.41	8.25
19	0.102	0.106	5.96	8.13	6.62
20	0.112	0.117	6.12	7.61	5.13
21	0.122	0.128	6.09	6.89	3.86
22	0.134	0.141	5.86	6.04	2.81
23	0.148	0.155	5.53	5.20	2.01
24	0.162	0.170	5.22	4.47	1.43
25	0.178	0.186	4.90	3.82	1.02
26	0.195	0.205	4.57	3.25	0.72
27	0.214	0.225	4.16	2.70	0.49
28	0.235	0.247	3.64	2.15	0.33
29	0.258	0.271	3.02	1.62	0.20
30	0.284	0.297	2.38	1.16	0.12
31	0.311	0.326	1.61	0.72	0.062
32	0.342	0.358	0.96	0.39	0.028
33	0.375	0.393	0.48	0.18	0.011
34	0.412	0.431	0.17	0.059	0.0029
35	0.452	0.474	0.11	0.032	0.0013
36	0.496	0.520	0.097	0.027	0.00092
37	0.545	0.571	0.14	0.036	0.0010
38	0.598	0.627	0.33	0.077	0.0018
39	0.656	0.688	0.57	0.12	0.0023
40	0.721	0.755	0.88	0.17	0.0028
41	0.791	0.829	1.33	0.23	0.0031
42	0.868	0.910	1.67	0.27	0.0030
43	0.953	0.999	1.97	0.29	0.0026
44	1.047	1.097	2.08	0.28	0.0021
45	1.149	1.204	1.79	0.22	0.0014

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.35	0.15	0.00078
47	1.385	1.451	1.00	0.10	0.00044
48	1.520	1.592	0.73	0.066	0.00024
49	1.668	1.748	0.64	0.053	0.00016
50	1.832	1.919	0.54	0.041	0.00010
51	2.011	2.107	0.40	0.028	0.000057
52	2.207	2.313	0.28	0.017	0.000030
53	2.423	2.539	0.12	0.0067	0.000010
54	2.660	2.787	0.034	0.0018	0.000002
55	2.920	3.059	0.0059	0.00028	2.75E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

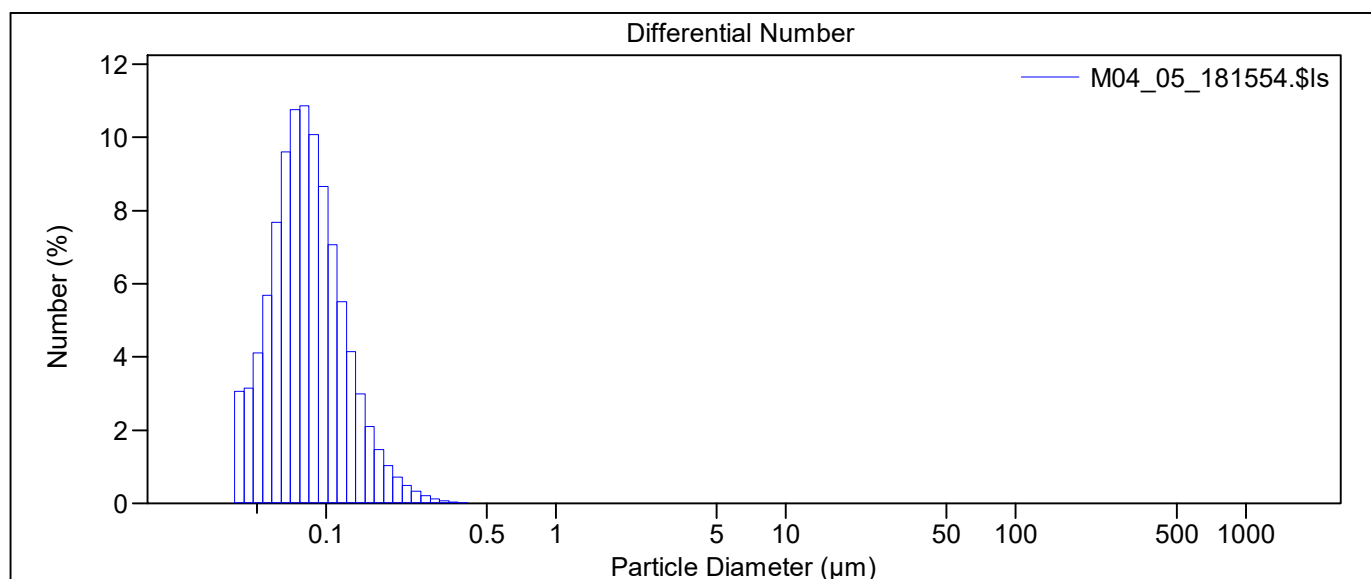
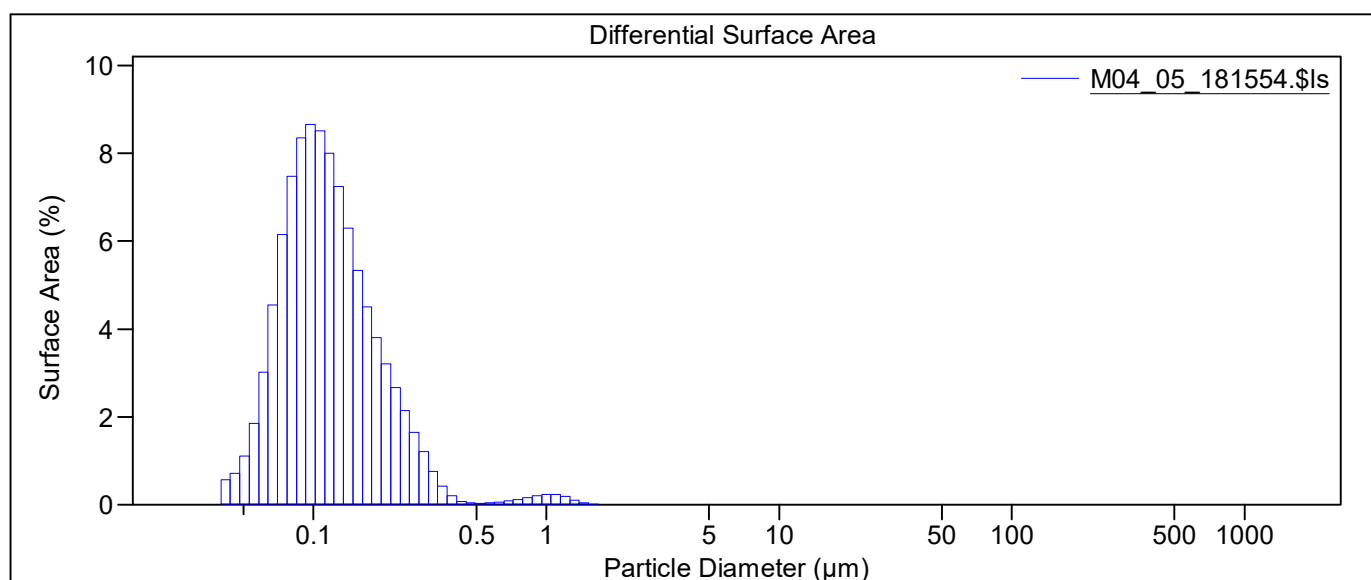
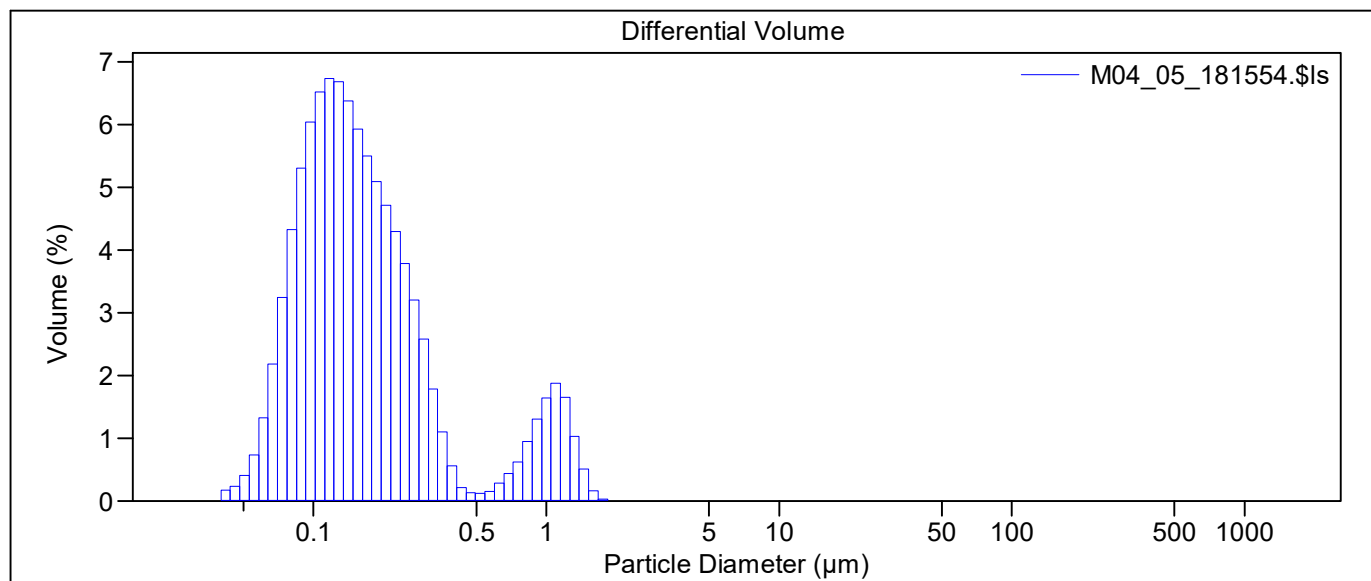
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File name:	D:\PP_PROFARB\POMIARY\M04\M04_05_181554.\$ls		
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File ID:	M04		
Operator:	PP		
Run number:	5		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.00%		
LS 13 320	Universal Liquid Module		
Start time:	18:14 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_05_181554.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.292 μm
Mean:	0.250 μm		Variance:	0.086 μm ²
Median:	0.147 μm		C.V.:	117%
Mean/Median ratio:	1.703		Skewness:	2.578 Right skewed
Mode:	0.117 μm		Kurtosis:	5.787 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.103 μm	0.147 μm	0.231 μm	0.690 μm

Surface Area Statistics (Arithmetic)			M04_05_181554.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.124 µm
Mean:	0.139 µm		Variance:	0.015 µm ²
Median:	0.110 µm		C.V.:	89.5%
Mean/Median ratio:	1.258		Skewness:	5.956 Right skewed
Mode:	0.097 µm		Kurtosis:	45.19 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.068 µm	0.084 µm	0.110 µm	0.154 µm	0.220 µm

Number Statistics (Arithmetic)			M04_05_181554.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.089 μm		Variance:	0.0015 μm ²
Median:	0.081 μm		C.V.:	43.2%
Mean/Median ratio:	1.101		Skewness:	3.600 Right skewed
Mode:	0.080 μm		Kurtosis:	51.84 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.053 μm	0.065 μm	0.081 μm	0.104 μm	0.133 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.57	3.06
10	0.044	0.046	0.23	0.71	3.15
11	0.048	0.050	0.40	1.11	4.12
12	0.053	0.055	0.74	1.85	5.68
13	0.058	0.061	1.32	3.02	7.68
14	0.064	0.067	2.19	4.55	9.61
15	0.070	0.073	3.24	6.14	10.8
16	0.077	0.080	4.33	7.47	10.9
17	0.084	0.088	5.31	8.35	10.1
18	0.093	0.097	6.04	8.66	8.67
19	0.102	0.106	6.52	8.51	7.07
20	0.112	0.117	6.73	8.01	5.52
21	0.122	0.128	6.69	7.24	4.14
22	0.134	0.141	6.38	6.30	2.99
23	0.148	0.155	5.93	5.33	2.10
24	0.162	0.170	5.50	4.51	1.47
25	0.178	0.186	5.09	3.80	1.03
26	0.195	0.205	4.72	3.20	0.72
27	0.214	0.225	4.30	2.66	0.50
28	0.235	0.247	3.79	2.14	0.33
29	0.258	0.271	3.20	1.64	0.21
30	0.284	0.297	2.58	1.21	0.13
31	0.311	0.326	1.79	0.76	0.067
32	0.342	0.358	1.10	0.43	0.031
33	0.375	0.393	0.56	0.20	0.012
34	0.412	0.431	0.21	0.068	0.0034
35	0.452	0.474	0.13	0.039	0.0016
36	0.496	0.520	0.13	0.034	0.0012
37	0.545	0.571	0.16	0.038	0.0011
38	0.598	0.627	0.29	0.064	0.0015
39	0.656	0.688	0.44	0.089	0.0018
40	0.721	0.755	0.63	0.12	0.0019
41	0.791	0.829	0.95	0.16	0.0022
42	0.868	0.910	1.31	0.20	0.0023
43	0.953	0.999	1.64	0.23	0.0022
44	1.047	1.097	1.87	0.24	0.0019
45	1.149	1.204	1.65	0.19	0.0012
46	1.261	1.321	1.03	0.11	0.00058
47	1.385	1.451	0.51	0.049	0.00022
48	1.520	1.592	0.16	0.014	0.000053
49	1.668	1.748	0.032	0.0025	0.000008
50	1.832	1.919	0.0043	0.00031	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

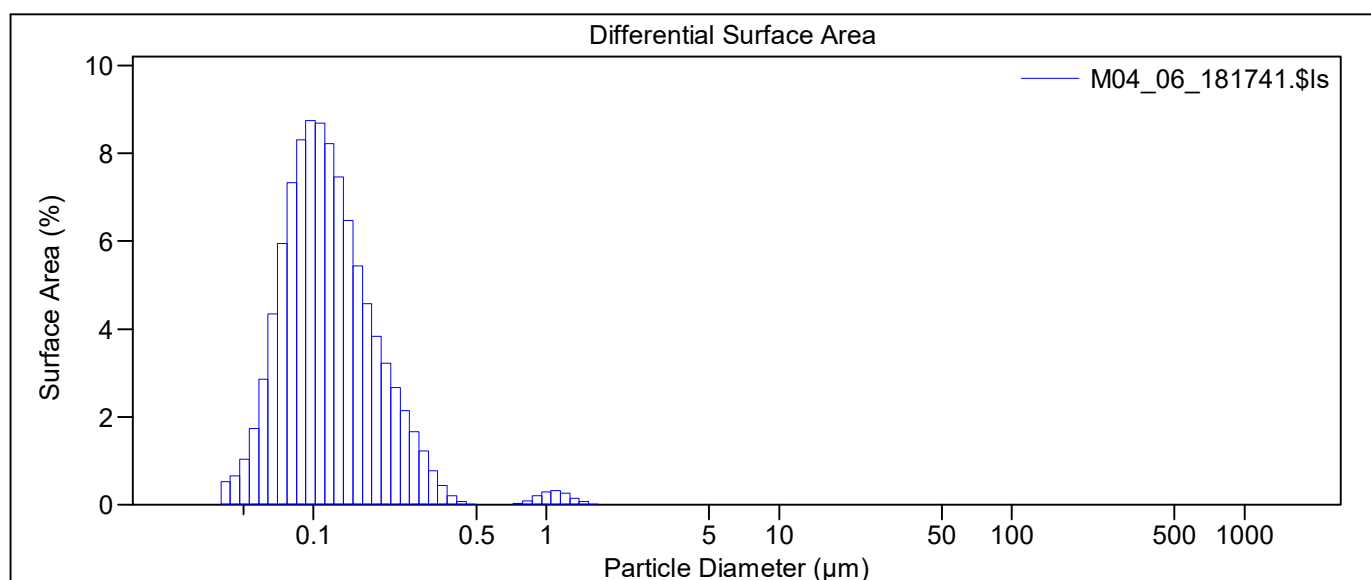
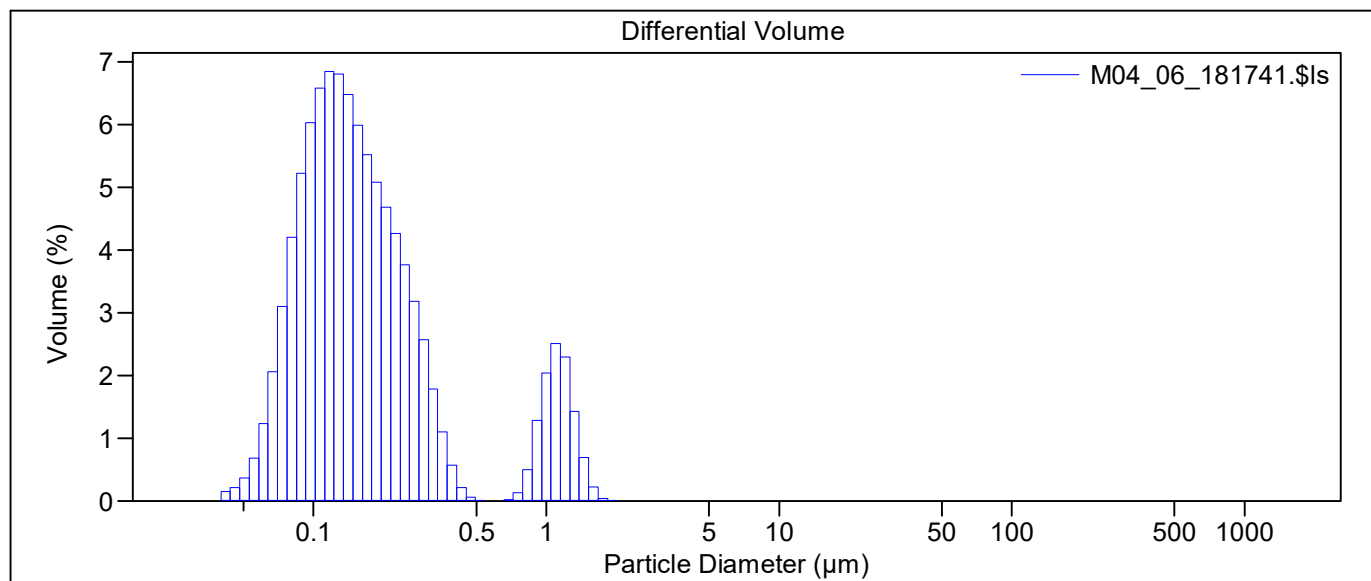
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_06_181741.\$ls		
	M04_06_181741.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.16%		
LS 13 320	Universal Liquid Module		
Start time:	18:16 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_06_181741.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.319 μm
Mean:	0.264 μm		Variance:	0.102 μm ²
Median:	0.148 μm		C.V.:	121%
Mean/Median ratio:	1.788		Skewness:	2.429 Right skewed
Mode:	0.117 μm		Kurtosis:	4.694 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.104 μm	0.148 μm	0.233 μm	0.904 μm

Surface Area Statistics (Arithmetic)			M04_06_181741.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.132 μm
Mean:	0.141 μm		Variance:	0.017 μm ²
Median:	0.111 μm		C.V.:	93.7%
Mean/Median ratio:	1.262		Skewness:	6.155 Right skewed
Mode:	0.097 μm		Kurtosis:	46.03 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.068 μm	0.085 μm	0.111 μm	0.155 μm	0.219 μm

Number Statistics (Arithmetic)			M04_06_181741.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.090 μm		Variance:	0.0015 μm ²
Median:	0.082 μm		C.V.:	42.9%
Mean/Median ratio:	1.098		Skewness:	3.734 Right skewed
Mode:	0.080 μm		Kurtosis:	59.66 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.053 μm	0.065 μm	0.082 μm	0.105 μm	0.134 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.16	0.53	2.88
10	0.044	0.046	0.21	0.65	2.97
11	0.048	0.050	0.37	1.03	3.90
12	0.053	0.055	0.68	1.73	5.42
13	0.058	0.061	1.24	2.85	7.40
14	0.064	0.067	2.07	4.35	9.36
15	0.070	0.073	3.10	5.94	10.6
16	0.077	0.080	4.20	7.33	10.9
17	0.084	0.088	5.23	8.31	10.2
18	0.093	0.097	6.03	8.74	8.92
19	0.102	0.106	6.58	8.69	7.36
20	0.112	0.117	6.84	8.23	5.78
21	0.122	0.128	6.81	7.46	4.35
22	0.134	0.141	6.48	6.47	3.13
23	0.148	0.155	5.99	5.44	2.19
24	0.162	0.170	5.52	4.57	1.52
25	0.178	0.186	5.08	3.83	1.06
26	0.195	0.205	4.69	3.22	0.74
27	0.214	0.225	4.27	2.67	0.51
28	0.235	0.247	3.76	2.15	0.34
29	0.258	0.271	3.19	1.65	0.22
30	0.284	0.297	2.58	1.22	0.13
31	0.311	0.326	1.79	0.77	0.070
32	0.342	0.358	1.10	0.43	0.032
33	0.375	0.393	0.57	0.20	0.013
34	0.412	0.431	0.21	0.069	0.0036
35	0.452	0.474	0.059	0.017	0.00075
36	0.496	0.520	0.0087	0.0024	0.000084
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0.019	0.0038	0.000078
40	0.721	0.755	0.14	0.025	0.00043
41	0.791	0.829	0.50	0.085	0.0012
42	0.868	0.910	1.29	0.20	0.0023
43	0.953	0.999	2.04	0.29	0.0028
44	1.047	1.097	2.51	0.32	0.0026
45	1.149	1.204	2.30	0.27	0.0018

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.43	0.15	0.00084
47	1.385	1.451	0.70	0.067	0.00031
48	1.520	1.592	0.22	0.020	0.000074
49	1.668	1.748	0.041	0.0033	0.000010
50	1.832	1.919	0.0052	0.00038	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

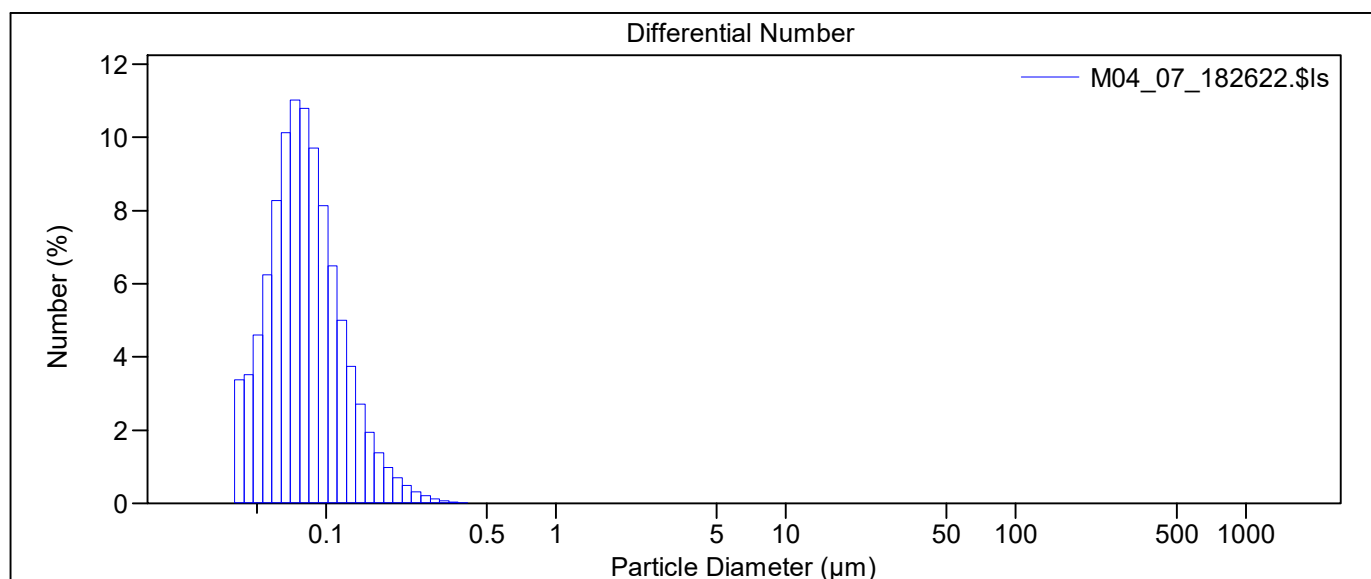
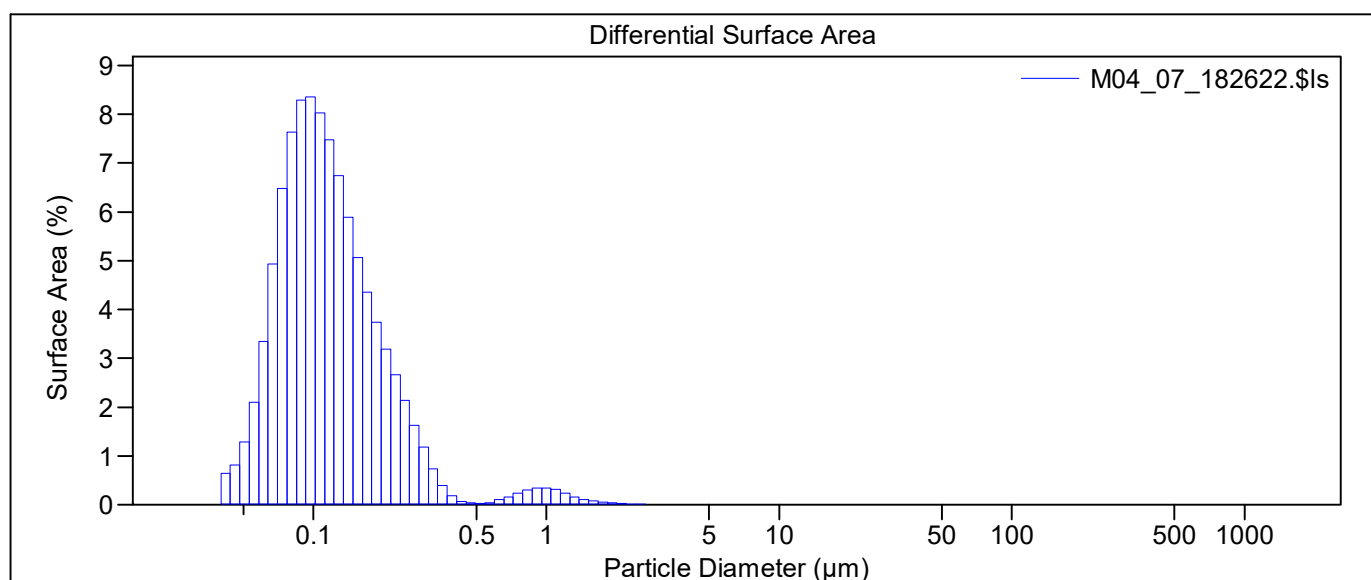
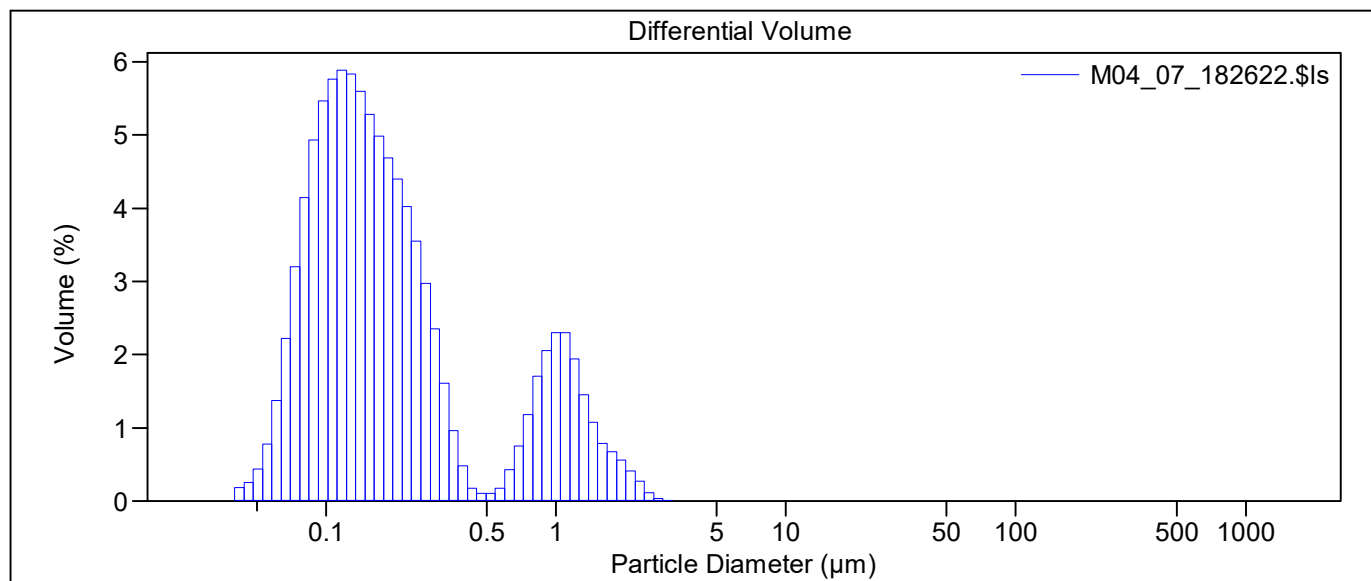
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_07_182622.\$ls		
	M04_07_182622.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.50%		
LS 13 320	Universal Liquid Module		
Start time:	18:24 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_07_182622.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.427 µm
Mean:	0.337 µm		Variance:	0.183 µm ²
Median:	0.158 µm		C.V.:	127%
Mean/Median ratio:	2.131		Skewness:	2.259 Right skewed
Mode:	0.117 µm		Kurtosis:	4.878 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.158 µm	0.275 µm	1.031 µm

Surface Area Statistics (Arithmetic)			M04_07_182622.\$Is	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.168 μm
Mean:	0.148 μm		Variance:	0.028 μm ²
Median:	0.109 μm		C.V.:	113%
Mean/Median ratio:	1.359		Skewness:	6.010 Right skewed
Mode:	0.097 μm		Kurtosis:	45.72 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.156 μm	0.227 μm

Number Statistics (Arithmetic)			M04_07_182622.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.9%
Mean/Median ratio:	1.107		Skewness:	4.830 Right skewed
Mode:	0.073 μm		Kurtosis:	93.62 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.131 μm



M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.37
10	0.044	0.046	0.25	0.81	3.51
11	0.048	0.050	0.44	1.28	4.60
12	0.053	0.055	0.78	2.09	6.24
13	0.058	0.061	1.37	3.35	8.28
14	0.064	0.067	2.22	4.93	10.1
15	0.070	0.073	3.20	6.48	11.0
16	0.077	0.080	4.14	7.64	10.8
17	0.084	0.088	4.93	8.29	9.71
18	0.093	0.097	5.46	8.36	8.13
19	0.102	0.106	5.76	8.03	6.48
20	0.112	0.117	5.89	7.47	5.01
21	0.122	0.128	5.83	6.75	3.75
22	0.134	0.141	5.60	5.90	2.72
23	0.148	0.155	5.28	5.07	1.94
24	0.162	0.170	4.99	4.36	1.38
25	0.178	0.186	4.69	3.74	0.98
26	0.195	0.205	4.40	3.19	0.70
27	0.214	0.225	4.02	2.66	0.48
28	0.235	0.247	3.55	2.14	0.32
29	0.258	0.271	2.97	1.63	0.20
30	0.284	0.297	2.36	1.18	0.12
31	0.311	0.326	1.61	0.73	0.063
32	0.342	0.358	0.96	0.40	0.029
33	0.375	0.393	0.48	0.18	0.011
34	0.412	0.431	0.18	0.060	0.0030
35	0.452	0.474	0.11	0.033	0.0014
36	0.496	0.520	0.10	0.030	0.0010
37	0.545	0.571	0.17	0.045	0.0013
38	0.598	0.627	0.43	0.10	0.0024
39	0.656	0.688	0.75	0.16	0.0031
40	0.721	0.755	1.18	0.23	0.0037
41	0.791	0.829	1.71	0.31	0.0041
42	0.868	0.910	2.06	0.34	0.0037
43	0.953	0.999	2.30	0.34	0.0031
44	1.047	1.097	2.30	0.31	0.0024
45	1.149	1.204	1.94	0.24	0.0015

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.45	0.16	0.00085
47	1.385	1.451	1.08	0.11	0.00048
48	1.520	1.592	0.79	0.073	0.00026
49	1.668	1.748	0.67	0.057	0.00017
50	1.832	1.919	0.56	0.043	0.00011
51	2.011	2.107	0.41	0.029	0.000059
52	2.207	2.313	0.27	0.018	0.000030
53	2.423	2.539	0.11	0.0067	0.000009
54	2.660	2.787	0.033	0.0017	0.000002
55	2.920	3.059	0.0057	0.00028	2.72E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

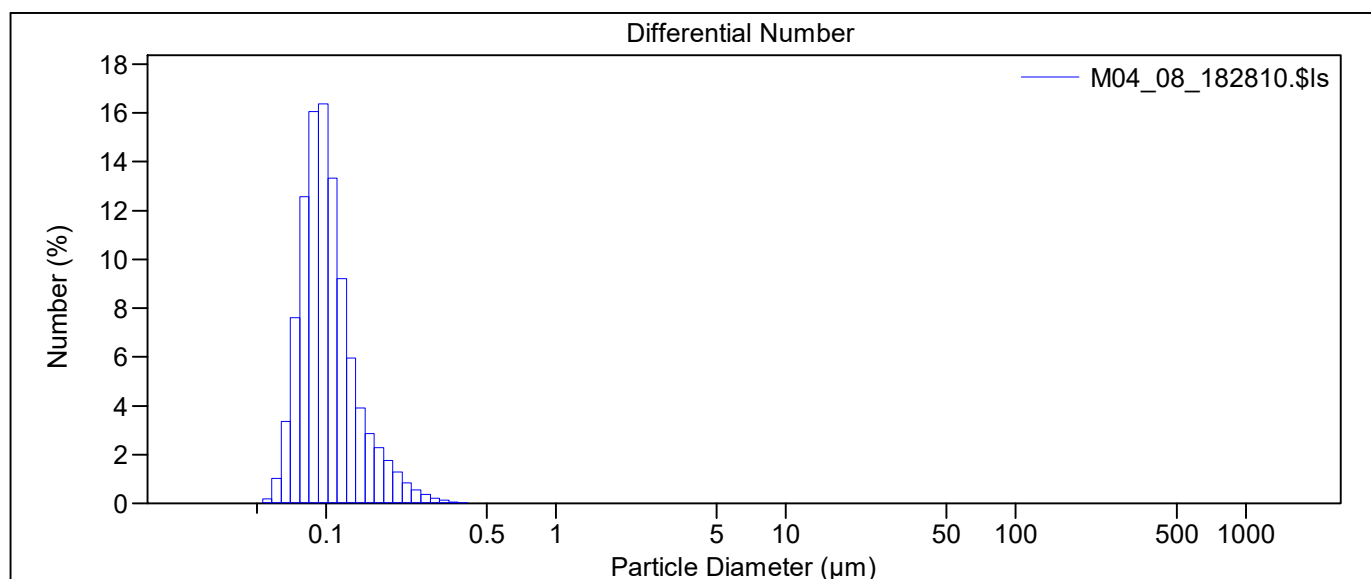
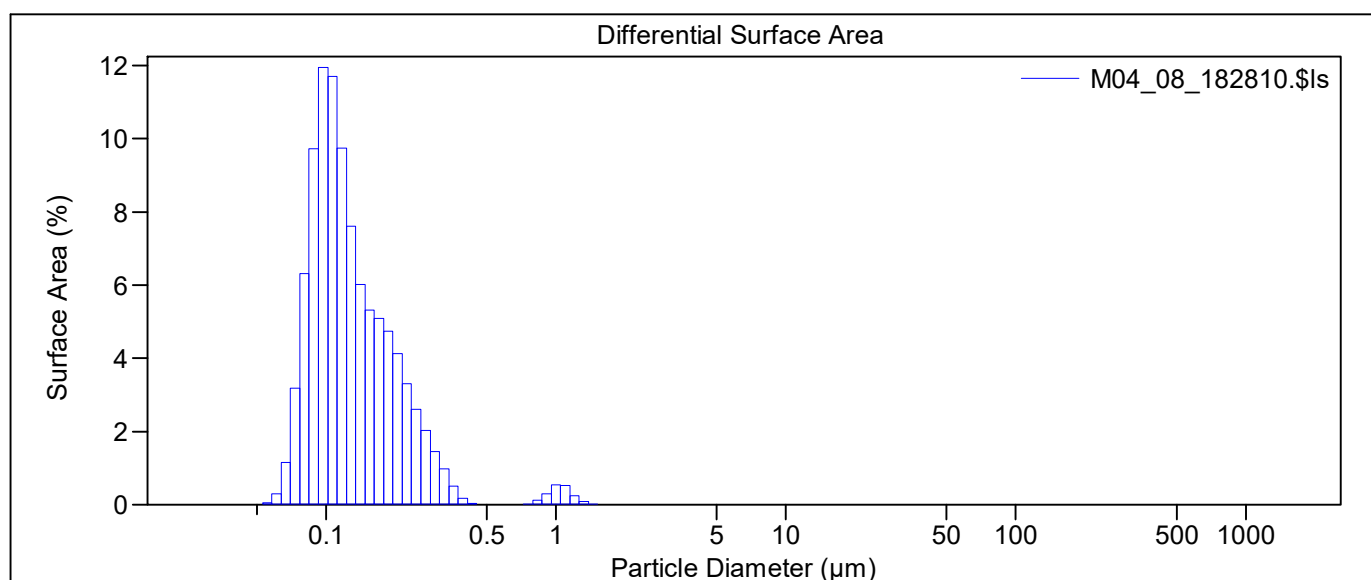
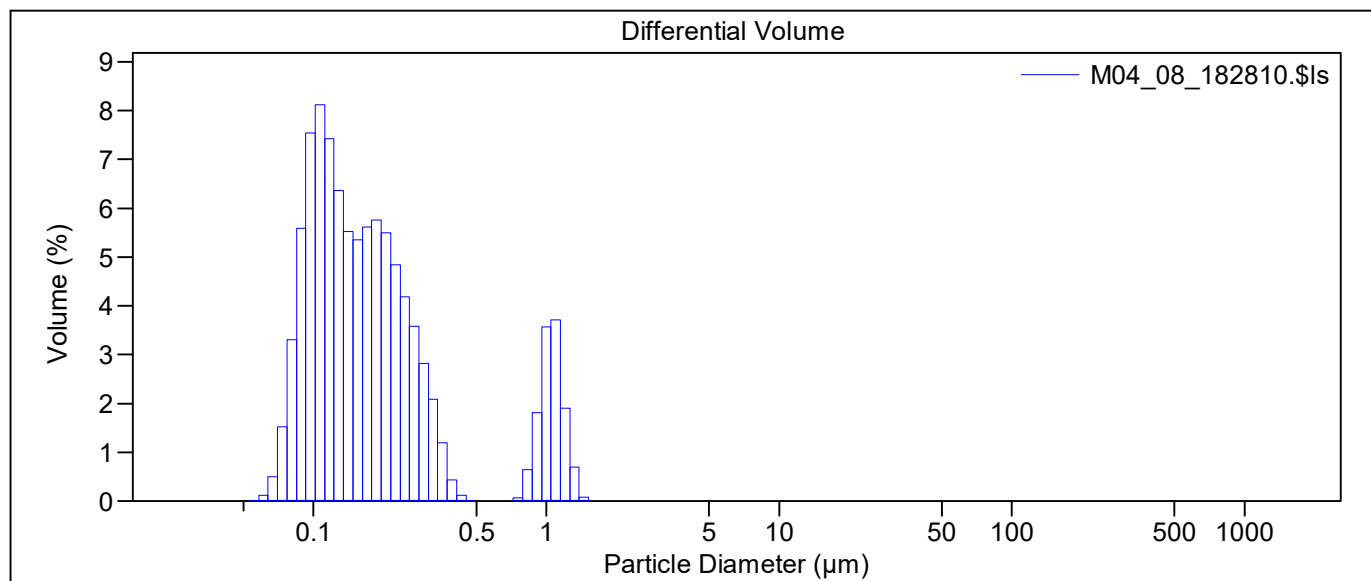
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_08_182810.\$ls		
	M04_08_182810.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.19%		
LS 13 320	Universal Liquid Module		
Start time:	18:26 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_08_182810.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.306 μm
Mean:	0.274 μm		Variance:	0.094 μm ²
Median:	0.158 μm		C.V.:	112%
Mean/Median ratio:	1.731		Skewness:	2.167 Right skewed
Mode:	0.106 μm		Kurtosis:	3.247 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.091 μm	0.109 μm	0.158 μm	0.246 μm	0.952 μm

Surface Area Statistics (Arithmetic)			M04_08_182810.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.136 µm
Mean:	0.154 µm		Variance:	0.019 µm ²
Median:	0.118 µm		C.V.:	88.5%
Mean/Median ratio:	1.303		Skewness:	5.488 Right skewed
Mode:	0.097 µm		Kurtosis:	34.79 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.083 µm	0.096 µm	0.118 µm	0.168 µm	0.233 µm

Number Statistics (Arithmetic)		M04_08_182810.\$ls		
Calculations from 0.017 μm to 2000 μm				
Number:	100%	S.D.:	0.039 μm	
Mean:	0.107 μm	Variance:	0.0015 μm ²	
Median:	0.098 μm	C.V.:	36.1%	
Mean/Median ratio:	1.094	Skewness:	4.966 Right skewed	
Mode:	0.097 μm	Kurtosis:	82.16 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.075 μm	0.084 μm	0.098 μm	0.117 μm	0.149 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00076	0.0023	0.012
12	0.053	0.055	0.016	0.045	0.19
13	0.058	0.061	0.12	0.29	1.01
14	0.064	0.067	0.50	1.16	3.36
15	0.070	0.073	1.52	3.18	7.62
16	0.077	0.080	3.31	6.31	12.6
17	0.084	0.088	5.59	9.72	16.1
18	0.093	0.097	7.54	11.9	16.4
19	0.102	0.106	8.12	11.7	13.3
20	0.112	0.117	7.42	9.75	9.21
21	0.122	0.128	6.36	7.61	5.96
22	0.134	0.141	5.52	6.02	3.91
23	0.148	0.155	5.36	5.32	2.87
24	0.162	0.170	5.62	5.08	2.28
25	0.178	0.186	5.76	4.75	1.76
26	0.195	0.205	5.50	4.13	1.27
27	0.214	0.225	4.84	3.31	0.85
28	0.235	0.247	4.19	2.61	0.55
29	0.258	0.271	3.58	2.03	0.36
30	0.284	0.297	2.82	1.46	0.21
31	0.311	0.326	2.09	0.98	0.12
32	0.342	0.358	1.20	0.51	0.052
33	0.375	0.393	0.44	0.17	0.014
34	0.412	0.431	0.12	0.043	0.0030
35	0.452	0.474	0.013	0.0042	0.00024
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.064	0.013	0.00030
41	0.791	0.829	0.64	0.12	0.0022
42	0.868	0.910	1.80	0.30	0.0047
43	0.953	0.999	3.56	0.55	0.0071
44	1.047	1.097	3.71	0.52	0.0056
45	1.149	1.204	1.91	0.24	0.0022

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.70	0.081	0.00060
47	1.385	1.451	0.085	0.0090	0.000055
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

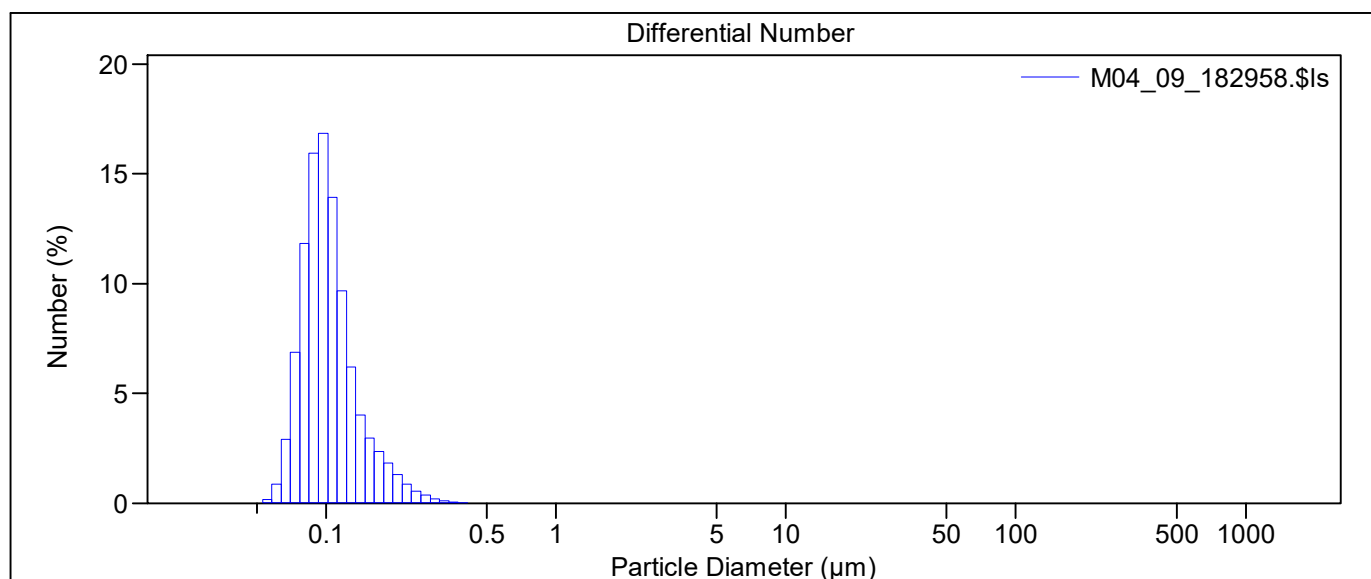
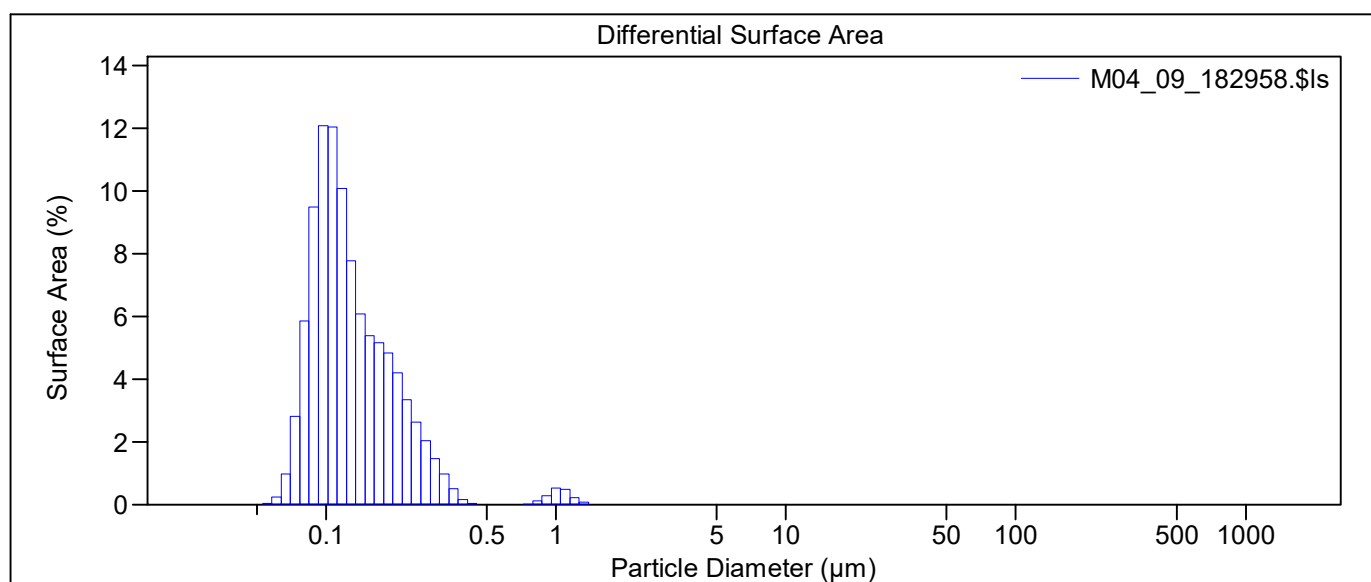
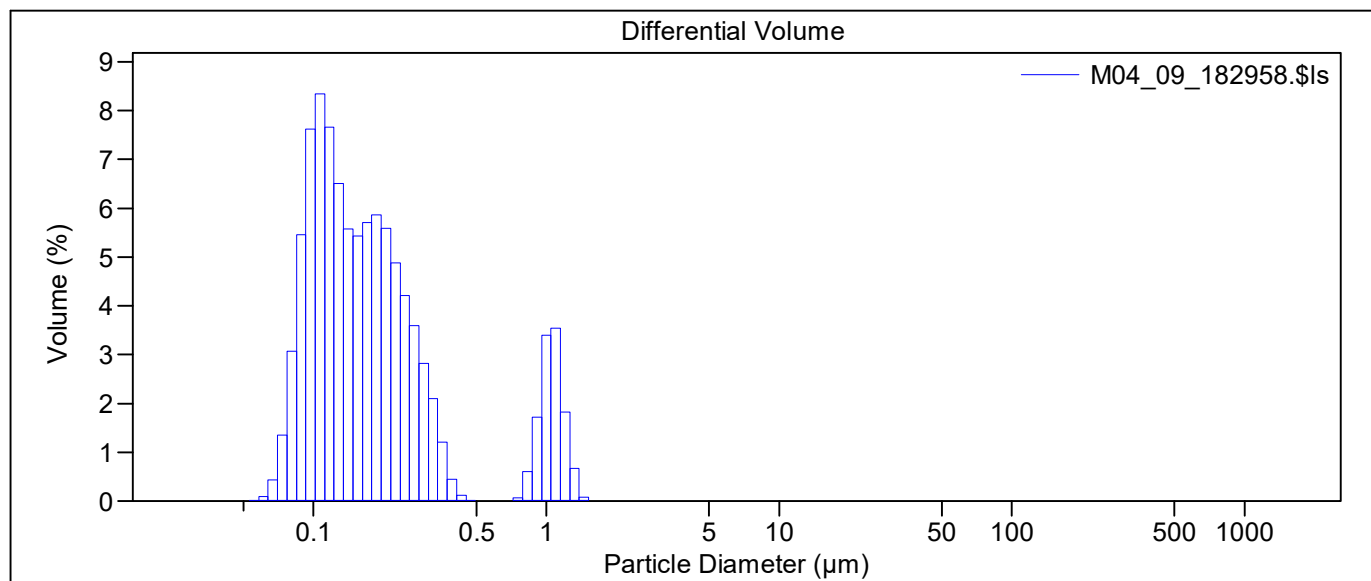
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_09_182958.\$ls		
	M04_09_182958.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.26%		
LS 13 320	Universal Liquid Module		
Start time:	18:28 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_09_182958.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.301 µm
Mean:	0.269 µm		Variance:	0.090 µm ²
Median:	0.158 µm		C.V.:	112%
Mean/Median ratio:	1.706		Skewness:	2.238 Right skewed
Mode:	0.106 µm		Kurtosis:	3.590 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.092 µm	0.110 µm	0.158 µm	0.243 µm	0.930 µm

Surface Area Statistics (Arithmetic)			M04_09_182958.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.133 µm
Mean:	0.154 µm		Variance:	0.018 µm ²
Median:	0.119 µm		C.V.:	86.8%
Mean/Median ratio:	1.296		Skewness:	5.567 Right skewed
Mode:	0.097 µm		Kurtosis:	36.09 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.084 µm	0.097 µm	0.119 µm	0.169 µm	0.233 µm

Number Statistics (Arithmetic)			M04_09_182958.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.108 μm		Variance:	0.0015 μm ²
Median:	0.099 μm		C.V.:	35.7%
Mean/Median ratio:	1.093		Skewness:	4.879 Right skewed
Mode:	0.097 μm		Kurtosis:	79.99 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.076 μm	0.086 μm	0.099 μm	0.118 μm	0.151 μm



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M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00072	0.0022	0.011
12	0.053	0.055	0.014	0.039	0.17
13	0.058	0.061	0.096	0.24	0.86
14	0.064	0.067	0.43	0.99	2.91
15	0.070	0.073	1.35	2.82	6.88
16	0.077	0.080	3.06	5.85	11.8
17	0.084	0.088	5.45	9.48	15.9
18	0.093	0.097	7.63	12.1	16.9
19	0.102	0.106	8.34	12.0	13.9
20	0.112	0.117	7.67	10.1	9.68
21	0.122	0.128	6.50	7.78	6.20
22	0.134	0.141	5.58	6.08	4.02
23	0.148	0.155	5.43	5.39	2.96
24	0.162	0.170	5.70	5.16	2.35
25	0.178	0.186	5.86	4.83	1.83
26	0.195	0.205	5.59	4.20	1.32
27	0.214	0.225	4.88	3.34	0.87
28	0.235	0.247	4.21	2.63	0.57
29	0.258	0.271	3.60	2.04	0.37
30	0.284	0.297	2.83	1.46	0.22
31	0.311	0.326	2.09	0.99	0.12
32	0.342	0.358	1.20	0.52	0.053
33	0.375	0.393	0.44	0.17	0.015
34	0.412	0.431	0.12	0.044	0.0031
35	0.452	0.474	0.014	0.0044	0.00026
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.061	0.012	0.00028
41	0.791	0.829	0.61	0.11	0.0021
42	0.868	0.910	1.72	0.29	0.0046
43	0.953	0.999	3.40	0.52	0.0069
44	1.047	1.097	3.55	0.50	0.0054
45	1.149	1.204	1.82	0.23	0.0021
46	1.261	1.321	0.67	0.078	0.00059
47	1.385	1.451	0.082	0.0087	0.000054
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

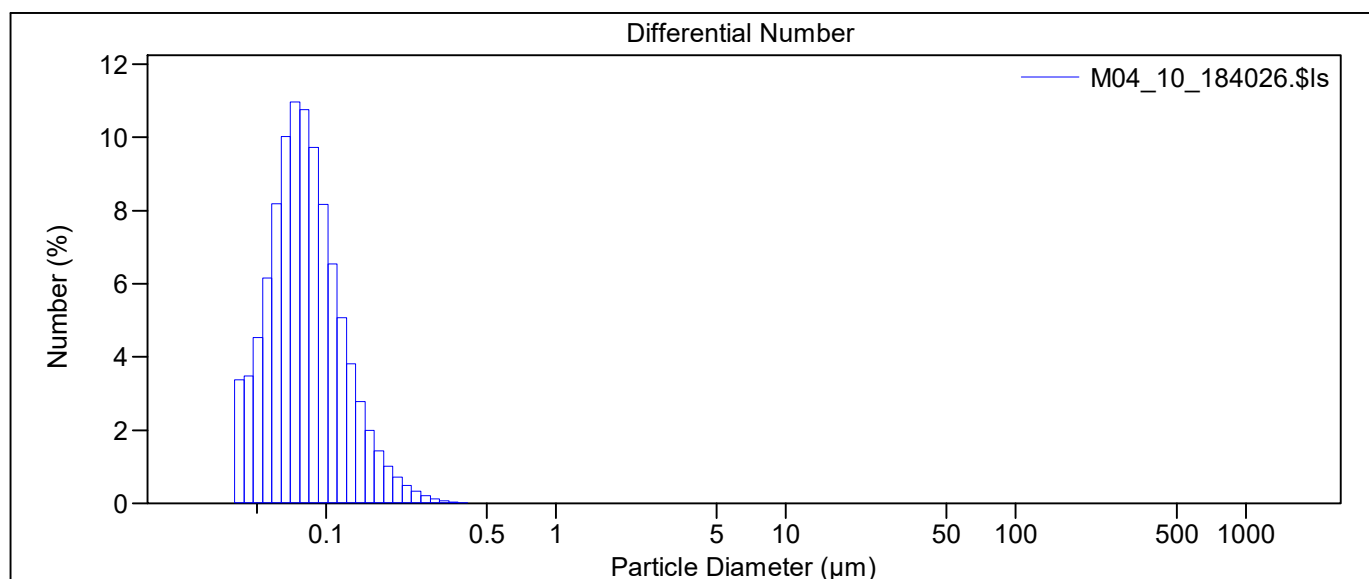
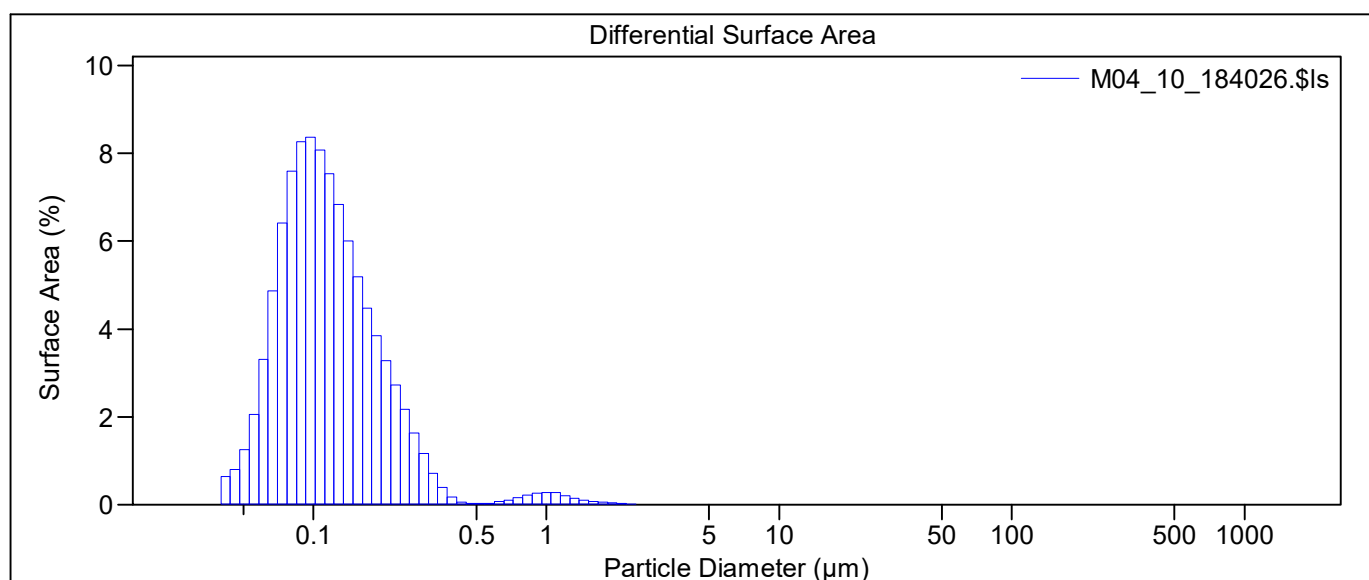
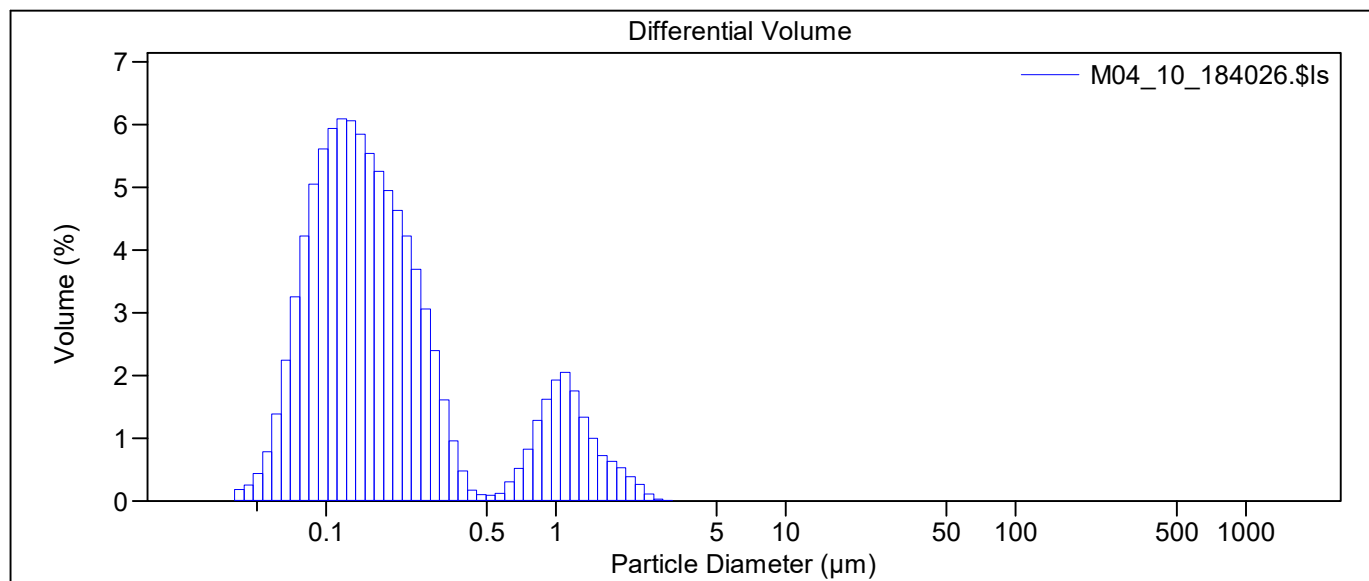
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File name:	D:\PP_PROFARB\POMIARY\M04\M04_10_184026.\$ls		
	M04_10_184026.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.64%		
LS 13 320	Universal Liquid Module		
Start time:	18:38 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_10_184026.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.412 µm
Mean:	0.315 µm		Variance:	0.170 µm ²
Median:	0.154 µm		C.V.:	131%
Mean/Median ratio:	2.040		Skewness:	2.506 Right skewed
Mode:	0.117 µm		Kurtosis:	6.172 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.154 µm	0.254 µm	0.991 µm

Surface Area Statistics (Arithmetic)			M04_10_184026.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.157 µm
Mean:	0.145 µm		Variance:	0.025 µm ²
Median:	0.110 µm		C.V.:	108%
Mean/Median ratio:	1.322		Skewness:	6.522 Right skewed
Mode:	0.097 µm		Kurtosis:	54.72 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.156 µm	0.223 µm

Number Statistics (Arithmetic)			M04_10_184026.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.4%
Mean/Median ratio:	1.107		Skewness:	4.411 Right skewed
Mode:	0.073 μm		Kurtosis:	83.87 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.64	3.37
10	0.044	0.046	0.25	0.80	3.48
11	0.048	0.050	0.44	1.26	4.53
12	0.053	0.055	0.79	2.06	6.16
13	0.058	0.061	1.39	3.30	8.19
14	0.064	0.067	2.25	4.87	10.0
15	0.070	0.073	3.25	6.42	11.0
16	0.077	0.080	4.22	7.59	10.8
17	0.084	0.088	5.05	8.27	9.72
18	0.093	0.097	5.61	8.37	8.17
19	0.102	0.106	5.94	8.07	6.53
20	0.112	0.117	6.09	7.54	5.07
21	0.122	0.128	6.06	6.84	3.81
22	0.134	0.141	5.85	6.01	2.78
23	0.148	0.155	5.54	5.19	1.99
24	0.162	0.170	5.25	4.48	1.43
25	0.178	0.186	4.95	3.84	1.02
26	0.195	0.205	4.63	3.28	0.72
27	0.214	0.225	4.22	2.72	0.50
28	0.235	0.247	3.69	2.17	0.33
29	0.258	0.271	3.06	1.64	0.21
30	0.284	0.297	2.40	1.17	0.12
31	0.311	0.326	1.62	0.72	0.062
32	0.342	0.358	0.96	0.39	0.028
33	0.375	0.393	0.48	0.18	0.010
34	0.412	0.431	0.17	0.058	0.0028
35	0.452	0.474	0.10	0.031	0.0013
36	0.496	0.520	0.088	0.024	0.00083
37	0.545	0.571	0.12	0.032	0.00089
38	0.598	0.627	0.30	0.070	0.0016
39	0.656	0.688	0.52	0.11	0.0021
40	0.721	0.755	0.83	0.16	0.0026
41	0.791	0.829	1.28	0.22	0.0030
42	0.868	0.910	1.63	0.26	0.0029
43	0.953	0.999	1.93	0.28	0.0026
44	1.047	1.097	2.05	0.27	0.0021
45	1.149	1.204	1.75	0.21	0.0013

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.33	0.15	0.00077
47	1.385	1.451	1.00	0.100	0.00044
48	1.520	1.592	0.73	0.066	0.00024
49	1.668	1.748	0.64	0.053	0.00016
50	1.832	1.919	0.53	0.040	0.00010
51	2.011	2.107	0.39	0.027	0.000056
52	2.207	2.313	0.27	0.017	0.000029
53	2.423	2.539	0.11	0.0064	0.000009
54	2.660	2.787	0.032	0.0017	0.000002
55	2.920	3.059	0.0057	0.00027	2.63E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

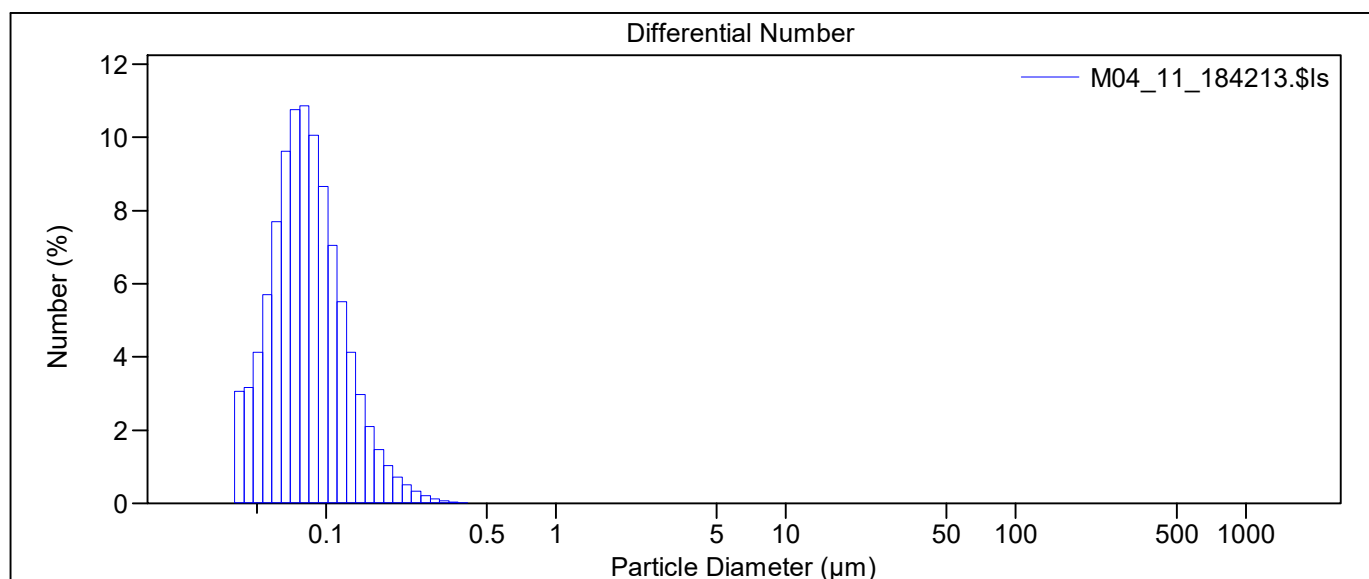
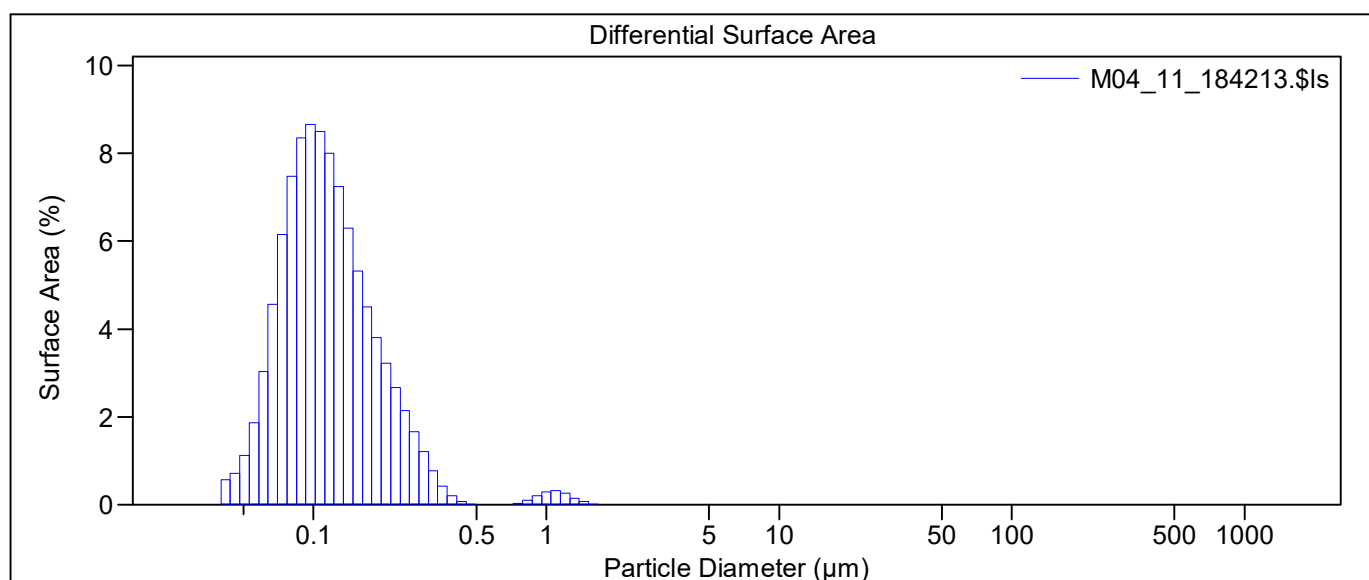
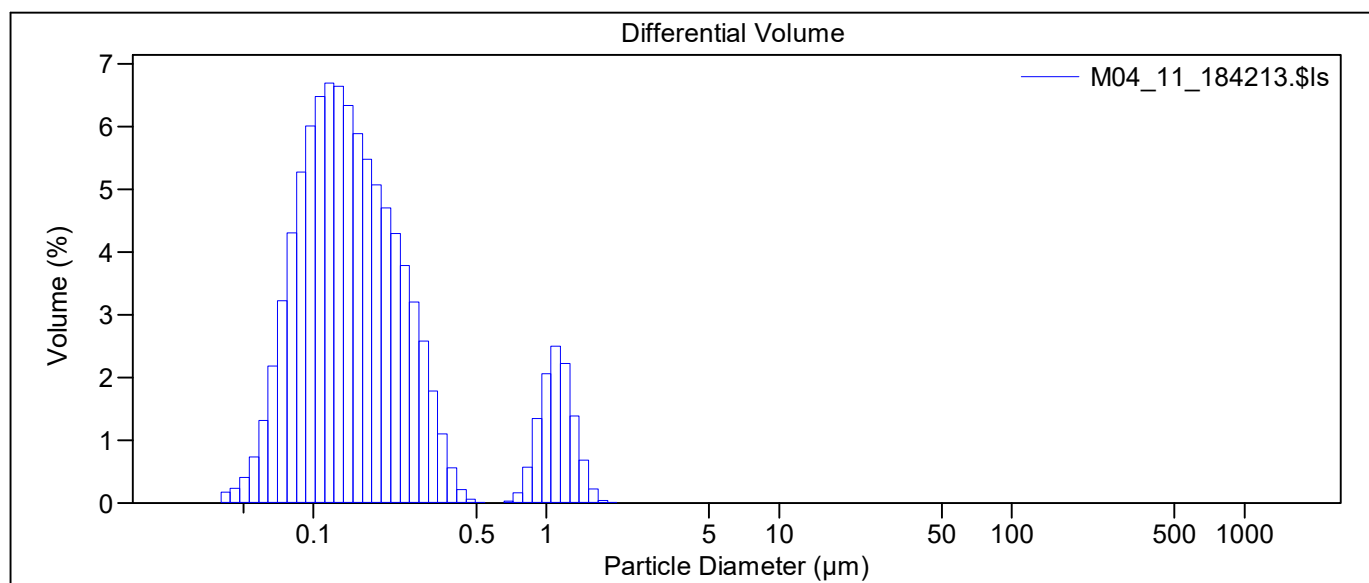
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	M04_11_184213.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.03%		
LS 13 320	Universal Liquid Module		
Start time:	18:40 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_11_184213.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.319 μm
Mean:	0.263 μm		Variance:	0.102 μm ²
Median:	0.148 μm		C.V.:	121%
Mean/Median ratio:	1.785		Skewness:	2.424 Right skewed
Mode:	0.117 μm		Kurtosis:	4.688 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.103 μm	0.148 μm	0.233 μm	0.899 μm

Surface Area Statistics (Arithmetic)			M04_11_184213.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.131 µm
Mean:	0.140 µm		Variance:	0.017 µm ²
Median:	0.110 µm		C.V.:	94.0%
Mean/Median ratio:	1.266		Skewness:	6.120 Right skewed
Mode:	0.097 µm		Kurtosis:	45.66 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.084 µm	0.110 µm	0.154 µm	0.219 µm

Number Statistics (Arithmetic)			M04_11_184213.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.089 μm		Variance:	0.0015 μm ²
Median:	0.081 μm		C.V.:	43.2%
Mean/Median ratio:	1.101		Skewness:	3.753 Right skewed
Mode:	0.080 μm		Kurtosis:	59.45 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.065 μm	0.081 μm	0.103 μm	0.133 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.57	3.06
10	0.044	0.046	0.23	0.71	3.16
11	0.048	0.050	0.40	1.12	4.13
12	0.053	0.055	0.74	1.86	5.69
13	0.058	0.061	1.32	3.03	7.70
14	0.064	0.067	2.18	4.56	9.62
15	0.070	0.073	3.23	6.15	10.8
16	0.077	0.080	4.31	7.48	10.9
17	0.084	0.088	5.28	8.35	10.1
18	0.093	0.097	6.01	8.66	8.65
19	0.102	0.106	6.48	8.50	7.05
20	0.112	0.117	6.69	8.00	5.51
21	0.122	0.128	6.64	7.24	4.14
22	0.134	0.141	6.34	6.29	2.98
23	0.148	0.155	5.89	5.33	2.10
24	0.162	0.170	5.48	4.51	1.47
25	0.178	0.186	5.07	3.80	1.03
26	0.195	0.205	4.70	3.22	0.72
27	0.214	0.225	4.30	2.67	0.50
28	0.235	0.247	3.79	2.15	0.33
29	0.258	0.271	3.21	1.66	0.21
30	0.284	0.297	2.58	1.22	0.13
31	0.311	0.326	1.79	0.77	0.068
32	0.342	0.358	1.10	0.43	0.032
33	0.375	0.393	0.57	0.20	0.012
34	0.412	0.431	0.21	0.068	0.0034
35	0.452	0.474	0.058	0.017	0.00072
36	0.496	0.520	0.0086	0.0023	0.000080
37	0.545	0.571	0	0	0
38	0.598	0.627	0.00047	0.00010	0.000003
39	0.656	0.688	0.029	0.0058	0.00012
40	0.721	0.755	0.17	0.031	0.00051
41	0.791	0.829	0.57	0.096	0.0013
42	0.868	0.910	1.35	0.21	0.0024
43	0.953	0.999	2.07	0.29	0.0027
44	1.047	1.097	2.50	0.32	0.0025
45	1.149	1.204	2.23	0.26	0.0017
46	1.261	1.321	1.39	0.15	0.00079
47	1.385	1.451	0.68	0.066	0.00029
48	1.520	1.592	0.22	0.019	0.000072
49	1.668	1.748	0.042	0.0034	0.000010
50	1.832	1.919	0.0057	0.00042	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

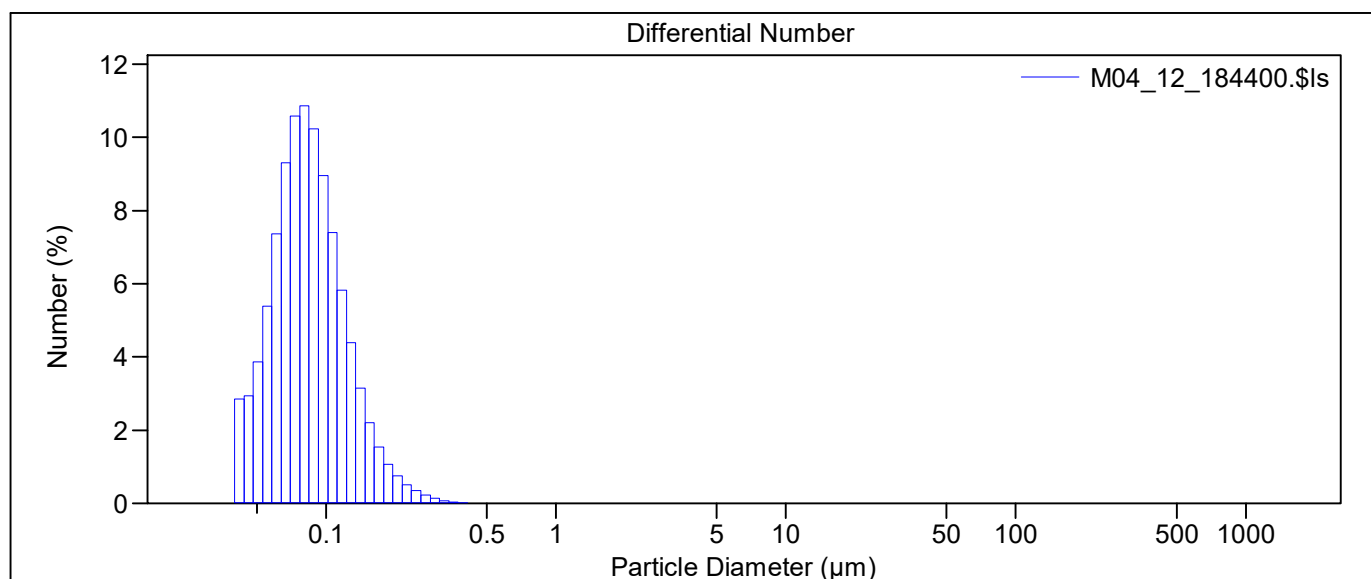
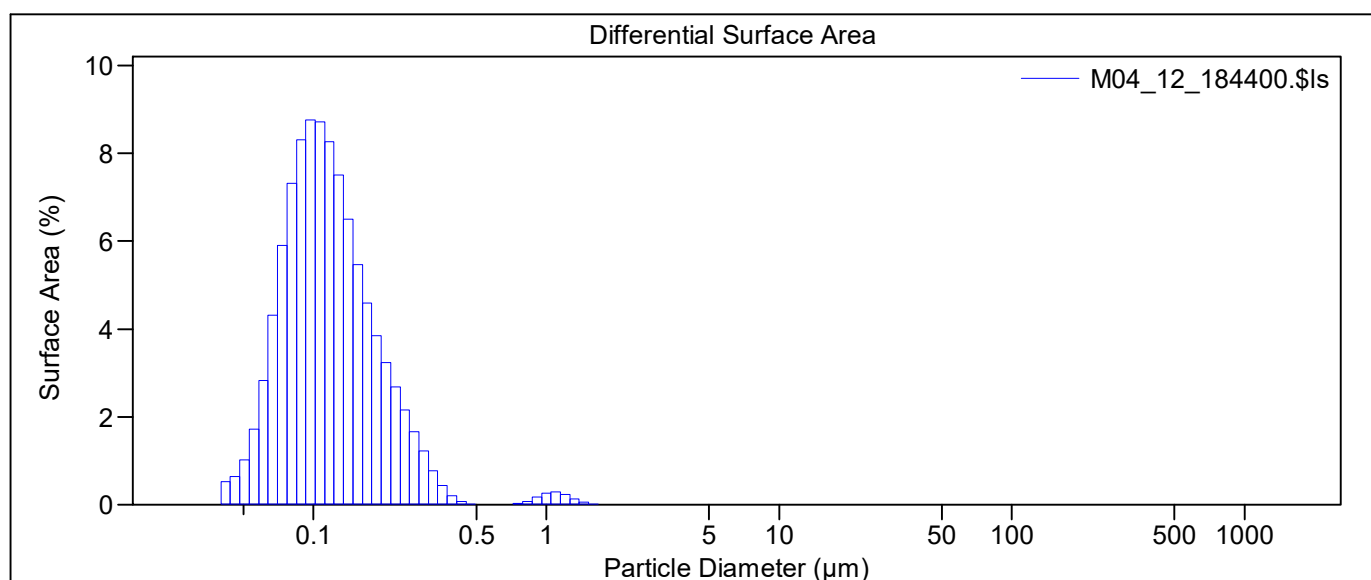
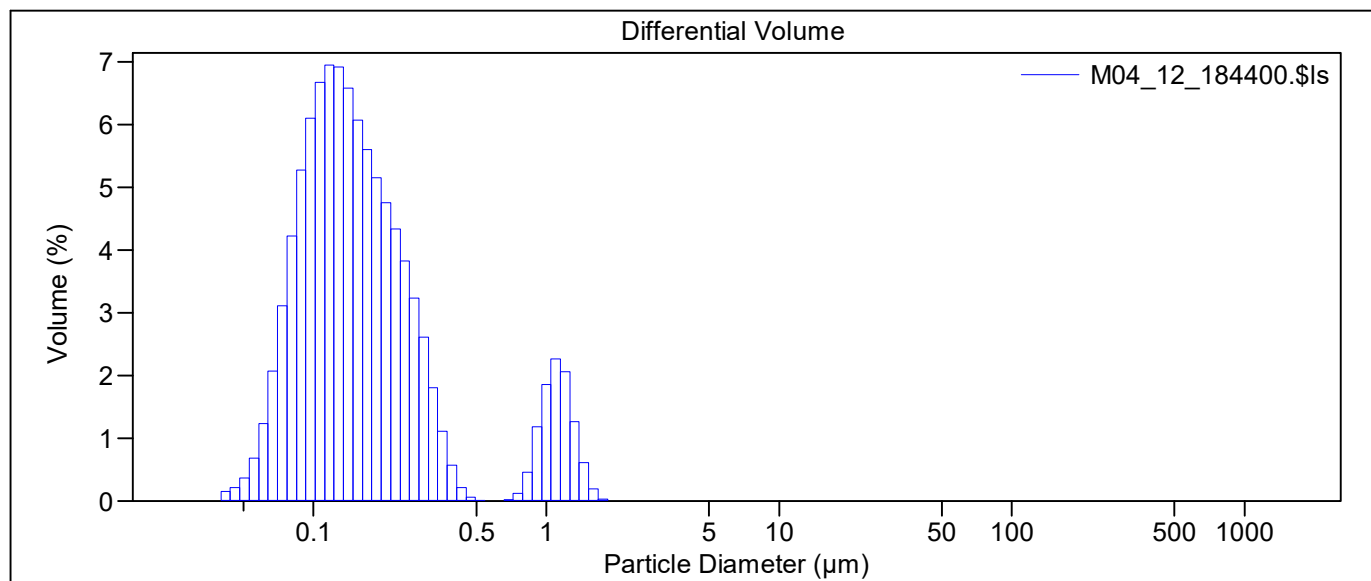
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File ID:	M04		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.20%		
LS 13 320	Universal Liquid Module		
Start time:	18:42 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_12_184400.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.305 µm
Mean:	0.253 µm		Variance:	0.093 µm ²
Median:	0.146 µm		C.V.:	121%
Mean/Median ratio:	1.727		Skewness:	2.589 Right skewed
Mode:	0.117 µm		Kurtosis:	5.605 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.104 µm	0.146 µm	0.228 µm	0.753 µm

Surface Area Statistics (Arithmetic)			M04_12_184400.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.126 µm
Mean:	0.139 µm		Variance:	0.016 µm ²
Median:	0.112 µm		C.V.:	90.4%
Mean/Median ratio:	1.249		Skewness:	6.294 Right skewed
Mode:	0.097 µm		Kurtosis:	49.23 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.068 µm	0.085 µm	0.112 µm	0.155 µm	0.218 µm

Number Statistics (Arithmetic)			M04_12_184400.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.090 μm		Variance:	0.0015 μm ²
Median:	0.082 μm		C.V.:	42.7%
Mean/Median ratio:	1.098		Skewness:	3.550 Right skewed
Mode:	0.080 μm		Kurtosis:	54.32 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.053 μm	0.066 μm	0.082 μm	0.105 μm	0.135 μm



M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.16	0.52	2.84
10	0.044	0.046	0.21	0.65	2.94
11	0.048	0.050	0.37	1.02	3.87
12	0.053	0.055	0.68	1.72	5.38
13	0.058	0.061	1.24	2.83	7.36
14	0.064	0.067	2.07	4.32	9.31
15	0.070	0.073	3.11	5.91	10.6
16	0.077	0.080	4.23	7.31	10.9
17	0.084	0.088	5.27	8.31	10.2
18	0.093	0.097	6.10	8.76	8.96
19	0.102	0.106	6.67	8.72	7.41
20	0.112	0.117	6.94	8.27	5.83
21	0.122	0.128	6.91	7.50	4.39
22	0.134	0.141	6.58	6.50	3.15
23	0.148	0.155	6.07	5.47	2.20
24	0.162	0.170	5.60	4.59	1.53
25	0.178	0.186	5.15	3.85	1.07
26	0.195	0.205	4.76	3.24	0.74
27	0.214	0.225	4.34	2.69	0.51
28	0.235	0.247	3.82	2.16	0.34
29	0.258	0.271	3.24	1.67	0.22
30	0.284	0.297	2.61	1.22	0.13
31	0.311	0.326	1.81	0.77	0.070
32	0.342	0.358	1.11	0.43	0.033
33	0.375	0.393	0.57	0.20	0.013
34	0.412	0.431	0.21	0.069	0.0036
35	0.452	0.474	0.059	0.017	0.00075
36	0.496	0.520	0.0087	0.0023	0.000083
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0.017	0.0035	0.000071
40	0.721	0.755	0.13	0.023	0.00039
41	0.791	0.829	0.46	0.077	0.0011
42	0.868	0.910	1.18	0.18	0.0021
43	0.953	0.999	1.86	0.26	0.0025
44	1.047	1.097	2.27	0.29	0.0023
45	1.149	1.204	2.06	0.24	0.0016

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.27	0.13	0.00074
47	1.385	1.451	0.61	0.058	0.00027
48	1.520	1.592	0.19	0.017	0.000063
49	1.668	1.748	0.034	0.0027	0.000009
50	1.832	1.919	0.0042	0.00030	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

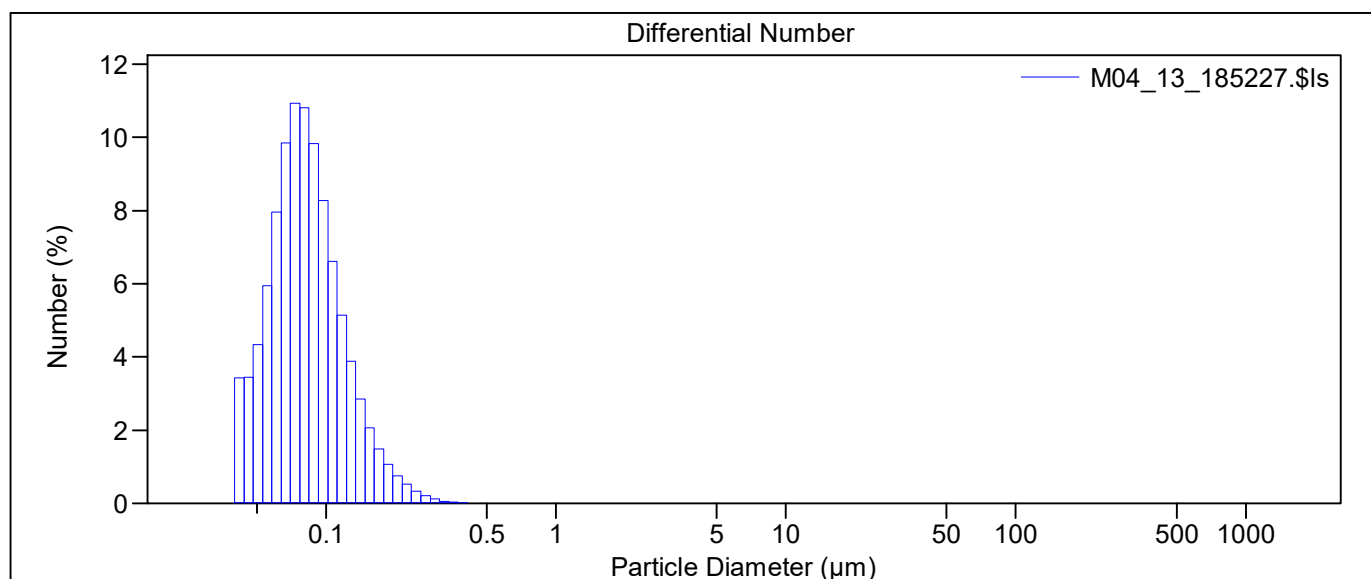
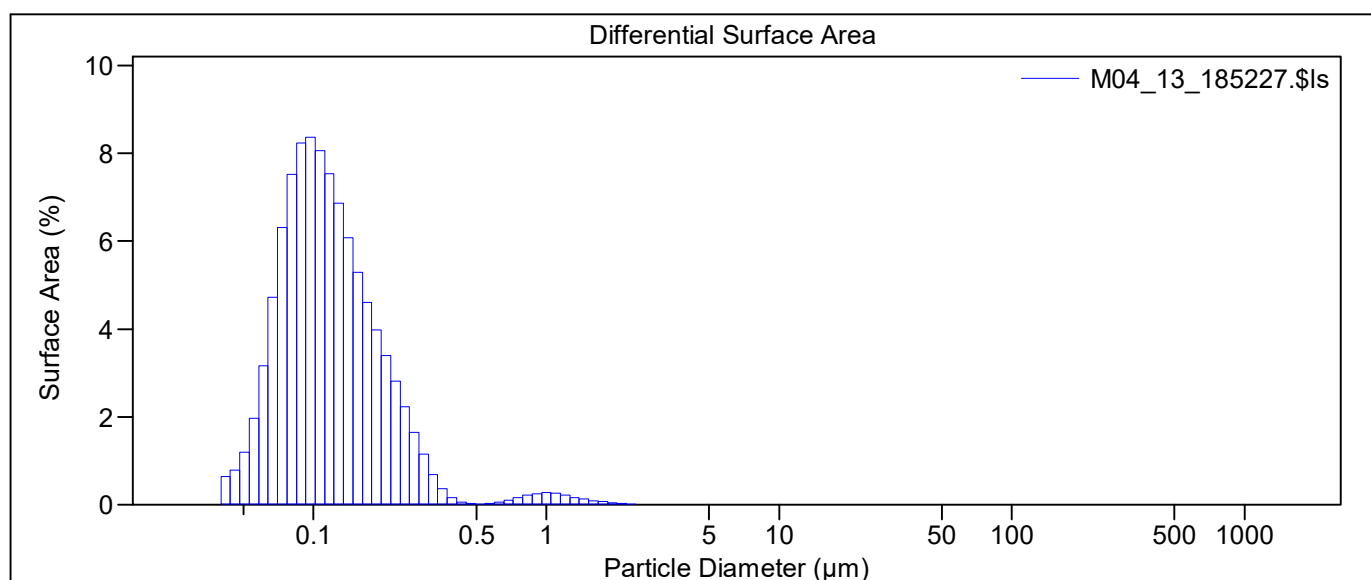
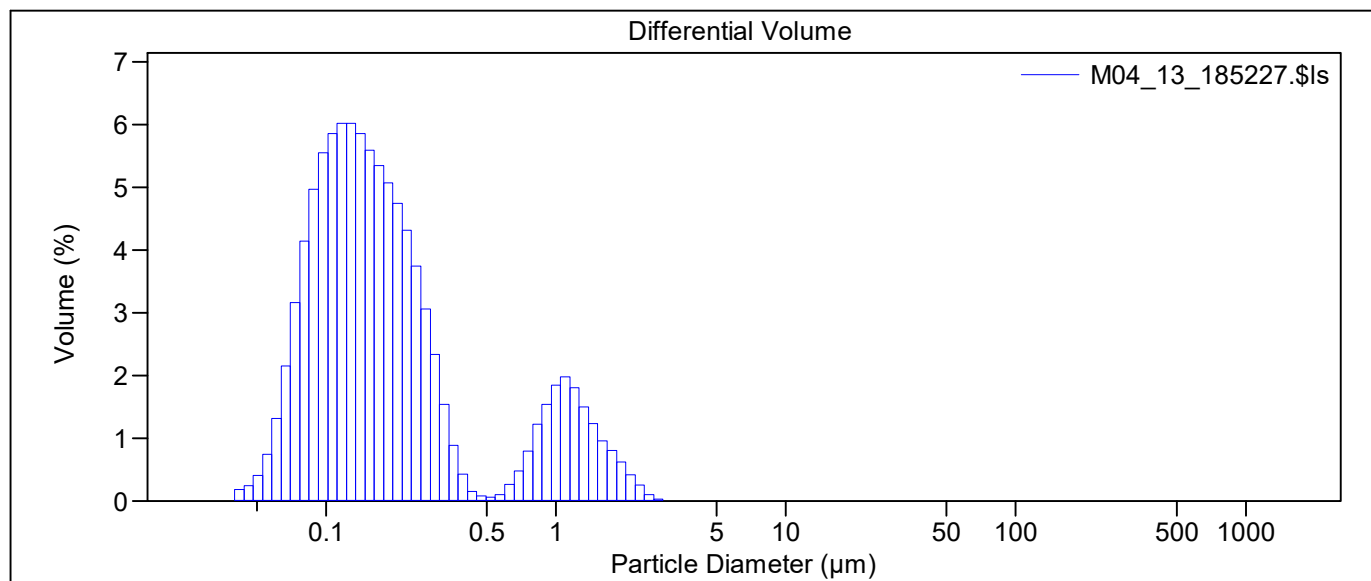
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_13_185227.\$ls		
	M04_13_185227.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.54%		
LS 13 320	Universal Liquid Module		
Start time:	18:50 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	70%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_13_185227.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.427 µm
Mean:	0.325 µm		Variance:	0.183 µm ²
Median:	0.156 µm		C.V.:	131%
Mean/Median ratio:	2.081		Skewness:	2.401 Right skewed
Mode:	0.128 µm		Kurtosis:	5.367 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.156 µm	0.256 µm	1.032 µm

Surface Area Statistics (Arithmetic)			M04_13_185227.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.162 μm
Mean:	0.146 μm		Variance:	0.026 μm ²
Median:	0.110 μm		C.V.:	111%
Mean/Median ratio:	1.326		Skewness:	6.511 Right skewed
Mode:	0.097 μm		Kurtosis:	53.27 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.110 μm	0.157 μm	0.224 μm

Number Statistics (Arithmetic)			M04_13_185227.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.5%
Mean/Median ratio:	1.106		Skewness:	4.468 Right skewed
Mode:	0.073 μm		Kurtosis:	87.80 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.133 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.43
10	0.044	0.046	0.25	0.78	3.44
11	0.048	0.050	0.41	1.19	4.34
12	0.053	0.055	0.74	1.96	5.95
13	0.058	0.061	1.31	3.16	7.95
14	0.064	0.067	2.15	4.72	9.85
15	0.070	0.073	3.16	6.31	10.9
16	0.077	0.080	4.14	7.53	10.8
17	0.084	0.088	4.97	8.24	9.82
18	0.093	0.097	5.55	8.37	8.28
19	0.102	0.106	5.86	8.05	6.61
20	0.112	0.117	6.02	7.54	5.14
21	0.122	0.128	6.02	6.87	3.88
22	0.134	0.141	5.86	6.08	2.86
23	0.148	0.155	5.60	5.30	2.06
24	0.162	0.170	5.35	4.61	1.49
25	0.178	0.186	5.07	3.98	1.07
26	0.195	0.205	4.74	3.39	0.76
27	0.214	0.225	4.31	2.81	0.52
28	0.235	0.247	3.75	2.22	0.34
29	0.258	0.271	3.06	1.65	0.21
30	0.284	0.297	2.34	1.15	0.12
31	0.311	0.326	1.54	0.69	0.061
32	0.342	0.358	0.89	0.36	0.026
33	0.375	0.393	0.43	0.16	0.0096
34	0.412	0.431	0.15	0.051	0.0026
35	0.452	0.474	0.083	0.026	0.0011
36	0.496	0.520	0.066	0.019	0.00064
37	0.545	0.571	0.10	0.026	0.00075
38	0.598	0.627	0.27	0.062	0.0015
39	0.656	0.688	0.48	0.10	0.0020
40	0.721	0.755	0.80	0.15	0.0025
41	0.791	0.829	1.23	0.22	0.0029
42	0.868	0.910	1.54	0.25	0.0028
43	0.953	0.999	1.85	0.27	0.0025
44	1.047	1.097	1.97	0.26	0.0020
45	1.149	1.204	1.80	0.22	0.0014

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.50	0.17	0.00089
47	1.385	1.451	1.23	0.12	0.00055
48	1.520	1.592	0.96	0.088	0.00032
49	1.668	1.748	0.81	0.068	0.00021
50	1.832	1.919	0.63	0.048	0.00012
51	2.011	2.107	0.42	0.029	0.000061
52	2.207	2.313	0.26	0.016	0.000028
53	2.423	2.539	0.10	0.0059	0.000008
54	2.660	2.787	0.028	0.0015	0.000002
55	2.920	3.059	0.0050	0.00024	2.38E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

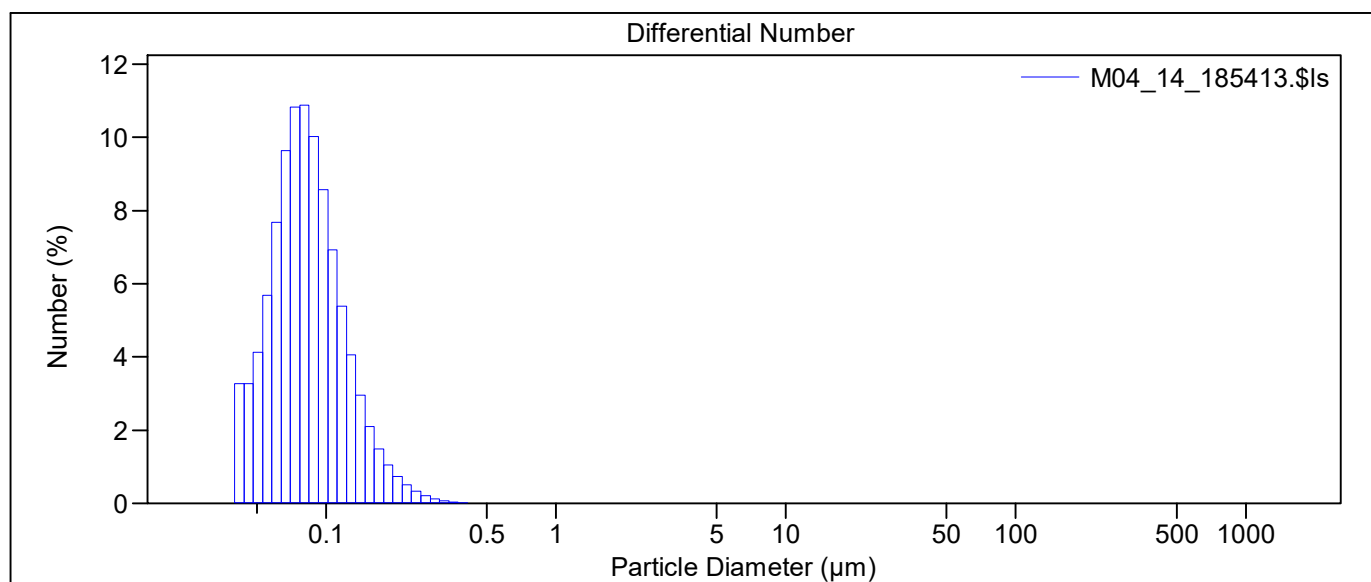
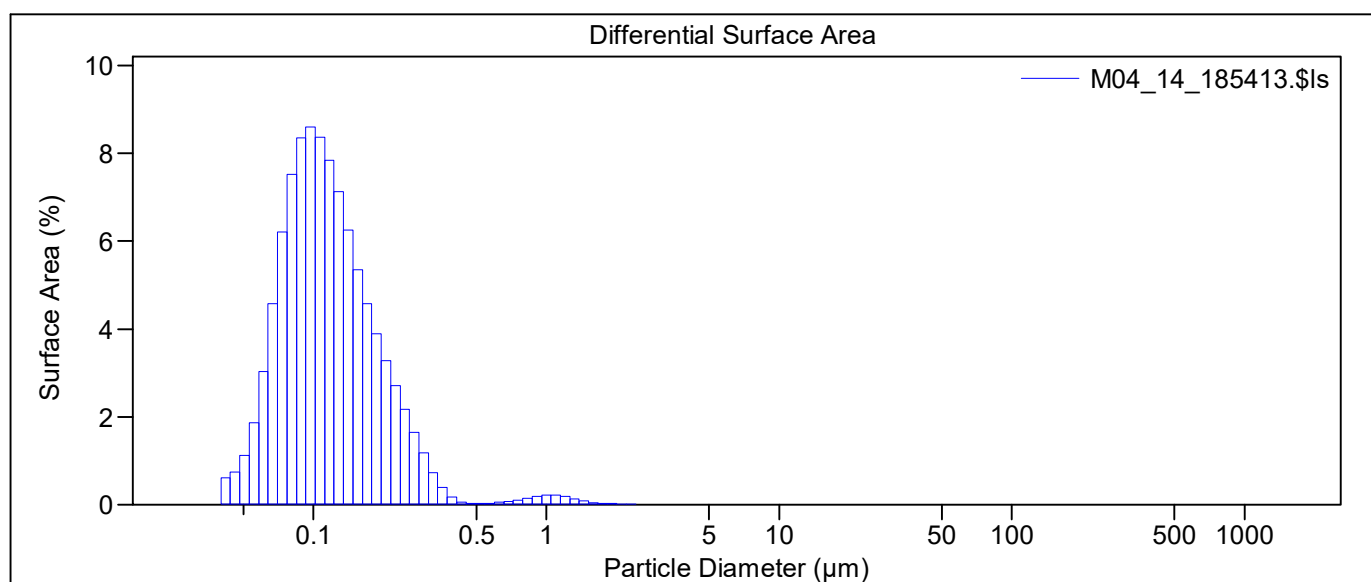
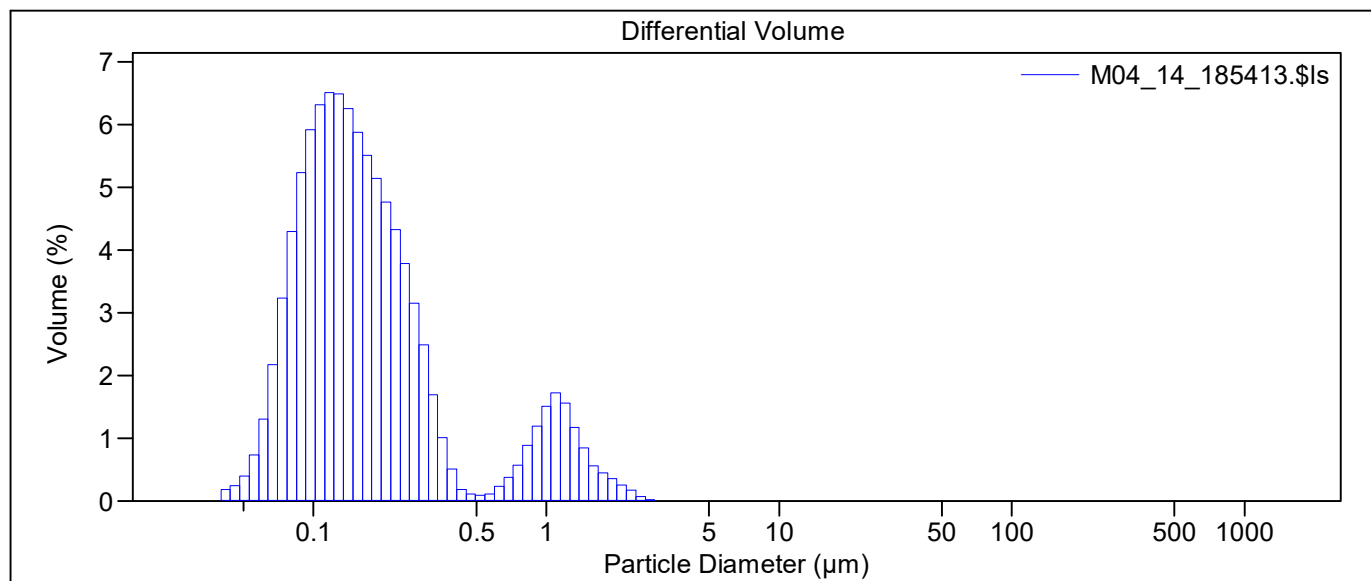
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_14_185413.\$ls		
	M04_14_185413.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.94%		
LS 13 320	Universal Liquid Module		
Start time:	18:52 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	73%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_14_185413.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.367 µm
Mean:	0.280 µm		Variance:	0.135 µm ²
Median:	0.149 µm		C.V.:	131%
Mean/Median ratio:	1.872		Skewness:	2.857 Right skewed
Mode:	0.117 µm		Kurtosis:	8.380 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.104 µm	0.149 µm	0.236 µm	0.859 µm

Surface Area Statistics (Arithmetic)			M04_14_185413.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.140 µm
Mean:	0.141 µm		Variance:	0.020 µm ²
Median:	0.110 µm		C.V.:	99.2%
Mean/Median ratio:	1.276		Skewness:	6.949 Right skewed
Mode:	0.097 µm		Kurtosis:	64.01 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.084 µm	0.110 µm	0.155 µm	0.220 µm

Number Statistics (Arithmetic)			M04_14_185413.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.089 μm		Variance:	0.0015 μm ²
Median:	0.081 μm		C.V.:	43.5%
Mean/Median ratio:	1.102		Skewness:	3.868 Right skewed
Mode:	0.080 μm		Kurtosis:	67.49 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.081 μm	0.103 μm	0.133 μm



M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.61	3.27
10	0.044	0.046	0.24	0.74	3.28
11	0.048	0.050	0.40	1.12	4.12
12	0.053	0.055	0.73	1.86	5.69
13	0.058	0.061	1.31	3.03	7.68
14	0.064	0.067	2.17	4.58	9.63
15	0.070	0.073	3.23	6.21	10.8
16	0.077	0.080	4.29	7.52	10.9
17	0.084	0.088	5.23	8.35	10.0
18	0.093	0.097	5.92	8.59	8.57
19	0.102	0.106	6.32	8.36	6.92
20	0.112	0.117	6.51	7.85	5.39
21	0.122	0.128	6.49	7.13	4.06
22	0.134	0.141	6.25	6.26	2.96
23	0.148	0.155	5.87	5.35	2.10
24	0.162	0.170	5.51	4.57	1.49
25	0.178	0.186	5.14	3.89	1.05
26	0.195	0.205	4.76	3.28	0.74
27	0.214	0.225	4.33	2.72	0.51
28	0.235	0.247	3.79	2.17	0.33
29	0.258	0.271	3.15	1.64	0.21
30	0.284	0.297	2.49	1.18	0.13
31	0.311	0.326	1.69	0.73	0.064
32	0.342	0.358	1.01	0.40	0.029
33	0.375	0.393	0.51	0.18	0.011
34	0.412	0.431	0.18	0.060	0.0030
35	0.452	0.474	0.11	0.032	0.0013
36	0.496	0.520	0.092	0.025	0.00087
37	0.545	0.571	0.11	0.028	0.00080
38	0.598	0.627	0.24	0.053	0.0013
39	0.656	0.688	0.38	0.077	0.0015
40	0.721	0.755	0.57	0.11	0.0017
41	0.791	0.829	0.89	0.15	0.0021
42	0.868	0.910	1.19	0.19	0.0021
43	0.953	0.999	1.51	0.21	0.0020
44	1.047	1.097	1.73	0.22	0.0017
45	1.149	1.204	1.56	0.18	0.0012

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.17	0.12	0.00067
47	1.385	1.451	0.85	0.082	0.00037
48	1.520	1.592	0.56	0.050	0.00018
49	1.668	1.748	0.44	0.036	0.00011
50	1.832	1.919	0.36	0.026	0.000067
51	2.011	2.107	0.25	0.017	0.000035
52	2.207	2.313	0.17	0.011	0.000019
53	2.423	2.539	0.075	0.0041	0.000006
54	2.660	2.787	0.021	0.0011	0.000001
55	2.920	3.059	0.0039	0.00018	1.79E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

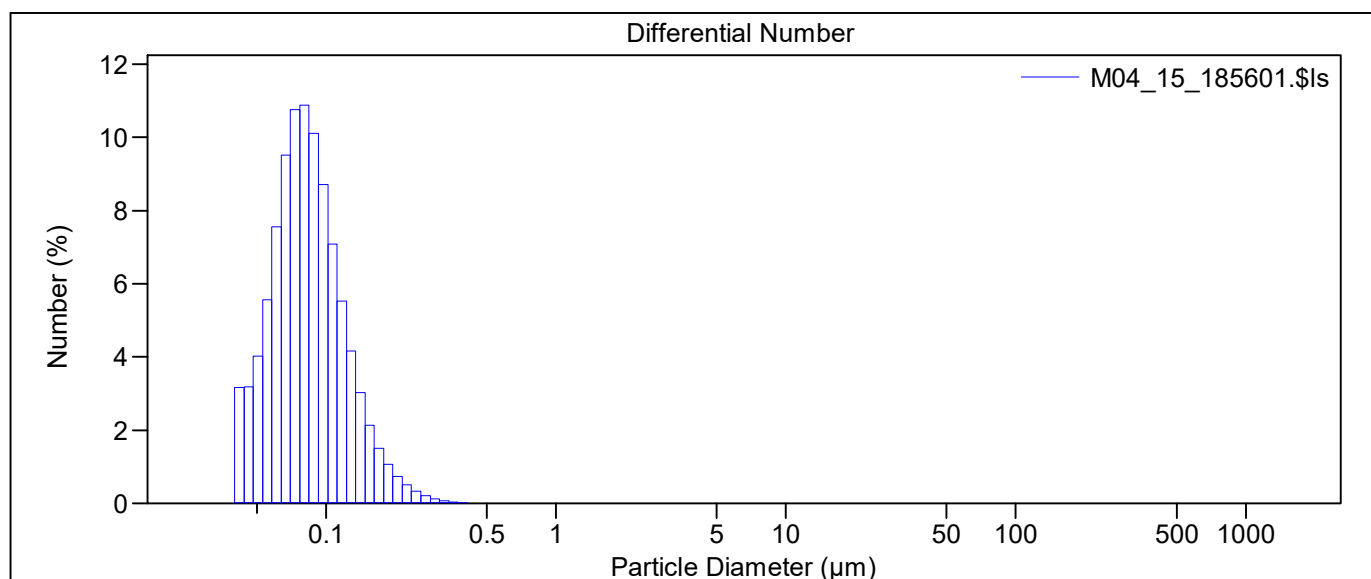
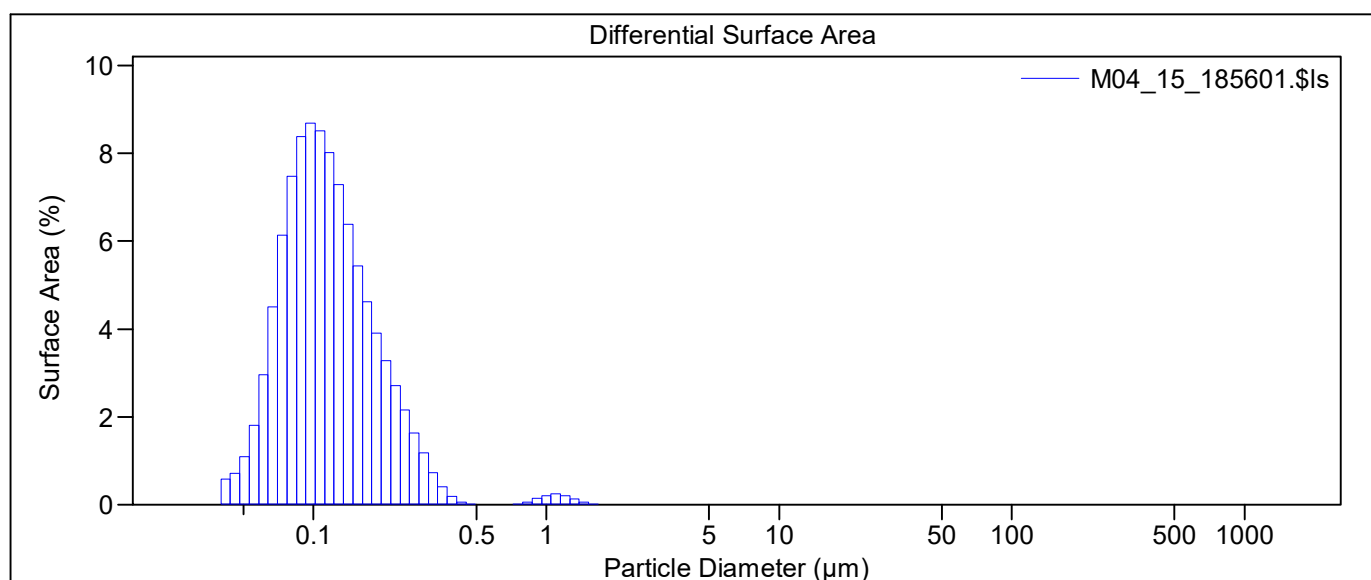
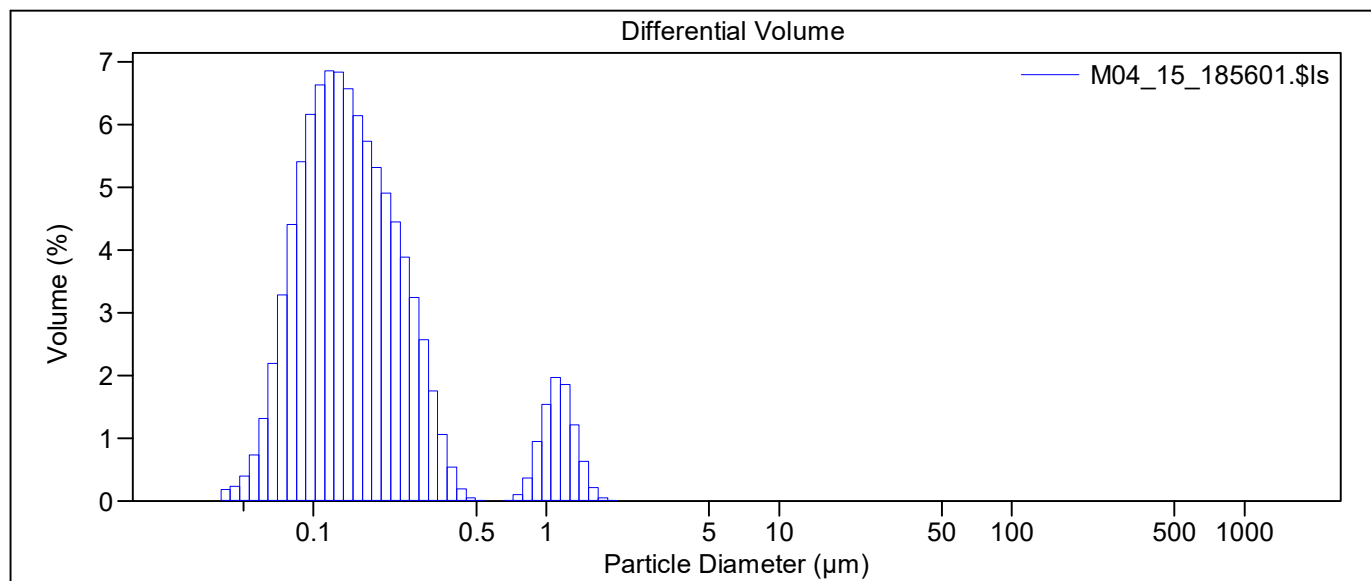
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M04\M04_15_185601.\$ls		
	M04_15_185601.\$ls		
File ID:	M04		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.10%		
LS 13 320	Universal Liquid Module		
Start time:	18:54 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	72%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M04_15_185601.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.294 µm
Mean:	0.242 µm		Variance:	0.086 µm ²
Median:	0.145 µm		C.V.:	121%
Mean/Median ratio:	1.669		Skewness:	2.802 Right skewed
Mode:	0.117 µm		Kurtosis:	6.901 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.103 µm	0.145 µm	0.222 µm	0.366 µm

Surface Area Statistics (Arithmetic)		M04_15_185601.\$ls		
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%			
Mean:	0.137 µm	S.D.:	0.120 µm	
Median:	0.111 µm	Variance:	0.014 µm ²	
Mean/Median ratio:	1.237	C.V.:	87.8%	
Mode:	0.097 µm	Skewness:	6.568 Right skewed	
		Kurtosis:	55.12 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.068 µm	0.084 µm	0.111 µm	0.154 µm	0.216 µm

Number Statistics (Arithmetic)			M04_15_185601.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.089 μm		Variance:	0.0015 μm ²
Median:	0.081 μm		C.V.:	42.8%
Mean/Median ratio:	1.100		Skewness:	3.363 Right skewed
Mode:	0.080 μm		Kurtosis:	49.61 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.065 μm	0.081 μm	0.104 μm	0.134 μm



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M04.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.59	3.16
10	0.044	0.046	0.24	0.71	3.18
11	0.048	0.050	0.40	1.09	4.02
12	0.053	0.055	0.73	1.81	5.56
13	0.058	0.061	1.32	2.97	7.55
14	0.064	0.067	2.20	4.50	9.51
15	0.070	0.073	3.29	6.13	10.8
16	0.077	0.080	4.40	7.48	10.9
17	0.084	0.088	5.41	8.38	10.1
18	0.093	0.097	6.16	8.69	8.70
19	0.102	0.106	6.63	8.52	7.08
20	0.112	0.117	6.85	8.02	5.53
21	0.122	0.128	6.84	7.29	4.17
22	0.134	0.141	6.57	6.38	3.03
23	0.148	0.155	6.14	5.43	2.14
24	0.162	0.170	5.73	4.62	1.51
25	0.178	0.186	5.32	3.90	1.06
26	0.195	0.205	4.91	3.28	0.74
27	0.214	0.225	4.45	2.71	0.51
28	0.235	0.247	3.89	2.16	0.33
29	0.258	0.271	3.24	1.64	0.21
30	0.284	0.297	2.57	1.19	0.13
31	0.311	0.326	1.75	0.74	0.065
32	0.342	0.358	1.06	0.40	0.030
33	0.375	0.393	0.54	0.19	0.011
34	0.412	0.431	0.20	0.062	0.0032
35	0.452	0.474	0.054	0.016	0.00065
36	0.496	0.520	0.0079	0.0021	0.000073
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0.014	0.0027	0.000054
40	0.721	0.755	0.098	0.018	0.00029
41	0.791	0.829	0.37	0.060	0.00083
42	0.868	0.910	0.95	0.14	0.0016
43	0.953	0.999	1.54	0.21	0.0020
44	1.047	1.097	1.97	0.25	0.0019
45	1.149	1.204	1.86	0.21	0.0014
46	1.261	1.321	1.21	0.13	0.00068
47	1.385	1.451	0.63	0.060	0.00027
48	1.520	1.592	0.21	0.018	0.000069
49	1.668	1.748	0.046	0.0036	0.000011
50	1.832	1.919	0.0068	0.00048	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

Beckman Coulter LS13320

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M05\M05.\$av
M05.\$av
File ID: M05
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M05.\$av

Calculations from 0.017 μm to 2000 μm

Volume:	100%	S.D.:	0.369 μm
Mean:	0.304 μm	Variance:	0.136 μm^2
Median:	0.159 μm	C.V.:	121%
Mean/Median ratio:	1.916	Skewness:	2.353 Right skewed
Mode:	0.106 μm	Kurtosis:	5.337 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.084 μm	0.107 μm	0.159 μm	0.260 μm	0.959 μm

Surface Area Statistics (Arithmetic) M05.\$av

Calculations from 0.017 μm to 2000 μm

Surface Area:	100%	S.D.:	0.152 μm
Mean:	0.150 μm	Variance:	0.023 μm^2
Median:	0.113 μm	C.V.:	101%
Mean/Median ratio:	1.328	Skewness:	5.831 Right skewed
Mode:	0.097 μm	Kurtosis:	43.07 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.071 μm	0.088 μm	0.113 μm	0.161 μm	0.231 μm

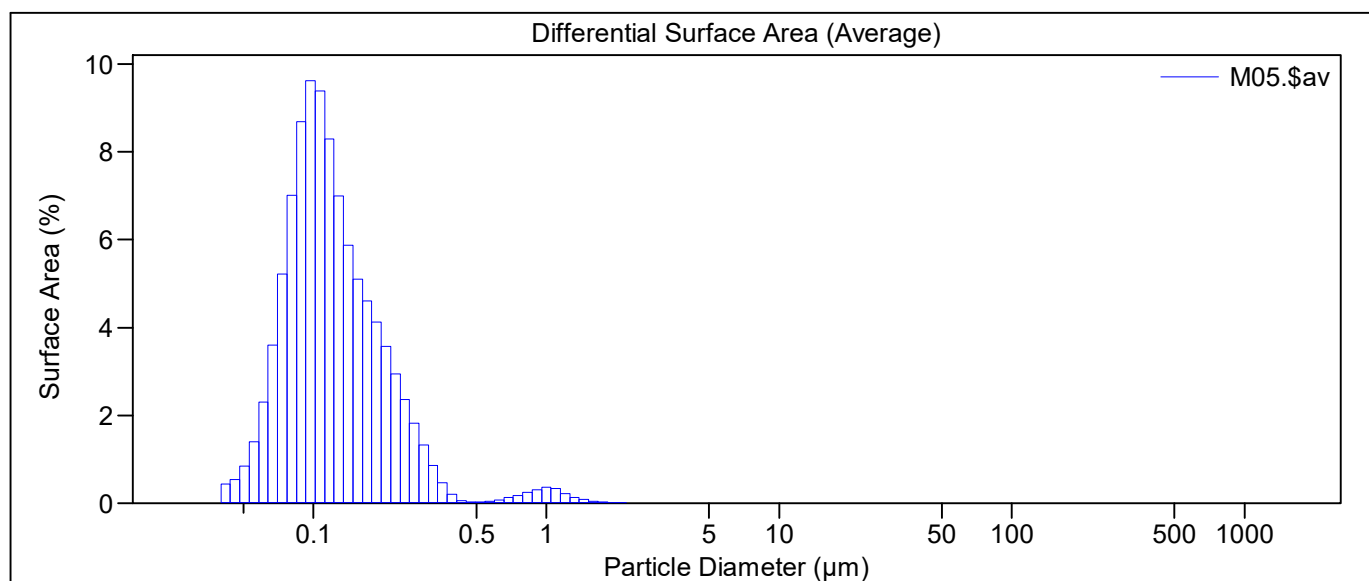
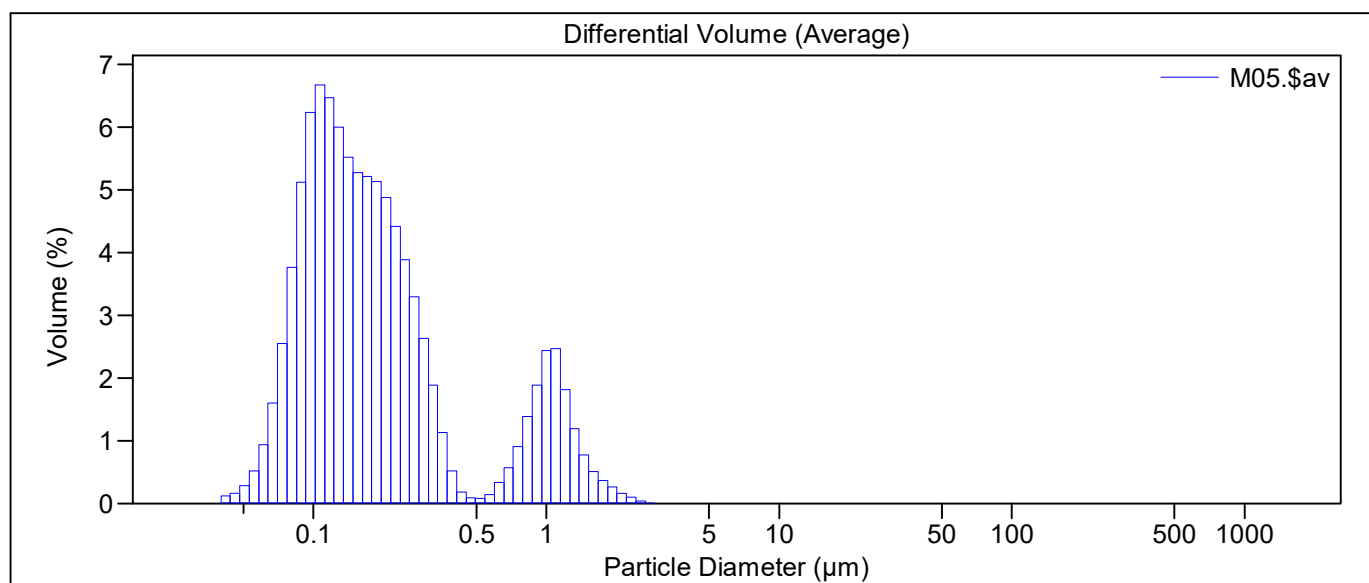
Number Statistics (Arithmetic)

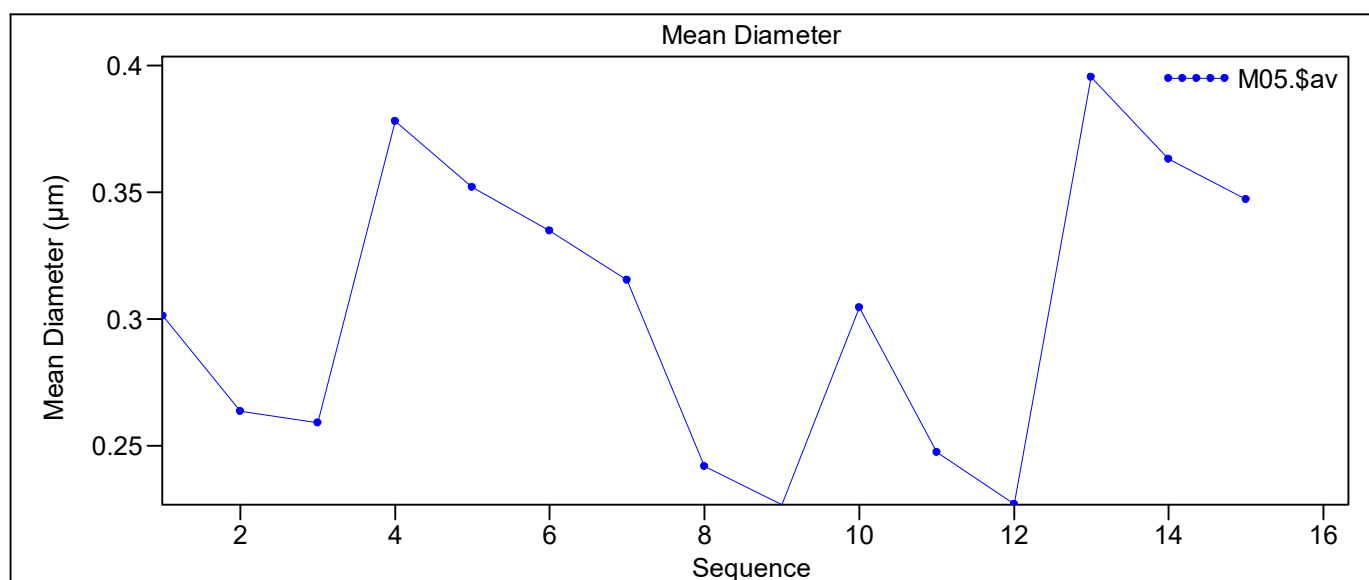
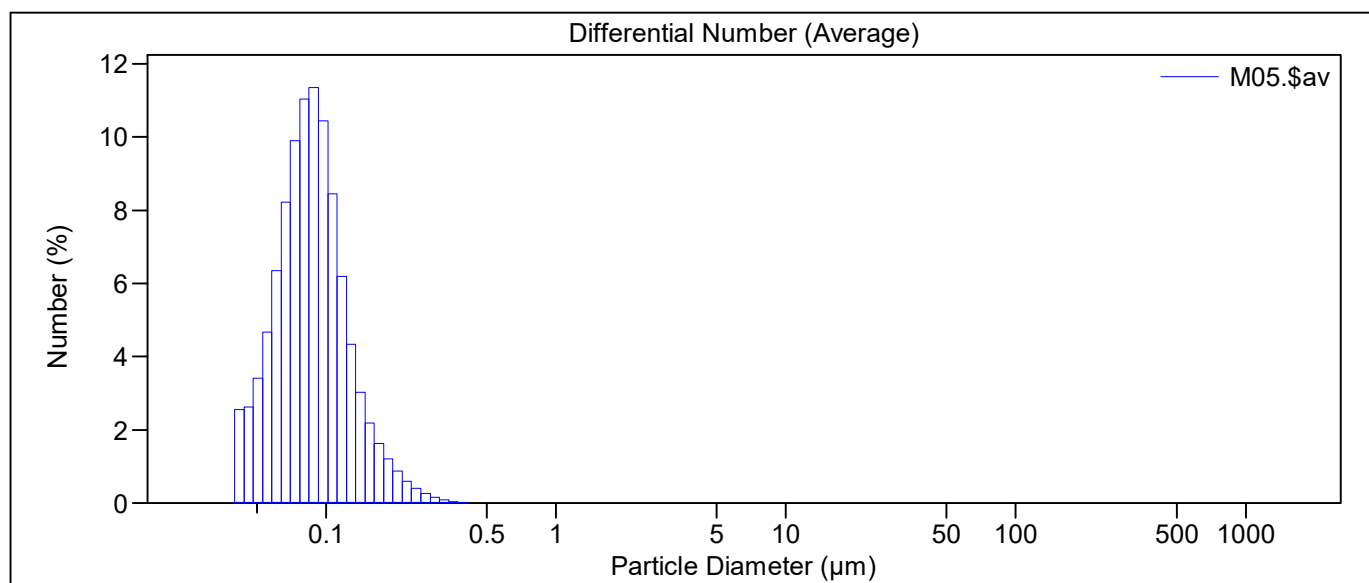
M05.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.040 μm
Mean:	0.093 μm	Variance:	0.0016 μm^2
Median:	0.085 μm	C.V.:	43.4%
Mean/Median ratio:	1.087	Skewness:	4.338 Right skewed
Mode:	0.088 μm	Kurtosis:	74.18 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 μm	0.068 μm	0.085 μm	0.107 μm	0.137 μm





M05.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.12	0.44	2.55
10	0.044	0.046	0.17	0.54	2.63
11	0.048	0.050	0.29	0.85	3.41
12	0.053	0.055	0.52	1.40	4.66
13	0.058	0.061	0.94	2.30	6.35
14	0.064	0.067	1.60	3.60	8.23
15	0.070	0.073	2.55	5.22	9.90
16	0.077	0.080	3.77	7.01	11.0
17	0.084	0.088	5.12	8.68	11.3

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	6.23	9.63	10.4
19	0.102	0.106	6.67	9.38	8.44
20	0.112	0.117	6.47	8.30	6.19
21	0.122	0.128	6.00	7.00	4.34
22	0.134	0.141	5.52	5.87	3.02
23	0.148	0.155	5.27	5.11	2.18
24	0.162	0.170	5.22	4.60	1.63
25	0.178	0.186	5.13	4.12	1.21
26	0.195	0.205	4.88	3.57	0.87
27	0.214	0.225	4.42	2.95	0.60
28	0.235	0.247	3.89	2.36	0.40
29	0.258	0.271	3.30	1.82	0.25
30	0.284	0.297	2.64	1.33	0.15
31	0.311	0.326	1.89	0.87	0.083
32	0.342	0.358	1.13	0.47	0.038
33	0.375	0.393	0.52	0.20	0.013
34	0.412	0.431	0.19	0.064	0.0035
35	0.452	0.474	0.090	0.028	0.0013
36	0.496	0.520	0.083	0.024	0.00090
37	0.545	0.571	0.14	0.038	0.0012
38	0.598	0.627	0.34	0.080	0.0021
39	0.656	0.688	0.57	0.13	0.0027
40	0.721	0.755	0.91	0.18	0.0032
41	0.791	0.829	1.39	0.25	0.0037
42	0.868	0.910	1.89	0.31	0.0038
43	0.953	0.999	2.44	0.37	0.0037
44	1.047	1.097	2.47	0.34	0.0029
45	1.149	1.204	1.81	0.23	0.0016
46	1.261	1.321	1.20	0.14	0.00079
47	1.385	1.451	0.78	0.080	0.00039
48	1.520	1.592	0.51	0.048	0.00019
49	1.668	1.748	0.37	0.031	0.00010
50	1.832	1.919	0.26	0.020	0.000056
51	2.011	2.107	0.16	0.012	0.000026
52	2.207	2.313	0.097	0.0063	0.000012
53	2.423	2.539	0.039	0.0023	0.000004
54	2.660	2.787	0.010	0.00056	0.000001
55	2.920	3.059	0.0019	0.000093	1.02E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

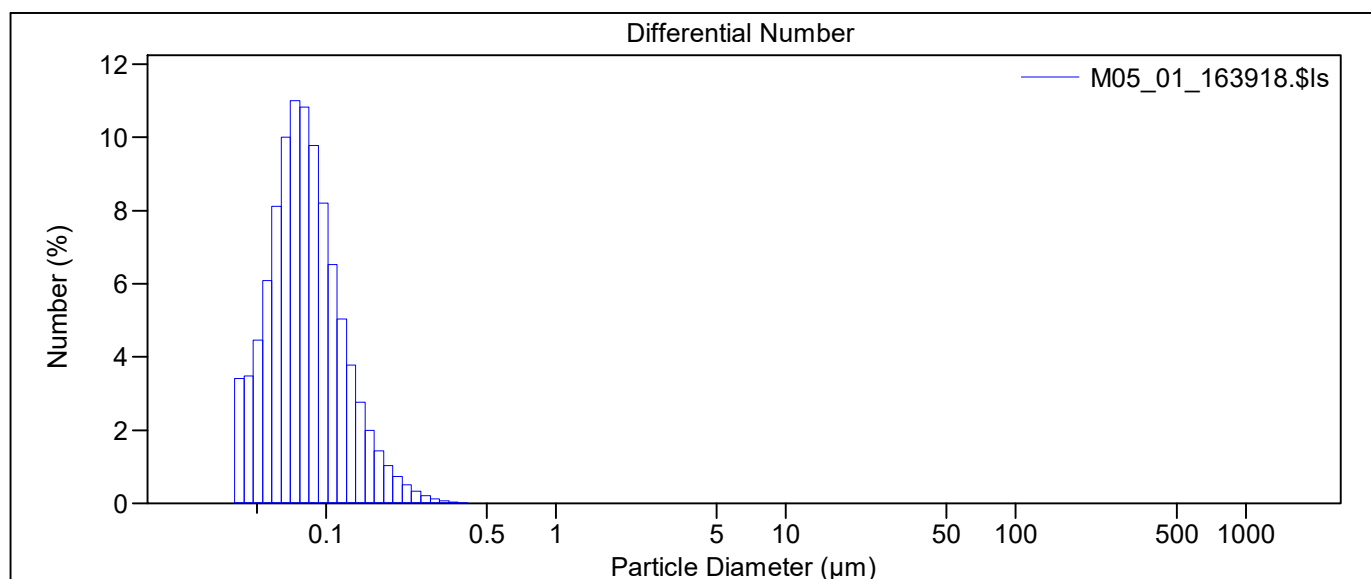
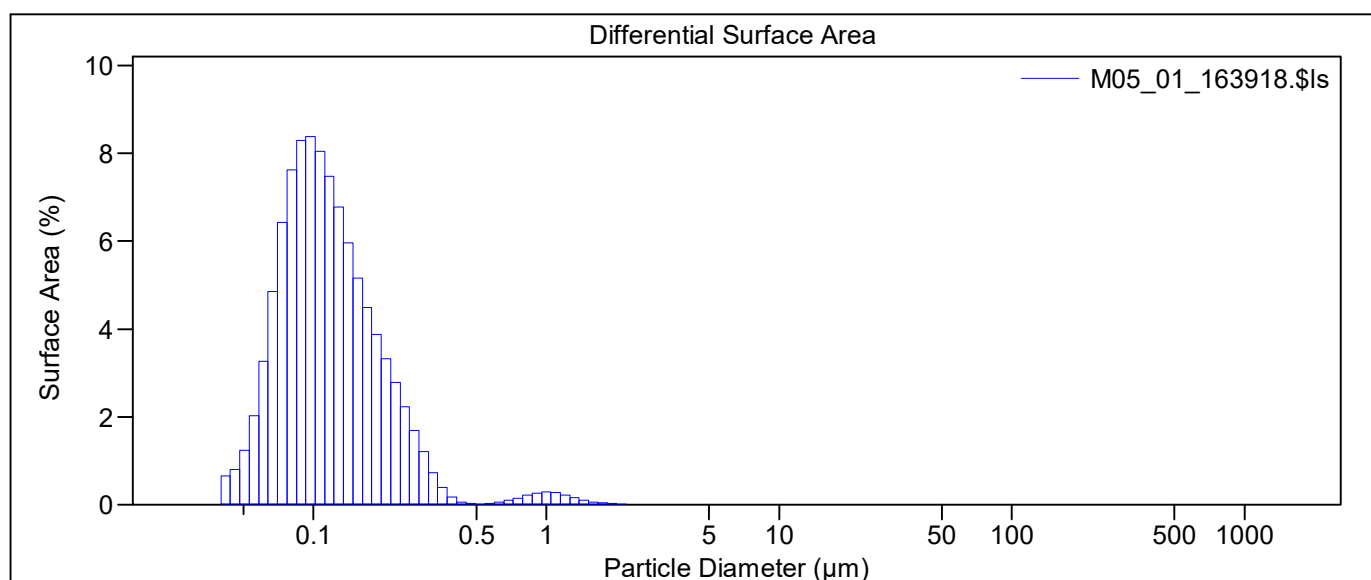
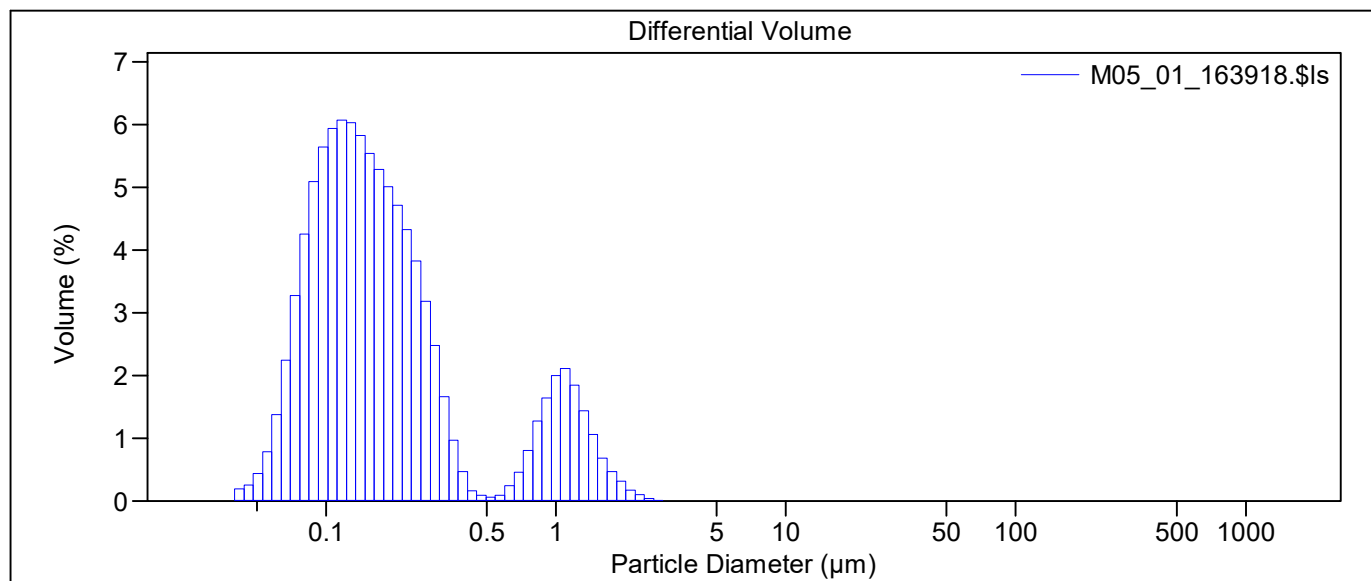
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_01_163918.\$ls		
	M05_01_163918.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.66%		
LS 13 320	Universal Liquid Module		
Start time:	16:37 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	64%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_01_163918.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.380 µm
Mean:	0.301 µm		Variance:	0.145 µm ²
Median:	0.154 µm		C.V.:	126%
Mean/Median ratio:	1.954		Skewness:	2.409 Right skewed
Mode:	0.117 µm		Kurtosis:	5.446 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.154 µm	0.251 µm	0.965 µm

Surface Area Statistics (Arithmetic)			M05_01_163918.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.151 µm
Mean:	0.144 µm		Variance:	0.023 µm ²
Median:	0.110 µm		C.V.:	105%
Mean/Median ratio:	1.315		Skewness:	6.194 Right skewed
Mode:	0.097 µm		Kurtosis:	48.46 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.110 µm	0.156 µm	0.224 µm

Number Statistics (Arithmetic)			M05_01_163918.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.5%
Mean/Median ratio:	1.107		Skewness:	4.271 Right skewed
Mode:	0.073 μm		Kurtosis:	75.82 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.42
10	0.044	0.046	0.26	0.80	3.48
11	0.048	0.050	0.43	1.24	4.47
12	0.053	0.055	0.78	2.03	6.09
13	0.058	0.061	1.38	3.27	8.12
14	0.064	0.067	2.25	4.85	10.0
15	0.070	0.073	3.27	6.43	11.0
16	0.077	0.080	4.26	7.62	10.8
17	0.084	0.088	5.09	8.30	9.78
18	0.093	0.097	5.65	8.39	8.20
19	0.102	0.106	5.94	8.04	6.52
20	0.112	0.117	6.07	7.48	5.04
21	0.122	0.128	6.04	6.78	3.79
22	0.134	0.141	5.83	5.96	2.76
23	0.148	0.155	5.54	5.16	1.99
24	0.162	0.170	5.28	4.48	1.43
25	0.178	0.186	5.01	3.87	1.03
26	0.195	0.205	4.71	3.32	0.73
27	0.214	0.225	4.33	2.78	0.51
28	0.235	0.247	3.82	2.23	0.34
29	0.258	0.271	3.19	1.70	0.21
30	0.284	0.297	2.48	1.20	0.13
31	0.311	0.326	1.66	0.74	0.064
32	0.342	0.358	0.97	0.39	0.028
33	0.375	0.393	0.47	0.17	0.010
34	0.412	0.431	0.17	0.055	0.0027
35	0.452	0.474	0.088	0.027	0.0011
36	0.496	0.520	0.061	0.017	0.00057
37	0.545	0.571	0.091	0.023	0.00065
38	0.598	0.627	0.25	0.057	0.0013
39	0.656	0.688	0.46	0.095	0.0019
40	0.721	0.755	0.80	0.15	0.0025
41	0.791	0.829	1.28	0.22	0.0030
42	0.868	0.910	1.64	0.26	0.0029
43	0.953	0.999	2.00	0.29	0.0027
44	1.047	1.097	2.11	0.28	0.0021
45	1.149	1.204	1.85	0.22	0.0014

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.43	0.16	0.00082
47	1.385	1.451	1.06	0.10	0.00046
48	1.520	1.592	0.68	0.062	0.00022
49	1.668	1.748	0.47	0.039	0.00012
50	1.832	1.919	0.31	0.024	0.000059
51	2.011	2.107	0.18	0.012	0.000025
52	2.207	2.313	0.10	0.0065	0.000011
53	2.423	2.539	0.041	0.0023	0.000003
54	2.660	2.787	0.010	0.00053	0.000001
55	2.920	3.059	0.0023	0.00011	1.08E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

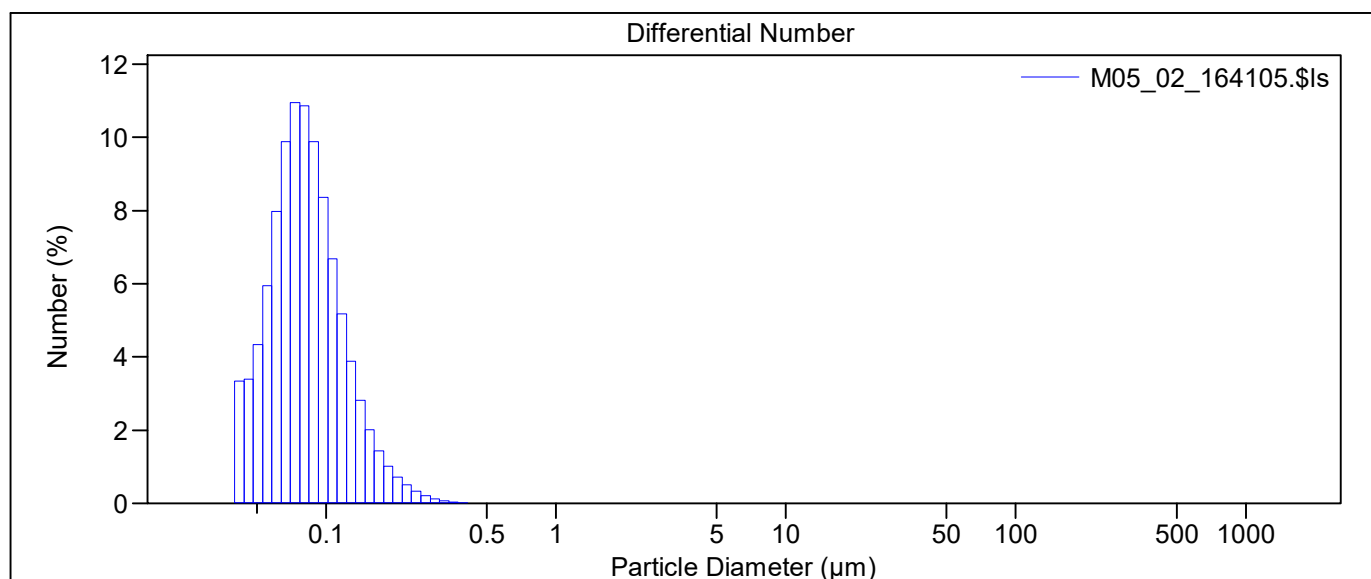
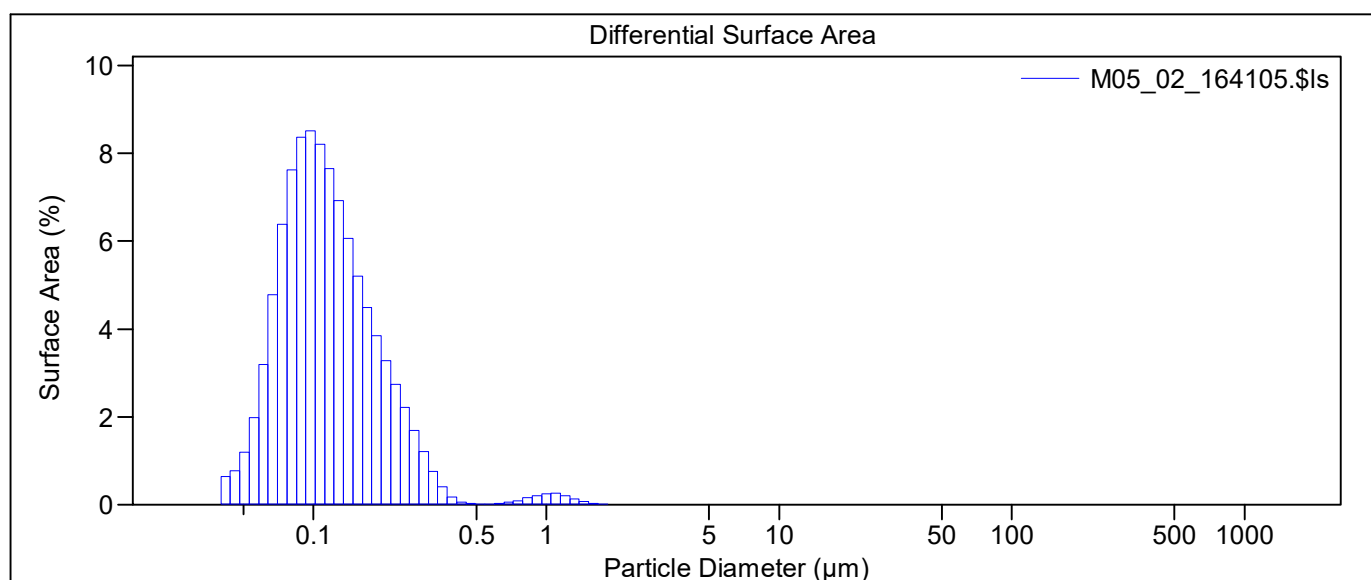
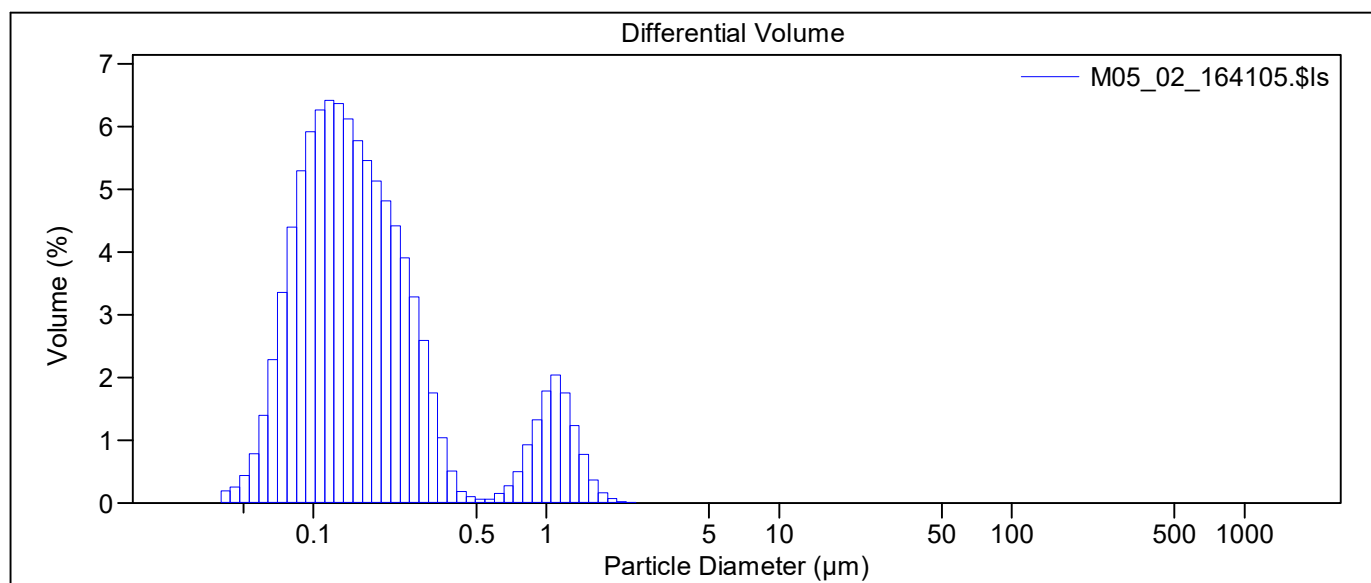
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_02_164105.\$ls		
	M05_02_164105.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.99%		
LS 13 320	Universal Liquid Module		
Start time:	16:39 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	66%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_02_164105.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.321 μm
Mean:	0.264 μm		Variance:	0.103 μm ²
Median:	0.149 μm		C.V.:	122%
Mean/Median ratio:	1.772		Skewness:	2.543 Right skewed
Mode:	0.117 μm		Kurtosis:	5.700 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.149 μm	0.235 μm	0.831 μm

Surface Area Statistics (Arithmetic)			M05_02_164105.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.132 μm
Mean:	0.140 μm		Variance:	0.017 μm ²
Median:	0.110 μm		C.V.:	94.4%
Mean/Median ratio:	1.274		Skewness:	6.175 Right skewed
Mode:	0.097 μm		Kurtosis:	48.14 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.110 μm	0.155 μm	0.221 μm

Number Statistics (Arithmetic)			M05_02_164105.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	43.7%
Mean/Median ratio:	1.104		Skewness:	3.764 Right skewed
Mode:	0.073 μm		Kurtosis:	58.55 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.132 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.64	3.35
10	0.044	0.046	0.26	0.78	3.40
11	0.048	0.050	0.43	1.20	4.35
12	0.053	0.055	0.79	1.98	5.95
13	0.058	0.061	1.39	3.20	7.97
14	0.064	0.067	2.29	4.78	9.88
15	0.070	0.073	3.35	6.38	11.0
16	0.077	0.080	4.40	7.63	10.9
17	0.084	0.088	5.30	8.37	9.89
18	0.093	0.097	5.92	8.52	8.35
19	0.102	0.106	6.27	8.21	6.68
20	0.112	0.117	6.41	7.66	5.17
21	0.122	0.128	6.37	6.92	3.88
22	0.134	0.141	6.12	6.07	2.82
23	0.148	0.155	5.77	5.21	2.01
24	0.162	0.170	5.45	4.48	1.44
25	0.178	0.186	5.13	3.85	1.02
26	0.195	0.205	4.81	3.28	0.72
27	0.214	0.225	4.42	2.75	0.50
28	0.235	0.247	3.91	2.21	0.34
29	0.258	0.271	3.29	1.69	0.21
30	0.284	0.297	2.59	1.22	0.13
31	0.311	0.326	1.75	0.75	0.065
32	0.342	0.358	1.04	0.41	0.029
33	0.375	0.393	0.51	0.18	0.011
34	0.412	0.431	0.18	0.059	0.0029
35	0.452	0.474	0.098	0.029	0.0012
36	0.496	0.520	0.060	0.016	0.00055
37	0.545	0.571	0.060	0.015	0.00041
38	0.598	0.627	0.16	0.035	0.00081
39	0.656	0.688	0.27	0.055	0.0011
40	0.721	0.755	0.50	0.093	0.0015
41	0.791	0.829	0.93	0.16	0.0021
42	0.868	0.910	1.33	0.20	0.0023
43	0.953	0.999	1.79	0.25	0.0023
44	1.047	1.097	2.05	0.26	0.0020
45	1.149	1.204	1.76	0.20	0.0013

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.23	0.13	0.00069
47	1.385	1.451	0.78	0.075	0.00033
48	1.520	1.592	0.37	0.032	0.00012
49	1.668	1.748	0.16	0.013	0.000038
50	1.832	1.919	0.069	0.0050	0.000013
51	2.011	2.107	0.019	0.0012	0.000003
52	2.207	2.313	0.0074	0.00045	0.000001
53	2.423	2.539	0.0020	0.00011	1.55E-7
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

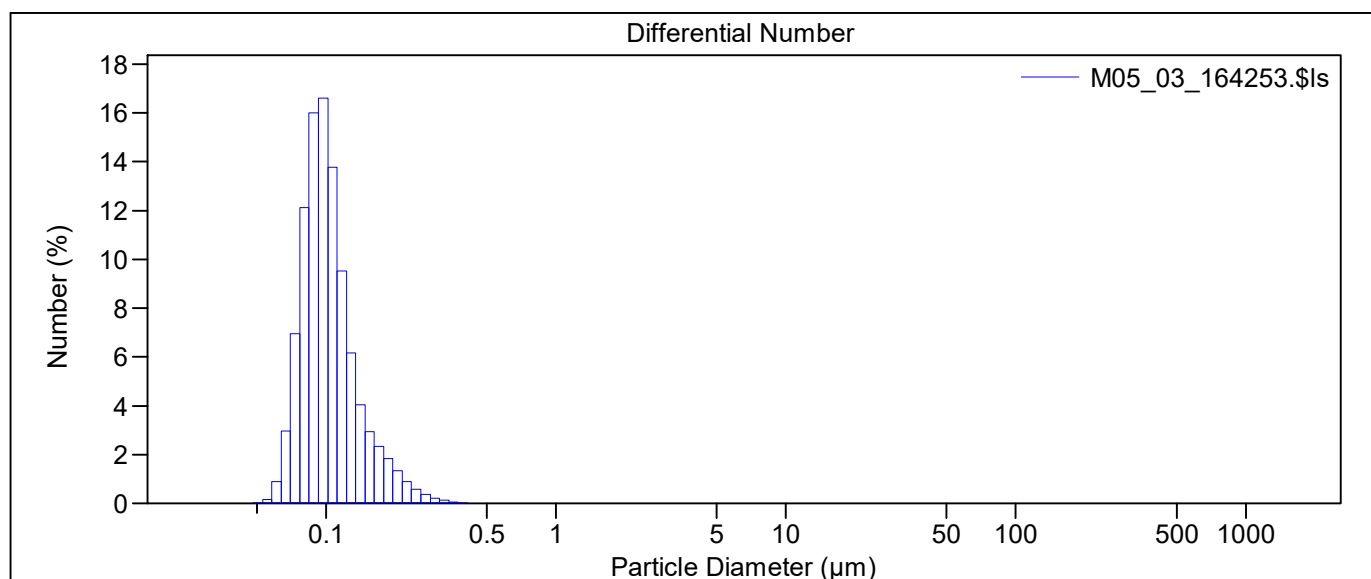
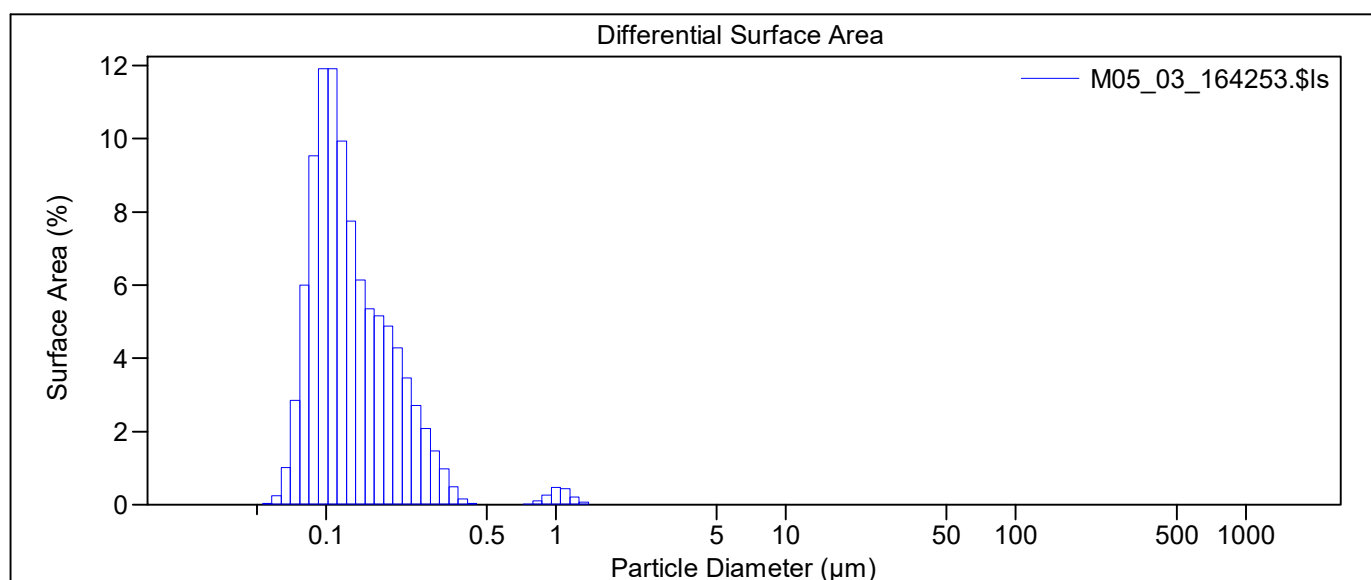
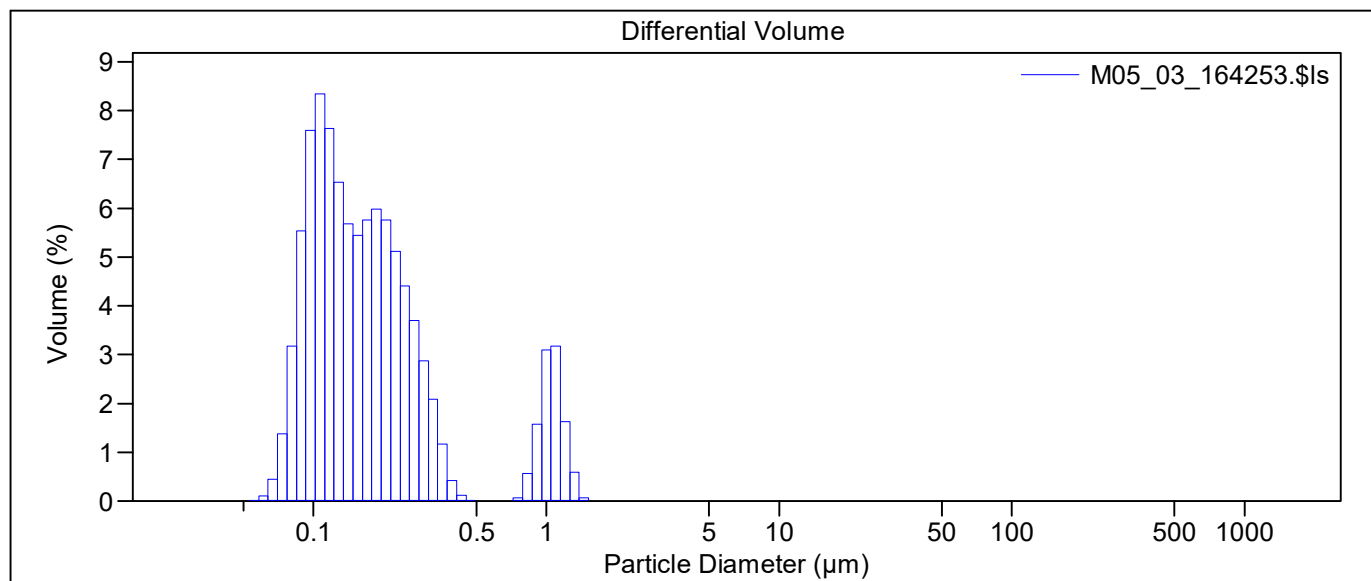
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_03_164253.\$ls		
	M05_03_164253.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.54%		
LS 13 320	Universal Liquid Module		
Start time:	16:41 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	65%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_03_164253.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.287 μm
Mean:	0.259 μm		Variance:	0.083 μm ²
Median:	0.157 μm		C.V.:	111%
Mean/Median ratio:	1.649		Skewness:	2.391 Right skewed
Mode:	0.106 μm		Kurtosis:	4.388 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.092 μm	0.110 μm	0.157 μm	0.238 μm	0.875 μm

Surface Area Statistics (Arithmetic)			M05_03_164253.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.128 µm
Mean:	0.152 µm		Variance:	0.016 µm ²
Median:	0.119 µm		C.V.:	83.8%
Mean/Median ratio:	1.282		Skewness:	5.708 Right skewed
Mode:	0.106 µm		Kurtosis:	38.81 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.084 µm	0.097 µm	0.119 µm	0.169 µm	0.232 µm

Number Statistics (Arithmetic)			M05_03_164253.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.108 μm		Variance:	0.0015 μm ²
Median:	0.099 μm		C.V.:	35.7%
Mean/Median ratio:	1.095		Skewness:	4.595 Right skewed
Mode:	0.097 μm		Kurtosis:	72.38 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.076 μm	0.085 μm	0.099 μm	0.118 μm	0.151 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0.000040	0.00013	0.00082
11	0.048	0.050	0.0012	0.0036	0.019
12	0.053	0.055	0.014	0.039	0.17
13	0.058	0.061	0.100	0.25	0.88
14	0.064	0.067	0.44	1.01	2.96
15	0.070	0.073	1.38	2.85	6.96
16	0.077	0.080	3.17	6.00	12.1
17	0.084	0.088	5.54	9.53	16.0
18	0.093	0.097	7.60	11.9	16.6
19	0.102	0.106	8.34	11.9	13.8
20	0.112	0.117	7.63	9.94	9.53
21	0.122	0.128	6.53	7.74	6.16
22	0.134	0.141	5.68	6.13	4.05
23	0.148	0.155	5.45	5.36	2.94
24	0.162	0.170	5.76	5.16	2.35
25	0.178	0.186	5.98	4.88	1.84
26	0.195	0.205	5.76	4.28	1.34
27	0.214	0.225	5.12	3.47	0.90
28	0.235	0.247	4.41	2.72	0.59
29	0.258	0.271	3.70	2.08	0.37
30	0.284	0.297	2.87	1.47	0.22
31	0.311	0.326	2.08	0.97	0.12
32	0.342	0.358	1.16	0.49	0.051
33	0.375	0.393	0.42	0.16	0.014
34	0.412	0.431	0.11	0.040	0.0028
35	0.452	0.474	0.012	0.0037	0.00022
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.059	0.012	0.00027
41	0.791	0.829	0.56	0.10	0.0020
42	0.868	0.910	1.58	0.26	0.0042
43	0.953	0.999	3.10	0.47	0.0062
44	1.047	1.097	3.17	0.44	0.0048
45	1.149	1.204	1.62	0.21	0.0019
46	1.261	1.321	0.59	0.068	0.00051
47	1.385	1.451	0.069	0.0072	0.000045
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M05.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

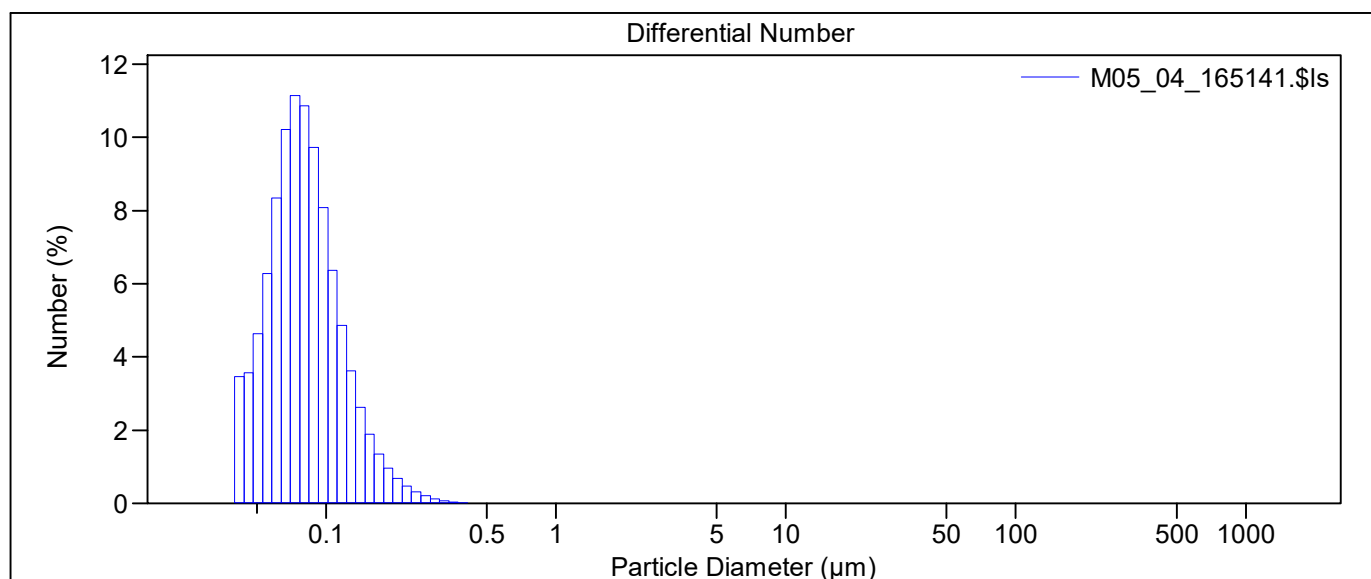
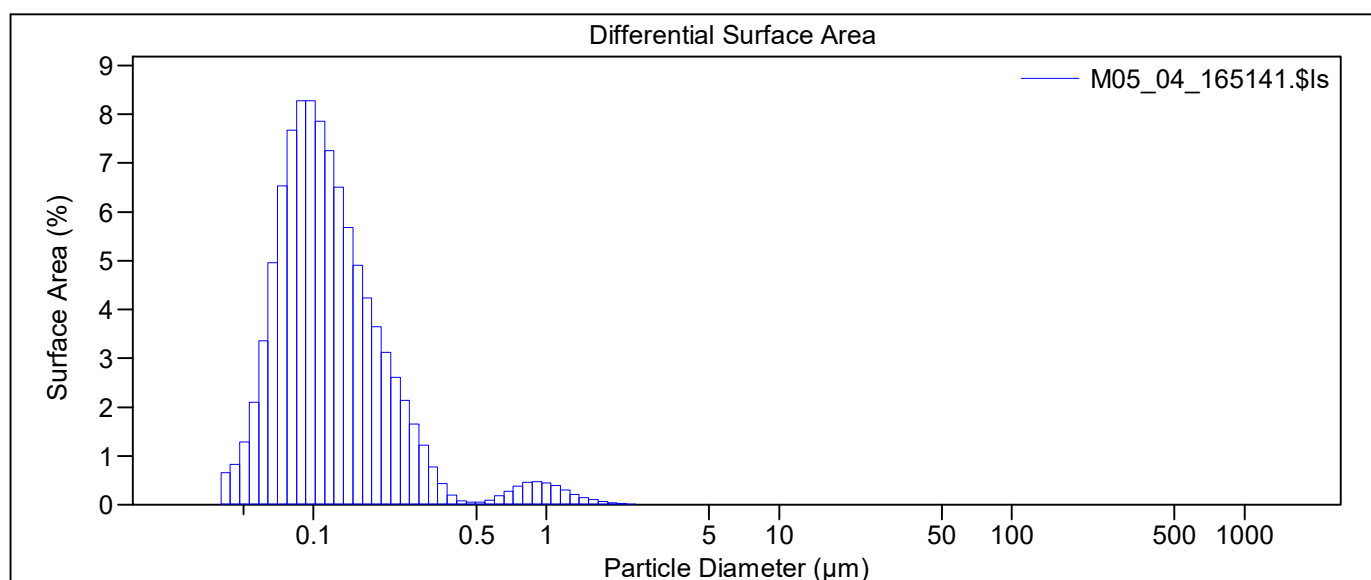
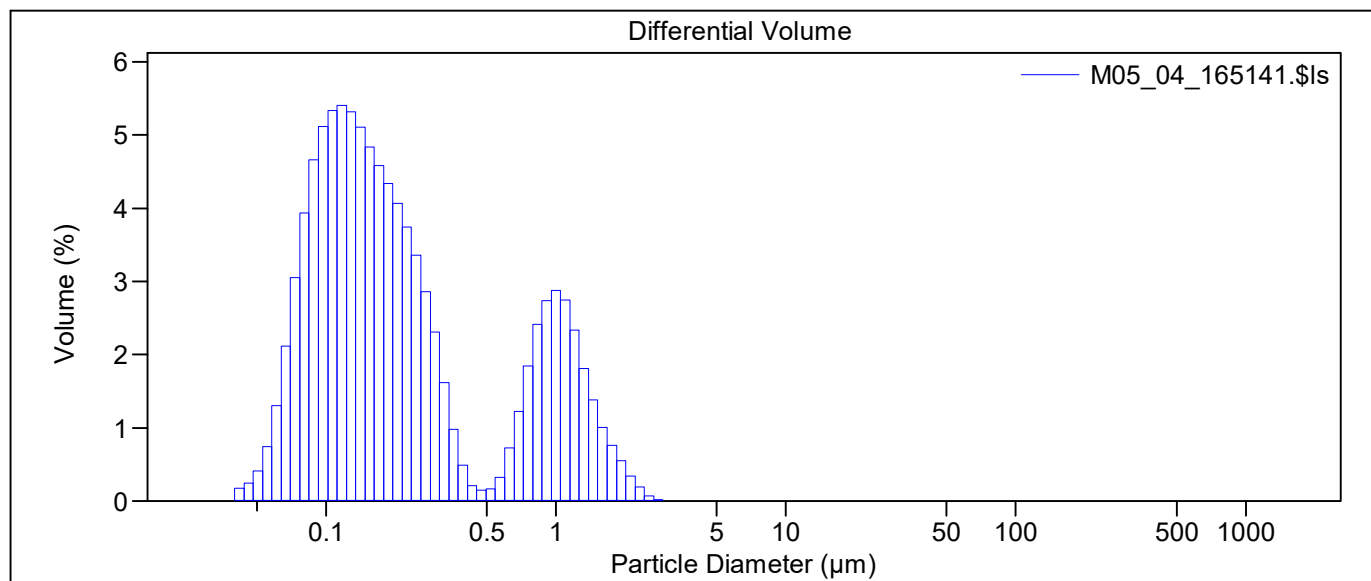
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File name:	D:\PP_PROFARB\POMIARY\M05\M05_04_165141.\$ls		
	M05_04_165141.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.96%		
LS 13 320	Universal Liquid Module		
Start time:	16:50 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_04_165141.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.443 μm
Mean:	0.378 μm		Variance:	0.197 μm ²
Median:	0.170 μm		C.V.:	117%
Mean/Median ratio:	2.227		Skewness:	1.819 Right skewed
Mode:	0.117 μm		Kurtosis:	2.741 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.108 μm	0.170 μm	0.354 μm	1.091 μm

Surface Area Statistics (Arithmetic)			M05_04_165141.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.186 µm
Mean:	0.157 µm		Variance:	0.035 µm ²
Median:	0.109 µm		C.V.:	119%
Mean/Median ratio:	1.435		Skewness:	5.117 Right skewed
Mode:	0.097 µm		Kurtosis:	31.76 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.159 µm	0.238 µm

Number Statistics (Arithmetic)			M05_04_165141.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.2%
Mean/Median ratio:	1.109		Skewness:	5.542 Right skewed
Mode:	0.073 μm		Kurtosis:	107.4 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.46
10	0.044	0.046	0.24	0.82	3.57
11	0.048	0.050	0.41	1.29	4.63
12	0.053	0.055	0.74	2.10	6.28
13	0.058	0.061	1.30	3.36	8.34
14	0.064	0.067	2.11	4.96	10.2
15	0.070	0.073	3.05	6.53	11.1
16	0.077	0.080	3.94	7.67	10.9
17	0.084	0.088	4.66	8.28	9.73
18	0.093	0.097	5.12	8.28	8.08
19	0.102	0.106	5.34	7.86	6.37
20	0.112	0.117	5.40	7.25	4.87
21	0.122	0.128	5.32	6.50	3.63
22	0.134	0.141	5.10	5.68	2.63
23	0.148	0.155	4.84	4.91	1.88
24	0.162	0.170	4.58	4.23	1.35
25	0.178	0.186	4.33	3.65	0.96
26	0.195	0.205	4.07	3.12	0.68
27	0.214	0.225	3.74	2.62	0.48
28	0.235	0.247	3.36	2.14	0.32
29	0.258	0.271	2.86	1.66	0.21
30	0.284	0.297	2.31	1.22	0.13
31	0.311	0.326	1.62	0.78	0.067
32	0.342	0.358	0.98	0.43	0.031
33	0.375	0.393	0.49	0.20	0.012
34	0.412	0.431	0.21	0.076	0.0037
35	0.452	0.474	0.14	0.048	0.0020
36	0.496	0.520	0.17	0.051	0.0017
37	0.545	0.571	0.32	0.089	0.0025
38	0.598	0.627	0.73	0.18	0.0043
39	0.656	0.688	1.23	0.28	0.0054
40	0.721	0.755	1.84	0.38	0.0062
41	0.791	0.829	2.42	0.46	0.0061
42	0.868	0.910	2.74	0.47	0.0052
43	0.953	0.999	2.88	0.45	0.0042
44	1.047	1.097	2.75	0.39	0.0030
45	1.149	1.204	2.33	0.30	0.0019

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.81	0.21	0.0011
47	1.385	1.451	1.38	0.15	0.00065
48	1.520	1.592	1.00	0.099	0.00036
49	1.668	1.748	0.76	0.068	0.00021
50	1.832	1.919	0.55	0.045	0.00011
51	2.011	2.107	0.34	0.025	0.000052
52	2.207	2.313	0.19	0.013	0.000022
53	2.423	2.539	0.073	0.0045	0.000006
54	2.660	2.787	0.019	0.0011	0.000001
55	2.920	3.059	0.0034	0.00017	1.72E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

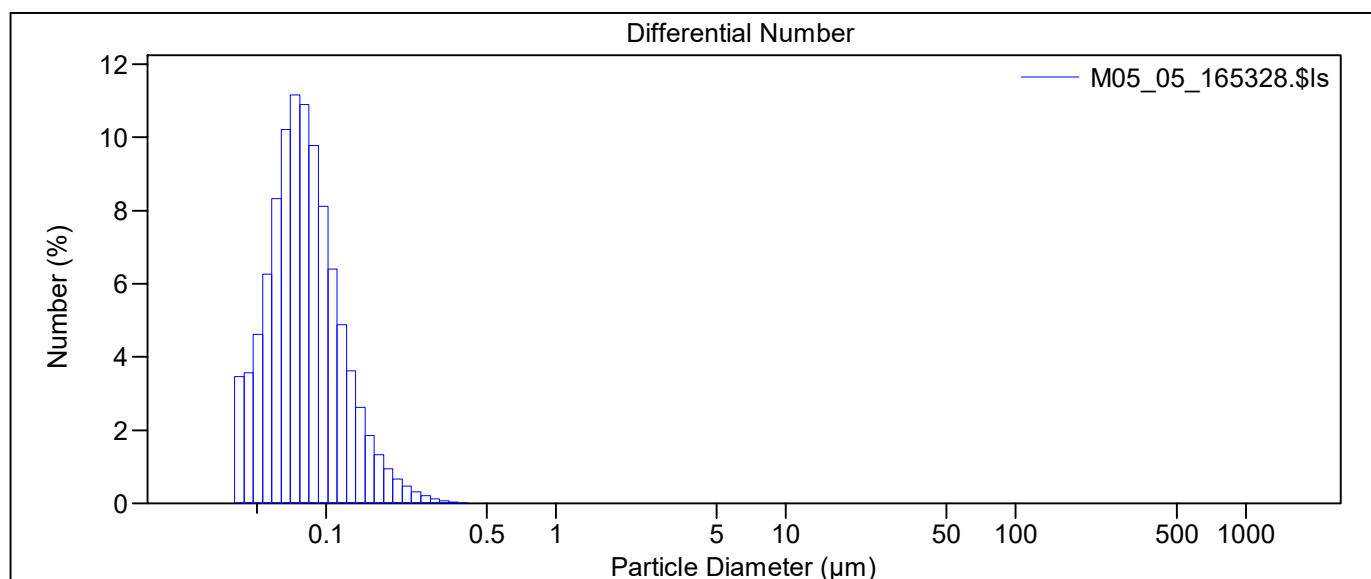
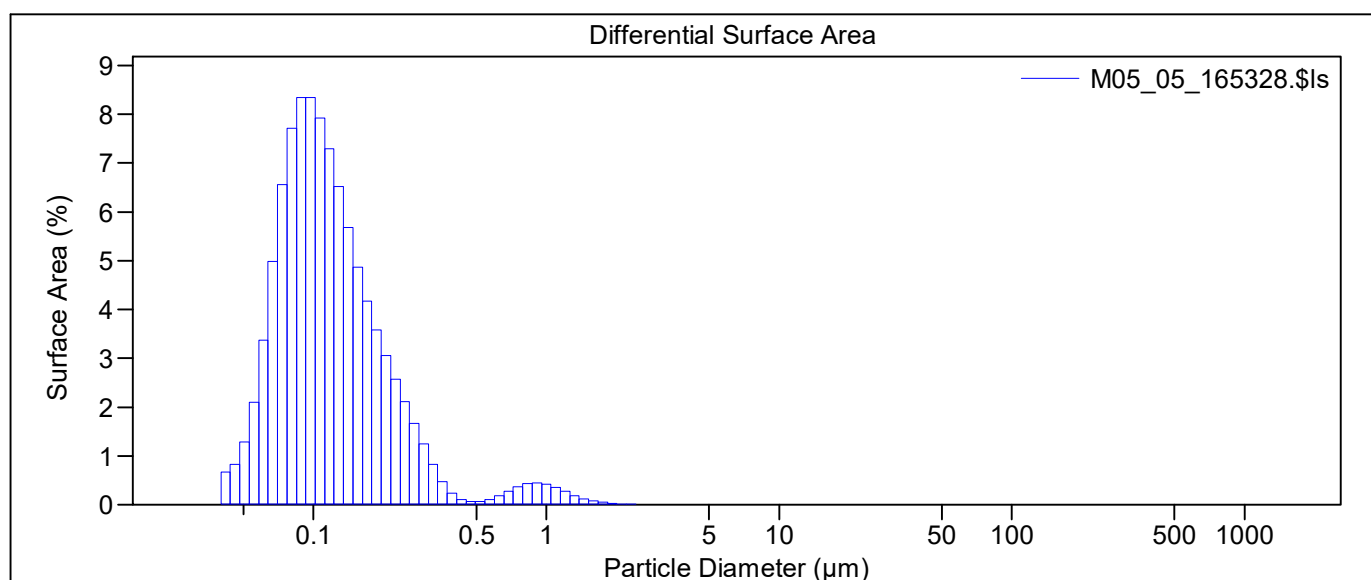
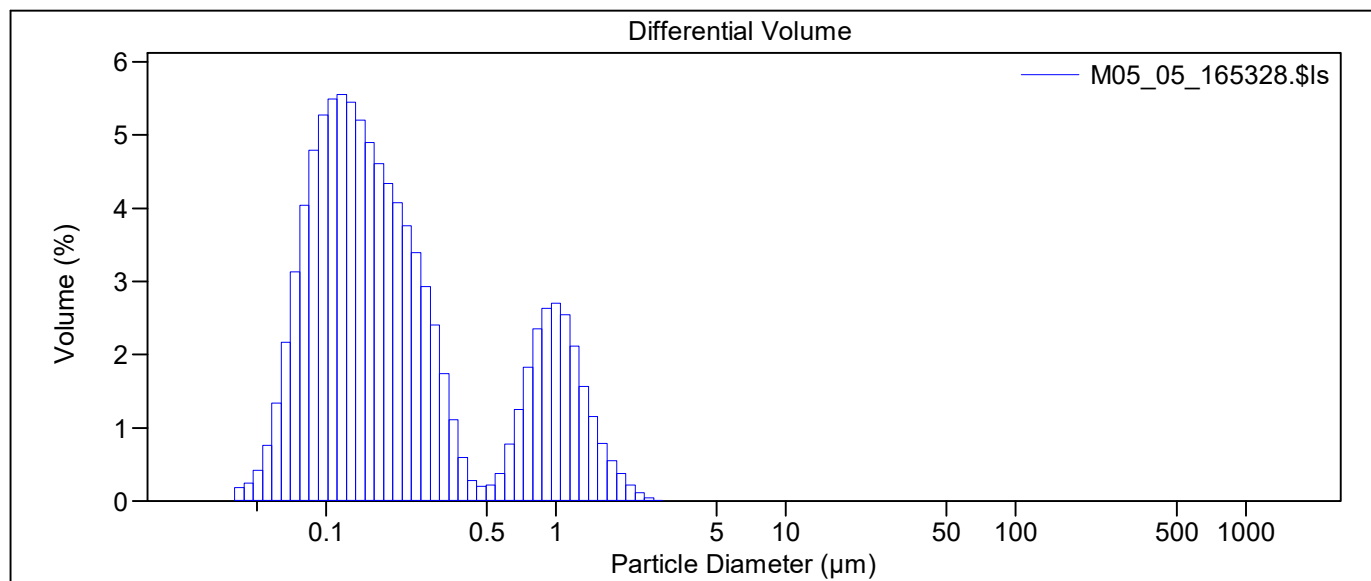
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_05_165328.\$ls		
	M05_05_165328.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.07%		
LS 13 320	Universal Liquid Module		
Start time:	16:51 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	61%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_05_165328.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.410 μm
Mean:	0.352 μm		Variance:	0.169 μm ²
Median:	0.166 μm		C.V.:	117%
Mean/Median ratio:	2.126		Skewness:	1.901 Right skewed
Mode:	0.117 μm		Kurtosis:	3.095 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.166 μm	0.321 μm	1.028 μm

Surface Area Statistics (Arithmetic)			M05_05_165328.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.175 µm
Mean:	0.154 µm		Variance:	0.030 µm ²
Median:	0.109 µm		C.V.:	114%
Mean/Median ratio:	1.411		Skewness:	5.118 Right skewed
Mode:	0.097 µm		Kurtosis:	32.09 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.237 µm

Number Statistics (Arithmetic)			M05_05_165328.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.9%
Mean/Median ratio:	1.108		Skewness:	5.243 Right skewed
Mode:	0.073 μm		Kurtosis:	95.37 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.46
10	0.044	0.046	0.25	0.82	3.56
11	0.048	0.050	0.42	1.28	4.61
12	0.053	0.055	0.76	2.10	6.26
13	0.058	0.061	1.33	3.37	8.32
14	0.064	0.067	2.16	4.98	10.2
15	0.070	0.073	3.13	6.56	11.2
16	0.077	0.080	4.04	7.72	10.9
17	0.084	0.088	4.80	8.34	9.77
18	0.093	0.097	5.27	8.35	8.12
19	0.102	0.106	5.49	7.92	6.39
20	0.112	0.117	5.55	7.30	4.88
21	0.122	0.128	5.45	6.53	3.63
22	0.134	0.141	5.20	5.68	2.62
23	0.148	0.155	4.90	4.87	1.86
24	0.162	0.170	4.61	4.17	1.32
25	0.178	0.186	4.34	3.58	0.94
26	0.195	0.205	4.07	3.06	0.67
27	0.214	0.225	3.76	2.57	0.47
28	0.235	0.247	3.39	2.11	0.32
29	0.258	0.271	2.93	1.66	0.21
30	0.284	0.297	2.41	1.25	0.13
31	0.311	0.326	1.74	0.82	0.071
32	0.342	0.358	1.11	0.48	0.034
33	0.375	0.393	0.59	0.23	0.014
34	0.412	0.431	0.28	0.099	0.0049
35	0.452	0.474	0.20	0.065	0.0027
36	0.496	0.520	0.22	0.065	0.0022
37	0.545	0.571	0.38	0.10	0.0029
38	0.598	0.627	0.78	0.19	0.0044
39	0.656	0.688	1.25	0.28	0.0054
40	0.721	0.755	1.83	0.37	0.0060
41	0.791	0.829	2.35	0.44	0.0058
42	0.868	0.910	2.63	0.44	0.0049
43	0.953	0.999	2.71	0.42	0.0038
44	1.047	1.097	2.54	0.36	0.0027
45	1.149	1.204	2.12	0.27	0.0017
46	1.261	1.321	1.56	0.18	0.00095
47	1.385	1.451	1.15	0.12	0.00053
48	1.520	1.592	0.79	0.076	0.00027
49	1.668	1.748	0.55	0.048	0.00014
50	1.832	1.919	0.38	0.030	0.000075
51	2.011	2.107	0.22	0.016	0.000032
52	2.207	2.313	0.11	0.0074	0.000013
53	2.423	2.539	0.040	0.0024	0.000003
54	2.660	2.787	0.0090	0.00049	0.000001
55	2.920	3.059	0.0015	0.000073	7.12E-8
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M05.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

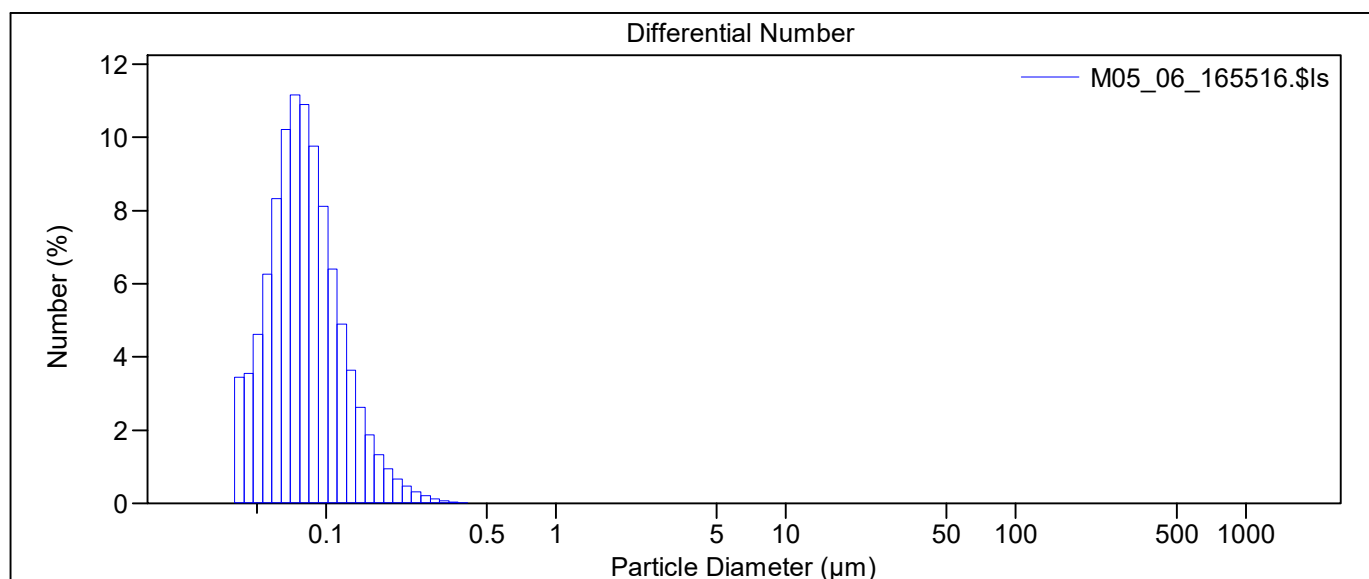
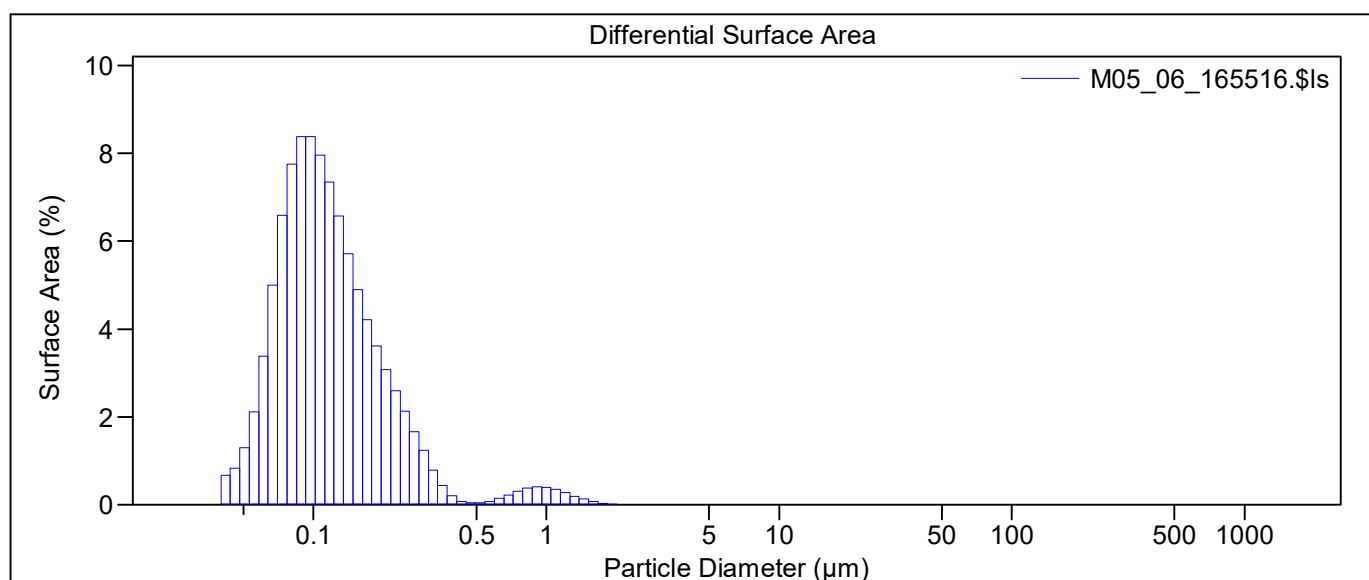
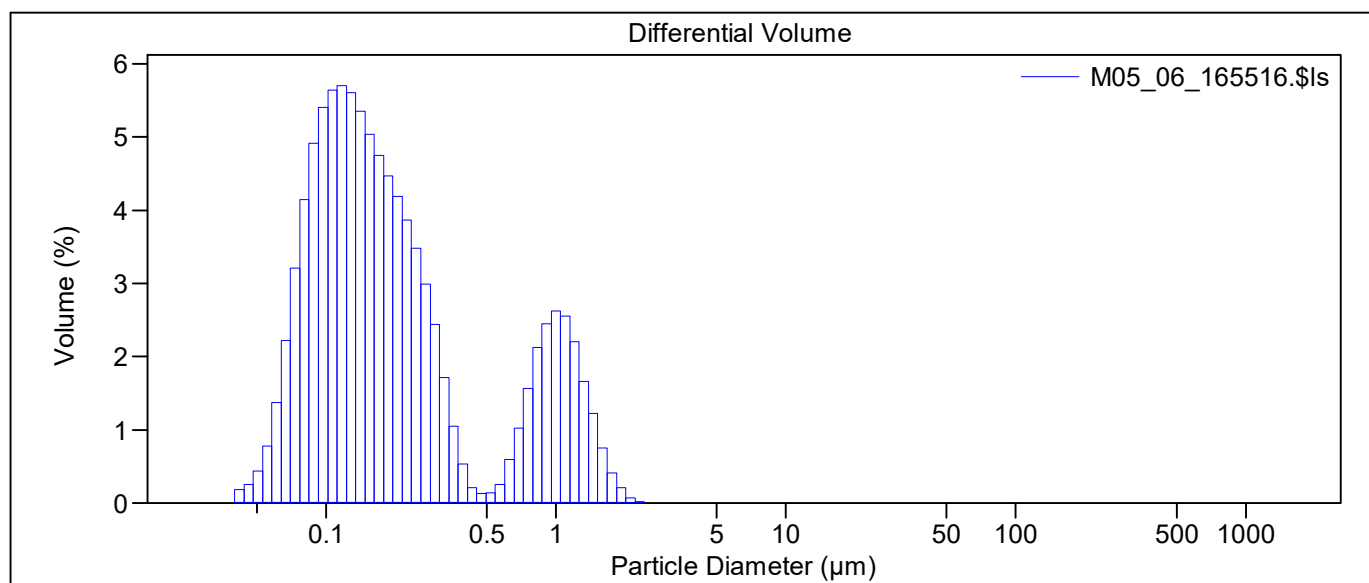
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_06_165516.\$ls		
	M05_06_165516.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.18%		
LS 13 320	Universal Liquid Module		
Start time:	16:53 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_06_165516.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.390 µm
Mean:	0.335 µm		Variance:	0.152 µm ²
Median:	0.161 µm		C.V.:	116%
Mean/Median ratio:	2.076		Skewness:	1.856 Right skewed
Mode:	0.117 µm		Kurtosis:	2.514 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.105 µm	0.161 µm	0.295 µm	1.016 µm

Surface Area Statistics (Arithmetic)			M05_06_165516.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.167 µm
Mean:	0.150 µm		Variance:	0.028 µm ²
Median:	0.109 µm		C.V.:	111%
Mean/Median ratio:	1.385		Skewness:	5.147 Right skewed
Mode:	0.097 µm		Kurtosis:	31.46 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.232 µm

Number Statistics (Arithmetic)			M05_06_165516.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.4%
Mean/Median ratio:	1.107		Skewness:	5.012 Right skewed
Mode:	0.073 μm		Kurtosis:	89.33 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.45
10	0.044	0.046	0.25	0.83	3.56
11	0.048	0.050	0.43	1.29	4.61
12	0.053	0.055	0.78	2.11	6.26
13	0.058	0.061	1.37	3.39	8.33
14	0.064	0.067	2.22	5.00	10.2
15	0.070	0.073	3.21	6.59	11.2
16	0.077	0.080	4.15	7.75	10.9
17	0.084	0.088	4.92	8.38	9.77
18	0.093	0.097	5.41	8.39	8.12
19	0.102	0.106	5.64	7.97	6.40
20	0.112	0.117	5.70	7.34	4.89
21	0.122	0.128	5.61	6.57	3.64
22	0.134	0.141	5.35	5.72	2.62
23	0.148	0.155	5.04	4.90	1.87
24	0.162	0.170	4.75	4.21	1.33
25	0.178	0.186	4.47	3.61	0.95
26	0.195	0.205	4.19	3.08	0.67
27	0.214	0.225	3.87	2.59	0.47
28	0.235	0.247	3.48	2.12	0.32
29	0.258	0.271	2.99	1.66	0.21
30	0.284	0.297	2.44	1.23	0.13
31	0.311	0.326	1.72	0.79	0.068
32	0.342	0.358	1.05	0.44	0.031
33	0.375	0.393	0.54	0.21	0.012
34	0.412	0.431	0.21	0.074	0.0036
35	0.452	0.474	0.14	0.043	0.0017
36	0.496	0.520	0.14	0.040	0.0014
37	0.545	0.571	0.25	0.066	0.0019
38	0.598	0.627	0.59	0.14	0.0033
39	0.656	0.688	1.02	0.22	0.0043
40	0.721	0.755	1.57	0.31	0.0050
41	0.791	0.829	2.13	0.39	0.0051
42	0.868	0.910	2.45	0.41	0.0045
43	0.953	0.999	2.62	0.40	0.0036
44	1.047	1.097	2.56	0.35	0.0027
45	1.149	1.204	2.20	0.28	0.0017

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.66	0.19	0.00099
47	1.385	1.451	1.22	0.13	0.00055
48	1.520	1.592	0.76	0.071	0.00026
49	1.668	1.748	0.41	0.036	0.00011
50	1.832	1.919	0.21	0.017	0.000041
51	2.011	2.107	0.073	0.0052	0.000011
52	2.207	2.313	0.020	0.0013	0.000002
53	2.423	2.539	0.0034	0.00020	2.85E-7
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

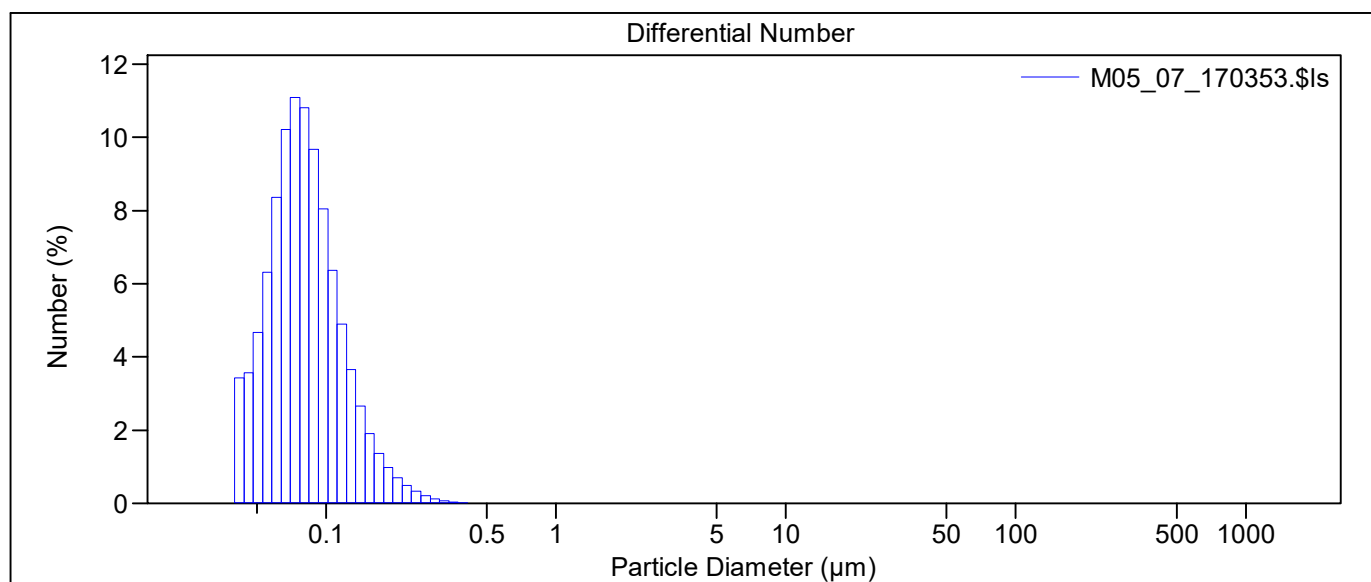
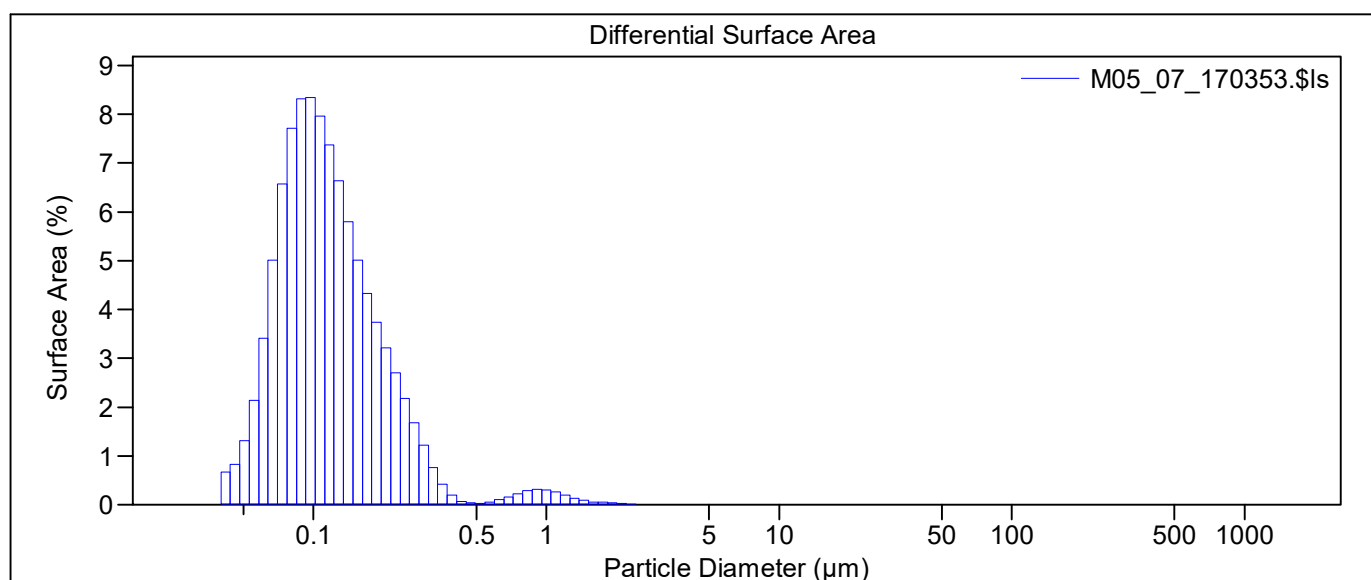
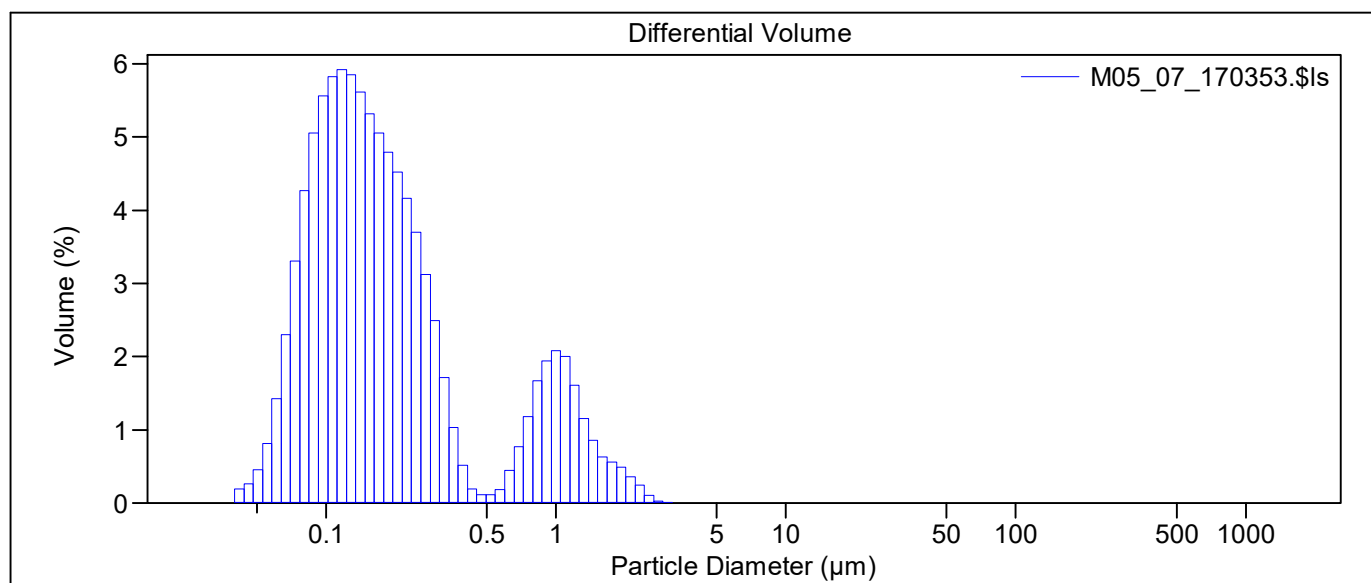
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_07_170353.\$ls		
	M05_07_170353.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.46%		
LS 13 320	Universal Liquid Module		
Start time:	17:02 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_07_170353.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.402 µm
Mean:	0.315 µm		Variance:	0.161 µm ²
Median:	0.156 µm		C.V.:	127%
Mean/Median ratio:	2.020		Skewness:	2.475 Right skewed
Mode:	0.117 µm		Kurtosis:	6.209 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.156 µm	0.263 µm	0.959 µm

Surface Area Statistics (Arithmetic)			M05_07_170353.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.157 µm
Mean:	0.146 µm		Variance:	0.025 µm ²
Median:	0.109 µm		C.V.:	108%
Mean/Median ratio:	1.339		Skewness:	6.205 Right skewed
Mode:	0.097 µm		Kurtosis:	50.31 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.227 µm

Number Statistics (Arithmetic)			M05_07_170353.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.8%
Mean/Median ratio:	1.108		Skewness:	4.523 Right skewed
Mode:	0.073 μm		Kurtosis:	82.51 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.66	3.43
10	0.044	0.046	0.26	0.83	3.57
11	0.048	0.050	0.45	1.31	4.66
12	0.053	0.055	0.81	2.14	6.32
13	0.058	0.061	1.43	3.41	8.37
14	0.064	0.067	2.30	5.02	10.2
15	0.070	0.073	3.31	6.57	11.1
16	0.077	0.080	4.26	7.71	10.8
17	0.084	0.088	5.05	8.32	9.68
18	0.093	0.097	5.56	8.35	8.05
19	0.102	0.106	5.83	7.96	6.38
20	0.112	0.117	5.92	7.38	4.90
21	0.122	0.128	5.85	6.64	3.66
22	0.134	0.141	5.62	5.80	2.65
23	0.148	0.155	5.32	5.01	1.90
24	0.162	0.170	5.06	4.34	1.37
25	0.178	0.186	4.79	3.74	0.98
26	0.195	0.205	4.52	3.22	0.70
27	0.214	0.225	4.17	2.70	0.49
28	0.235	0.247	3.70	2.18	0.33
29	0.258	0.271	3.12	1.68	0.21
30	0.284	0.297	2.49	1.22	0.13
31	0.311	0.326	1.71	0.76	0.065
32	0.342	0.358	1.03	0.42	0.030
33	0.375	0.393	0.52	0.19	0.011
34	0.412	0.431	0.19	0.064	0.0031
35	0.452	0.474	0.11	0.035	0.0014
36	0.496	0.520	0.11	0.031	0.0010
37	0.545	0.571	0.18	0.046	0.0013
38	0.598	0.627	0.44	0.10	0.0024
39	0.656	0.688	0.77	0.16	0.0031
40	0.721	0.755	1.18	0.23	0.0036
41	0.791	0.829	1.67	0.29	0.0039
42	0.868	0.910	1.94	0.31	0.0034
43	0.953	0.999	2.08	0.30	0.0028
44	1.047	1.097	2.00	0.27	0.0020
45	1.149	1.204	1.61	0.19	0.0012

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.16	0.13	0.00066
47	1.385	1.451	0.85	0.086	0.00037
48	1.520	1.592	0.63	0.058	0.00021
49	1.668	1.748	0.56	0.046	0.00014
50	1.832	1.919	0.49	0.037	0.000091
51	2.011	2.107	0.36	0.025	0.000051
52	2.207	2.313	0.24	0.015	0.000026
53	2.423	2.539	0.10	0.0058	0.000008
54	2.660	2.787	0.029	0.0015	0.000002
55	2.920	3.059	0.0049	0.00023	2.25E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

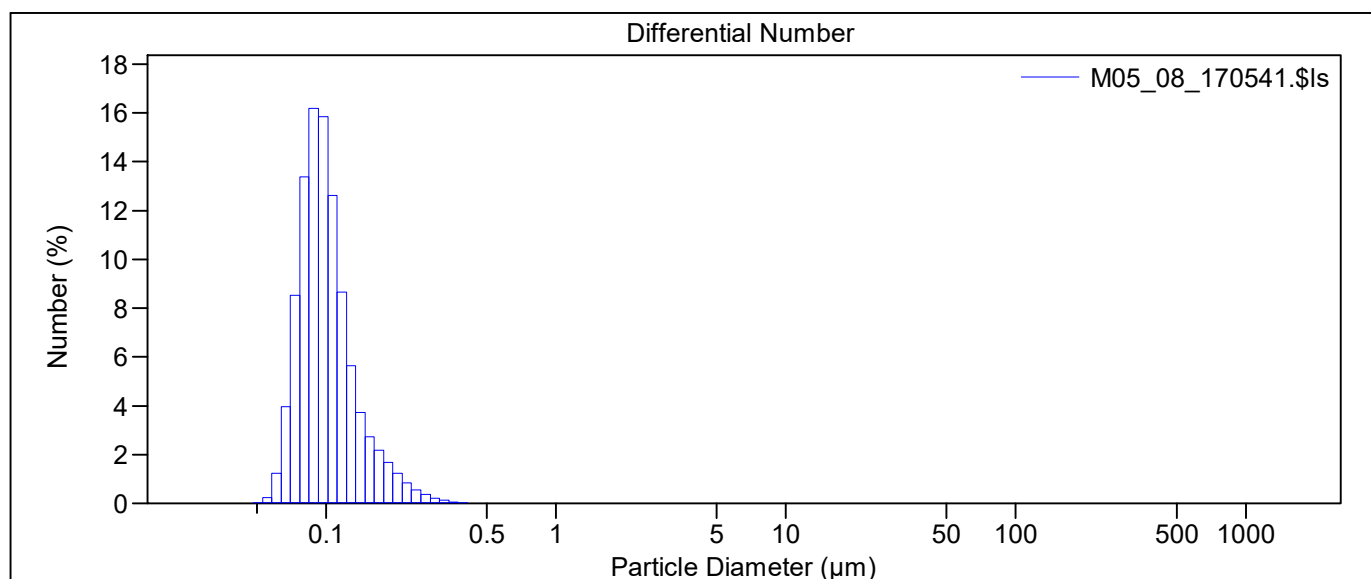
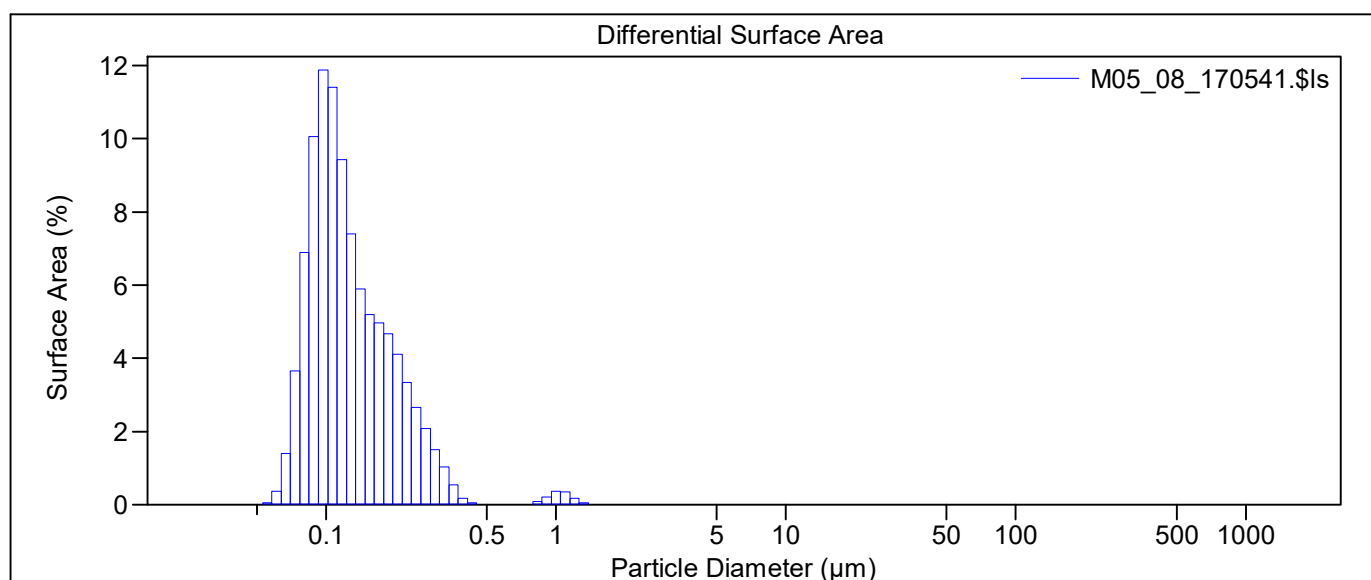
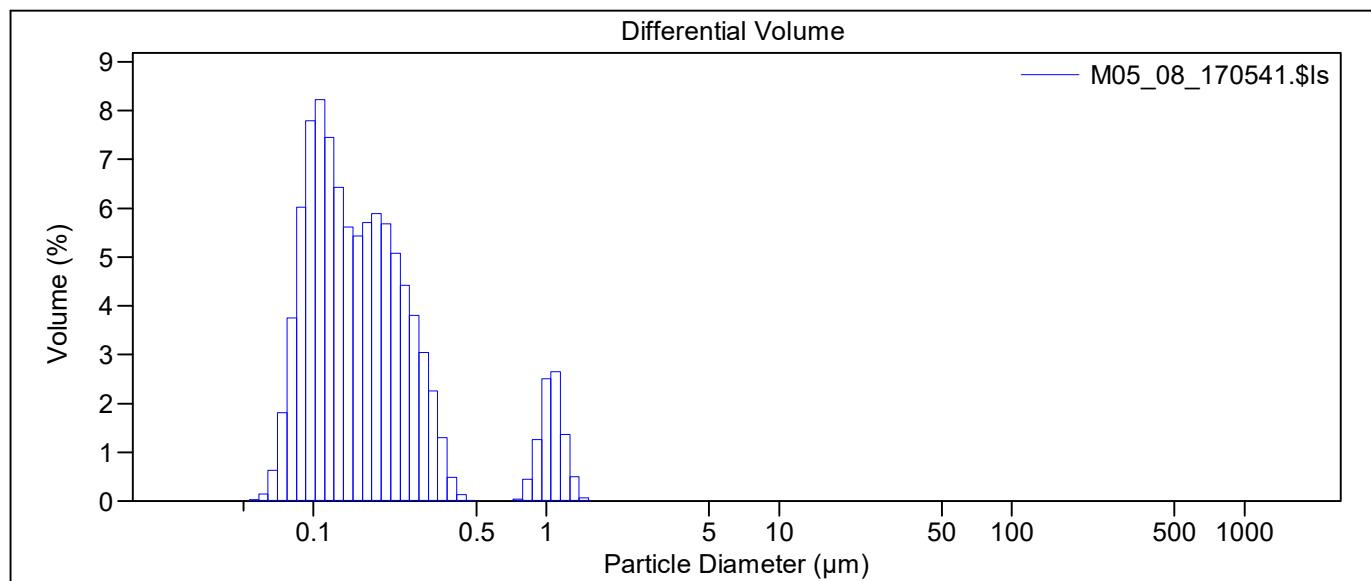
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_08_170541.\$ls		
	M05_08_170541.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.15%		
LS 13 320	Universal Liquid Module		
Start time:	17:03 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_08_170541.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.266 µm
Mean:	0.242 µm		Variance:	0.071 µm ²
Median:	0.153 µm		C.V.:	110%
Mean/Median ratio:	1.579		Skewness:	2.675 Right skewed
Mode:	0.106 µm		Kurtosis:	6.055 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.089 µm	0.107 µm	0.153 µm	0.232 µm	0.361 µm

Surface Area Statistics (Arithmetic)			M05_08_170541.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.118 µm
Mean:	0.148 µm		Variance:	0.014 µm ²
Median:	0.117 µm		C.V.:	79.8%
Mean/Median ratio:	1.268		Skewness:	5.934 Right skewed
Mode:	0.097 µm		Kurtosis:	44.08 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 µm	0.095 µm	0.117 µm	0.166 µm	0.231 µm

Number Statistics (Arithmetic)			M05_08_170541.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.105 μm		Variance:	0.0014 μm ²
Median:	0.096 μm		C.V.:	35.9%
Mean/Median ratio:	1.096		Skewness:	4.219 Right skewed
Mode:	0.088 μm		Kurtosis:	61.73 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.074 μm	0.083 μm	0.096 μm	0.115 μm	0.147 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00095	0.0028	0.014
12	0.053	0.055	0.021	0.055	0.23
13	0.058	0.061	0.15	0.36	1.23
14	0.064	0.067	0.64	1.41	3.95
15	0.070	0.073	1.81	3.65	8.53
16	0.077	0.080	3.76	6.90	13.4
17	0.084	0.088	6.02	10.1	16.2
18	0.093	0.097	7.79	11.9	15.8
19	0.102	0.106	8.22	11.4	12.6
20	0.112	0.117	7.45	9.42	8.66
21	0.122	0.128	6.43	7.40	5.64
22	0.134	0.141	5.62	5.89	3.73
23	0.148	0.155	5.43	5.19	2.72
24	0.162	0.170	5.71	4.97	2.17
25	0.178	0.186	5.89	4.67	1.69
26	0.195	0.205	5.68	4.11	1.23
27	0.214	0.225	5.08	3.34	0.83
28	0.235	0.247	4.43	2.65	0.55
29	0.258	0.271	3.81	2.08	0.36
30	0.284	0.297	3.04	1.51	0.22
31	0.311	0.326	2.26	1.02	0.12
32	0.342	0.358	1.30	0.54	0.053
33	0.375	0.393	0.48	0.18	0.015
34	0.412	0.431	0.13	0.045	0.0030
35	0.452	0.474	0.014	0.0044	0.00024
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.043	0.0084	0.00018
41	0.791	0.829	0.44	0.079	0.0014
42	0.868	0.910	1.26	0.21	0.0031
43	0.953	0.999	2.50	0.37	0.0047
44	1.047	1.097	2.65	0.36	0.0037
45	1.149	1.204	1.37	0.17	0.0015

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.50	0.056	0.00041
47	1.385	1.451	0.063	0.0065	0.000039
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

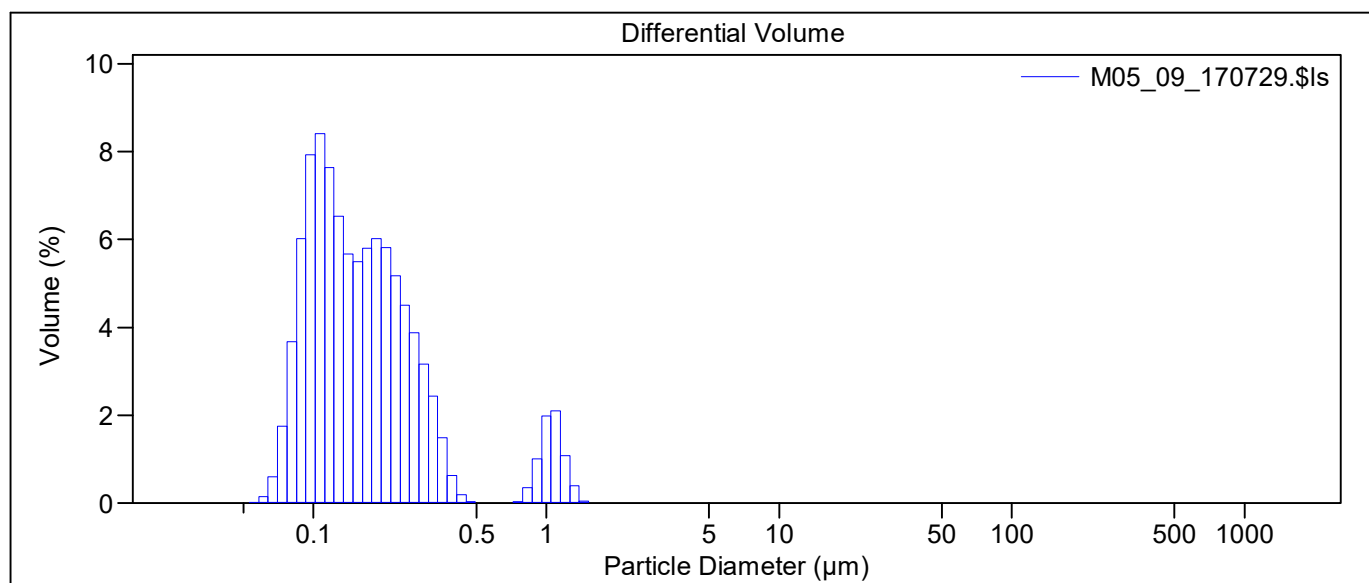
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_09_170729.\$ls		
	M05_09_170729.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.18%		
LS 13 320	Universal Liquid Module		
Start time:	17:05 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_09_170729.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.241 μm
Mean:	0.227 μm		Variance:	0.058 μm ²
Median:	0.152 μm		C.V.:	106%
Mean/Median ratio:	1.494		Skewness:	3.012 Right skewed
Mode:	0.106 μm		Kurtosis:	8.361 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 μm	0.107 μm	0.152 μm	0.228 μm	0.333 μm

Surface Area Statistics (Arithmetic)			M05_09_170729.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.109 μm
Mean:	0.146 μm		Variance:	0.012 μm ²
Median:	0.117 μm		C.V.:	74.2%
Mean/Median ratio:	1.251		Skewness:	6.056 Right skewed
Mode:	0.097 μm		Kurtosis:	48.84 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 μm	0.095 μm	0.117 μm	0.167 μm	0.231 μm

Number Statistics (Arithmetic)			M05_09_170729.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.106 μm		Variance:	0.0014 μm ²
Median:	0.097 μm		C.V.:	35.6%
Mean/Median ratio:	1.095		Skewness:	3.854 Right skewed
Mode:	0.088 μm		Kurtosis:	50.92 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.074 μm	0.084 μm	0.097 μm	0.116 μm	0.148 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00094	0.0027	0.014
12	0.053	0.055	0.020	0.053	0.22
13	0.058	0.061	0.14	0.34	1.16
14	0.064	0.067	0.60	1.32	3.74
15	0.070	0.073	1.74	3.48	8.19
16	0.077	0.080	3.68	6.68	13.1
17	0.084	0.088	6.02	9.96	16.2
18	0.093	0.097	7.93	12.0	16.1
19	0.102	0.106	8.42	11.6	12.9
20	0.112	0.117	7.64	9.56	8.86
21	0.122	0.128	6.53	7.45	5.73
22	0.134	0.141	5.67	5.88	3.75
23	0.148	0.155	5.49	5.20	2.75
24	0.162	0.170	5.80	5.00	2.20
25	0.178	0.186	6.02	4.72	1.72
26	0.195	0.205	5.82	4.16	1.26
27	0.214	0.225	5.18	3.37	0.85
28	0.235	0.247	4.51	2.67	0.56
29	0.258	0.271	3.88	2.09	0.36
30	0.284	0.297	3.17	1.56	0.22
31	0.311	0.326	2.44	1.09	0.13
32	0.342	0.358	1.49	0.61	0.060
33	0.375	0.393	0.62	0.23	0.019
34	0.412	0.431	0.19	0.063	0.0043
35	0.452	0.474	0.026	0.0081	0.00046
36	0.496	0.520	0.00041	0.00012	0.000005
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.034	0.0065	0.00015
41	0.791	0.829	0.35	0.062	0.0011
42	0.868	0.910	1.00	0.16	0.0025
43	0.953	0.999	1.98	0.29	0.0037
44	1.047	1.097	2.10	0.28	0.0029
45	1.149	1.204	1.08	0.13	0.0011
46	1.261	1.321	0.40	0.044	0.00032
47	1.385	1.451	0.050	0.0051	0.000031
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

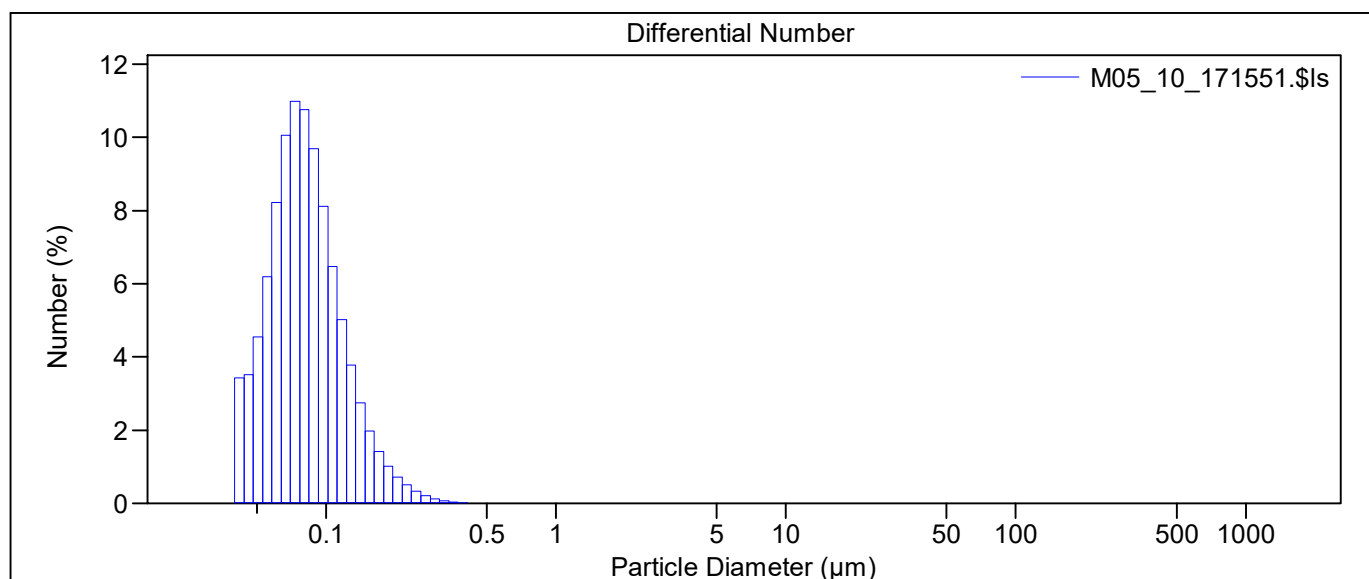
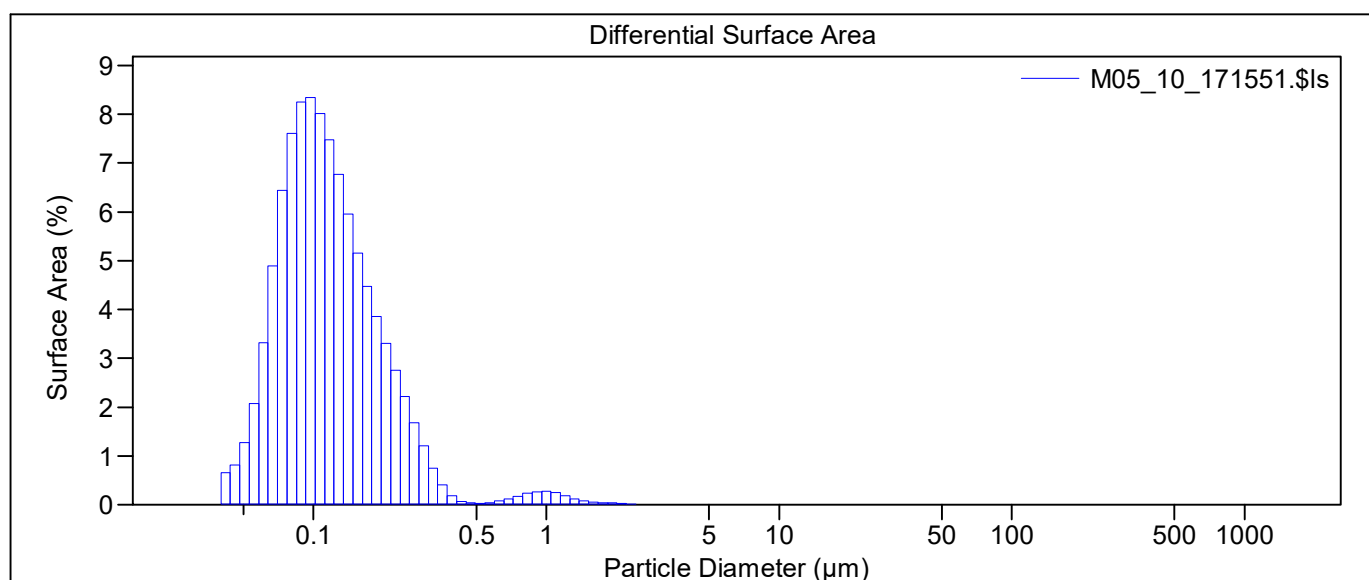
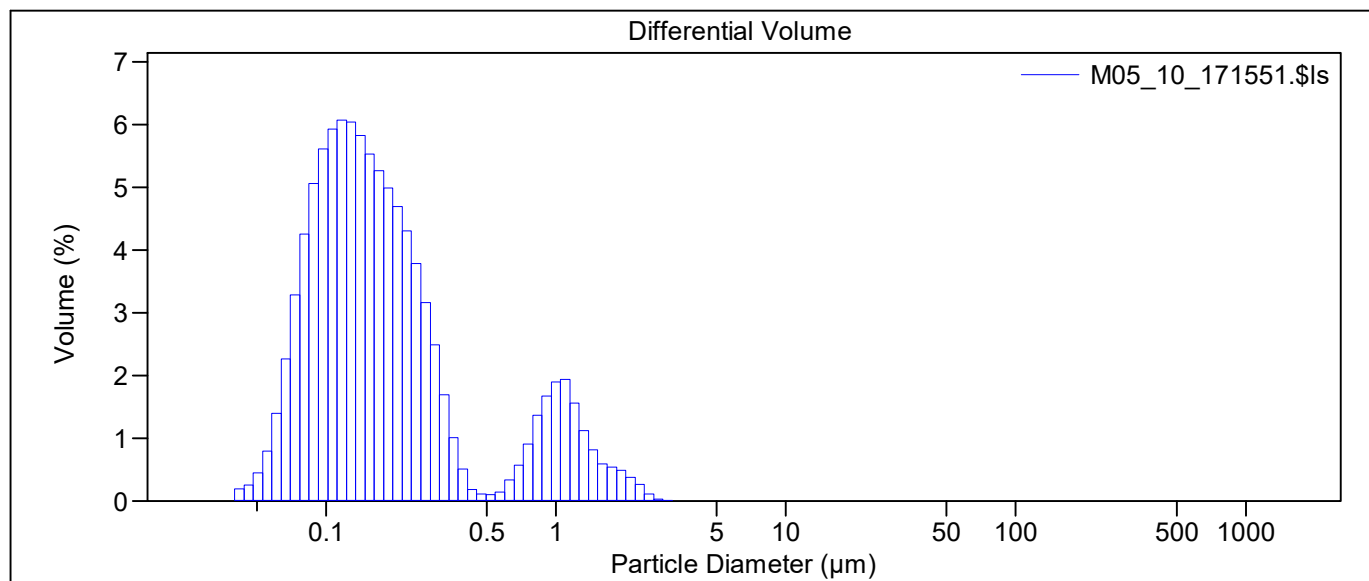
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_10_171551.\$ls		
	M05_10_171551.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.56%		
LS 13 320	Universal Liquid Module		
Start time:	17:14 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_10_171551.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.397 μm
Mean:	0.305 μm		Variance:	0.158 μm ²
Median:	0.154 μm		C.V.:	130%
Mean/Median ratio:	1.975		Skewness:	2.638 Right skewed
Mode:	0.117 μm		Kurtosis:	7.135 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.104 μm	0.154 μm	0.252 μm	0.940 μm

Surface Area Statistics (Arithmetic)			M05_10_171551.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.152 μm
Mean:	0.144 μm		Variance:	0.023 μm ²
Median:	0.109 μm		C.V.:	106%
Mean/Median ratio:	1.315		Skewness:	6.561 Right skewed
Mode:	0.097 μm		Kurtosis:	56.78 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.156 μm	0.224 μm

Number Statistics (Arithmetic)			M05_10_171551.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.6%
Mean/Median ratio:	1.108		Skewness:	4.270 Right skewed
Mode:	0.073 μm		Kurtosis:	77.46 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.101 μm	0.132 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.66	3.44
10	0.044	0.046	0.26	0.81	3.52
11	0.048	0.050	0.44	1.27	4.55
12	0.053	0.055	0.80	2.08	6.19
13	0.058	0.061	1.40	3.32	8.22
14	0.064	0.067	2.27	4.89	10.1
15	0.070	0.073	3.28	6.44	11.0
16	0.077	0.080	4.25	7.60	10.8
17	0.084	0.088	5.07	8.26	9.69
18	0.093	0.097	5.62	8.34	8.12
19	0.102	0.106	5.93	8.01	6.48
20	0.112	0.117	6.07	7.48	5.02
21	0.122	0.128	6.04	6.78	3.77
22	0.134	0.141	5.82	5.95	2.75
23	0.148	0.155	5.53	5.15	1.98
24	0.162	0.170	5.27	4.47	1.42
25	0.178	0.186	4.99	3.85	1.02
26	0.195	0.205	4.69	3.30	0.72
27	0.214	0.225	4.30	2.76	0.50
28	0.235	0.247	3.79	2.21	0.33
29	0.258	0.271	3.16	1.68	0.21
30	0.284	0.297	2.49	1.21	0.13
31	0.311	0.326	1.69	0.75	0.064
32	0.342	0.358	1.01	0.41	0.029
33	0.375	0.393	0.51	0.19	0.011
34	0.412	0.431	0.18	0.061	0.0030
35	0.452	0.474	0.11	0.033	0.0014
36	0.496	0.520	0.097	0.027	0.00091
37	0.545	0.571	0.14	0.035	0.00099
38	0.598	0.627	0.34	0.078	0.0018
39	0.656	0.688	0.58	0.12	0.0023
40	0.721	0.755	0.90	0.17	0.0028
41	0.791	0.829	1.37	0.24	0.0032
42	0.868	0.910	1.68	0.27	0.0029
43	0.953	0.999	1.90	0.27	0.0025
44	1.047	1.097	1.93	0.25	0.0019
45	1.149	1.204	1.56	0.19	0.0012

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.12	0.12	0.00064
47	1.385	1.451	0.81	0.081	0.00035
48	1.520	1.592	0.59	0.053	0.00019
49	1.668	1.748	0.54	0.045	0.00013
50	1.832	1.919	0.49	0.037	0.000091
51	2.011	2.107	0.37	0.026	0.000053
52	2.207	2.313	0.27	0.017	0.000028
53	2.423	2.539	0.11	0.0064	0.000009
54	2.660	2.787	0.032	0.0017	0.000002
55	2.920	3.059	0.0055	0.00026	2.53E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

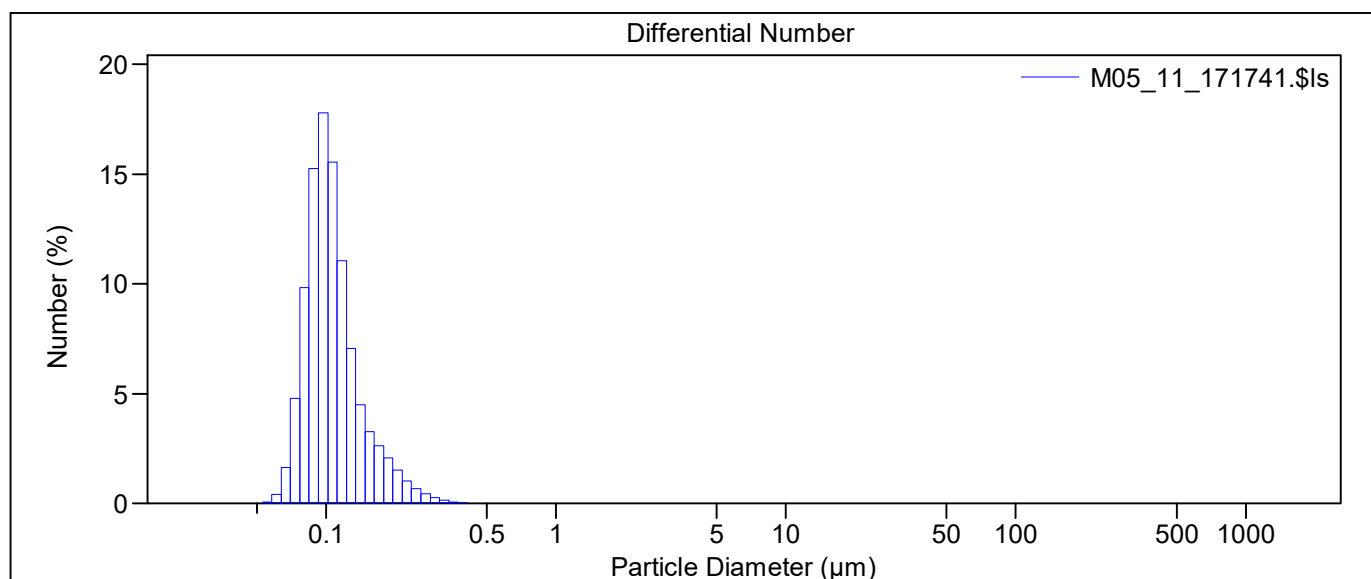
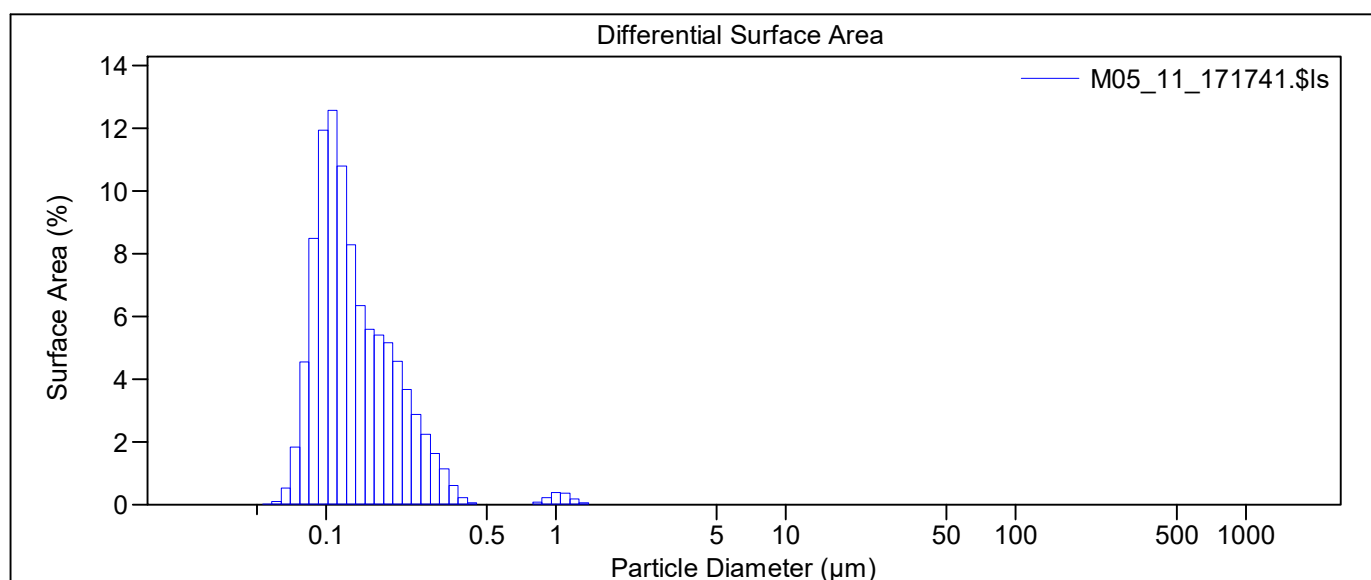
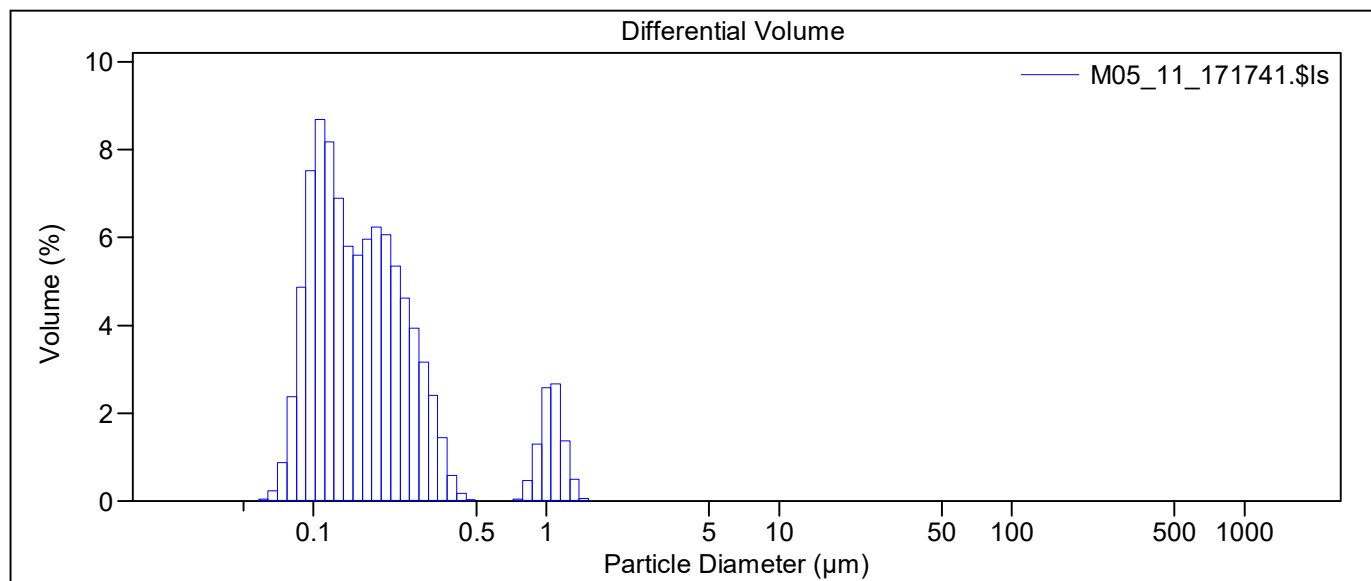
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_11_171741.\$ls		
	M05_11_171741.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.27%		
LS 13 320	Universal Liquid Module		
Start time:	17:15 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_11_171741.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.266 μm
Mean:	0.247 μm		Variance:	0.071 μm ²
Median:	0.159 μm		C.V.:	108%
Mean/Median ratio:	1.554		Skewness:	2.648 Right skewed
Mode:	0.106 μm		Kurtosis:	5.903 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.095 μm	0.112 μm	0.159 μm	0.237 μm	0.370 μm

Surface Area Statistics (Arithmetic)		M05_11_171741.\$ls		
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%			
Mean:	0.154 µm	S.D.:	0.120 µm	
Median:	0.122 µm	Variance:	0.014 µm ²	
Mean/Median ratio:	1.267	C.V.:	77.8%	
Mode:	0.106 µm	Skewness:	5.821 Right skewed	
		Kurtosis:	42.09 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.087 µm	0.100 µm	0.122 µm	0.174 µm	0.236 µm

Number Statistics (Arithmetic)			M05_11_171741.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.112 μm		Variance:	0.0015 μm ²
Median:	0.102 μm		C.V.:	34.9%
Mean/Median ratio:	1.098		Skewness:	4.268 Right skewed
Mode:	0.097 μm		Kurtosis:	62.11 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.089 μm	0.102 μm	0.121 μm	0.157 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00030	0.00090	0.0050
12	0.053	0.055	0.0057	0.016	0.072
13	0.058	0.061	0.041	0.10	0.40
14	0.064	0.067	0.23	0.52	1.64
15	0.070	0.073	0.87	1.83	4.78
16	0.077	0.080	2.37	4.54	9.82
17	0.084	0.088	4.87	8.49	15.2
18	0.093	0.097	7.52	11.9	17.8
19	0.102	0.106	8.69	12.6	15.5
20	0.112	0.117	8.18	10.8	11.1
21	0.122	0.128	6.90	8.29	7.05
22	0.134	0.141	5.80	6.35	4.48
23	0.148	0.155	5.60	5.58	3.27
24	0.162	0.170	5.96	5.41	2.63
25	0.178	0.186	6.24	5.16	2.08
26	0.195	0.205	6.06	4.57	1.53
27	0.214	0.225	5.35	3.67	1.02
28	0.235	0.247	4.62	2.89	0.67
29	0.258	0.271	3.93	2.24	0.43
30	0.284	0.297	3.16	1.64	0.26
31	0.311	0.326	2.40	1.14	0.15
32	0.342	0.358	1.44	0.62	0.068
33	0.375	0.393	0.59	0.23	0.021
34	0.412	0.431	0.17	0.062	0.0047
35	0.452	0.474	0.023	0.0076	0.00048
36	0.496	0.520	0.00030	0.000089	0.000005
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.047	0.0096	0.00024
41	0.791	0.829	0.46	0.086	0.0018
42	0.868	0.910	1.30	0.22	0.0037
43	0.953	0.999	2.57	0.40	0.0056
44	1.047	1.097	2.66	0.37	0.0044
45	1.149	1.204	1.37	0.18	0.0017
46	1.261	1.321	0.50	0.058	0.00047
47	1.385	1.451	0.060	0.0064	0.000043
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

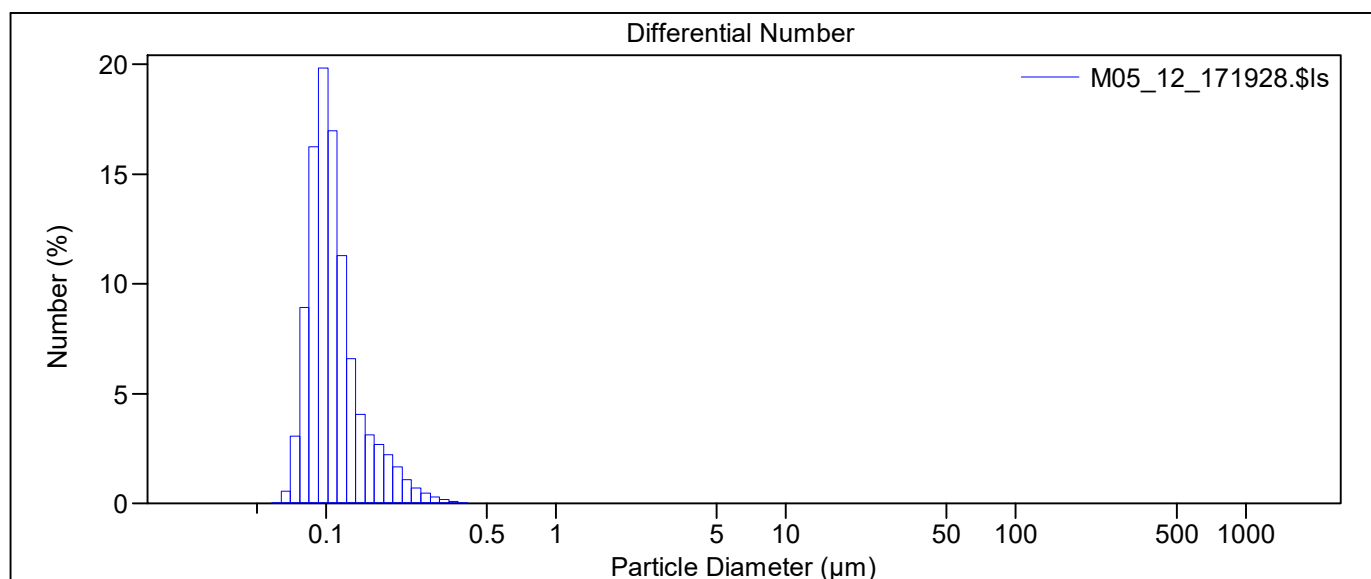
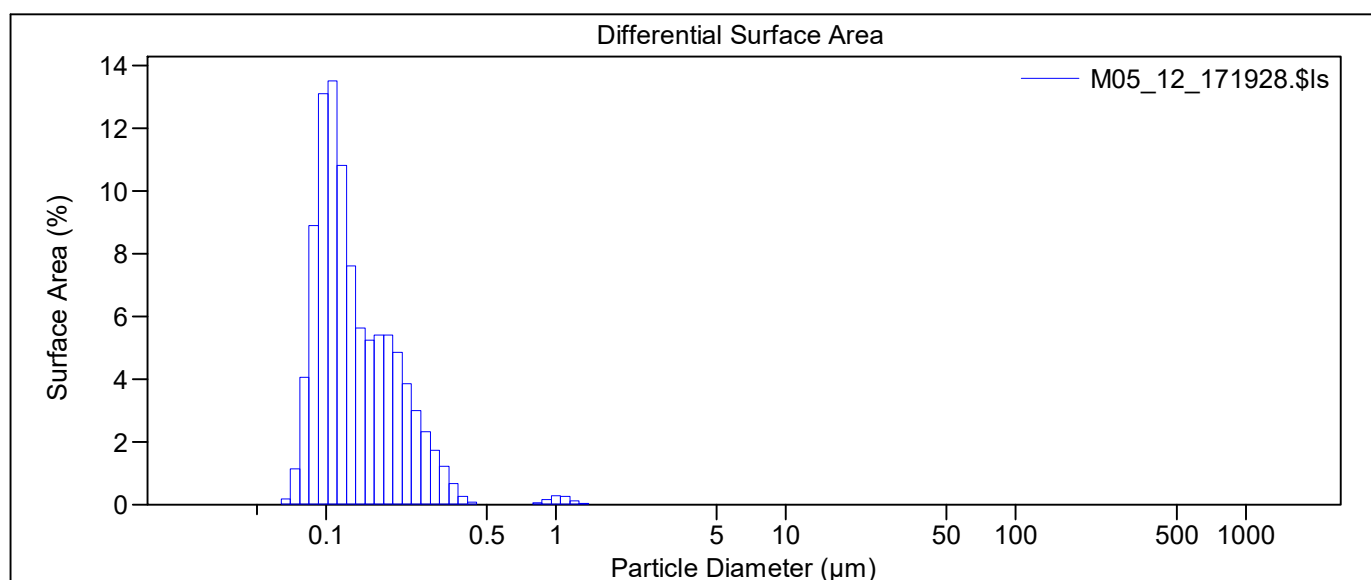
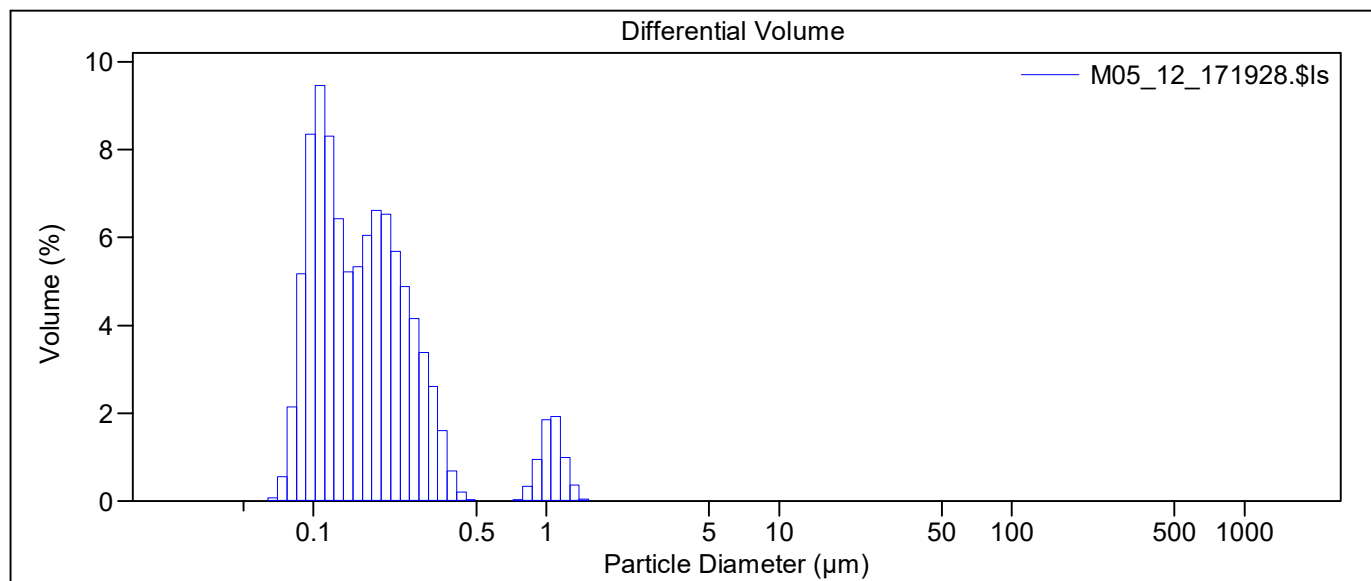
Beckman Coulter LS13320

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File ID:	M05		
Operator:	PP		
Run number:	12		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.31%		
LS 13 320	Universal Liquid Module		
Start time:	17:17 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_12_171928.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.232 µm
Mean:	0.227 µm		Variance:	0.054 µm ²
Median:	0.159 µm		C.V.:	102%
Mean/Median ratio:	1.428		Skewness:	3.121 Right skewed
Mode:	0.106 µm		Kurtosis:	9.194 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.095 µm	0.111 µm	0.159 µm	0.232 µm	0.330 µm

Surface Area Statistics (Arithmetic)			M05_12_171928.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.107 µm
Mean:	0.152 µm		Variance:	0.011 µm ²
Median:	0.121 µm		C.V.:	70.3%
Mean/Median ratio:	1.259		Skewness:	5.993 Right skewed
Mode:	0.106 µm		Kurtosis:	48.64 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.089 µm	0.100 µm	0.121 µm	0.176 µm	0.237 µm

Number Statistics (Arithmetic)			M05_12_171928.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.113 μm		Variance:	0.0015 μm ²
Median:	0.102 μm		C.V.:	34.0%
Mean/Median ratio:	1.103		Skewness:	3.902 Right skewed
Mode:	0.097 μm		Kurtosis:	49.71 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 μm	0.091 μm	0.102 μm	0.121 μm	0.159 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0	0	0
12	0.053	0.055	0	0	0
13	0.058	0.061	0.0035	0.0088	0.034
14	0.064	0.067	0.078	0.18	0.57
15	0.070	0.073	0.55	1.15	3.05
16	0.077	0.080	2.15	4.06	8.92
17	0.084	0.088	5.17	8.90	16.2
18	0.093	0.097	8.36	13.1	19.8
19	0.102	0.106	9.46	13.5	17.0
20	0.112	0.117	8.31	10.8	11.3
21	0.122	0.128	6.43	7.62	6.59
22	0.134	0.141	5.22	5.64	4.05
23	0.148	0.155	5.34	5.25	3.13
24	0.162	0.170	6.04	5.41	2.68
25	0.178	0.186	6.62	5.40	2.22
26	0.195	0.205	6.54	4.86	1.65
27	0.214	0.225	5.68	3.85	1.09
28	0.235	0.247	4.88	3.01	0.70
29	0.258	0.271	4.15	2.33	0.45
30	0.284	0.297	3.37	1.73	0.28
31	0.311	0.326	2.61	1.22	0.16
32	0.342	0.358	1.60	0.68	0.076
33	0.375	0.393	0.68	0.26	0.024
34	0.412	0.431	0.21	0.074	0.0057
35	0.452	0.474	0.031	0.0099	0.00063
36	0.496	0.520	0.00067	0.00020	0.000010
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.034	0.0068	0.00017
41	0.791	0.829	0.33	0.061	0.0013
42	0.868	0.910	0.94	0.16	0.0027
43	0.953	0.999	1.86	0.28	0.0040
44	1.047	1.097	1.93	0.27	0.0032
45	1.149	1.204	0.99	0.12	0.0012

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.36	0.042	0.00034
47	1.385	1.451	0.044	0.0046	0.000031
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

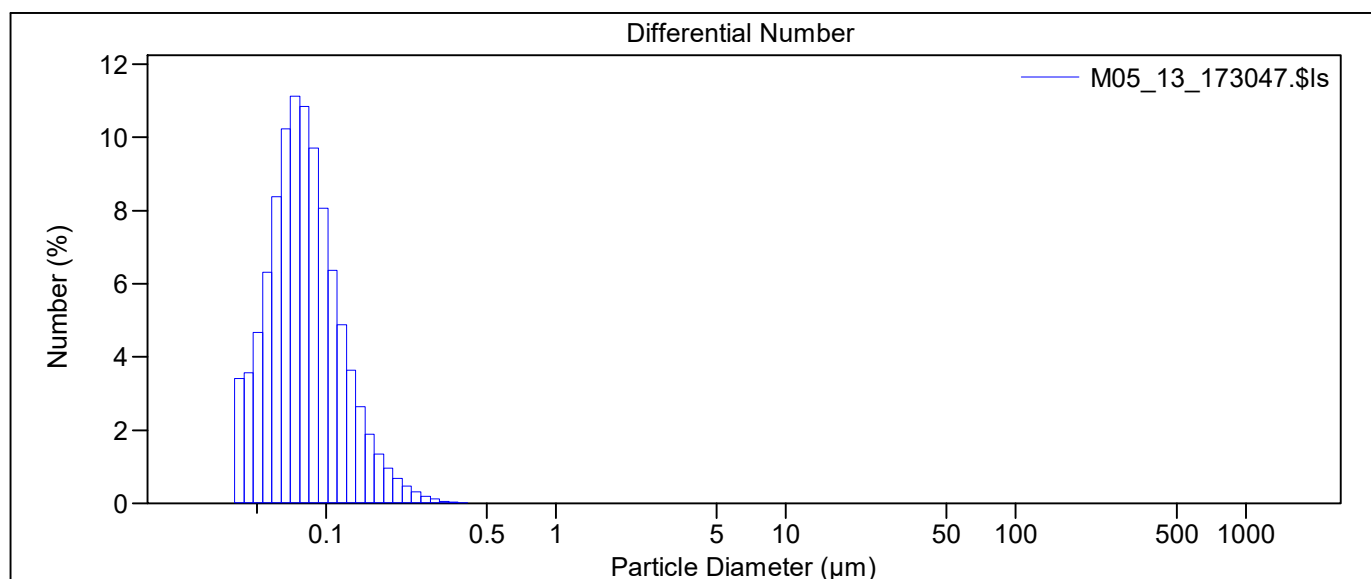
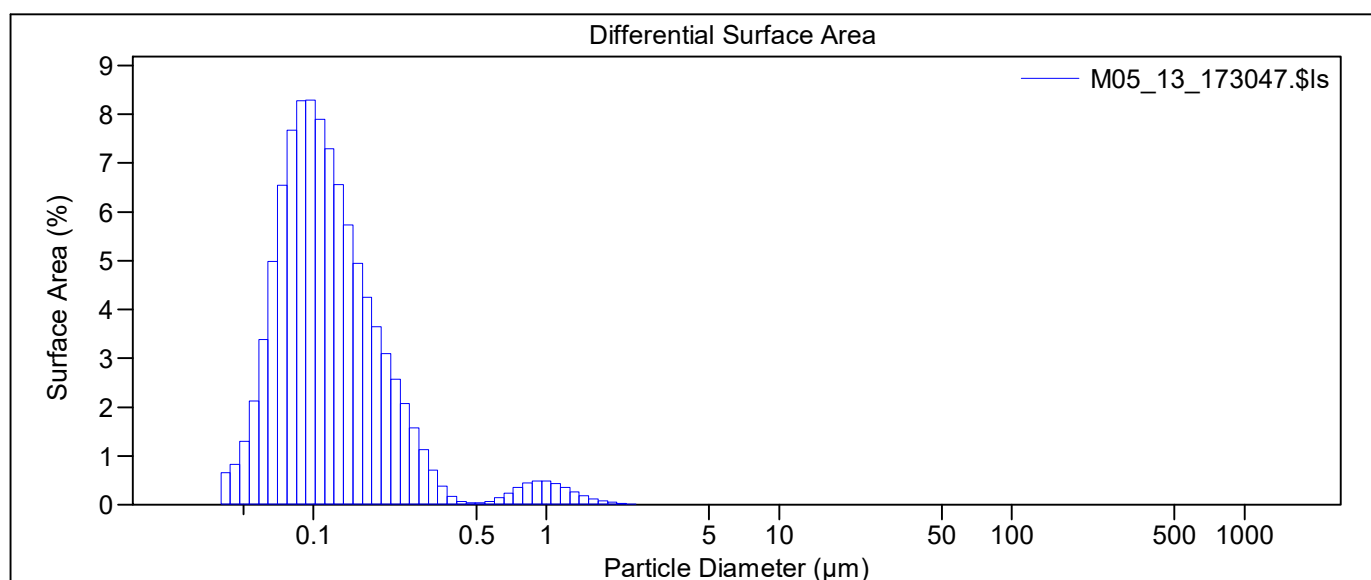
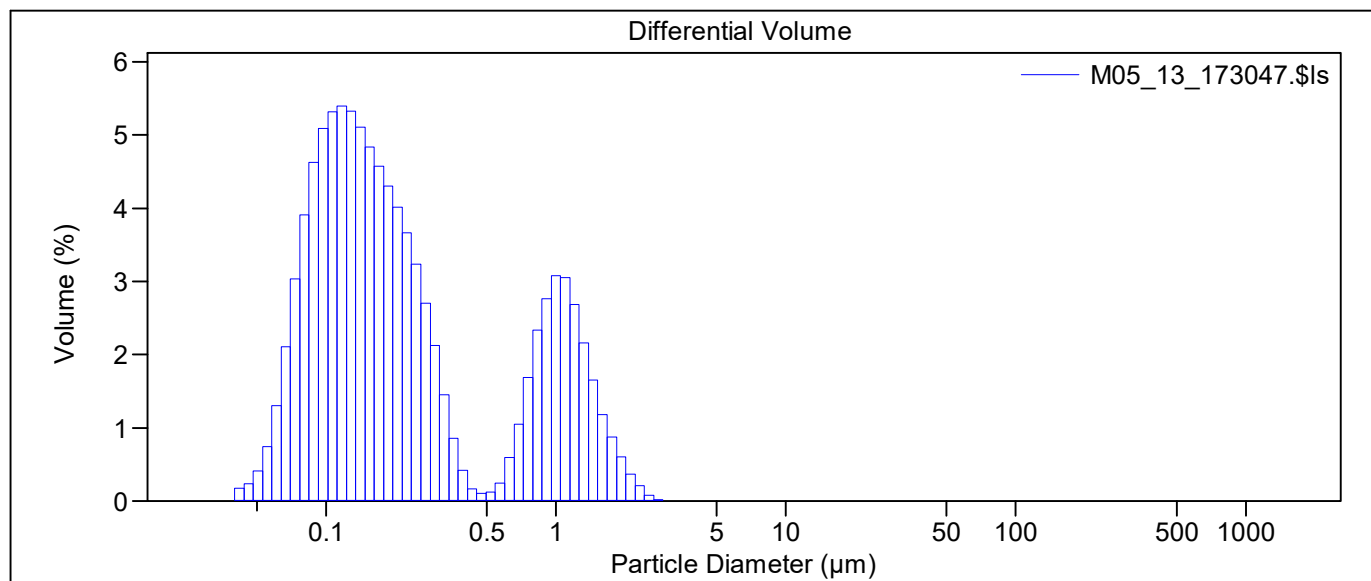
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_13_173047.\$ls		
	M05_13_173047.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.14%		
LS 13 320	Universal Liquid Module		
Start time:	17:29 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_13_173047.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.463 µm
Mean:	0.395 µm		Variance:	0.215 µm ²
Median:	0.170 µm		C.V.:	117%
Mean/Median ratio:	2.324		Skewness:	1.703 Right skewed
Mode:	0.117 µm		Kurtosis:	2.166 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.108 µm	0.170 µm	0.417 µm	1.143 µm

Surface Area Statistics (Arithmetic)			M05_13_173047.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.194 µm
Mean:	0.158 µm		Variance:	0.038 µm ²
Median:	0.109 µm		C.V.:	123%
Mean/Median ratio:	1.449		Skewness:	5.076 Right skewed
Mode:	0.097 µm		Kurtosis:	30.52 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.235 µm

Number Statistics (Arithmetic)			M05_13_173047.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.1%
Mean/Median ratio:	1.108		Skewness:	5.803 Right skewed
Mode:	0.073 μm		Kurtosis:	118.7 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.66	3.42
10	0.044	0.046	0.24	0.82	3.56
11	0.048	0.050	0.42	1.30	4.67
12	0.053	0.055	0.74	2.12	6.32
13	0.058	0.061	1.31	3.39	8.38
14	0.064	0.067	2.11	4.99	10.2
15	0.070	0.073	3.03	6.54	11.1
16	0.077	0.080	3.91	7.68	10.8
17	0.084	0.088	4.63	8.28	9.71
18	0.093	0.097	5.09	8.29	8.06
19	0.102	0.106	5.32	7.89	6.37
20	0.112	0.117	5.40	7.30	4.89
21	0.122	0.128	5.33	6.56	3.65
22	0.134	0.141	5.11	5.73	2.64
23	0.148	0.155	4.83	4.94	1.89
24	0.162	0.170	4.57	4.26	1.35
25	0.178	0.186	4.30	3.65	0.96
26	0.195	0.205	4.01	3.10	0.68
27	0.214	0.225	3.66	2.58	0.47
28	0.235	0.247	3.24	2.08	0.31
29	0.258	0.271	2.70	1.58	0.20
30	0.284	0.297	2.13	1.13	0.12
31	0.311	0.326	1.45	0.70	0.060
32	0.342	0.358	0.85	0.38	0.027
33	0.375	0.393	0.42	0.17	0.010
34	0.412	0.431	0.17	0.061	0.0030
35	0.452	0.474	0.11	0.036	0.0015
36	0.496	0.520	0.12	0.036	0.0012
37	0.545	0.571	0.24	0.067	0.0019
38	0.598	0.627	0.59	0.15	0.0035
39	0.656	0.688	1.05	0.24	0.0047
40	0.721	0.755	1.68	0.35	0.0057
41	0.791	0.829	2.33	0.44	0.0059
42	0.868	0.910	2.77	0.48	0.0053
43	0.953	0.999	3.07	0.49	0.0045
44	1.047	1.097	3.05	0.44	0.0033
45	1.149	1.204	2.69	0.35	0.0022

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	2.16	0.26	0.0014
47	1.385	1.451	1.66	0.18	0.00078
48	1.520	1.592	1.18	0.12	0.00042
49	1.668	1.748	0.88	0.079	0.00024
50	1.832	1.919	0.60	0.050	0.00012
51	2.011	2.107	0.36	0.027	0.000056
52	2.207	2.313	0.21	0.014	0.000024
53	2.423	2.539	0.080	0.0050	0.000007
54	2.660	2.787	0.022	0.0012	0.000001
55	2.920	3.059	0.0043	0.00022	2.16E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

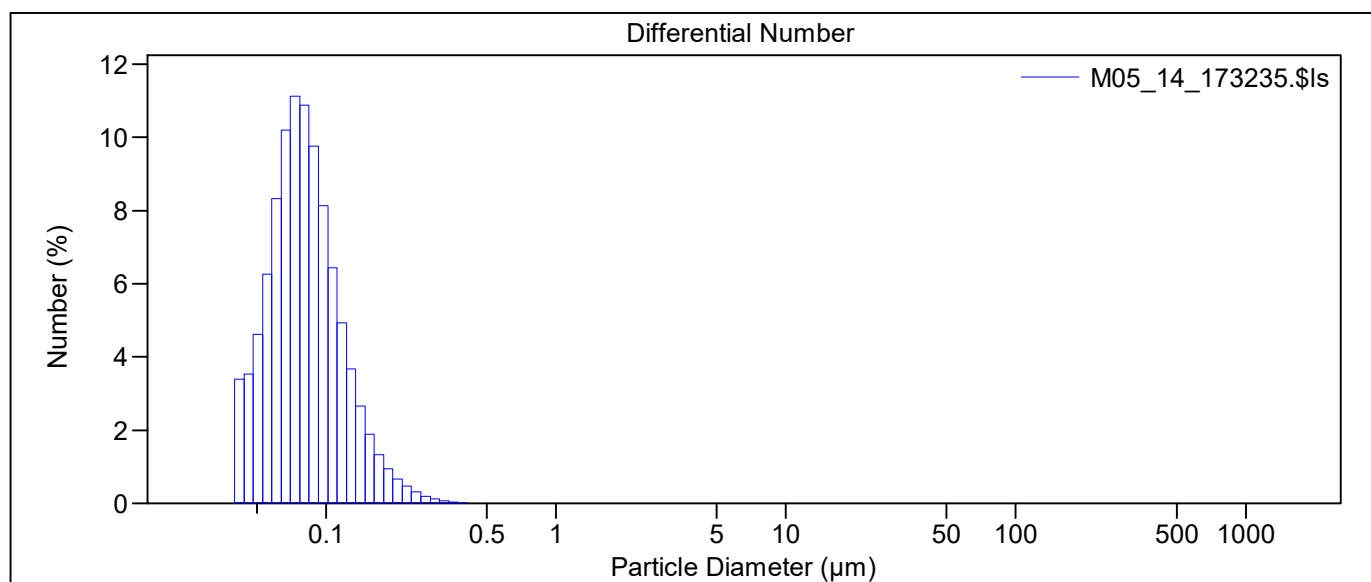
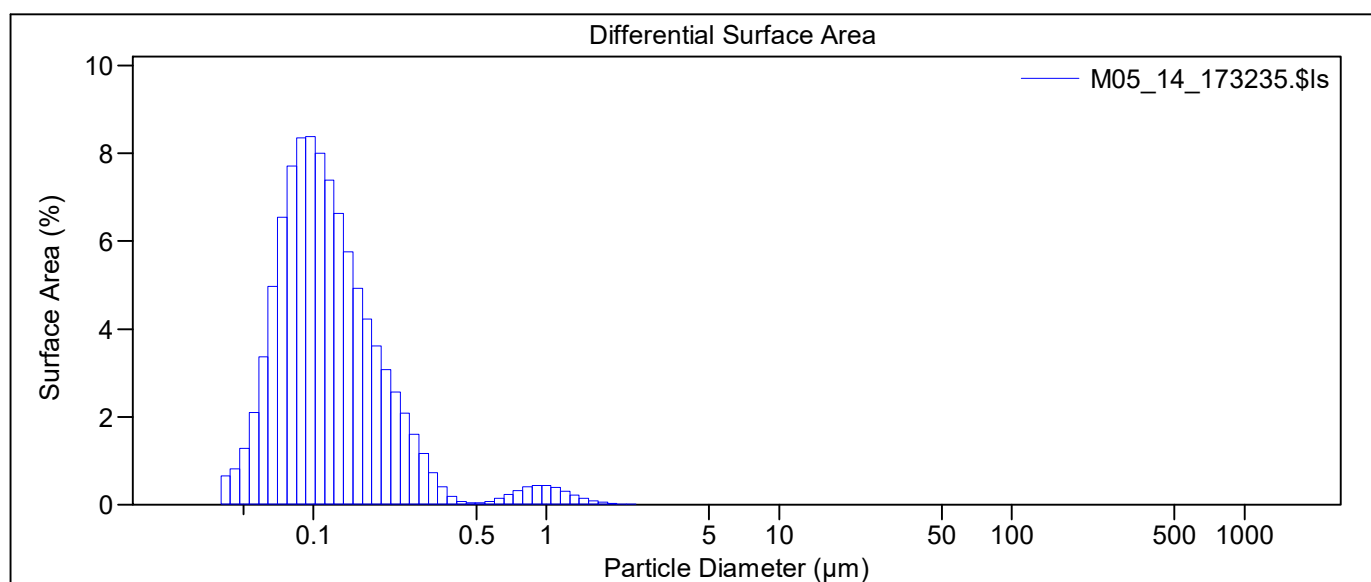
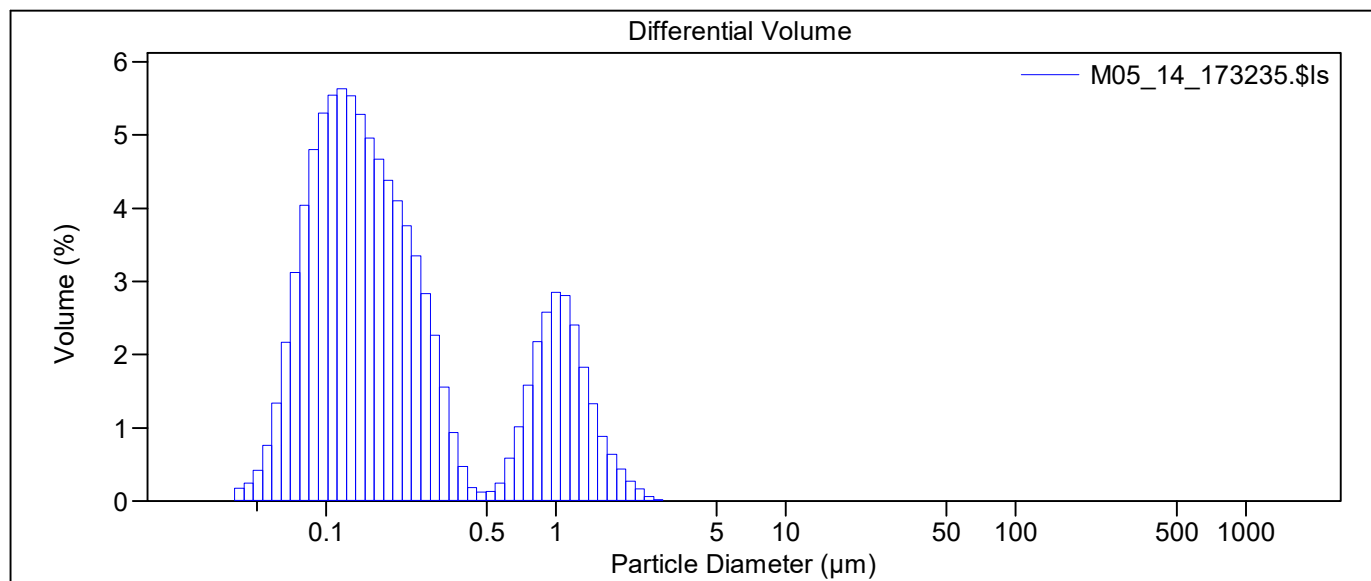
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_14_173235.\$ls		
	M05_14_173235.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.35%		
LS 13 320	Universal Liquid Module		
Start time:	17:30 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_14_173235.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.431 µm
Mean:	0.363 µm		Variance:	0.186 µm ²
Median:	0.164 µm		C.V.:	119%
Mean/Median ratio:	2.212		Skewness:	1.871 Right skewed
Mode:	0.117 µm		Kurtosis:	2.925 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.164 µm	0.317 µm	1.078 µm

Surface Area Statistics (Arithmetic)			M05_14_173235.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.179 µm
Mean:	0.153 µm		Variance:	0.032 µm ²
Median:	0.109 µm		C.V.:	117%
Mean/Median ratio:	1.410		Skewness:	5.260 Right skewed
Mode:	0.097 µm		Kurtosis:	33.48 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.232 µm

Number Statistics (Arithmetic)			M05_14_173235.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.6%
Mean/Median ratio:	1.106		Skewness:	5.374 Right skewed
Mode:	0.073 μm		Kurtosis:	104.2 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.130 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.40
10	0.044	0.046	0.24	0.82	3.53
11	0.048	0.050	0.42	1.29	4.61
12	0.053	0.055	0.76	2.10	6.26
13	0.058	0.061	1.34	3.37	8.32
14	0.064	0.067	2.17	4.98	10.2
15	0.070	0.073	3.13	6.54	11.1
16	0.077	0.080	4.04	7.71	10.9
17	0.084	0.088	4.81	8.35	9.77
18	0.093	0.097	5.30	8.38	8.14
19	0.102	0.106	5.55	8.00	6.44
20	0.112	0.117	5.63	7.39	4.94
21	0.122	0.128	5.54	6.63	3.68
22	0.134	0.141	5.29	5.76	2.65
23	0.148	0.155	4.96	4.93	1.88
24	0.162	0.170	4.67	4.22	1.34
25	0.178	0.186	4.38	3.61	0.95
26	0.195	0.205	4.10	3.08	0.67
27	0.214	0.225	3.76	2.57	0.47
28	0.235	0.247	3.35	2.09	0.31
29	0.258	0.271	2.83	1.61	0.20
30	0.284	0.297	2.26	1.17	0.12
31	0.311	0.326	1.56	0.73	0.063
32	0.342	0.358	0.94	0.40	0.029
33	0.375	0.393	0.47	0.18	0.011
34	0.412	0.431	0.19	0.066	0.0032
35	0.452	0.474	0.12	0.039	0.0016
36	0.496	0.520	0.13	0.039	0.0013
37	0.545	0.571	0.25	0.067	0.0019
38	0.598	0.627	0.58	0.14	0.0033
39	0.656	0.688	1.01	0.23	0.0044
40	0.721	0.755	1.58	0.32	0.0052
41	0.791	0.829	2.18	0.40	0.0054
42	0.868	0.910	2.58	0.44	0.0048
43	0.953	0.999	2.85	0.44	0.0040
44	1.047	1.097	2.81	0.39	0.0030
45	1.149	1.204	2.41	0.31	0.0019

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.83	0.21	0.0011
47	1.385	1.451	1.33	0.14	0.00061
48	1.520	1.592	0.89	0.086	0.00031
49	1.668	1.748	0.64	0.056	0.00017
50	1.832	1.919	0.44	0.035	0.000088
51	2.011	2.107	0.27	0.020	0.000041
52	2.207	2.313	0.16	0.011	0.000018
53	2.423	2.539	0.064	0.0039	0.000006
54	2.660	2.787	0.018	0.00097	0.000001
55	2.920	3.059	0.0035	0.00017	1.7E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

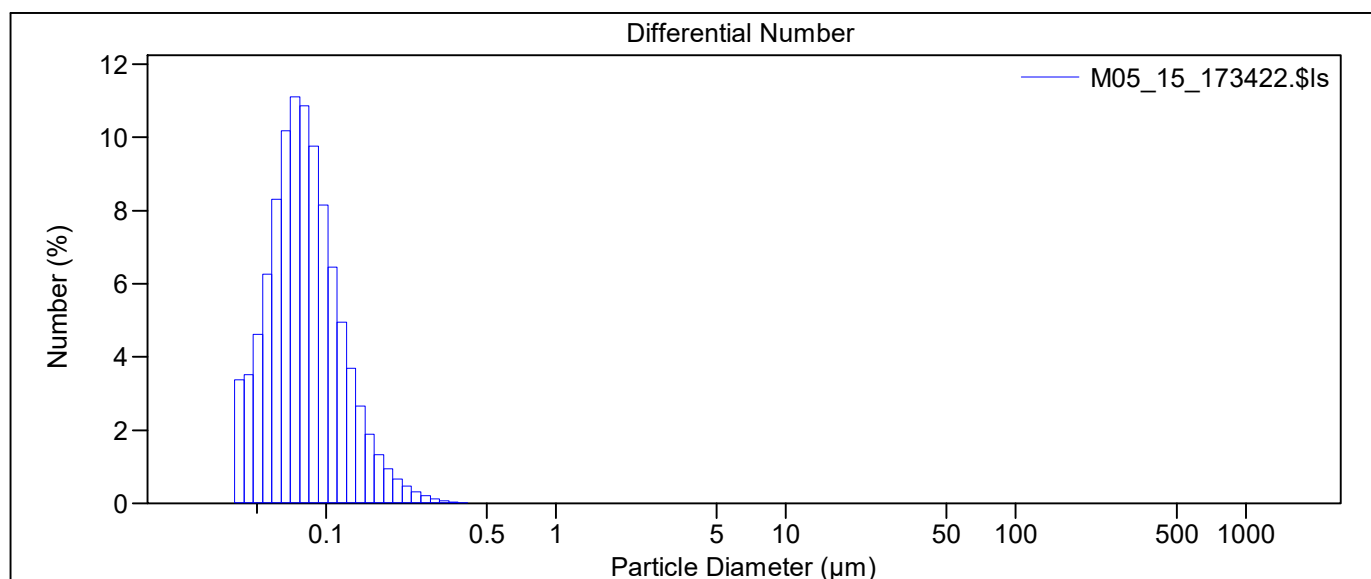
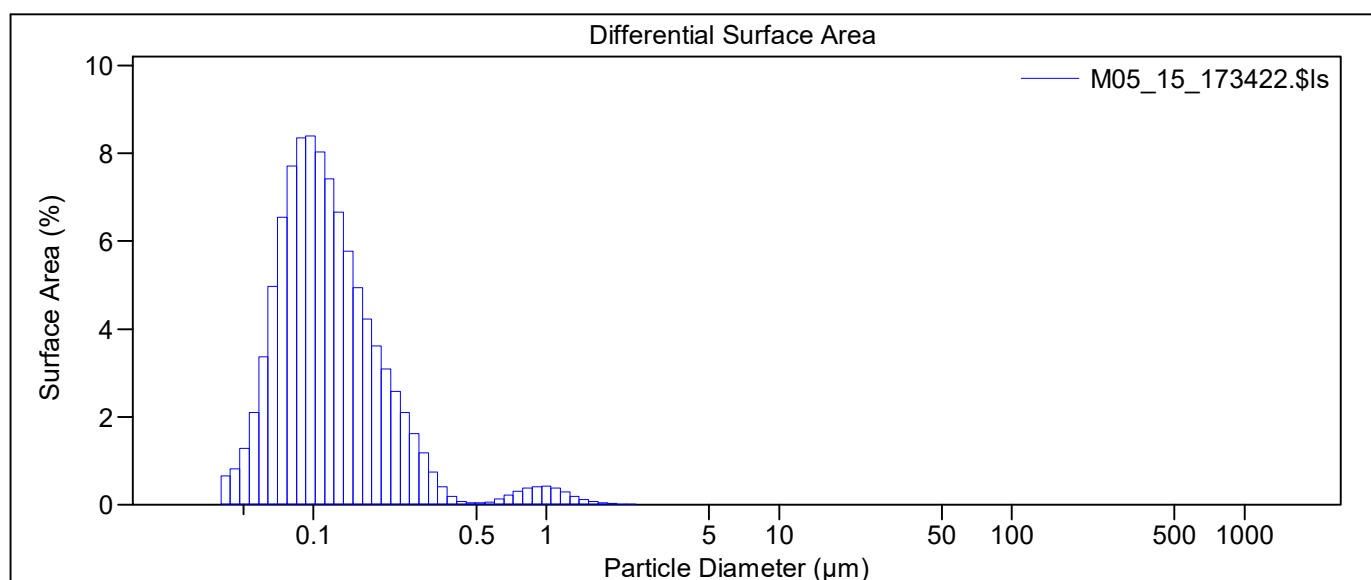
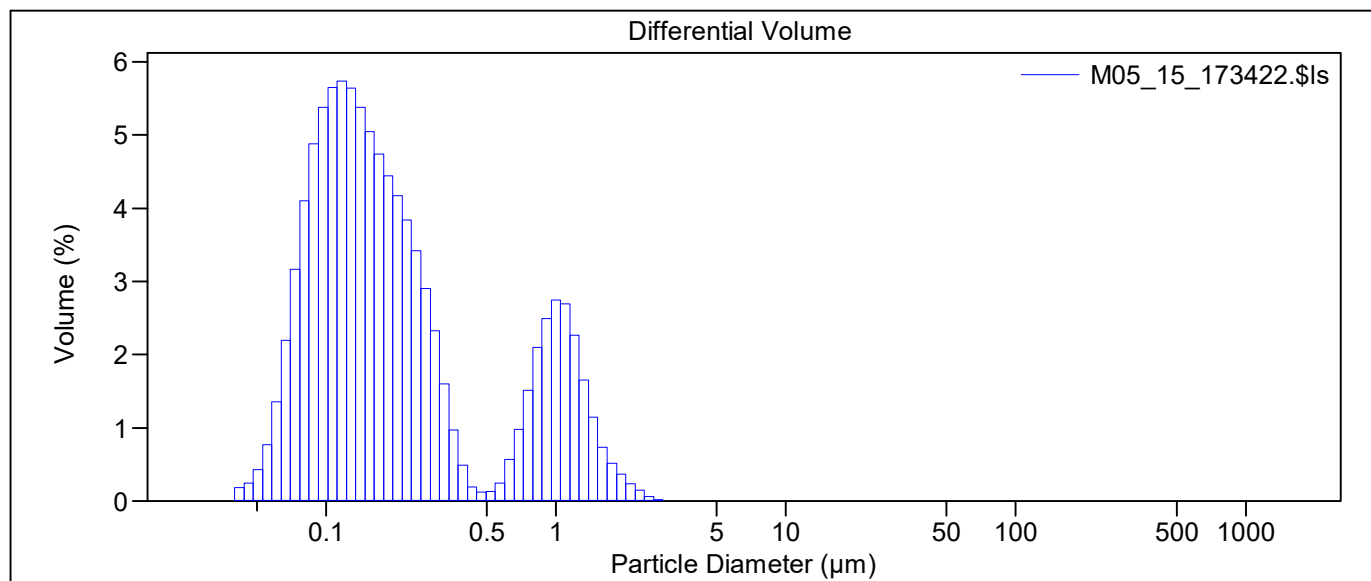
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M05\M05_15_173422.\$ls		
	M05_15_173422.\$ls		
File ID:	M05		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.46%		
LS 13 320	Universal Liquid Module		
Start time:	17:32 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M05_15_173422.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.415 µm
Mean:	0.347 µm		Variance:	0.172 µm ²
Median:	0.162 µm		C.V.:	119%
Mean/Median ratio:	2.149		Skewness:	1.970 Right skewed
Mode:	0.117 µm		Kurtosis:	3.427 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.162 µm	0.299 µm	1.041 µm

Surface Area Statistics (Arithmetic)			M05_15_173422.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.172 µm
Mean:	0.151 µm		Variance:	0.030 µm ²
Median:	0.109 µm		C.V.:	114%
Mean/Median ratio:	1.391		Skewness:	5.356 Right skewed
Mode:	0.097 µm		Kurtosis:	35.17 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.231 µm

Number Statistics (Arithmetic)			M05_15_173422.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.3%
Mean/Median ratio:	1.106		Skewness:	5.147 Right skewed
Mode:	0.073 μm		Kurtosis:	96.69 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.130 μm



M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.38
10	0.044	0.046	0.25	0.82	3.52
11	0.048	0.050	0.43	1.29	4.61
12	0.053	0.055	0.77	2.11	6.26
13	0.058	0.061	1.36	3.37	8.31
14	0.064	0.067	2.20	4.98	10.2
15	0.070	0.073	3.17	6.54	11.1
16	0.077	0.080	4.10	7.71	10.9
17	0.084	0.088	4.88	8.35	9.76
18	0.093	0.097	5.38	8.40	8.15
19	0.102	0.106	5.65	8.03	6.46
20	0.112	0.117	5.73	7.42	4.96
21	0.122	0.128	5.64	6.66	3.69
22	0.134	0.141	5.38	5.78	2.66
23	0.148	0.155	5.04	4.94	1.88
24	0.162	0.170	4.74	4.22	1.34
25	0.178	0.186	4.45	3.61	0.95
26	0.195	0.205	4.17	3.09	0.67
27	0.214	0.225	3.84	2.59	0.47
28	0.235	0.247	3.42	2.10	0.32
29	0.258	0.271	2.90	1.62	0.20
30	0.284	0.297	2.33	1.18	0.12
31	0.311	0.326	1.60	0.74	0.064
32	0.342	0.358	0.97	0.41	0.029
33	0.375	0.393	0.49	0.19	0.011
34	0.412	0.431	0.19	0.066	0.0033
35	0.452	0.474	0.12	0.040	0.0016
36	0.496	0.520	0.13	0.039	0.0013
37	0.545	0.571	0.24	0.065	0.0018
38	0.598	0.627	0.57	0.14	0.0032
39	0.656	0.688	0.98	0.22	0.0042
40	0.721	0.755	1.52	0.30	0.0049
41	0.791	0.829	2.10	0.38	0.0051
42	0.868	0.910	2.49	0.41	0.0046
43	0.953	0.999	2.74	0.42	0.0038
44	1.047	1.097	2.70	0.37	0.0028
45	1.149	1.204	2.27	0.28	0.0018
46	1.261	1.321	1.65	0.19	0.00099
47	1.385	1.451	1.15	0.12	0.00052
48	1.520	1.592	0.73	0.070	0.00025
49	1.668	1.748	0.52	0.045	0.00013
50	1.832	1.919	0.37	0.029	0.000072
51	2.011	2.107	0.23	0.017	0.000035
52	2.207	2.313	0.15	0.0097	0.000017
53	2.423	2.539	0.061	0.0036	0.000005
54	2.660	2.787	0.017	0.00092	0.000001
55	2.920	3.059	0.0033	0.00016	1.6E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

M05.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M06\M06.\$av
M06.\$av
File ID: M06
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M06.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.342 µm
Mean:	0.301 µm	Variance:	0.117 µm ²
Median:	0.158 µm	C.V.:	113%
Mean/Median ratio:	1.910	Skewness:	2.063 Right skewed
Mode:	0.117 µm	Kurtosis:	3.949 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.158 µm	0.276 µm	0.905 µm

Surface Area Statistics (Arithmetic) M06.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.151 µm
Mean:	0.147 µm	Variance:	0.023 µm ²
Median:	0.109 µm	C.V.:	103%
Mean/Median ratio:	1.354	Skewness:	5.067 Right skewed
Mode:	0.097 µm	Kurtosis:	32.02 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.231 µm

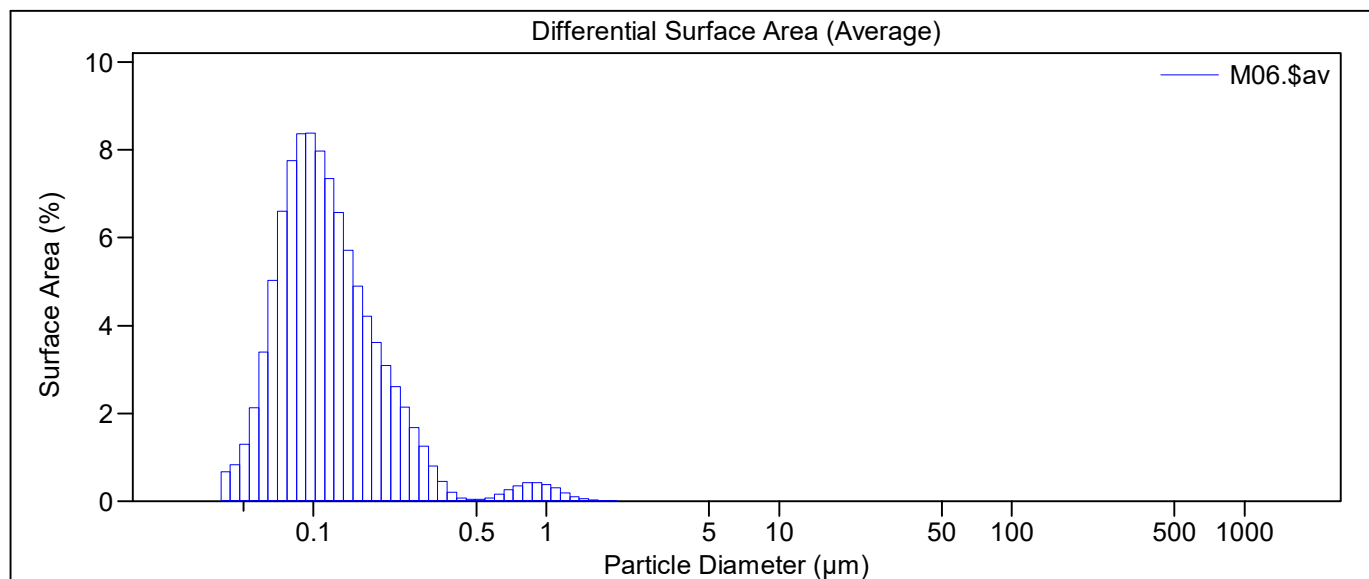
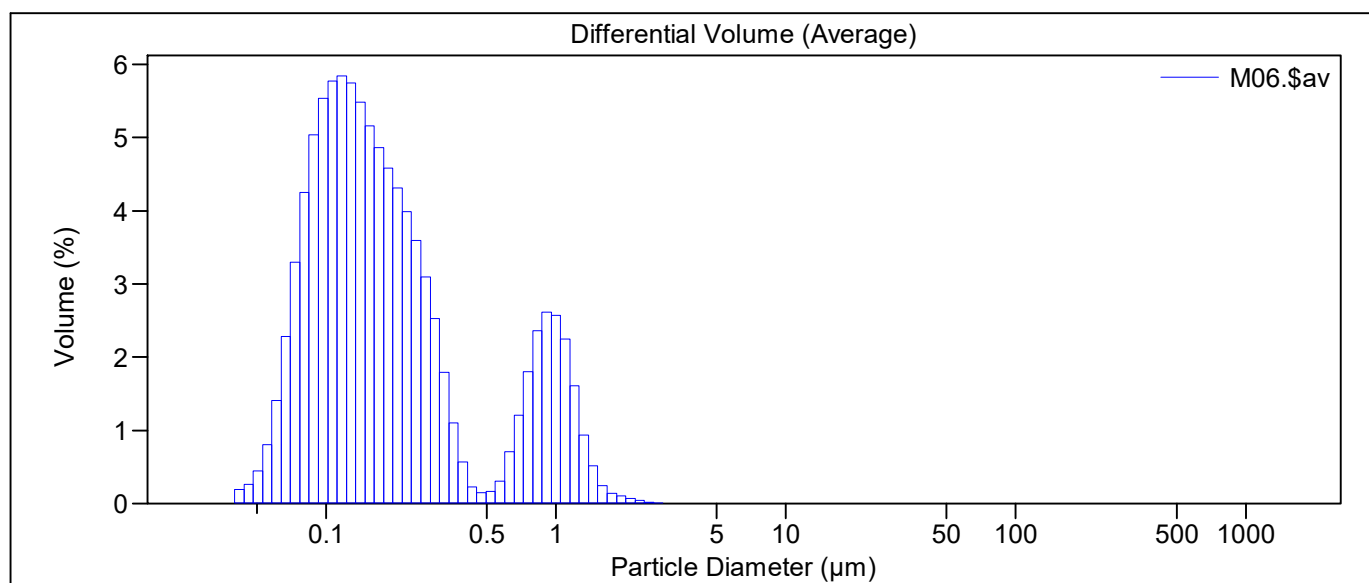
Number Statistics (Arithmetic)

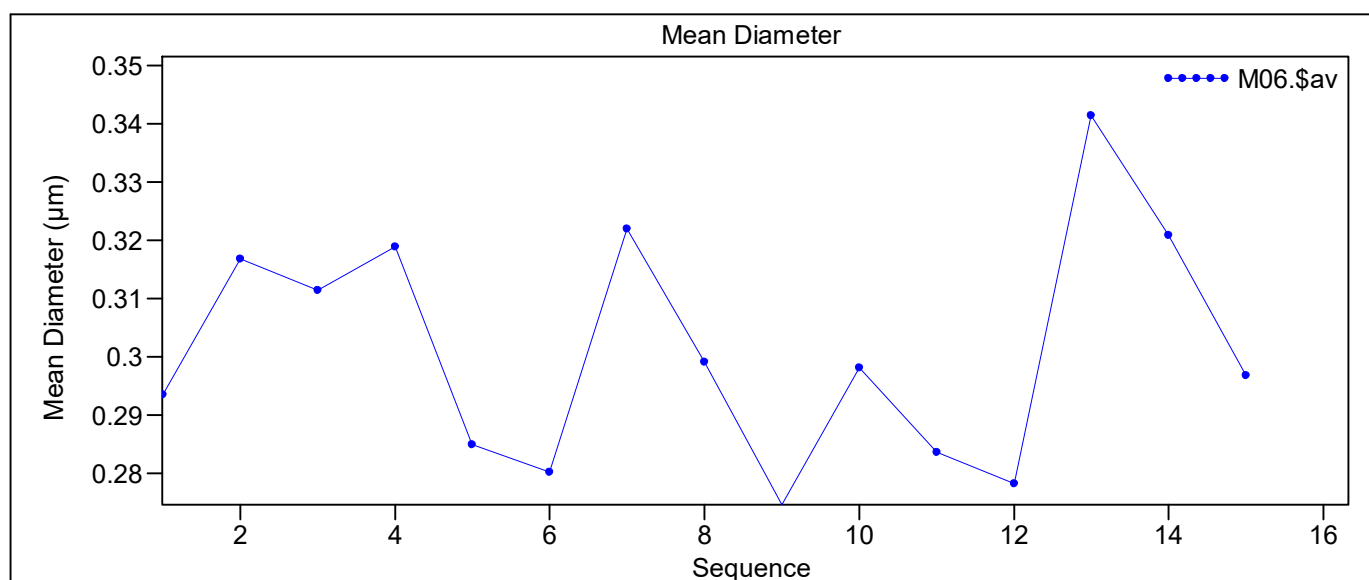
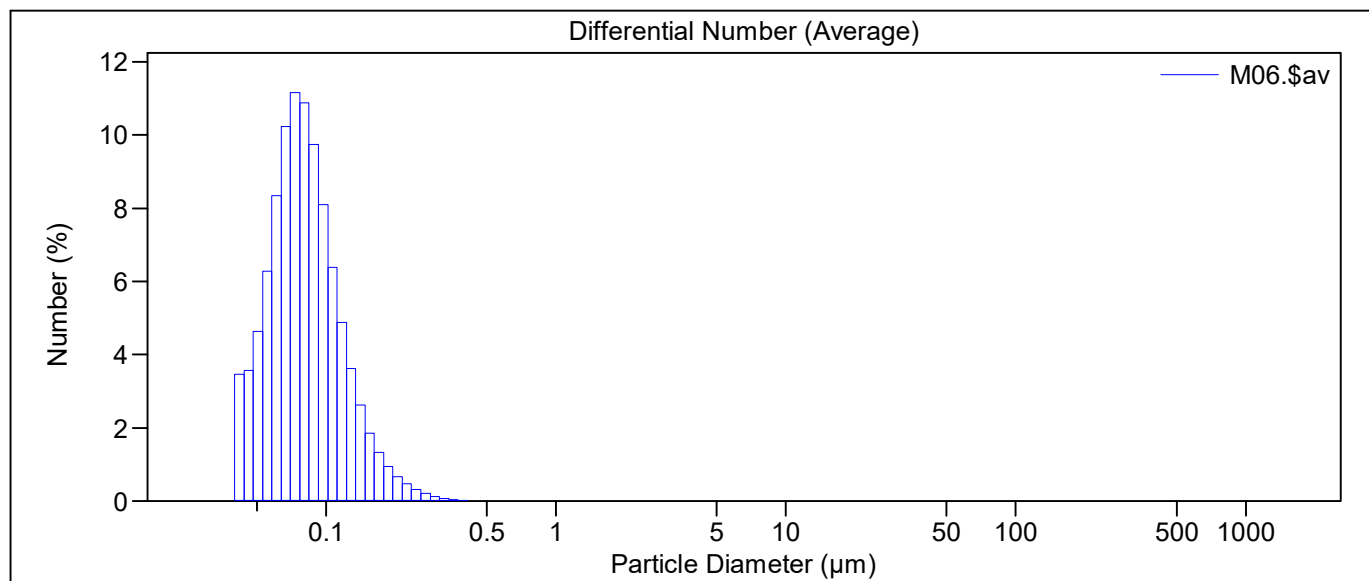
M06.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.039 μm
Mean:	0.087 μm	Variance:	0.0015 μm^2
Median:	0.078 μm	C.V.:	45.2%
Mean/Median ratio:	1.107	Skewness:	4.582 Right skewed
Mode:	0.073 μm	Kurtosis:	72.24 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm





M06.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.67	3.47
10	0.044	0.046	0.26	0.83	3.57
11	0.048	0.050	0.45	1.30	4.63
12	0.053	0.055	0.80	2.13	6.29
13	0.058	0.061	1.41	3.40	8.35
14	0.064	0.067	2.28	5.02	10.2
15	0.070	0.073	3.30	6.60	11.2
16	0.077	0.080	4.25	7.76	10.9
17	0.084	0.088	5.04	8.37	9.74

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M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	5.54	8.38	8.09
19	0.102	0.106	5.78	7.97	6.38
20	0.112	0.117	5.85	7.35	4.88
21	0.122	0.128	5.75	6.58	3.63
22	0.134	0.141	5.48	5.72	2.62
23	0.148	0.155	5.16	4.90	1.86
24	0.162	0.170	4.86	4.21	1.33
25	0.178	0.186	4.59	3.62	0.95
26	0.195	0.205	4.31	3.10	0.67
27	0.214	0.225	3.98	2.61	0.47
28	0.235	0.247	3.59	2.14	0.32
29	0.258	0.271	3.09	1.68	0.21
30	0.284	0.297	2.53	1.25	0.13
31	0.311	0.326	1.79	0.81	0.069
32	0.342	0.358	1.10	0.45	0.032
33	0.375	0.393	0.56	0.21	0.012
34	0.412	0.431	0.23	0.077	0.0038
35	0.452	0.474	0.15	0.047	0.0019
36	0.496	0.520	0.17	0.047	0.0016
37	0.545	0.571	0.31	0.079	0.0022
38	0.598	0.627	0.71	0.17	0.0039
39	0.656	0.688	1.21	0.26	0.0049
40	0.721	0.755	1.80	0.35	0.0056
41	0.791	0.829	2.36	0.42	0.0055
42	0.868	0.910	2.61	0.42	0.0046
43	0.953	0.999	2.57	0.38	0.0034
44	1.047	1.097	2.25	0.30	0.0023
45	1.149	1.204	1.61	0.20	0.0012
46	1.261	1.321	0.94	0.10	0.00054
47	1.385	1.451	0.51	0.052	0.00022
48	1.520	1.592	0.25	0.023	0.000081
49	1.668	1.748	0.14	0.012	0.000036
50	1.832	1.919	0.10	0.0080	0.000020
51	2.011	2.107	0.067	0.0047	0.000010
52	2.207	2.313	0.046	0.0029	0.000005
53	2.423	2.539	0.020	0.0012	0.000002
54	2.660	2.787	0.0054	0.00029	3.35E-7
55	2.920	3.059	0.0012	0.000056	5.42E-8
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

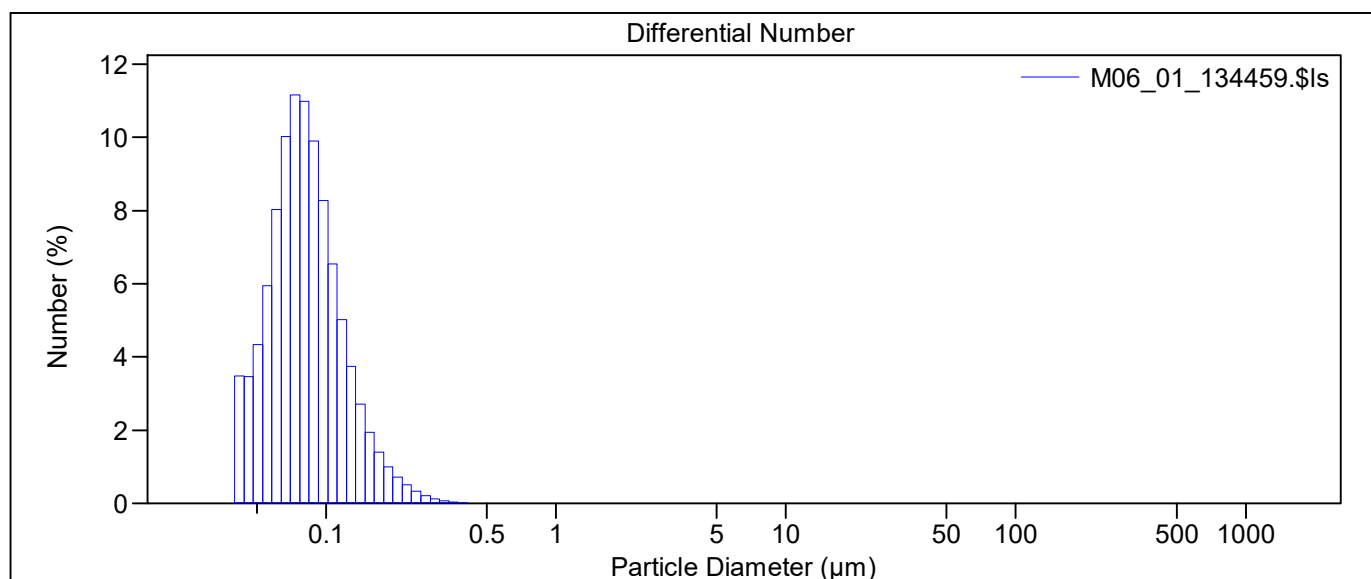
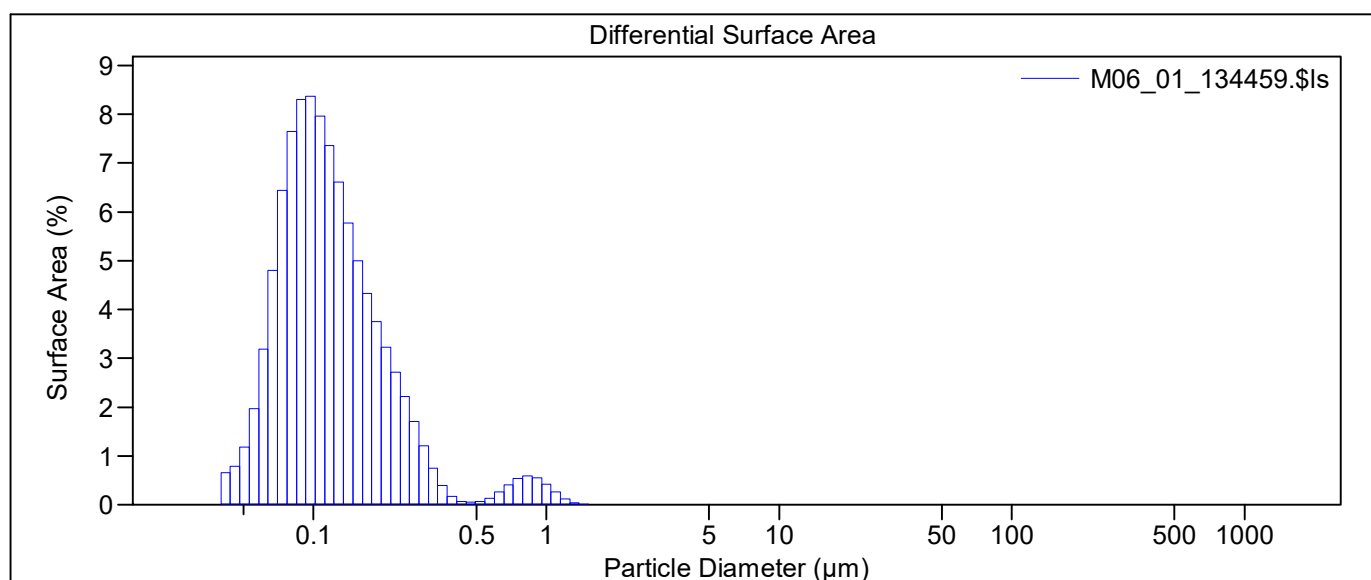
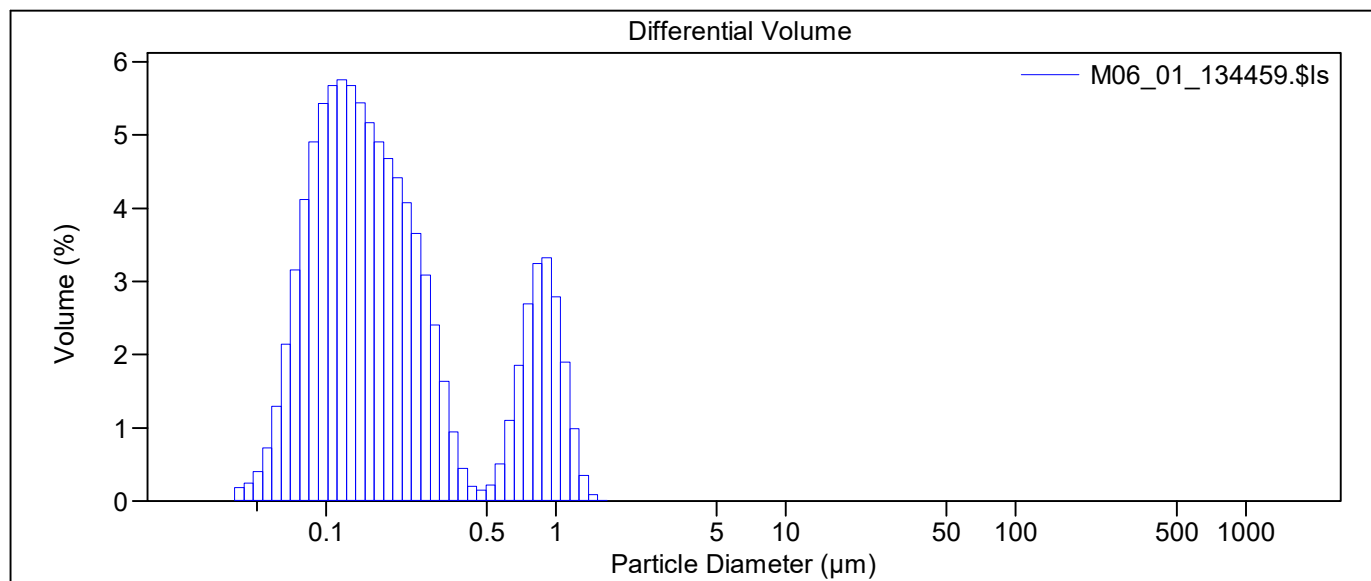
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_01_134459.\$ls		
	M06_01_134459.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.94%		
LS 13 320	Universal Liquid Module		
Start time:	13:43 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	71%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_01_134459.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.303 µm
Mean:	0.293 µm		Variance:	0.092 µm ²
Median:	0.161 µm		C.V.:	103%
Mean/Median ratio:	1.822		Skewness:	1.654 Right skewed
Mode:	0.117 µm		Kurtosis:	1.450 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.161 µm	0.282 µm	0.855 µm

Surface Area Statistics (Arithmetic)			M06_01_134459.\$Is	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.147 μm
Mean:	0.149 μm		Variance:	0.022 μm ²
Median:	0.110 μm		C.V.:	98.2%
Mean/Median ratio:	1.360		Skewness:	4.296 Right skewed
Mode:	0.097 μm		Kurtosis:	21.13 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.110 μm	0.159 μm	0.235 μm

Number Statistics (Arithmetic)			M06_01_134459.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.7%
Mean/Median ratio:	1.107		Skewness:	4.540 Right skewed
Mode:	0.073 μm		Kurtosis:	63.69 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.101 μm	0.132 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.47
10	0.044	0.046	0.24	0.79	3.47
11	0.048	0.050	0.40	1.19	4.34
12	0.053	0.055	0.73	1.96	5.94
13	0.058	0.061	1.30	3.19	8.02
14	0.064	0.067	2.15	4.80	10.0
15	0.070	0.073	3.16	6.44	11.2
16	0.077	0.080	4.12	7.65	11.0
17	0.084	0.088	4.91	8.30	9.90
18	0.093	0.097	5.43	8.36	8.28
19	0.102	0.106	5.68	7.97	6.54
20	0.112	0.117	5.76	7.36	5.01
21	0.122	0.128	5.67	6.61	3.74
22	0.134	0.141	5.44	5.78	2.71
23	0.148	0.155	5.17	5.00	1.94
24	0.162	0.170	4.91	4.32	1.40
25	0.178	0.186	4.68	3.75	1.01
26	0.195	0.205	4.42	3.23	0.72
27	0.214	0.225	4.08	2.71	0.50
28	0.235	0.247	3.65	2.21	0.34
29	0.258	0.271	3.08	1.70	0.22
30	0.284	0.297	2.40	1.21	0.13
31	0.311	0.326	1.64	0.75	0.066
32	0.342	0.358	0.95	0.40	0.029
33	0.375	0.393	0.44	0.17	0.010
34	0.412	0.431	0.20	0.069	0.0034
35	0.452	0.474	0.15	0.048	0.0020
36	0.496	0.520	0.22	0.063	0.0022
37	0.545	0.571	0.51	0.13	0.0038
38	0.598	0.627	1.10	0.26	0.0062
39	0.656	0.688	1.85	0.40	0.0079
40	0.721	0.755	2.69	0.53	0.0087
41	0.791	0.829	3.25	0.59	0.0079
42	0.868	0.910	3.32	0.55	0.0061
43	0.953	0.999	2.79	0.42	0.0039
44	1.047	1.097	1.89	0.26	0.0020
45	1.149	1.204	0.99	0.12	0.00079

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.35	0.039	0.00021
47	1.385	1.451	0.086	0.0089	0.000039
48	1.520	1.592	0.0097	0.00091	0.000003
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

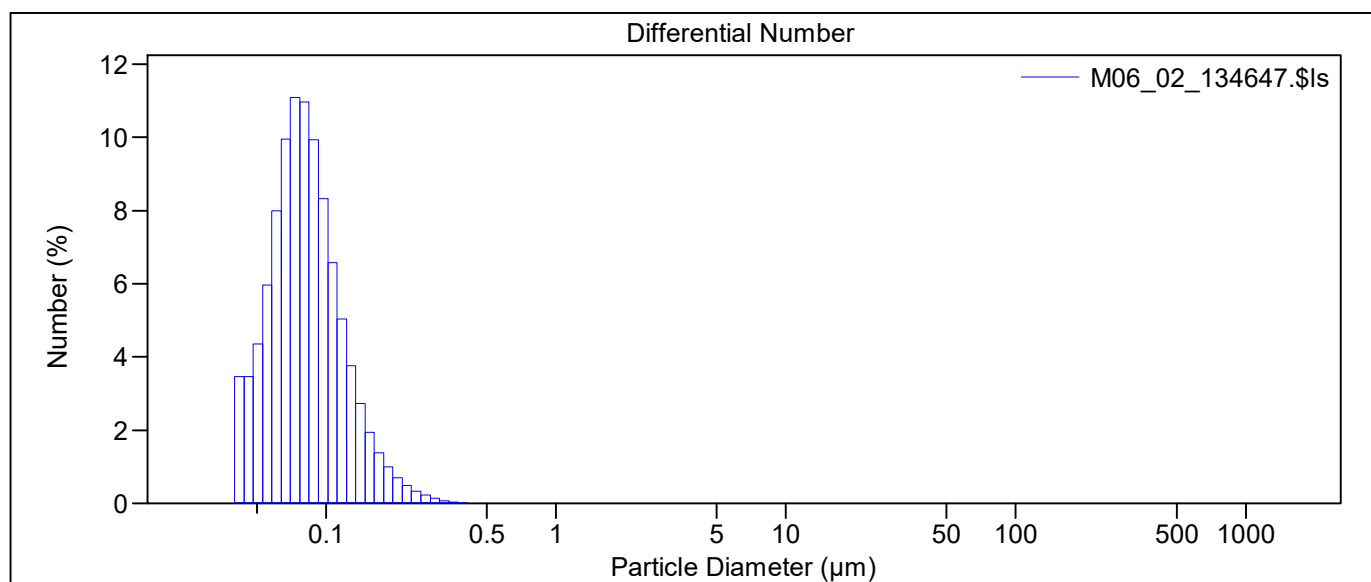
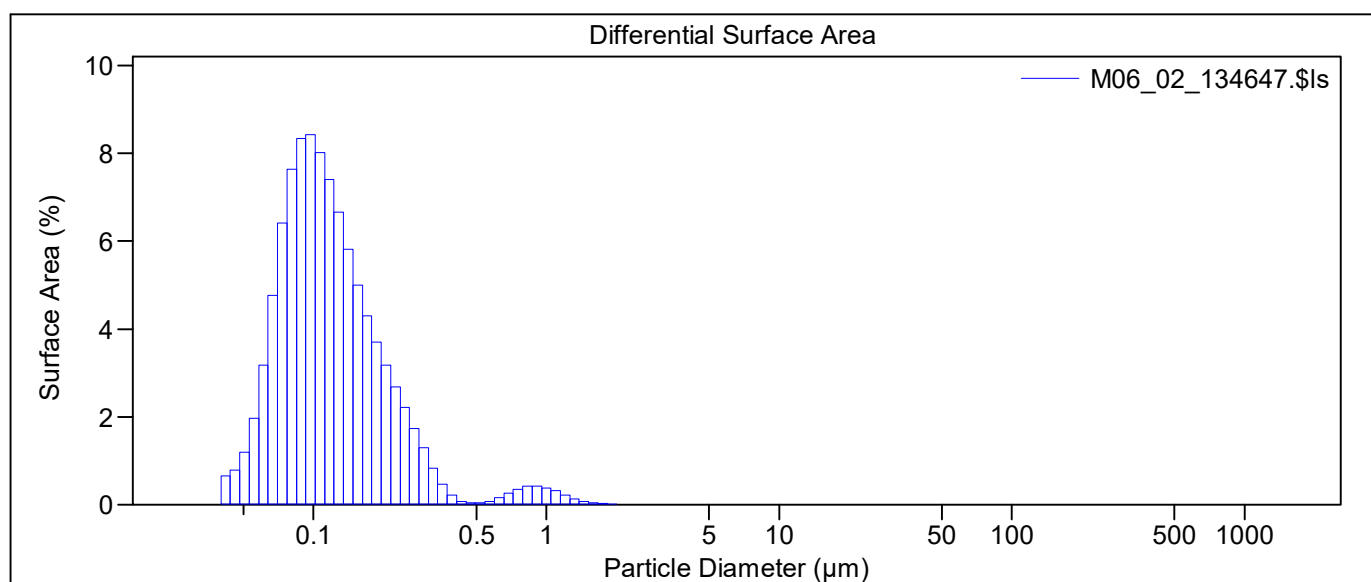
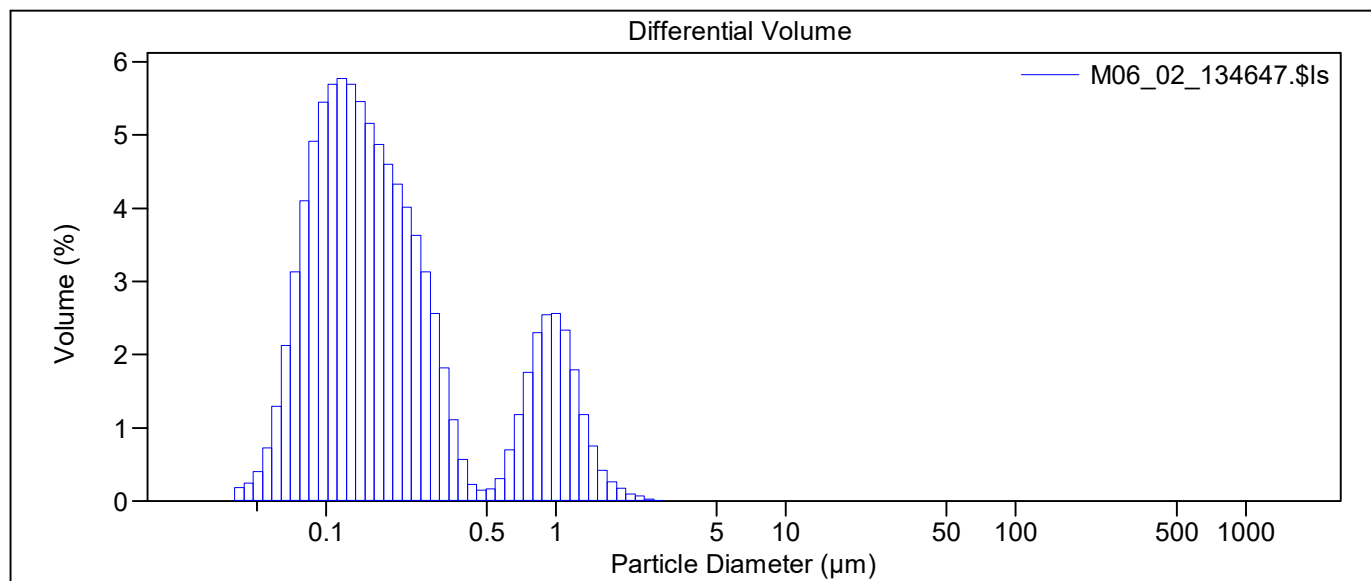
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_02_134647.\$ls		
	M06_02_134647.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.13%		
LS 13 320	Universal Liquid Module		
Start time:	13:45 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	73%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_02_134647.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.365 μm
Mean:	0.317 μm		Variance:	0.133 μm ²
Median:	0.161 μm		C.V.:	115%
Mean/Median ratio:	1.967		Skewness:	2.054 Right skewed
Mode:	0.117 μm		Kurtosis:	3.911 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.161 μm	0.284 μm	0.943 μm

Surface Area Statistics (Arithmetic)			M06_02_134647.\$Is	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.158 μm
Mean:	0.150 μm		Variance:	0.025 μm ²
Median:	0.110 μm		C.V.:	105%
Mean/Median ratio:	1.366		Skewness:	5.146 Right skewed
Mode:	0.097 μm		Kurtosis:	33.04 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 μm	0.083 μm	0.110 μm	0.158 μm	0.234 μm

Number Statistics (Arithmetic)			M06_02_134647.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.5%
Mean/Median ratio:	1.106		Skewness:	4.704 Right skewed
Mode:	0.073 μm		Kurtosis:	77.38 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.101 μm	0.132 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.46
10	0.044	0.046	0.24	0.79	3.47
11	0.048	0.050	0.40	1.19	4.35
12	0.053	0.055	0.73	1.97	5.96
13	0.058	0.061	1.29	3.18	8.00
14	0.064	0.067	2.12	4.77	9.95
15	0.070	0.073	3.13	6.41	11.1
16	0.077	0.080	4.10	7.64	11.0
17	0.084	0.088	4.91	8.34	9.93
18	0.093	0.097	5.45	8.43	8.33
19	0.102	0.106	5.69	8.02	6.58
20	0.112	0.117	5.77	7.41	5.04
21	0.122	0.128	5.69	6.65	3.76
22	0.134	0.141	5.46	5.81	2.72
23	0.148	0.155	5.16	5.01	1.95
24	0.162	0.170	4.87	4.31	1.39
25	0.178	0.186	4.60	3.71	0.99
26	0.195	0.205	4.33	3.18	0.71
27	0.214	0.225	4.01	2.68	0.49
28	0.235	0.247	3.63	2.21	0.34
29	0.258	0.271	3.14	1.74	0.22
30	0.284	0.297	2.56	1.29	0.14
31	0.311	0.326	1.82	0.83	0.073
32	0.342	0.358	1.11	0.47	0.034
33	0.375	0.393	0.57	0.22	0.013
34	0.412	0.431	0.23	0.079	0.0040
35	0.452	0.474	0.15	0.047	0.0020
36	0.496	0.520	0.16	0.047	0.0016
37	0.545	0.571	0.30	0.080	0.0023
38	0.598	0.627	0.70	0.17	0.0040
39	0.656	0.688	1.18	0.26	0.0051
40	0.721	0.755	1.76	0.35	0.0057
41	0.791	0.829	2.30	0.42	0.0056
42	0.868	0.910	2.54	0.42	0.0047
43	0.953	0.999	2.57	0.39	0.0036
44	1.047	1.097	2.33	0.32	0.0025
45	1.149	1.204	1.80	0.22	0.0014

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.18	0.13	0.00071
47	1.385	1.451	0.76	0.078	0.00035
48	1.520	1.592	0.42	0.039	0.00014
49	1.668	1.748	0.26	0.022	0.000068
50	1.832	1.919	0.18	0.014	0.000035
51	2.011	2.107	0.10	0.0072	0.000015
52	2.207	2.313	0.067	0.0043	0.000008
53	2.423	2.539	0.029	0.0017	0.000002
54	2.660	2.787	0.0078	0.00042	0.000001
55	2.920	3.059	0.0021	0.00011	1.04E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

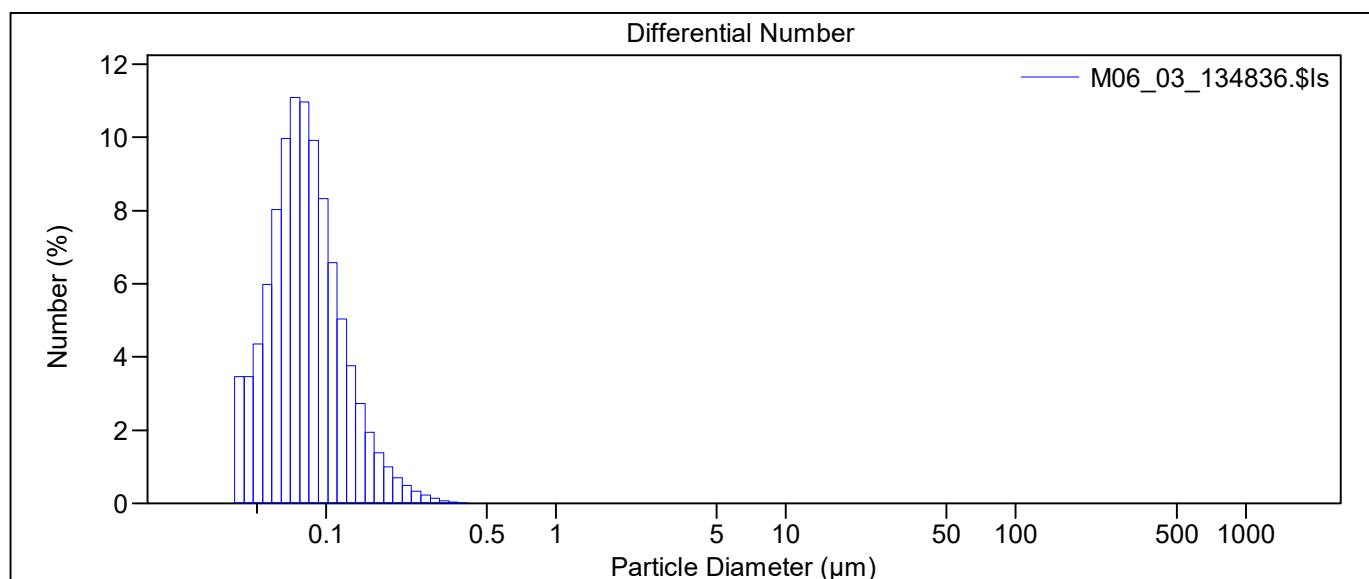
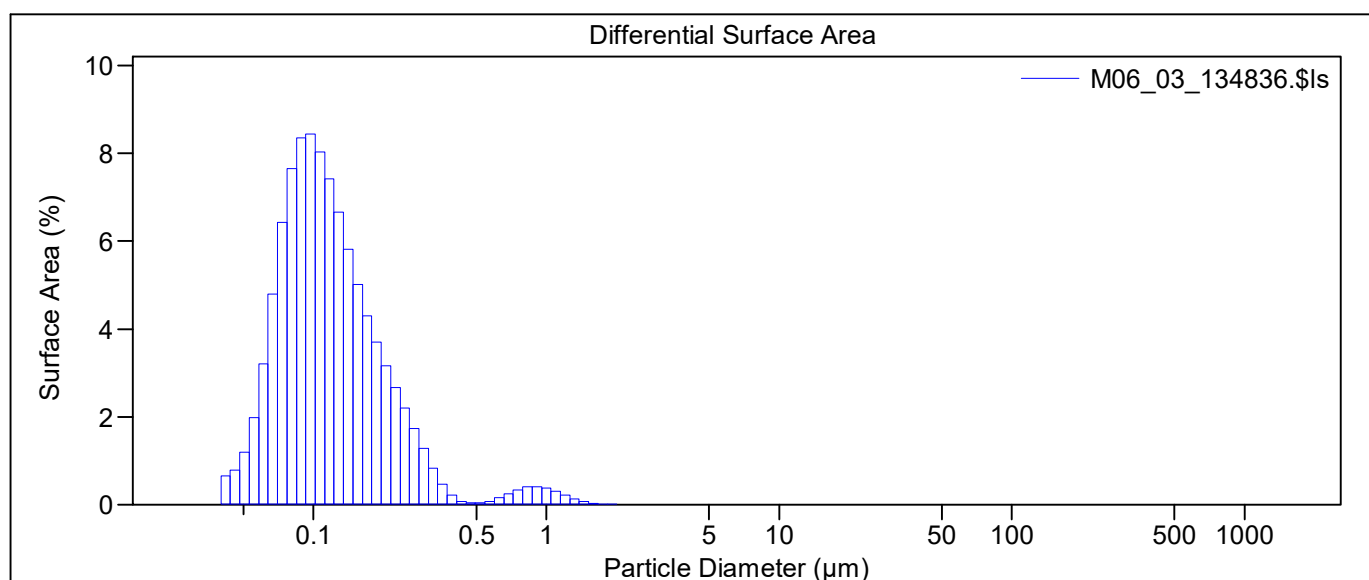
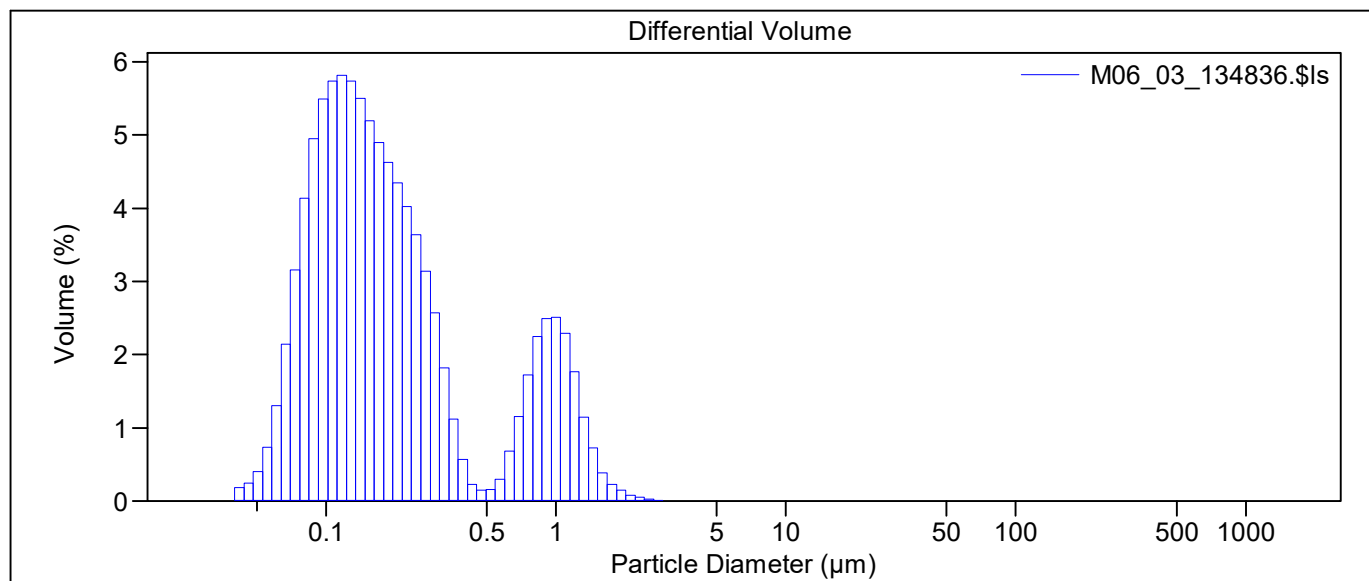
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_03_134836.\$ls		
	M06_03_134836.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.19%		
LS 13 320	Universal Liquid Module		
Start time:	13:46 11	Run length:	96 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	72%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_03_134836.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.358 µm
Mean:	0.311 µm		Variance:	0.128 µm ²
Median:	0.160 µm		C.V.:	115%
Mean/Median ratio:	1.947		Skewness:	2.066 Right skewed
Mode:	0.117 µm		Kurtosis:	3.909 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.106 µm	0.160 µm	0.280 µm	0.932 µm

Surface Area Statistics (Arithmetic)			M06_03_134836.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.156 µm
Mean:	0.149 µm		Variance:	0.024 µm ²
Median:	0.110 µm		C.V.:	104%
Mean/Median ratio:	1.359		Skewness:	5.158 Right skewed
Mode:	0.097 µm		Kurtosis:	33.14 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.158 µm	0.233 µm

Number Statistics (Arithmetic)			M06_03_134836.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.088 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.3%
Mean/Median ratio:	1.106		Skewness:	4.636 Right skewed
Mode:	0.073 μm		Kurtosis:	75.39 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.079 μm	0.101 μm	0.132 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.65	3.46
10	0.044	0.046	0.24	0.79	3.47
11	0.048	0.050	0.41	1.20	4.36
12	0.053	0.055	0.74	1.98	5.98
13	0.058	0.061	1.31	3.20	8.02
14	0.064	0.067	2.15	4.79	9.97
15	0.070	0.073	3.16	6.43	11.1
16	0.077	0.080	4.13	7.65	11.0
17	0.084	0.088	4.95	8.35	9.93
18	0.093	0.097	5.49	8.44	8.32
19	0.102	0.106	5.74	8.03	6.57
20	0.112	0.117	5.82	7.42	5.04
21	0.122	0.128	5.73	6.66	3.75
22	0.134	0.141	5.50	5.82	2.72
23	0.148	0.155	5.19	5.01	1.94
24	0.162	0.170	4.90	4.30	1.39
25	0.178	0.186	4.63	3.70	0.99
26	0.195	0.205	4.35	3.17	0.70
27	0.214	0.225	4.02	2.67	0.49
28	0.235	0.247	3.64	2.20	0.34
29	0.258	0.271	3.14	1.73	0.22
30	0.284	0.297	2.57	1.29	0.14
31	0.311	0.326	1.82	0.83	0.073
32	0.342	0.358	1.12	0.47	0.034
33	0.375	0.393	0.57	0.22	0.013
34	0.412	0.431	0.23	0.079	0.0039
35	0.452	0.474	0.15	0.047	0.0019
36	0.496	0.520	0.16	0.045	0.0016
37	0.545	0.571	0.29	0.077	0.0022
38	0.598	0.627	0.68	0.16	0.0038
39	0.656	0.688	1.16	0.25	0.0049
40	0.721	0.755	1.72	0.34	0.0055
41	0.791	0.829	2.25	0.40	0.0055
42	0.868	0.910	2.49	0.41	0.0046
43	0.953	0.999	2.51	0.37	0.0035
44	1.047	1.097	2.29	0.31	0.0024
45	1.149	1.204	1.76	0.22	0.0014

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.15	0.13	0.00069
47	1.385	1.451	0.73	0.075	0.00033
48	1.520	1.592	0.39	0.036	0.00013
49	1.668	1.748	0.23	0.020	0.000060
50	1.832	1.919	0.15	0.012	0.000030
51	2.011	2.107	0.082	0.0058	0.000012
52	2.207	2.313	0.054	0.0035	0.000006
53	2.423	2.539	0.024	0.0014	0.000002
54	2.660	2.787	0.0061	0.00033	3.93E-7
55	2.920	3.059	0.0019	0.000091	9.06E-8
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

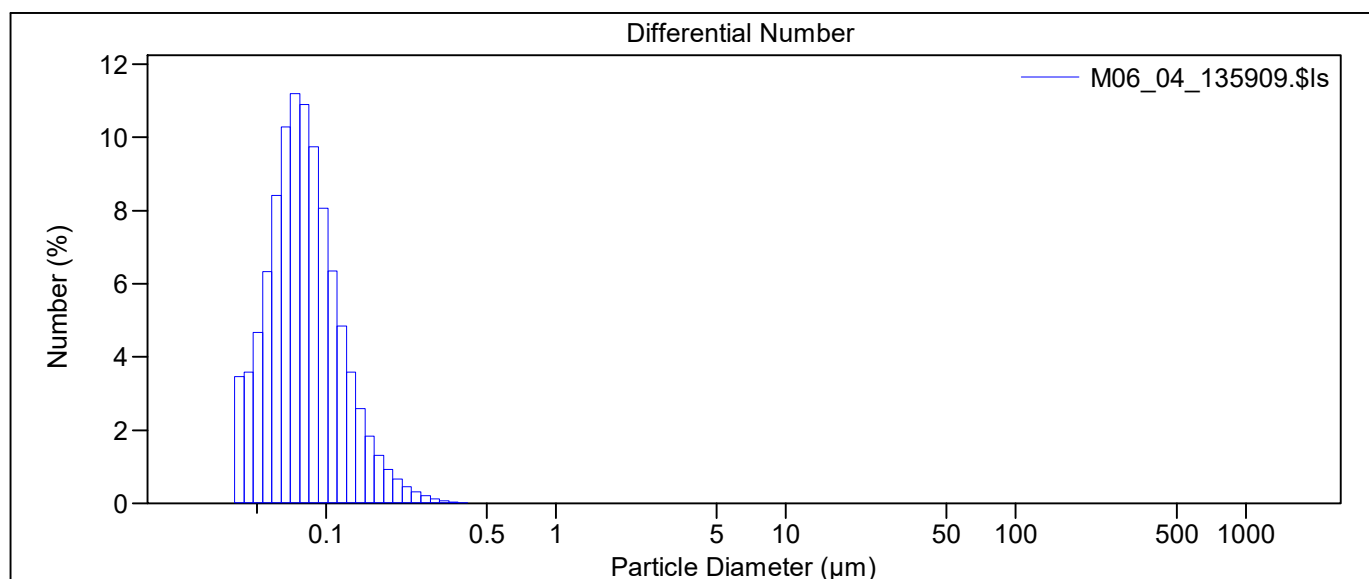
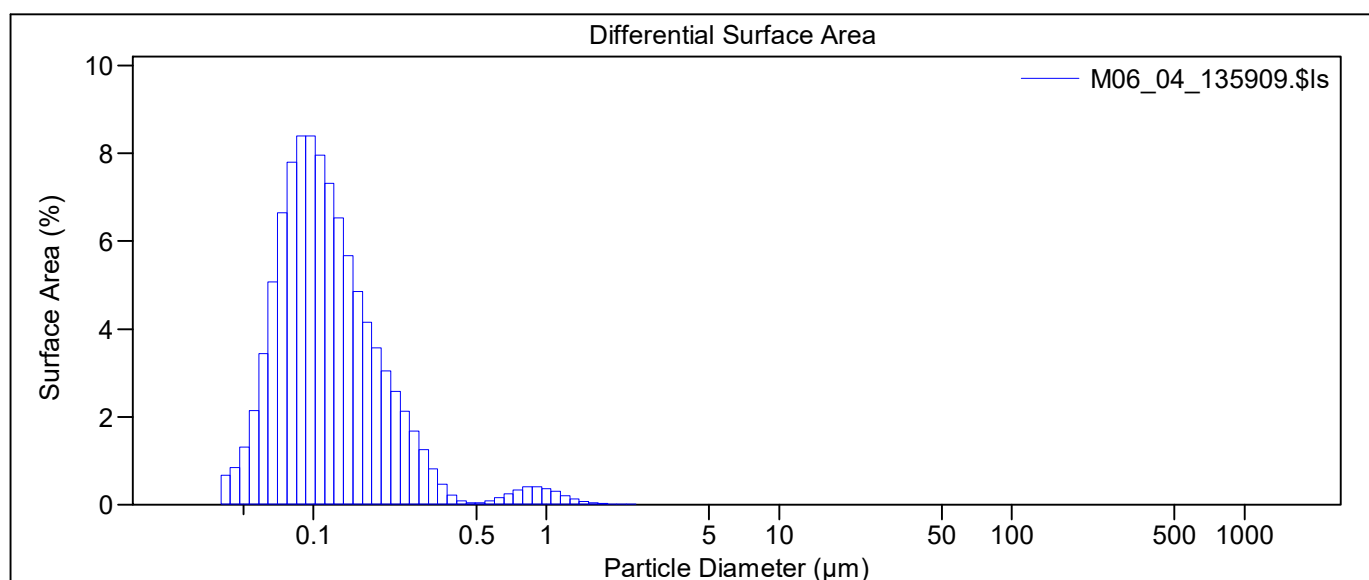
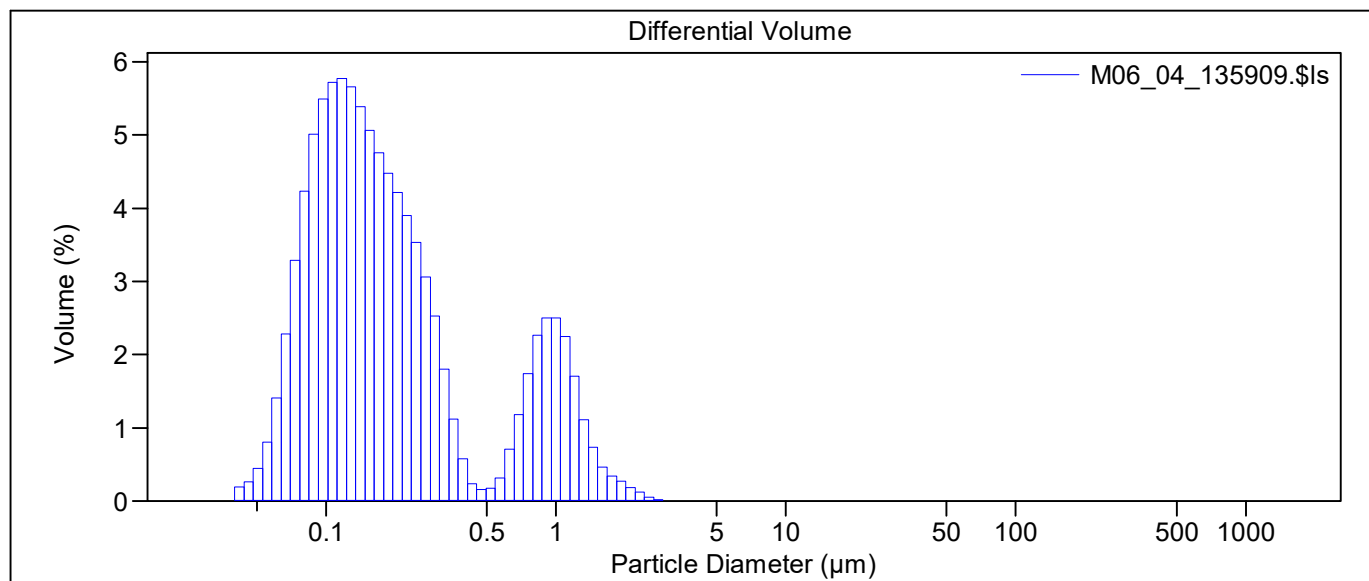
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_04_135909.\$ls		
	M06_04_135909.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	4		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.24%		
LS 13 320	Universal Liquid Module		
Start time:	13:57 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_04_135909.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.377 μm
Mean:	0.319 μm		Variance:	0.142 μm ²
Median:	0.159 μm		C.V.:	118%
Mean/Median ratio:	2.004		Skewness:	2.173 Right skewed
Mode:	0.117 μm		Kurtosis:	4.725 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.104 μm	0.159 μm	0.284 μm	0.945 μm

Surface Area Statistics (Arithmetic)			M06_04_135909.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.159 µm
Mean:	0.148 µm		Variance:	0.025 µm ²
Median:	0.108 µm		C.V.:	107%
Mean/Median ratio:	1.370		Skewness:	5.364 Right skewed
Mode:	0.088 µm		Kurtosis:	36.84 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.108 µm	0.156 µm	0.232 µm

Number Statistics (Arithmetic)			M06_04_135909.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.3%
Mean/Median ratio:	1.107		Skewness:	4.795 Right skewed
Mode:	0.073 μm		Kurtosis:	81.77 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.67	3.46
10	0.044	0.046	0.26	0.84	3.59
11	0.048	0.050	0.45	1.32	4.67
12	0.053	0.055	0.80	2.15	6.33
13	0.058	0.061	1.41	3.44	8.41
14	0.064	0.067	2.28	5.07	10.3
15	0.070	0.073	3.29	6.65	11.2
16	0.077	0.080	4.23	7.80	10.9
17	0.084	0.088	5.01	8.40	9.74
18	0.093	0.097	5.49	8.39	8.07
19	0.102	0.106	5.72	7.96	6.35
20	0.112	0.117	5.77	7.32	4.85
21	0.122	0.128	5.66	6.54	3.59
22	0.134	0.141	5.39	5.67	2.59
23	0.148	0.155	5.06	4.85	1.84
24	0.162	0.170	4.76	4.16	1.31
25	0.178	0.186	4.48	3.57	0.93
26	0.195	0.205	4.21	3.05	0.66
27	0.214	0.225	3.90	2.57	0.46
28	0.235	0.247	3.53	2.12	0.32
29	0.258	0.271	3.06	1.68	0.21
30	0.284	0.297	2.52	1.26	0.13
31	0.311	0.326	1.80	0.82	0.070
32	0.342	0.358	1.12	0.46	0.033
33	0.375	0.393	0.58	0.22	0.013
34	0.412	0.431	0.24	0.081	0.0040
35	0.452	0.474	0.16	0.050	0.0020
36	0.496	0.520	0.17	0.050	0.0017
37	0.545	0.571	0.31	0.082	0.0023
38	0.598	0.627	0.71	0.17	0.0039
39	0.656	0.688	1.18	0.25	0.0049
40	0.721	0.755	1.74	0.34	0.0054
41	0.791	0.829	2.26	0.40	0.0053
42	0.868	0.910	2.51	0.41	0.0045
43	0.953	0.999	2.50	0.37	0.0034
44	1.047	1.097	2.25	0.30	0.0023
45	1.149	1.204	1.71	0.21	0.0013

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.11	0.12	0.00065
47	1.385	1.451	0.73	0.075	0.00032
48	1.520	1.592	0.46	0.043	0.00015
49	1.668	1.748	0.34	0.029	0.000085
50	1.832	1.919	0.27	0.021	0.000052
51	2.011	2.107	0.18	0.013	0.000026
52	2.207	2.313	0.12	0.0078	0.000013
53	2.423	2.539	0.052	0.0030	0.000004
54	2.660	2.787	0.014	0.00074	0.000001
55	2.920	3.059	0.0026	0.00013	1.23E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

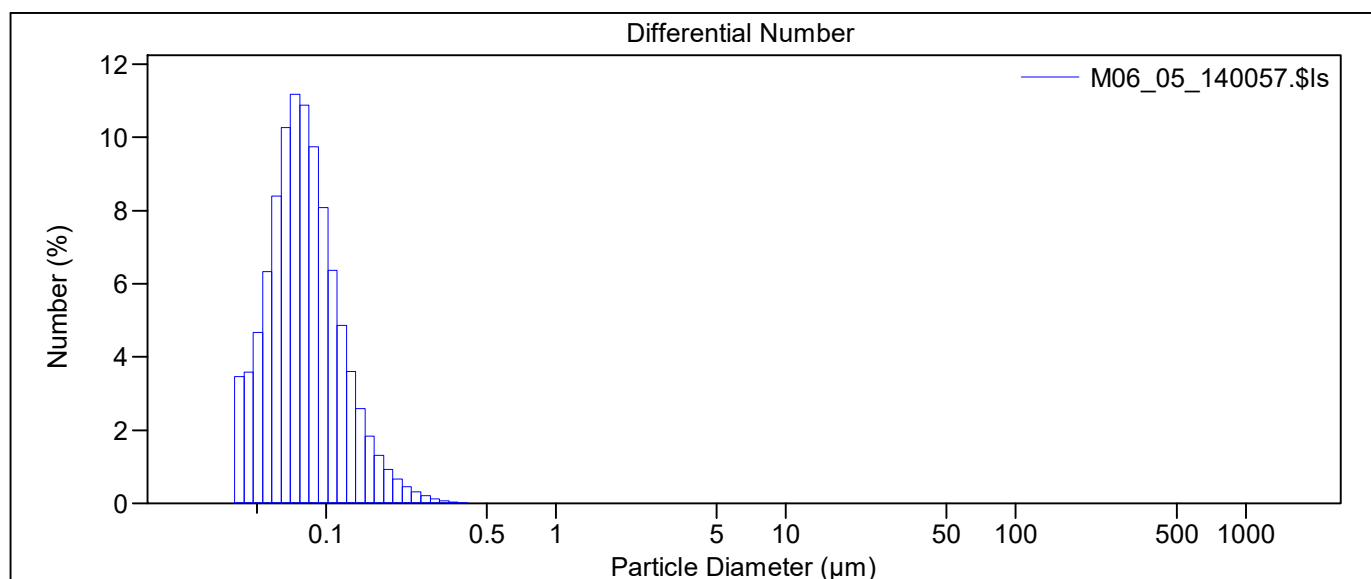
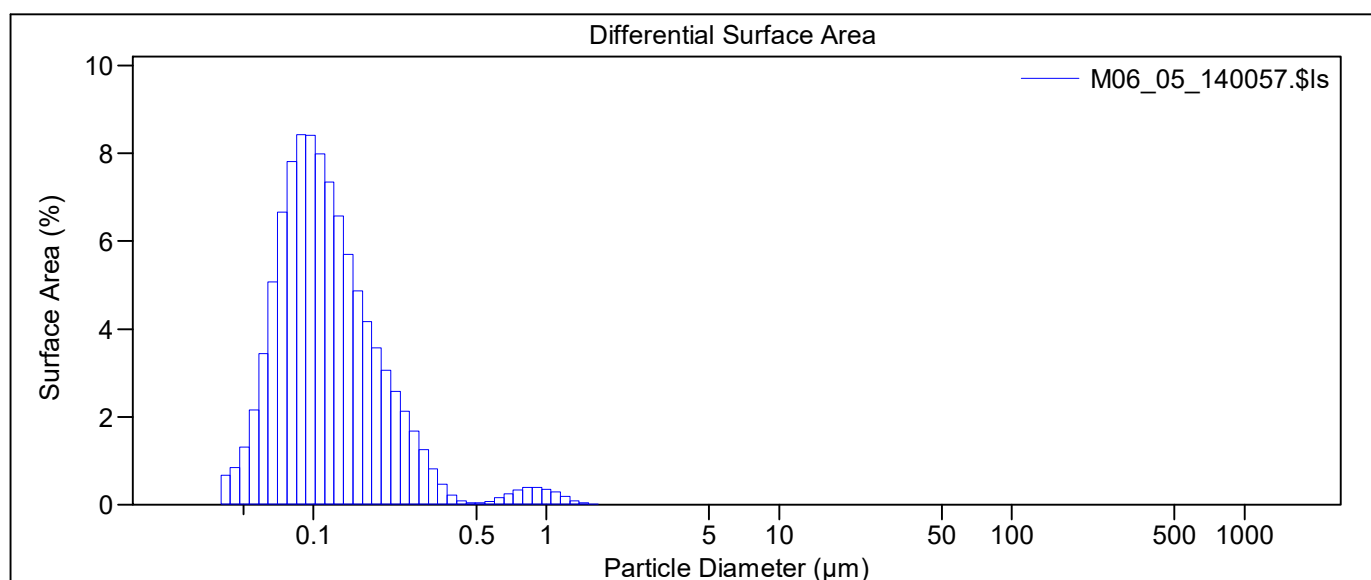
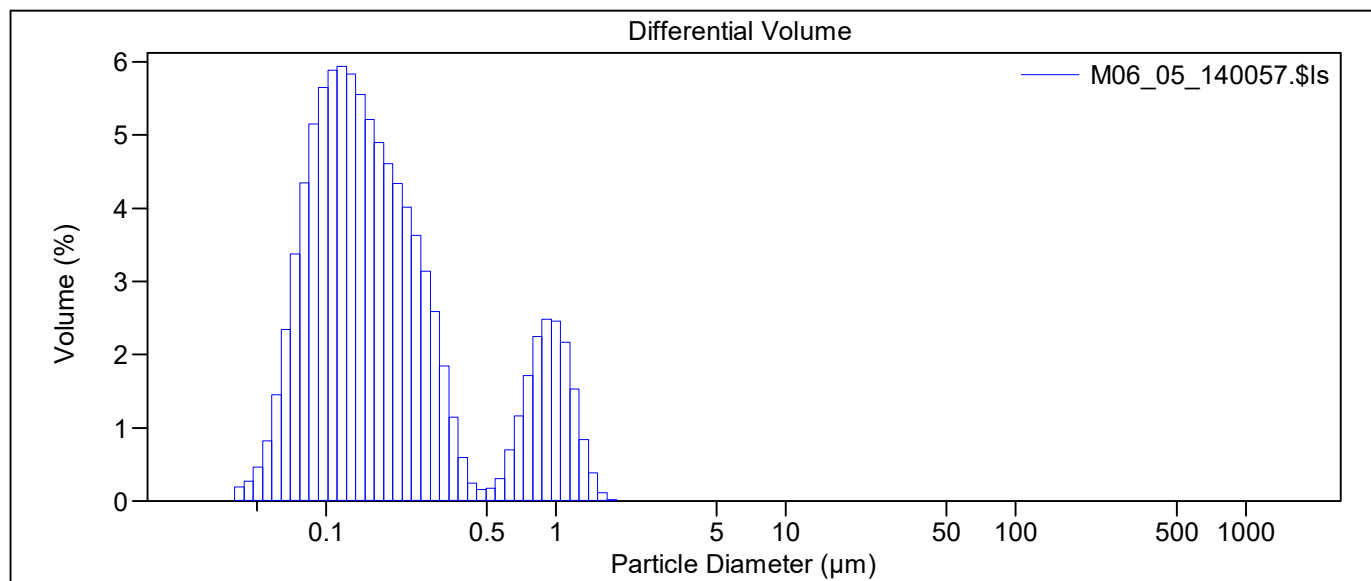
Beckman Coulter LS13320

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	M06_05_140057.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.31%		
LS 13 320	Universal Liquid Module		
Start time:	13:59 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_05_140057.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.314 μm
Mean:	0.285 μm		Variance:	0.099 μm ²
Median:	0.155 μm		C.V.:	110%
Mean/Median ratio:	1.837		Skewness:	1.951 Right skewed
Mode:	0.117 μm		Kurtosis:	2.720 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.155 μm	0.267 μm	0.869 μm

Surface Area Statistics (Arithmetic)			M06_05_140057.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.142 µm
Mean:	0.145 µm		Variance:	0.020 µm ²
Median:	0.108 µm		C.V.:	98.6%
Mean/Median ratio:	1.338		Skewness:	4.901 Right skewed
Mode:	0.088 µm		Kurtosis:	28.77 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.155 µm	0.230 µm

Number Statistics (Arithmetic)			M06_05_140057.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.0%
Mean/Median ratio:	1.107		Skewness:	4.389 Right skewed
Mode:	0.073 μm		Kurtosis:	65.15 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.67	3.47
10	0.044	0.046	0.27	0.84	3.59
11	0.048	0.050	0.46	1.32	4.67
12	0.053	0.055	0.83	2.15	6.33
13	0.058	0.061	1.45	3.44	8.40
14	0.064	0.067	2.34	5.07	10.3
15	0.070	0.073	3.38	6.66	11.2
16	0.077	0.080	4.35	7.81	10.9
17	0.084	0.088	5.15	8.42	9.74
18	0.093	0.097	5.65	8.42	8.08
19	0.102	0.106	5.88	7.99	6.36
20	0.112	0.117	5.94	7.35	4.86
21	0.122	0.128	5.83	6.57	3.60
22	0.134	0.141	5.55	5.70	2.59
23	0.148	0.155	5.21	4.87	1.84
24	0.162	0.170	4.90	4.17	1.31
25	0.178	0.186	4.61	3.58	0.93
26	0.195	0.205	4.34	3.06	0.66
27	0.214	0.225	4.01	2.58	0.46
28	0.235	0.247	3.63	2.13	0.32
29	0.258	0.271	3.14	1.68	0.21
30	0.284	0.297	2.59	1.26	0.13
31	0.311	0.326	1.84	0.82	0.069
32	0.342	0.358	1.15	0.46	0.033
33	0.375	0.393	0.59	0.22	0.013
34	0.412	0.431	0.24	0.081	0.0039
35	0.452	0.474	0.16	0.049	0.0020
36	0.496	0.520	0.17	0.048	0.0016
37	0.545	0.571	0.31	0.078	0.0022
38	0.598	0.627	0.70	0.16	0.0037
39	0.656	0.688	1.17	0.25	0.0047
40	0.721	0.755	1.72	0.33	0.0052
41	0.791	0.829	2.25	0.39	0.0051
42	0.868	0.910	2.49	0.39	0.0043
43	0.953	0.999	2.45	0.36	0.0032
44	1.047	1.097	2.17	0.29	0.0021
45	1.149	1.204	1.53	0.18	0.0011

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.84	0.092	0.00047
47	1.385	1.451	0.38	0.038	0.00016
48	1.520	1.592	0.11	0.010	0.000037
49	1.668	1.748	0.021	0.0017	0.000005
50	1.832	1.919	0.0037	0.00028	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

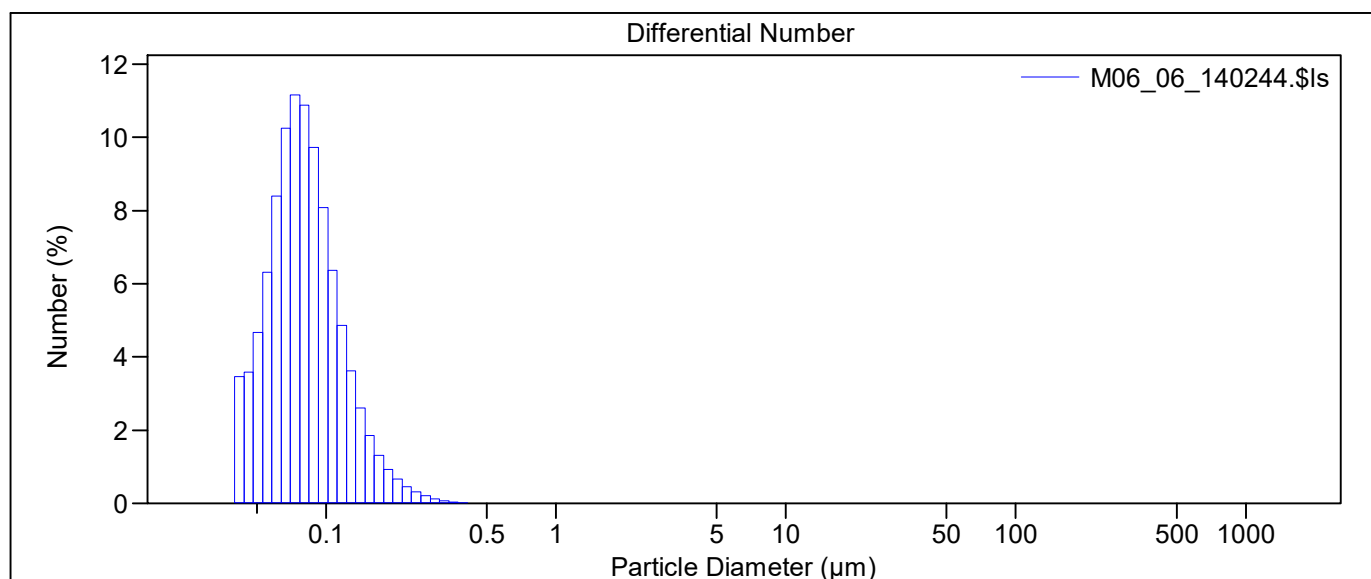
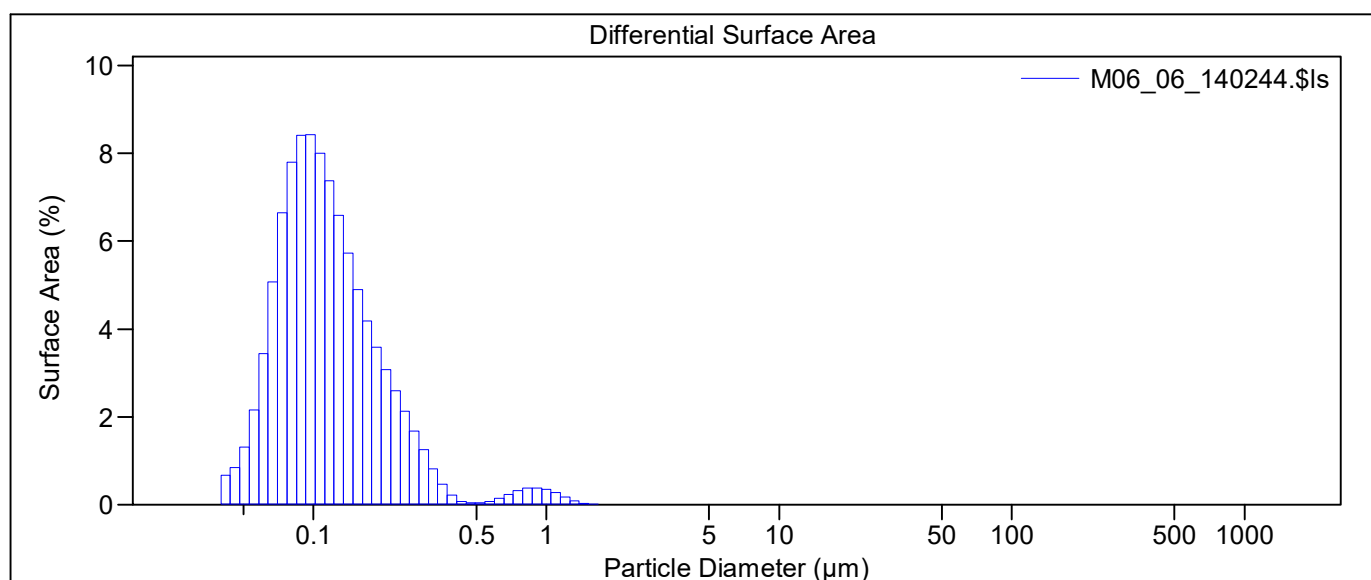
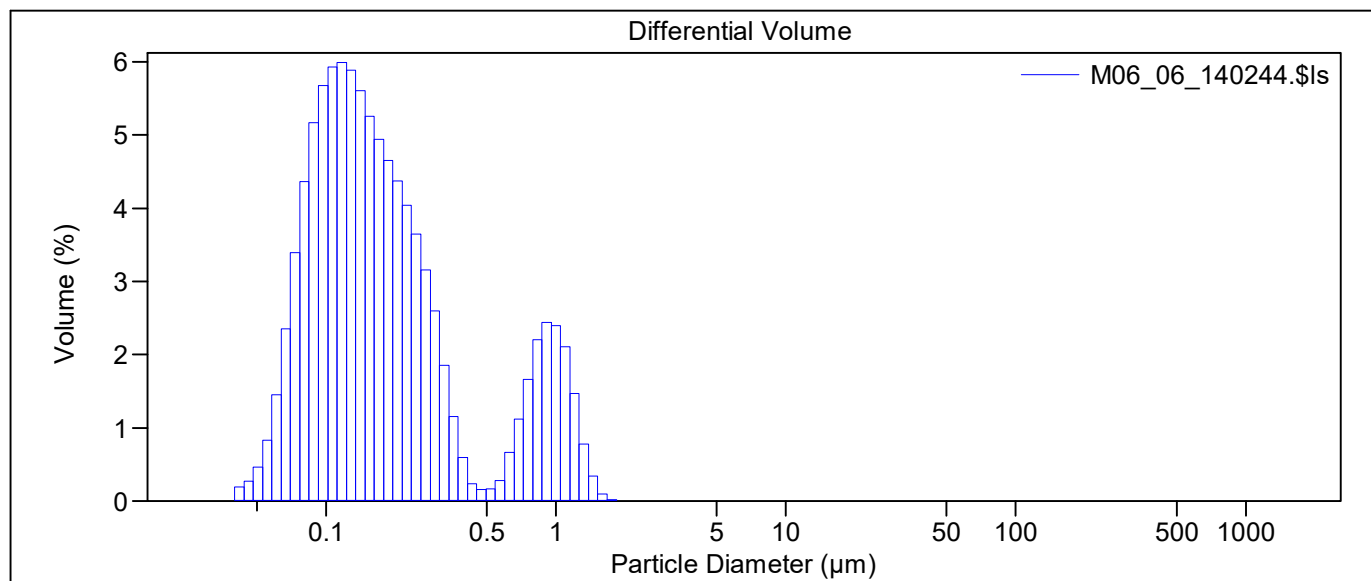
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_06_140244.\$ls		
	M06_06_140244.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.37%		
LS 13 320	Universal Liquid Module		
Start time:	14:01 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	58%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_06_140244.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.309 µm
Mean:	0.280 µm		Variance:	0.095 µm ²
Median:	0.154 µm		C.V.:	110%
Mean/Median ratio:	1.817		Skewness:	1.992 Right skewed
Mode:	0.117 µm		Kurtosis:	2.896 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.103 µm	0.154 µm	0.262 µm	0.857 µm

Surface Area Statistics (Arithmetic)			M06_06_140244.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.140 µm
Mean:	0.144 µm		Variance:	0.020 µm ²
Median:	0.108 µm		C.V.:	97.4%
Mean/Median ratio:	1.330		Skewness:	4.941 Right skewed
Mode:	0.097 µm		Kurtosis:	29.41 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.108 µm	0.155 µm	0.229 µm

Number Statistics (Arithmetic)			M06_06_140244.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.9%
Mean/Median ratio:	1.107		Skewness:	4.307 Right skewed
Mode:	0.073 μm		Kurtosis:	63.13 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.67	3.46
10	0.044	0.046	0.27	0.84	3.58
11	0.048	0.050	0.46	1.32	4.67
12	0.053	0.055	0.83	2.15	6.32
13	0.058	0.061	1.46	3.44	8.39
14	0.064	0.067	2.35	5.07	10.3
15	0.070	0.073	3.39	6.65	11.2
16	0.077	0.080	4.37	7.80	10.9
17	0.084	0.088	5.17	8.41	9.73
18	0.093	0.097	5.68	8.42	8.08
19	0.102	0.106	5.93	8.00	6.37
20	0.112	0.117	5.99	7.37	4.87
21	0.122	0.128	5.89	6.60	3.62
22	0.134	0.141	5.61	5.72	2.60
23	0.148	0.155	5.26	4.89	1.85
24	0.162	0.170	4.94	4.19	1.31
25	0.178	0.186	4.65	3.59	0.93
26	0.195	0.205	4.37	3.07	0.66
27	0.214	0.225	4.04	2.59	0.46
28	0.235	0.247	3.65	2.13	0.32
29	0.258	0.271	3.16	1.68	0.21
30	0.284	0.297	2.60	1.26	0.13
31	0.311	0.326	1.85	0.82	0.069
32	0.342	0.358	1.15	0.46	0.033
33	0.375	0.393	0.60	0.22	0.013
34	0.412	0.431	0.24	0.079	0.0038
35	0.452	0.474	0.15	0.047	0.0019
36	0.496	0.520	0.16	0.045	0.0015
37	0.545	0.571	0.28	0.072	0.0020
38	0.598	0.627	0.66	0.15	0.0035
39	0.656	0.688	1.12	0.23	0.0045
40	0.721	0.755	1.66	0.32	0.0050
41	0.791	0.829	2.20	0.38	0.0050
42	0.868	0.910	2.44	0.39	0.0042
43	0.953	0.999	2.40	0.35	0.0031
44	1.047	1.097	2.11	0.28	0.0021
45	1.149	1.204	1.47	0.18	0.0011

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.78	0.085	0.00044
47	1.385	1.451	0.35	0.034	0.00015
48	1.520	1.592	0.100	0.0090	0.000032
49	1.668	1.748	0.017	0.0014	0.000004
50	1.832	1.919	0.0029	0.00022	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

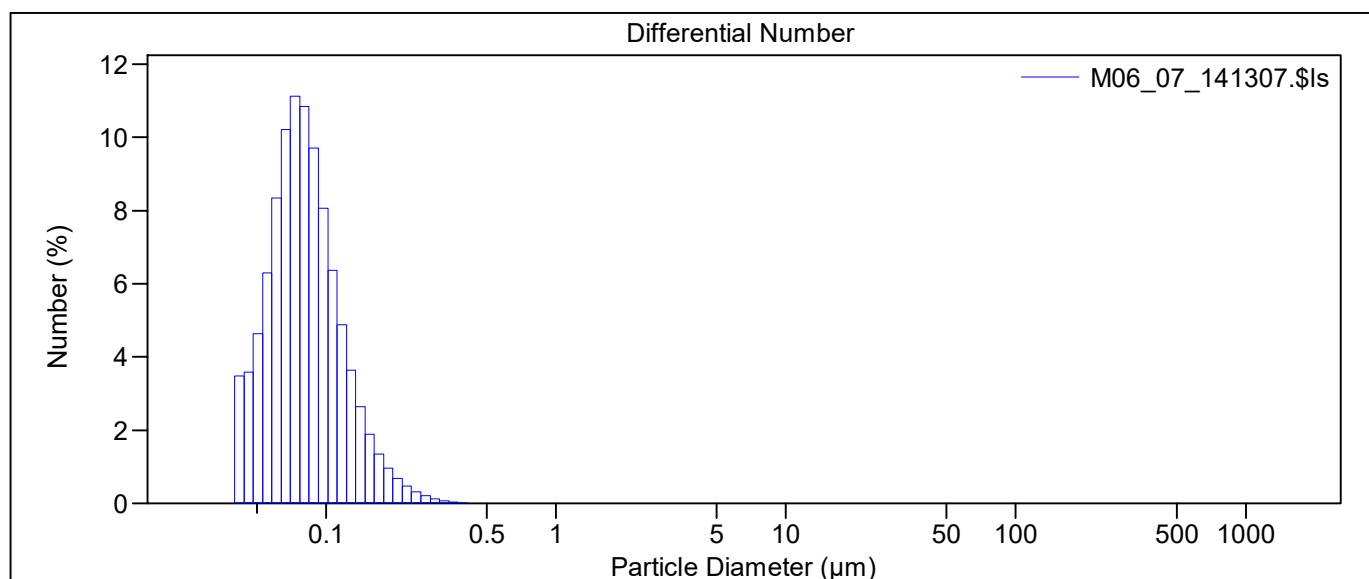
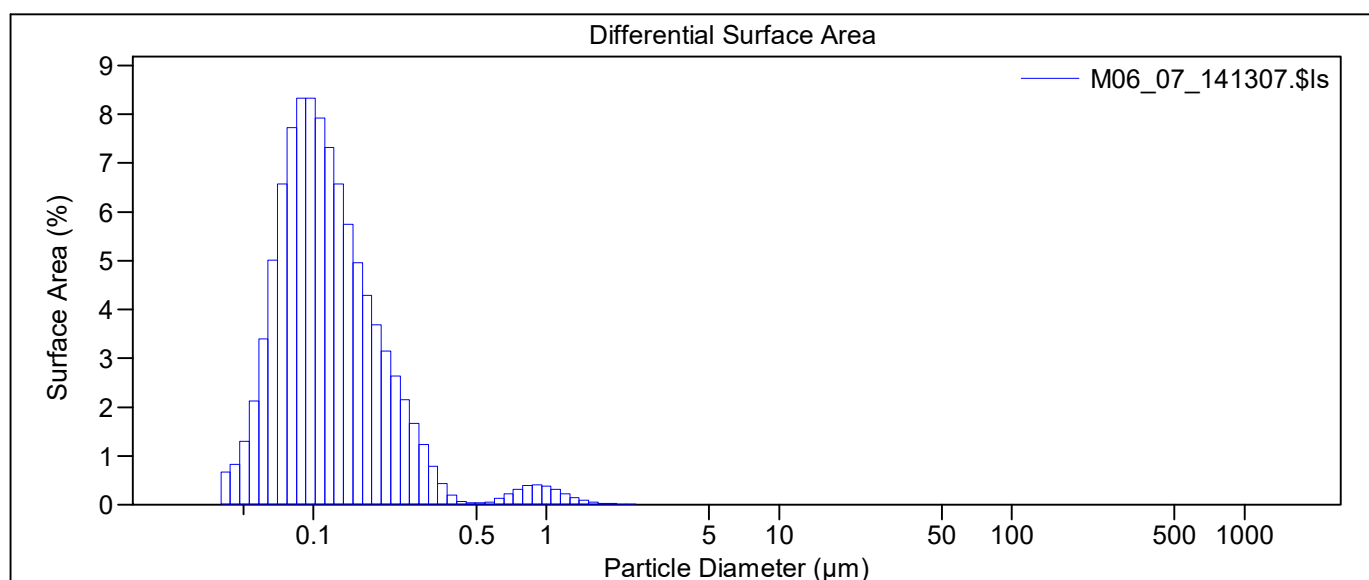
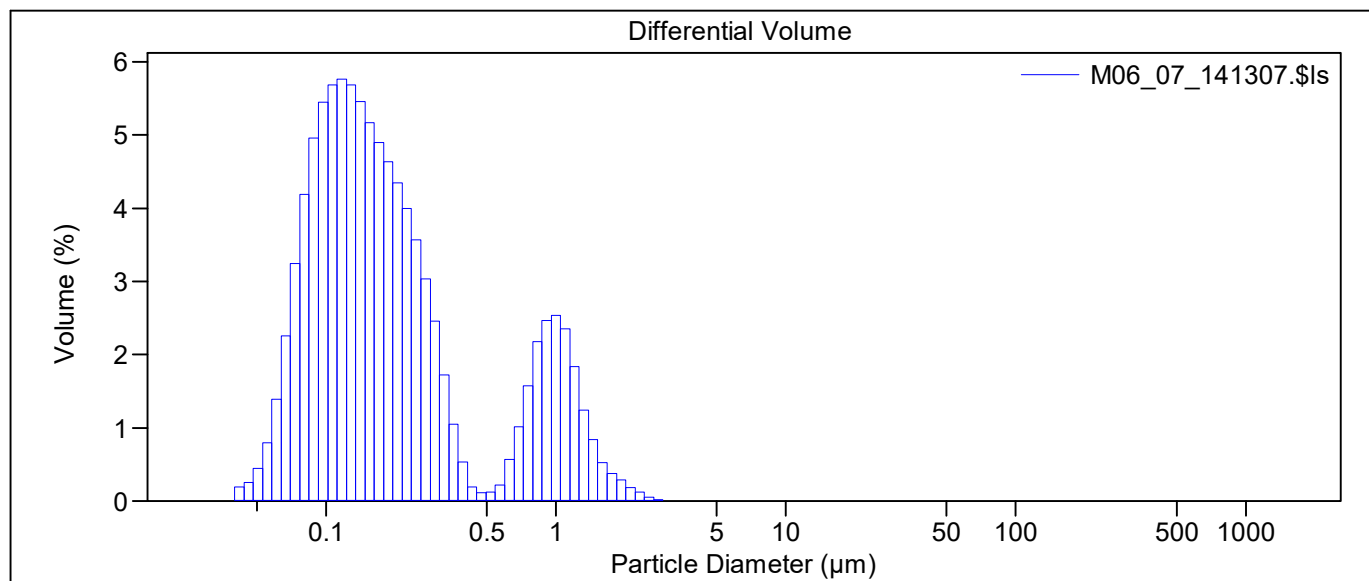
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_07_141307.\$ls		
	M06_07_141307.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.23%		
LS 13 320	Universal Liquid Module		
Start time:	14:11 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_07_141307.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.384 µm
Mean:	0.322 µm		Variance:	0.147 µm ²
Median:	0.159 µm		C.V.:	119%
Mean/Median ratio:	2.019		Skewness:	2.152 Right skewed
Mode:	0.117 µm		Kurtosis:	4.480 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.105 µm	0.159 µm	0.280 µm	0.967 µm

Surface Area Statistics (Arithmetic)			M06_07_141307.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.160 µm
Mean:	0.148 µm		Variance:	0.026 µm ²
Median:	0.109 µm		C.V.:	108%
Mean/Median ratio:	1.365		Skewness:	5.448 Right skewed
Mode:	0.097 µm		Kurtosis:	37.54 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.230 µm

Number Statistics (Arithmetic)			M06_07_141307.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.3%
Mean/Median ratio:	1.108		Skewness:	4.766 Right skewed
Mode:	0.073 μm		Kurtosis:	83.00 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.131 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.67	3.47
10	0.044	0.046	0.26	0.83	3.58
11	0.048	0.050	0.44	1.30	4.64
12	0.053	0.055	0.79	2.12	6.30
13	0.058	0.061	1.39	3.40	8.35
14	0.064	0.067	2.25	5.01	10.2
15	0.070	0.073	3.25	6.58	11.1
16	0.077	0.080	4.19	7.72	10.8
17	0.084	0.088	4.96	8.33	9.71
18	0.093	0.097	5.45	8.34	8.06
19	0.102	0.106	5.69	7.93	6.36
20	0.112	0.117	5.76	7.32	4.88
21	0.122	0.128	5.69	6.58	3.64
22	0.134	0.141	5.46	5.75	2.64
23	0.148	0.155	5.17	4.96	1.89
24	0.162	0.170	4.90	4.28	1.35
25	0.178	0.186	4.63	3.69	0.97
26	0.195	0.205	4.35	3.16	0.69
27	0.214	0.225	4.00	2.64	0.48
28	0.235	0.247	3.57	2.15	0.32
29	0.258	0.271	3.04	1.67	0.21
30	0.284	0.297	2.46	1.23	0.13
31	0.311	0.326	1.72	0.78	0.067
32	0.342	0.358	1.05	0.44	0.031
33	0.375	0.393	0.54	0.20	0.012
34	0.412	0.431	0.20	0.067	0.0033
35	0.452	0.474	0.12	0.037	0.0015
36	0.496	0.520	0.12	0.034	0.0011
37	0.545	0.571	0.22	0.057	0.0016
38	0.598	0.627	0.57	0.13	0.0031
39	0.656	0.688	1.01	0.22	0.0042
40	0.721	0.755	1.58	0.31	0.0049
41	0.791	0.829	2.18	0.39	0.0052
42	0.868	0.910	2.46	0.40	0.0044
43	0.953	0.999	2.54	0.38	0.0034
44	1.047	1.097	2.35	0.32	0.0024
45	1.149	1.204	1.83	0.23	0.0014

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.24	0.14	0.00073
47	1.385	1.451	0.84	0.086	0.00037
48	1.520	1.592	0.52	0.049	0.00017
49	1.668	1.748	0.38	0.032	0.000095
50	1.832	1.919	0.29	0.022	0.000055
51	2.011	2.107	0.19	0.013	0.000027
52	2.207	2.313	0.12	0.0078	0.000013
53	2.423	2.539	0.051	0.0030	0.000004
54	2.660	2.787	0.014	0.00074	0.000001
55	2.920	3.059	0.0028	0.00014	1.32E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

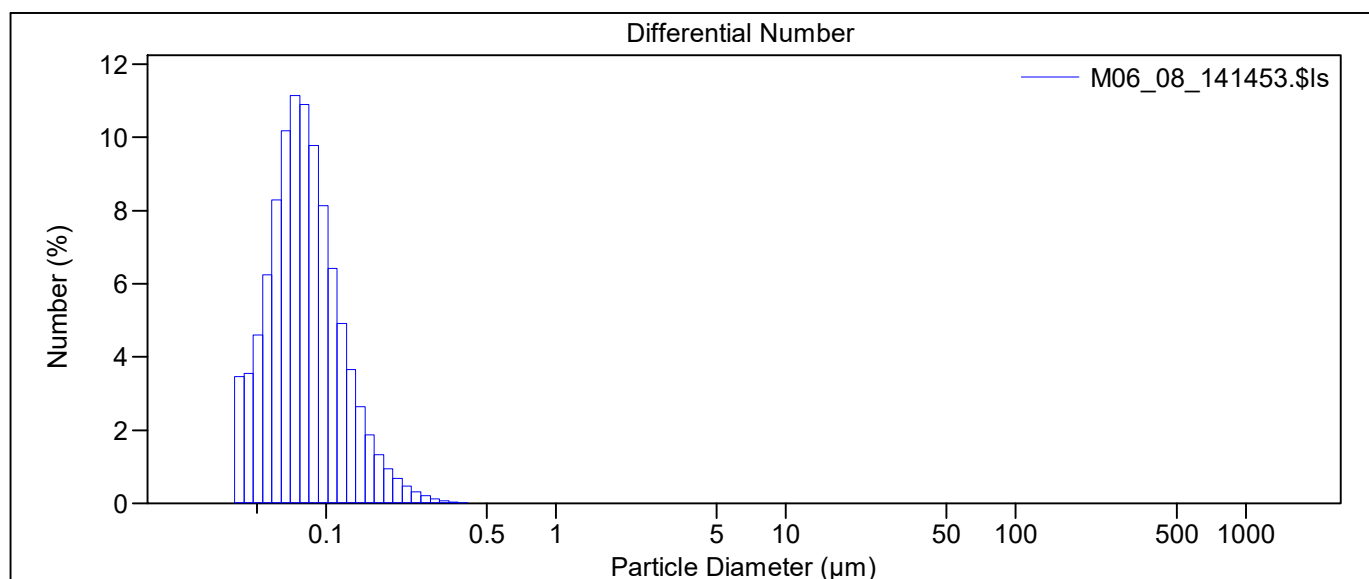
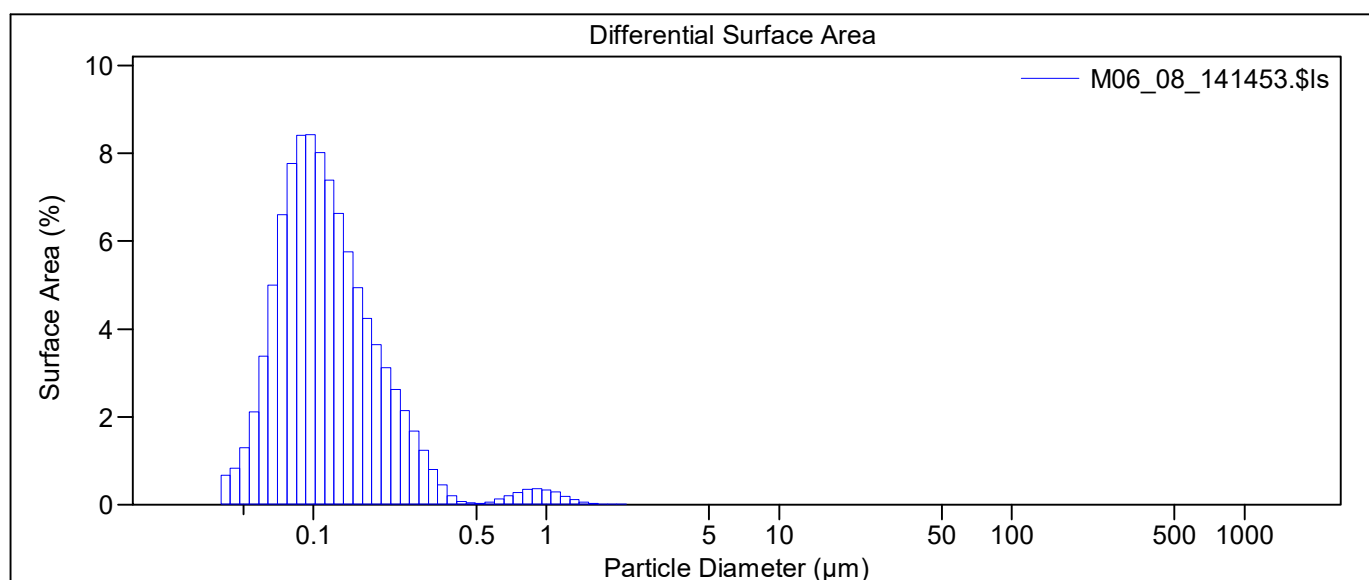
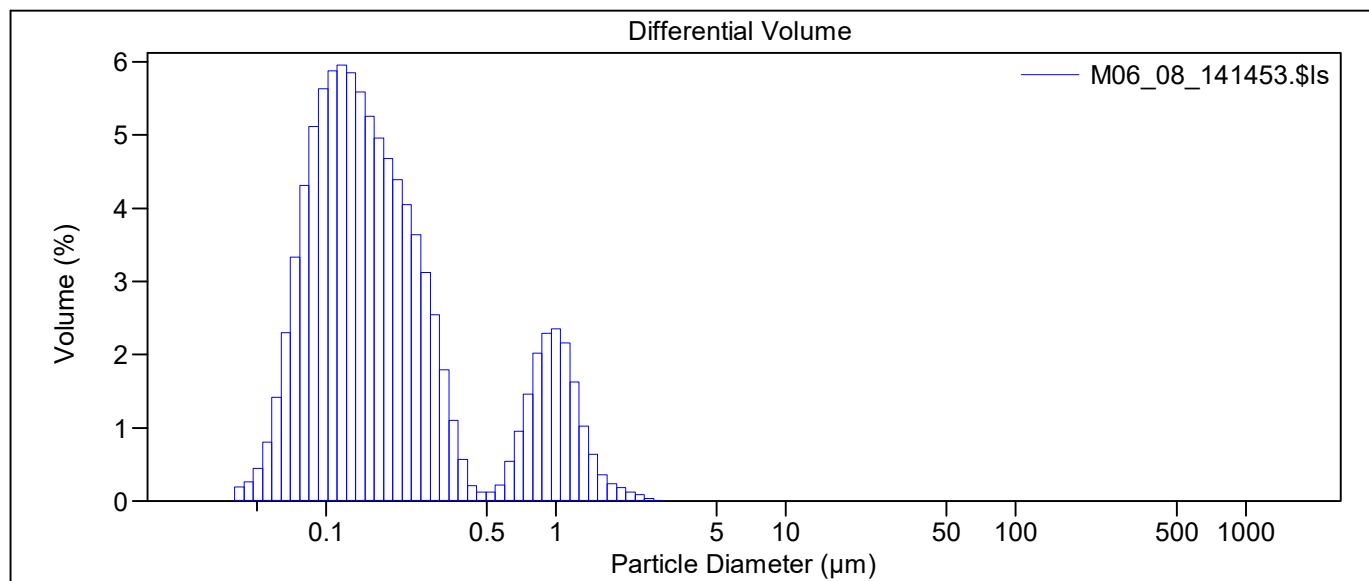
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_08_141453.\$ls		
	M06_08_141453.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.41%		
LS 13 320	Universal Liquid Module		
Start time:	14:13 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	61%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_08_141453.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.354 µm
Mean:	0.299 µm		Variance:	0.126 µm ²
Median:	0.156 µm		C.V.:	118%
Mean/Median ratio:	1.923		Skewness:	2.286 Right skewed
Mode:	0.117 µm		Kurtosis:	5.252 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.156 µm	0.266 µm	0.911 µm

Surface Area Statistics (Arithmetic)			M06_08_141453.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.150 µm
Mean:	0.145 µm		Variance:	0.022 µm ²
Median:	0.108 µm		C.V.:	103%
Mean/Median ratio:	1.339		Skewness:	5.518 Right skewed
Mode:	0.097 µm		Kurtosis:	39.15 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.108 µm	0.155 µm	0.228 µm

Number Statistics (Arithmetic)			M06_08_141453.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.9%
Mean/Median ratio:	1.106		Skewness:	4.470 Right skewed
Mode:	0.073 μm		Kurtosis:	73.26 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.67	3.46
10	0.044	0.046	0.26	0.83	3.55
11	0.048	0.050	0.45	1.29	4.59
12	0.053	0.055	0.81	2.11	6.24
13	0.058	0.061	1.42	3.39	8.30
14	0.064	0.067	2.30	5.01	10.2
15	0.070	0.073	3.33	6.60	11.1
16	0.077	0.080	4.31	7.77	10.9
17	0.084	0.088	5.12	8.41	9.77
18	0.093	0.097	5.63	8.43	8.13
19	0.102	0.106	5.88	8.02	6.42
20	0.112	0.117	5.95	7.40	4.91
21	0.122	0.128	5.85	6.63	3.65
22	0.134	0.141	5.59	5.76	2.64
23	0.148	0.155	5.26	4.94	1.87
24	0.162	0.170	4.96	4.24	1.34
25	0.178	0.186	4.68	3.64	0.95
26	0.195	0.205	4.39	3.12	0.68
27	0.214	0.225	4.05	2.62	0.47
28	0.235	0.247	3.64	2.14	0.32
29	0.258	0.271	3.12	1.67	0.21
30	0.284	0.297	2.55	1.25	0.13
31	0.311	0.326	1.79	0.80	0.068
32	0.342	0.358	1.10	0.45	0.032
33	0.375	0.393	0.57	0.21	0.012
34	0.412	0.431	0.21	0.071	0.0034
35	0.452	0.474	0.13	0.039	0.0016
36	0.496	0.520	0.12	0.035	0.0012
37	0.545	0.571	0.22	0.055	0.0015
38	0.598	0.627	0.54	0.13	0.0029
39	0.656	0.688	0.95	0.20	0.0039
40	0.721	0.755	1.46	0.28	0.0045
41	0.791	0.829	2.02	0.35	0.0047
42	0.868	0.910	2.29	0.37	0.0040
43	0.953	0.999	2.35	0.34	0.0031
44	1.047	1.097	2.16	0.29	0.0022
45	1.149	1.204	1.63	0.20	0.0012

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.02	0.11	0.00059
47	1.385	1.451	0.64	0.064	0.00028
48	1.520	1.592	0.36	0.032	0.00012
49	1.668	1.748	0.24	0.020	0.000059
50	1.832	1.919	0.19	0.014	0.000035
51	2.011	2.107	0.12	0.0085	0.000017
52	2.207	2.313	0.088	0.0055	0.000009
53	2.423	2.539	0.039	0.0022	0.000003
54	2.660	2.787	0.010	0.00054	0.000001
55	2.920	3.059	0.0021	0.00010	9.73E-8
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

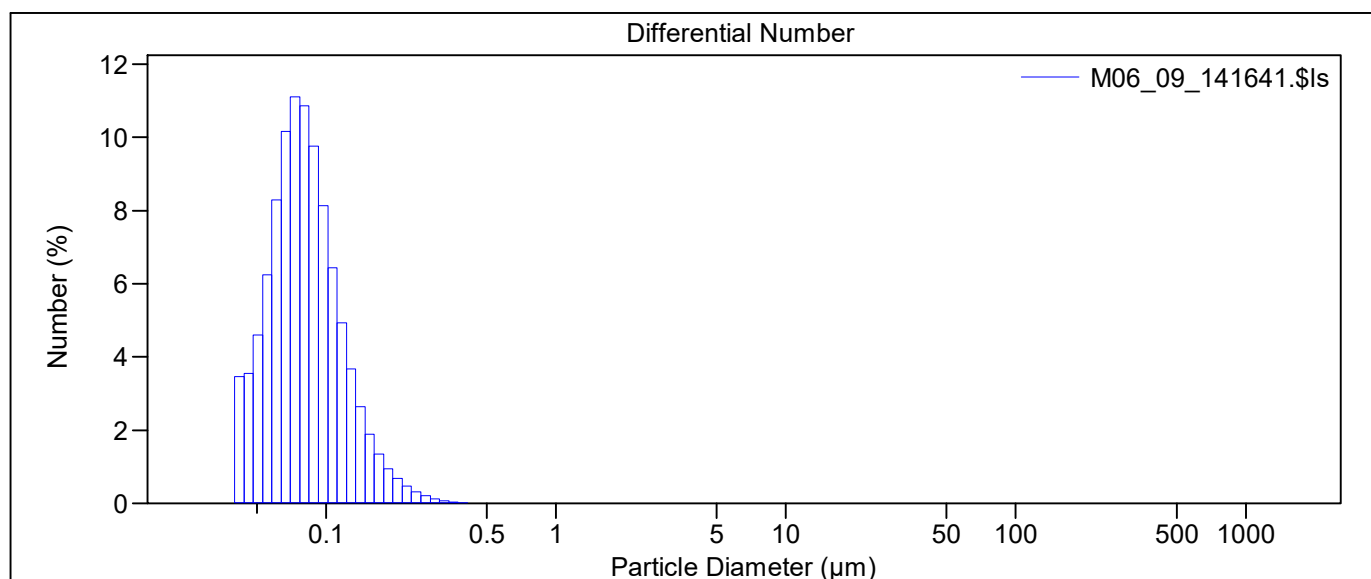
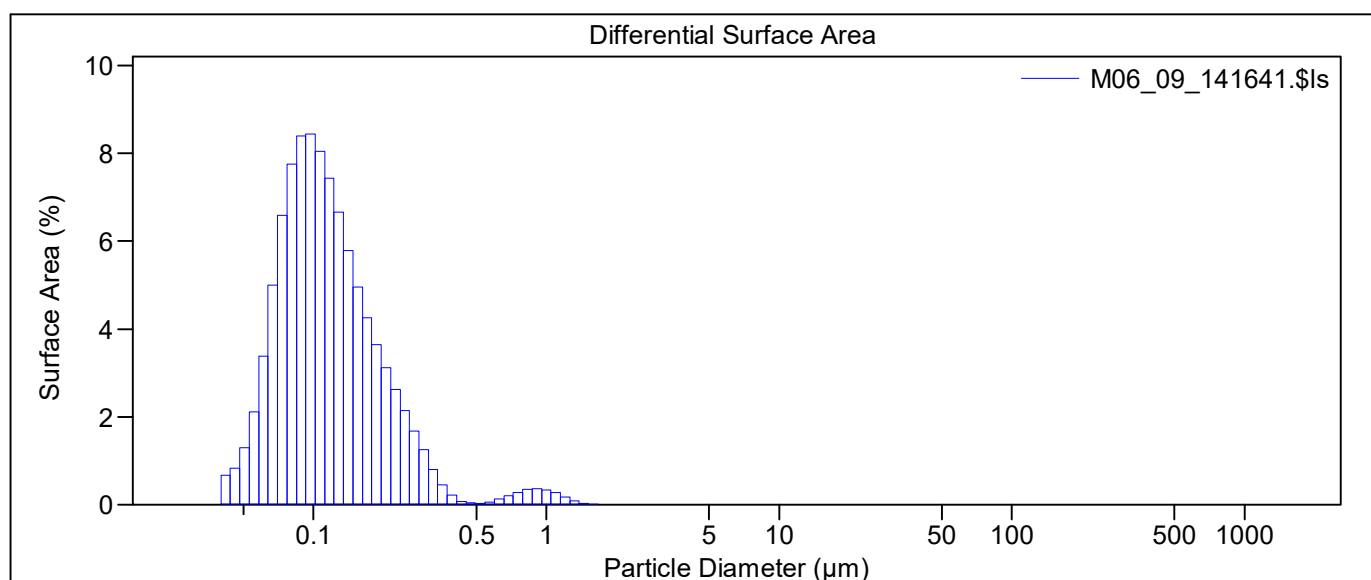
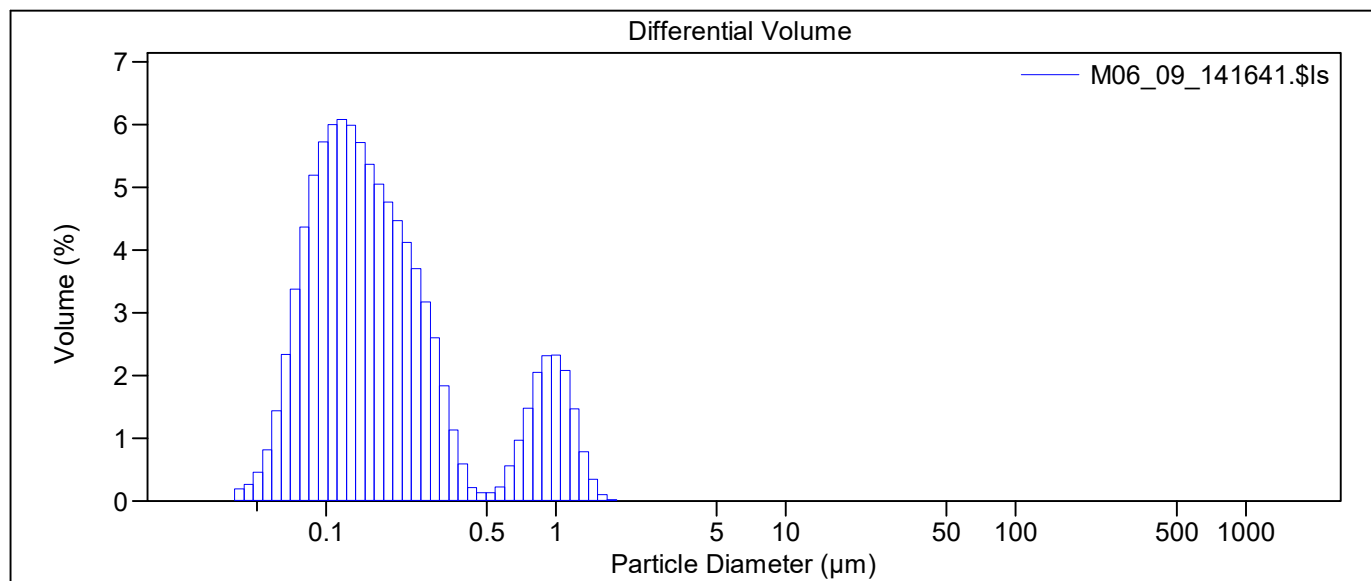
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File name:	D:\PP_PROFARB\POMIARY\M06\M06_09_141641.\$ls		
	M06_09_141641.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.46%		
LS 13 320	Universal Liquid Module		
Start time:	14:14 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_09_141641.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.305 μm
Mean:	0.275 μm		Variance:	0.093 μm ²
Median:	0.153 μm		C.V.:	111%
Mean/Median ratio:	1.795		Skewness:	2.071 Right skewed
Mode:	0.117 μm		Kurtosis:	3.237 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.153 μm	0.256 μm	0.847 μm

Surface Area Statistics (Arithmetic)			M06_09_141641.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.137 µm
Mean:	0.143 µm		Variance:	0.019 µm ²
Median:	0.108 µm		C.V.:	96.0%
Mean/Median ratio:	1.317		Skewness:	5.071 Right skewed
Mode:	0.097 µm		Kurtosis:	31.22 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.108 µm	0.155 µm	0.227 µm

Number Statistics (Arithmetic)			M06_09_141641.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.7%
Mean/Median ratio:	1.106		Skewness:	4.175 Right skewed
Mode:	0.073 μm		Kurtosis:	60.76 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.67	3.46
10	0.044	0.046	0.27	0.83	3.55
11	0.048	0.050	0.46	1.29	4.60
12	0.053	0.055	0.82	2.12	6.24
13	0.058	0.061	1.44	3.39	8.30
14	0.064	0.067	2.34	5.00	10.2
15	0.070	0.073	3.38	6.59	11.1
16	0.077	0.080	4.37	7.76	10.9
17	0.084	0.088	5.19	8.40	9.75
18	0.093	0.097	5.73	8.43	8.13
19	0.102	0.106	6.00	8.04	6.43
20	0.112	0.117	6.08	7.43	4.93
21	0.122	0.128	5.99	6.67	3.67
22	0.134	0.141	5.71	5.79	2.65
23	0.148	0.155	5.37	4.96	1.88
24	0.162	0.170	5.06	4.25	1.34
25	0.178	0.186	4.76	3.65	0.95
26	0.195	0.205	4.47	3.12	0.68
27	0.214	0.225	4.12	2.62	0.47
28	0.235	0.247	3.70	2.15	0.32
29	0.258	0.271	3.18	1.68	0.21
30	0.284	0.297	2.60	1.25	0.13
31	0.311	0.326	1.84	0.80	0.069
32	0.342	0.358	1.14	0.45	0.032
33	0.375	0.393	0.59	0.21	0.013
34	0.412	0.431	0.22	0.072	0.0035
35	0.452	0.474	0.13	0.040	0.0016
36	0.496	0.520	0.13	0.036	0.0012
37	0.545	0.571	0.22	0.056	0.0016
38	0.598	0.627	0.56	0.13	0.0029
39	0.656	0.688	0.97	0.20	0.0039
40	0.721	0.755	1.48	0.28	0.0045
41	0.791	0.829	2.05	0.35	0.0047
42	0.868	0.910	2.32	0.36	0.0040
43	0.953	0.999	2.33	0.33	0.0030
44	1.047	1.097	2.08	0.27	0.0020
45	1.149	1.204	1.46	0.17	0.0011
46	1.261	1.321	0.78	0.085	0.00044
47	1.385	1.451	0.34	0.034	0.00015
48	1.520	1.592	0.098	0.0088	0.000032
49	1.668	1.748	0.016	0.0013	0.000004
50	1.832	1.919	0.0026	0.00020	4.86E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

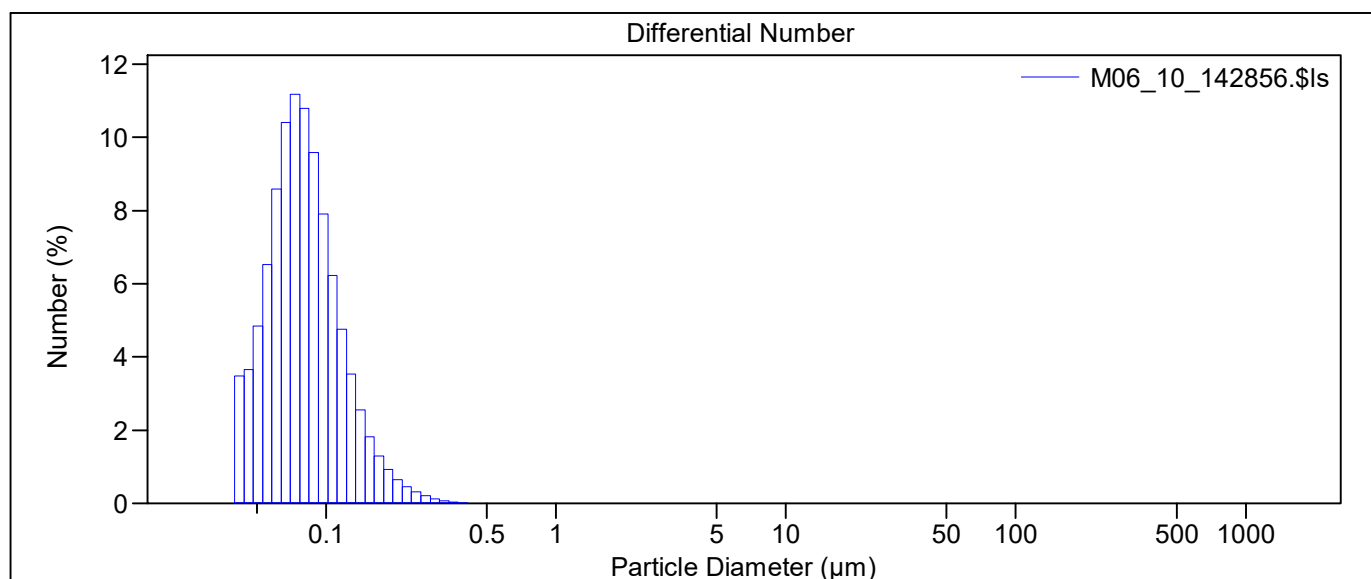
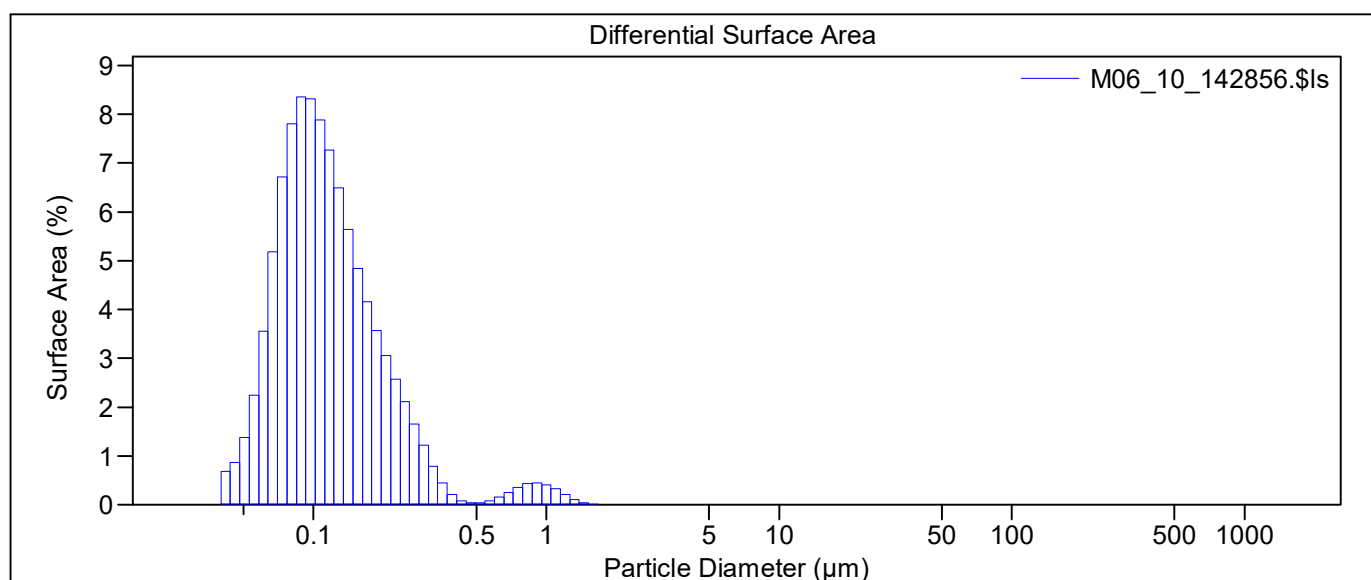
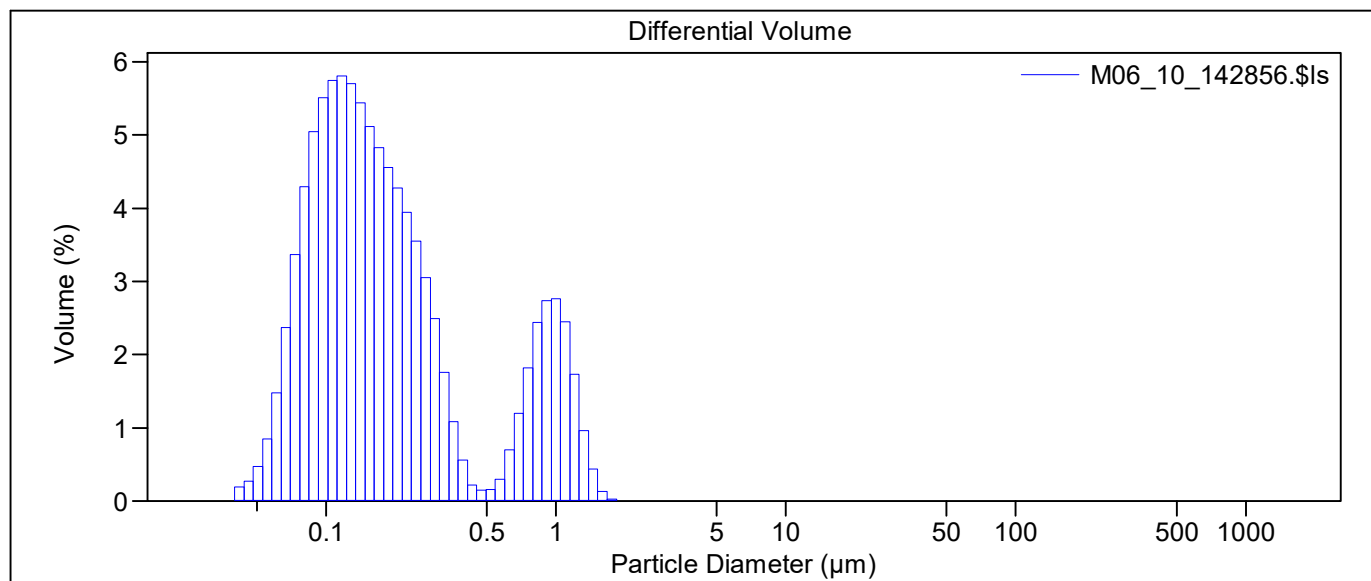
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_10_142856.\$ls		
	M06_10_142856.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.23%		
LS 13 320	Universal Liquid Module		
Start time:	14:27 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	50%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_10_142856.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.328 µm
Mean:	0.298 µm		Variance:	0.108 µm ²
Median:	0.157 µm		C.V.:	110%
Mean/Median ratio:	1.895		Skewness:	1.820 Right skewed
Mode:	0.117 µm		Kurtosis:	2.127 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.157 µm	0.276 µm	0.907 µm

Surface Area Statistics (Arithmetic)			M06_10_142856.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.149 µm
Mean:	0.146 µm		Variance:	0.022 µm ²
Median:	0.108 µm		C.V.:	102%
Mean/Median ratio:	1.356		Skewness:	4.791 Right skewed
Mode:	0.088 µm		Kurtosis:	26.90 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.065 µm	0.081 µm	0.108 µm	0.155 µm	0.230 µm

Number Statistics (Arithmetic)			M06_10_142856.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.086 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.3%
Mean/Median ratio:	1.109		Skewness:	4.613 Right skewed
Mode:	0.073 μm		Kurtosis:	71.15 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.062 μm	0.078 μm	0.099 μm	0.129 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.68	3.48
10	0.044	0.046	0.27	0.86	3.66
11	0.048	0.050	0.48	1.38	4.84
12	0.053	0.055	0.85	2.24	6.52
13	0.058	0.061	1.48	3.55	8.60
14	0.064	0.067	2.37	5.18	10.4
15	0.070	0.073	3.37	6.71	11.2
16	0.077	0.080	4.30	7.81	10.8
17	0.084	0.088	5.05	8.36	9.59
18	0.093	0.097	5.51	8.31	7.91
19	0.102	0.106	5.74	7.89	6.23
20	0.112	0.117	5.81	7.26	4.76
21	0.122	0.128	5.70	6.50	3.54
22	0.134	0.141	5.44	5.64	2.55
23	0.148	0.155	5.12	4.84	1.81
24	0.162	0.170	4.83	4.16	1.29
25	0.178	0.186	4.55	3.57	0.92
26	0.195	0.205	4.28	3.06	0.65
27	0.214	0.225	3.95	2.57	0.46
28	0.235	0.247	3.55	2.11	0.31
29	0.258	0.271	3.05	1.65	0.20
30	0.284	0.297	2.49	1.23	0.12
31	0.311	0.326	1.76	0.79	0.067
32	0.342	0.358	1.09	0.44	0.031
33	0.375	0.393	0.56	0.21	0.012
34	0.412	0.431	0.22	0.075	0.0036
35	0.452	0.474	0.15	0.046	0.0018
36	0.496	0.520	0.16	0.045	0.0015
37	0.545	0.571	0.30	0.076	0.0021
38	0.598	0.627	0.70	0.16	0.0037
39	0.656	0.688	1.20	0.25	0.0048
40	0.721	0.755	1.82	0.35	0.0055
41	0.791	0.829	2.44	0.43	0.0056
42	0.868	0.910	2.74	0.44	0.0048
43	0.953	0.999	2.76	0.40	0.0036
44	1.047	1.097	2.45	0.33	0.0024
45	1.149	1.204	1.73	0.21	0.0013

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.96	0.11	0.00055
47	1.385	1.451	0.44	0.044	0.00019
48	1.520	1.592	0.13	0.012	0.000043
49	1.668	1.748	0.025	0.0021	0.000006
50	1.832	1.919	0.0037	0.00028	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

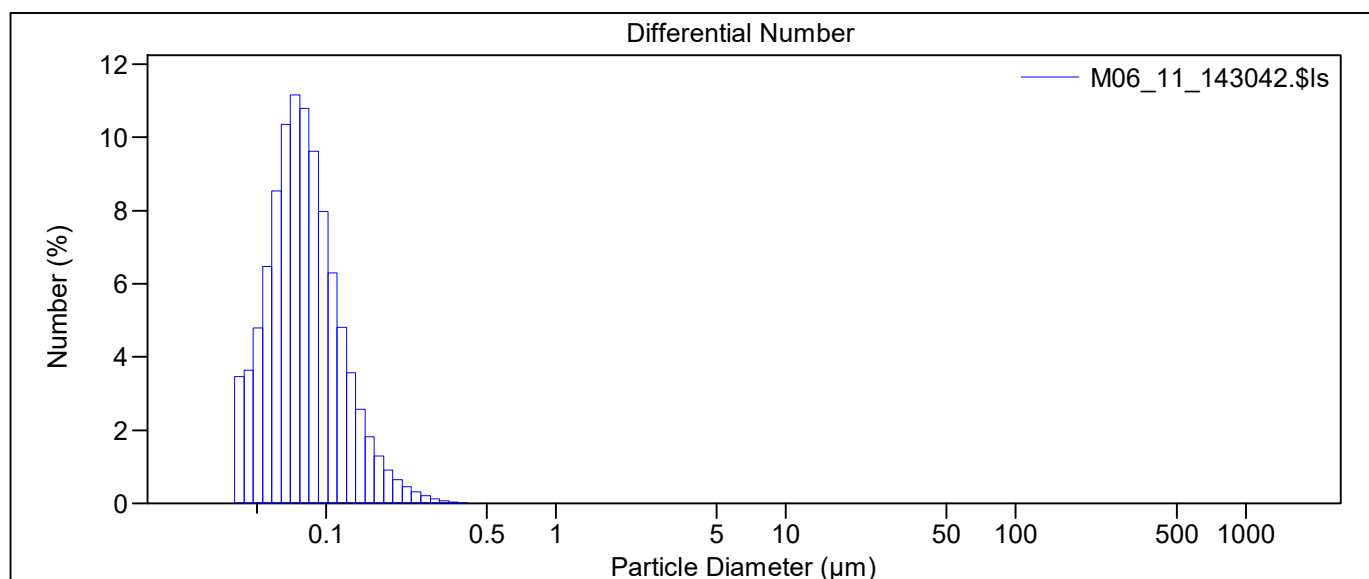
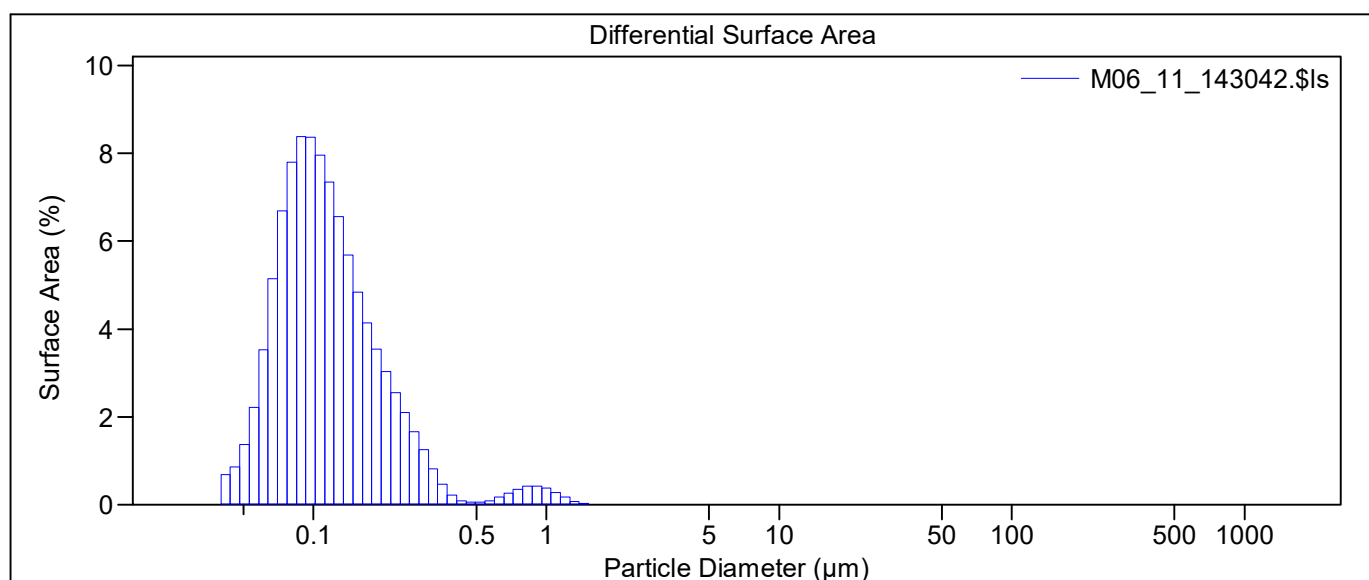
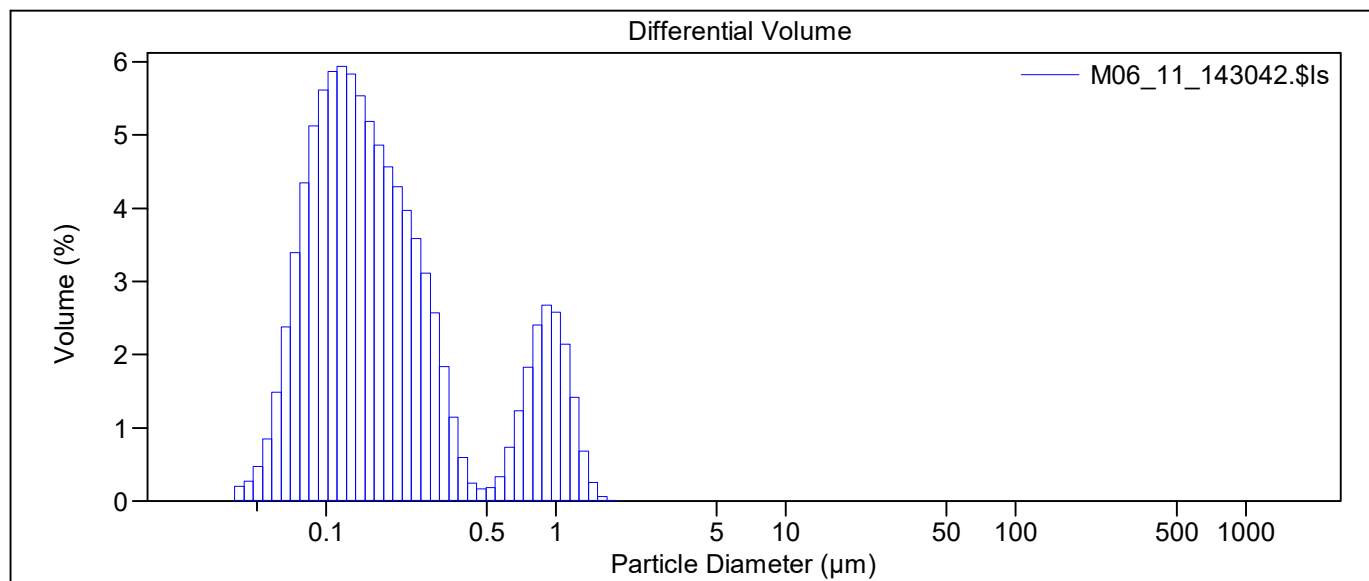
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_11_143042.\$ls		
	M06_11_143042.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.32%		
LS 13 320	Universal Liquid Module		
Start time:	14:29 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_11_143042.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.308 μm
Mean:	0.284 μm		Variance:	0.095 μm ²
Median:	0.155 μm		C.V.:	109%
Mean/Median ratio:	1.830		Skewness:	1.896 Right skewed
Mode:	0.117 μm		Kurtosis:	2.446 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.103 μm	0.155 μm	0.268 μm	0.863 μm

Surface Area Statistics (Arithmetic)			M06_11_143042.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.142 µm
Mean:	0.144 µm		Variance:	0.020 µm ²
Median:	0.108 µm		C.V.:	98.2%
Mean/Median ratio:	1.339		Skewness:	4.776 Right skewed
Mode:	0.088 µm		Kurtosis:	27.11 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.065 µm	0.081 µm	0.108 µm	0.155 µm	0.230 µm

Number Statistics (Arithmetic)			M06_11_143042.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.086 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.1%
Mean/Median ratio:	1.108		Skewness:	4.407 Right skewed
Mode:	0.073 μm		Kurtosis:	64.39 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.062 μm	0.078 μm	0.100 μm	0.129 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.68	3.47
10	0.044	0.046	0.27	0.86	3.63
11	0.048	0.050	0.48	1.36	4.80
12	0.053	0.055	0.85	2.22	6.47
13	0.058	0.061	1.48	3.52	8.54
14	0.064	0.067	2.38	5.15	10.4
15	0.070	0.073	3.40	6.69	11.2
16	0.077	0.080	4.35	7.80	10.8
17	0.084	0.088	5.12	8.38	9.62
18	0.093	0.097	5.62	8.36	7.97
19	0.102	0.106	5.87	7.96	6.30
20	0.112	0.117	5.94	7.34	4.82
21	0.122	0.128	5.83	6.56	3.58
22	0.134	0.141	5.54	5.68	2.57
23	0.148	0.155	5.18	4.84	1.82
24	0.162	0.170	4.86	4.14	1.29
25	0.178	0.186	4.57	3.54	0.91
26	0.195	0.205	4.29	3.03	0.65
27	0.214	0.225	3.97	2.55	0.45
28	0.235	0.247	3.59	2.10	0.31
29	0.258	0.271	3.11	1.66	0.20
30	0.284	0.297	2.57	1.25	0.13
31	0.311	0.326	1.84	0.81	0.069
32	0.342	0.358	1.15	0.46	0.032
33	0.375	0.393	0.60	0.22	0.013
34	0.412	0.431	0.25	0.082	0.0040
35	0.452	0.474	0.17	0.052	0.0021
36	0.496	0.520	0.19	0.052	0.0017
37	0.545	0.571	0.33	0.083	0.0023
38	0.598	0.627	0.74	0.17	0.0039
39	0.656	0.688	1.24	0.26	0.0049
40	0.721	0.755	1.83	0.35	0.0055
41	0.791	0.829	2.41	0.42	0.0055
42	0.868	0.910	2.68	0.43	0.0046
43	0.953	0.999	2.58	0.37	0.0034
44	1.047	1.097	2.14	0.28	0.0021
45	1.149	1.204	1.41	0.17	0.0011

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.68	0.074	0.00038
47	1.385	1.451	0.26	0.025	0.00011
48	1.520	1.592	0.061	0.0055	0.000019
49	1.668	1.748	0.0058	0.00048	0.000001
50	1.832	1.919	0.00079	0.000059	1.44E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

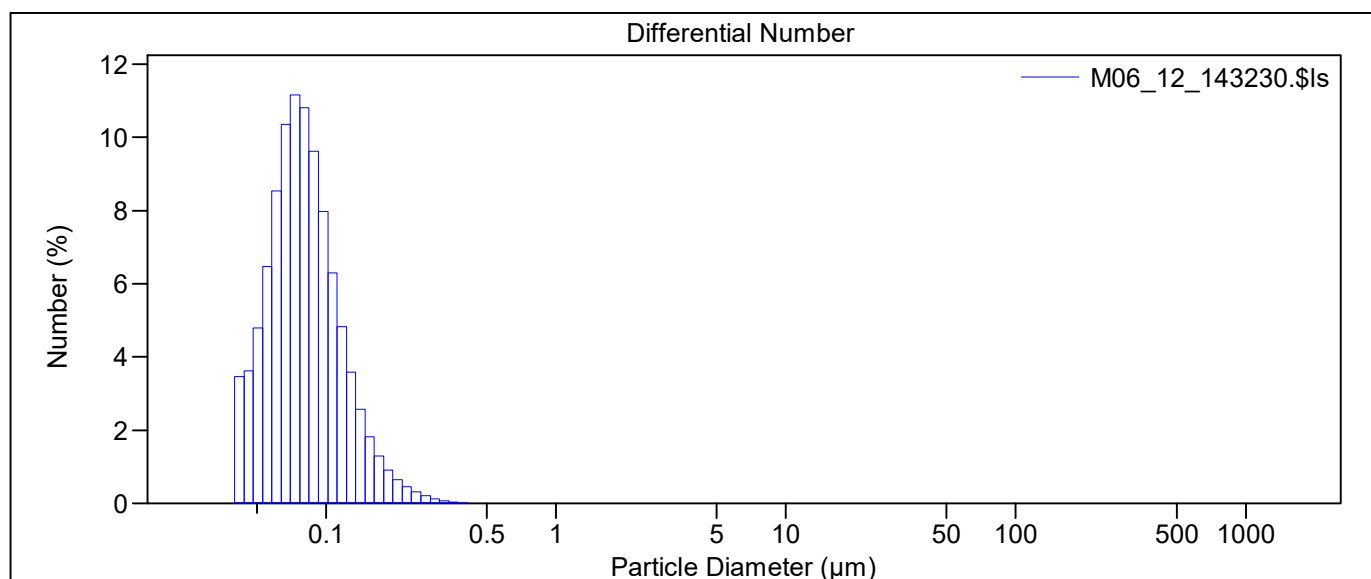
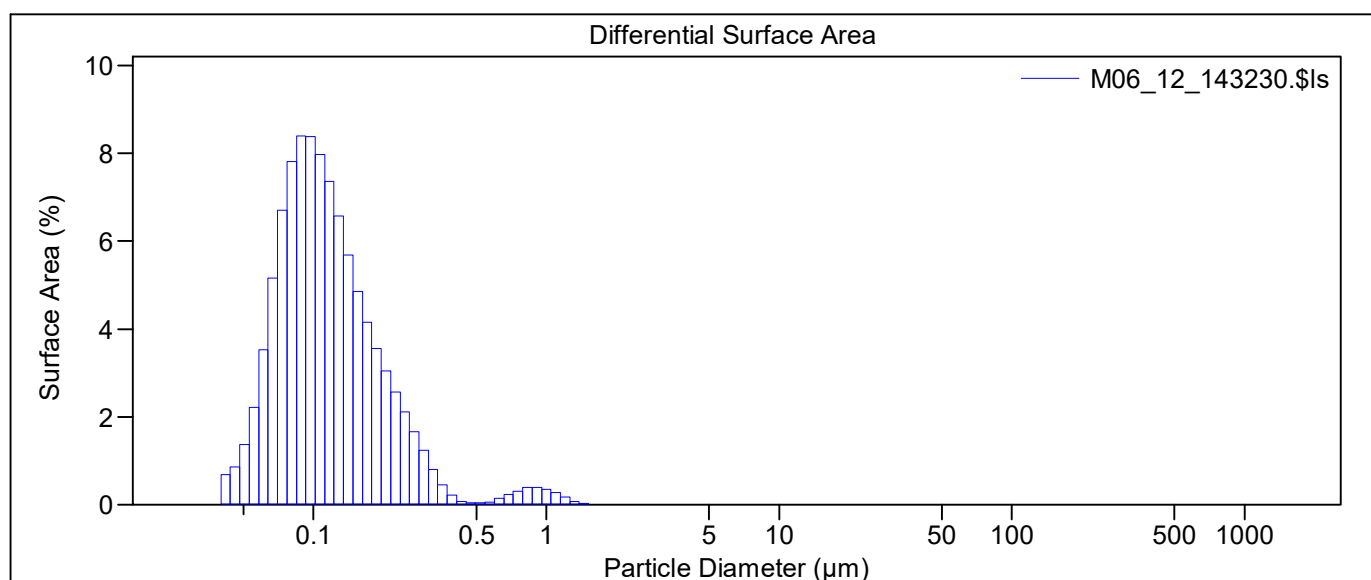
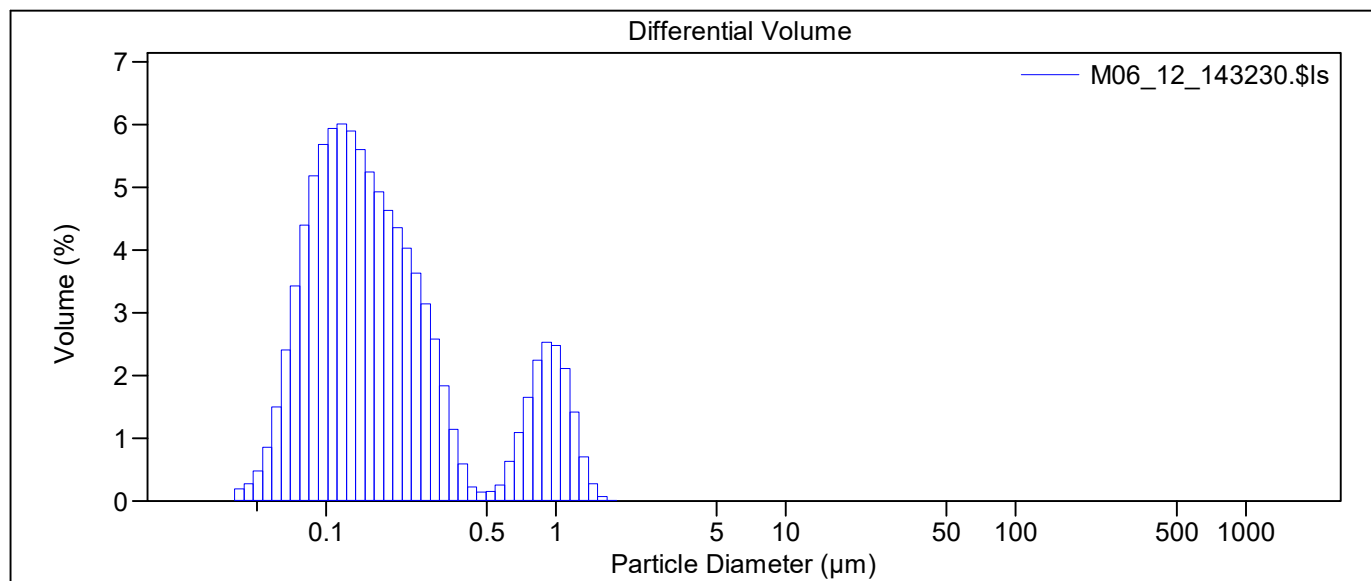
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_12_143230.\$ls		
	M06_12_143230.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.43%		
LS 13 320	Universal Liquid Module		
Start time:	14:30 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	50%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_12_143230.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.306 μm
Mean:	0.278 μm		Variance:	0.094 μm ²
Median:	0.153 μm		C.V.:	110%
Mean/Median ratio:	1.813		Skewness:	1.978 Right skewed
Mode:	0.117 μm		Kurtosis:	2.801 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.103 μm	0.153 μm	0.261 μm	0.855 μm

Surface Area Statistics (Arithmetic)			M06_12_143230.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.139 µm
Mean:	0.143 µm		Variance:	0.019 µm ²
Median:	0.108 µm		C.V.:	97.2%
Mean/Median ratio:	1.329		Skewness:	4.919 Right skewed
Mode:	0.088 µm		Kurtosis:	29.04 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.065 µm	0.081 µm	0.108 µm	0.154 µm	0.228 µm

Number Statistics (Arithmetic)			M06_12_143230.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.086 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.8%
Mean/Median ratio:	1.108		Skewness:	4.301 Right skewed
Mode:	0.073 μm		Kurtosis:	62.76 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.129 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.68	3.46
10	0.044	0.046	0.28	0.86	3.62
11	0.048	0.050	0.48	1.36	4.79
12	0.053	0.055	0.86	2.22	6.47
13	0.058	0.061	1.50	3.53	8.54
14	0.064	0.067	2.41	5.16	10.4
15	0.070	0.073	3.43	6.70	11.2
16	0.077	0.080	4.40	7.82	10.8
17	0.084	0.088	5.18	8.40	9.63
18	0.093	0.097	5.68	8.38	7.98
19	0.102	0.106	5.94	7.98	6.30
20	0.112	0.117	6.01	7.36	4.82
21	0.122	0.128	5.90	6.58	3.58
22	0.134	0.141	5.60	5.69	2.57
23	0.148	0.155	5.25	4.86	1.82
24	0.162	0.170	4.93	4.15	1.29
25	0.178	0.186	4.64	3.56	0.92
26	0.195	0.205	4.36	3.05	0.65
27	0.214	0.225	4.03	2.57	0.46
28	0.235	0.247	3.63	2.11	0.31
29	0.258	0.271	3.14	1.66	0.20
30	0.284	0.297	2.58	1.24	0.13
31	0.311	0.326	1.84	0.81	0.068
32	0.342	0.358	1.14	0.46	0.032
33	0.375	0.393	0.59	0.22	0.013
34	0.412	0.431	0.23	0.076	0.0036
35	0.452	0.474	0.15	0.044	0.0018
36	0.496	0.520	0.15	0.041	0.0014
37	0.545	0.571	0.26	0.065	0.0018
38	0.598	0.627	0.63	0.14	0.0033
39	0.656	0.688	1.09	0.23	0.0043
40	0.721	0.755	1.65	0.31	0.0049
41	0.791	0.829	2.25	0.39	0.0051
42	0.868	0.910	2.53	0.40	0.0043
43	0.953	0.999	2.48	0.36	0.0032
44	1.047	1.097	2.11	0.28	0.0021
45	1.149	1.204	1.42	0.17	0.0010

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.71	0.077	0.00039
47	1.385	1.451	0.28	0.027	0.00012
48	1.520	1.592	0.070	0.0063	0.000022
49	1.668	1.748	0.0081	0.00066	0.000002
50	1.832	1.919	0.0011	0.000084	2.03E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

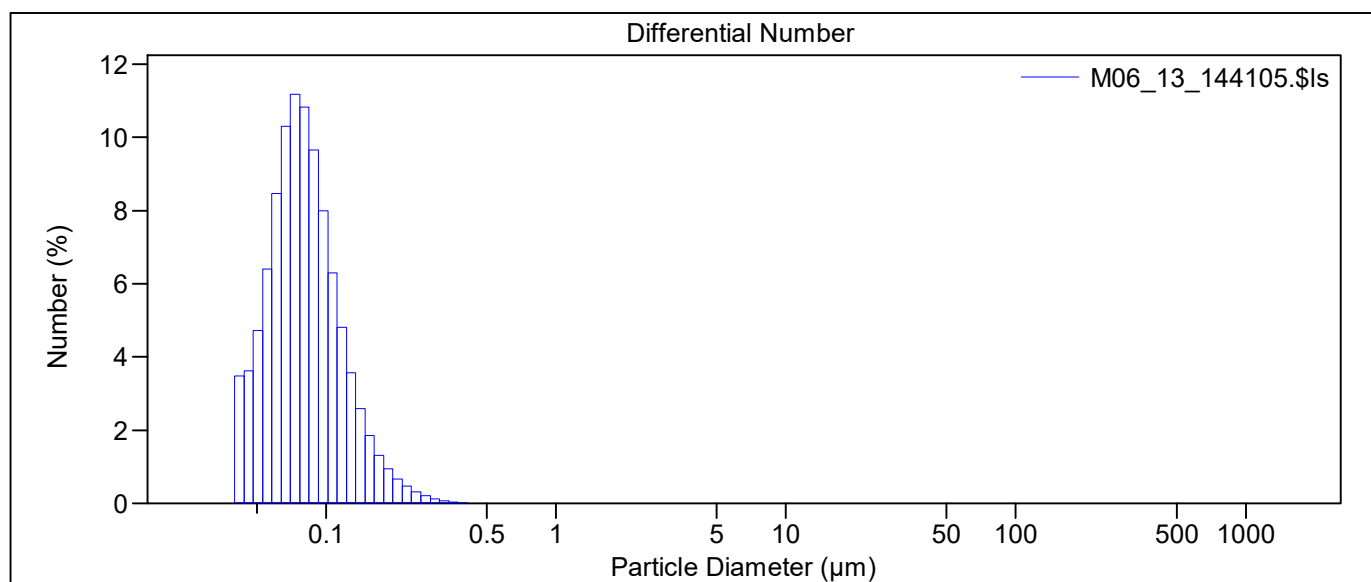
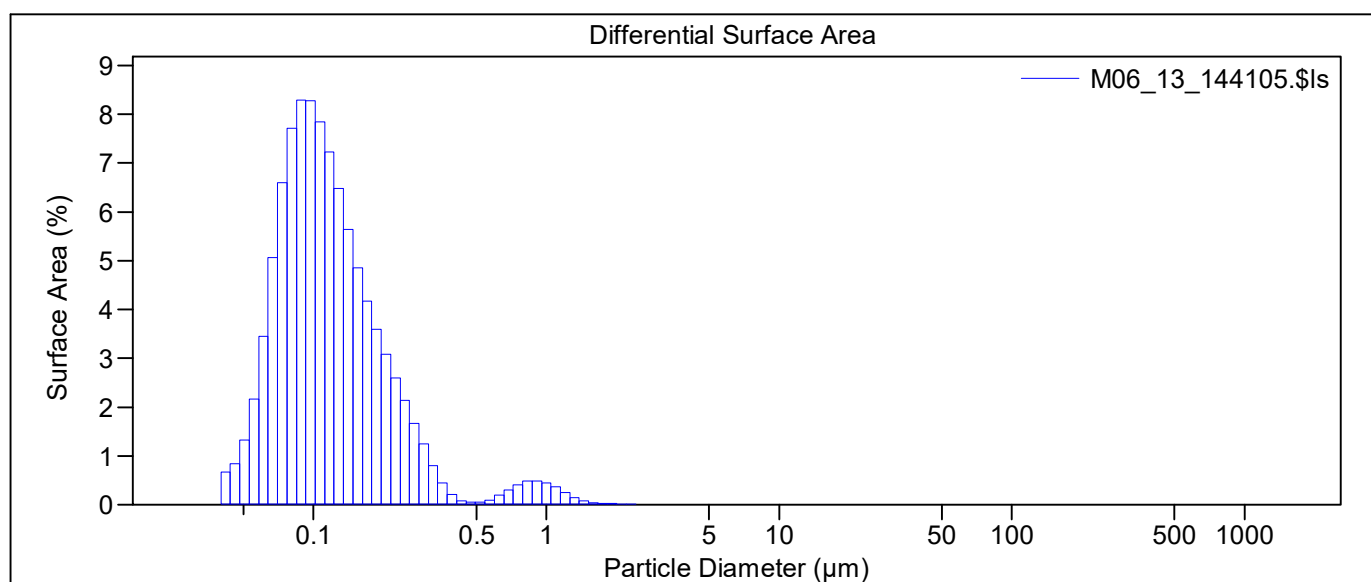
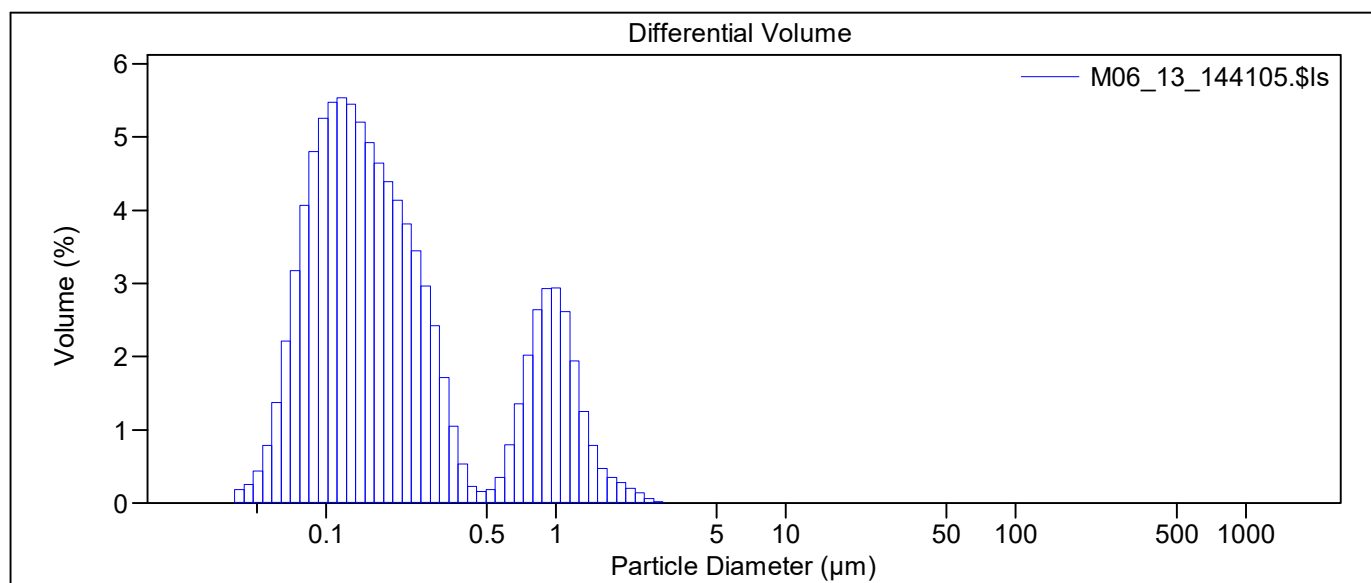
Beckman Coulter LS13320

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	M06_13_144105.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.05%		
LS 13 320	Universal Liquid Module		
Start time:	14:39 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_13_144105.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.393 μm
Mean:	0.341 μm		Variance:	0.155 μm ²
Median:	0.165 μm		C.V.:	115%
Mean/Median ratio:	2.070		Skewness:	1.968 Right skewed
Mode:	0.117 μm		Kurtosis:	3.750 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.165 μm	0.312 μm	0.987 μm

Surface Area Statistics (Arithmetic)			M06_13_144105.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.170 µm
Mean:	0.153 µm		Variance:	0.029 µm ²
Median:	0.109 µm		C.V.:	111%
Mean/Median ratio:	1.404		Skewness:	5.034 Right skewed
Mode:	0.088 µm		Kurtosis:	31.77 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.158 µm	0.236 µm

Number Statistics (Arithmetic)			M06_13_144105.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	46.0%
Mean/Median ratio:	1.109		Skewness:	5.133 Right skewed
Mode:	0.073 μm		Kurtosis:	89.52 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.67	3.48
10	0.044	0.046	0.25	0.84	3.62
11	0.048	0.050	0.44	1.33	4.73
12	0.053	0.055	0.78	2.16	6.40
13	0.058	0.061	1.37	3.45	8.46
14	0.064	0.067	2.21	5.06	10.3
15	0.070	0.073	3.17	6.60	11.2
16	0.077	0.080	4.07	7.72	10.8
17	0.084	0.088	4.80	8.30	9.66
18	0.093	0.097	5.26	8.27	8.00
19	0.102	0.106	5.48	7.85	6.30
20	0.112	0.117	5.54	7.23	4.81
21	0.122	0.128	5.45	6.48	3.58
22	0.134	0.141	5.21	5.64	2.59
23	0.148	0.155	4.92	4.86	1.85
24	0.162	0.170	4.65	4.18	1.32
25	0.178	0.186	4.39	3.60	0.94
26	0.195	0.205	4.14	3.09	0.67
27	0.214	0.225	3.82	2.59	0.47
28	0.235	0.247	3.45	2.13	0.32
29	0.258	0.271	2.96	1.67	0.21
30	0.284	0.297	2.42	1.24	0.13
31	0.311	0.326	1.72	0.80	0.069
32	0.342	0.358	1.05	0.45	0.032
33	0.375	0.393	0.54	0.21	0.012
34	0.412	0.431	0.22	0.080	0.0039
35	0.452	0.474	0.16	0.050	0.0020
36	0.496	0.520	0.18	0.054	0.0018
37	0.545	0.571	0.35	0.094	0.0026
38	0.598	0.627	0.80	0.19	0.0045
39	0.656	0.688	1.35	0.30	0.0058
40	0.721	0.755	2.02	0.41	0.0065
41	0.791	0.829	2.64	0.49	0.0064
42	0.868	0.910	2.93	0.49	0.0054
43	0.953	0.999	2.94	0.45	0.0041
44	1.047	1.097	2.62	0.36	0.0028
45	1.149	1.204	1.94	0.25	0.0015
46	1.261	1.321	1.25	0.14	0.00075
47	1.385	1.451	0.79	0.083	0.00036
48	1.520	1.592	0.47	0.045	0.00016
49	1.668	1.748	0.35	0.031	0.000091
50	1.832	1.919	0.28	0.022	0.000055
51	2.011	2.107	0.20	0.014	0.000029
52	2.207	2.313	0.14	0.0094	0.000016
53	2.423	2.539	0.062	0.0037	0.000005
54	2.660	2.787	0.018	0.00097	0.000001
55	2.920	3.059	0.0035	0.00018	1.71E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

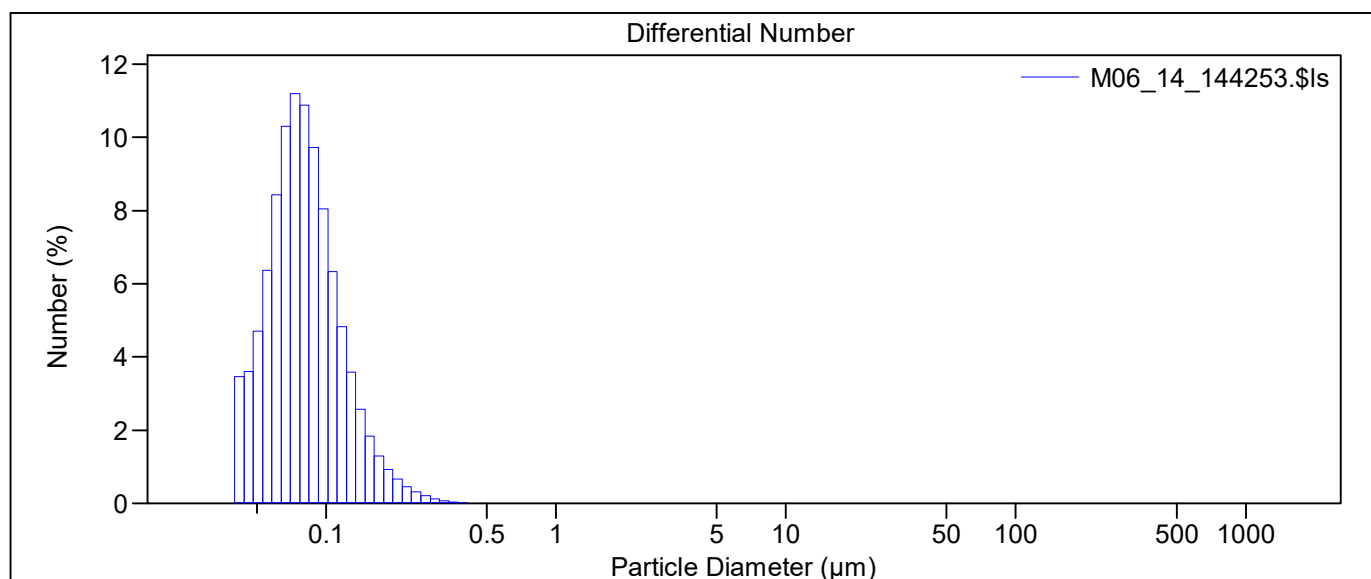
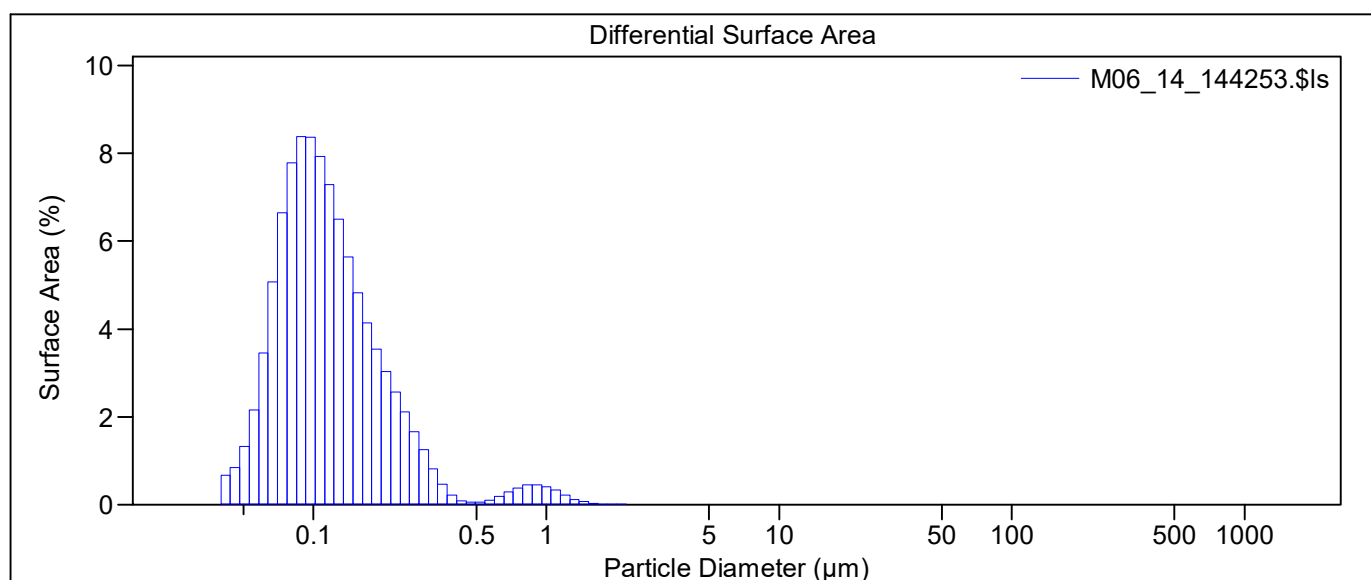
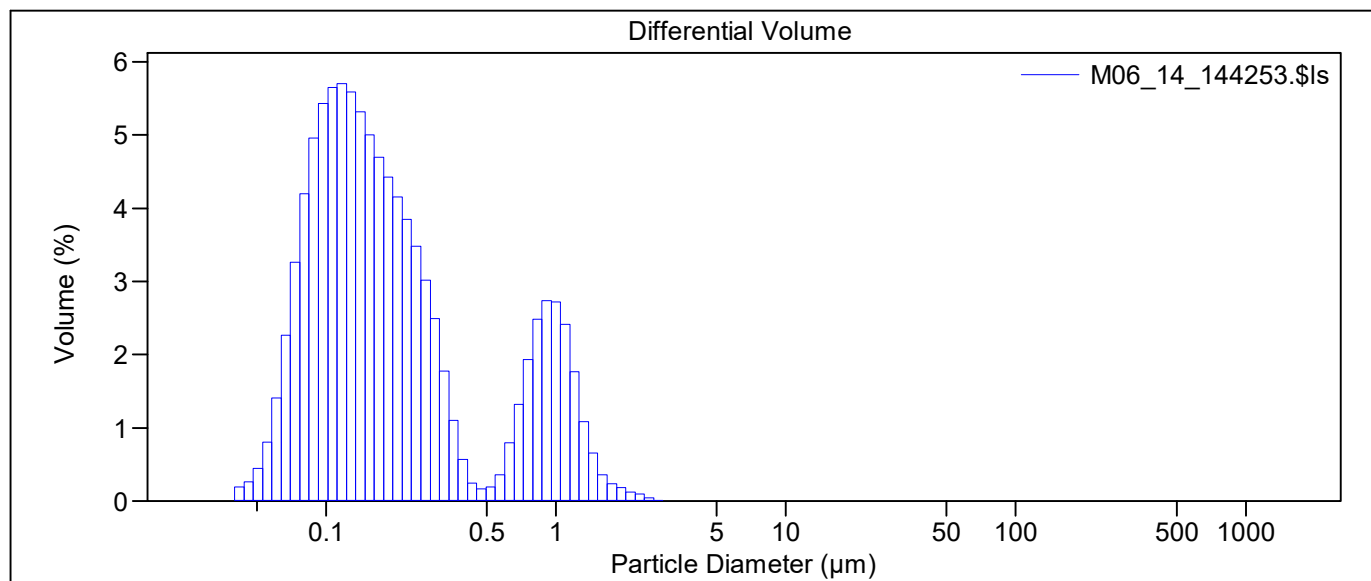
Beckman Coulter LS13320

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File ID:	M06		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.20%		
LS 13 320	Universal Liquid Module		
Start time:	14:41 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_14_144253.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.368 μm
Mean:	0.321 μm		Variance:	0.135 μm ²
Median:	0.161 μm		C.V.:	115%
Mean/Median ratio:	1.998		Skewness:	2.032 Right skewed
Mode:	0.117 μm		Kurtosis:	4.012 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.105 μm	0.161 μm	0.294 μm	0.944 μm

Surface Area Statistics (Arithmetic)			M06_14_144253.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.160 µm
Mean:	0.149 µm		Variance:	0.026 µm ²
Median:	0.108 µm		C.V.:	107%
Mean/Median ratio:	1.380		Skewness:	5.066 Right skewed
Mode:	0.088 µm		Kurtosis:	32.27 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.156 µm	0.234 µm

Number Statistics (Arithmetic)			M06_14_144253.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.6%
Mean/Median ratio:	1.108		Skewness:	4.885 Right skewed
Mode:	0.073 μm		Kurtosis:	81.39 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.67	3.46
10	0.044	0.046	0.26	0.84	3.60
11	0.048	0.050	0.45	1.32	4.70
12	0.053	0.055	0.80	2.16	6.36
13	0.058	0.061	1.40	3.45	8.44
14	0.064	0.067	2.27	5.08	10.3
15	0.070	0.073	3.26	6.65	11.2
16	0.077	0.080	4.20	7.79	10.9
17	0.084	0.088	4.96	8.38	9.72
18	0.093	0.097	5.43	8.37	8.05
19	0.102	0.106	5.65	7.93	6.33
20	0.112	0.117	5.70	7.29	4.83
21	0.122	0.128	5.59	6.51	3.58
22	0.134	0.141	5.32	5.65	2.58
23	0.148	0.155	5.00	4.83	1.83
24	0.162	0.170	4.70	4.14	1.30
25	0.178	0.186	4.42	3.55	0.92
26	0.195	0.205	4.16	3.04	0.66
27	0.214	0.225	3.85	2.56	0.46
28	0.235	0.247	3.49	2.11	0.31
29	0.258	0.271	3.02	1.67	0.21
30	0.284	0.297	2.49	1.25	0.13
31	0.311	0.326	1.78	0.82	0.069
32	0.342	0.358	1.10	0.46	0.033
33	0.375	0.393	0.57	0.22	0.013
34	0.412	0.431	0.24	0.083	0.0041
35	0.452	0.474	0.17	0.053	0.0022
36	0.496	0.520	0.20	0.056	0.0019
37	0.545	0.571	0.36	0.095	0.0026
38	0.598	0.627	0.80	0.19	0.0044
39	0.656	0.688	1.32	0.29	0.0055
40	0.721	0.755	1.93	0.38	0.0061
41	0.791	0.829	2.48	0.45	0.0059
42	0.868	0.910	2.74	0.45	0.0049
43	0.953	0.999	2.72	0.41	0.0037
44	1.047	1.097	2.41	0.33	0.0025
45	1.149	1.204	1.77	0.22	0.0014

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.09	0.12	0.00064
47	1.385	1.451	0.66	0.068	0.00029
48	1.520	1.592	0.36	0.033	0.00012
49	1.668	1.748	0.24	0.020	0.000060
50	1.832	1.919	0.19	0.015	0.000036
51	2.011	2.107	0.13	0.0090	0.000018
52	2.207	2.313	0.092	0.0059	0.000010
53	2.423	2.539	0.041	0.0024	0.000003
54	2.660	2.787	0.011	0.00061	0.000001
55	2.920	3.059	0.0024	0.00012	1.12E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

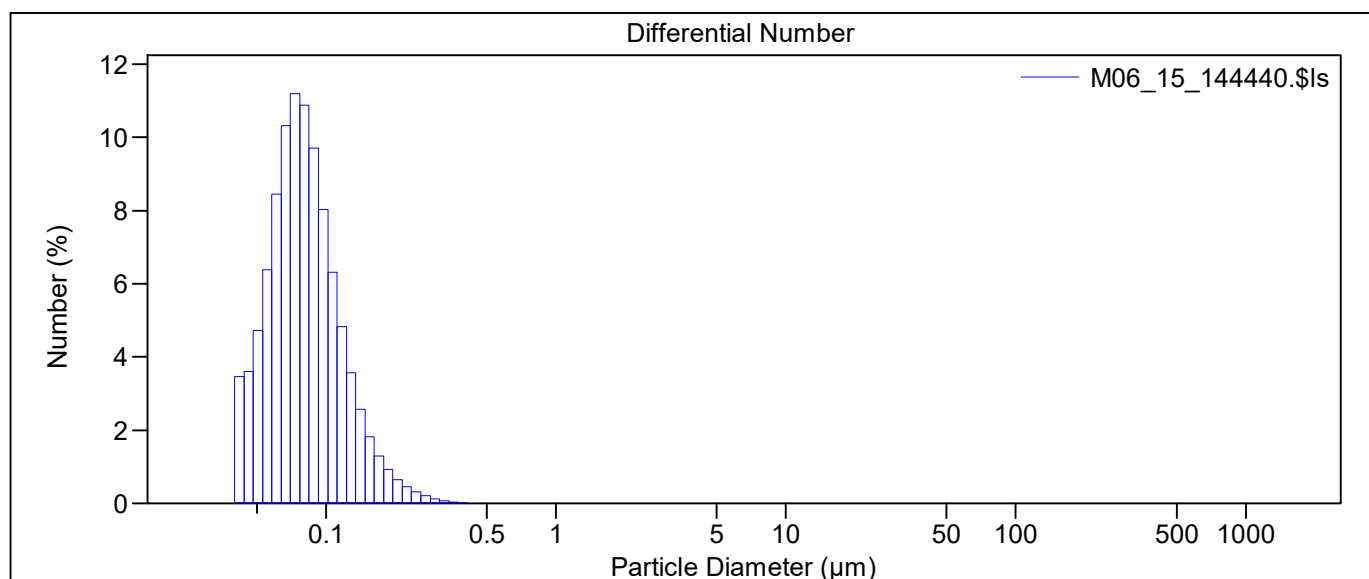
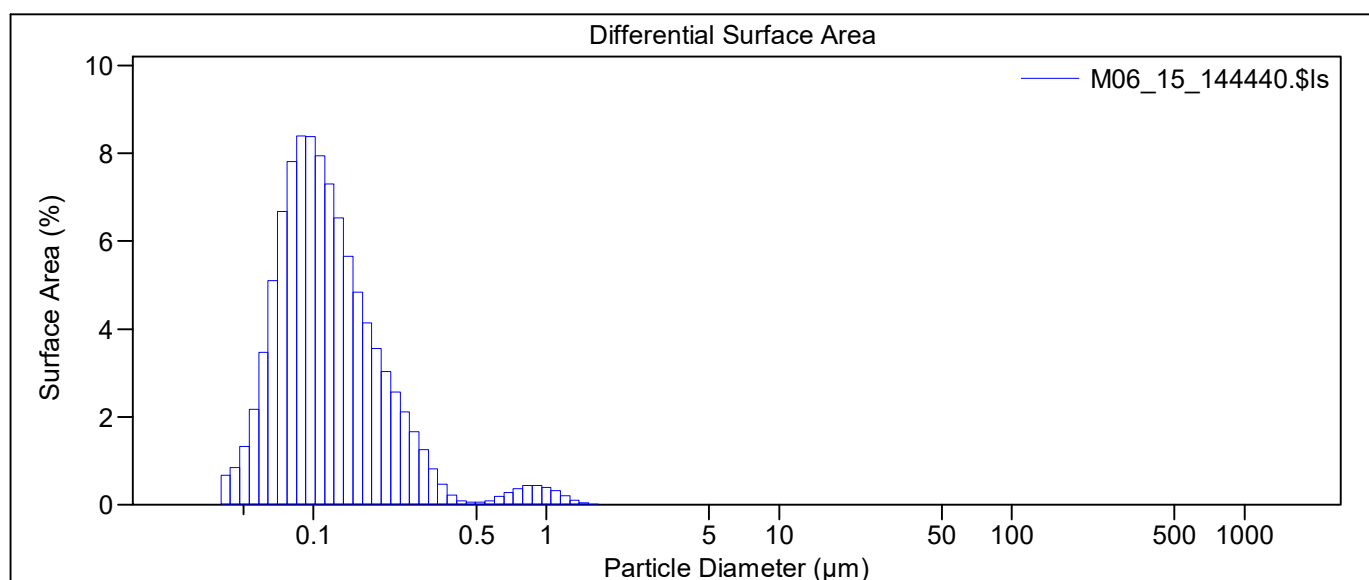
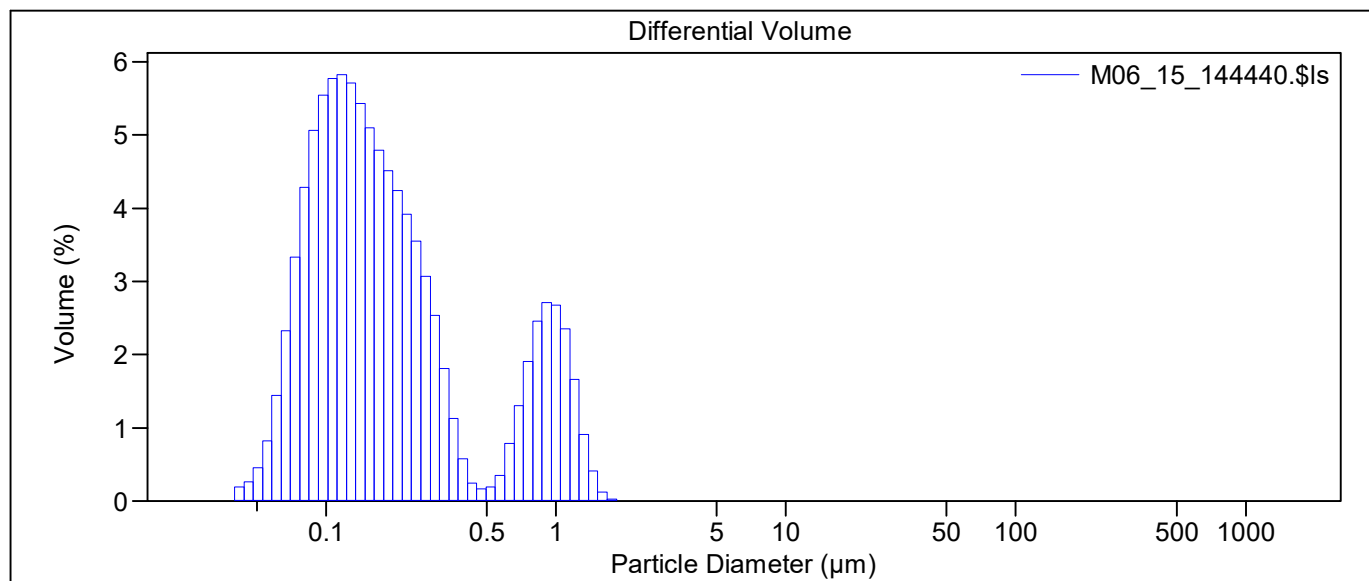
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M06\M06_15_144440.\$ls		
	M06_15_144440.\$ls		
File ID:	M06		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.25%		
LS 13 320	Universal Liquid Module		
Start time:	14:42 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M06_15_144440.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.325 μm
Mean:	0.297 μm		Variance:	0.105 μm ²
Median:	0.158 μm		C.V.:	109%
Mean/Median ratio:	1.884		Skewness:	1.824 Right skewed
Mode:	0.117 μm		Kurtosis:	2.173 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.104 μm	0.158 μm	0.278 μm	0.896 μm

Surface Area Statistics (Arithmetic)			M06_15_144440.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.148 µm
Mean:	0.147 µm		Variance:	0.022 µm ²
Median:	0.108 µm		C.V.:	101%
Mean/Median ratio:	1.357		Skewness:	4.747 Right skewed
Mode:	0.088 µm		Kurtosis:	26.51 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.156 µm	0.232 µm

Number Statistics (Arithmetic)			M06_15_144440.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.3%
Mean/Median ratio:	1.108		Skewness:	4.602 Right skewed
Mode:	0.073 μm		Kurtosis:	70.00 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.68	3.47
10	0.044	0.046	0.27	0.85	3.61
11	0.048	0.050	0.46	1.33	4.72
12	0.053	0.055	0.82	2.17	6.38
13	0.058	0.061	1.44	3.47	8.45
14	0.064	0.067	2.32	5.10	10.3
15	0.070	0.073	3.34	6.67	11.2
16	0.077	0.080	4.29	7.81	10.9
17	0.084	0.088	5.06	8.40	9.70
18	0.093	0.097	5.54	8.38	8.03
19	0.102	0.106	5.77	7.95	6.32
20	0.112	0.117	5.83	7.31	4.82
21	0.122	0.128	5.71	6.53	3.57
22	0.134	0.141	5.44	5.66	2.57
23	0.148	0.155	5.10	4.84	1.82
24	0.162	0.170	4.79	4.14	1.30
25	0.178	0.186	4.51	3.55	0.92
26	0.195	0.205	4.24	3.04	0.65
27	0.214	0.225	3.92	2.56	0.46
28	0.235	0.247	3.55	2.11	0.31
29	0.258	0.271	3.07	1.67	0.21
30	0.284	0.297	2.54	1.25	0.13
31	0.311	0.326	1.81	0.81	0.069
32	0.342	0.358	1.12	0.46	0.032
33	0.375	0.393	0.58	0.22	0.013
34	0.412	0.431	0.24	0.083	0.0040
35	0.452	0.474	0.17	0.052	0.0021
36	0.496	0.520	0.19	0.054	0.0018
37	0.545	0.571	0.35	0.091	0.0025
38	0.598	0.627	0.78	0.18	0.0042
39	0.656	0.688	1.30	0.28	0.0053
40	0.721	0.755	1.90	0.37	0.0058
41	0.791	0.829	2.46	0.43	0.0057
42	0.868	0.910	2.71	0.44	0.0048
43	0.953	0.999	2.67	0.39	0.0035
44	1.047	1.097	2.35	0.31	0.0024
45	1.149	1.204	1.66	0.20	0.0013
46	1.261	1.321	0.91	0.10	0.00052
47	1.385	1.451	0.41	0.042	0.00018
48	1.520	1.592	0.12	0.012	0.000041
49	1.668	1.748	0.023	0.0019	0.000006
50	1.832	1.919	0.0037	0.00028	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

Beckman Coulter LS13320

M06.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M07\M07.\$av
M07.\$av
File ID: M07
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M07.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.317 µm
Mean:	0.284 µm	Variance:	0.101 µm ²
Median:	0.158 µm	C.V.:	112%
Mean/Median ratio:	1.791	Skewness:	2.174 Right skewed
Mode:	0.106 µm	Kurtosis:	4.164 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.085 µm	0.107 µm	0.158 µm	0.261 µm	0.885 µm

Surface Area Statistics (Arithmetic) M07.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.142 µm
Mean:	0.150 µm	Variance:	0.020 µm ²
Median:	0.113 µm	C.V.:	94.7%
Mean/Median ratio:	1.323	Skewness:	5.177 Right skewed
Mode:	0.097 µm	Kurtosis:	33.15 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.072 µm	0.088 µm	0.113 µm	0.162 µm	0.234 µm

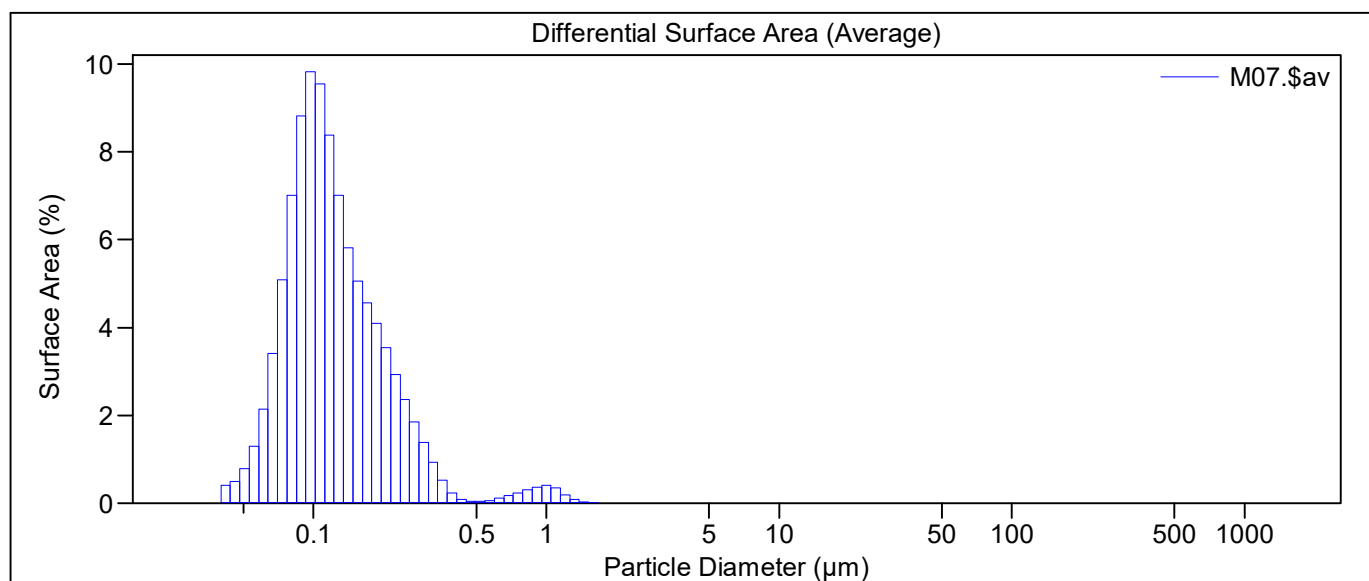
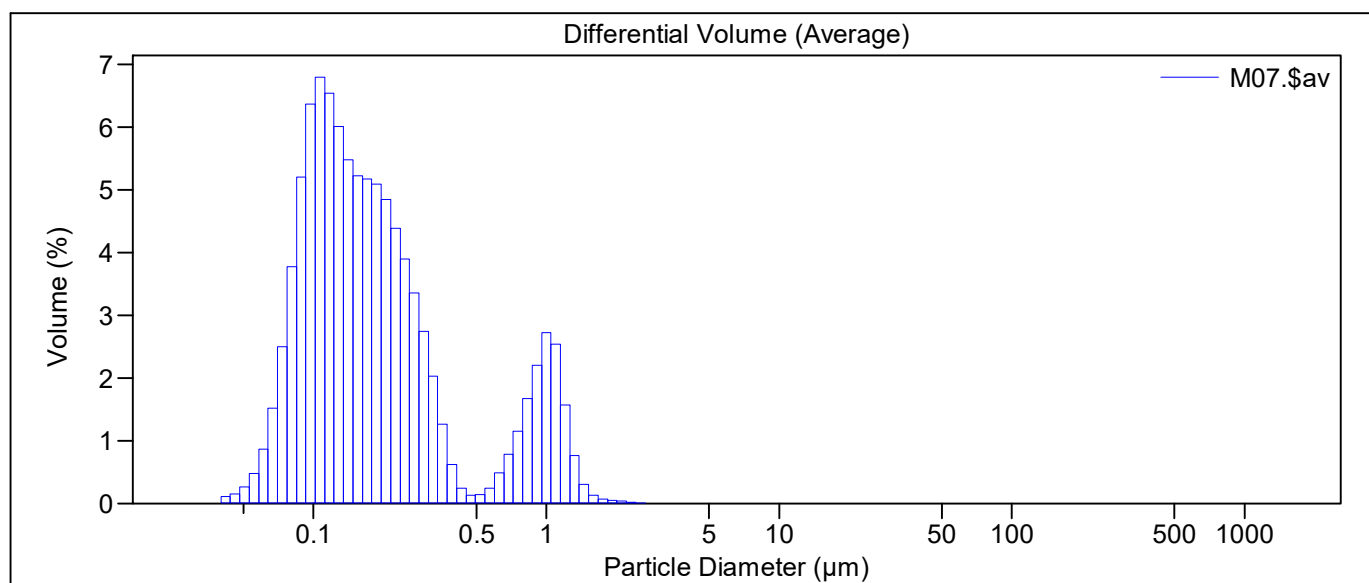
Number Statistics (Arithmetic)

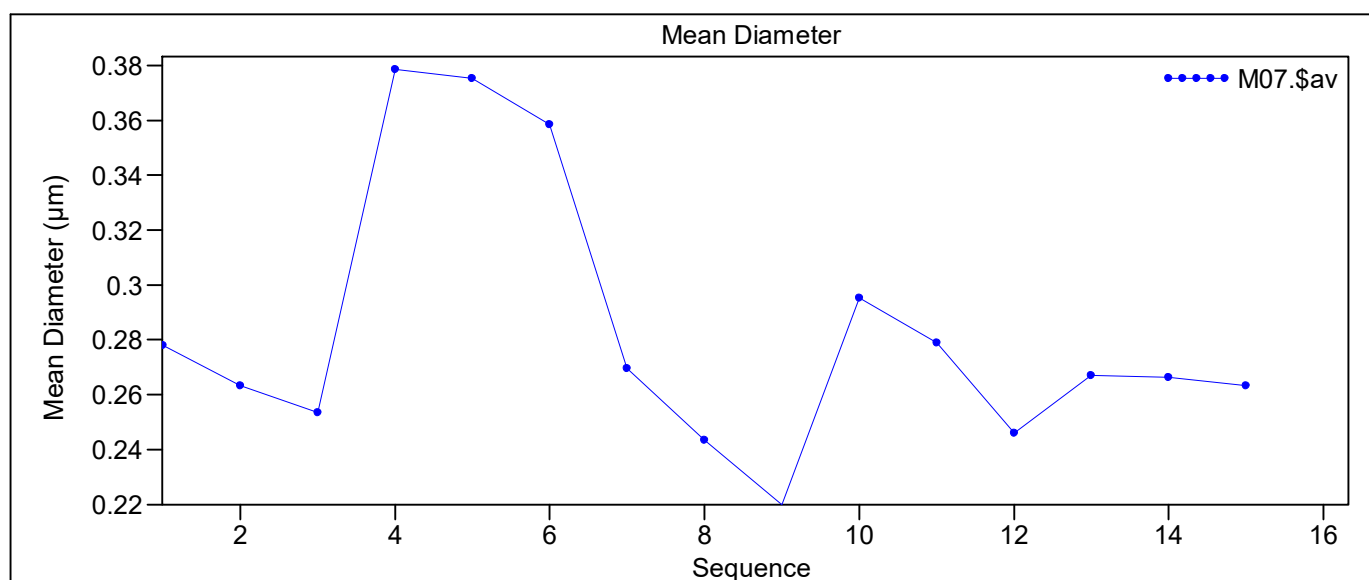
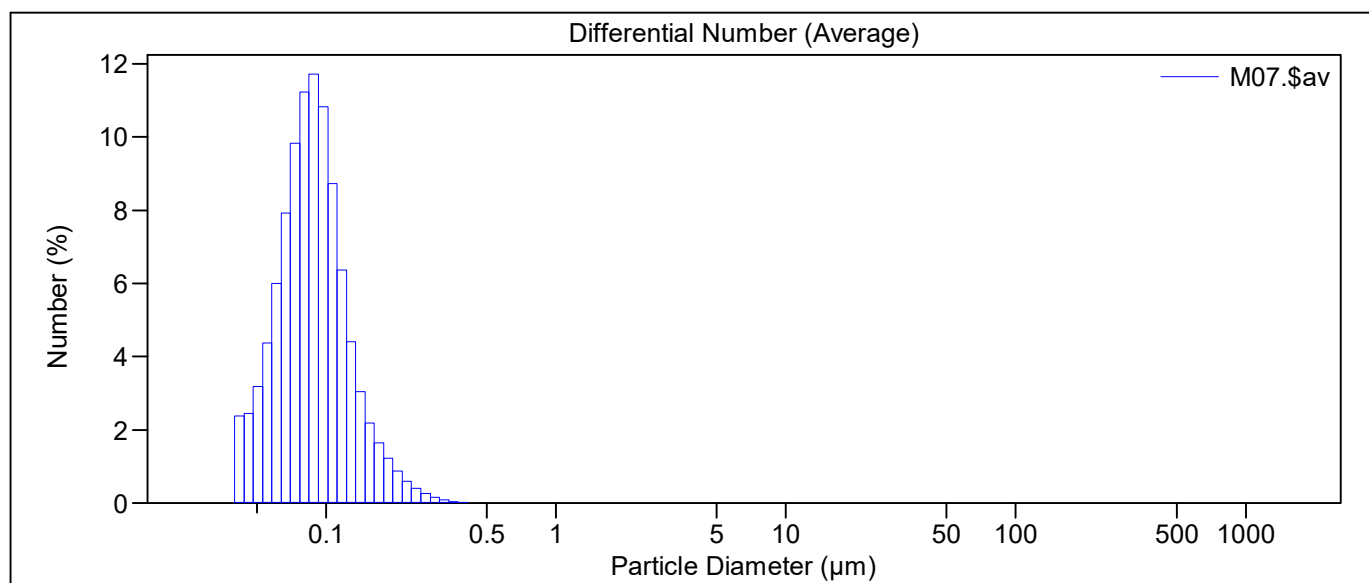
M07.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.040 μm
Mean:	0.093 μm	Variance:	0.0016 μm^2
Median:	0.086 μm	C.V.:	43.2%
Mean/Median ratio:	1.084	Skewness:	4.192 Right skewed
Mode:	0.088 μm	Kurtosis:	62.52 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.055 μm	0.069 μm	0.086 μm	0.107 μm	0.137 μm





M07.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.11	0.40	2.38
10	0.044	0.046	0.15	0.50	2.45
11	0.048	0.050	0.26	0.78	3.18
12	0.053	0.055	0.48	1.29	4.36
13	0.058	0.061	0.87	2.14	6.00
14	0.064	0.067	1.52	3.41	7.93
15	0.070	0.073	2.50	5.09	9.83
16	0.077	0.080	3.77	7.01	11.2
17	0.084	0.088	5.21	8.82	11.7

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	6.37	9.83	10.8
19	0.102	0.106	6.79	9.54	8.73
20	0.112	0.117	6.54	8.38	6.36
21	0.122	0.128	6.01	7.00	4.41
22	0.134	0.141	5.48	5.82	3.04
23	0.148	0.155	5.22	5.05	2.19
24	0.162	0.170	5.17	4.56	1.64
25	0.178	0.186	5.09	4.09	1.22
26	0.195	0.205	4.85	3.55	0.88
27	0.214	0.225	4.39	2.93	0.60
28	0.235	0.247	3.89	2.36	0.40
29	0.258	0.271	3.35	1.85	0.26
30	0.284	0.297	2.74	1.38	0.16
31	0.311	0.326	2.03	0.93	0.091
32	0.342	0.358	1.27	0.53	0.043
33	0.375	0.393	0.62	0.24	0.016
34	0.412	0.431	0.24	0.085	0.0047
35	0.452	0.474	0.14	0.043	0.0020
36	0.496	0.520	0.14	0.041	0.0016
37	0.545	0.571	0.24	0.063	0.0020
38	0.598	0.627	0.49	0.12	0.0031
39	0.656	0.688	0.78	0.17	0.0037
40	0.721	0.755	1.15	0.23	0.0042
41	0.791	0.829	1.68	0.30	0.0046
42	0.868	0.910	2.20	0.36	0.0045
43	0.953	0.999	2.72	0.41	0.0042
44	1.047	1.097	2.54	0.35	0.0030
45	1.149	1.204	1.57	0.19	0.0014
46	1.261	1.321	0.77	0.087	0.00051
47	1.385	1.451	0.31	0.032	0.00016
48	1.520	1.592	0.13	0.012	0.000049
49	1.668	1.748	0.071	0.0061	0.000021
50	1.832	1.919	0.054	0.0042	0.000012
51	2.011	2.107	0.036	0.0026	0.000006
52	2.207	2.313	0.022	0.0014	0.000003
53	2.423	2.539	0.0091	0.00054	0.000001
54	2.660	2.787	0.0023	0.00012	1.65E-7
55	2.920	3.059	0.00034	0.000017	1.84E-8
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

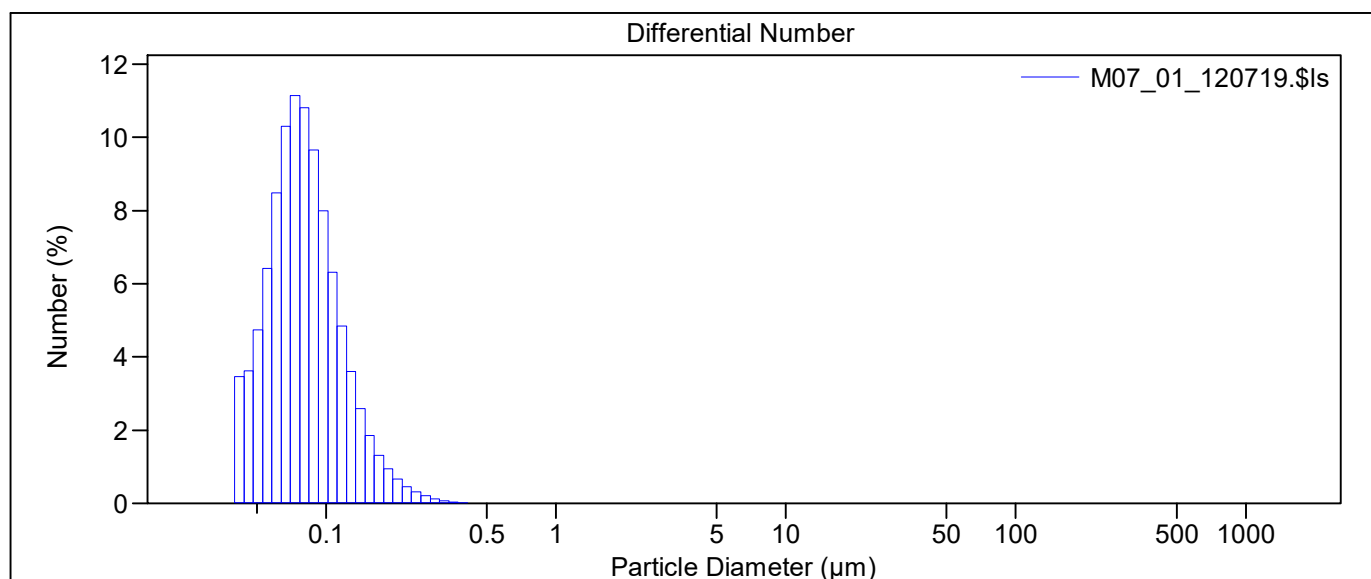
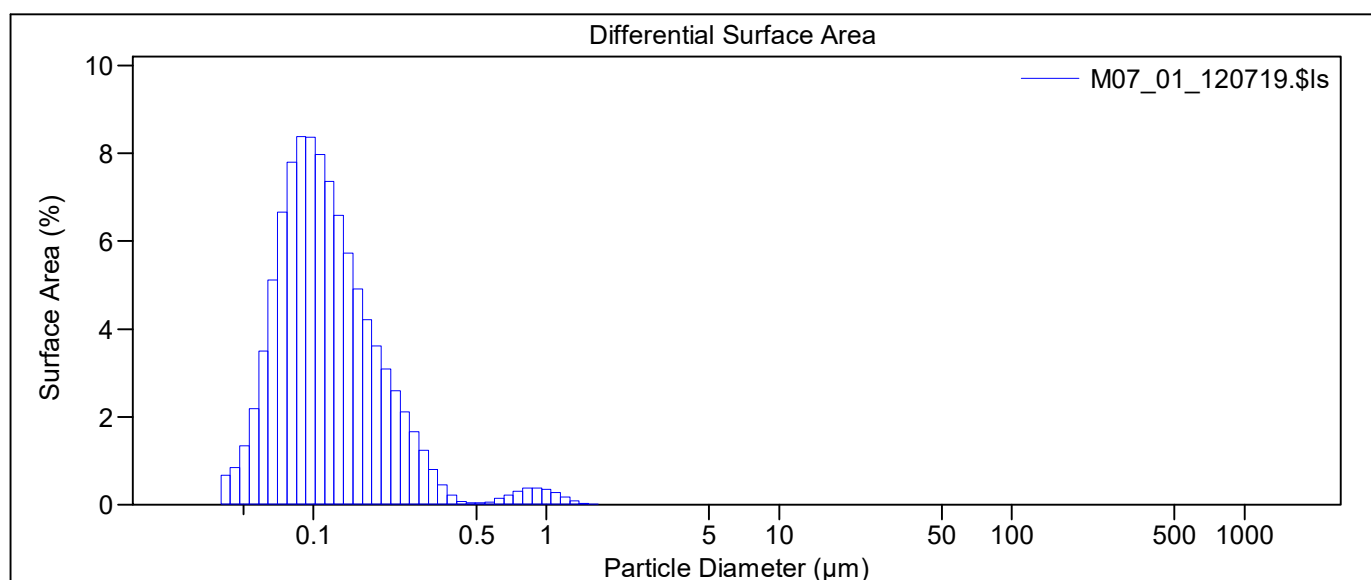
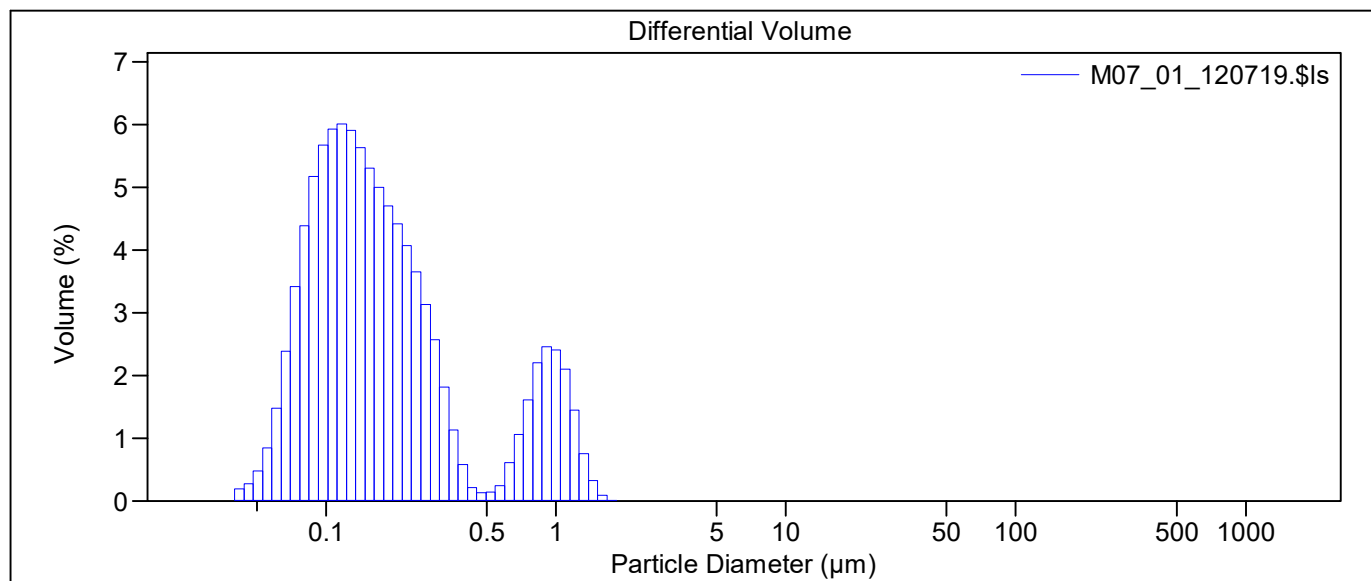
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_01_120719.\$ls		
	M07_01_120719.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.39%		
LS 13 320	Universal Liquid Module		
Start time:	12:05 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_01_120719.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.307 µm
Mean:	0.278 µm		Variance:	0.094 µm ²
Median:	0.154 µm		C.V.:	110%
Mean/Median ratio:	1.810		Skewness:	2.008 Right skewed
Mode:	0.117 µm		Kurtosis:	2.949 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 µm	0.103 µm	0.154 µm	0.259 µm	0.854 µm

Surface Area Statistics (Arithmetic)			M07_01_120719.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.139 µm
Mean:	0.143 µm		Variance:	0.019 µm ²
Median:	0.108 µm		C.V.:	97.0%
Mean/Median ratio:	1.325		Skewness:	4.976 Right skewed
Mode:	0.088 µm		Kurtosis:	29.83 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.155 µm	0.228 µm

Number Statistics (Arithmetic)			M07_01_120719.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.8%
Mean/Median ratio:	1.108		Skewness:	4.266 Right skewed
Mode:	0.073 μm		Kurtosis:	62.41 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.68	3.47
10	0.044	0.046	0.27	0.85	3.61
11	0.048	0.050	0.47	1.35	4.75
12	0.053	0.055	0.85	2.19	6.41
13	0.058	0.061	1.48	3.49	8.48
14	0.064	0.067	2.39	5.12	10.3
15	0.070	0.073	3.42	6.67	11.1
16	0.077	0.080	4.38	7.79	10.8
17	0.084	0.088	5.17	8.38	9.65
18	0.093	0.097	5.67	8.37	8.00
19	0.102	0.106	5.93	7.97	6.32
20	0.112	0.117	6.01	7.36	4.84
21	0.122	0.128	5.91	6.59	3.60
22	0.134	0.141	5.64	5.73	2.59
23	0.148	0.155	5.30	4.91	1.85
24	0.162	0.170	5.00	4.21	1.31
25	0.178	0.186	4.71	3.62	0.94
26	0.195	0.205	4.42	3.09	0.66
27	0.214	0.225	4.07	2.59	0.46
28	0.235	0.247	3.65	2.12	0.31
29	0.258	0.271	3.13	1.66	0.20
30	0.284	0.297	2.57	1.24	0.13
31	0.311	0.326	1.82	0.80	0.067
32	0.342	0.358	1.13	0.45	0.032
33	0.375	0.393	0.59	0.21	0.012
34	0.412	0.431	0.22	0.073	0.0035
35	0.452	0.474	0.14	0.041	0.0016
36	0.496	0.520	0.14	0.039	0.0013
37	0.545	0.571	0.24	0.061	0.0017
38	0.598	0.627	0.61	0.14	0.0032
39	0.656	0.688	1.06	0.22	0.0042
40	0.721	0.755	1.61	0.31	0.0048
41	0.791	0.829	2.20	0.38	0.0050
42	0.868	0.910	2.45	0.39	0.0042
43	0.953	0.999	2.41	0.35	0.0031
44	1.047	1.097	2.10	0.27	0.0021
45	1.149	1.204	1.45	0.17	0.0011
46	1.261	1.321	0.76	0.082	0.00042
47	1.385	1.451	0.32	0.032	0.00014
48	1.520	1.592	0.090	0.0081	0.000029
49	1.668	1.748	0.014	0.0011	0.000003
50	1.832	1.919	0.0023	0.00017	4.2E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

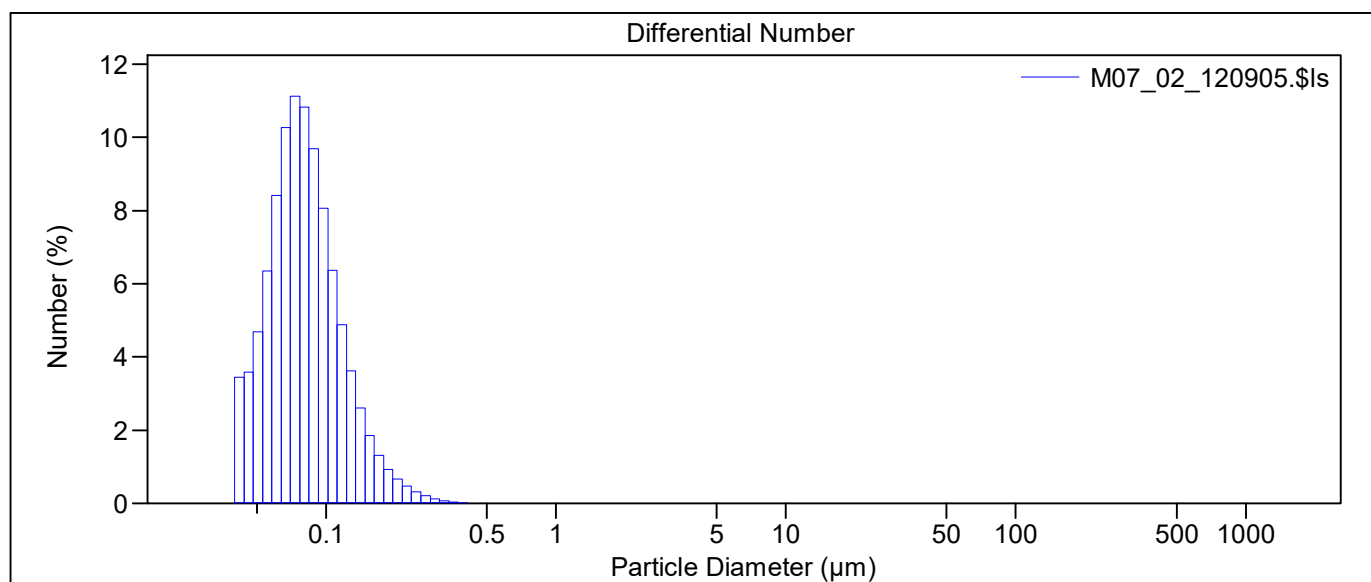
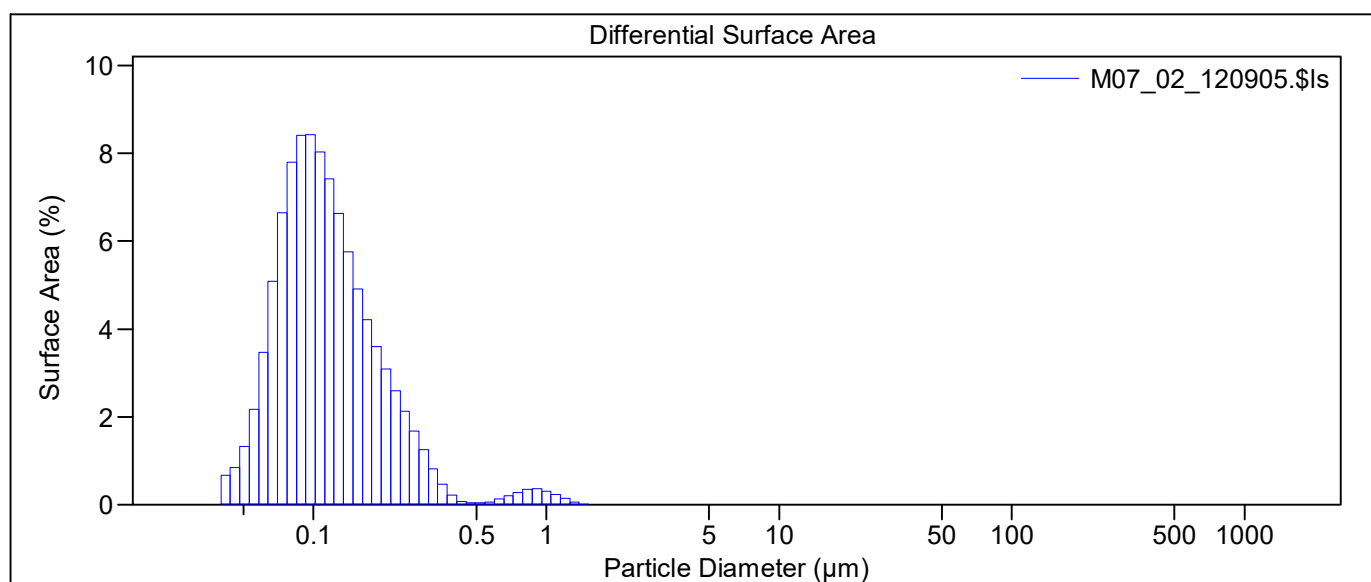
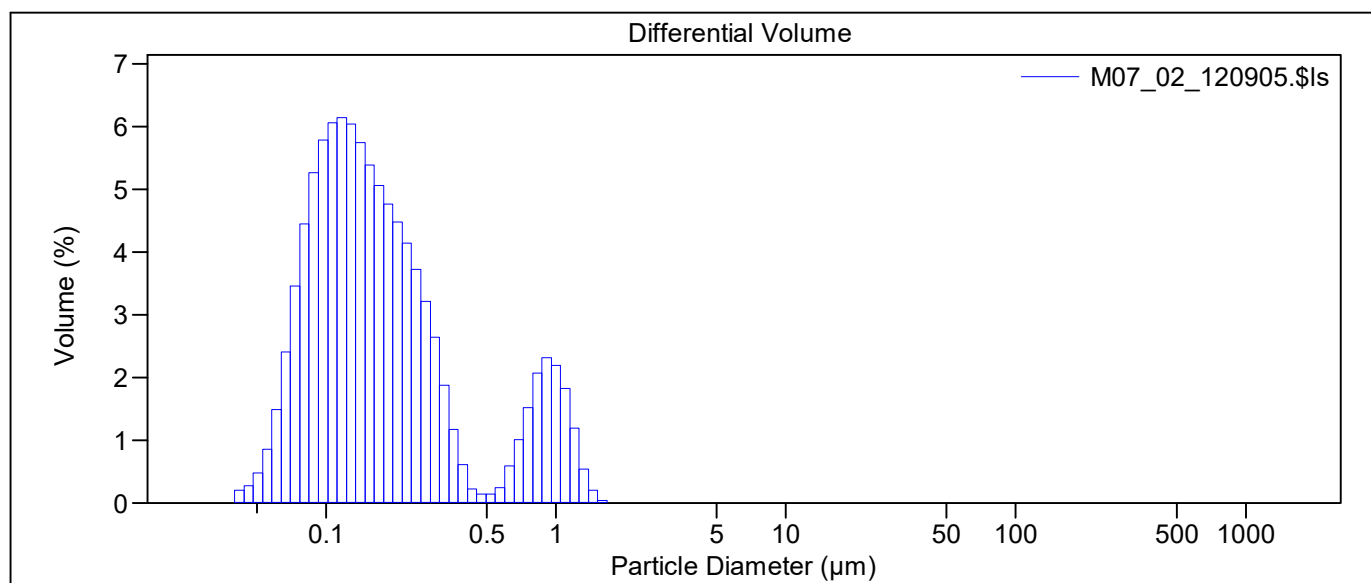
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_02_120905.\$ls		
	M07_02_120905.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.53%		
LS 13 320	Universal Liquid Module		
Start time:	12:07 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_02_120905.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.288 µm
Mean:	0.263 µm		Variance:	0.083 µm ²
Median:	0.151 µm		C.V.:	109%
Mean/Median ratio:	1.742		Skewness:	2.130 Right skewed
Mode:	0.117 µm		Kurtosis:	3.529 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 µm	0.102 µm	0.151 µm	0.251 µm	0.806 µm

Surface Area Statistics (Arithmetic)			M07_02_120905.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.131 µm
Mean:	0.141 µm		Variance:	0.017 µm ²
Median:	0.108 µm		C.V.:	93.1%
Mean/Median ratio:	1.307		Skewness:	5.020 Right skewed
Mode:	0.097 µm		Kurtosis:	31.00 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.154 µm	0.226 µm

Number Statistics (Arithmetic)			M07_02_120905.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.5%
Mean/Median ratio:	1.107		Skewness:	4.036 Right skewed
Mode:	0.073 μm		Kurtosis:	55.81 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.67	3.45
10	0.044	0.046	0.27	0.84	3.58
11	0.048	0.050	0.48	1.33	4.70
12	0.053	0.055	0.85	2.17	6.36
13	0.058	0.061	1.49	3.46	8.42
14	0.064	0.067	2.41	5.09	10.3
15	0.070	0.073	3.46	6.65	11.1
16	0.077	0.080	4.45	7.80	10.8
17	0.084	0.088	5.27	8.41	9.69
18	0.093	0.097	5.79	8.42	8.06
19	0.102	0.106	6.06	8.03	6.37
20	0.112	0.117	6.14	7.42	4.88
21	0.122	0.128	6.04	6.64	3.63
22	0.134	0.141	5.75	5.76	2.61
23	0.148	0.155	5.39	4.92	1.85
24	0.162	0.170	5.06	4.21	1.31
25	0.178	0.186	4.76	3.61	0.93
26	0.195	0.205	4.48	3.09	0.66
27	0.214	0.225	4.14	2.60	0.46
28	0.235	0.247	3.72	2.13	0.32
29	0.258	0.271	3.21	1.68	0.21
30	0.284	0.297	2.64	1.26	0.13
31	0.311	0.326	1.88	0.81	0.069
32	0.342	0.358	1.17	0.46	0.033
33	0.375	0.393	0.61	0.22	0.013
34	0.412	0.431	0.23	0.075	0.0036
35	0.452	0.474	0.14	0.043	0.0017
36	0.496	0.520	0.15	0.039	0.0013
37	0.545	0.571	0.24	0.060	0.0016
38	0.598	0.627	0.59	0.13	0.0030
39	0.656	0.688	1.01	0.21	0.0040
40	0.721	0.755	1.52	0.28	0.0045
41	0.791	0.829	2.07	0.35	0.0046
42	0.868	0.910	2.31	0.36	0.0039
43	0.953	0.999	2.19	0.31	0.0028
44	1.047	1.097	1.83	0.24	0.0018
45	1.149	1.204	1.19	0.14	0.00087

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.55	0.058	0.00030
47	1.385	1.451	0.20	0.020	0.000084
48	1.520	1.592	0.044	0.0039	0.000014
49	1.668	1.748	0.0030	0.00024	0.000001
50	1.832	1.919	0.00077	0.000056	1.38E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

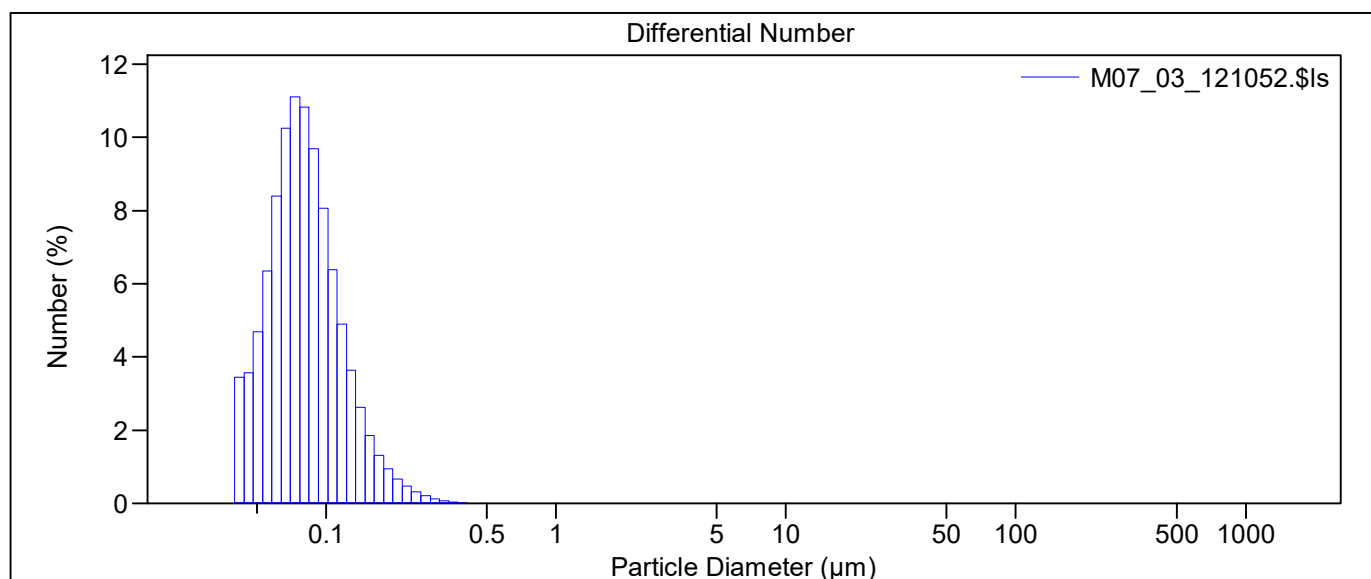
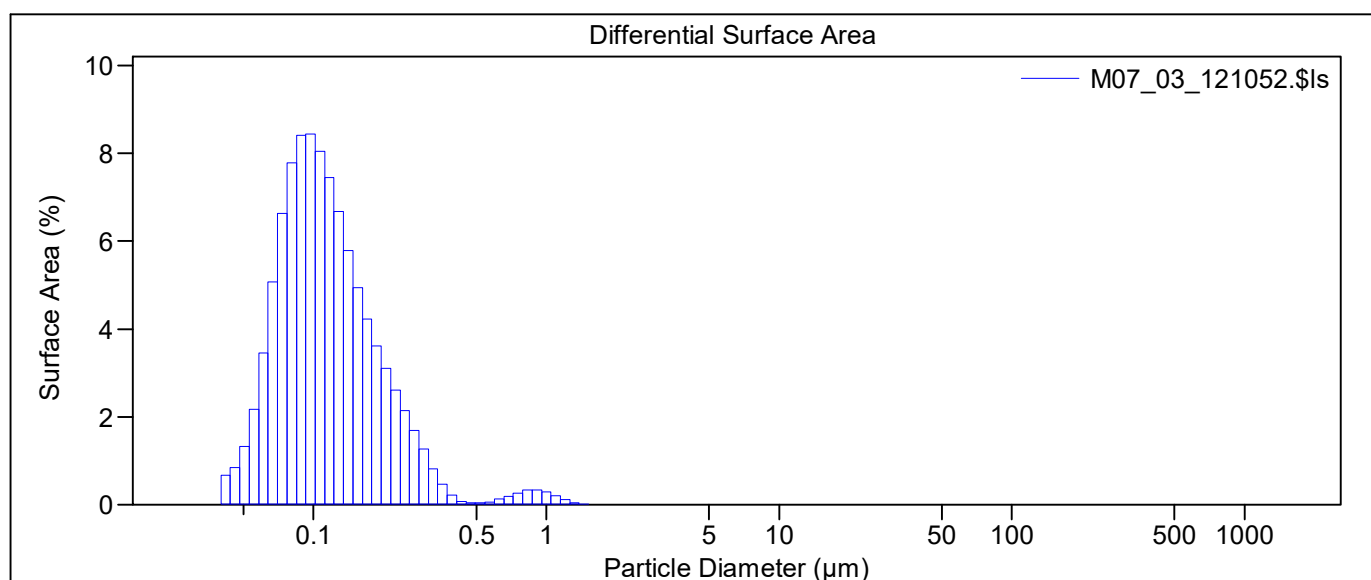
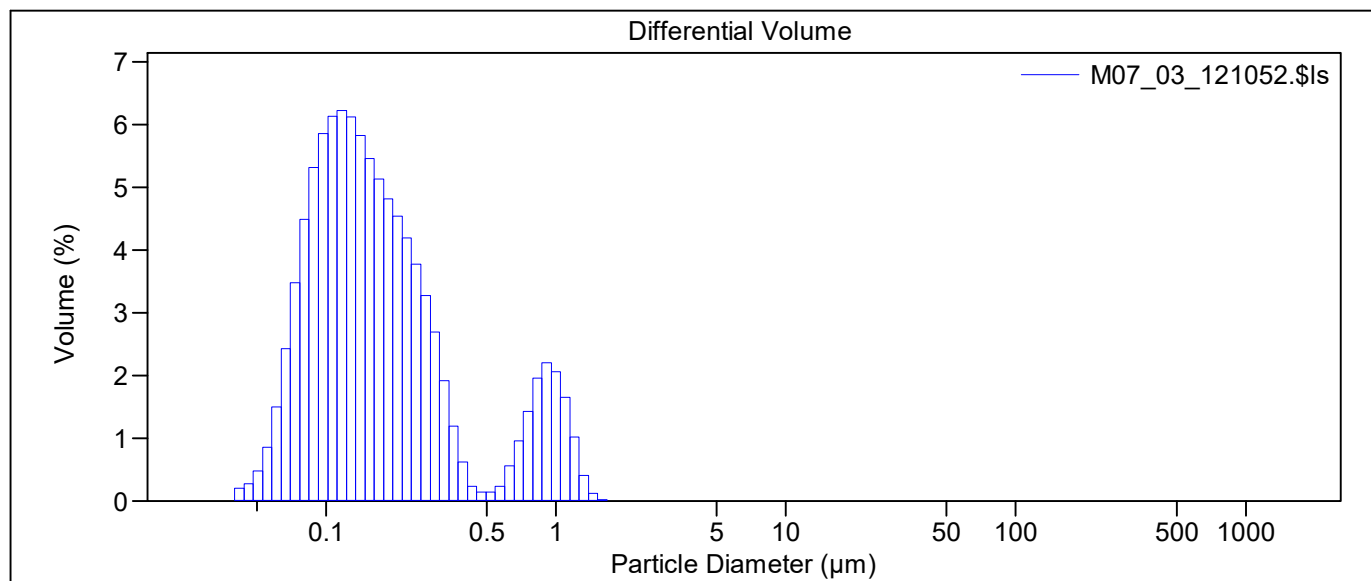
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_03_121052.\$ls		
	M07_03_121052.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.61%		
LS 13 320	Universal Liquid Module		
Start time:	12:09 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_03_121052.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.274 μm
Mean:	0.253 μm		Variance:	0.075 μm ²
Median:	0.150 μm		C.V.:	108%
Mean/Median ratio:	1.693		Skewness:	2.220 Right skewed
Mode:	0.117 μm		Kurtosis:	3.968 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.102 μm	0.150 μm	0.245 μm	0.764 μm

Surface Area Statistics (Arithmetic)		M07_03_121052.\$ls		
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%			
Mean:	0.140 µm	S.D.:	0.126 µm	
Median:	0.108 µm	Variance:	0.016 µm ²	
Mean/Median ratio:	1.294	C.V.:	90.2%	
Mode:	0.097 µm	Skewness:	5.042 Right skewed	
		Kurtosis:	31.77 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.154 µm	0.225 µm

Number Statistics (Arithmetic)			M07_03_121052.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.4%
Mean/Median ratio:	1.107		Skewness:	3.871 Right skewed
Mode:	0.073 μm		Kurtosis:	51.26 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.67	3.44
10	0.044	0.046	0.28	0.84	3.57
11	0.048	0.050	0.48	1.33	4.69
12	0.053	0.055	0.86	2.17	6.35
13	0.058	0.061	1.50	3.46	8.40
14	0.064	0.067	2.43	5.08	10.2
15	0.070	0.073	3.48	6.64	11.1
16	0.077	0.080	4.49	7.79	10.8
17	0.084	0.088	5.32	8.41	9.69
18	0.093	0.097	5.85	8.43	8.07
19	0.102	0.106	6.14	8.05	6.39
20	0.112	0.117	6.23	7.45	4.90
21	0.122	0.128	6.13	6.67	3.65
22	0.134	0.141	5.83	5.78	2.62
23	0.148	0.155	5.46	4.94	1.86
24	0.162	0.170	5.13	4.22	1.32
25	0.178	0.186	4.82	3.62	0.94
26	0.195	0.205	4.54	3.10	0.67
27	0.214	0.225	4.20	2.61	0.47
28	0.235	0.247	3.78	2.14	0.32
29	0.258	0.271	3.27	1.69	0.21
30	0.284	0.297	2.69	1.27	0.13
31	0.311	0.326	1.92	0.82	0.069
32	0.342	0.358	1.20	0.47	0.033
33	0.375	0.393	0.62	0.22	0.013
34	0.412	0.431	0.23	0.076	0.0037
35	0.452	0.474	0.15	0.043	0.0017
36	0.496	0.520	0.15	0.039	0.0013
37	0.545	0.571	0.23	0.057	0.0016
38	0.598	0.627	0.56	0.13	0.0029
39	0.656	0.688	0.96	0.20	0.0037
40	0.721	0.755	1.43	0.26	0.0042
41	0.791	0.829	1.96	0.33	0.0043
42	0.868	0.910	2.20	0.34	0.0037
43	0.953	0.999	2.06	0.29	0.0026
44	1.047	1.097	1.65	0.21	0.0016
45	1.149	1.204	1.02	0.12	0.00074
46	1.261	1.321	0.41	0.044	0.00023
47	1.385	1.451	0.12	0.012	0.000050
48	1.520	1.592	0.017	0.0015	0.000005
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

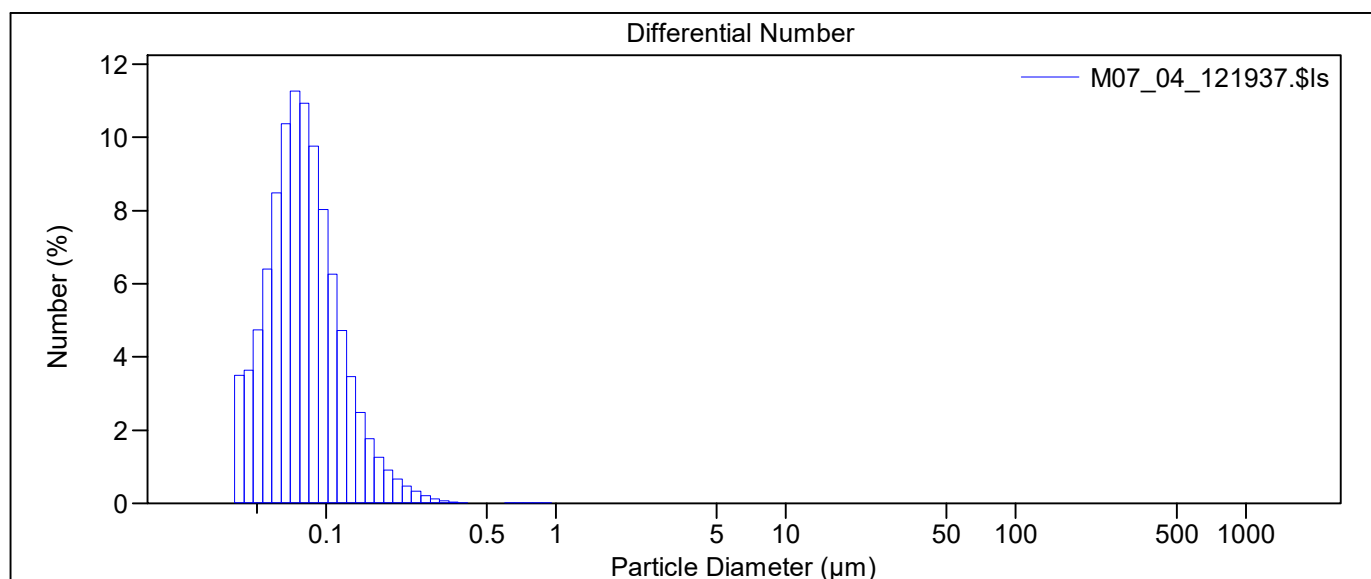
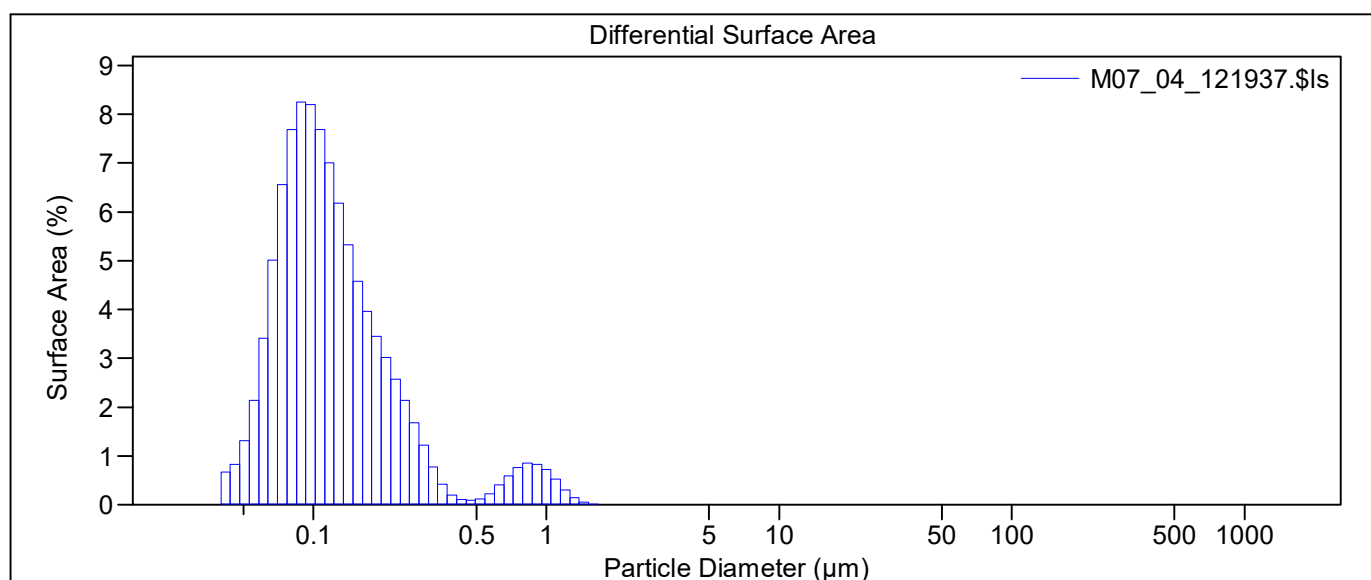
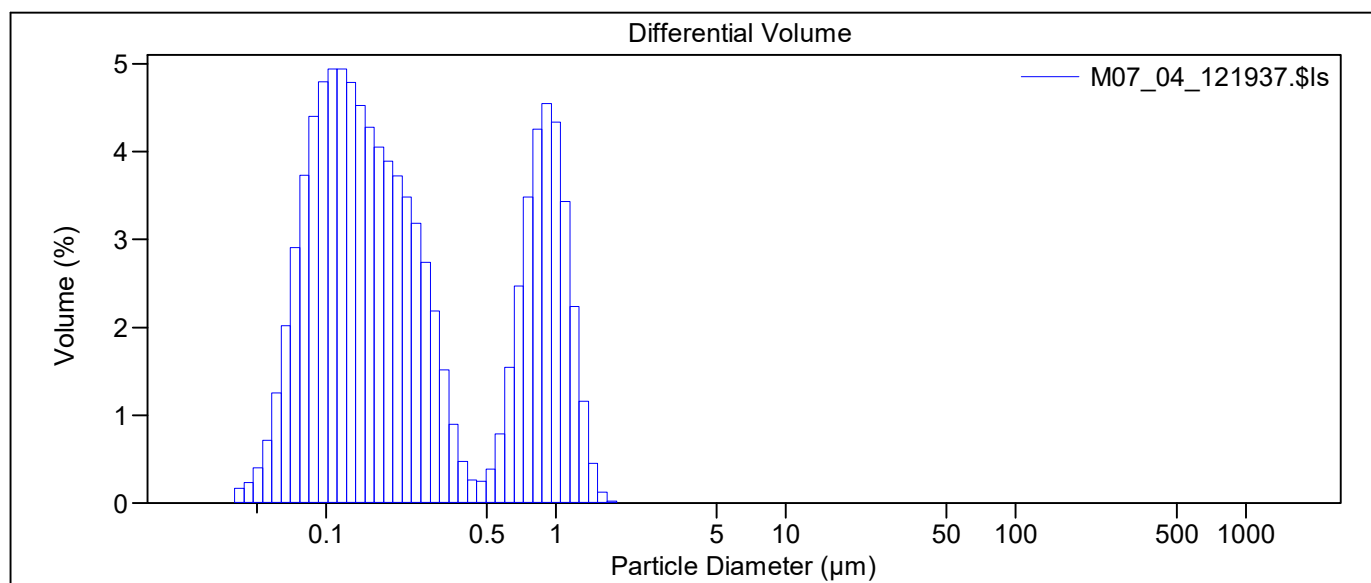
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File ID:	M07		
Operator:	PP		
Run number:	4		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.40%		
LS 13 320	Universal Liquid Module		
Start time:	12:17 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_04_121937.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.370 μm
Mean:	0.379 μm		Variance:	0.137 μm ²
Median:	0.186 μm		C.V.:	97.7%
Mean/Median ratio:	2.035		Skewness:	1.124 Right skewed
Mode:	0.106 μm		Kurtosis:	-0.137 Platykurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.110 μm	0.186 μm	0.696 μm	0.991 μm

Surface Area Statistics (Arithmetic)			M07_04_121937.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.188 μm
Mean:	0.166 μm		Variance:	0.035 μm ²
Median:	0.109 μm		C.V.:	113%
Mean/Median ratio:	1.515		Skewness:	3.671 Right skewed
Mode:	0.088 μm		Kurtosis:	14.25 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.109 μm	0.163 μm	0.259 μm

Number Statistics (Arithmetic)			M07_04_121937.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.042 μm
Mean:	0.087 μm		Variance:	0.0017 μm ²
Median:	0.078 μm		C.V.:	48.1%
Mean/Median ratio:	1.111		Skewness:	5.955 Right skewed
Mode:	0.073 μm		Kurtosis:	95.48 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.099 μm	0.129 μm



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Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.67	3.51
10	0.044	0.046	0.23	0.83	3.63
11	0.048	0.050	0.40	1.31	4.73
12	0.053	0.055	0.71	2.13	6.41
13	0.058	0.061	1.25	3.41	8.49
14	0.064	0.067	2.02	5.02	10.4
15	0.070	0.073	2.91	6.56	11.3
16	0.077	0.080	3.73	7.68	10.9
17	0.084	0.088	4.40	8.26	9.76
18	0.093	0.097	4.80	8.20	8.04
19	0.102	0.106	4.94	7.69	6.26
20	0.112	0.117	4.94	7.00	4.73
21	0.122	0.128	4.79	6.18	3.46
22	0.134	0.141	4.53	5.33	2.48
23	0.148	0.155	4.28	4.58	1.77
24	0.162	0.170	4.05	3.96	1.27
25	0.178	0.186	3.89	3.46	0.92
26	0.195	0.205	3.73	3.02	0.66
27	0.214	0.225	3.48	2.57	0.47
28	0.235	0.247	3.18	2.14	0.32
29	0.258	0.271	2.74	1.68	0.21
30	0.284	0.297	2.18	1.22	0.13
31	0.311	0.326	1.52	0.77	0.067
32	0.342	0.358	0.90	0.41	0.030
33	0.375	0.393	0.47	0.20	0.012
34	0.412	0.431	0.26	0.100	0.0049
35	0.452	0.474	0.25	0.087	0.0036
36	0.496	0.520	0.39	0.12	0.0042
37	0.545	0.571	0.79	0.23	0.0065
38	0.598	0.627	1.55	0.41	0.0096
39	0.656	0.688	2.47	0.60	0.012
40	0.721	0.755	3.49	0.76	0.012
41	0.791	0.829	4.26	0.85	0.011
42	0.868	0.910	4.55	0.83	0.0092
43	0.953	0.999	4.34	0.72	0.0067
44	1.047	1.097	3.43	0.52	0.0040
45	1.149	1.204	2.24	0.31	0.0020

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.16	0.15	0.00077
47	1.385	1.451	0.45	0.051	0.00022
48	1.520	1.592	0.12	0.013	0.000046
49	1.668	1.748	0.019	0.0018	0.000005
50	1.832	1.919	0.0010	0.000087	2.17E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

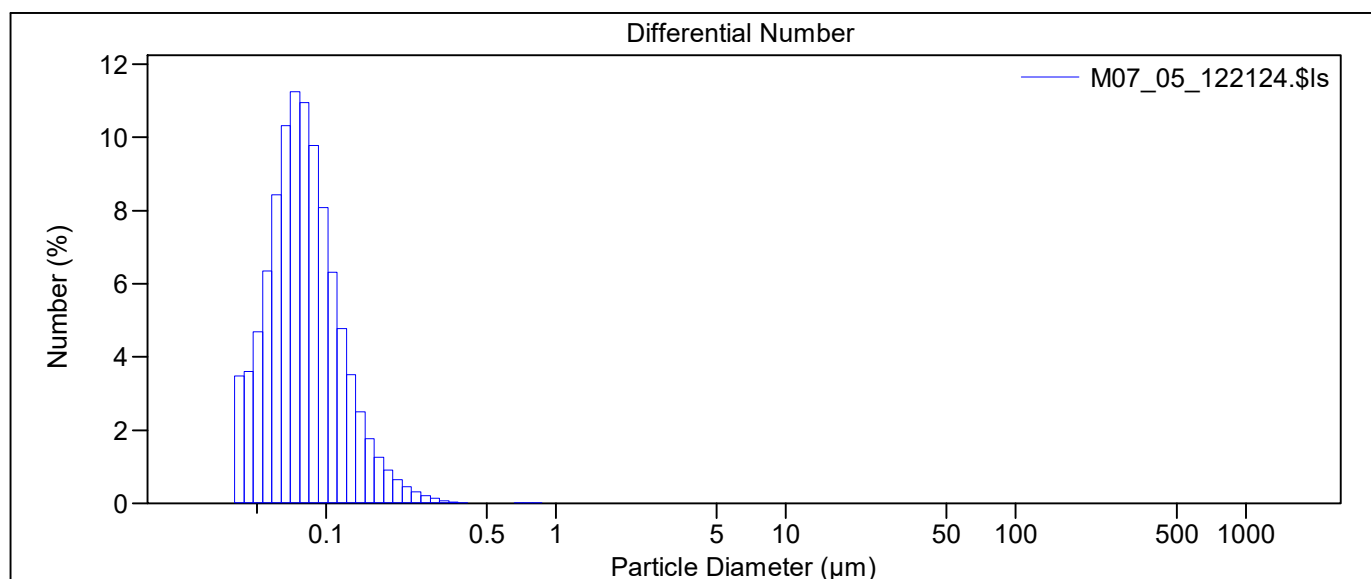
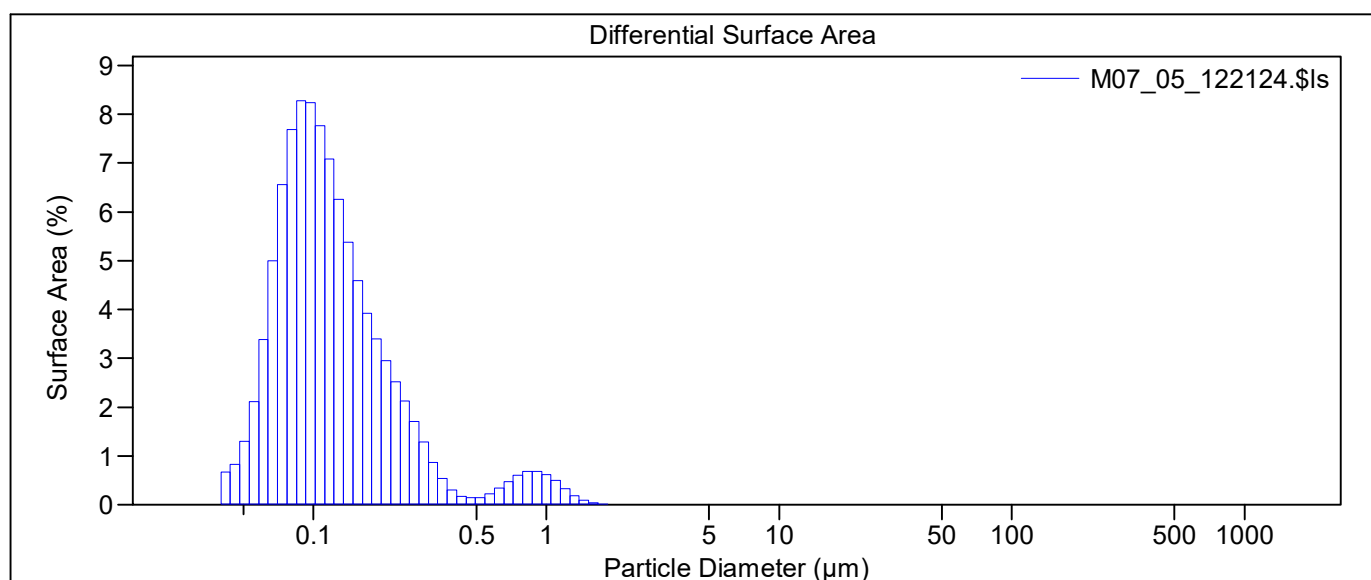
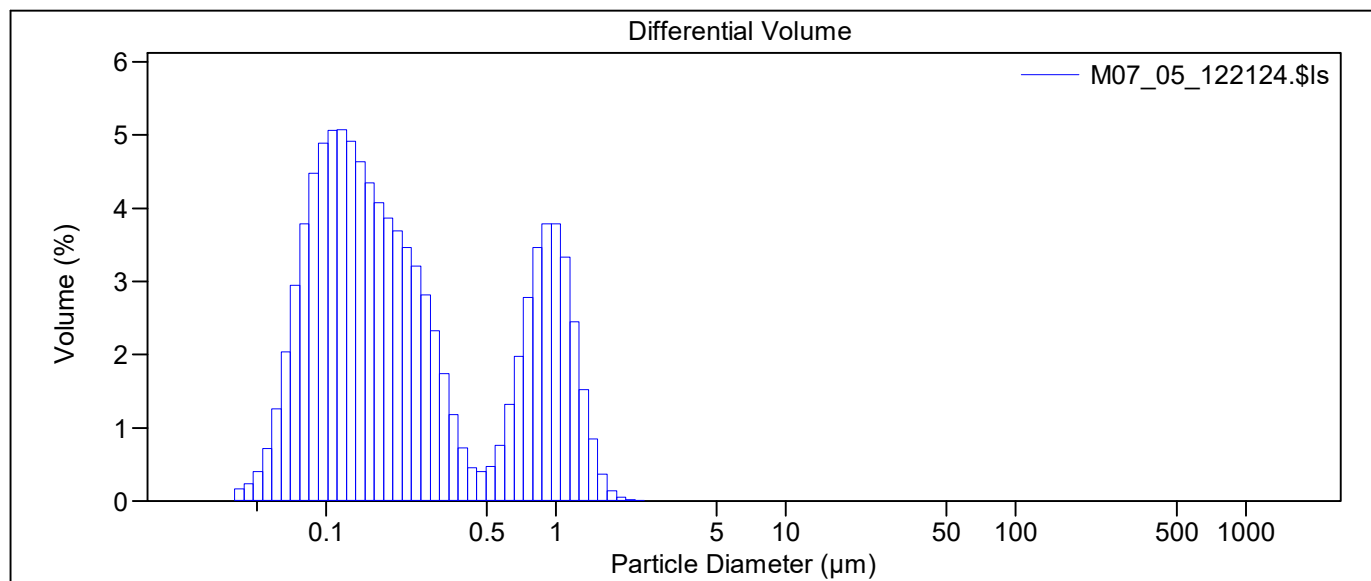
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Operator:	PP		
Run number:	5		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.83%		
LS 13 320	Universal Liquid Module		
Start time:	12:19 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_05_122124.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.383 μm
Mean:	0.375 μm		Variance:	0.147 μm ²
Median:	0.182 μm		C.V.:	102%
Mean/Median ratio:	2.059		Skewness:	1.320 Right skewed
Mode:	0.117 μm		Kurtosis:	0.566 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 μm	0.110 μm	0.182 μm	0.636 μm	1.016 μm

Surface Area Statistics (Arithmetic)			M07_05_122124.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.186 µm
Mean:	0.163 µm		Variance:	0.035 µm ²
Median:	0.109 µm		C.V.:	114%
Mean/Median ratio:	1.496		Skewness:	3.981 Right skewed
Mode:	0.088 µm		Kurtosis:	17.62 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.162 µm	0.258 µm

Number Statistics (Arithmetic)			M07_05_122124.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.041 μm
Mean:	0.087 μm		Variance:	0.0017 μm ²
Median:	0.078 μm		C.V.:	47.7%
Mean/Median ratio:	1.110		Skewness:	5.815 Right skewed
Mode:	0.073 μm		Kurtosis:	95.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.099 μm	0.129 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.66	3.49
10	0.044	0.046	0.23	0.83	3.61
11	0.048	0.050	0.40	1.29	4.68
12	0.053	0.055	0.72	2.12	6.35
13	0.058	0.061	1.26	3.39	8.44
14	0.064	0.067	2.04	5.00	10.3
15	0.070	0.073	2.94	6.56	11.3
16	0.077	0.080	3.79	7.69	11.0
17	0.084	0.088	4.48	8.28	9.78
18	0.093	0.097	4.89	8.24	8.08
19	0.102	0.106	5.06	7.77	6.32
20	0.112	0.117	5.07	7.09	4.78
21	0.122	0.128	4.92	6.26	3.51
22	0.134	0.141	4.64	5.38	2.50
23	0.148	0.155	4.34	4.59	1.77
24	0.162	0.170	4.08	3.93	1.26
25	0.178	0.186	3.87	3.39	0.90
26	0.195	0.205	3.69	2.95	0.65
27	0.214	0.225	3.47	2.52	0.46
28	0.235	0.247	3.21	2.13	0.32
29	0.258	0.271	2.82	1.70	0.21
30	0.284	0.297	2.33	1.28	0.13
31	0.311	0.326	1.74	0.87	0.075
32	0.342	0.358	1.18	0.54	0.039
33	0.375	0.393	0.73	0.30	0.018
34	0.412	0.431	0.45	0.17	0.0085
35	0.452	0.474	0.40	0.14	0.0057
36	0.496	0.520	0.47	0.15	0.0051
37	0.545	0.571	0.76	0.22	0.0061
38	0.598	0.627	1.32	0.34	0.0081
39	0.656	0.688	1.98	0.47	0.0092
40	0.721	0.755	2.78	0.60	0.0097
41	0.791	0.829	3.46	0.68	0.0092
42	0.868	0.910	3.79	0.68	0.0076
43	0.953	0.999	3.78	0.62	0.0057
44	1.047	1.097	3.33	0.50	0.0038
45	1.149	1.204	2.45	0.33	0.0021
46	1.261	1.321	1.52	0.19	0.00100
47	1.385	1.451	0.85	0.096	0.00042
48	1.520	1.592	0.37	0.038	0.00014
49	1.668	1.748	0.14	0.013	0.000040
50	1.832	1.919	0.056	0.0048	0.000012
51	2.011	2.107	0.014	0.0011	0.000002
52	2.207	2.313	0.0057	0.00040	0.000001
53	2.423	2.539	0.0013	0.000086	1.23E-7
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

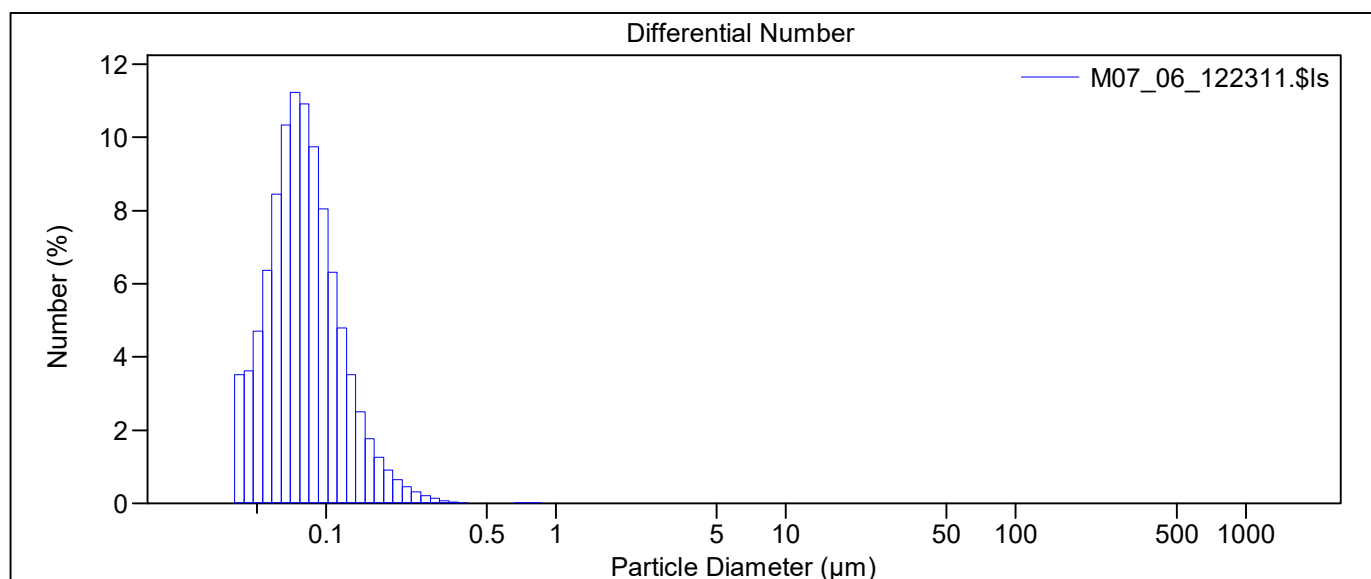
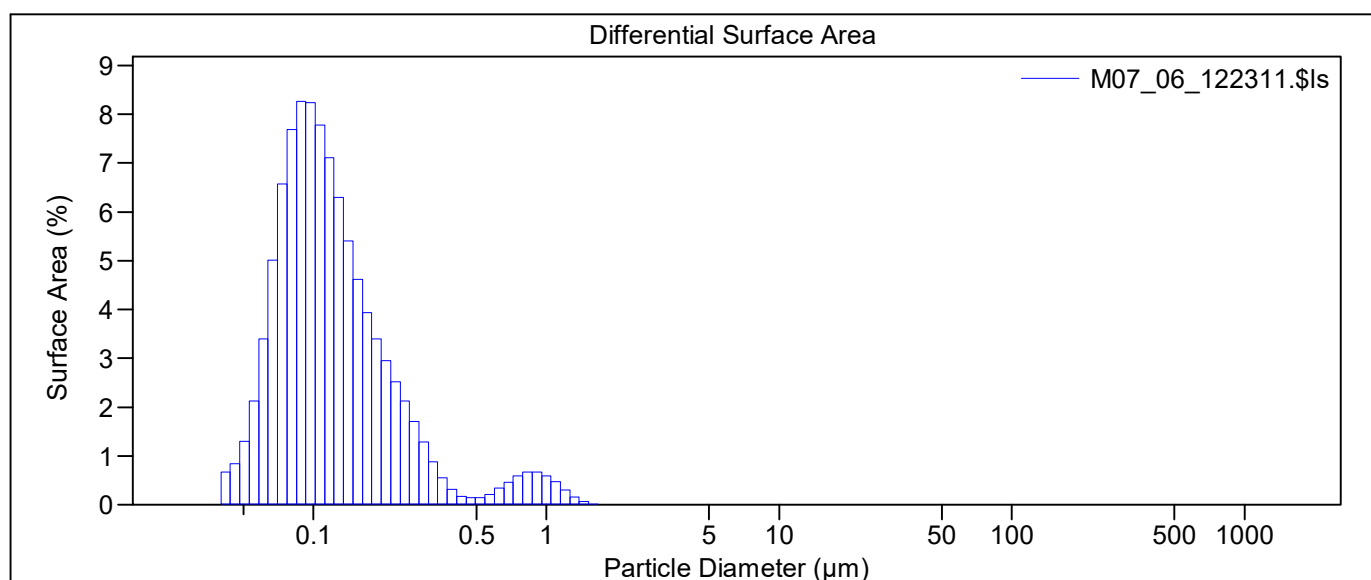
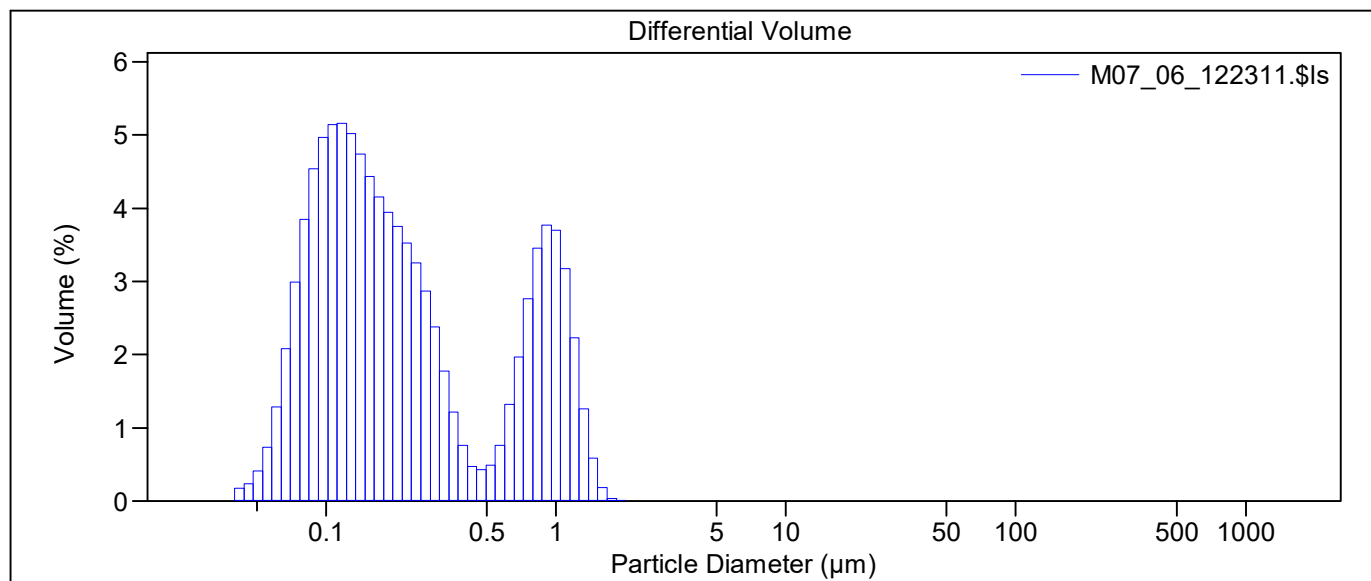
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File name:	D:\PP_PROFARB\POMIARY\M07\M07_06_122311.\$ls		
	M07_06_122311.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.84%		
LS 13 320	Universal Liquid Module		
Start time:	12:21 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	59%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_06_122311.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.364 µm
Mean:	0.359 µm		Variance:	0.132 µm ²
Median:	0.178 µm		C.V.:	101%
Mean/Median ratio:	2.012		Skewness:	1.326 Right skewed
Mode:	0.117 µm		Kurtosis:	0.459 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.109 µm	0.178 µm	0.560 µm	0.983 µm

Surface Area Statistics (Arithmetic)			M07_06_122311.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.178 µm
Mean:	0.161 µm		Variance:	0.032 µm ²
Median:	0.109 µm		C.V.:	111%
Mean/Median ratio:	1.474		Skewness:	3.959 Right skewed
Mode:	0.088 µm		Kurtosis:	17.28 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.161 µm	0.255 µm

Number Statistics (Arithmetic)			M07_06_122311.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.041 μm
Mean:	0.087 μm		Variance:	0.0017 μm ²
Median:	0.078 μm		C.V.:	47.5%
Mean/Median ratio:	1.110		Skewness:	5.593 Right skewed
Mode:	0.073 μm		Kurtosis:	88.73 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.099 μm	0.129 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.67	3.51
10	0.044	0.046	0.24	0.83	3.62
11	0.048	0.050	0.41	1.30	4.70
12	0.053	0.055	0.73	2.13	6.37
13	0.058	0.061	1.29	3.40	8.46
14	0.064	0.067	2.08	5.01	10.3
15	0.070	0.073	2.99	6.57	11.2
16	0.077	0.080	3.85	7.69	10.9
17	0.084	0.088	4.54	8.27	9.74
18	0.093	0.097	4.97	8.24	8.05
19	0.102	0.106	5.15	7.77	6.31
20	0.112	0.117	5.16	7.11	4.79
21	0.122	0.128	5.02	6.29	3.51
22	0.134	0.141	4.74	5.41	2.51
23	0.148	0.155	4.43	4.61	1.77
24	0.162	0.170	4.16	3.94	1.26
25	0.178	0.186	3.94	3.40	0.90
26	0.195	0.205	3.75	2.95	0.65
27	0.214	0.225	3.52	2.52	0.46
28	0.235	0.247	3.26	2.13	0.32
29	0.258	0.271	2.87	1.70	0.21
30	0.284	0.297	2.38	1.29	0.13
31	0.311	0.326	1.78	0.88	0.076
32	0.342	0.358	1.22	0.55	0.039
33	0.375	0.393	0.76	0.31	0.019
34	0.412	0.431	0.47	0.18	0.0087
35	0.452	0.474	0.43	0.14	0.0059
36	0.496	0.520	0.49	0.15	0.0051
37	0.545	0.571	0.76	0.21	0.0060
38	0.598	0.627	1.32	0.34	0.0079
39	0.656	0.688	1.96	0.46	0.0089
40	0.721	0.755	2.77	0.59	0.0095
41	0.791	0.829	3.45	0.67	0.0090
42	0.868	0.910	3.77	0.67	0.0074
43	0.953	0.999	3.70	0.60	0.0055
44	1.047	1.097	3.18	0.47	0.0036
45	1.149	1.204	2.23	0.30	0.0019

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.26	0.15	0.00081
47	1.385	1.451	0.58	0.065	0.00028
48	1.520	1.592	0.19	0.019	0.000068
49	1.668	1.748	0.039	0.0035	0.000011
50	1.832	1.919	0.0056	0.00047	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

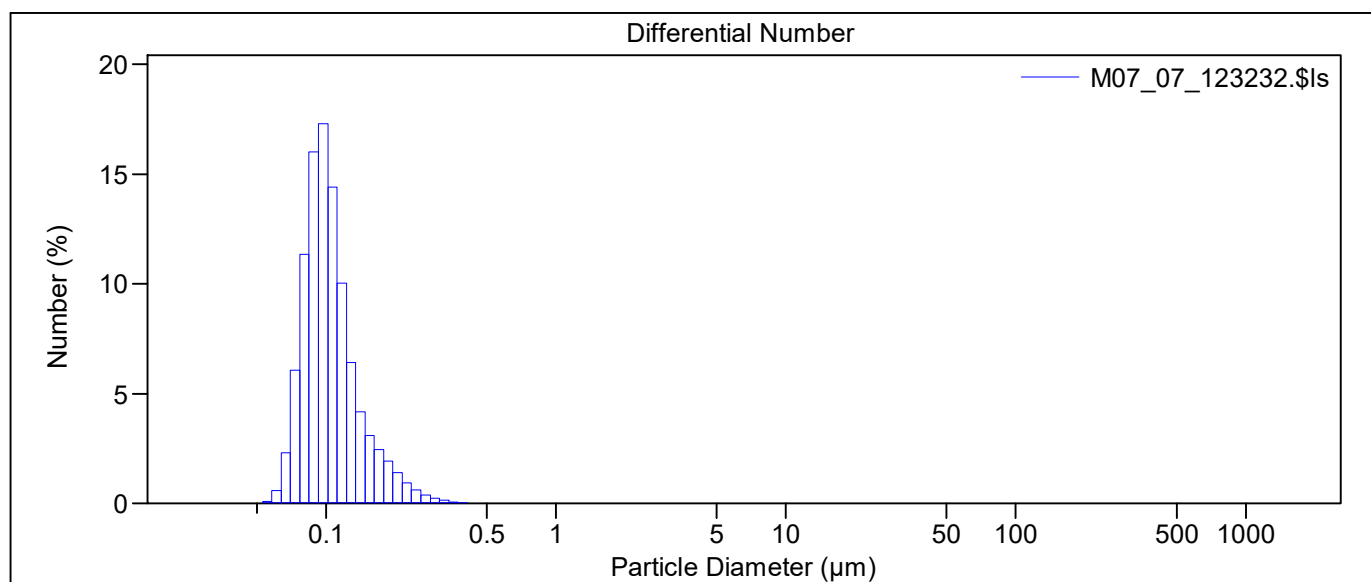
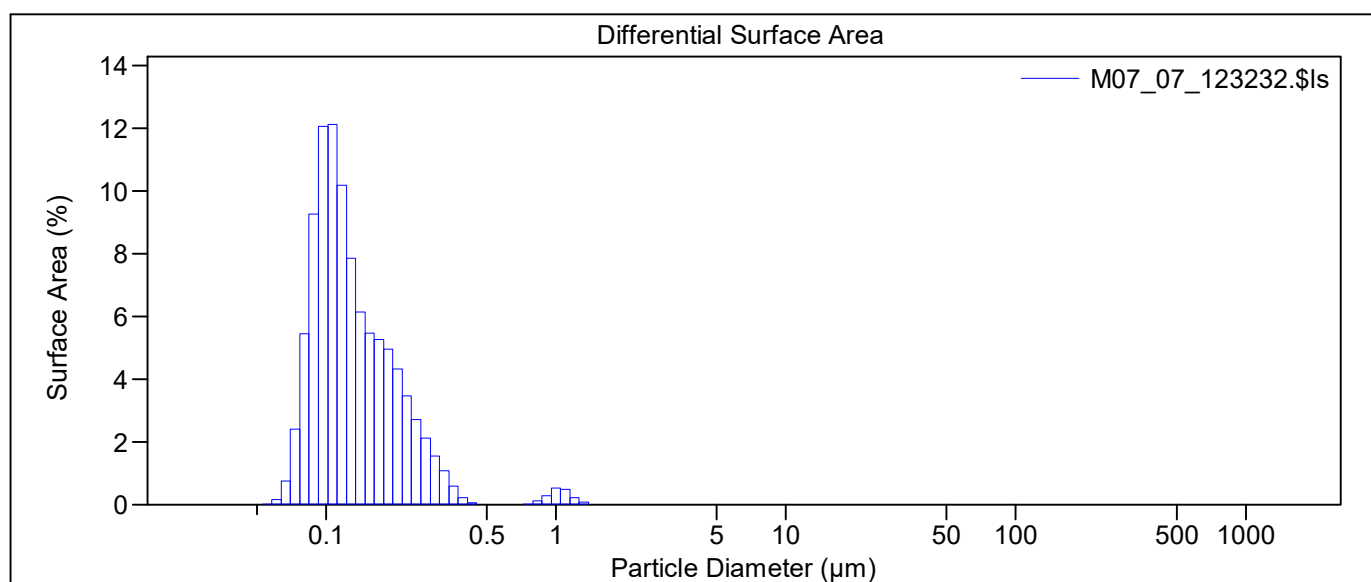
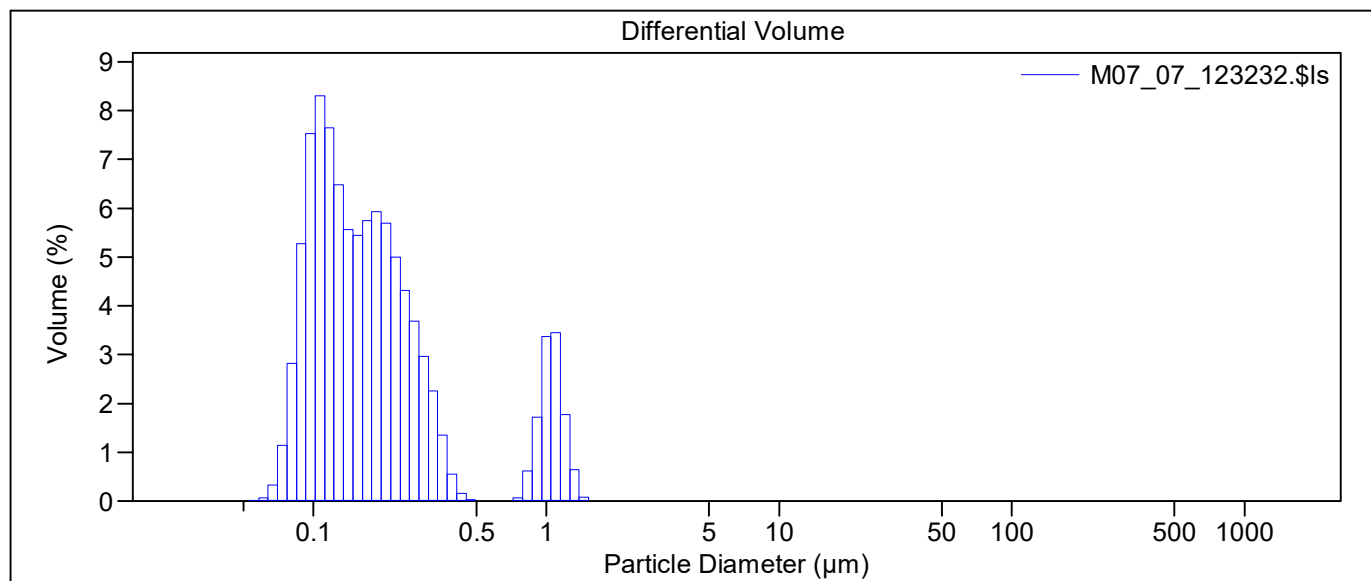
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_07_123232.\$ls		
	M07_07_123232.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.37%		
LS 13 320	Universal Liquid Module		
Start time:	12:30 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_07_123232.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.297 µm
Mean:	0.270 µm		Variance:	0.088 µm ²
Median:	0.160 µm		C.V.:	110%
Mean/Median ratio:	1.680		Skewness:	2.254 Right skewed
Mode:	0.106 µm		Kurtosis:	3.693 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.093 µm	0.111 µm	0.160 µm	0.246 µm	0.919 µm

Surface Area Statistics (Arithmetic)			M07_07_123232.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.133 µm
Mean:	0.155 µm		Variance:	0.018 µm ²
Median:	0.120 µm		C.V.:	85.7%
Mean/Median ratio:	1.297		Skewness:	5.508 Right skewed
Mode:	0.106 µm		Kurtosis:	35.54 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.085 µm	0.098 µm	0.120 µm	0.171 µm	0.236 µm

Number Statistics (Arithmetic)			M07_07_123232.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.109 μm		Variance:	0.0015 μm ²
Median:	0.100 μm		C.V.:	35.7%
Mean/Median ratio:	1.097		Skewness:	4.835 Right skewed
Mode:	0.097 μm		Kurtosis:	77.23 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.077 μm	0.087 μm	0.100 μm	0.119 μm	0.154 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00035	0.0011	0.0057
12	0.053	0.055	0.0077	0.022	0.095
13	0.058	0.061	0.062	0.16	0.58
14	0.064	0.067	0.33	0.76	2.30
15	0.070	0.073	1.14	2.42	6.06
16	0.077	0.080	2.82	5.45	11.3
17	0.084	0.088	5.27	9.28	16.0
18	0.093	0.097	7.53	12.1	17.3
19	0.102	0.106	8.31	12.1	14.4
20	0.112	0.117	7.65	10.2	10.0
21	0.122	0.128	6.48	7.85	6.43
22	0.134	0.141	5.57	6.14	4.17
23	0.148	0.155	5.44	5.47	3.08
24	0.162	0.170	5.75	5.26	2.46
25	0.178	0.186	5.93	4.95	1.92
26	0.195	0.205	5.70	4.33	1.39
27	0.214	0.225	5.01	3.46	0.93
28	0.235	0.247	4.32	2.72	0.60
29	0.258	0.271	3.68	2.11	0.39
30	0.284	0.297	2.96	1.55	0.24
31	0.311	0.326	2.25	1.07	0.14
32	0.342	0.358	1.35	0.59	0.062
33	0.375	0.393	0.55	0.22	0.019
34	0.412	0.431	0.16	0.059	0.0043
35	0.452	0.474	0.022	0.0071	0.00043
36	0.496	0.520	0.00025	0.000075	0.000004
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.065	0.013	0.00031
41	0.791	0.829	0.61	0.11	0.0023
42	0.868	0.910	1.72	0.29	0.0048
43	0.953	0.999	3.38	0.53	0.0071
44	1.047	1.097	3.45	0.49	0.0055
45	1.149	1.204	1.77	0.23	0.0021
46	1.261	1.321	0.64	0.076	0.00058
47	1.385	1.451	0.075	0.0080	0.000051
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

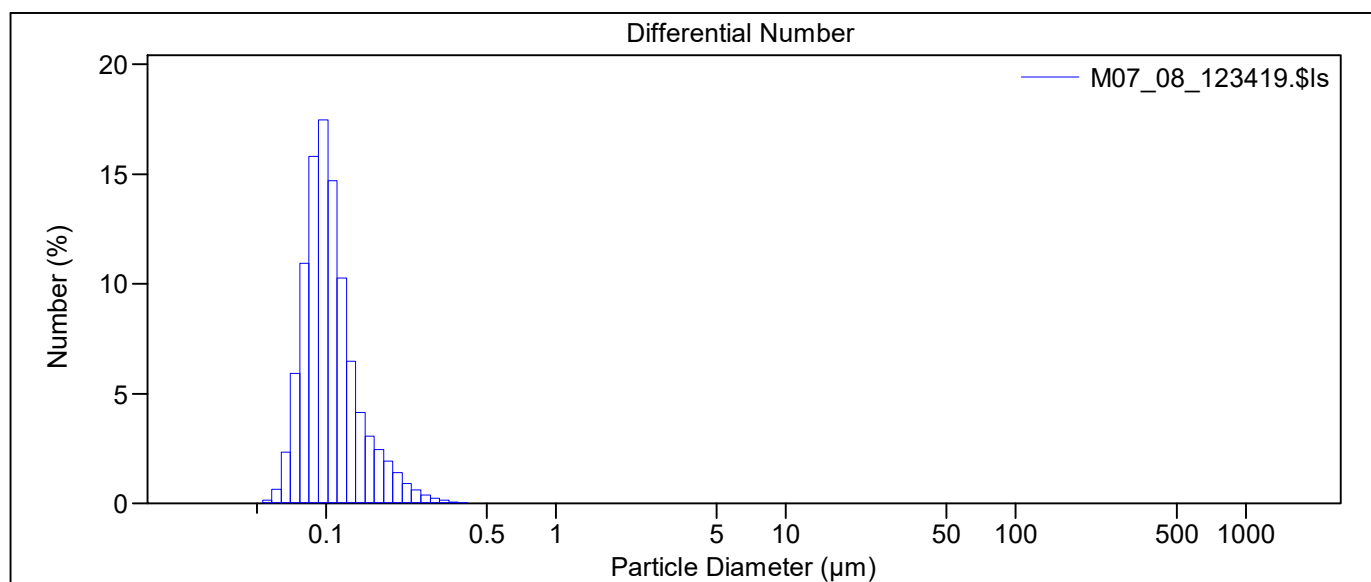
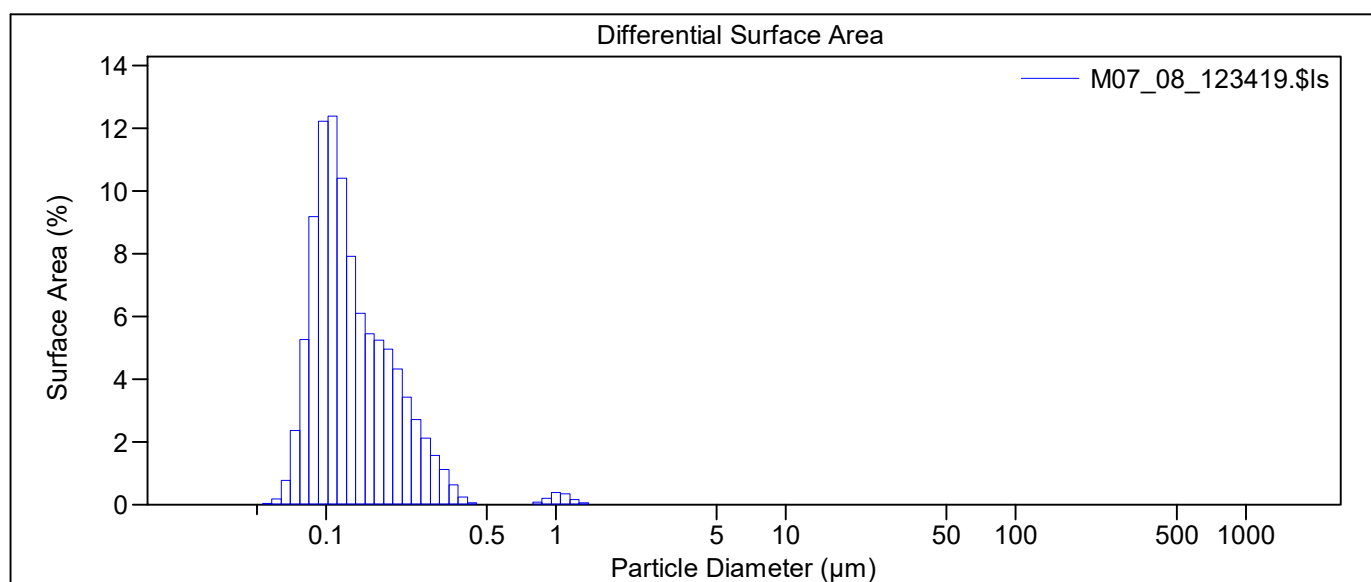
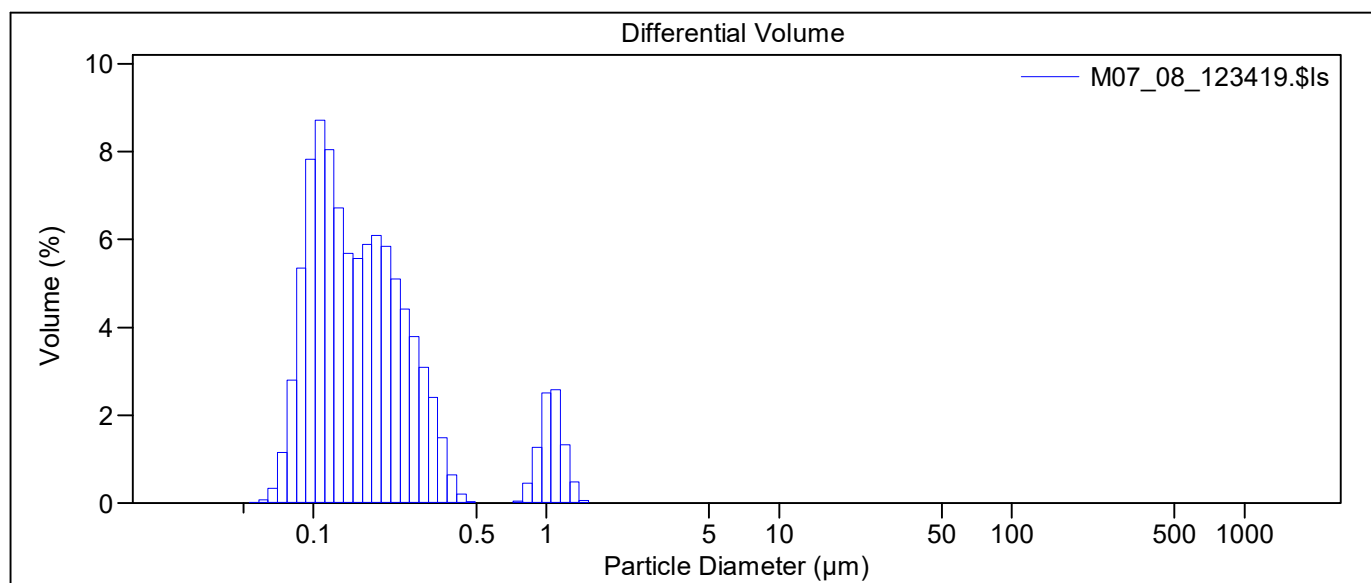
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_08_123419.\$ls		
	M07_08_123419.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.49%		
LS 13 320	Universal Liquid Module		
Start time:	12:32 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_08_123419.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.263 μm
Mean:	0.244 μm		Variance:	0.069 μm ²
Median:	0.156 μm		C.V.:	108%
Mean/Median ratio:	1.560		Skewness:	2.686 Right skewed
Mode:	0.106 μm		Kurtosis:	6.146 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.093 μm	0.110 μm	0.156 μm	0.234 μm	0.366 μm

Surface Area Statistics (Arithmetic)			M07_08_123419.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.118 µm
Mean:	0.151 µm		Variance:	0.014 µm ²
Median:	0.120 µm		C.V.:	78.0%
Mean/Median ratio:	1.266		Skewness:	5.871 Right skewed
Mode:	0.106 µm		Kurtosis:	43.17 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.086 µm	0.098 µm	0.120 µm	0.170 µm	0.234 µm

Number Statistics (Arithmetic)			M07_08_123419.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.109 μm		Variance:	0.0015 μm ²
Median:	0.100 μm		C.V.:	35.1%
Mean/Median ratio:	1.095		Skewness:	4.250 Right skewed
Mode:	0.097 μm		Kurtosis:	61.65 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.077 μm	0.087 μm	0.100 μm	0.119 μm	0.153 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00062	0.0019	0.0099
12	0.053	0.055	0.011	0.031	0.14
13	0.058	0.061	0.072	0.18	0.65
14	0.064	0.067	0.34	0.77	2.32
15	0.070	0.073	1.15	2.37	5.92
16	0.077	0.080	2.80	5.27	10.9
17	0.084	0.088	5.36	9.17	15.8
18	0.093	0.097	7.83	12.2	17.5
19	0.102	0.106	8.72	12.4	14.7
20	0.112	0.117	8.04	10.4	10.2
21	0.122	0.128	6.72	7.93	6.47
22	0.134	0.141	5.69	6.11	4.14
23	0.148	0.155	5.56	5.44	3.06
24	0.162	0.170	5.88	5.25	2.45
25	0.178	0.186	6.10	4.95	1.92
26	0.195	0.205	5.85	4.33	1.39
27	0.214	0.225	5.09	3.43	0.92
28	0.235	0.247	4.41	2.71	0.60
29	0.258	0.271	3.79	2.12	0.39
30	0.284	0.297	3.09	1.58	0.24
31	0.311	0.326	2.41	1.12	0.14
32	0.342	0.358	1.49	0.63	0.066
33	0.375	0.393	0.64	0.25	0.021
34	0.412	0.431	0.20	0.070	0.0051
35	0.452	0.474	0.030	0.0097	0.00058
36	0.496	0.520	0.00067	0.00020	0.000010
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.047	0.0095	0.00022
41	0.791	0.829	0.45	0.083	0.0016
42	0.868	0.910	1.27	0.21	0.0034
43	0.953	0.999	2.51	0.38	0.0051
44	1.047	1.097	2.58	0.36	0.0040
45	1.149	1.204	1.32	0.17	0.0015

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.48	0.055	0.00042
47	1.385	1.451	0.057	0.0059	0.000038
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

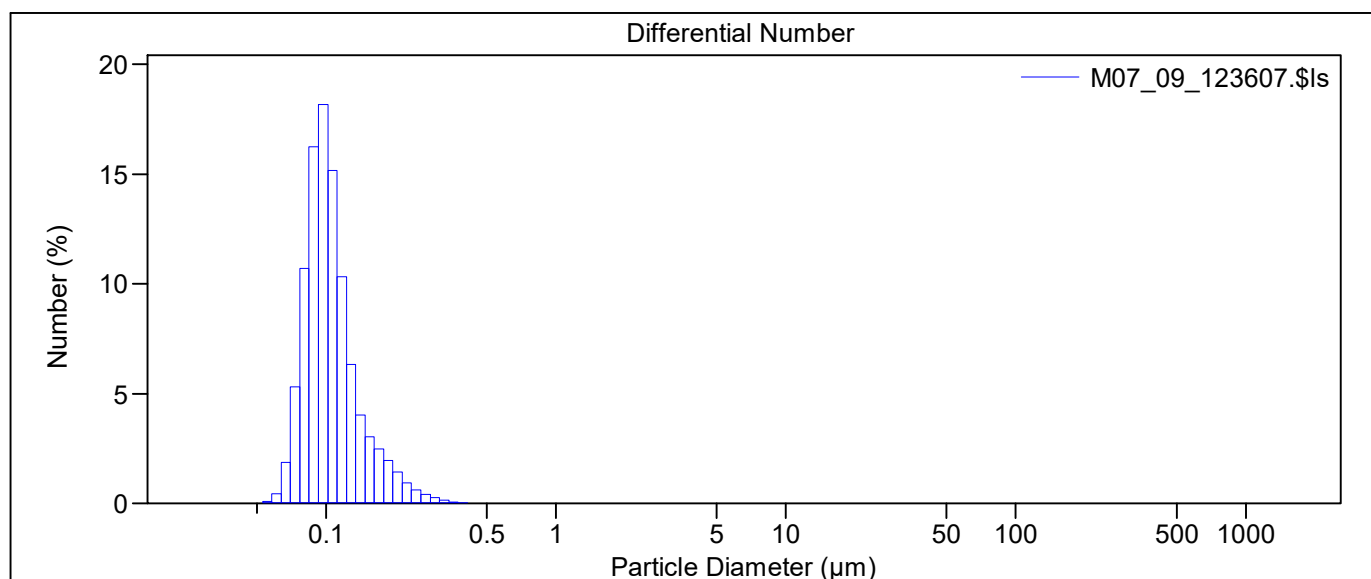
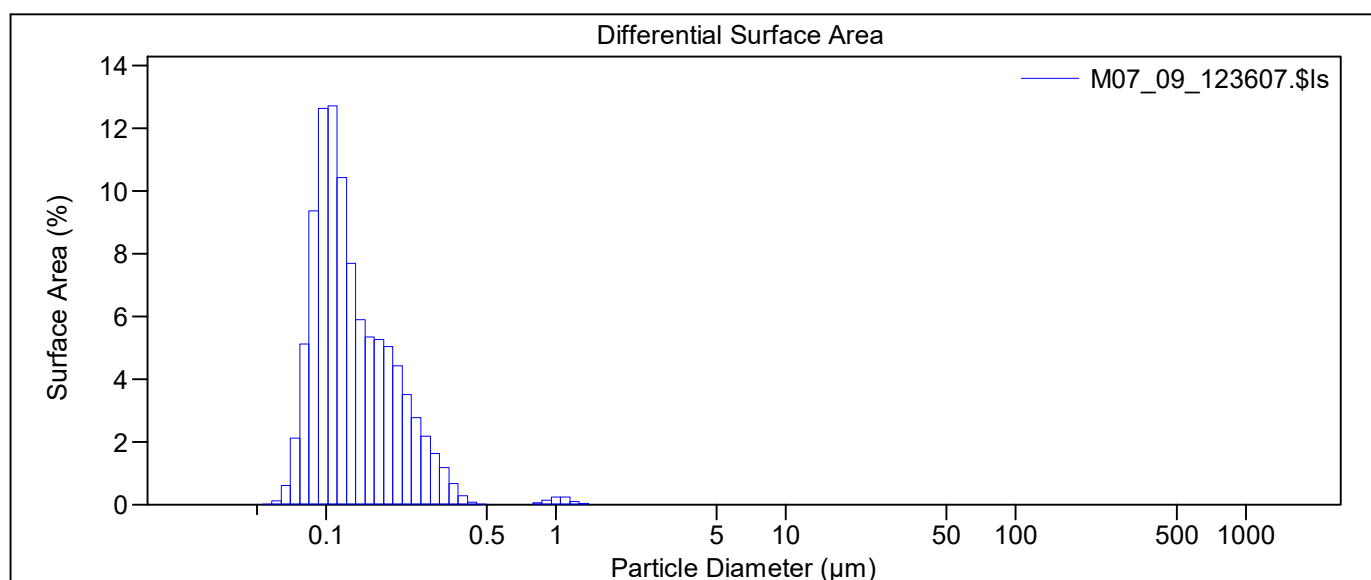
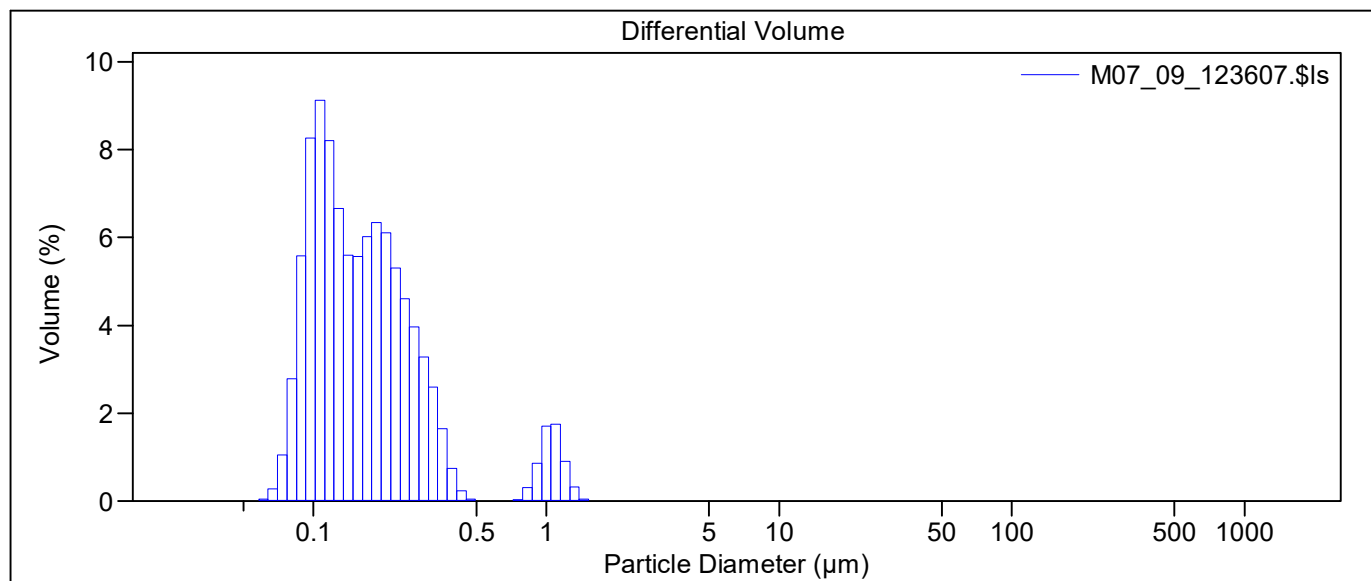
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_09_123607.\$ls		
	M07_09_123607.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.50%		
LS 13 320	Universal Liquid Module		
Start time:	12:34 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_09_123607.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.224 µm
Mean:	0.220 µm		Variance:	0.050 µm ²
Median:	0.154 µm		C.V.:	102%
Mean/Median ratio:	1.430		Skewness:	3.249 Right skewed
Mode:	0.106 µm		Kurtosis:	10.21 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.093 µm	0.109 µm	0.154 µm	0.228 µm	0.325 µm

Surface Area Statistics (Arithmetic)			M07_09_123607.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.103 µm
Mean:	0.148 µm		Variance:	0.011 µm ²
Median:	0.119 µm		C.V.:	69.4%
Mean/Median ratio:	1.245		Skewness:	6.058 Right skewed
Mode:	0.106 µm		Kurtosis:	50.98 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.086 µm	0.098 µm	0.119 µm	0.171 µm	0.233 µm

Number Statistics (Arithmetic)			M07_09_123607.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.110 μm		Variance:	0.0014 μm ²
Median:	0.100 μm		C.V.:	34.5%
Mean/Median ratio:	1.097		Skewness:	3.720 Right skewed
Mode:	0.097 μm		Kurtosis:	45.96 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.088 μm	0.100 μm	0.119 μm	0.154 μm



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M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00040	0.0012	0.0062
12	0.053	0.055	0.0072	0.019	0.085
13	0.058	0.061	0.051	0.12	0.45
14	0.064	0.067	0.28	0.61	1.86
15	0.070	0.073	1.05	2.11	5.32
16	0.077	0.080	2.78	5.13	10.7
17	0.084	0.088	5.58	9.37	16.2
18	0.093	0.097	8.27	12.6	18.2
19	0.102	0.106	9.12	12.7	15.2
20	0.112	0.117	8.21	10.4	10.3
21	0.122	0.128	6.66	7.70	6.33
22	0.134	0.141	5.59	5.89	4.01
23	0.148	0.155	5.57	5.34	3.02
24	0.162	0.170	6.02	5.26	2.47
25	0.178	0.186	6.34	5.05	1.97
26	0.195	0.205	6.11	4.43	1.43
27	0.214	0.225	5.31	3.51	0.94
28	0.235	0.247	4.60	2.77	0.62
29	0.258	0.271	3.97	2.17	0.40
30	0.284	0.297	3.28	1.64	0.25
31	0.311	0.326	2.60	1.18	0.15
32	0.342	0.358	1.65	0.68	0.072
33	0.375	0.393	0.74	0.28	0.024
34	0.412	0.431	0.24	0.082	0.0059
35	0.452	0.474	0.039	0.012	0.00073
36	0.496	0.520	0.0012	0.00035	0.000017
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.032	0.0063	0.00015
41	0.791	0.829	0.31	0.055	0.0011
42	0.868	0.910	0.87	0.14	0.0023
43	0.953	0.999	1.71	0.25	0.0034
44	1.047	1.097	1.75	0.24	0.0027
45	1.149	1.204	0.90	0.11	0.0010
46	1.261	1.321	0.33	0.037	0.00028
47	1.385	1.451	0.038	0.0039	0.000025
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

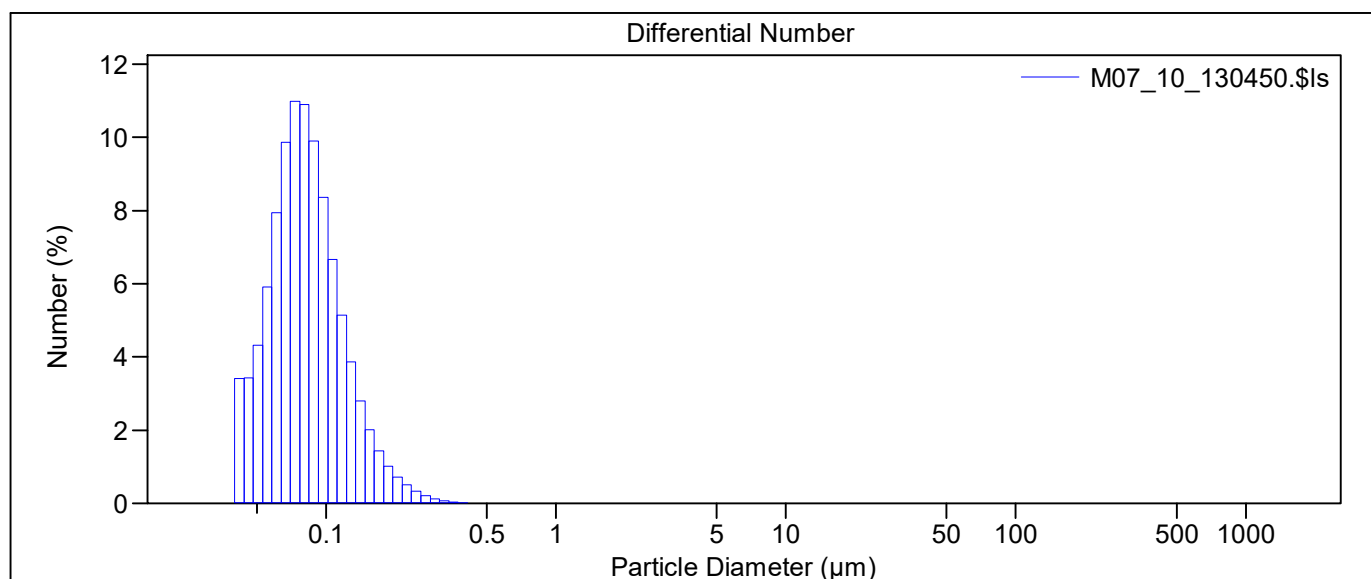
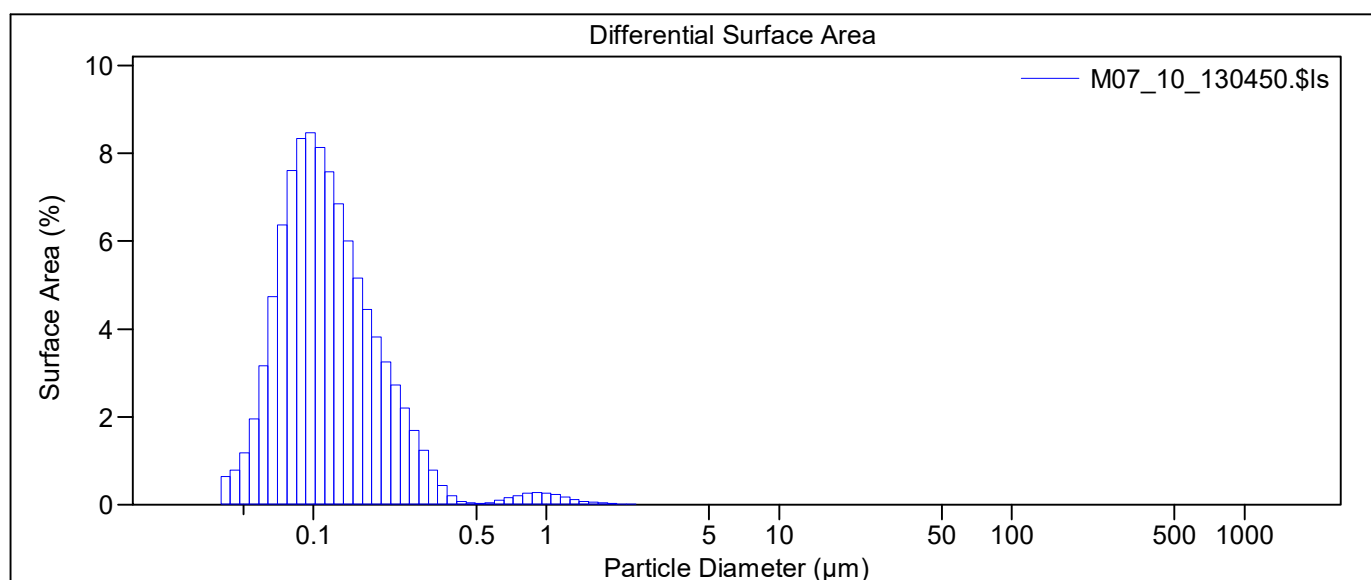
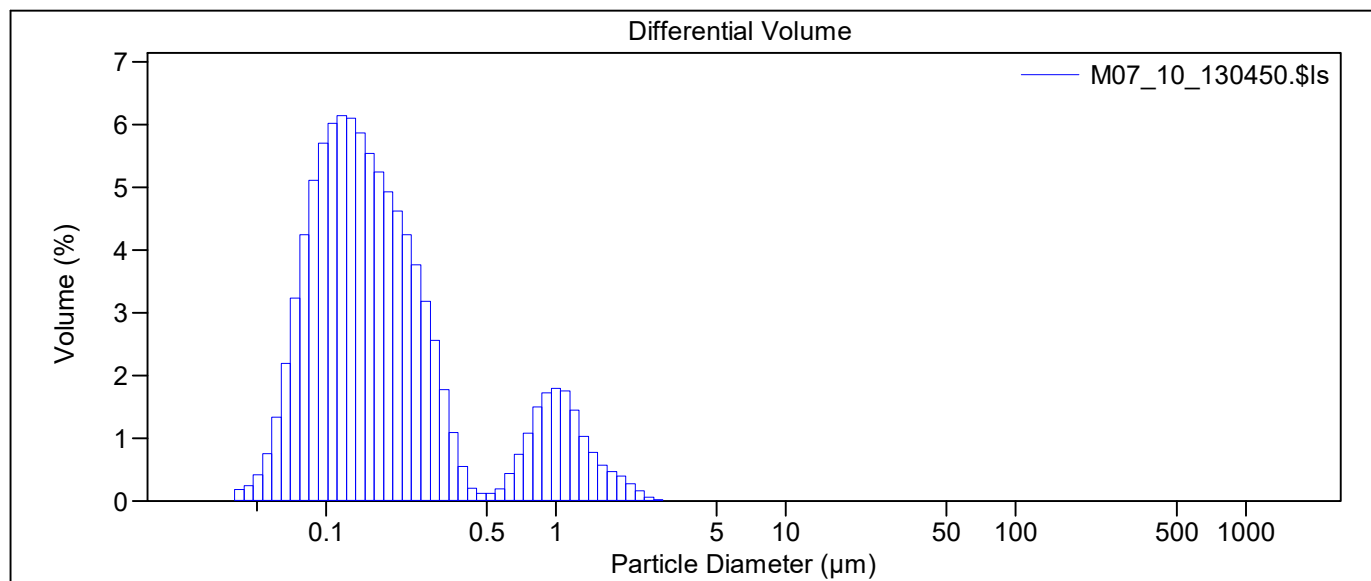
Beckman Coulter LS13320

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File ID:	M07		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.75%		
LS 13 320	Universal Liquid Module		
Start time:	13:03 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-2%	PIDS Obscur:	71%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_10_130450.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.374 µm
Mean:	0.295 µm		Variance:	0.140 µm ²
Median:	0.154 µm		C.V.:	127%
Mean/Median ratio:	1.919		Skewness:	2.629 Right skewed
Mode:	0.117 µm		Kurtosis:	7.122 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.104 µm	0.154 µm	0.253 µm	0.893 µm

Surface Area Statistics (Arithmetic)			M07_10_130450.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.148 µm
Mean:	0.144 µm		Variance:	0.022 µm ²
Median:	0.110 µm		C.V.:	102%
Mean/Median ratio:	1.312		Skewness:	6.317 Right skewed
Mode:	0.097 µm		Kurtosis:	52.90 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.226 µm

Number Statistics (Arithmetic)			M07_10_130450.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.088 μm		Variance:	0.0015 μm ²
Median:	0.080 μm		C.V.:	44.4%
Mean/Median ratio:	1.105		Skewness:	4.195 Right skewed
Mode:	0.073 μm		Kurtosis:	71.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.132 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.65	3.41
10	0.044	0.046	0.25	0.78	3.43
11	0.048	0.050	0.42	1.19	4.32
12	0.053	0.055	0.75	1.96	5.92
13	0.058	0.061	1.34	3.17	7.94
14	0.064	0.067	2.20	4.74	9.86
15	0.070	0.073	3.24	6.37	11.0
16	0.077	0.080	4.25	7.61	10.9
17	0.084	0.088	5.11	8.34	9.91
18	0.093	0.097	5.71	8.47	8.36
19	0.102	0.106	6.02	8.14	6.66
20	0.112	0.117	6.15	7.58	5.14
21	0.122	0.128	6.10	6.85	3.86
22	0.134	0.141	5.87	6.00	2.81
23	0.148	0.155	5.54	5.16	2.00
24	0.162	0.170	5.24	4.45	1.43
25	0.178	0.186	4.93	3.81	1.02
26	0.195	0.205	4.62	3.26	0.72
27	0.214	0.225	4.24	2.72	0.50
28	0.235	0.247	3.76	2.20	0.34
29	0.258	0.271	3.19	1.70	0.21
30	0.284	0.297	2.56	1.24	0.13
31	0.311	0.326	1.78	0.79	0.068
32	0.342	0.358	1.09	0.44	0.032
33	0.375	0.393	0.55	0.20	0.012
34	0.412	0.431	0.20	0.068	0.0034
35	0.452	0.474	0.13	0.038	0.0016
36	0.496	0.520	0.12	0.034	0.0012
37	0.545	0.571	0.19	0.048	0.0014
38	0.598	0.627	0.44	0.10	0.0024
39	0.656	0.688	0.74	0.16	0.0030
40	0.721	0.755	1.09	0.21	0.0034
41	0.791	0.829	1.50	0.26	0.0035
42	0.868	0.910	1.73	0.27	0.0031
43	0.953	0.999	1.80	0.26	0.0024
44	1.047	1.097	1.75	0.23	0.0018
45	1.149	1.204	1.45	0.17	0.0011

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.03	0.11	0.00060
47	1.385	1.451	0.77	0.077	0.00034
48	1.520	1.592	0.57	0.052	0.00019
49	1.668	1.748	0.47	0.039	0.00012
50	1.832	1.919	0.40	0.030	0.000075
51	2.011	2.107	0.27	0.019	0.000039
52	2.207	2.313	0.16	0.010	0.000018
53	2.423	2.539	0.066	0.0038	0.000005
54	2.660	2.787	0.017	0.00087	0.000001
55	2.920	3.059	0.0025	0.00012	1.17E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

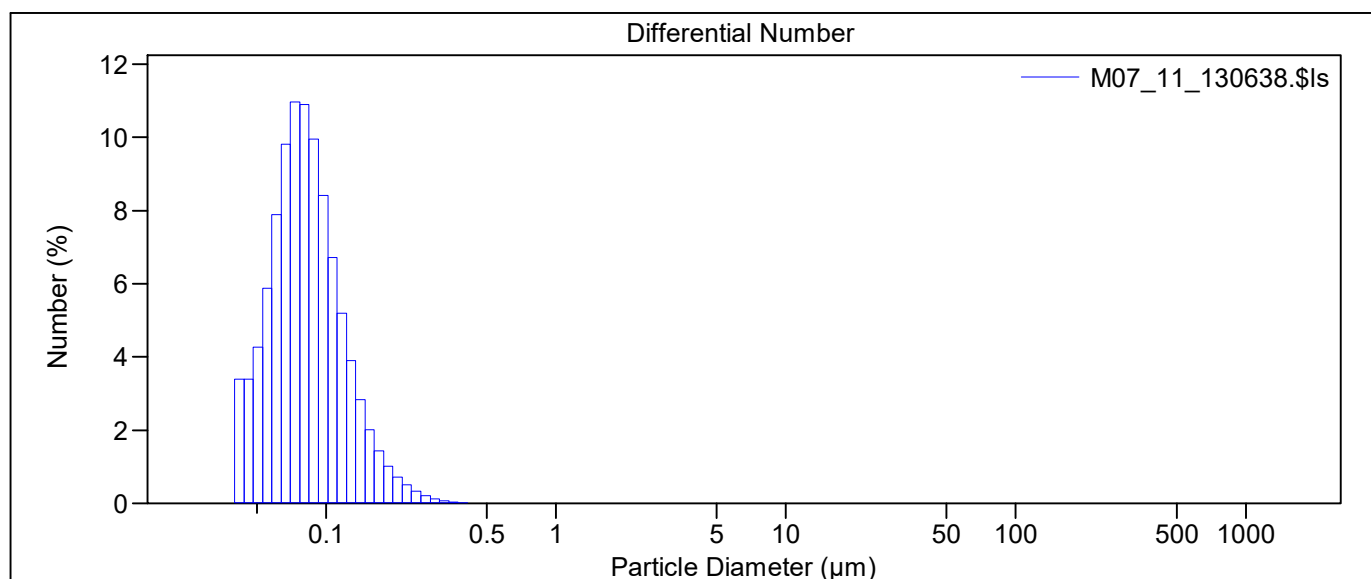
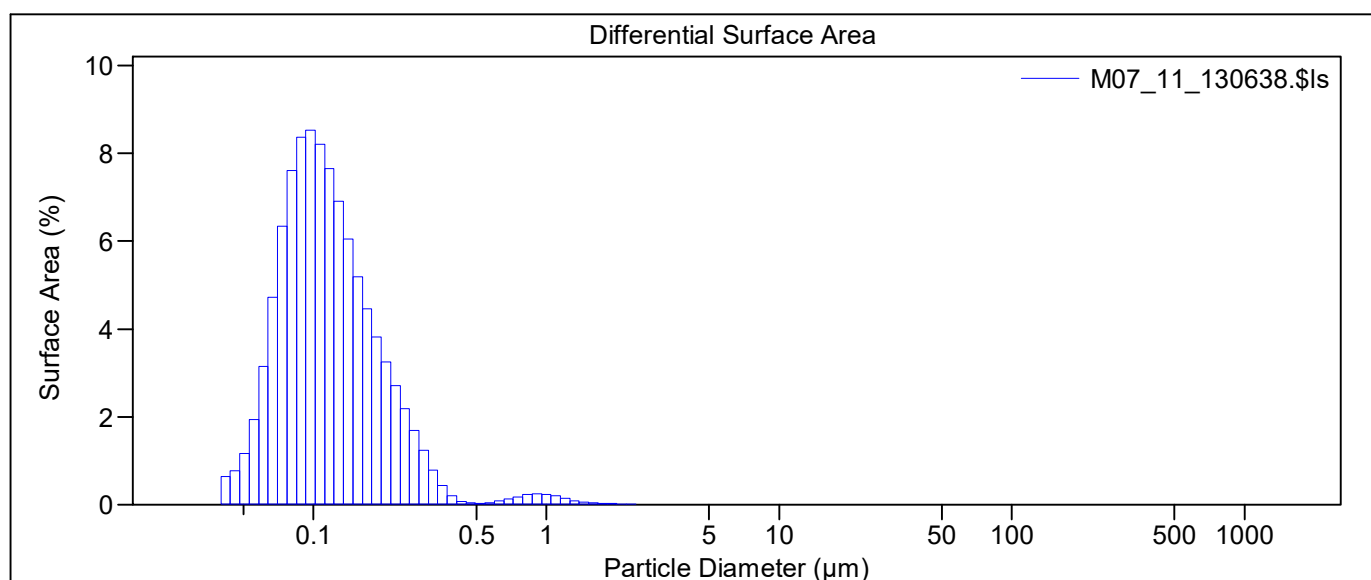
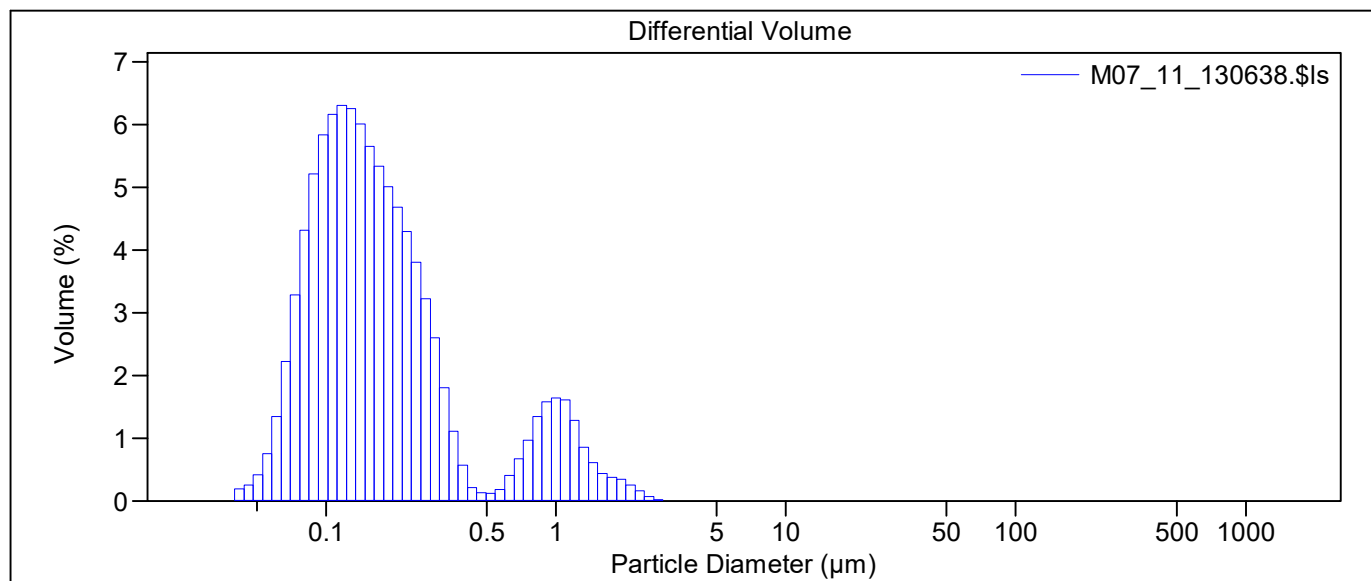
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File name:	D:\PP_PROFARB\POMIARY\M07\M07_11_130638.\$ls		
	M07_11_130638.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.94%		
LS 13 320	Universal Liquid Module		
Start time:	13:04 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-6%	PIDS Obscur:	72%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_11_130638.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.355 µm
Mean:	0.279 µm		Variance:	0.126 µm ²
Median:	0.151 µm		C.V.:	127%
Mean/Median ratio:	1.844		Skewness:	2.859 Right skewed
Mode:	0.117 µm		Kurtosis:	8.795 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.151 µm	0.244 µm	0.827 µm

Surface Area Statistics (Arithmetic)			M07_11_130638.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.139 µm
Mean:	0.142 µm		Variance:	0.019 µm ²
Median:	0.110 µm		C.V.:	98.3%
Mean/Median ratio:	1.292		Skewness:	6.544 Right skewed
Mode:	0.097 µm		Kurtosis:	58.53 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.067 µm	0.083 µm	0.110 µm	0.156 µm	0.224 µm

Number Statistics (Arithmetic)		M07_11_130638.\$ls		
Calculations from 0.017 μm to 2000 μm				
Number:	100%	S.D.:	0.039 μm	
Mean:	0.088 μm	Variance:	0.0015 μm ²	
Median:	0.080 μm	C.V.:	44.1%	
Mean/Median ratio:	1.104	Skewness:	3.953 Right skewed	
Mode:	0.073 μm	Kurtosis:	64.79 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.052 μm	0.064 μm	0.080 μm	0.102 μm	0.132 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.64	3.39
10	0.044	0.046	0.25	0.77	3.39
11	0.048	0.050	0.42	1.17	4.27
12	0.053	0.055	0.76	1.94	5.87
13	0.058	0.061	1.35	3.14	7.88
14	0.064	0.067	2.22	4.72	9.81
15	0.070	0.073	3.28	6.35	11.0
16	0.077	0.080	4.32	7.61	10.9
17	0.084	0.088	5.21	8.37	9.95
18	0.093	0.097	5.83	8.53	8.41
19	0.102	0.106	6.16	8.21	6.72
20	0.112	0.117	6.31	7.65	5.20
21	0.122	0.128	6.25	6.91	3.90
22	0.134	0.141	6.01	6.05	2.83
23	0.148	0.155	5.66	5.19	2.01
24	0.162	0.170	5.33	4.46	1.44
25	0.178	0.186	5.01	3.81	1.02
26	0.195	0.205	4.69	3.25	0.72
27	0.214	0.225	4.30	2.72	0.50
28	0.235	0.247	3.81	2.19	0.33
29	0.258	0.271	3.23	1.69	0.21
30	0.284	0.297	2.61	1.24	0.13
31	0.311	0.326	1.81	0.79	0.069
32	0.342	0.358	1.11	0.44	0.032
33	0.375	0.393	0.57	0.21	0.012
34	0.412	0.431	0.21	0.070	0.0035
35	0.452	0.474	0.13	0.039	0.0016
36	0.496	0.520	0.13	0.035	0.0012
37	0.545	0.571	0.18	0.045	0.0013
38	0.598	0.627	0.41	0.093	0.0022
39	0.656	0.688	0.67	0.14	0.0027
40	0.721	0.755	0.96	0.18	0.0029
41	0.791	0.829	1.35	0.23	0.0031
42	0.868	0.910	1.58	0.25	0.0028
43	0.953	0.999	1.65	0.23	0.0022
44	1.047	1.097	1.61	0.21	0.0016
45	1.149	1.204	1.29	0.15	0.00097
46	1.261	1.321	0.86	0.092	0.00049
47	1.385	1.451	0.62	0.060	0.00027
48	1.520	1.592	0.44	0.039	0.00014
49	1.668	1.748	0.37	0.030	0.000092
50	1.832	1.919	0.35	0.026	0.000065
51	2.011	2.107	0.25	0.017	0.000036
52	2.207	2.313	0.17	0.010	0.000018
53	2.423	2.539	0.069	0.0038	0.000006
54	2.660	2.787	0.018	0.00090	0.000001
55	2.920	3.059	0.0026	0.00012	1.19E-7
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

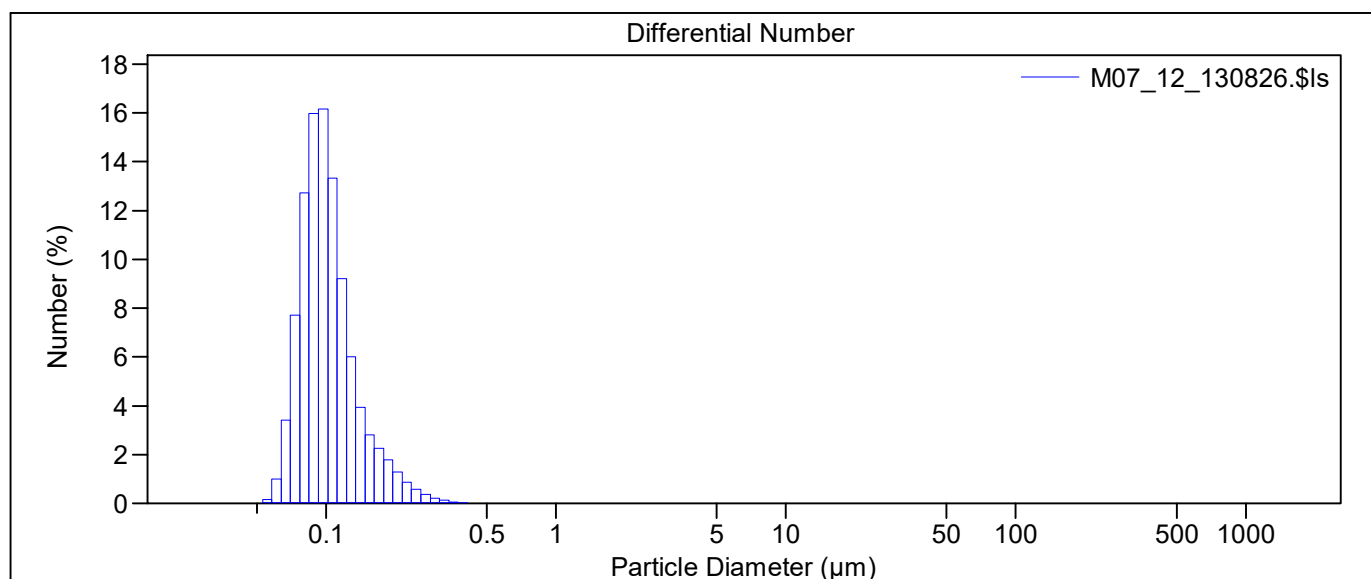
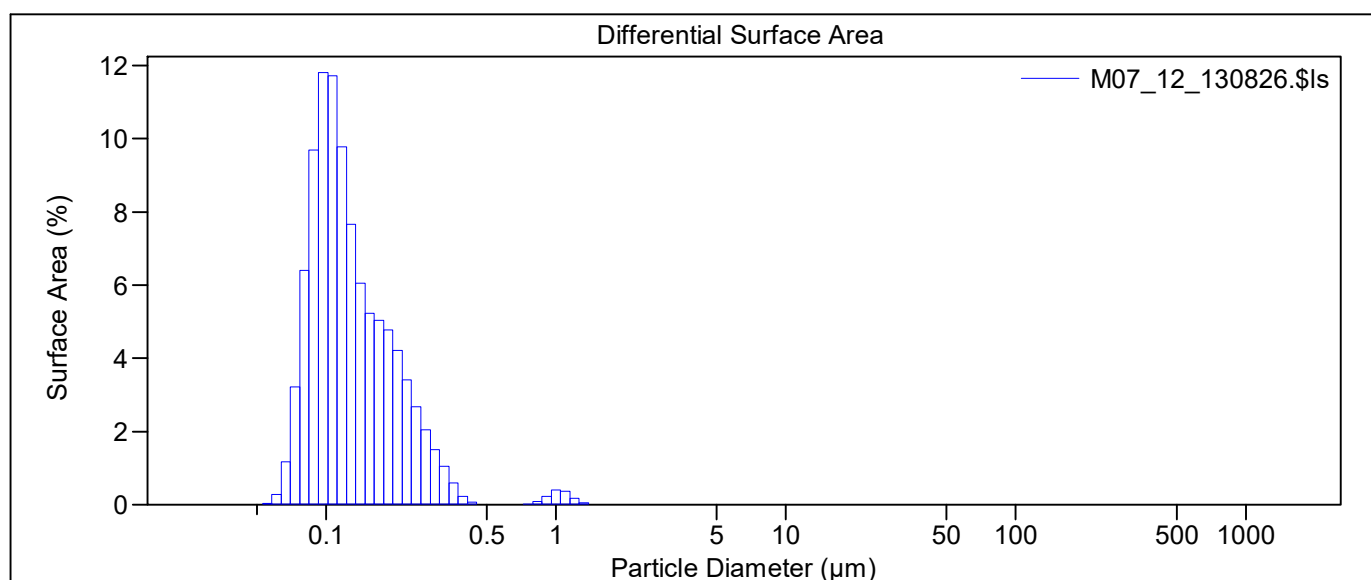
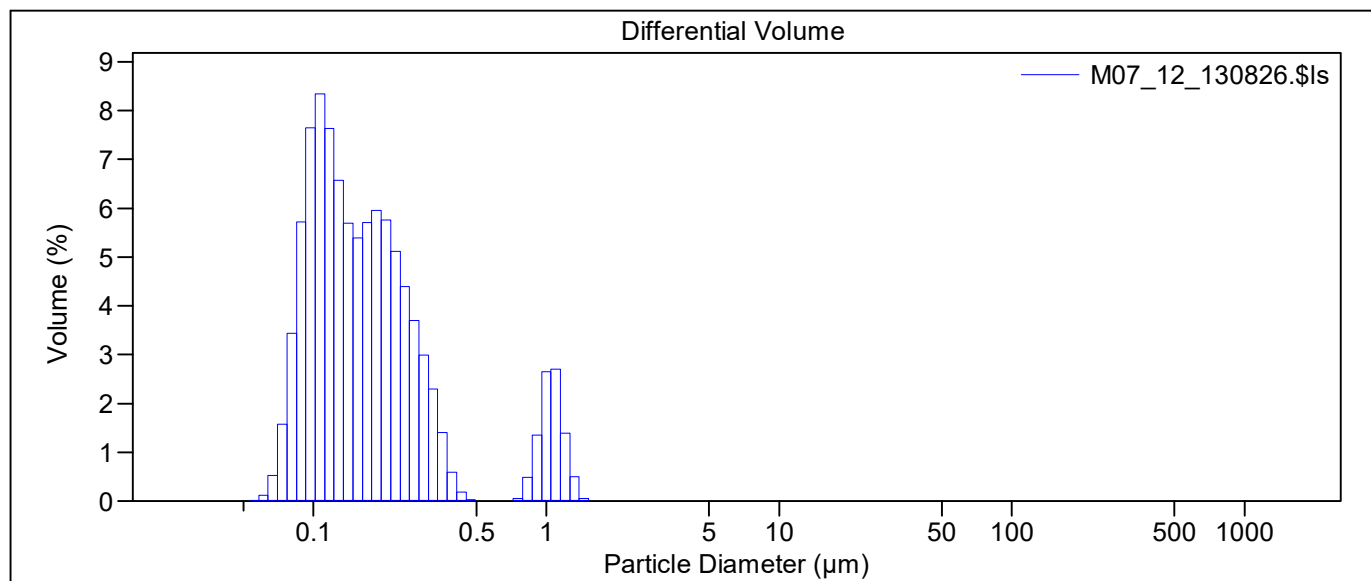
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	M07_12_130826.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.41%		
LS 13 320	Universal Liquid Module		
Start time:	13:06 11	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	-10%	PIDS Obscur:	71%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_12_130826.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.270 µm
Mean:	0.246 µm		Variance:	0.073 µm ²
Median:	0.155 µm		C.V.:	110%
Mean/Median ratio:	1.589		Skewness:	2.608 Right skewed
Mode:	0.106 µm		Kurtosis:	5.662 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.091 µm	0.109 µm	0.155 µm	0.234 µm	0.375 µm

Surface Area Statistics (Arithmetic)			M07_12_130826.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.120 µm
Mean:	0.150 µm		Variance:	0.014 µm ²
Median:	0.118 µm		C.V.:	80.2%
Mean/Median ratio:	1.270		Skewness:	5.838 Right skewed
Mode:	0.097 µm		Kurtosis:	42.26 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.083 µm	0.096 µm	0.118 µm	0.168 µm	0.232 µm

Number Statistics (Arithmetic)			M07_12_130826.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.107 μm		Variance:	0.0015 μm ²
Median:	0.098 μm		C.V.:	35.8%
Mean/Median ratio:	1.095		Skewness:	4.294 Right skewed
Mode:	0.097 μm		Kurtosis:	63.29 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.075 μm	0.084 μm	0.098 μm	0.117 μm	0.150 μm



M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00062	0.0018	0.0092
12	0.053	0.055	0.015	0.040	0.17
13	0.058	0.061	0.12	0.29	1.00
14	0.064	0.067	0.53	1.18	3.40
15	0.070	0.073	1.58	3.22	7.71
16	0.077	0.080	3.44	6.39	12.7
17	0.084	0.088	5.72	9.69	16.0
18	0.093	0.097	7.65	11.8	16.2
19	0.102	0.106	8.34	11.7	13.3
20	0.112	0.117	7.63	9.77	9.21
21	0.122	0.128	6.57	7.67	6.00
22	0.134	0.141	5.70	6.06	3.93
23	0.148	0.155	5.40	5.23	2.82
24	0.162	0.170	5.71	5.04	2.25
25	0.178	0.186	5.95	4.78	1.77
26	0.195	0.205	5.76	4.21	1.30
27	0.214	0.225	5.12	3.41	0.87
28	0.235	0.247	4.39	2.67	0.57
29	0.258	0.271	3.71	2.05	0.36
30	0.284	0.297	2.99	1.51	0.22
31	0.311	0.326	2.30	1.05	0.13
32	0.342	0.358	1.40	0.59	0.059
33	0.375	0.393	0.59	0.23	0.019
34	0.412	0.431	0.18	0.063	0.0044
35	0.452	0.474	0.027	0.0084	0.00049
36	0.496	0.520	0.00059	0.00017	0.000008
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.051	0.010	0.00023
41	0.791	0.829	0.48	0.087	0.0016
42	0.868	0.910	1.35	0.22	0.0035
43	0.953	0.999	2.65	0.40	0.0051
44	1.047	1.097	2.71	0.37	0.0040
45	1.149	1.204	1.39	0.17	0.0015

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.50	0.057	0.00042
47	1.385	1.451	0.059	0.0061	0.000037
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

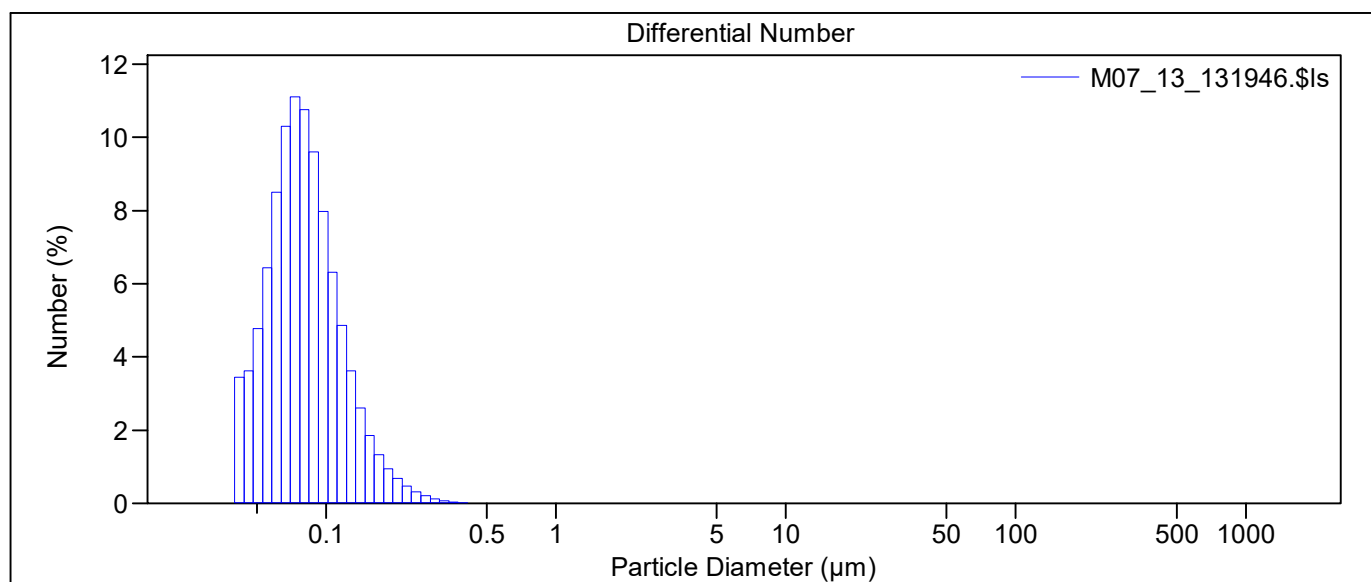
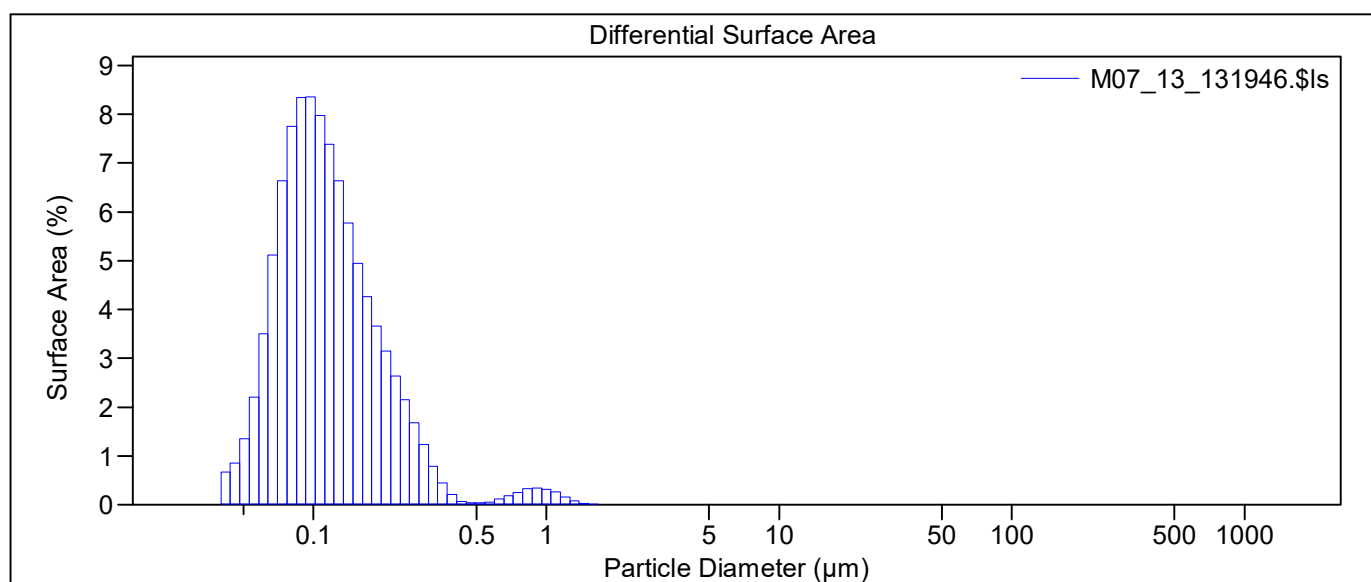
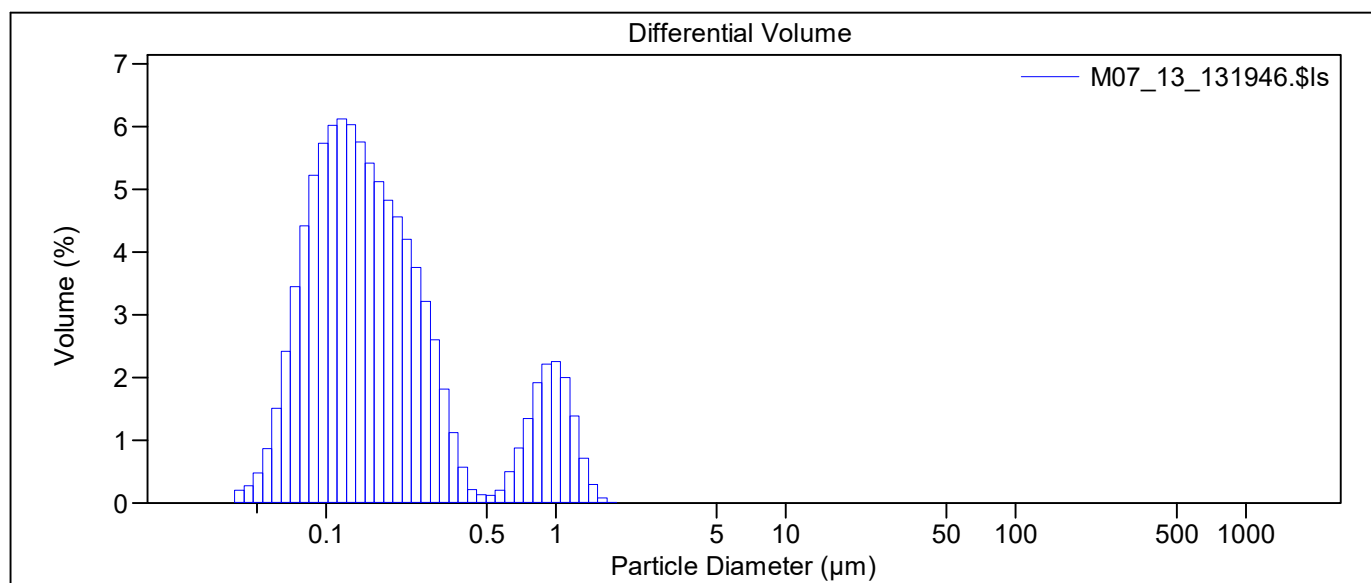
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_13_131946.\$ls		
	M07_13_131946.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.60%		
LS 13 320	Universal Liquid Module		
Start time:	13:18 11	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_13_131946.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.297 μm
Mean:	0.267 μm		Variance:	0.088 μm ²
Median:	0.152 μm		C.V.:	111%
Mean/Median ratio:	1.762		Skewness:	2.149 Right skewed
Mode:	0.117 μm		Kurtosis:	3.593 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.102 μm	0.152 μm	0.250 μm	0.827 μm

Surface Area Statistics (Arithmetic)			M07_13_131946.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.133 µm
Mean:	0.141 µm		Variance:	0.018 µm ²
Median:	0.108 µm		C.V.:	94.4%
Mean/Median ratio:	1.306		Skewness:	5.158 Right skewed
Mode:	0.097 µm		Kurtosis:	32.65 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.065 µm	0.081 µm	0.108 µm	0.155 µm	0.225 µm

Number Statistics (Arithmetic)			M07_13_131946.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.6%
Mean/Median ratio:	1.108		Skewness:	4.051 Right skewed
Mode:	0.073 μm		Kurtosis:	57.76 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.20	0.67	3.45
10	0.044	0.046	0.28	0.85	3.61
11	0.048	0.050	0.48	1.36	4.78
12	0.053	0.055	0.87	2.20	6.45
13	0.058	0.061	1.51	3.50	8.50
14	0.064	0.067	2.42	5.12	10.3
15	0.070	0.073	3.45	6.64	11.1
16	0.077	0.080	4.42	7.76	10.8
17	0.084	0.088	5.22	8.34	9.60
18	0.093	0.097	5.74	8.35	7.97
19	0.102	0.106	6.02	7.98	6.32
20	0.112	0.117	6.12	7.39	4.86
21	0.122	0.128	6.03	6.64	3.62
22	0.134	0.141	5.76	5.77	2.61
23	0.148	0.155	5.42	4.95	1.86
24	0.162	0.170	5.12	4.26	1.33
25	0.178	0.186	4.83	3.66	0.95
26	0.195	0.205	4.56	3.15	0.68
27	0.214	0.225	4.20	2.64	0.47
28	0.235	0.247	3.76	2.15	0.32
29	0.258	0.271	3.21	1.68	0.21
30	0.284	0.297	2.60	1.24	0.13
31	0.311	0.326	1.82	0.79	0.066
32	0.342	0.358	1.12	0.44	0.031
33	0.375	0.393	0.57	0.21	0.012
34	0.412	0.431	0.21	0.069	0.0033
35	0.452	0.474	0.13	0.039	0.0016
36	0.496	0.520	0.13	0.034	0.0011
37	0.545	0.571	0.20	0.050	0.0014
38	0.598	0.627	0.50	0.11	0.0026
39	0.656	0.688	0.88	0.18	0.0034
40	0.721	0.755	1.35	0.25	0.0040
41	0.791	0.829	1.92	0.33	0.0043
42	0.868	0.910	2.21	0.34	0.0037
43	0.953	0.999	2.25	0.32	0.0029
44	1.047	1.097	2.00	0.26	0.0019
45	1.149	1.204	1.39	0.16	0.0010

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.72	0.077	0.00040
47	1.385	1.451	0.29	0.029	0.00012
48	1.520	1.592	0.078	0.0069	0.000024
49	1.668	1.748	0.010	0.00082	0.000002
50	1.832	1.919	0.0014	0.00010	2.49E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

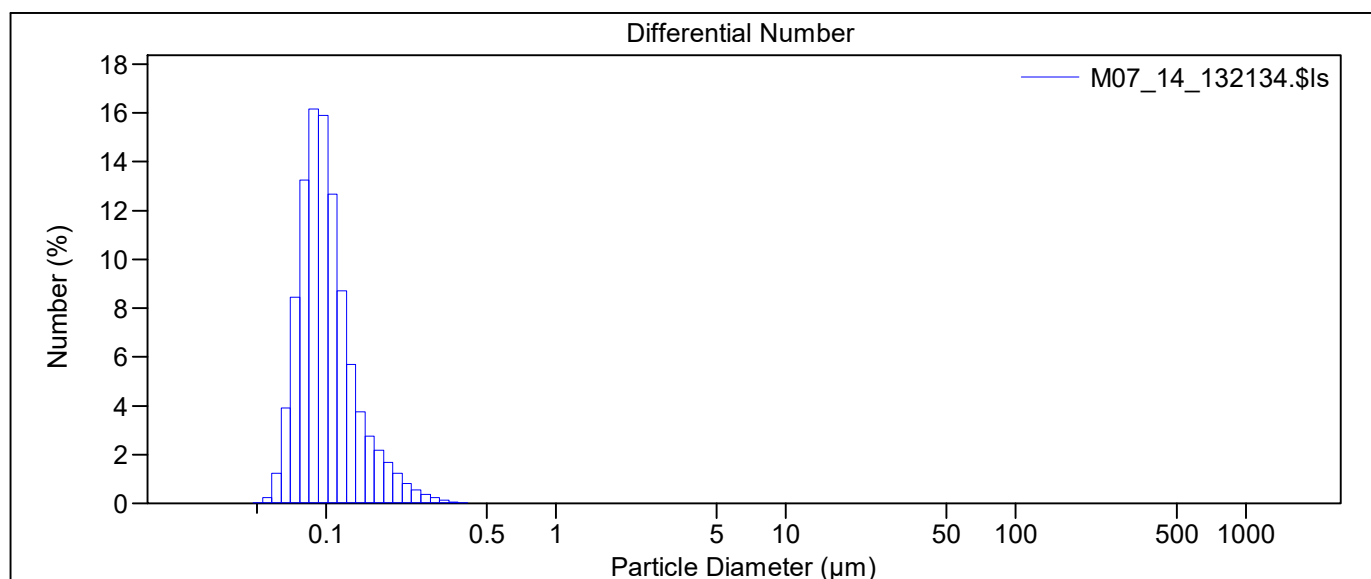
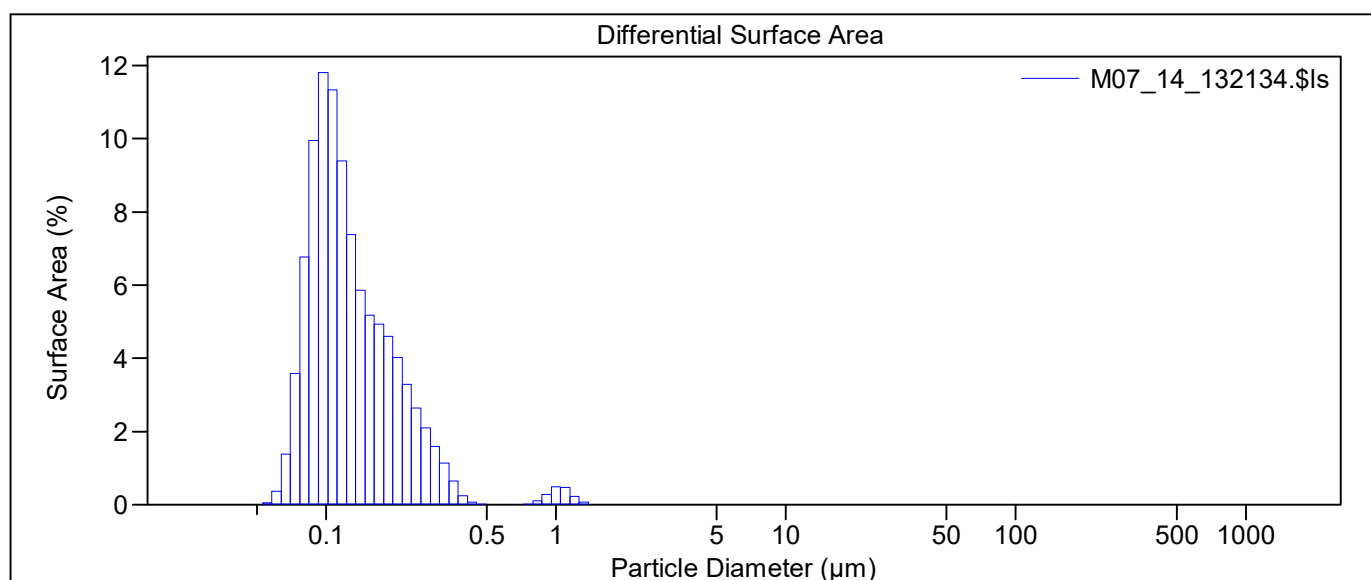
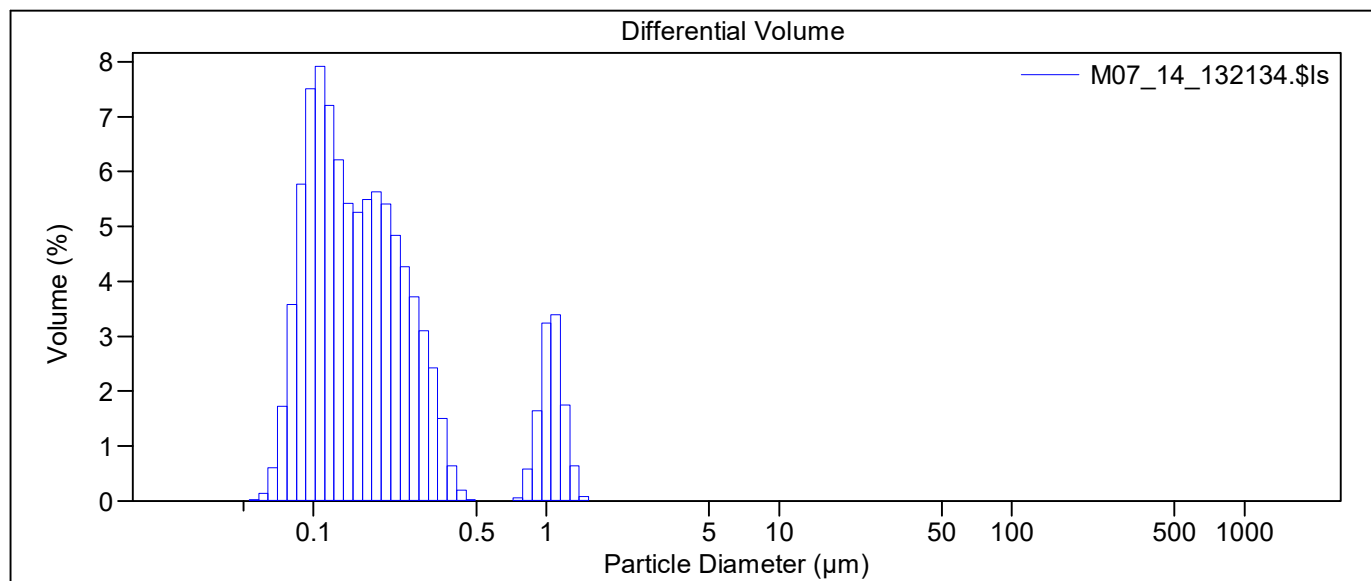
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_14_132134.\$ls		
	M07_14_132134.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.20%		
LS 13 320	Universal Liquid Module		
Start time:	13:19 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_14_132134.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.295 µm
Mean:	0.266 µm		Variance:	0.087 µm ²
Median:	0.158 µm		C.V.:	111%
Mean/Median ratio:	1.682		Skewness:	2.283 Right skewed
Mode:	0.106 µm		Kurtosis:	3.868 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 µm	0.109 µm	0.158 µm	0.247 µm	0.906 µm

Surface Area Statistics (Arithmetic)			M07_14_132134.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.132 µm
Mean:	0.152 µm		Variance:	0.017 µm ²
Median:	0.117 µm		C.V.:	86.4%
Mean/Median ratio:	1.302		Skewness:	5.517 Right skewed
Mode:	0.097 µm		Kurtosis:	36.15 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 µm	0.095 µm	0.117 µm	0.168 µm	0.236 µm

Number Statistics (Arithmetic)			M07_14_132134.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.106 μm		Variance:	0.0015 μm ²
Median:	0.096 μm		C.V.:	36.6%
Mean/Median ratio:	1.096		Skewness:	4.727 Right skewed
Mode:	0.088 μm		Kurtosis:	73.79 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.074 μm	0.083 μm	0.096 μm	0.116 μm	0.148 μm



M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00096	0.0029	0.014
12	0.053	0.055	0.020	0.056	0.23
13	0.058	0.061	0.14	0.36	1.23
14	0.064	0.067	0.60	1.38	3.91
15	0.070	0.073	1.72	3.58	8.45
16	0.077	0.080	3.58	6.77	13.3
17	0.084	0.088	5.77	9.95	16.2
18	0.093	0.097	7.51	11.8	15.9
19	0.102	0.106	7.92	11.3	12.7
20	0.112	0.117	7.21	9.39	8.72
21	0.122	0.128	6.21	7.38	5.68
22	0.134	0.141	5.42	5.87	3.75
23	0.148	0.155	5.26	5.18	2.75
24	0.162	0.170	5.49	4.93	2.17
25	0.178	0.186	5.63	4.60	1.68
26	0.195	0.205	5.41	4.03	1.22
27	0.214	0.225	4.84	3.29	0.83
28	0.235	0.247	4.26	2.64	0.55
29	0.258	0.271	3.72	2.10	0.36
30	0.284	0.297	3.11	1.59	0.23
31	0.311	0.326	2.42	1.13	0.14
32	0.342	0.358	1.50	0.64	0.063
33	0.375	0.393	0.65	0.25	0.021
34	0.412	0.431	0.20	0.069	0.0047
35	0.452	0.474	0.029	0.0094	0.00053
36	0.496	0.520	0.00066	0.00019	0.000009
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.058	0.012	0.00026
41	0.791	0.829	0.58	0.11	0.0020
42	0.868	0.910	1.64	0.27	0.0042
43	0.953	0.999	3.24	0.49	0.0063
44	1.047	1.097	3.39	0.47	0.0050
45	1.149	1.204	1.74	0.22	0.0019

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.64	0.074	0.00054
47	1.385	1.451	0.079	0.0082	0.000050
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

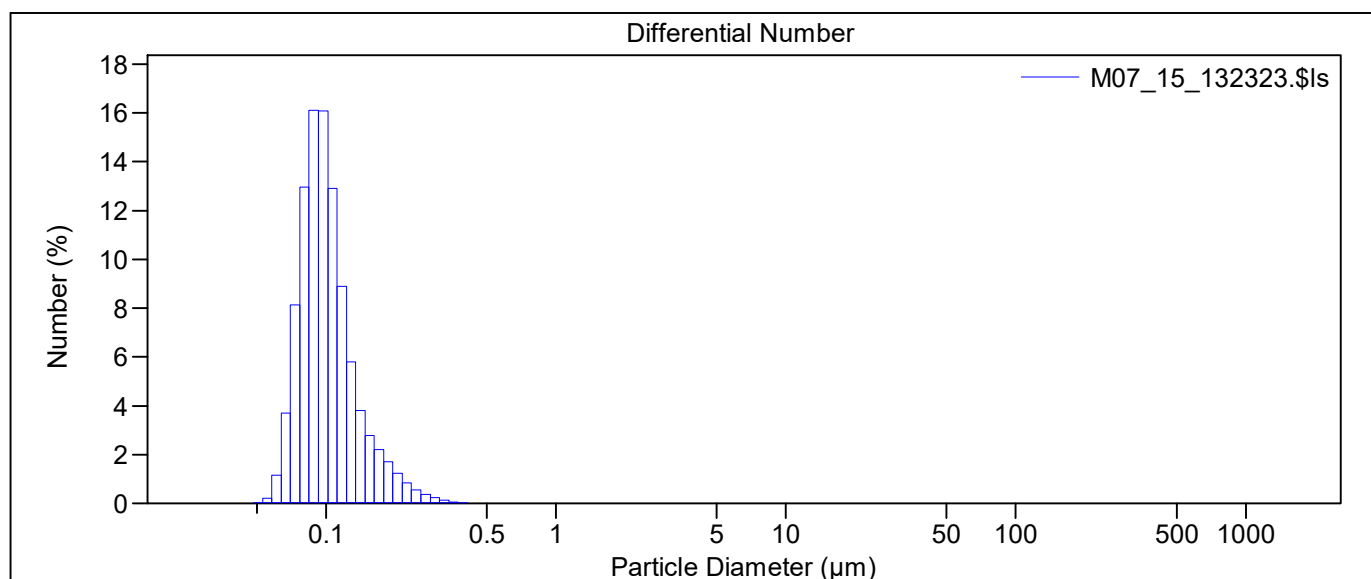
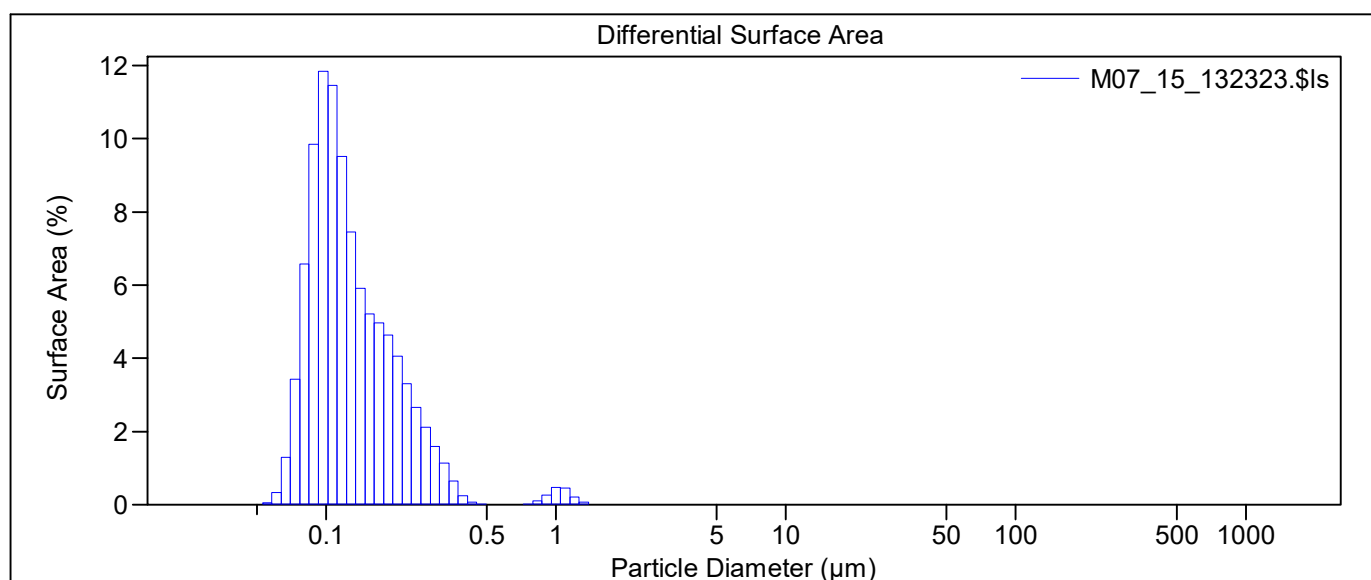
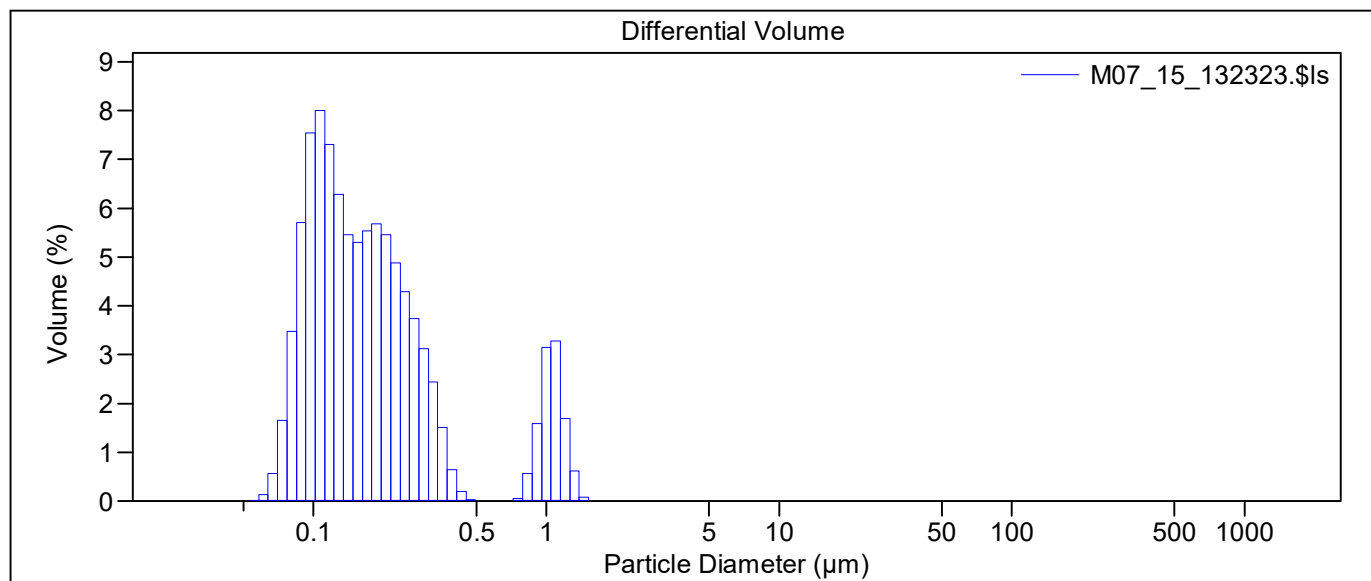
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M07\M07_15_132323.\$ls		
	M07_15_132323.\$ls		
File ID:	M07		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.25%		
LS 13 320	Universal Liquid Module		
Start time:	13:21 11	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M07_15_132323.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.291 µm
Mean:	0.263 µm		Variance:	0.085 µm ²
Median:	0.158 µm		C.V.:	111%
Mean/Median ratio:	1.667		Skewness:	2.329 Right skewed
Mode:	0.106 µm		Kurtosis:	4.107 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 µm	0.109 µm	0.158 µm	0.246 µm	0.890 µm

Surface Area Statistics (Arithmetic)			M07_15_132323.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.130 µm
Mean:	0.152 µm		Variance:	0.017 µm ²
Median:	0.117 µm		C.V.:	85.4%
Mean/Median ratio:	1.297		Skewness:	5.558 Right skewed
Mode:	0.097 µm		Kurtosis:	36.92 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 µm	0.095 µm	0.117 µm	0.169 µm	0.236 µm

Number Statistics (Arithmetic)			M07_15_132323.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.106 μm		Variance:	0.0015 μm ²
Median:	0.097 μm		C.V.:	36.5%
Mean/Median ratio:	1.096		Skewness:	4.659 Right skewed
Mode:	0.088 μm		Kurtosis:	72.05 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.074 μm	0.084 μm	0.097 μm	0.116 μm	0.149 μm



Beckman Coulter LS13320

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00091	0.0028	0.014
12	0.053	0.055	0.019	0.053	0.22
13	0.058	0.061	0.13	0.33	1.15
14	0.064	0.067	0.57	1.29	3.71
15	0.070	0.073	1.65	3.42	8.14
16	0.077	0.080	3.47	6.58	13.0
17	0.084	0.088	5.71	9.85	16.1
18	0.093	0.097	7.54	11.8	16.1
19	0.102	0.106	8.01	11.5	12.9
20	0.112	0.117	7.31	9.52	8.90
21	0.122	0.128	6.28	7.46	5.79
22	0.134	0.141	5.46	5.91	3.81
23	0.148	0.155	5.30	5.22	2.79
24	0.162	0.170	5.54	4.97	2.20
25	0.178	0.186	5.68	4.64	1.71
26	0.195	0.205	5.46	4.07	1.24
27	0.214	0.225	4.87	3.31	0.84
28	0.235	0.247	4.29	2.65	0.56
29	0.258	0.271	3.75	2.11	0.37
30	0.284	0.297	3.12	1.60	0.23
31	0.311	0.326	2.43	1.14	0.14
32	0.342	0.358	1.51	0.64	0.064
33	0.375	0.393	0.65	0.25	0.021
34	0.412	0.431	0.20	0.069	0.0048
35	0.452	0.474	0.029	0.0093	0.00053
36	0.496	0.520	0.00065	0.00019	0.000009
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.056	0.011	0.00025
41	0.791	0.829	0.56	0.10	0.0019
42	0.868	0.910	1.59	0.27	0.0041
43	0.953	0.999	3.14	0.48	0.0061
44	1.047	1.097	3.28	0.46	0.0048
45	1.149	1.204	1.69	0.21	0.0019
46	1.261	1.321	0.62	0.072	0.00052
47	1.385	1.451	0.076	0.0080	0.000048
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

Beckman Coulter LS13320

M07.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M08\M08.\$av
M08.\$av
File ID: M08
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M08.\$av

Calculations from 0.017 μm to 2000 μm

Volume:	100%	S.D.:	0.321 μm
Mean:	0.288 μm	Variance:	0.103 μm^2
Median:	0.158 μm	C.V.:	112%
Mean/Median ratio:	1.820	Skewness:	2.021 Right skewed
Mode:	0.106 μm	Kurtosis:	2.933 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.085 μm	0.107 μm	0.158 μm	0.260 μm	0.912 μm

Surface Area Statistics (Arithmetic) M08.\$av

Calculations from 0.017 μm to 2000 μm

Surface Area:	100%	S.D.:	0.144 μm
Mean:	0.150 μm	Variance:	0.021 μm^2
Median:	0.113 μm	C.V.:	95.9%
Mean/Median ratio:	1.326	Skewness:	5.118 Right skewed
Mode:	0.097 μm	Kurtosis:	31.03 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.072 μm	0.089 μm	0.113 μm	0.161 μm	0.232 μm

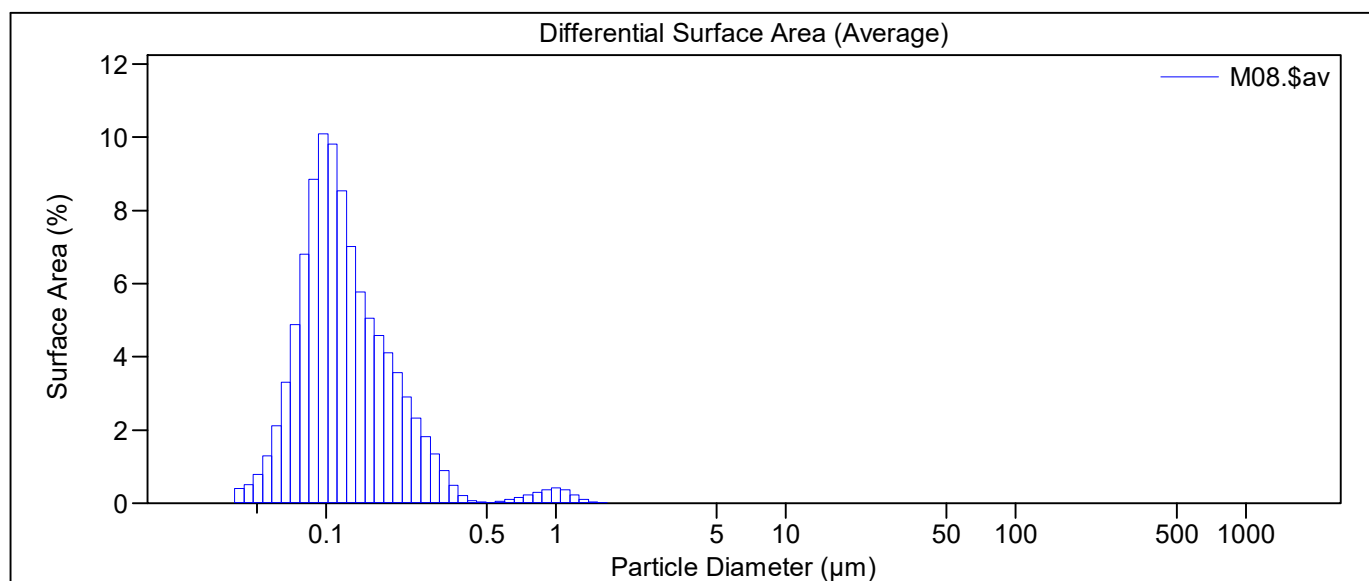
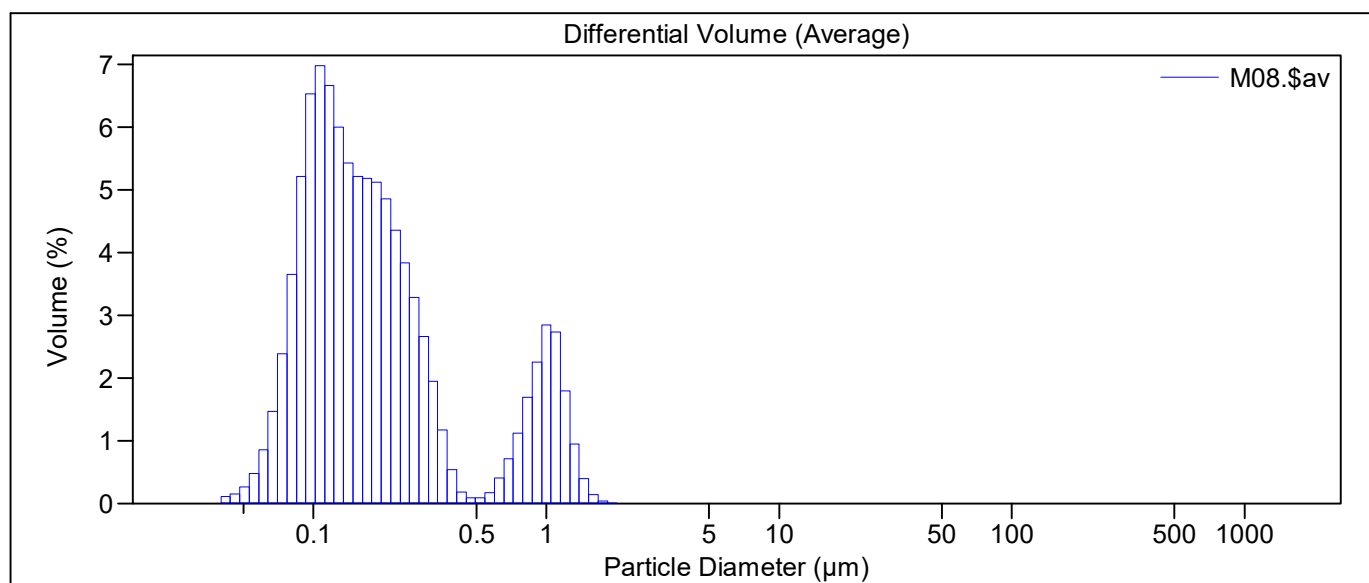
Number Statistics (Arithmetic)

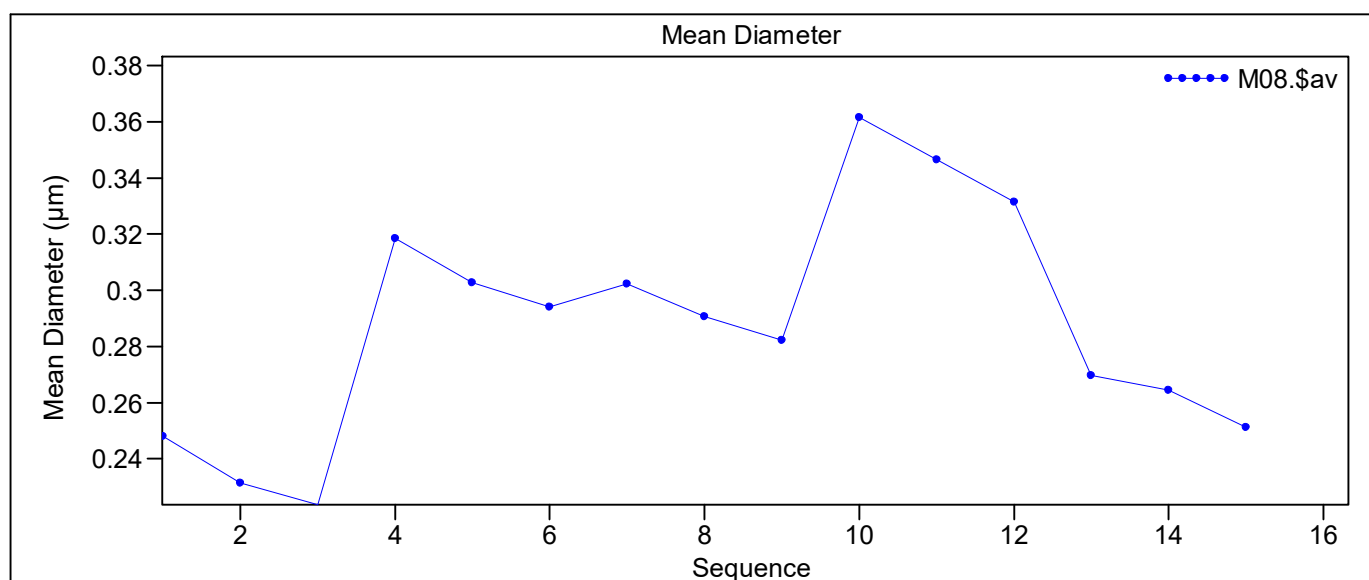
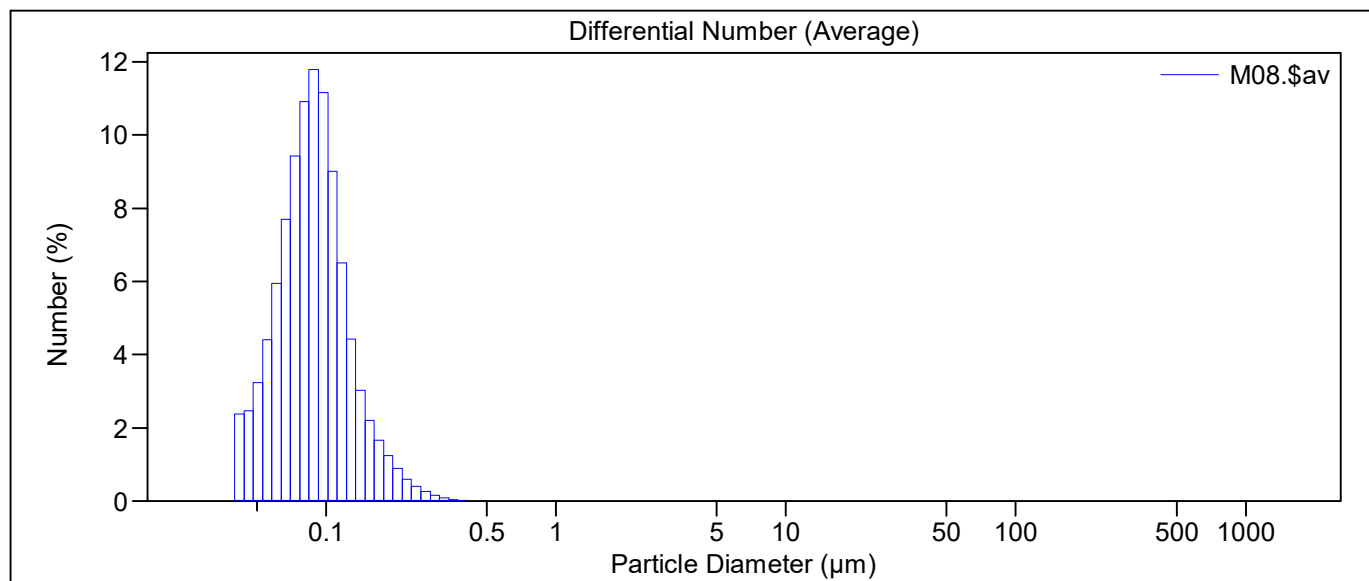
M08.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.040 μm
Mean:	0.094 μm	Variance:	0.0016 μm^2
Median:	0.087 μm	C.V.:	43.1%
Mean/Median ratio:	1.080	Skewness:	4.261 Right skewed
Mode:	0.088 μm	Kurtosis:	65.38 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.055 μm	0.069 μm	0.087 μm	0.108 μm	0.137 μm





M08.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.11	0.40	2.39
10	0.044	0.046	0.15	0.50	2.47
11	0.048	0.050	0.27	0.79	3.23
12	0.053	0.055	0.48	1.30	4.40
13	0.058	0.061	0.86	2.12	5.95
14	0.064	0.067	1.47	3.30	7.70
15	0.070	0.073	2.38	4.87	9.44
16	0.077	0.080	3.65	6.80	10.9
17	0.084	0.088	5.21	8.85	11.8

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	6.53	10.1	11.2
19	0.102	0.106	6.98	9.82	9.01
20	0.112	0.117	6.66	8.54	6.51
21	0.122	0.128	6.00	7.02	4.43
22	0.134	0.141	5.43	5.78	3.03
23	0.148	0.155	5.21	5.05	2.20
24	0.162	0.170	5.18	4.58	1.65
25	0.178	0.186	5.12	4.12	1.23
26	0.195	0.205	4.86	3.56	0.89
27	0.214	0.225	4.35	2.91	0.60
28	0.235	0.247	3.84	2.33	0.40
29	0.258	0.271	3.29	1.82	0.26
30	0.284	0.297	2.66	1.34	0.16
31	0.311	0.326	1.95	0.89	0.087
32	0.342	0.358	1.18	0.49	0.040
33	0.375	0.393	0.54	0.21	0.014
34	0.412	0.431	0.19	0.065	0.0036
35	0.452	0.474	0.088	0.028	0.0013
36	0.496	0.520	0.089	0.026	0.00099
37	0.545	0.571	0.17	0.044	0.0014
38	0.598	0.627	0.41	0.098	0.0026
39	0.656	0.688	0.72	0.16	0.0034
40	0.721	0.755	1.12	0.22	0.0041
41	0.791	0.829	1.69	0.31	0.0046
42	0.868	0.910	2.26	0.37	0.0047
43	0.953	0.999	2.85	0.43	0.0045
44	1.047	1.097	2.73	0.37	0.0032
45	1.149	1.204	1.79	0.22	0.0016
46	1.261	1.321	0.94	0.11	0.00064
47	1.385	1.451	0.40	0.041	0.00020
48	1.520	1.592	0.14	0.013	0.000055
49	1.668	1.748	0.042	0.0036	0.000012
50	1.832	1.919	0.013	0.00100	0.000003
51	2.011	2.107	0.0027	0.00020	4.58E-7
52	2.207	2.313	0.00062	0.000040	7.79E-8
53	2.423	2.539	0.00013	0.000007	1.2E-8
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

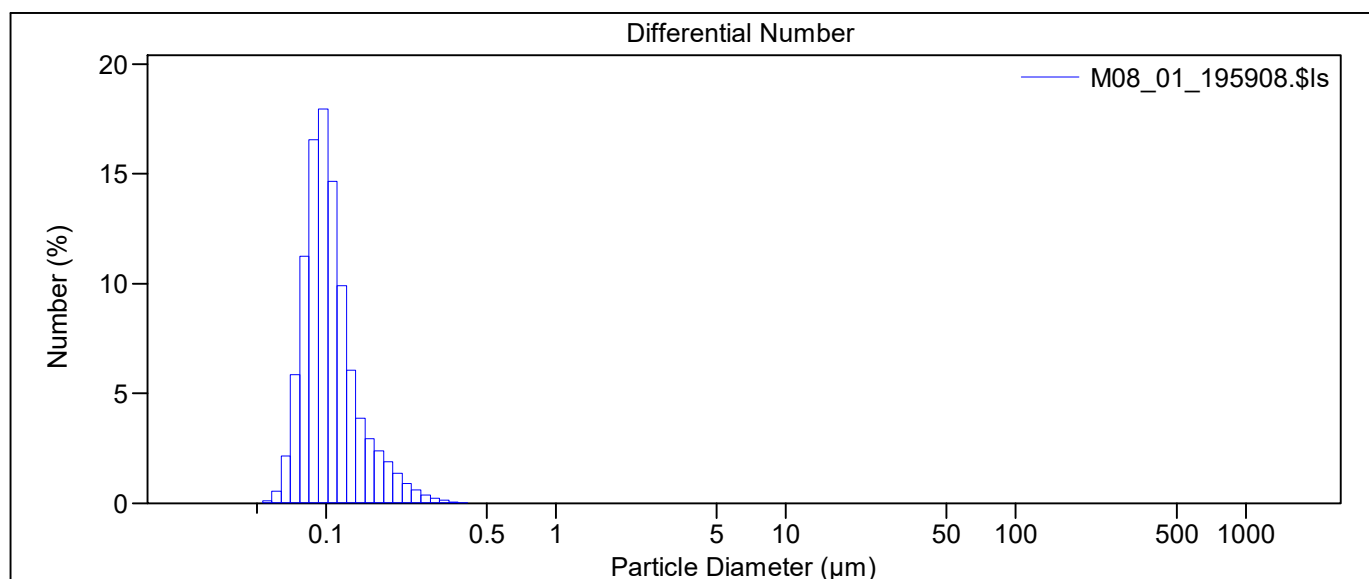
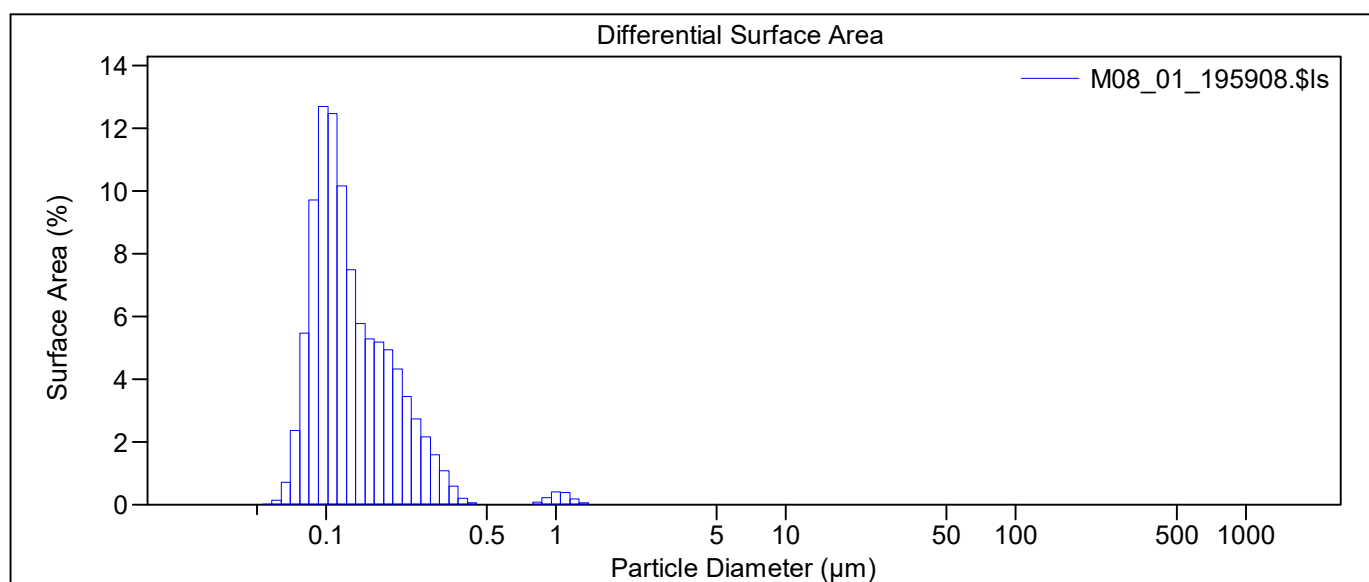
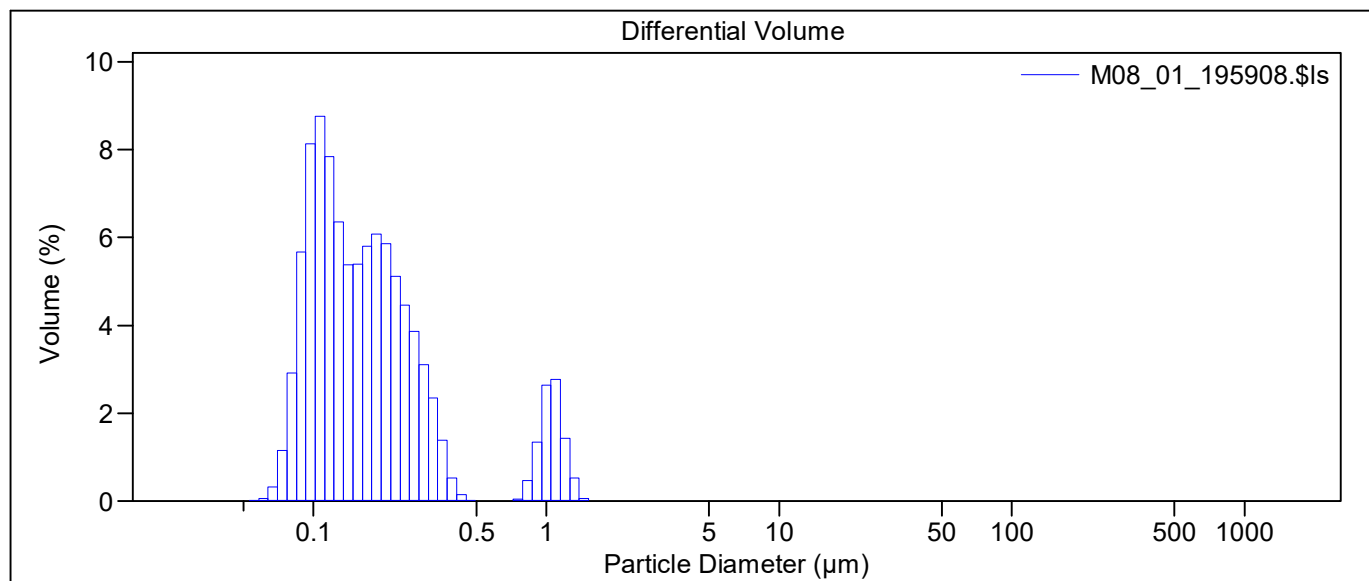
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_01_195908.\$ls		
	M08_01_195908.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.57%		
LS 13 320	Universal Liquid Module		
Start time:	19:57 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_01_195908.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.271 µm
Mean:	0.248 µm		Variance:	0.074 µm ²
Median:	0.157 µm		C.V.:	109%
Mean/Median ratio:	1.583		Skewness:	2.597 Right skewed
Mode:	0.106 µm		Kurtosis:	5.587 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.092 µm	0.109 µm	0.157 µm	0.236 µm	0.375 µm

Surface Area Statistics (Arithmetic)			M08_01_195908.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.121 µm
Mean:	0.151 µm		Variance:	0.015 µm ²
Median:	0.118 µm		C.V.:	79.9%
Mean/Median ratio:	1.278		Skewness:	5.836 Right skewed
Mode:	0.097 µm		Kurtosis:	42.01 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.085 µm	0.097 µm	0.118 µm	0.170 µm	0.234 µm

Number Statistics (Arithmetic)			M08_01_195908.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.109 μm		Variance:	0.0015 μm ²
Median:	0.099 μm		C.V.:	35.1%
Mean/Median ratio:	1.096		Skewness:	4.422 Right skewed
Mode:	0.097 μm		Kurtosis:	66.07 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.087 μm	0.099 μm	0.118 μm	0.153 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00052	0.0016	0.0081
12	0.053	0.055	0.0091	0.025	0.11
13	0.058	0.061	0.060	0.15	0.54
14	0.064	0.067	0.32	0.72	2.16
15	0.070	0.073	1.15	2.36	5.86
16	0.077	0.080	2.91	5.48	11.3
17	0.084	0.088	5.67	9.71	16.6
18	0.093	0.097	8.13	12.7	18.0
19	0.102	0.106	8.77	12.5	14.7
20	0.112	0.117	7.84	10.2	9.91
21	0.122	0.128	6.35	7.50	6.07
22	0.134	0.141	5.37	5.78	3.88
23	0.148	0.155	5.40	5.29	2.95
24	0.162	0.170	5.81	5.18	2.40
25	0.178	0.186	6.08	4.94	1.90
26	0.195	0.205	5.86	4.33	1.38
27	0.214	0.225	5.12	3.45	0.91
28	0.235	0.247	4.46	2.74	0.60
29	0.258	0.271	3.86	2.16	0.39
30	0.284	0.297	3.11	1.59	0.24
31	0.311	0.326	2.35	1.09	0.14
32	0.342	0.358	1.38	0.58	0.061
33	0.375	0.393	0.53	0.20	0.018
34	0.412	0.431	0.15	0.052	0.0037
35	0.452	0.474	0.017	0.0054	0.00032
36	0.496	0.520	0.000011	0.000003	1.58E-7
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.046	0.0093	0.00022
41	0.791	0.829	0.47	0.086	0.0017
42	0.868	0.910	1.34	0.22	0.0036
43	0.953	0.999	2.64	0.40	0.0054
44	1.047	1.097	2.78	0.38	0.0042
45	1.149	1.204	1.43	0.18	0.0017

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.53	0.060	0.00046
47	1.385	1.451	0.065	0.0068	0.000043
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

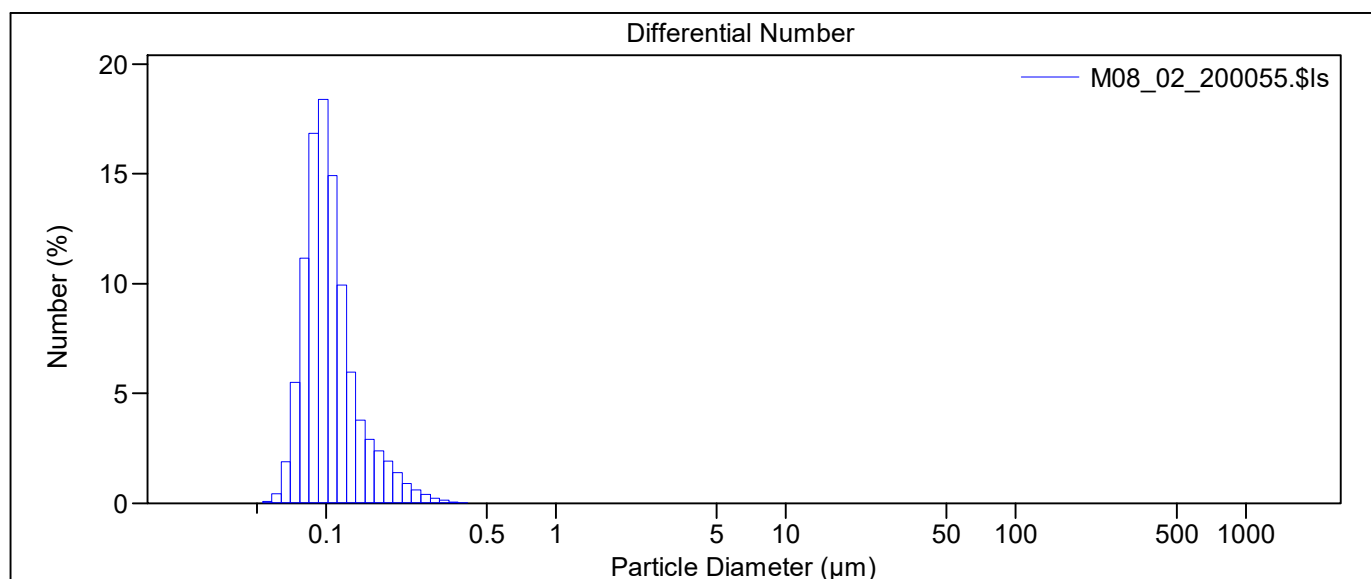
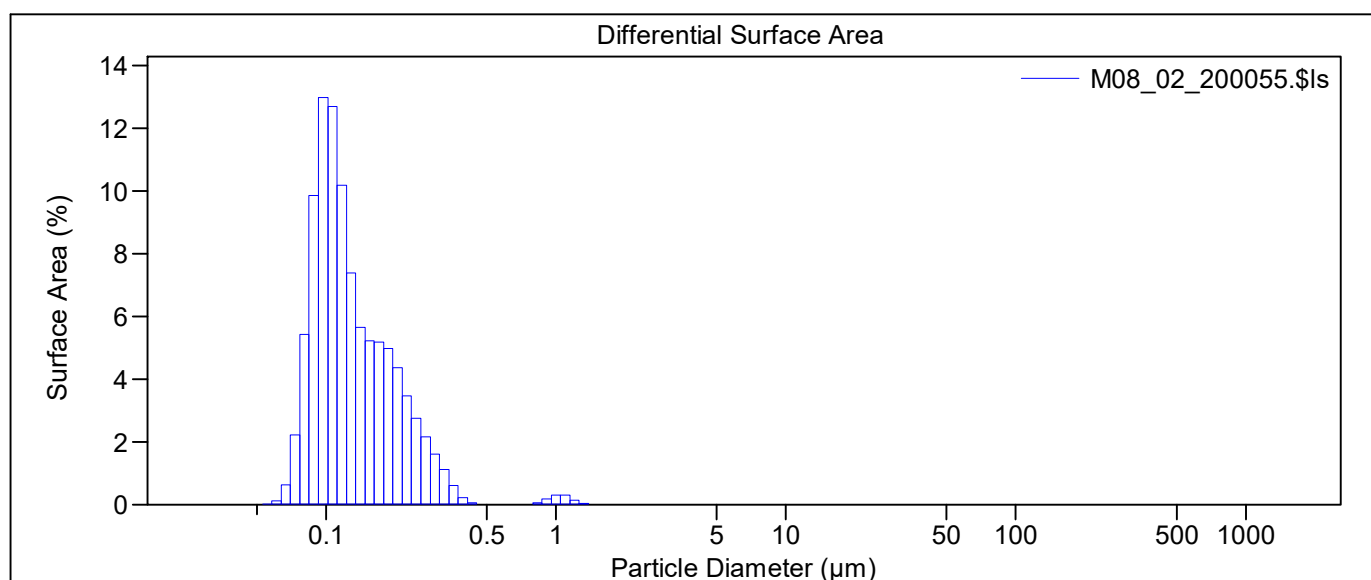
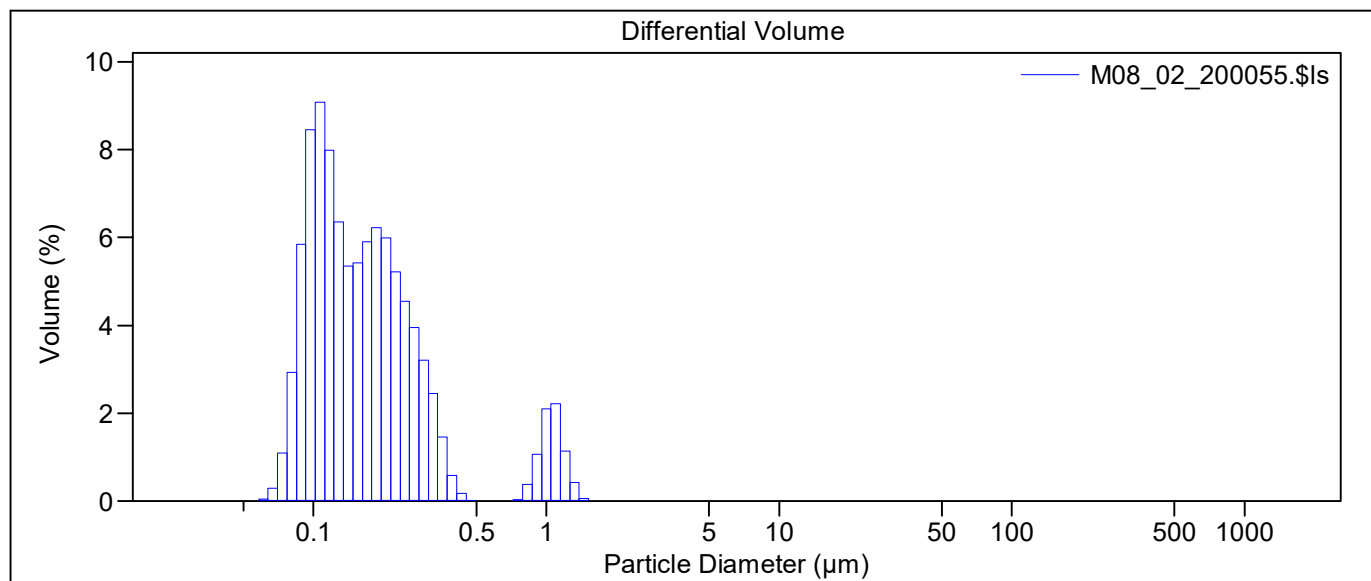
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_02_200055.\$ls		
	M08_02_200055.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.66%		
LS 13 320	Universal Liquid Module		
Start time:	19:59 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_02_200055.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.246 µm
Mean:	0.231 µm		Variance:	0.061 µm ²
Median:	0.154 µm		C.V.:	106%
Mean/Median ratio:	1.499		Skewness:	2.936 Right skewed
Mode:	0.106 µm		Kurtosis:	7.799 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.092 µm	0.109 µm	0.154 µm	0.230 µm	0.337 µm

Surface Area Statistics (Arithmetic)			M08_02_200055.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.111 µm
Mean:	0.149 µm		Variance:	0.012 µm ²
Median:	0.118 µm		C.V.:	74.4%
Mean/Median ratio:	1.262		Skewness:	6.037 Right skewed
Mode:	0.097 µm		Kurtosis:	47.57 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.086 µm	0.097 µm	0.118 µm	0.170 µm	0.233 µm

Number Statistics (Arithmetic)			M08_02_200055.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.109 μm		Variance:	0.0014 μm ²
Median:	0.100 μm		C.V.:	34.6%
Mean/Median ratio:	1.097		Skewness:	4.072 Right skewed
Mode:	0.097 μm		Kurtosis:	55.93 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.087 μm	0.100 μm	0.118 μm	0.153 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00038	0.0011	0.0059
12	0.053	0.055	0.0068	0.018	0.079
13	0.058	0.061	0.049	0.12	0.43
14	0.064	0.067	0.28	0.63	1.90
15	0.070	0.073	1.09	2.22	5.52
16	0.077	0.080	2.93	5.42	11.2
17	0.084	0.088	5.85	9.86	16.8
18	0.093	0.097	8.46	13.0	18.4
19	0.102	0.106	9.08	12.7	14.9
20	0.112	0.117	7.99	10.2	9.94
21	0.122	0.128	6.36	7.38	5.98
22	0.134	0.141	5.35	5.66	3.80
23	0.148	0.155	5.43	5.23	2.92
24	0.162	0.170	5.91	5.18	2.40
25	0.178	0.186	6.23	4.98	1.91
26	0.195	0.205	6.00	4.37	1.39
27	0.214	0.225	5.22	3.46	0.92
28	0.235	0.247	4.55	2.75	0.60
29	0.258	0.271	3.94	2.17	0.40
30	0.284	0.297	3.20	1.61	0.24
31	0.311	0.326	2.45	1.12	0.14
32	0.342	0.358	1.46	0.61	0.063
33	0.375	0.393	0.58	0.22	0.019
34	0.412	0.431	0.17	0.059	0.0042
35	0.452	0.474	0.021	0.0067	0.00040
36	0.496	0.520	0.00010	0.000030	0.000001
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.036	0.0072	0.00017
41	0.791	0.829	0.37	0.067	0.0013
42	0.868	0.910	1.06	0.17	0.0028
43	0.953	0.999	2.10	0.31	0.0042
44	1.047	1.097	2.21	0.30	0.0033
45	1.149	1.204	1.14	0.14	0.0013

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.42	0.047	0.00036
47	1.385	1.451	0.052	0.0054	0.000034
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

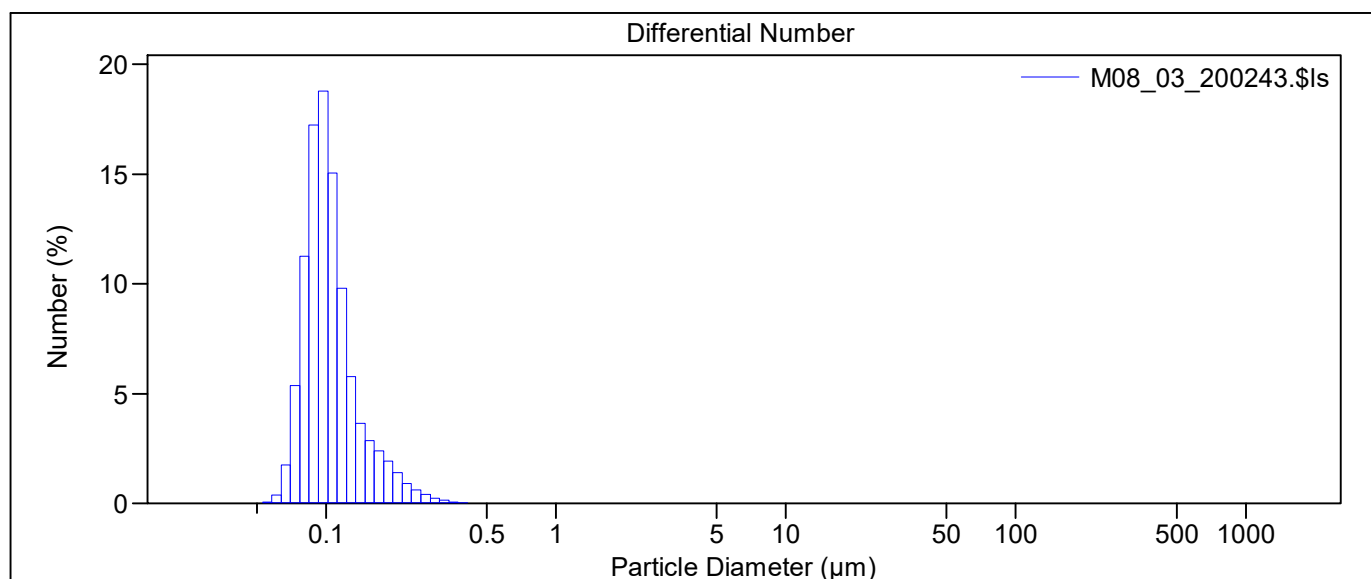
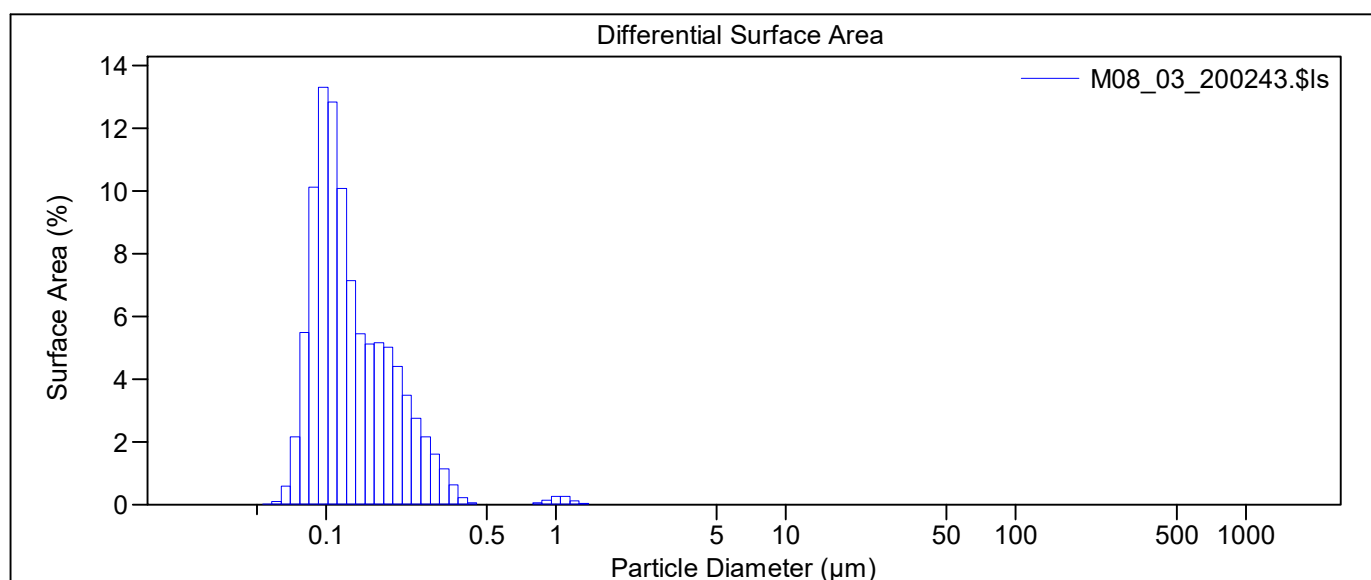
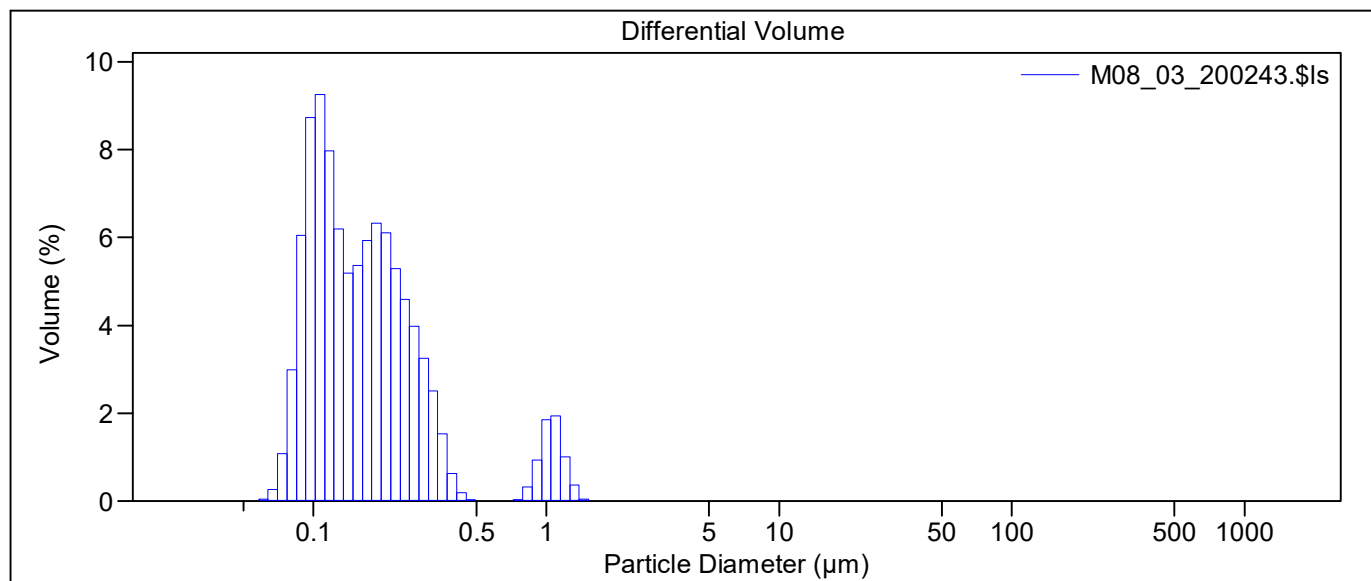
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_03_200243.\$ls		
	M08_03_200243.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.73%		
LS 13 320	Universal Liquid Module		
Start time:	20:01 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_03_200243.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.233 μm
Mean:	0.224 μm		Variance:	0.054 μm ²
Median:	0.154 μm		C.V.:	104%
Mean/Median ratio:	1.457		Skewness:	3.126 Right skewed
Mode:	0.106 μm		Kurtosis:	9.204 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.092 μm	0.108 μm	0.154 μm	0.228 μm	0.328 μm

Surface Area Statistics (Arithmetic)			M08_03_200243.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.106 µm
Mean:	0.148 µm		Variance:	0.011 µm ²
Median:	0.117 µm		C.V.:	71.7%
Mean/Median ratio:	1.258		Skewness:	6.090 Right skewed
Mode:	0.097 µm		Kurtosis:	50.17 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.086 µm	0.097 µm	0.117 µm	0.170 µm	0.232 µm

Number Statistics (Arithmetic)			M08_03_200243.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.109 μm		Variance:	0.0014 μm ²
Median:	0.099 μm		C.V.:	34.4%
Mean/Median ratio:	1.097		Skewness:	3.919 Right skewed
Mode:	0.097 μm		Kurtosis:	50.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.087 μm	0.099 μm	0.117 μm	0.152 μm



M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00030	0.00088	0.0046
12	0.053	0.055	0.0053	0.014	0.061
13	0.058	0.061	0.042	0.10	0.37
14	0.064	0.067	0.27	0.59	1.75
15	0.070	0.073	1.08	2.17	5.36
16	0.077	0.080	2.99	5.48	11.2
17	0.084	0.088	6.06	10.1	17.2
18	0.093	0.097	8.74	13.3	18.8
19	0.102	0.106	9.26	12.8	15.0
20	0.112	0.117	7.98	10.1	9.80
21	0.122	0.128	6.20	7.14	5.76
22	0.134	0.141	5.19	5.45	3.65
23	0.148	0.155	5.36	5.12	2.84
24	0.162	0.170	5.93	5.16	2.38
25	0.178	0.186	6.33	5.02	1.92
26	0.195	0.205	6.11	4.41	1.40
27	0.214	0.225	5.29	3.48	0.92
28	0.235	0.247	4.60	2.75	0.60
29	0.258	0.271	3.98	2.17	0.39
30	0.284	0.297	3.25	1.61	0.24
31	0.311	0.326	2.51	1.14	0.14
32	0.342	0.358	1.52	0.63	0.065
33	0.375	0.393	0.62	0.23	0.020
34	0.412	0.431	0.19	0.064	0.0046
35	0.452	0.474	0.025	0.0079	0.00047
36	0.496	0.520	0.00026	0.000074	0.000004
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.032	0.0063	0.00015
41	0.791	0.829	0.33	0.058	0.0011
42	0.868	0.910	0.93	0.15	0.0024
43	0.953	0.999	1.84	0.27	0.0036
44	1.047	1.097	1.94	0.26	0.0029
45	1.149	1.204	1.00	0.12	0.0011

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.37	0.041	0.00031
47	1.385	1.451	0.046	0.0046	0.000029
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

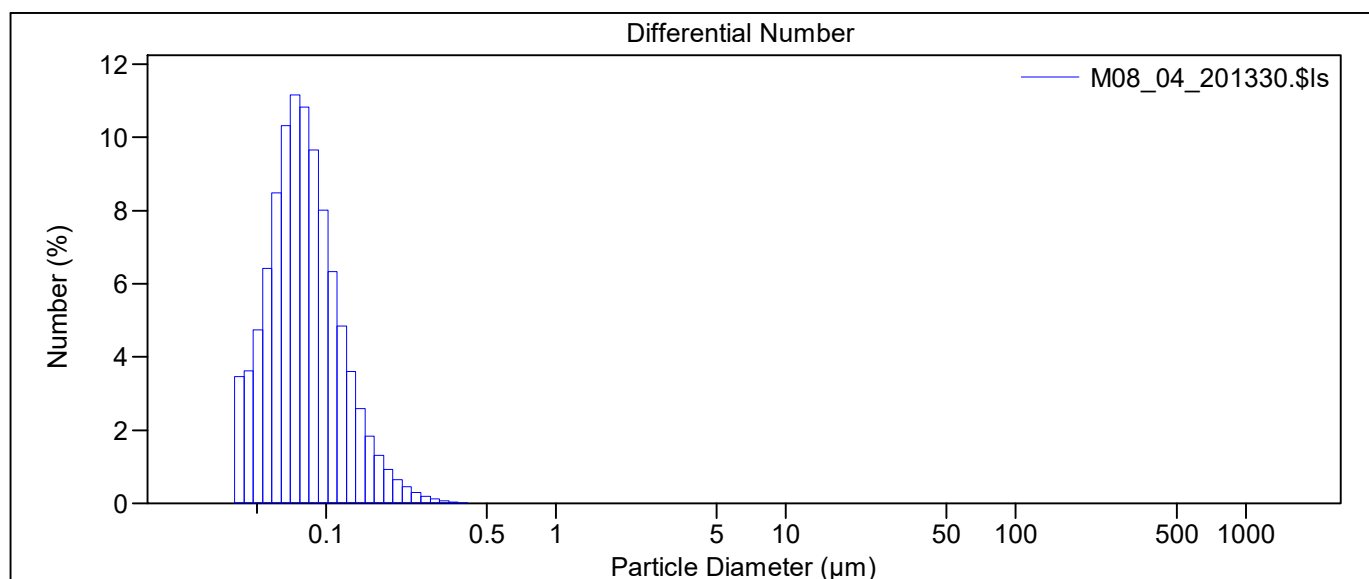
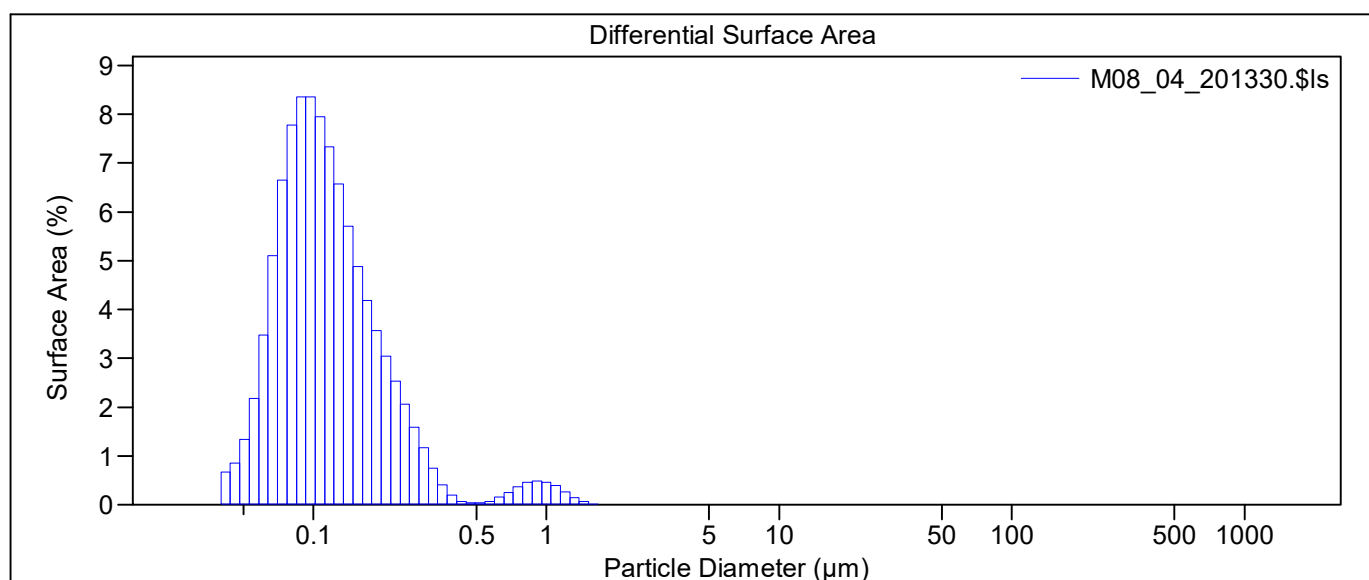
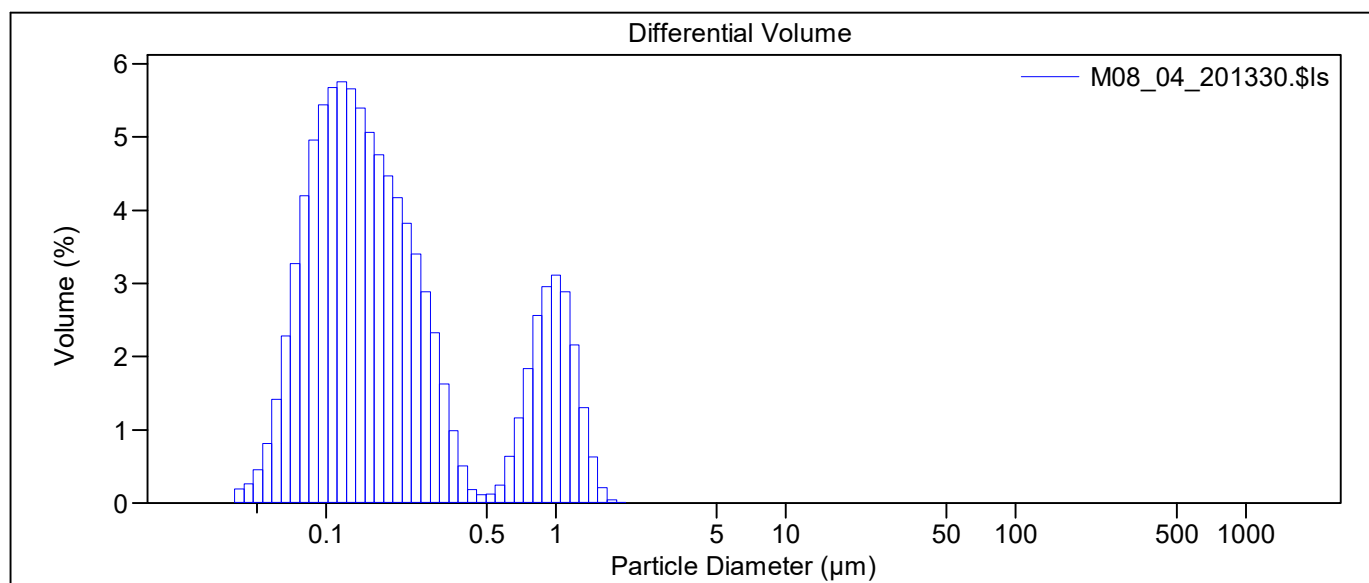
Beckman Coulter LS13320

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	M08_04_201330.\$ls		
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Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.41%		
LS 13 320	Universal Liquid Module		
Start time:	20:11 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_04_201330.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.352 µm
Mean:	0.318 µm		Variance:	0.124 µm ²
Median:	0.160 µm		C.V.:	110%
Mean/Median ratio:	1.995		Skewness:	1.677 Right skewed
Mode:	0.117 µm		Kurtosis:	1.530 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.105 µm	0.160 µm	0.291 µm	0.964 µm

Surface Area Statistics (Arithmetic)			M08_04_201330.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.159 µm
Mean:	0.149 µm		Variance:	0.025 µm ²
Median:	0.108 µm		C.V.:	107%
Mean/Median ratio:	1.378		Skewness:	4.722 Right skewed
Mode:	0.088 µm		Kurtosis:	25.45 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.155 µm	0.231 µm

Number Statistics (Arithmetic)			M08_04_201330.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.086 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.4%
Mean/Median ratio:	1.108		Skewness:	4.924 Right skewed
Mode:	0.073 μm		Kurtosis:	81.19 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.68	3.47
10	0.044	0.046	0.26	0.85	3.61
11	0.048	0.050	0.45	1.34	4.75
12	0.053	0.055	0.81	2.18	6.41
13	0.058	0.061	1.42	3.48	8.48
14	0.064	0.067	2.29	5.10	10.3
15	0.070	0.073	3.27	6.65	11.2
16	0.077	0.080	4.20	7.77	10.8
17	0.084	0.088	4.96	8.36	9.66
18	0.093	0.097	5.44	8.36	8.01
19	0.102	0.106	5.68	7.95	6.32
20	0.112	0.117	5.75	7.34	4.84
21	0.122	0.128	5.66	6.58	3.60
22	0.134	0.141	5.39	5.71	2.59
23	0.148	0.155	5.07	4.88	1.84
24	0.162	0.170	4.76	4.18	1.31
25	0.178	0.186	4.47	3.57	0.93
26	0.195	0.205	4.17	3.04	0.66
27	0.214	0.225	3.82	2.54	0.45
28	0.235	0.247	3.40	2.06	0.31
29	0.258	0.271	2.89	1.59	0.20
30	0.284	0.297	2.33	1.17	0.12
31	0.311	0.326	1.63	0.74	0.063
32	0.342	0.358	0.99	0.41	0.029
33	0.375	0.393	0.51	0.19	0.011
34	0.412	0.431	0.19	0.064	0.0031
35	0.452	0.474	0.12	0.037	0.0015
36	0.496	0.520	0.13	0.036	0.0012
37	0.545	0.571	0.25	0.065	0.0018
38	0.598	0.627	0.64	0.15	0.0035
39	0.656	0.688	1.16	0.25	0.0048
40	0.721	0.755	1.84	0.36	0.0057
41	0.791	0.829	2.57	0.46	0.0061
42	0.868	0.910	2.96	0.48	0.0053
43	0.953	0.999	3.11	0.46	0.0042
44	1.047	1.097	2.89	0.39	0.0029
45	1.149	1.204	2.16	0.27	0.0017

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.30	0.15	0.00076
47	1.385	1.451	0.63	0.065	0.00028
48	1.520	1.592	0.21	0.019	0.000069
49	1.668	1.748	0.045	0.0038	0.000011
50	1.832	1.919	0.0061	0.00048	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

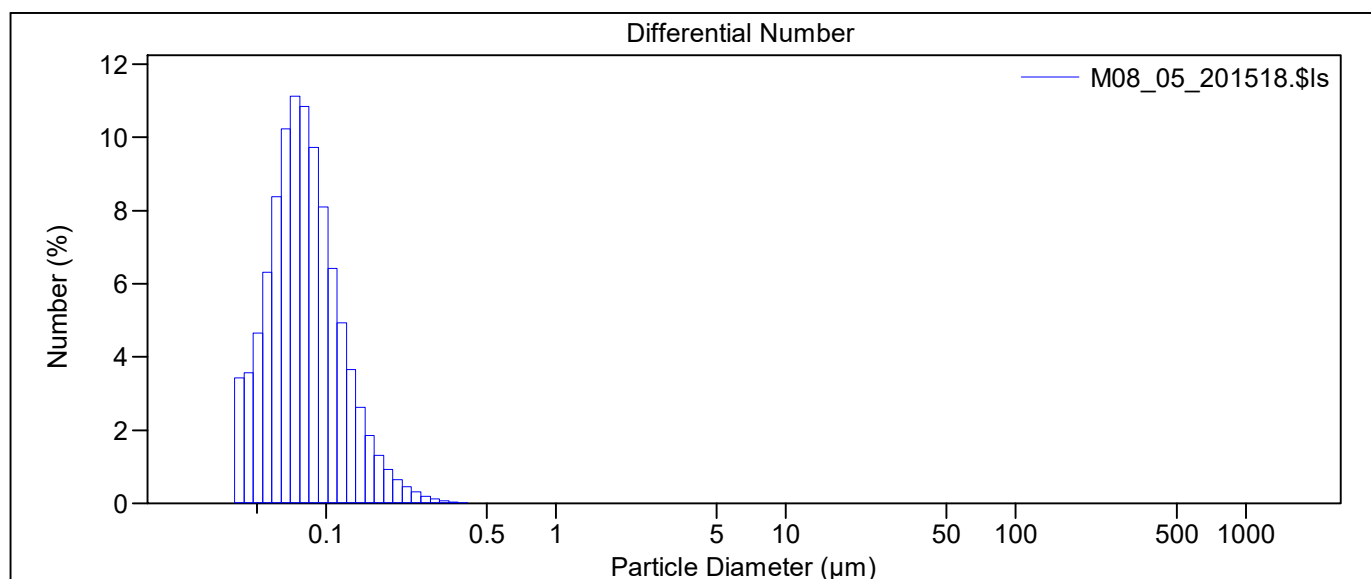
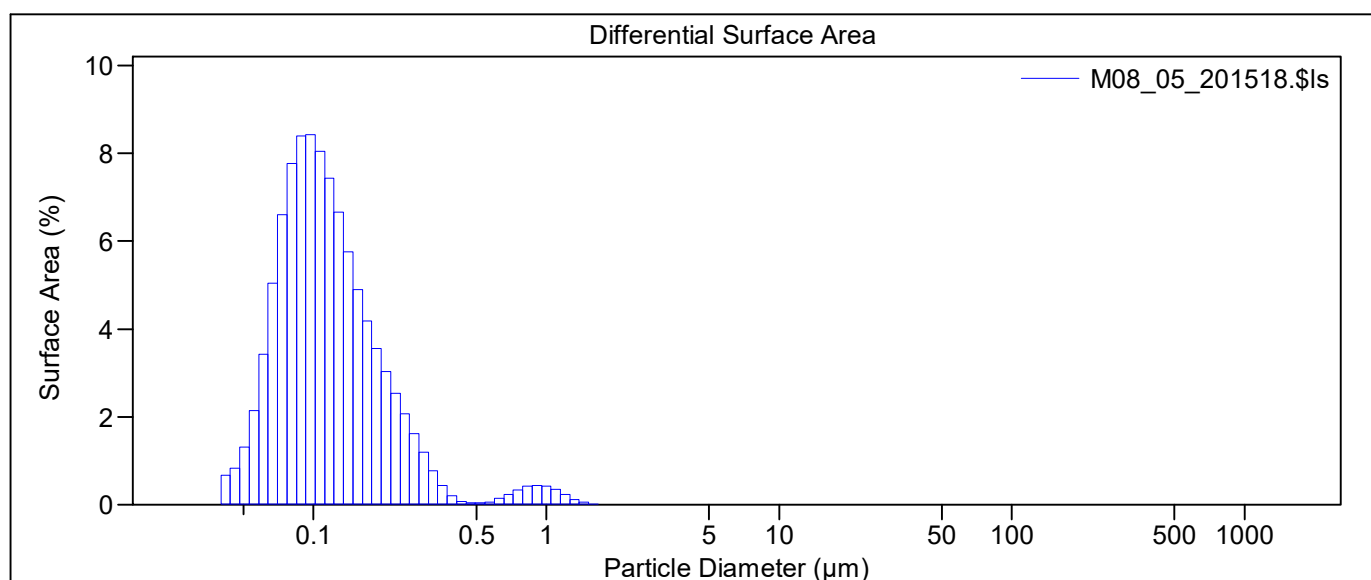
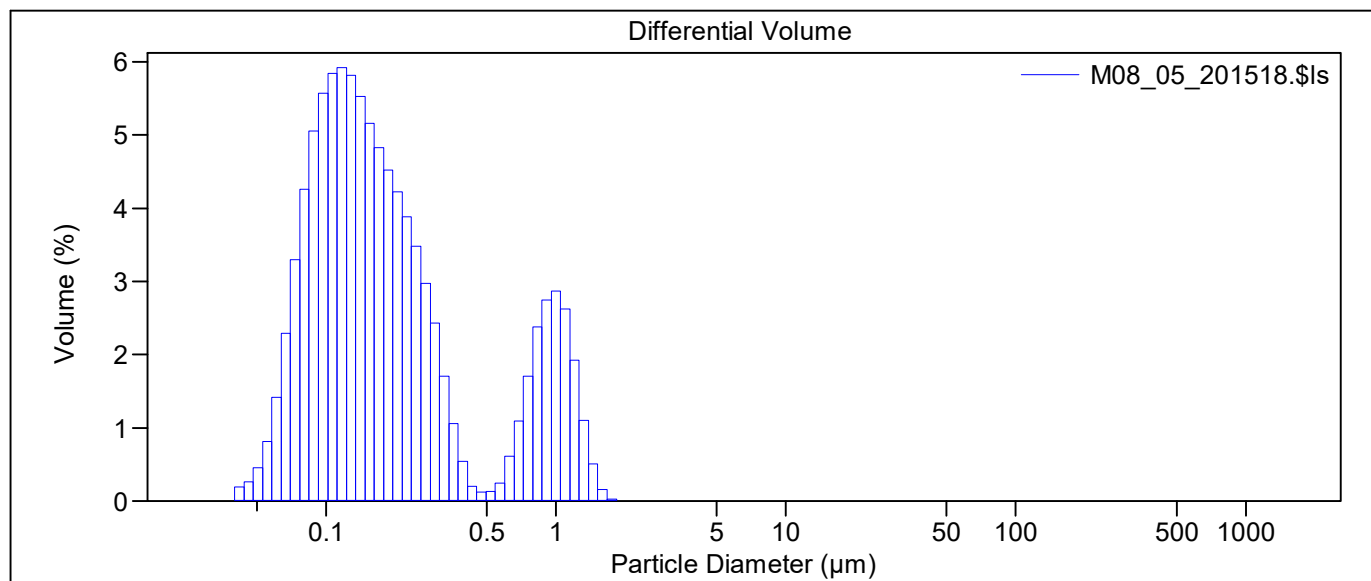
Beckman Coulter LS13320

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File ID:	M08		
Operator:	PP		
Run number:	5		
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Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.60%		
LS 13 320	Universal Liquid Module		
Start time:	20:13 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_05_201518.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.336 µm
Mean:	0.303 µm		Variance:	0.113 µm ²
Median:	0.157 µm		C.V.:	111%
Mean/Median ratio:	1.932		Skewness:	1.798 Right skewed
Mode:	0.117 µm		Kurtosis:	2.004 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.104 µm	0.157 µm	0.277 µm	0.929 µm

Surface Area Statistics (Arithmetic)			M08_05_201518.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.151 µm
Mean:	0.147 µm		Variance:	0.023 µm ²
Median:	0.108 µm		C.V.:	103%
Mean/Median ratio:	1.356		Skewness:	4.846 Right skewed
Mode:	0.097 µm		Kurtosis:	27.28 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.108 µm	0.155 µm	0.229 µm

Number Statistics (Arithmetic)			M08_05_201518.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.0%
Mean/Median ratio:	1.106		Skewness:	4.671 Right skewed
Mode:	0.073 μm		Kurtosis:	74.31 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.67	3.43
10	0.044	0.046	0.26	0.83	3.56
11	0.048	0.050	0.45	1.31	4.66
12	0.053	0.055	0.81	2.14	6.32
13	0.058	0.061	1.42	3.43	8.38
14	0.064	0.067	2.30	5.04	10.2
15	0.070	0.073	3.30	6.61	11.1
16	0.077	0.080	4.26	7.77	10.8
17	0.084	0.088	5.05	8.39	9.73
18	0.093	0.097	5.57	8.43	8.11
19	0.102	0.106	5.84	8.05	6.42
20	0.112	0.117	5.92	7.44	4.93
21	0.122	0.128	5.82	6.66	3.66
22	0.134	0.141	5.53	5.76	2.63
23	0.148	0.155	5.16	4.90	1.85
24	0.162	0.170	4.83	4.18	1.31
25	0.178	0.186	4.52	3.56	0.93
26	0.195	0.205	4.23	3.03	0.66
27	0.214	0.225	3.89	2.54	0.46
28	0.235	0.247	3.48	2.07	0.31
29	0.258	0.271	2.98	1.62	0.20
30	0.284	0.297	2.43	1.20	0.12
31	0.311	0.326	1.71	0.77	0.065
32	0.342	0.358	1.05	0.43	0.031
33	0.375	0.393	0.54	0.20	0.012
34	0.412	0.431	0.20	0.069	0.0033
35	0.452	0.474	0.13	0.039	0.0016
36	0.496	0.520	0.13	0.037	0.0012
37	0.545	0.571	0.24	0.062	0.0017
38	0.598	0.627	0.61	0.14	0.0033
39	0.656	0.688	1.09	0.23	0.0045
40	0.721	0.755	1.70	0.33	0.0053
41	0.791	0.829	2.38	0.42	0.0056
42	0.868	0.910	2.75	0.44	0.0048
43	0.953	0.999	2.87	0.42	0.0038
44	1.047	1.097	2.62	0.35	0.0026
45	1.149	1.204	1.92	0.23	0.0015

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.10	0.12	0.00064
47	1.385	1.451	0.51	0.051	0.00022
48	1.520	1.592	0.16	0.014	0.000052
49	1.668	1.748	0.030	0.0025	0.000007
50	1.832	1.919	0.0038	0.00029	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

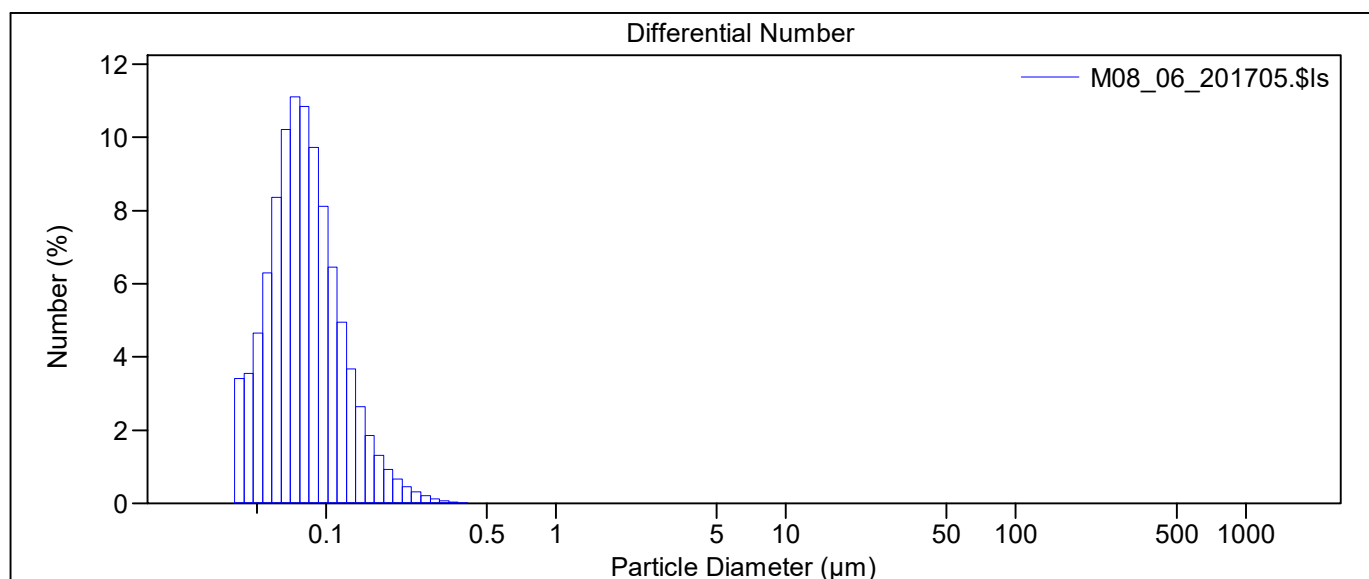
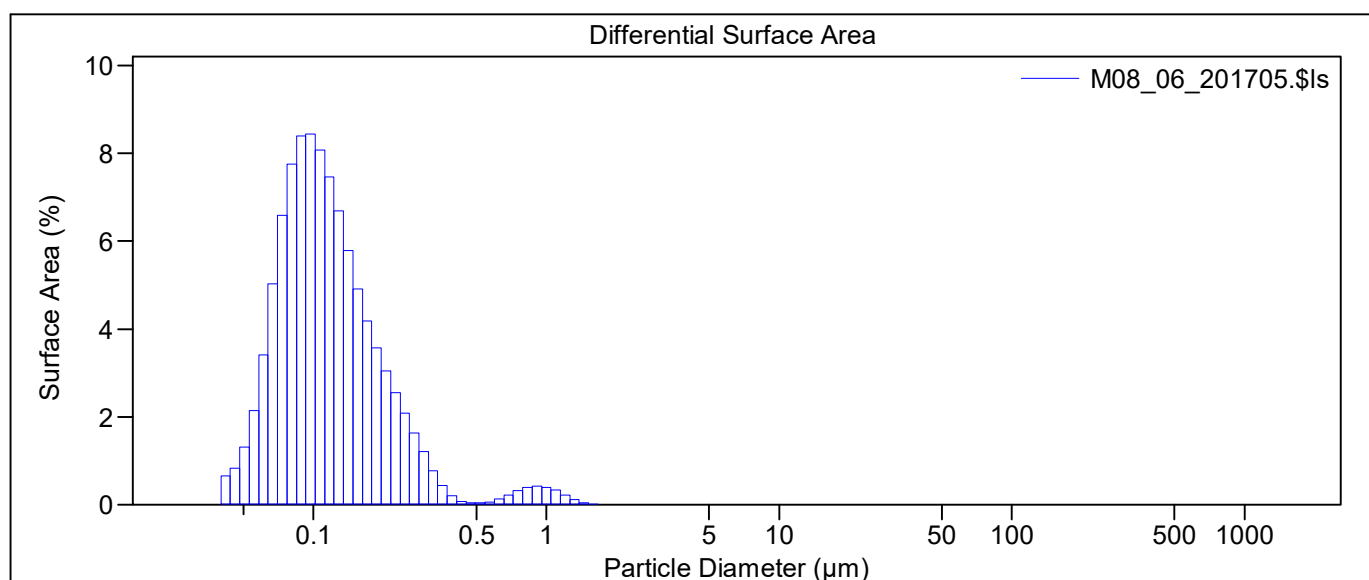
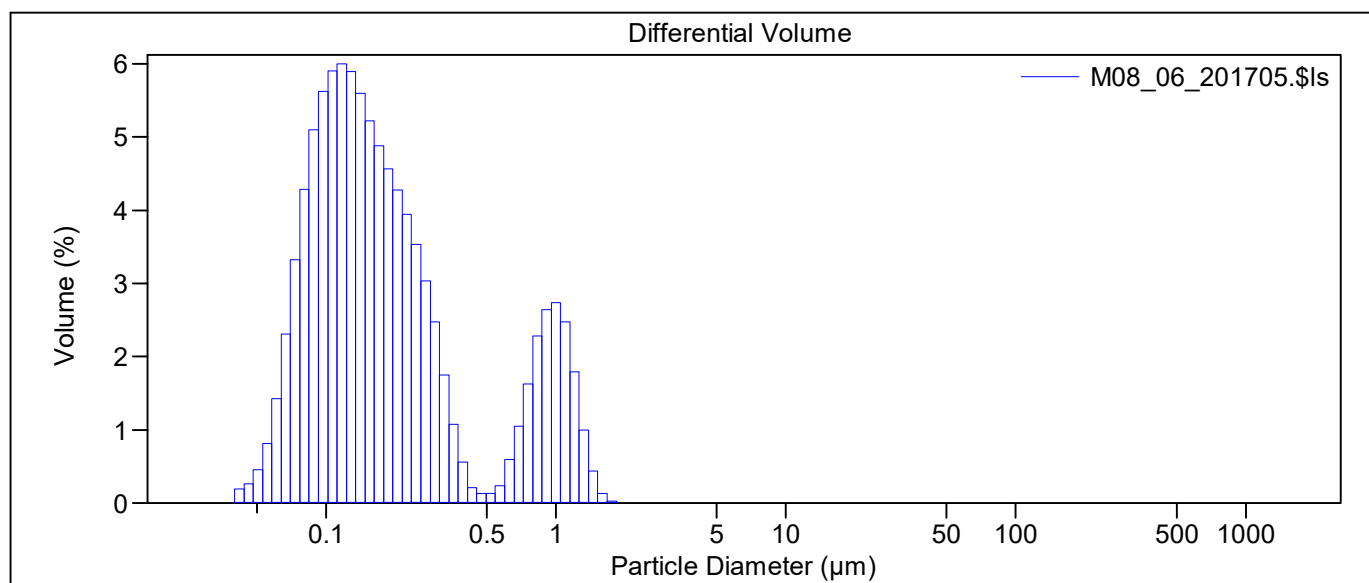
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_06_201705.\$ls		
	M08_06_201705.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.68%		
LS 13 320	Universal Liquid Module		
Start time:	20:15 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_06_201705.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.327 μm
Mean:	0.294 μm		Variance:	0.107 μm ²
Median:	0.155 μm		C.V.:	111%
Mean/Median ratio:	1.893		Skewness:	1.870 Right skewed
Mode:	0.117 μm		Kurtosis:	2.298 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.104 μm	0.155 μm	0.270 μm	0.908 μm

Surface Area Statistics (Arithmetic)			M08_06_201705.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.147 μm
Mean:	0.146 μm		Variance:	0.022 μm ²
Median:	0.108 μm		C.V.:	101%
Mean/Median ratio:	1.343		Skewness:	4.911 Right skewed
Mode:	0.097 μm		Kurtosis:	28.31 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.108 μm	0.155 μm	0.228 μm

Number Statistics (Arithmetic)			M08_06_201705.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.079 μm		C.V.:	44.9%
Mean/Median ratio:	1.106		Skewness:	4.525 Right skewed
Mode:	0.073 μm		Kurtosis:	70.32 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.66	3.42
10	0.044	0.046	0.26	0.83	3.55
11	0.048	0.050	0.45	1.31	4.65
12	0.053	0.055	0.81	2.14	6.30
13	0.058	0.061	1.43	3.42	8.36
14	0.064	0.067	2.31	5.03	10.2
15	0.070	0.073	3.32	6.59	11.1
16	0.077	0.080	4.29	7.75	10.8
17	0.084	0.088	5.10	8.39	9.73
18	0.093	0.097	5.63	8.44	8.12
19	0.102	0.106	5.91	8.07	6.45
20	0.112	0.117	6.00	7.47	4.95
21	0.122	0.128	5.90	6.69	3.68
22	0.134	0.141	5.60	5.78	2.64
23	0.148	0.155	5.22	4.91	1.86
24	0.162	0.170	4.88	4.19	1.32
25	0.178	0.186	4.57	3.57	0.93
26	0.195	0.205	4.28	3.04	0.66
27	0.214	0.225	3.94	2.55	0.46
28	0.235	0.247	3.53	2.09	0.31
29	0.258	0.271	3.03	1.63	0.20
30	0.284	0.297	2.48	1.21	0.12
31	0.311	0.326	1.75	0.78	0.066
32	0.342	0.358	1.08	0.44	0.031
33	0.375	0.393	0.56	0.21	0.012
34	0.412	0.431	0.21	0.070	0.0034
35	0.452	0.474	0.13	0.040	0.0016
36	0.496	0.520	0.13	0.037	0.0012
37	0.545	0.571	0.24	0.060	0.0017
38	0.598	0.627	0.59	0.14	0.0032
39	0.656	0.688	1.05	0.22	0.0042
40	0.721	0.755	1.63	0.31	0.0050
41	0.791	0.829	2.28	0.40	0.0053
42	0.868	0.910	2.64	0.42	0.0046
43	0.953	0.999	2.74	0.40	0.0036
44	1.047	1.097	2.47	0.33	0.0025
45	1.149	1.204	1.79	0.22	0.0014

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.00	0.11	0.00057
47	1.385	1.451	0.44	0.044	0.00019
48	1.520	1.592	0.13	0.012	0.000042
49	1.668	1.748	0.022	0.0018	0.000005
50	1.832	1.919	0.0026	0.00020	4.87E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

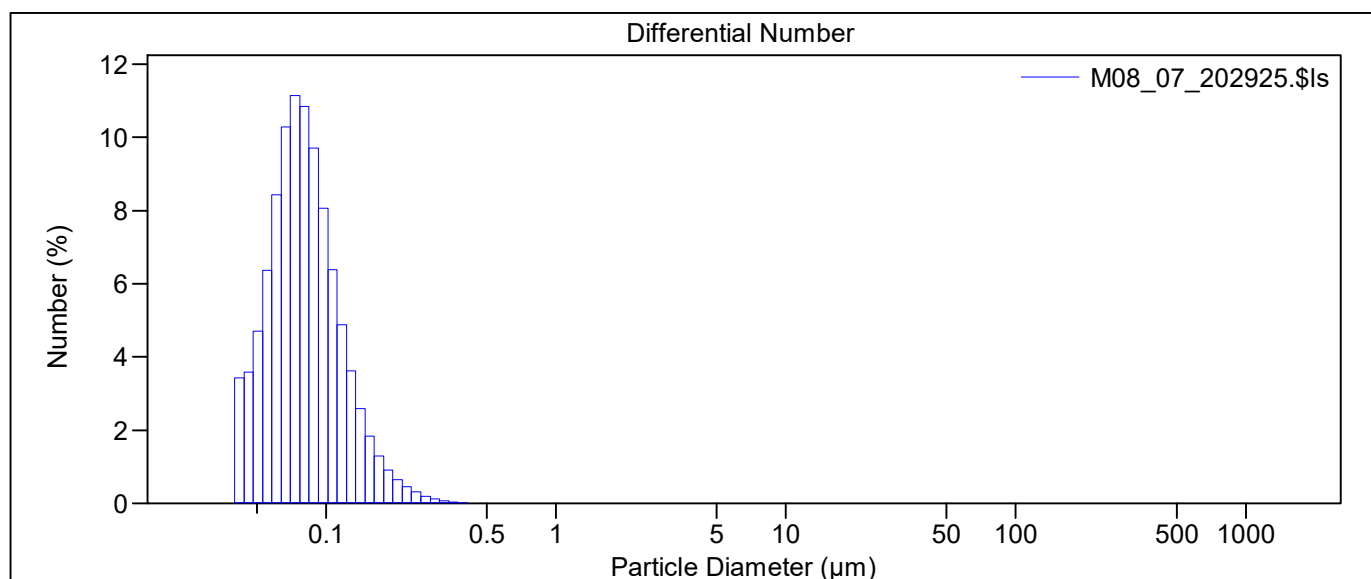
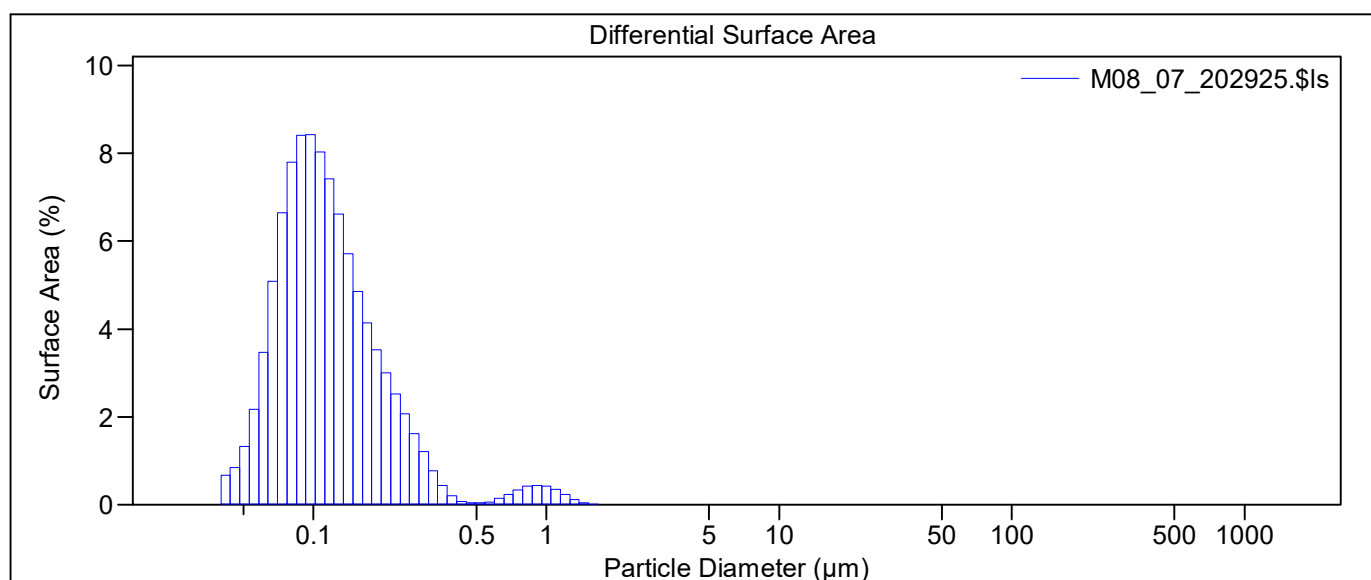
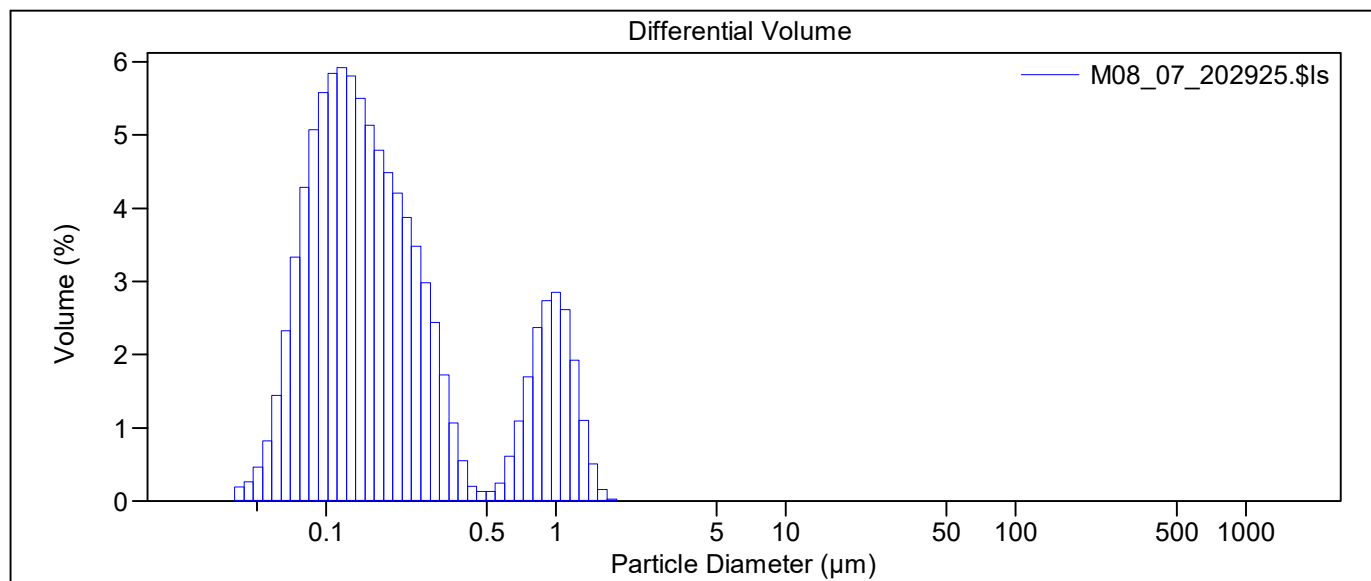
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_07_202925.\$ls		
	M08_07_202925.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.58%		
LS 13 320	Universal Liquid Module		
Start time:	20:27 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_07_202925.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.336 μm
Mean:	0.302 μm		Variance:	0.113 μm ²
Median:	0.156 μm		C.V.:	111%
Mean/Median ratio:	1.932		Skewness:	1.802 Right skewed
Mode:	0.117 μm		Kurtosis:	2.023 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.104 μm	0.156 μm	0.277 μm	0.928 μm

Surface Area Statistics (Arithmetic)			M08_07_202925.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.151 µm
Mean:	0.146 µm		Variance:	0.023 µm ²
Median:	0.108 µm		C.V.:	103%
Mean/Median ratio:	1.356		Skewness:	4.852 Right skewed
Mode:	0.097 µm		Kurtosis:	27.37 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.155 µm	0.229 µm

Number Statistics (Arithmetic)			M08_07_202925.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	45.0%
Mean/Median ratio:	1.106		Skewness:	4.679 Right skewed
Mode:	0.073 μm		Kurtosis:	74.48 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.67	3.43
10	0.044	0.046	0.26	0.84	3.58
11	0.048	0.050	0.46	1.33	4.71
12	0.053	0.055	0.82	2.17	6.37
13	0.058	0.061	1.44	3.47	8.44
14	0.064	0.067	2.32	5.09	10.3
15	0.070	0.073	3.33	6.65	11.1
16	0.077	0.080	4.29	7.80	10.8
17	0.084	0.088	5.08	8.41	9.71
18	0.093	0.097	5.58	8.43	8.07
19	0.102	0.106	5.85	8.04	6.39
20	0.112	0.117	5.92	7.42	4.89
21	0.122	0.128	5.81	6.62	3.62
22	0.134	0.141	5.50	5.72	2.60
23	0.148	0.155	5.13	4.86	1.83
24	0.162	0.170	4.80	4.14	1.29
25	0.178	0.186	4.49	3.53	0.91
26	0.195	0.205	4.20	3.01	0.65
27	0.214	0.225	3.87	2.53	0.45
28	0.235	0.247	3.48	2.07	0.31
29	0.258	0.271	2.99	1.62	0.20
30	0.284	0.297	2.44	1.20	0.12
31	0.311	0.326	1.72	0.77	0.066
32	0.342	0.358	1.07	0.44	0.031
33	0.375	0.393	0.55	0.21	0.012
34	0.412	0.431	0.20	0.070	0.0034
35	0.452	0.474	0.13	0.040	0.0016
36	0.496	0.520	0.13	0.038	0.0013
37	0.545	0.571	0.24	0.063	0.0017
38	0.598	0.627	0.61	0.14	0.0033
39	0.656	0.688	1.09	0.23	0.0044
40	0.721	0.755	1.70	0.33	0.0052
41	0.791	0.829	2.37	0.42	0.0055
42	0.868	0.910	2.74	0.44	0.0048
43	0.953	0.999	2.85	0.42	0.0038
44	1.047	1.097	2.61	0.35	0.0026
45	1.149	1.204	1.92	0.23	0.0015

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.10	0.12	0.00063
47	1.385	1.451	0.51	0.051	0.00022
48	1.520	1.592	0.16	0.014	0.000051
49	1.668	1.748	0.029	0.0025	0.000007
50	1.832	1.919	0.0038	0.00029	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

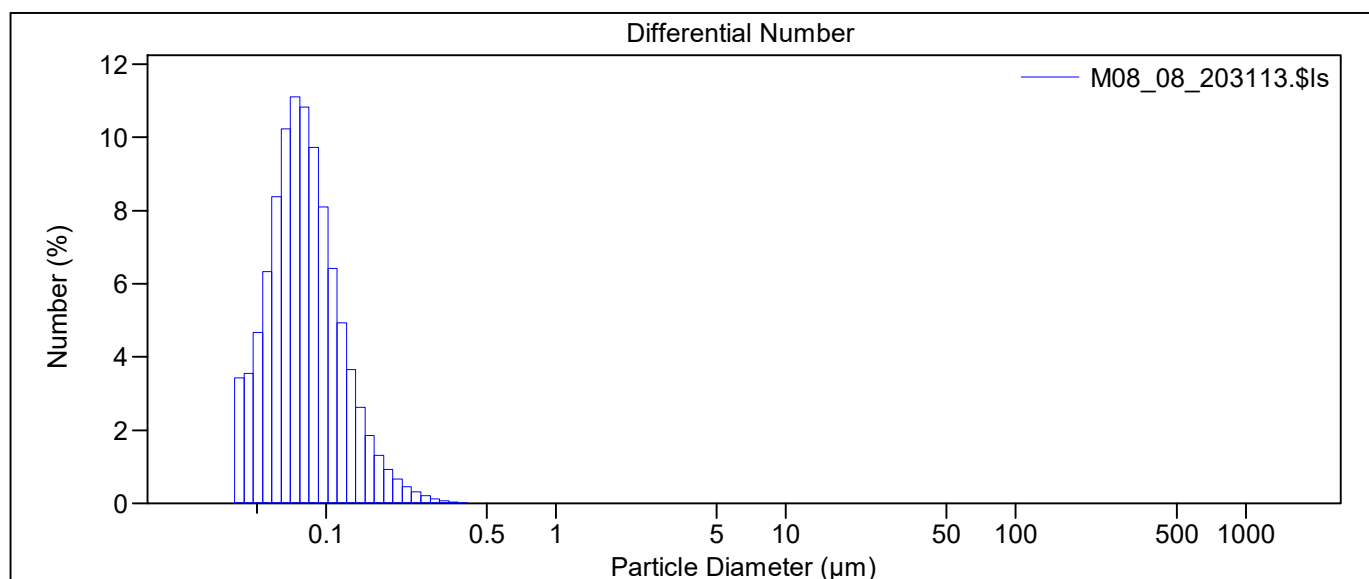
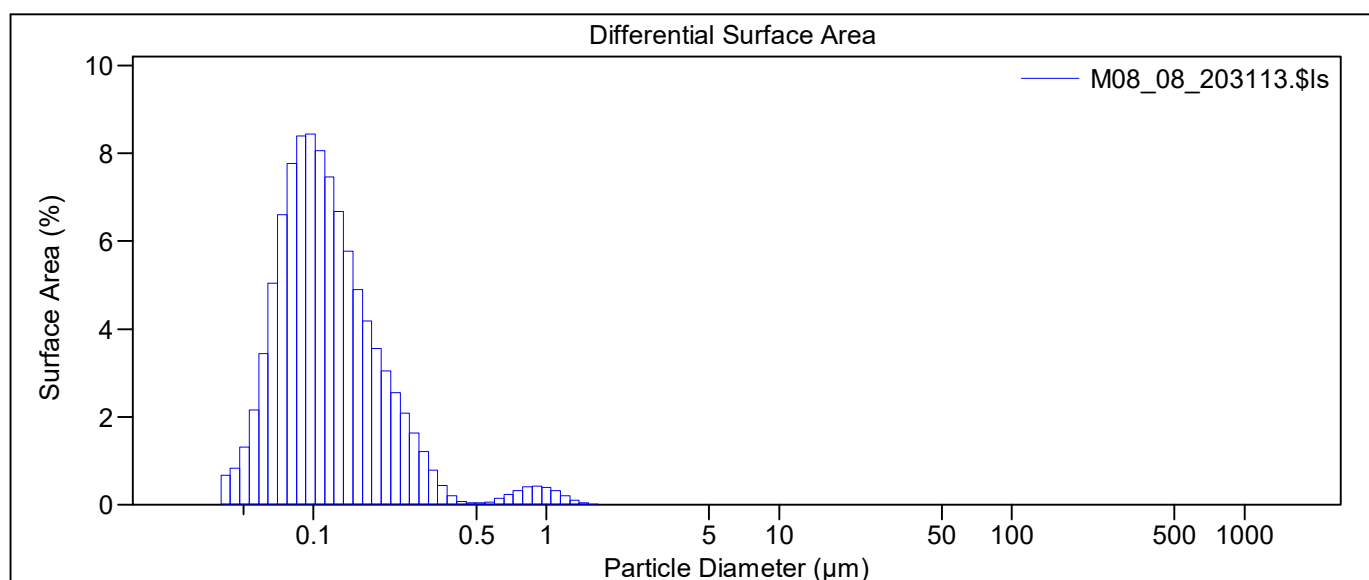
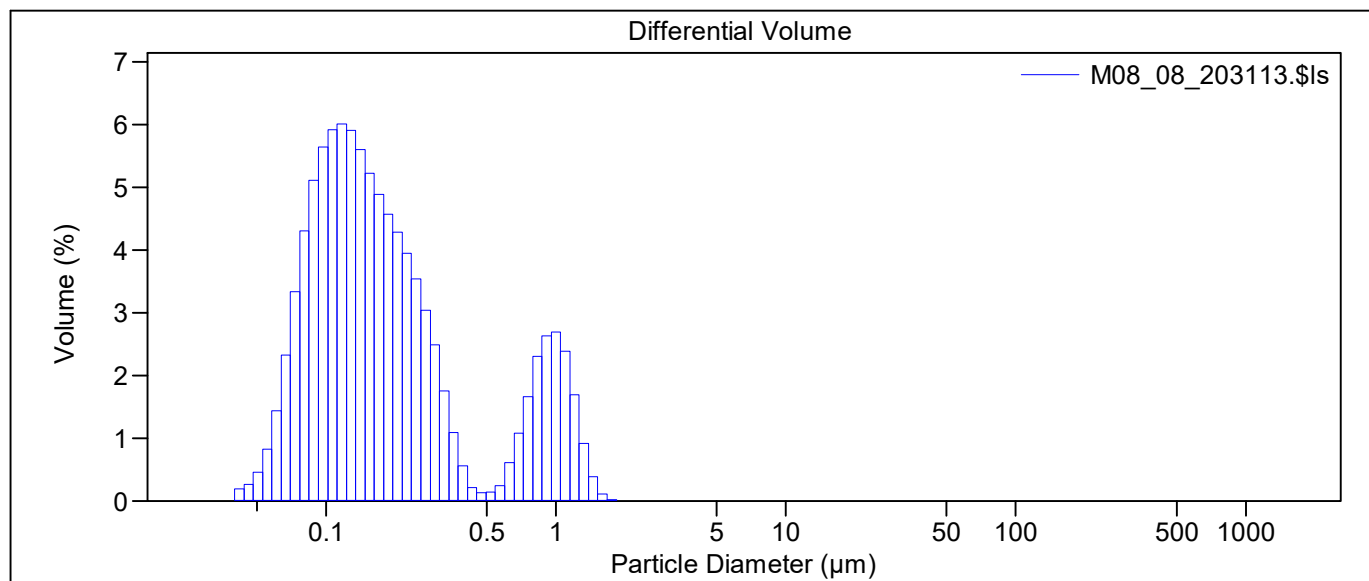
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_08_203113.\$ls		
	M08_08_203113.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.66%		
LS 13 320	Universal Liquid Module		
Start time:	20:29 10	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_08_203113.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.322 μm
Mean:	0.291 μm		Variance:	0.104 μm ²
Median:	0.155 μm		C.V.:	111%
Mean/Median ratio:	1.876		Skewness:	1.886 Right skewed
Mode:	0.117 μm		Kurtosis:	2.374 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.155 μm	0.268 μm	0.895 μm

Surface Area Statistics (Arithmetic)			M08_08_203113.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.145 µm
Mean:	0.145 µm		Variance:	0.021 µm ²
Median:	0.108 µm		C.V.:	100%
Mean/Median ratio:	1.340		Skewness:	4.898 Right skewed
Mode:	0.097 µm		Kurtosis:	28.27 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.108 µm	0.155 µm	0.228 µm

Number Statistics (Arithmetic)			M08_08_203113.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.9%
Mean/Median ratio:	1.106		Skewness:	4.481 Right skewed
Mode:	0.073 μm		Kurtosis:	68.65 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.66	3.42
10	0.044	0.046	0.26	0.83	3.56
11	0.048	0.050	0.46	1.32	4.67
12	0.053	0.055	0.82	2.15	6.33
13	0.058	0.061	1.44	3.44	8.39
14	0.064	0.067	2.33	5.05	10.2
15	0.070	0.073	3.34	6.61	11.1
16	0.077	0.080	4.31	7.77	10.8
17	0.084	0.088	5.12	8.40	9.72
18	0.093	0.097	5.64	8.44	8.10
19	0.102	0.106	5.92	8.06	6.43
20	0.112	0.117	6.01	7.46	4.93
21	0.122	0.128	5.90	6.67	3.66
22	0.134	0.141	5.60	5.77	2.63
23	0.148	0.155	5.23	4.90	1.85
24	0.162	0.170	4.89	4.18	1.31
25	0.178	0.186	4.57	3.56	0.93
26	0.195	0.205	4.29	3.04	0.66
27	0.214	0.225	3.95	2.55	0.46
28	0.235	0.247	3.54	2.08	0.31
29	0.258	0.271	3.04	1.63	0.20
30	0.284	0.297	2.49	1.22	0.12
31	0.311	0.326	1.76	0.78	0.066
32	0.342	0.358	1.09	0.44	0.031
33	0.375	0.393	0.57	0.21	0.012
34	0.412	0.431	0.21	0.071	0.0035
35	0.452	0.474	0.13	0.041	0.0017
36	0.496	0.520	0.14	0.039	0.0013
37	0.545	0.571	0.25	0.063	0.0018
38	0.598	0.627	0.61	0.14	0.0033
39	0.656	0.688	1.08	0.23	0.0044
40	0.721	0.755	1.66	0.32	0.0051
41	0.791	0.829	2.30	0.40	0.0053
42	0.868	0.910	2.64	0.42	0.0046
43	0.953	0.999	2.69	0.39	0.0035
44	1.047	1.097	2.38	0.32	0.0024
45	1.149	1.204	1.70	0.20	0.0013

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.91	0.10	0.00052
47	1.385	1.451	0.39	0.039	0.00017
48	1.520	1.592	0.11	0.0100	0.000036
49	1.668	1.748	0.017	0.0014	0.000004
50	1.832	1.919	0.0019	0.00014	3.5E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

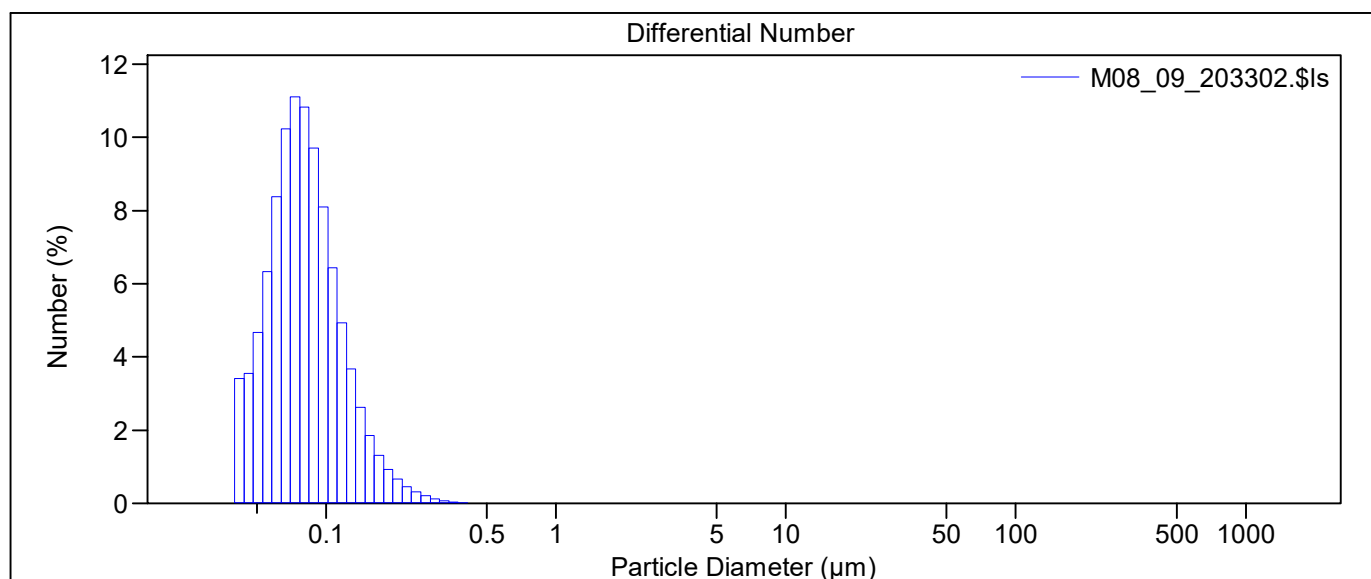
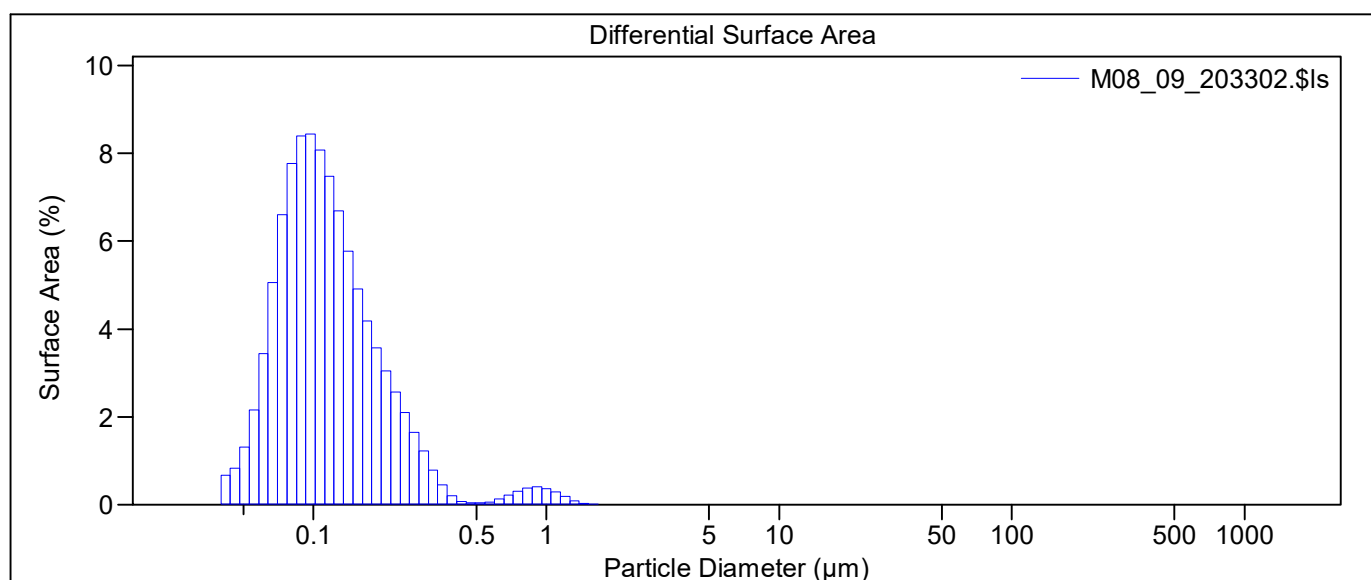
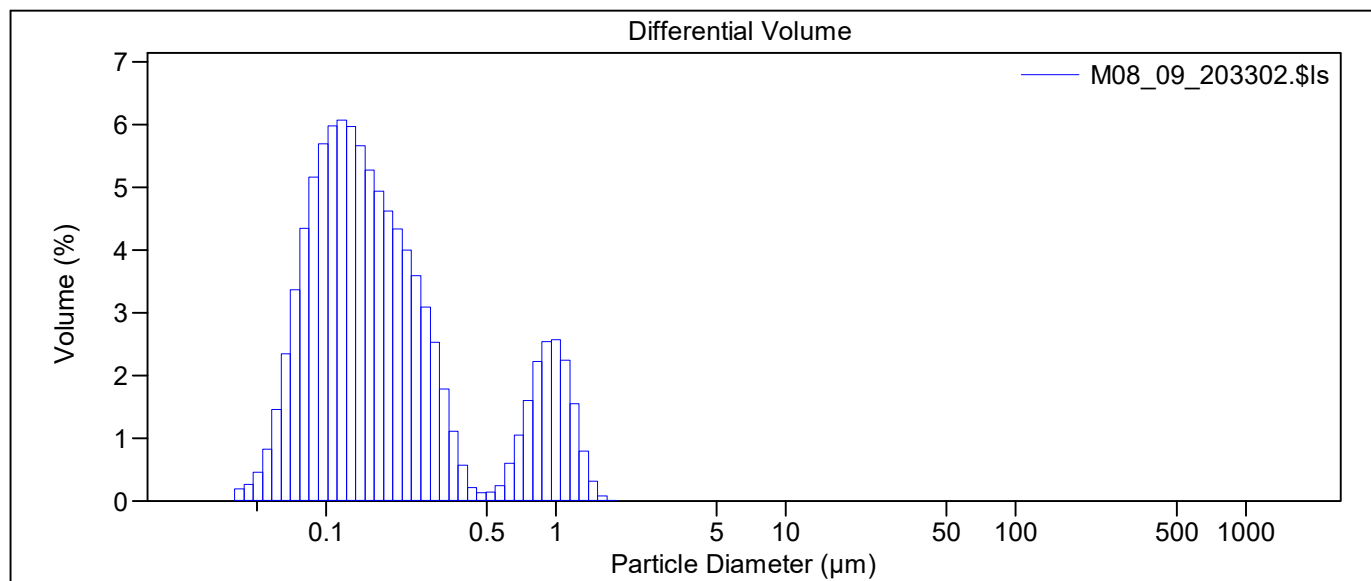
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_09_203302.\$ls		
	M08_09_203302.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.73%		
LS 13 320	Universal Liquid Module		
Start time:	20:31 10	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_09_203302.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.312 μm
Mean:	0.282 μm		Variance:	0.097 μm ²
Median:	0.154 μm		C.V.:	111%
Mean/Median ratio:	1.838		Skewness:	1.953 Right skewed
Mode:	0.117 μm		Kurtosis:	2.662 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.103 μm	0.154 μm	0.262 μm	0.873 μm

Surface Area Statistics (Arithmetic)			M08_09_203302.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.141 μm
Mean:	0.144 μm		Variance:	0.020 μm ²
Median:	0.108 μm		C.V.:	98.2%
Mean/Median ratio:	1.329		Skewness:	4.946 Right skewed
Mode:	0.097 μm		Kurtosis:	29.12 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 μm	0.082 μm	0.108 μm	0.154 μm	0.227 μm

Number Statistics (Arithmetic)			M08_09_203302.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.087 μm		Variance:	0.0015 μm ²
Median:	0.078 μm		C.V.:	44.7%
Mean/Median ratio:	1.106		Skewness:	4.346 Right skewed
Mode:	0.073 μm		Kurtosis:	64.88 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.130 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.19	0.66	3.42
10	0.044	0.046	0.27	0.83	3.56
11	0.048	0.050	0.46	1.32	4.67
12	0.053	0.055	0.83	2.15	6.33
13	0.058	0.061	1.45	3.44	8.39
14	0.064	0.067	2.35	5.05	10.2
15	0.070	0.073	3.37	6.61	11.1
16	0.077	0.080	4.35	7.77	10.8
17	0.084	0.088	5.16	8.40	9.72
18	0.093	0.097	5.70	8.44	8.11
19	0.102	0.106	5.98	8.08	6.43
20	0.112	0.117	6.07	7.47	4.94
21	0.122	0.128	5.97	6.69	3.67
22	0.134	0.141	5.66	5.78	2.63
23	0.148	0.155	5.28	4.91	1.85
24	0.162	0.170	4.94	4.18	1.31
25	0.178	0.186	4.62	3.57	0.93
26	0.195	0.205	4.34	3.05	0.66
27	0.214	0.225	4.00	2.56	0.46
28	0.235	0.247	3.59	2.09	0.31
29	0.258	0.271	3.09	1.64	0.20
30	0.284	0.297	2.53	1.22	0.13
31	0.311	0.326	1.79	0.79	0.067
32	0.342	0.358	1.11	0.45	0.031
33	0.375	0.393	0.57	0.21	0.012
34	0.412	0.431	0.22	0.072	0.0035
35	0.452	0.474	0.14	0.041	0.0017
36	0.496	0.520	0.14	0.039	0.0013
37	0.545	0.571	0.24	0.061	0.0017
38	0.598	0.627	0.60	0.14	0.0032
39	0.656	0.688	1.05	0.22	0.0042
40	0.721	0.755	1.60	0.31	0.0048
41	0.791	0.829	2.22	0.39	0.0051
42	0.868	0.910	2.55	0.40	0.0044
43	0.953	0.999	2.58	0.37	0.0034
44	1.047	1.097	2.24	0.29	0.0022
45	1.149	1.204	1.56	0.19	0.0012

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.80	0.087	0.00045
47	1.385	1.451	0.32	0.031	0.00013
48	1.520	1.592	0.082	0.0074	0.000026
49	1.668	1.748	0.0098	0.00081	0.000002
50	1.832	1.919	0.00086	0.000065	1.58E-7
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

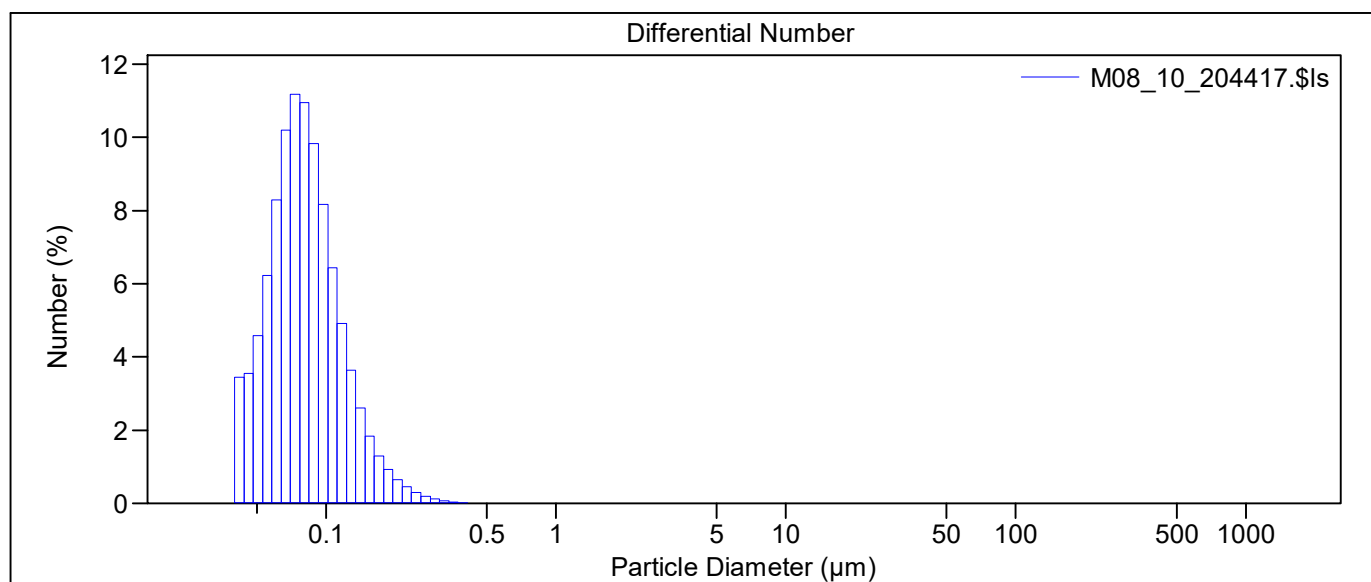
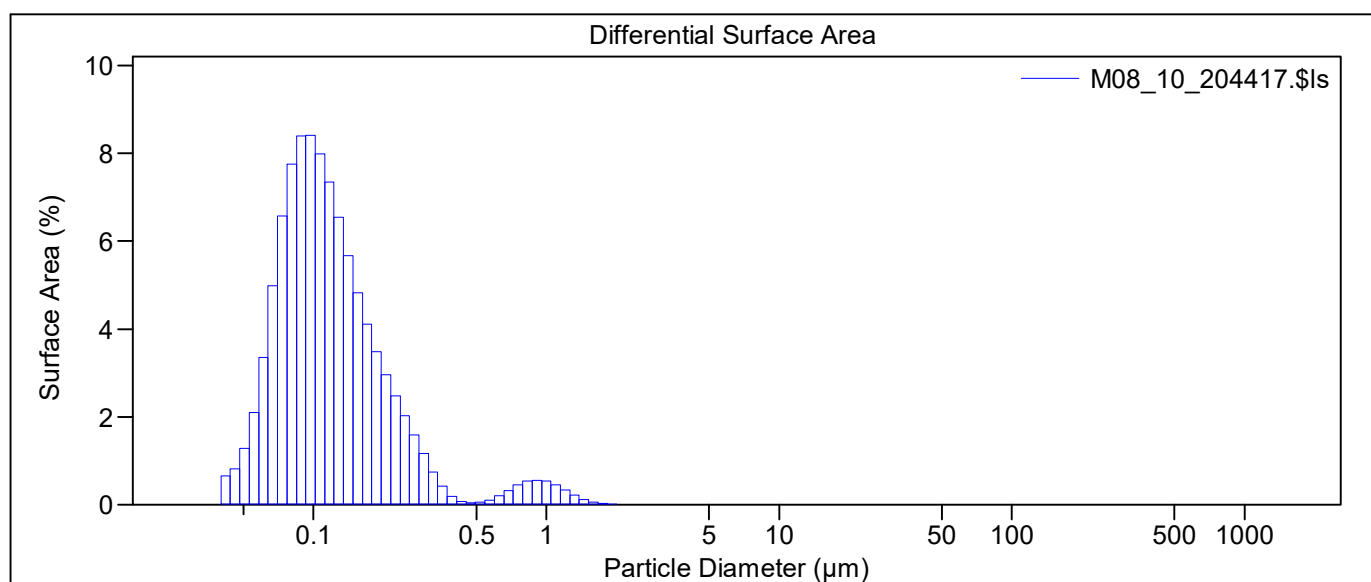
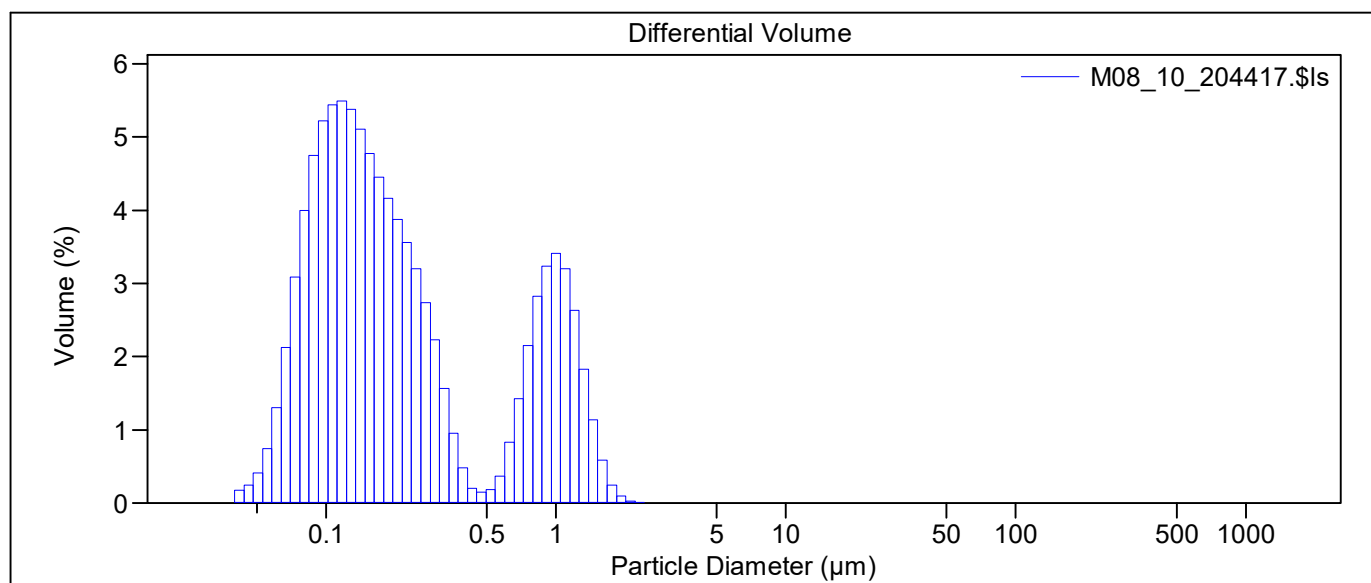
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_10_204417.\$ls		
	M08_10_204417.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.30%		
LS 13 320	Universal Liquid Module		
Start time:	20:42 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_10_204417.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.395 µm
Mean:	0.362 µm		Variance:	0.156 µm ²
Median:	0.168 µm		C.V.:	109%
Mean/Median ratio:	2.149		Skewness:	1.501 Right skewed
Mode:	0.117 µm		Kurtosis:	1.069 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.107 µm	0.168 µm	0.377 µm	1.040 µm

Surface Area Statistics (Arithmetic)			M08_10_204417.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.179 µm
Mean:	0.156 µm		Variance:	0.032 µm ²
Median:	0.109 µm		C.V.:	115%
Mean/Median ratio:	1.439		Skewness:	4.514 Right skewed
Mode:	0.097 µm		Kurtosis:	22.98 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.238 µm

Number Statistics (Arithmetic)			M08_10_204417.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	46.1%
Mean/Median ratio:	1.106		Skewness:	5.578 Right skewed
Mode:	0.073 μm		Kurtosis:	99.70 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.130 μm



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M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.45
10	0.044	0.046	0.24	0.82	3.55
11	0.048	0.050	0.41	1.28	4.58
12	0.053	0.055	0.74	2.09	6.23
13	0.058	0.061	1.31	3.36	8.30
14	0.064	0.067	2.13	4.98	10.2
15	0.070	0.073	3.08	6.58	11.2
16	0.077	0.080	3.99	7.76	10.9
17	0.084	0.088	4.75	8.40	9.83
18	0.093	0.097	5.22	8.42	8.18
19	0.102	0.106	5.44	7.99	6.44
20	0.112	0.117	5.49	7.35	4.91
21	0.122	0.128	5.38	6.55	3.64
22	0.134	0.141	5.11	5.67	2.61
23	0.148	0.155	4.77	4.83	1.85
24	0.162	0.170	4.46	4.10	1.30
25	0.178	0.186	4.16	3.49	0.92
26	0.195	0.205	3.87	2.96	0.65
27	0.214	0.225	3.56	2.48	0.45
28	0.235	0.247	3.20	2.03	0.30
29	0.258	0.271	2.74	1.58	0.20
30	0.284	0.297	2.23	1.17	0.12
31	0.311	0.326	1.56	0.75	0.064
32	0.342	0.358	0.95	0.42	0.030
33	0.375	0.393	0.48	0.19	0.011
34	0.412	0.431	0.20	0.074	0.0036
35	0.452	0.474	0.15	0.048	0.0020
36	0.496	0.520	0.18	0.054	0.0018
37	0.545	0.571	0.37	0.10	0.0028
38	0.598	0.627	0.83	0.21	0.0048
39	0.656	0.688	1.42	0.32	0.0062
40	0.721	0.755	2.15	0.45	0.0072
41	0.791	0.829	2.83	0.53	0.0071
42	0.868	0.910	3.23	0.56	0.0061
43	0.953	0.999	3.41	0.53	0.0049
44	1.047	1.097	3.20	0.46	0.0035
45	1.149	1.204	2.63	0.34	0.0022
46	1.261	1.321	1.83	0.22	0.0011
47	1.385	1.451	1.14	0.12	0.00053
48	1.520	1.592	0.58	0.057	0.00021
49	1.668	1.748	0.25	0.022	0.000066
50	1.832	1.919	0.097	0.0079	0.000020
51	2.011	2.107	0.026	0.0019	0.000004
52	2.207	2.313	0.0057	0.00039	0.000001
53	2.423	2.539	0.00096	0.000059	8.37E-8
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

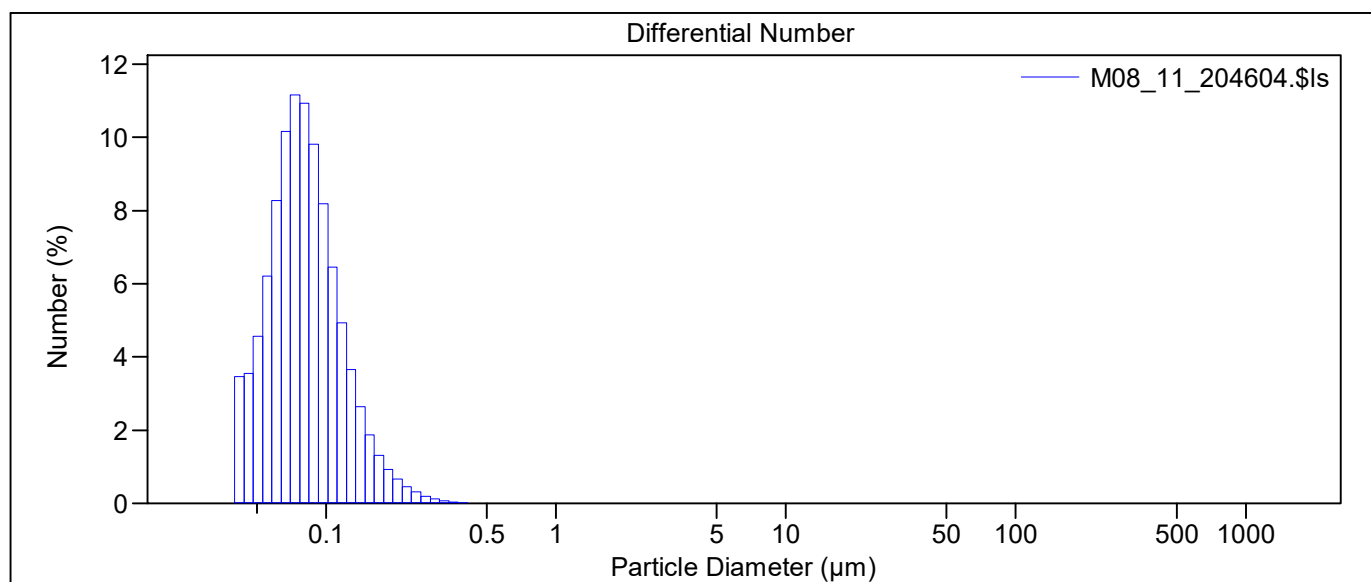
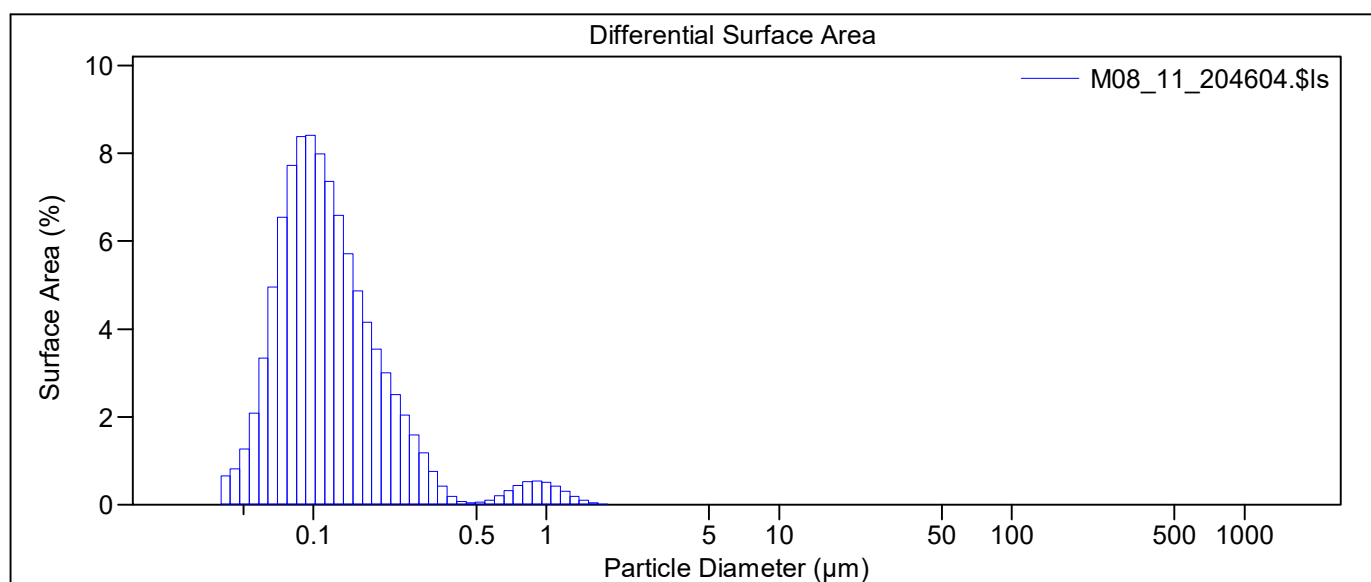
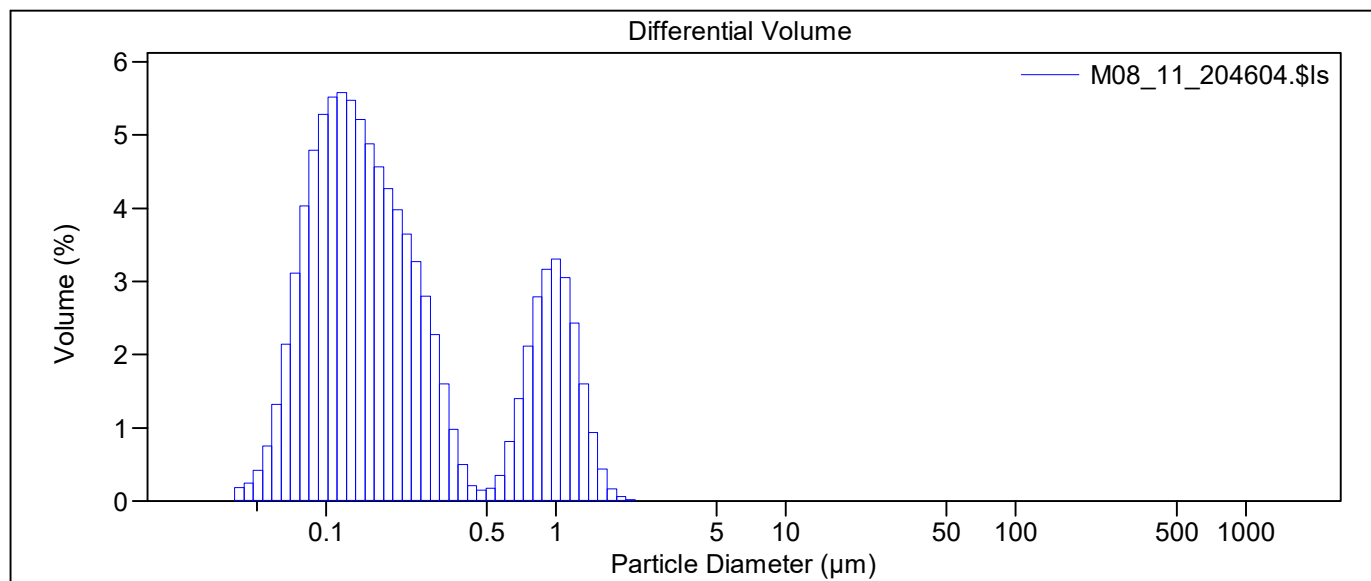
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	M08_11_204604.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.34%		
LS 13 320	Universal Liquid Module		
Start time:	20:44 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	63%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_11_204604.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.379 µm
Mean:	0.347 µm		Variance:	0.144 µm ²
Median:	0.166 µm		C.V.:	109%
Mean/Median ratio:	2.091		Skewness:	1.559 Right skewed
Mode:	0.117 µm		Kurtosis:	1.247 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 µm	0.107 µm	0.166 µm	0.335 µm	1.010 µm

Surface Area Statistics (Arithmetic)			M08_11_204604.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.172 µm
Mean:	0.154 µm		Variance:	0.030 µm ²
Median:	0.109 µm		C.V.:	112%
Mean/Median ratio:	1.418		Skewness:	4.558 Right skewed
Mode:	0.097 µm		Kurtosis:	23.56 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.157 µm	0.236 µm

Number Statistics (Arithmetic)			M08_11_204604.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.9%
Mean/Median ratio:	1.106		Skewness:	5.340 Right skewed
Mode:	0.073 μm		Kurtosis:	92.29 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.130 μm



M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.46
10	0.044	0.046	0.24	0.82	3.54
11	0.048	0.050	0.42	1.27	4.56
12	0.053	0.055	0.75	2.08	6.21
13	0.058	0.061	1.32	3.34	8.27
14	0.064	0.067	2.14	4.96	10.2
15	0.070	0.073	3.11	6.55	11.2
16	0.077	0.080	4.03	7.73	10.9
17	0.084	0.088	4.79	8.37	9.82
18	0.093	0.097	5.28	8.41	8.18
19	0.102	0.106	5.51	7.99	6.45
20	0.112	0.117	5.58	7.36	4.93
21	0.122	0.128	5.47	6.58	3.66
22	0.134	0.141	5.21	5.71	2.64
23	0.148	0.155	4.88	4.87	1.87
24	0.162	0.170	4.57	4.15	1.32
25	0.178	0.186	4.27	3.54	0.93
26	0.195	0.205	3.98	3.00	0.66
27	0.214	0.225	3.65	2.51	0.46
28	0.235	0.247	3.27	2.05	0.31
29	0.258	0.271	2.80	1.59	0.20
30	0.284	0.297	2.28	1.18	0.12
31	0.311	0.326	1.60	0.76	0.065
32	0.342	0.358	0.98	0.42	0.030
33	0.375	0.393	0.50	0.20	0.012
34	0.412	0.431	0.21	0.074	0.0036
35	0.452	0.474	0.14	0.047	0.0019
36	0.496	0.520	0.18	0.052	0.0018
37	0.545	0.571	0.35	0.095	0.0027
38	0.598	0.627	0.81	0.20	0.0047
39	0.656	0.688	1.40	0.31	0.0061
40	0.721	0.755	2.12	0.43	0.0070
41	0.791	0.829	2.79	0.52	0.0069
42	0.868	0.910	3.17	0.54	0.0059
43	0.953	0.999	3.30	0.51	0.0047
44	1.047	1.097	3.05	0.43	0.0033
45	1.149	1.204	2.43	0.31	0.0020

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.60	0.19	0.00098
47	1.385	1.451	0.94	0.100	0.00043
48	1.520	1.592	0.44	0.043	0.00015
49	1.668	1.748	0.17	0.015	0.000044
50	1.832	1.919	0.062	0.0050	0.000012
51	2.011	2.107	0.015	0.0011	0.000002
52	2.207	2.313	0.0036	0.00024	4.08E-7
53	2.423	2.539	0.00093	0.000056	8.01E-8
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

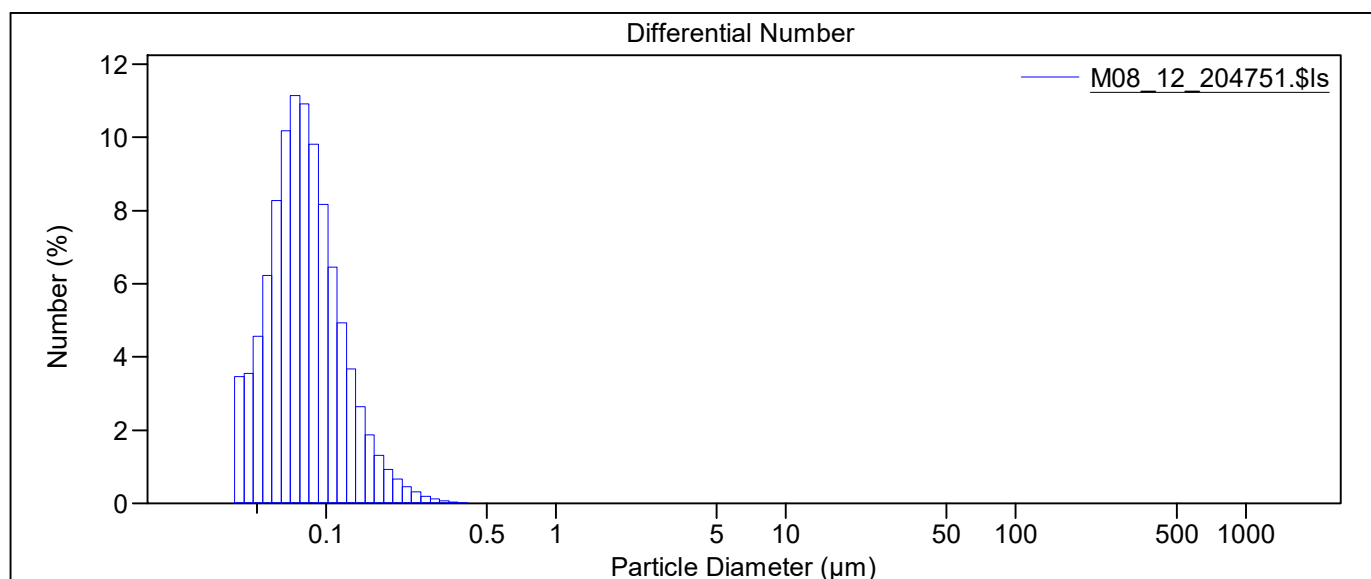
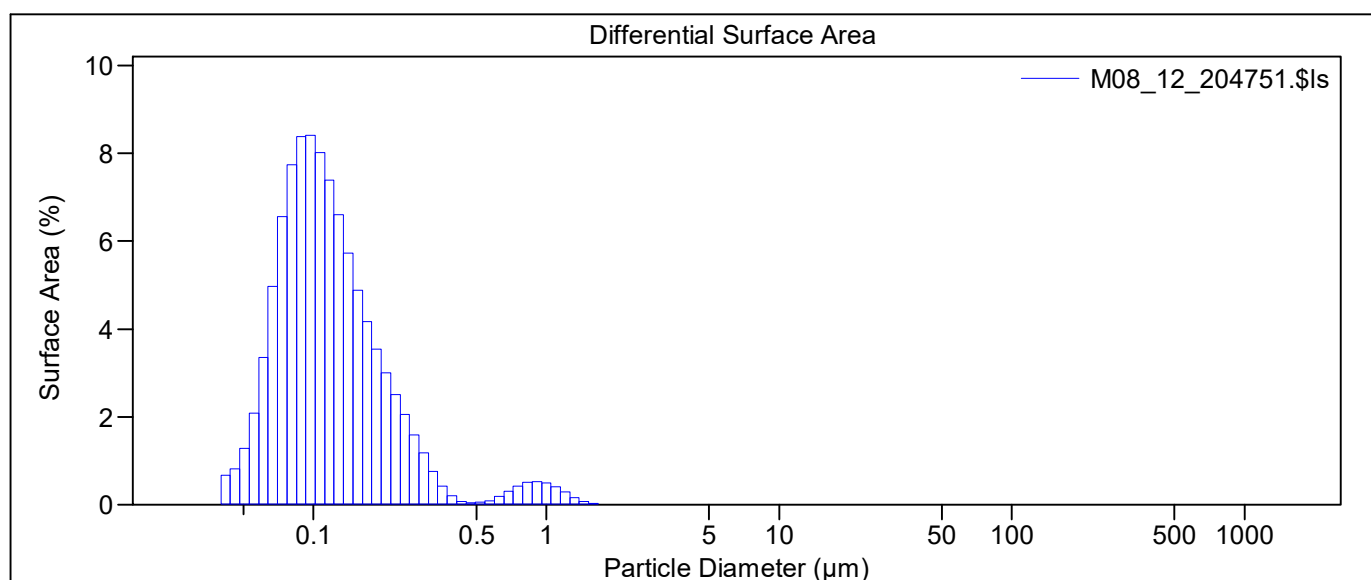
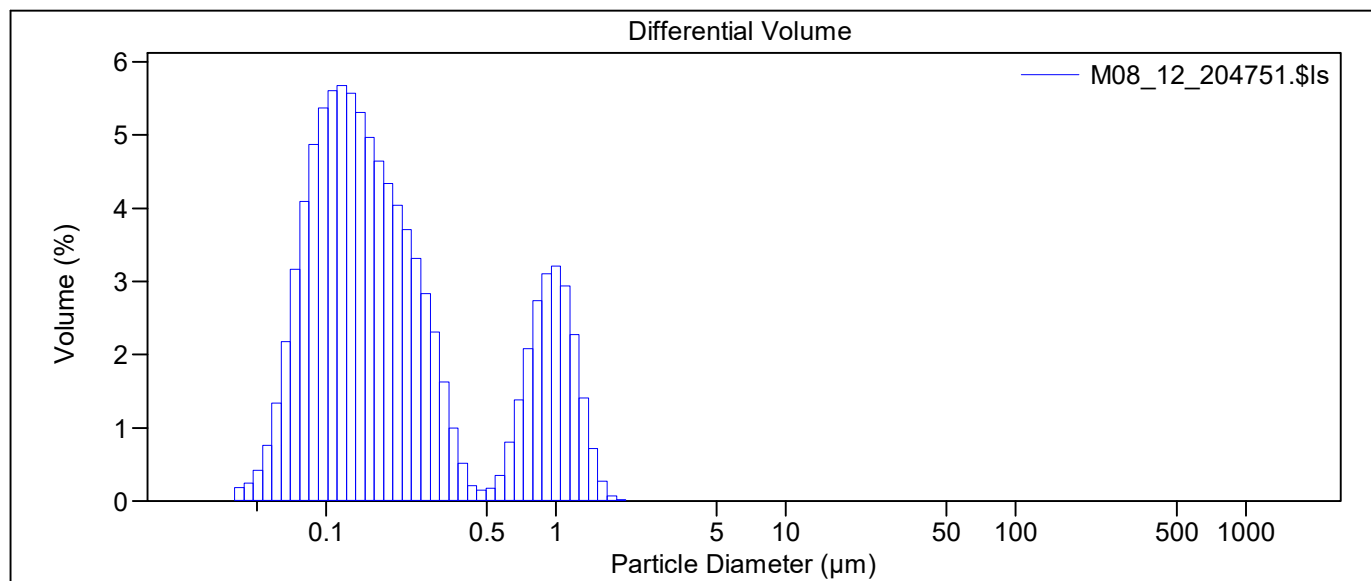
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_12_204751.\$ls		
	M08_12_204751.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.40%		
LS 13 320	Universal Liquid Module		
Start time:	20:46 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	62%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_12_204751.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.361 μm
Mean:	0.332 μm		Variance:	0.130 μm ²
Median:	0.163 μm		C.V.:	109%
Mean/Median ratio:	2.036		Skewness:	1.591 Right skewed
Mode:	0.117 μm		Kurtosis:	1.262 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.080 μm	0.106 μm	0.163 μm	0.312 μm	0.979 μm

Surface Area Statistics (Arithmetic)			M08_12_204751.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.165 µm
Mean:	0.152 µm		Variance:	0.027 µm ²
Median:	0.109 µm		C.V.:	109%
Mean/Median ratio:	1.399		Skewness:	4.567 Right skewed
Mode:	0.097 µm		Kurtosis:	23.62 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.082 µm	0.109 µm	0.156 µm	0.234 µm

Number Statistics (Arithmetic)			M08_12_204751.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.087 μm		Variance:	0.0016 μm ²
Median:	0.079 μm		C.V.:	45.7%
Mean/Median ratio:	1.106		Skewness:	5.133 Right skewed
Mode:	0.073 μm		Kurtosis:	85.59 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.079 μm	0.100 μm	0.130 μm



M08.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.66	3.46
10	0.044	0.046	0.25	0.82	3.55
11	0.048	0.050	0.42	1.28	4.57
12	0.053	0.055	0.76	2.09	6.22
13	0.058	0.061	1.34	3.36	8.28
14	0.064	0.067	2.18	4.97	10.2
15	0.070	0.073	3.16	6.56	11.1
16	0.077	0.080	4.10	7.74	10.9
17	0.084	0.088	4.87	8.38	9.81
18	0.093	0.097	5.37	8.42	8.17
19	0.102	0.106	5.61	8.01	6.45
20	0.112	0.117	5.68	7.39	4.94
21	0.122	0.128	5.57	6.61	3.67
22	0.134	0.141	5.31	5.73	2.64
23	0.148	0.155	4.97	4.89	1.87
24	0.162	0.170	4.64	4.16	1.32
25	0.178	0.186	4.34	3.54	0.93
26	0.195	0.205	4.04	3.01	0.66
27	0.214	0.225	3.71	2.51	0.45
28	0.235	0.247	3.32	2.05	0.31
29	0.258	0.271	2.84	1.59	0.20
30	0.284	0.297	2.31	1.18	0.12
31	0.311	0.326	1.63	0.76	0.065
32	0.342	0.358	1.00	0.42	0.030
33	0.375	0.393	0.51	0.20	0.012
34	0.412	0.431	0.21	0.074	0.0036
35	0.452	0.474	0.15	0.047	0.0019
36	0.496	0.520	0.18	0.052	0.0018
37	0.545	0.571	0.35	0.093	0.0026
38	0.598	0.627	0.80	0.20	0.0045
39	0.656	0.688	1.38	0.31	0.0059
40	0.721	0.755	2.08	0.42	0.0067
41	0.791	0.829	2.74	0.50	0.0067
42	0.868	0.910	3.10	0.52	0.0057
43	0.953	0.999	3.21	0.49	0.0045
44	1.047	1.097	2.94	0.41	0.0031
45	1.149	1.204	2.27	0.29	0.0018
46	1.261	1.321	1.41	0.16	0.00085
47	1.385	1.451	0.72	0.076	0.00033
48	1.520	1.592	0.27	0.026	0.000094
49	1.668	1.748	0.069	0.0060	0.000018
50	1.832	1.919	0.013	0.0010	0.000003
51	2.011	2.107	0.00056	0.000041	8.4E-8
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M08.\$av					
Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

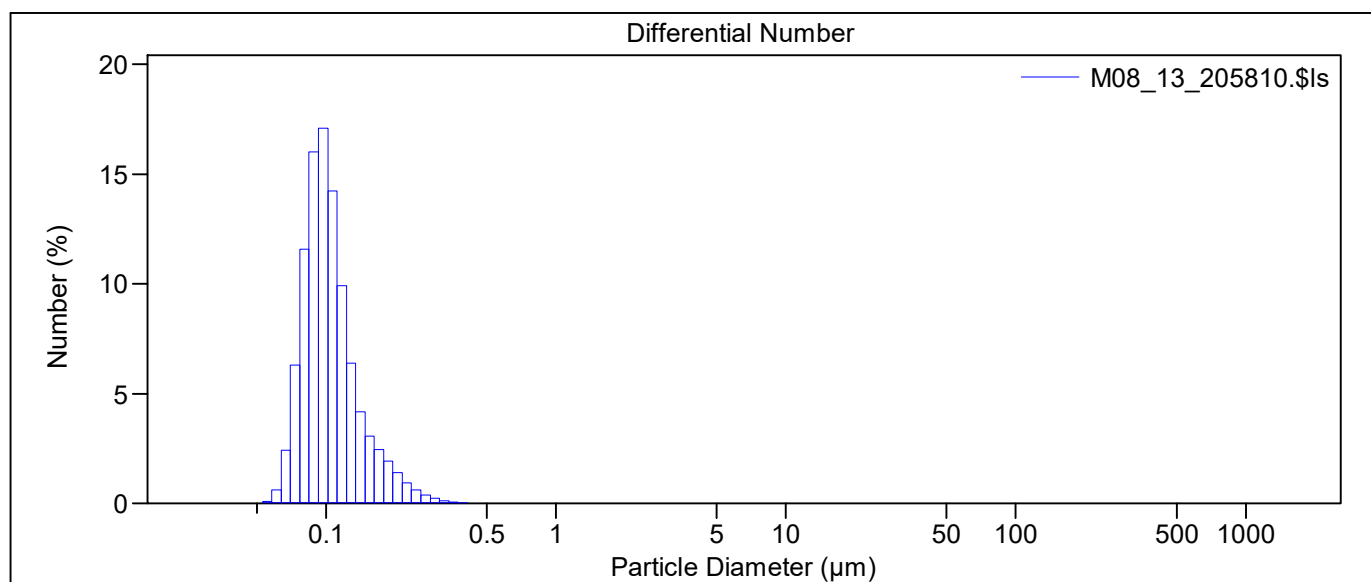
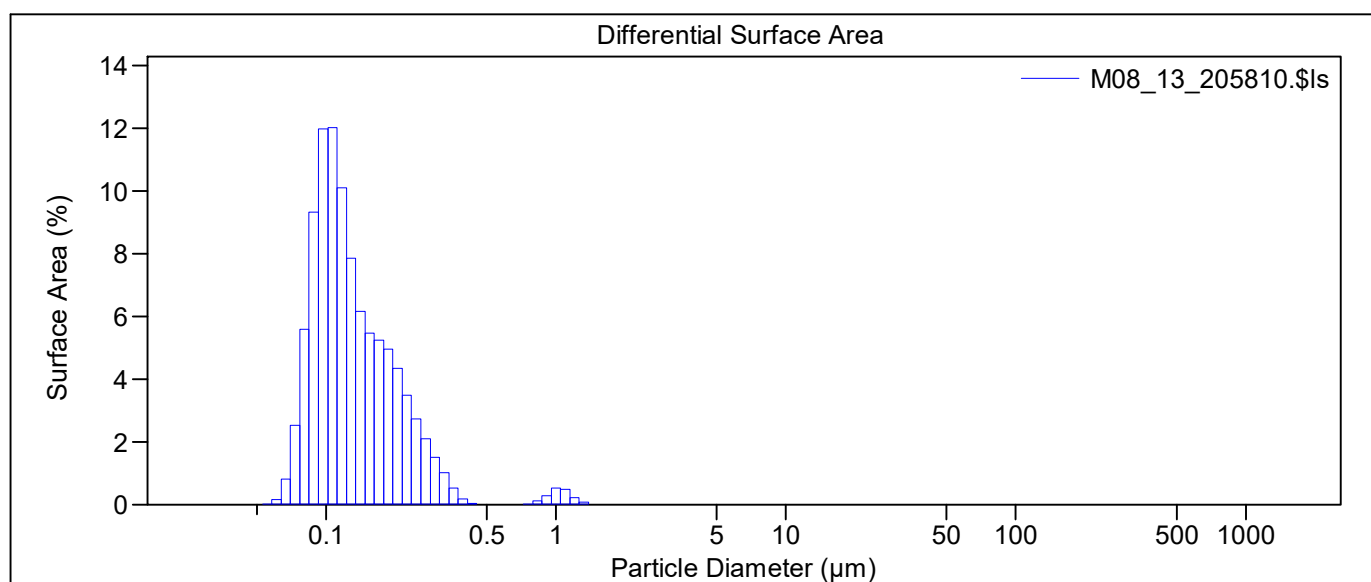
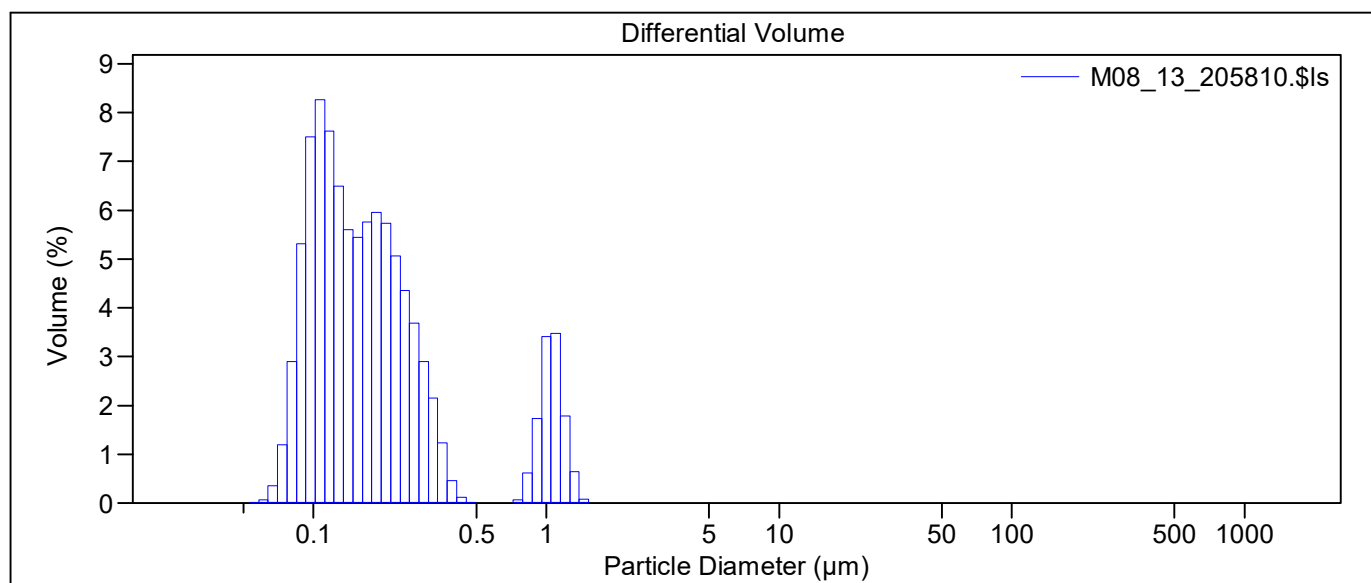
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_13_205810.\$ls		
	M08_13_205810.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.46%		
LS 13 320	Universal Liquid Module		
Start time:	20:56 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-4%	PIDS Obscur:	55%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_13_205810.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.299 μm
Mean:	0.270 μm		Variance:	0.089 μm ²
Median:	0.160 μm		C.V.:	111%
Mean/Median ratio:	1.686		Skewness:	2.247 Right skewed
Mode:	0.106 μm		Kurtosis:	3.647 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.093 μm	0.111 μm	0.160 μm	0.244 μm	0.924 μm

Surface Area Statistics (Arithmetic)			M08_13_205810.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.133 µm
Mean:	0.155 µm		Variance:	0.018 µm ²
Median:	0.120 µm		C.V.:	86.0%
Mean/Median ratio:	1.295		Skewness:	5.532 Right skewed
Mode:	0.106 µm		Kurtosis:	35.73 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.085 µm	0.098 µm	0.120 µm	0.171 µm	0.235 µm

Number Statistics (Arithmetic)			M08_13_205810.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.109 μm		Variance:	0.0015 μm ²
Median:	0.099 μm		C.V.:	35.7%
Mean/Median ratio:	1.096		Skewness:	4.835 Right skewed
Mode:	0.097 μm		Kurtosis:	77.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.077 μm	0.086 μm	0.099 μm	0.119 μm	0.153 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00033	0.0010	0.0053
12	0.053	0.055	0.0078	0.022	0.096
13	0.058	0.061	0.067	0.17	0.62
14	0.064	0.067	0.35	0.81	2.43
15	0.070	0.073	1.19	2.52	6.29
16	0.077	0.080	2.91	5.60	11.6
17	0.084	0.088	5.31	9.32	16.0
18	0.093	0.097	7.50	12.0	17.1
19	0.102	0.106	8.26	12.0	14.2
20	0.112	0.117	7.62	10.1	9.92
21	0.122	0.128	6.50	7.85	6.39
22	0.134	0.141	5.61	6.17	4.17
23	0.148	0.155	5.45	5.46	3.06
24	0.162	0.170	5.75	5.25	2.44
25	0.178	0.186	5.95	4.95	1.91
26	0.195	0.205	5.73	4.34	1.39
27	0.214	0.225	5.06	3.49	0.93
28	0.235	0.247	4.35	2.74	0.60
29	0.258	0.271	3.68	2.11	0.39
30	0.284	0.297	2.90	1.52	0.23
31	0.311	0.326	2.15	1.02	0.13
32	0.342	0.358	1.23	0.53	0.056
33	0.375	0.393	0.46	0.18	0.016
34	0.412	0.431	0.12	0.045	0.0032
35	0.452	0.474	0.013	0.0042	0.00025
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.065	0.013	0.00031
41	0.791	0.829	0.62	0.12	0.0022
42	0.868	0.910	1.73	0.29	0.0048
43	0.953	0.999	3.41	0.53	0.0071
44	1.047	1.097	3.48	0.49	0.0055
45	1.149	1.204	1.79	0.23	0.0021

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.65	0.076	0.00058
47	1.385	1.451	0.076	0.0081	0.000052
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

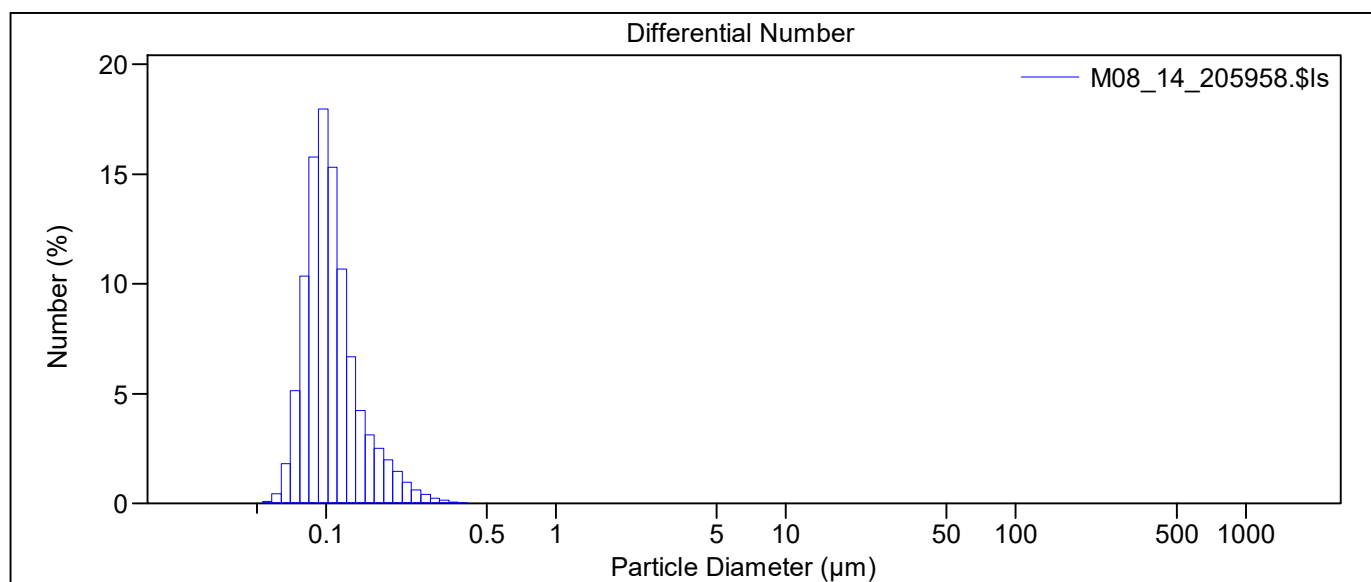
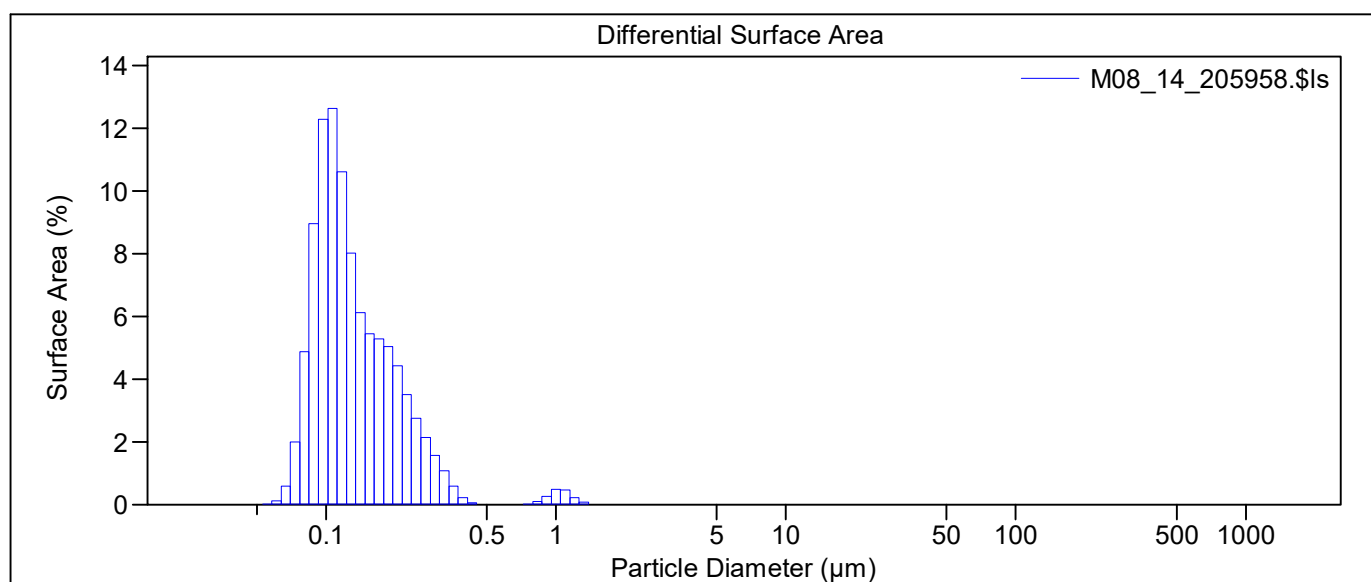
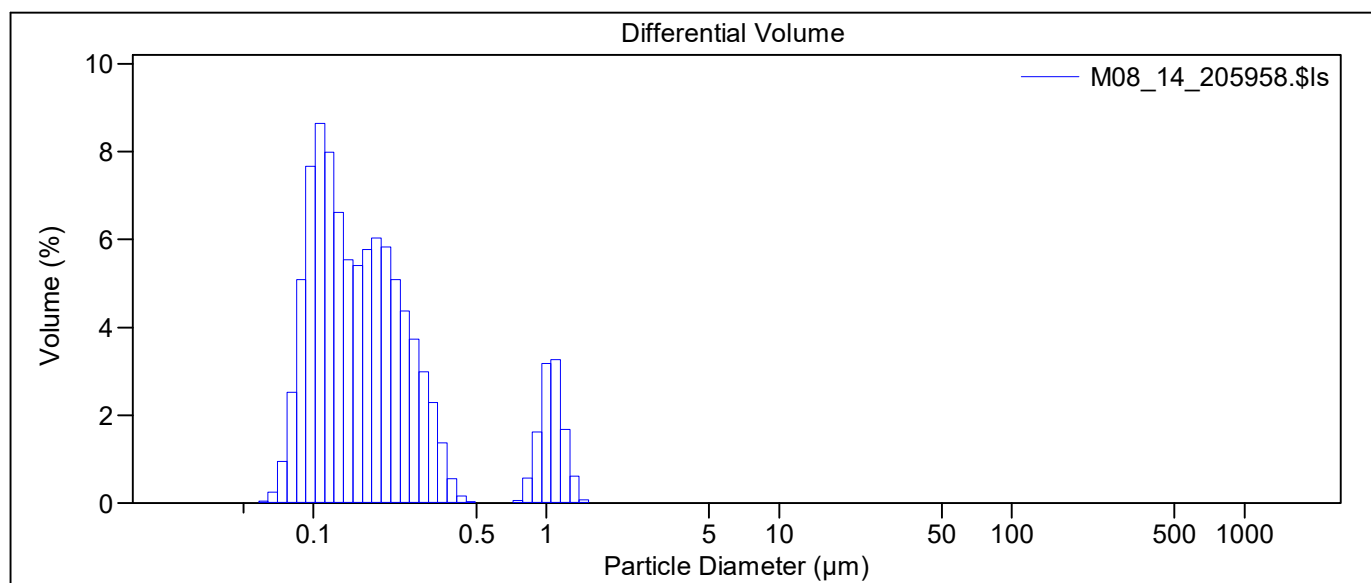
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_14_205958.\$ls		
	M08_14_205958.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.63%		
LS 13 320	Universal Liquid Module		
Start time:	20:58 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-4%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_14_205958.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.290 µm
Mean:	0.264 µm		Variance:	0.084 µm ²
Median:	0.160 µm		C.V.:	110%
Mean/Median ratio:	1.652		Skewness:	2.340 Right skewed
Mode:	0.106 µm		Kurtosis:	4.137 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.094 µm	0.111 µm	0.160 µm	0.243 µm	0.891 µm

Surface Area Statistics (Arithmetic)		M08_14_205958.\$ls		
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%			
Mean:	0.155 µm	S.D.:	0.130 µm	
Median:	0.120 µm	Variance:	0.017 µm ²	
Mean/Median ratio:	1.292	C.V.:	83.7%	
Mode:	0.106 µm	Skewness:	5.594 Right skewed	
		Kurtosis:	37.06 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.087 µm	0.099 µm	0.120 µm	0.172 µm	0.236 µm

Number Statistics (Arithmetic)			M08_14_205958.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.111 μm		Variance:	0.0015 μm ²
Median:	0.101 μm		C.V.:	35.2%
Mean/Median ratio:	1.096		Skewness:	4.762 Right skewed
Mode:	0.097 μm		Kurtosis:	75.18 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 μm	0.088 μm	0.101 μm	0.120 μm	0.155 μm



M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00035	0.0011	0.0058
12	0.053	0.055	0.0064	0.018	0.081
13	0.058	0.061	0.046	0.12	0.44
14	0.064	0.067	0.25	0.58	1.80
15	0.070	0.073	0.95	2.01	5.14
16	0.077	0.080	2.52	4.87	10.3
17	0.084	0.088	5.09	8.95	15.8
18	0.093	0.097	7.67	12.3	17.9
19	0.102	0.106	8.65	12.6	15.3
20	0.112	0.117	7.98	10.6	10.7
21	0.122	0.128	6.62	8.01	6.69
22	0.134	0.141	5.54	6.12	4.24
23	0.148	0.155	5.41	5.44	3.13
24	0.162	0.170	5.77	5.28	2.52
25	0.178	0.186	6.03	5.03	1.99
26	0.195	0.205	5.83	4.43	1.45
27	0.214	0.225	5.08	3.52	0.96
28	0.235	0.247	4.38	2.76	0.62
29	0.258	0.271	3.73	2.14	0.40
30	0.284	0.297	2.99	1.57	0.24
31	0.311	0.326	2.28	1.09	0.14
32	0.342	0.358	1.37	0.60	0.064
33	0.375	0.393	0.56	0.22	0.020
34	0.412	0.431	0.17	0.060	0.0044
35	0.452	0.474	0.022	0.0074	0.00045
36	0.496	0.520	0.00024	0.000073	0.000004
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.059	0.012	0.00029
41	0.791	0.829	0.57	0.11	0.0021
42	0.868	0.910	1.61	0.28	0.0046
43	0.953	0.999	3.18	0.49	0.0068
44	1.047	1.097	3.27	0.46	0.0053
45	1.149	1.204	1.68	0.22	0.0021

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.61	0.072	0.00057
47	1.385	1.451	0.073	0.0078	0.000051
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

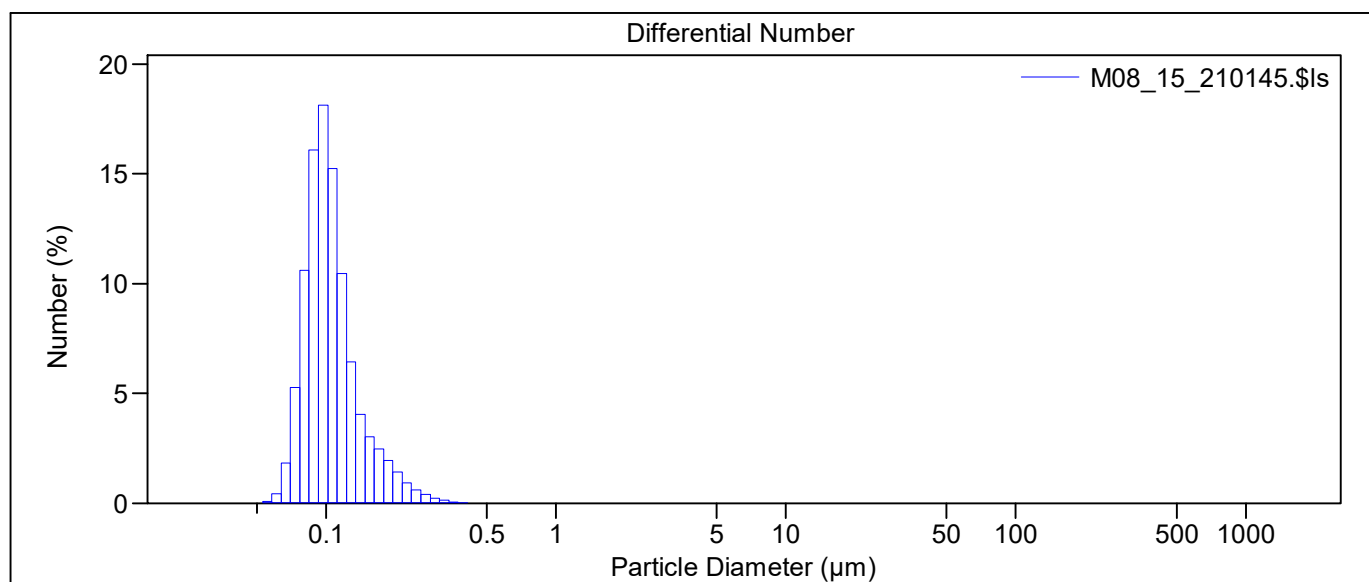
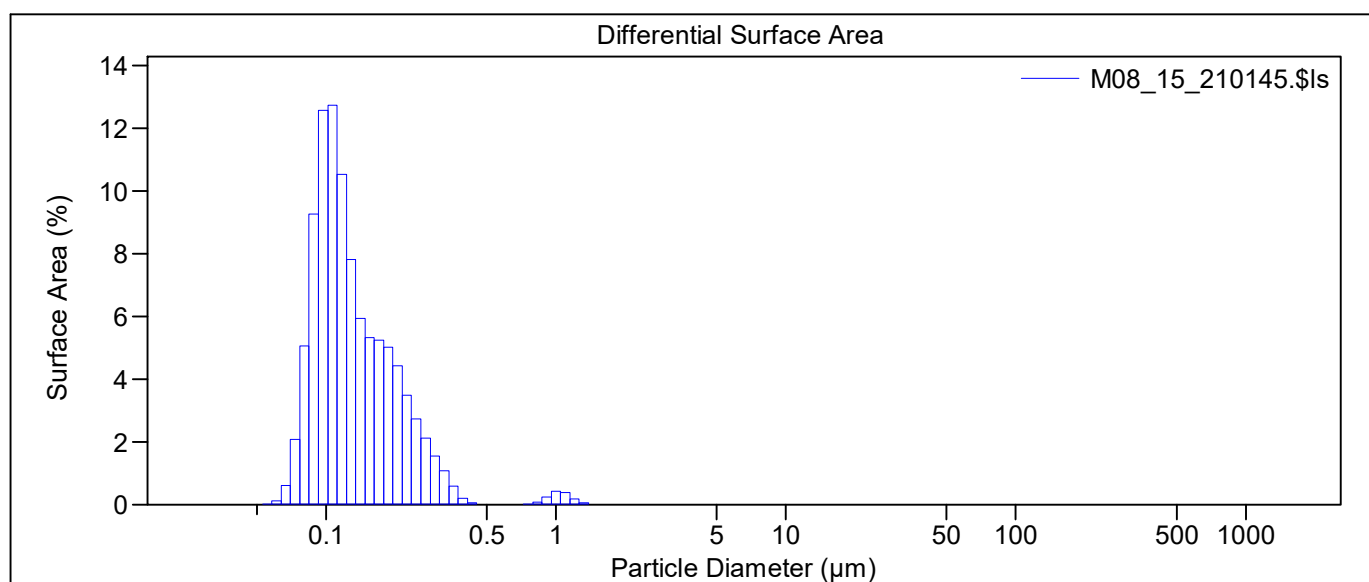
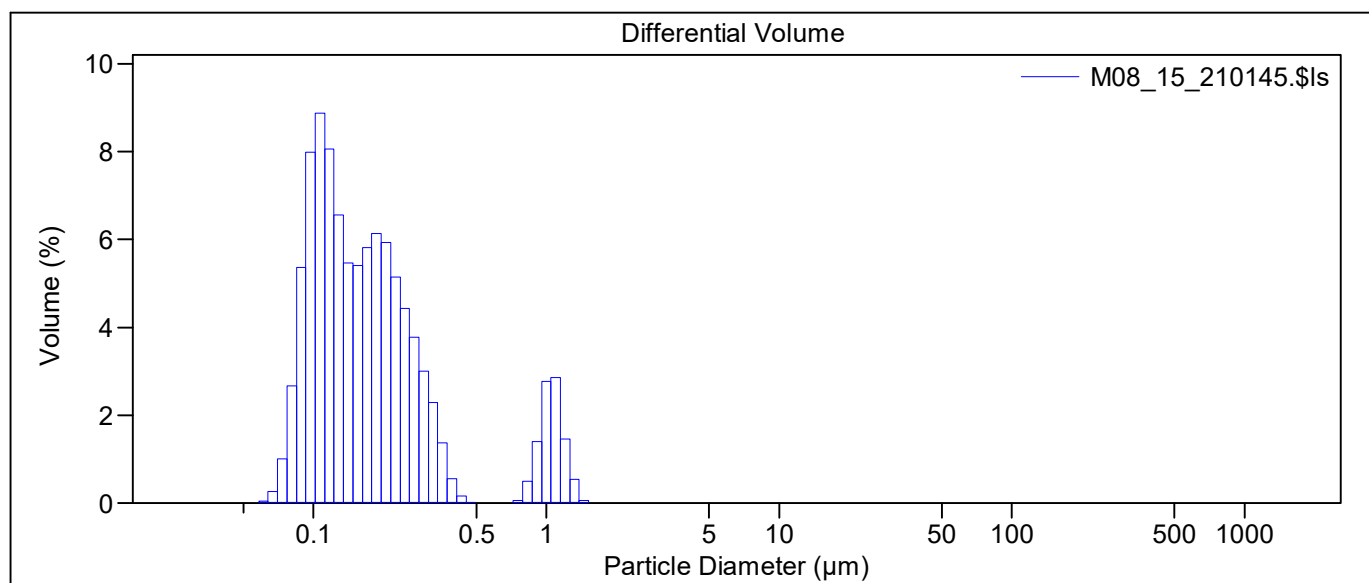
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M08\M08_15_210145.\$ls		
	M08_15_210145.\$ls		
File ID:	M08		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.68%		
LS 13 320	Universal Liquid Module		
Start time:	21:00 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-4%	PIDS Obscur:	57%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M08_15_210145.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.275 µm
Mean:	0.251 µm		Variance:	0.075 µm ²
Median:	0.157 µm		C.V.:	109%
Mean/Median ratio:	1.596		Skewness:	2.545 Right skewed
Mode:	0.106 µm		Kurtosis:	5.271 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.093 µm	0.110 µm	0.157 µm	0.237 µm	0.400 µm

Surface Area Statistics (Arithmetic)			M08_15_210145.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.123 µm
Mean:	0.153 µm		Variance:	0.015 µm ²
Median:	0.119 µm		C.V.:	80.4%
Mean/Median ratio:	1.279		Skewness:	5.798 Right skewed
Mode:	0.106 µm		Kurtosis:	41.01 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.086 µm	0.098 µm	0.119 µm	0.171 µm	0.234 µm

Number Statistics (Arithmetic)			M08_15_210145.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.038 μm
Mean:	0.110 μm		Variance:	0.0015 μm ²
Median:	0.100 μm		C.V.:	34.9%
Mean/Median ratio:	1.096		Skewness:	4.505 Right skewed
Mode:	0.097 μm		Kurtosis:	68.47 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.088 μm	0.100 μm	0.119 μm	0.154 μm



M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00037	0.0011	0.0059
12	0.053	0.055	0.0068	0.019	0.082
13	0.058	0.061	0.048	0.12	0.44
14	0.064	0.067	0.27	0.61	1.84
15	0.070	0.073	1.00	2.09	5.27
16	0.077	0.080	2.67	5.06	10.6
17	0.084	0.088	5.36	9.26	16.1
18	0.093	0.097	7.99	12.6	18.1
19	0.102	0.106	8.88	12.7	15.2
20	0.112	0.117	8.06	10.5	10.5
21	0.122	0.128	6.56	7.81	6.44
22	0.134	0.141	5.47	5.93	4.06
23	0.148	0.155	5.41	5.34	3.03
24	0.162	0.170	5.82	5.24	2.47
25	0.178	0.186	6.13	5.02	1.96
26	0.195	0.205	5.93	4.43	1.44
27	0.214	0.225	5.15	3.50	0.94
28	0.235	0.247	4.43	2.74	0.61
29	0.258	0.271	3.77	2.13	0.39
30	0.284	0.297	3.01	1.55	0.24
31	0.311	0.326	2.29	1.07	0.14
32	0.342	0.358	1.37	0.58	0.062
33	0.375	0.393	0.55	0.21	0.019
34	0.412	0.431	0.16	0.058	0.0042
35	0.452	0.474	0.021	0.0069	0.00042
36	0.496	0.520	0.00017	0.000051	0.000003
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.051	0.010	0.00025
41	0.791	0.829	0.50	0.092	0.0018
42	0.868	0.910	1.40	0.24	0.0039
43	0.953	0.999	2.77	0.42	0.0058
44	1.047	1.097	2.85	0.40	0.0045
45	1.149	1.204	1.46	0.19	0.0017

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.53	0.062	0.00048
47	1.385	1.451	0.064	0.0067	0.000043
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M08.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name: D:\PP_PROFARB\POMIARY\M09\M09.\$av
M09.\$av
File ID: M09
Operator: PP
Optical model: TiO2_KW.rf780d PIDS included
LS 13 320 Universal Liquid Module
Pump speed: 50%
Fluid: water

Average of 15 files

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Volume Statistics (Arithmetic) M09.\$av

Calculations from 0.017 µm to 2000 µm

Volume:	100%	S.D.:	0.348 µm
Mean:	0.324 µm	Variance:	0.121 µm ²
Median:	0.168 µm	C.V.:	107%
Mean/Median ratio:	1.926	Skewness:	1.630 Right skewed
Mode:	0.106 µm	Kurtosis:	1.230 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.089 µm	0.111 µm	0.168 µm	0.295 µm	0.994 µm

Surface Area Statistics (Arithmetic) M09.\$av

Calculations from 0.017 µm to 2000 µm

Surface Area:	100%	S.D.:	0.162 µm
Mean:	0.161 µm	Variance:	0.026 µm ²
Median:	0.116 µm	C.V.:	101%
Mean/Median ratio:	1.384	Skewness:	4.590 Right skewed
Mode:	0.097 µm	Kurtosis:	23.32 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.078 µm	0.093 µm	0.116 µm	0.168 µm	0.243 µm

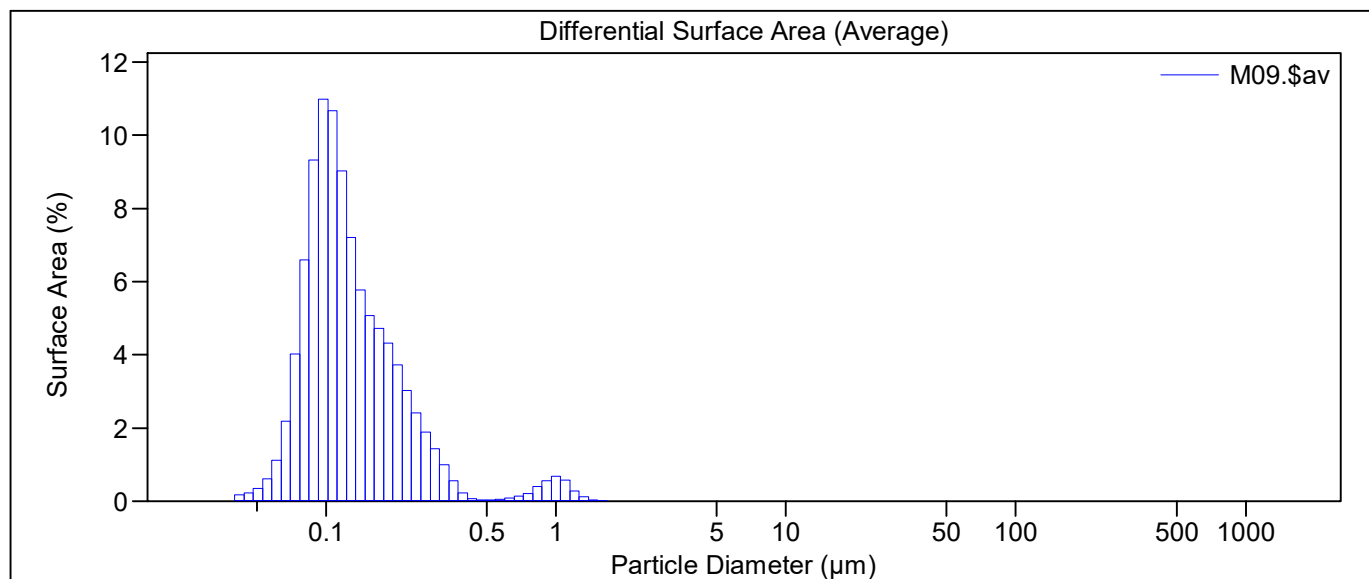
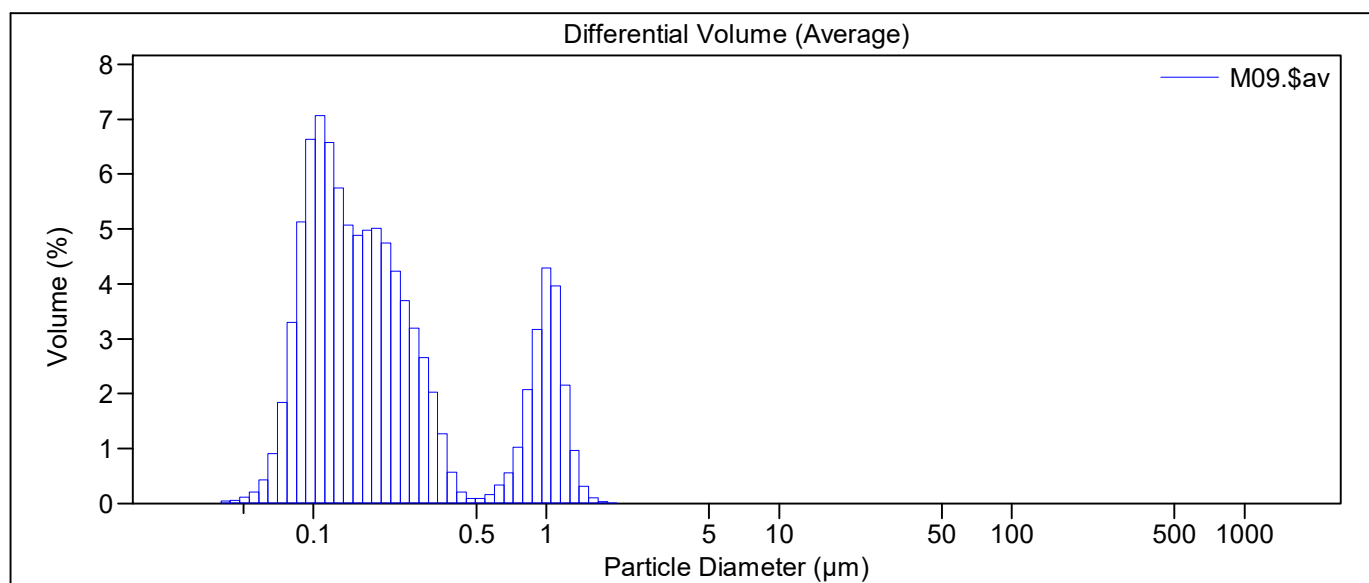
Number Statistics (Arithmetic)

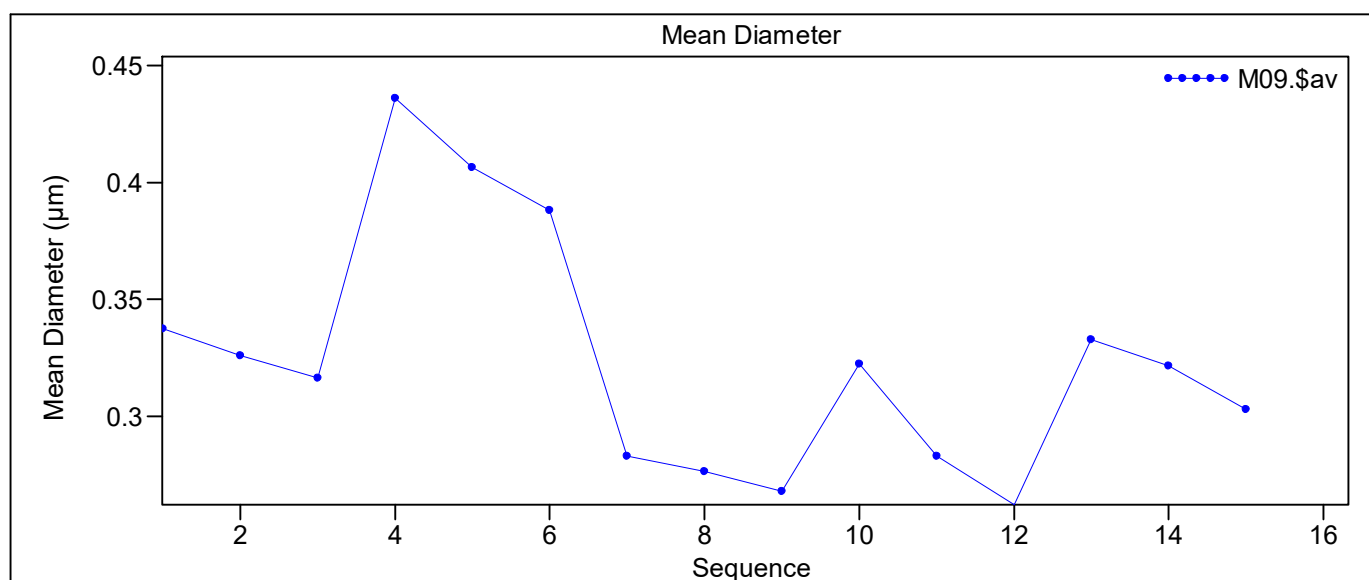
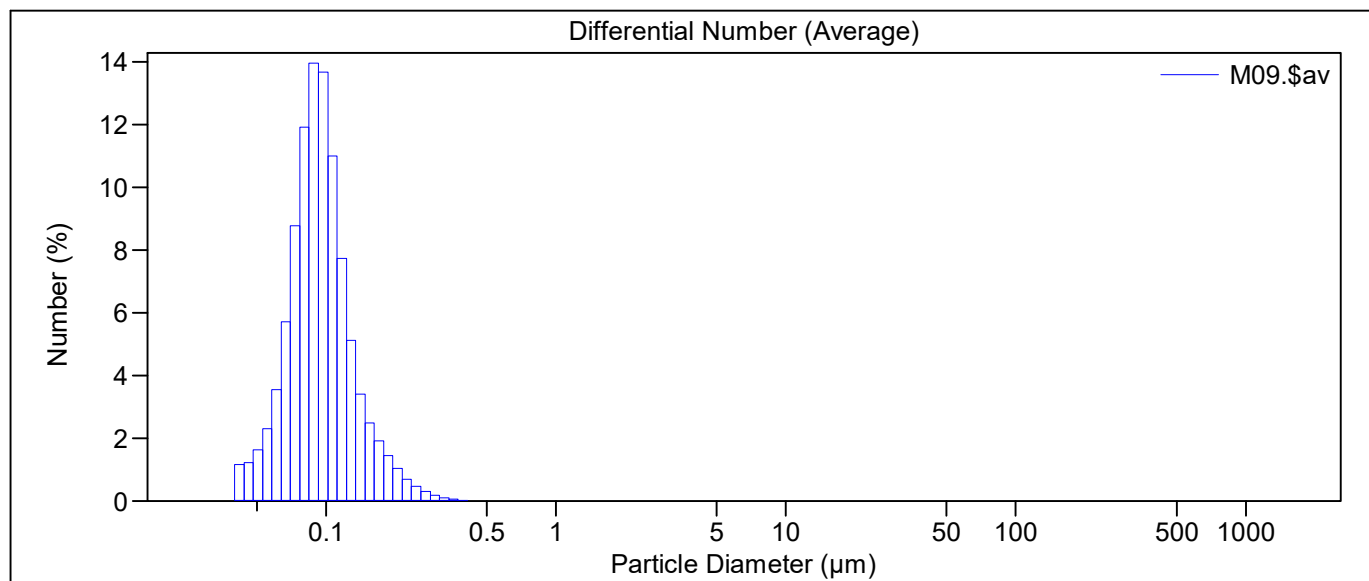
M09.\$av

Calculations from 0.017 μm to 2000 μm

Number:	100%	S.D.:	0.041 μm
Mean:	0.100 μm	Variance:	0.0017 μm^2
Median:	0.092 μm	C.V.:	41.3%
Mean/Median ratio:	1.082	Skewness:	5.243 Right skewed
Mode:	0.088 μm	Kurtosis:	86.44 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.064 μm	0.077 μm	0.092 μm	0.112 μm	0.143 μm





M09.\$av					
Channel Number	Channel Diameter (Lower) μm	Channel Diameter (Center) μm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.046	0.18	1.17
10	0.044	0.046	0.063	0.22	1.23
11	0.048	0.050	0.11	0.35	1.63
12	0.053	0.055	0.21	0.61	2.31
13	0.058	0.061	0.43	1.13	3.56
14	0.064	0.067	0.91	2.18	5.72
15	0.070	0.073	1.84	4.03	8.77
16	0.077	0.080	3.31	6.60	11.9
17	0.084	0.088	5.13	9.32	14.0

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M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.093	0.097	6.64	11.0	13.7
19	0.102	0.106	7.07	10.7	11.0
20	0.112	0.117	6.57	9.03	7.74
21	0.122	0.128	5.75	7.20	5.12
22	0.134	0.141	5.07	5.78	3.41
23	0.148	0.155	4.88	5.07	2.48
24	0.162	0.170	4.98	4.72	1.92
25	0.178	0.186	5.02	4.32	1.46
26	0.195	0.205	4.75	3.73	1.04
27	0.214	0.225	4.23	3.03	0.70
28	0.235	0.247	3.70	2.41	0.46
29	0.258	0.271	3.19	1.90	0.30
30	0.284	0.297	2.66	1.44	0.19
31	0.311	0.326	2.03	1.00	0.11
32	0.342	0.358	1.27	0.57	0.052
33	0.375	0.393	0.57	0.23	0.018
34	0.412	0.431	0.20	0.076	0.0048
35	0.452	0.474	0.091	0.031	0.0016
36	0.496	0.520	0.094	0.029	0.0013
37	0.545	0.571	0.17	0.047	0.0017
38	0.598	0.627	0.33	0.085	0.0025
39	0.656	0.688	0.56	0.13	0.0033
40	0.721	0.755	1.03	0.22	0.0045
41	0.791	0.829	2.08	0.40	0.0069
42	0.868	0.910	3.18	0.56	0.0079
43	0.953	0.999	4.30	0.69	0.0081
44	1.047	1.097	3.97	0.58	0.0057
45	1.149	1.204	2.15	0.29	0.0023
46	1.261	1.321	0.97	0.12	0.00079
47	1.385	1.451	0.32	0.035	0.00020
48	1.520	1.592	0.10	0.011	0.000049
49	1.668	1.748	0.033	0.0030	0.000012
50	1.832	1.919	0.0091	0.00076	0.000002
51	2.011	2.107	0.0017	0.00013	3.43E-7
52	2.207	2.313	0.00036	0.000025	5.53E-8
53	2.423	2.539	0.000049	0.000003	5.65E-9
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0

M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

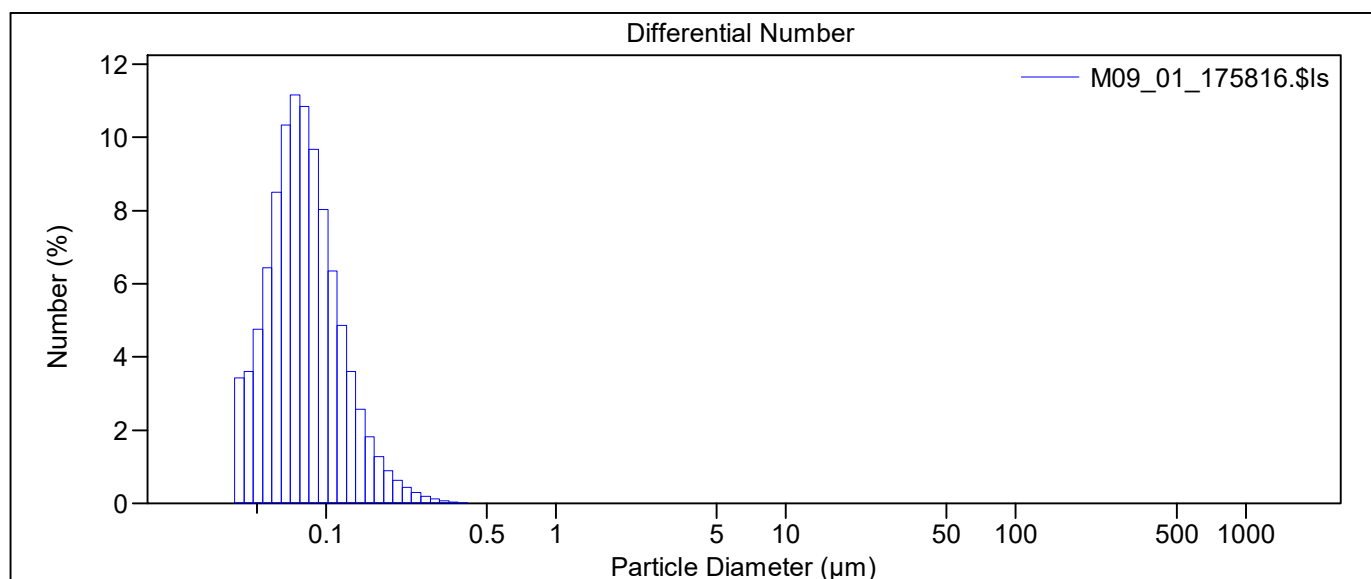
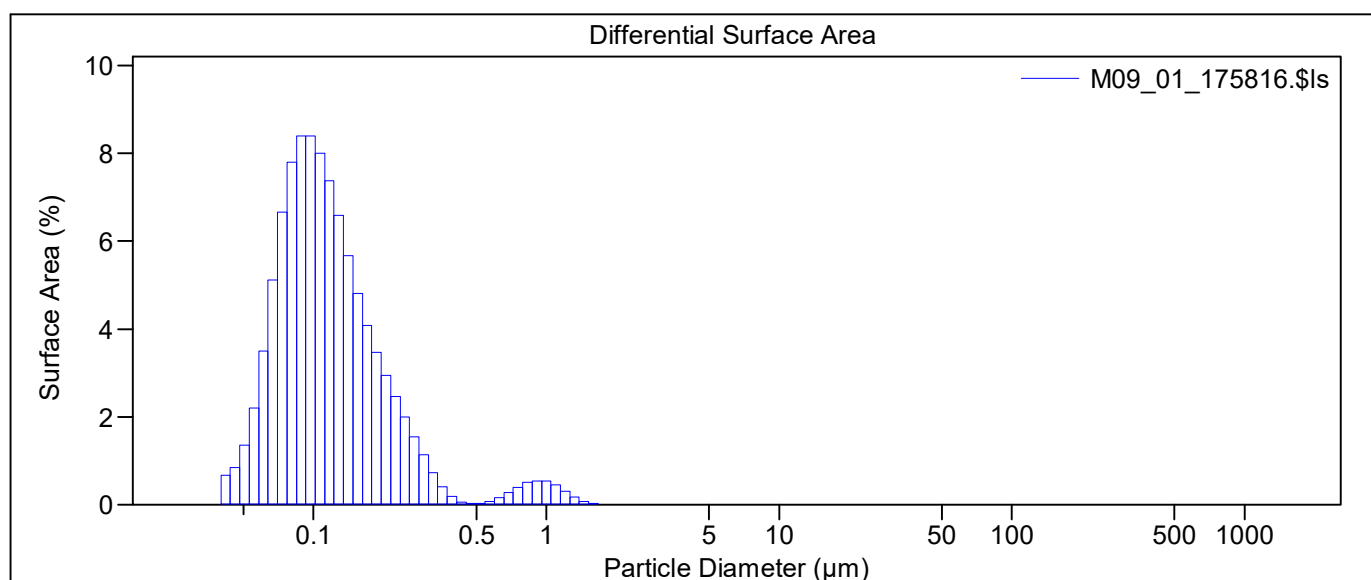
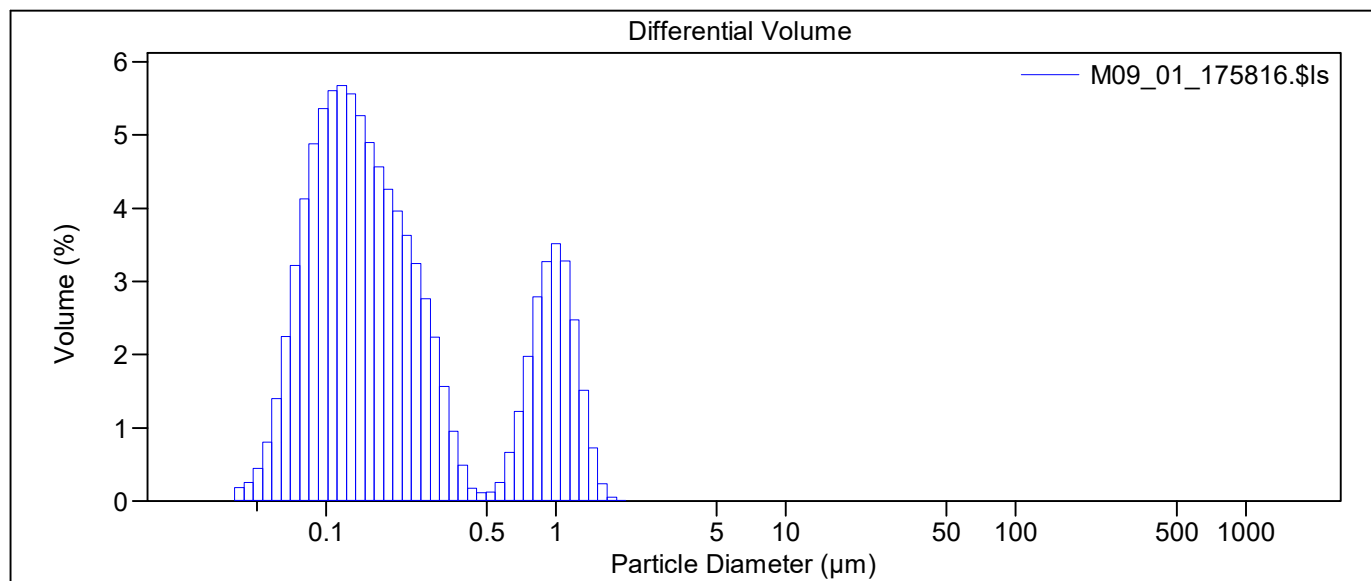
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_01_175816.\$ls		
	M09_01_175816.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.48%		
LS 13 320	Universal Liquid Module		
Start time:	17:56 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_01_175816.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.368 µm
Mean:	0.338 µm		Variance:	0.136 µm ²
Median:	0.162 µm		C.V.:	109%
Mean/Median ratio:	2.081		Skewness:	1.524 Right skewed
Mode:	0.117 µm		Kurtosis:	0.965 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.079 µm	0.105 µm	0.162 µm	0.319 µm	1.001 µm

Surface Area Statistics (Arithmetic)			M09_01_175816.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.168 µm
Mean:	0.152 µm		Variance:	0.028 µm ²
Median:	0.108 µm		C.V.:	111%
Mean/Median ratio:	1.407		Skewness:	4.547 Right skewed
Mode:	0.097 µm		Kurtosis:	23.04 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.066 µm	0.081 µm	0.108 µm	0.155 µm	0.233 µm

Number Statistics (Arithmetic)			M09_01_175816.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.086 μm		Variance:	0.0016 μm ²
Median:	0.078 μm		C.V.:	45.6%
Mean/Median ratio:	1.106		Skewness:	5.281 Right skewed
Mode:	0.073 μm		Kurtosis:	90.76 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.063 μm	0.078 μm	0.100 μm	0.129 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.18	0.67	3.44
10	0.044	0.046	0.26	0.85	3.60
11	0.048	0.050	0.45	1.35	4.76
12	0.053	0.055	0.80	2.19	6.44
13	0.058	0.061	1.40	3.50	8.51
14	0.064	0.067	2.25	5.12	10.3
15	0.070	0.073	3.22	6.66	11.2
16	0.077	0.080	4.13	7.80	10.8
17	0.084	0.088	4.88	8.39	9.68
18	0.093	0.097	5.36	8.39	8.03
19	0.102	0.106	5.61	8.00	6.35
20	0.112	0.117	5.67	7.37	4.86
21	0.122	0.128	5.56	6.58	3.60
22	0.134	0.141	5.26	5.67	2.58
23	0.148	0.155	4.90	4.81	1.81
24	0.162	0.170	4.57	4.09	1.28
25	0.178	0.186	4.26	3.47	0.90
26	0.195	0.205	3.96	2.94	0.63
27	0.214	0.225	3.63	2.46	0.44
28	0.235	0.247	3.25	2.00	0.30
29	0.258	0.271	2.76	1.55	0.19
30	0.284	0.297	2.24	1.14	0.12
31	0.311	0.326	1.56	0.73	0.062
32	0.342	0.358	0.95	0.40	0.028
33	0.375	0.393	0.49	0.19	0.011
34	0.412	0.431	0.18	0.063	0.0030
35	0.452	0.474	0.11	0.036	0.0014
36	0.496	0.520	0.12	0.036	0.0012
37	0.545	0.571	0.25	0.067	0.0019
38	0.598	0.627	0.66	0.16	0.0037
39	0.656	0.688	1.22	0.27	0.0051
40	0.721	0.755	1.97	0.40	0.0063
41	0.791	0.829	2.79	0.51	0.0067
42	0.868	0.910	3.27	0.55	0.0059
43	0.953	0.999	3.51	0.53	0.0048
44	1.047	1.097	3.28	0.45	0.0034
45	1.149	1.204	2.48	0.31	0.0019
46	1.261	1.321	1.51	0.17	0.00090
47	1.385	1.451	0.73	0.076	0.00033
48	1.520	1.592	0.24	0.023	0.000081
49	1.668	1.748	0.052	0.0045	0.000013
50	1.832	1.919	0.0062	0.00049	0.000001
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

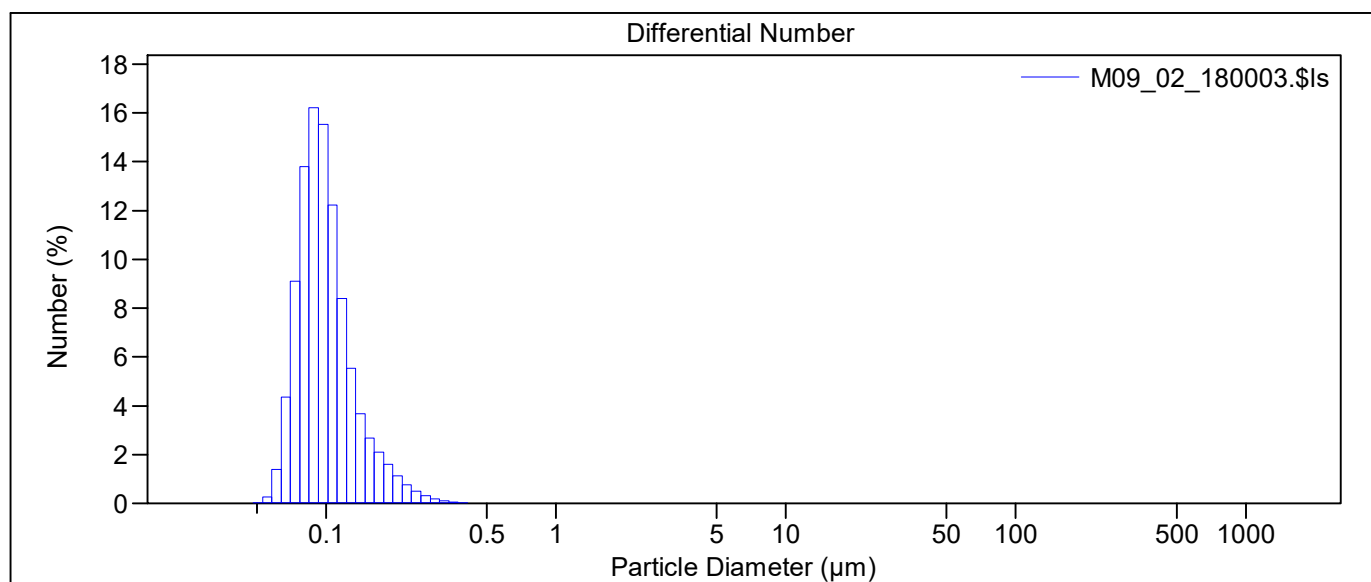
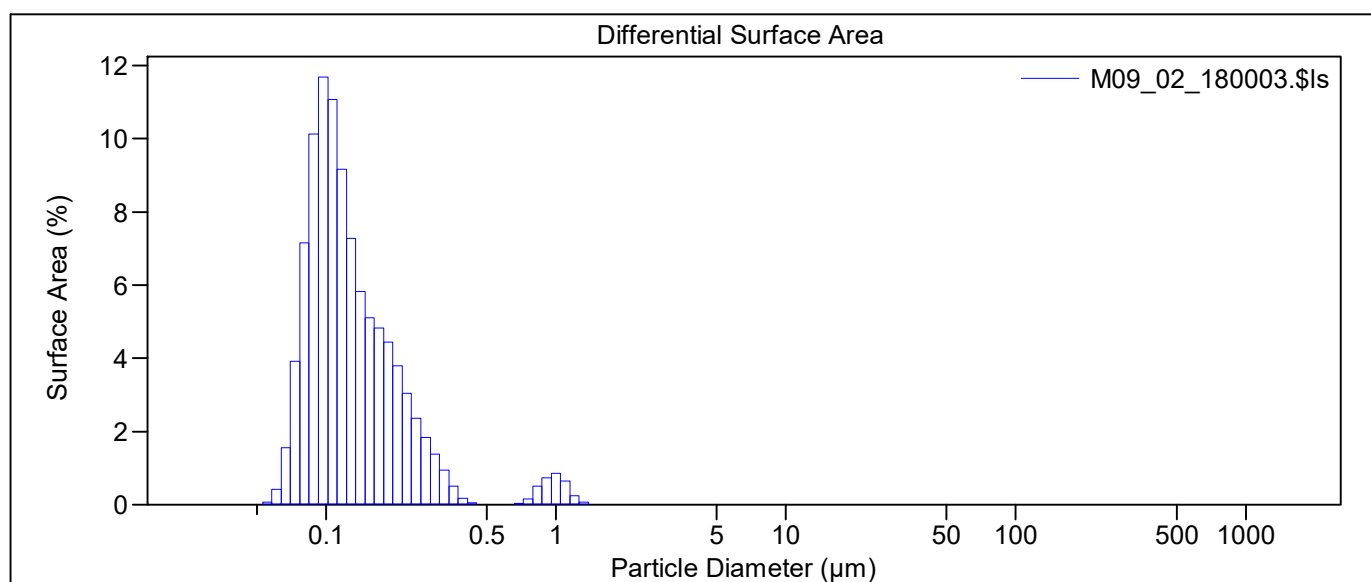
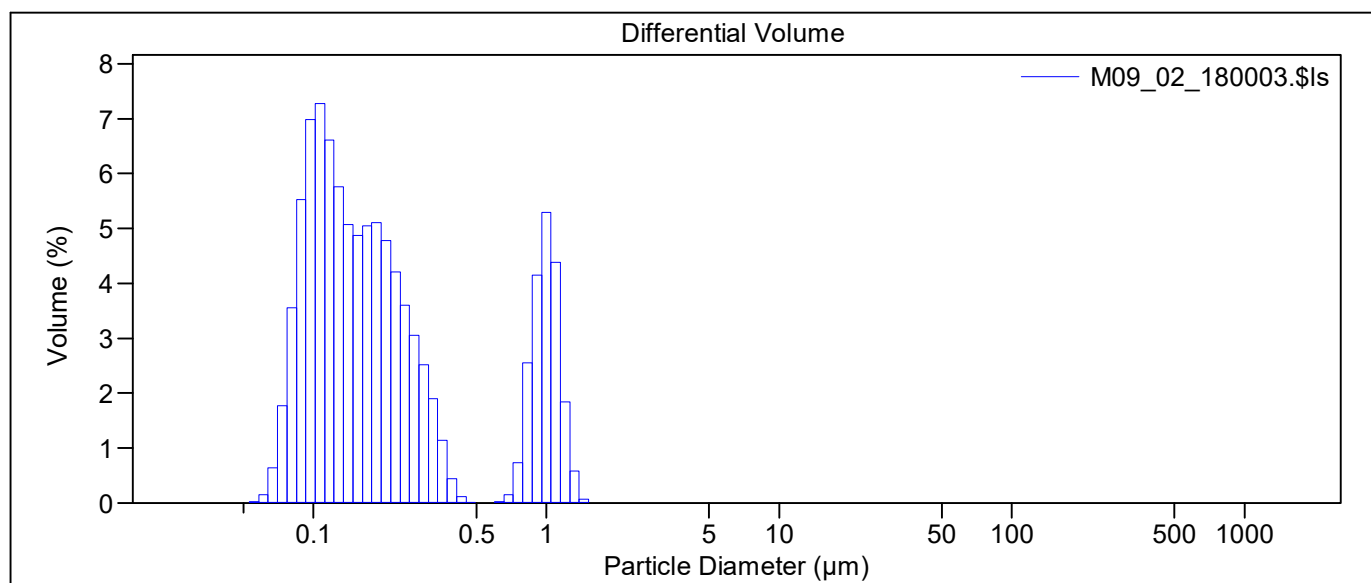
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File name:	D:\PP_PROFARB\POMIARY\M09\M09_02_180003.\$ls		
	M09_02_180003.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.04%		
LS 13 320	Universal Liquid Module		
Start time:	17:58 10	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_02_180003.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.345 µm
Mean:	0.326 µm		Variance:	0.119 µm ²
Median:	0.167 µm		C.V.:	106%
Mean/Median ratio:	1.947		Skewness:	1.509 Right skewed
Mode:	0.106 µm		Kurtosis:	0.656 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 µm	0.110 µm	0.167 µm	0.294 µm	0.992 µm

Surface Area Statistics (Arithmetic)			M09_02_180003.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.163 µm
Mean:	0.162 µm		Variance:	0.027 µm ²
Median:	0.116 µm		C.V.:	101%
Mean/Median ratio:	1.393		Skewness:	4.472 Right skewed
Mode:	0.097 µm		Kurtosis:	21.29 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.094 µm	0.116 µm	0.167 µm	0.240 µm

Number Statistics (Arithmetic)			M09_02_180003.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.105 μm		Variance:	0.0016 μm ²
Median:	0.095 μm		C.V.:	38.0%
Mean/Median ratio:	1.096		Skewness:	6.204 Right skewed
Mode:	0.088 μm		Kurtosis:	107.5 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.073 μm	0.082 μm	0.095 μm	0.114 μm	0.146 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.0010	0.0032	0.016
12	0.053	0.055	0.022	0.064	0.26
13	0.058	0.061	0.16	0.41	1.40
14	0.064	0.067	0.64	1.55	4.36
15	0.070	0.073	1.77	3.92	9.11
16	0.077	0.080	3.55	7.15	13.8
17	0.084	0.088	5.52	10.1	16.2
18	0.093	0.097	6.99	11.7	15.5
19	0.102	0.106	7.28	11.1	12.2
20	0.112	0.117	6.61	9.17	8.39
21	0.122	0.128	5.76	7.28	5.53
22	0.134	0.141	5.07	5.83	3.68
23	0.148	0.155	4.88	5.11	2.67
24	0.162	0.170	5.05	4.82	2.09
25	0.178	0.186	5.11	4.45	1.60
26	0.195	0.205	4.78	3.79	1.13
27	0.214	0.225	4.21	3.04	0.75
28	0.235	0.247	3.60	2.37	0.49
29	0.258	0.271	3.05	1.83	0.31
30	0.284	0.297	2.52	1.38	0.19
31	0.311	0.326	1.90	0.95	0.11
32	0.342	0.358	1.14	0.52	0.050
33	0.375	0.393	0.44	0.18	0.015
34	0.412	0.431	0.12	0.045	0.0030
35	0.452	0.474	0.013	0.0045	0.00025
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0.022	0.0058	0.00019
39	0.656	0.688	0.15	0.035	0.00094
40	0.721	0.755	0.74	0.16	0.0035
41	0.791	0.829	2.56	0.50	0.0091
42	0.868	0.910	4.15	0.74	0.011
43	0.953	0.999	5.29	0.86	0.011
44	1.047	1.097	4.39	0.65	0.0067
45	1.149	1.204	1.84	0.25	0.0021

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.59	0.072	0.00052
47	1.385	1.451	0.071	0.0079	0.000047
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

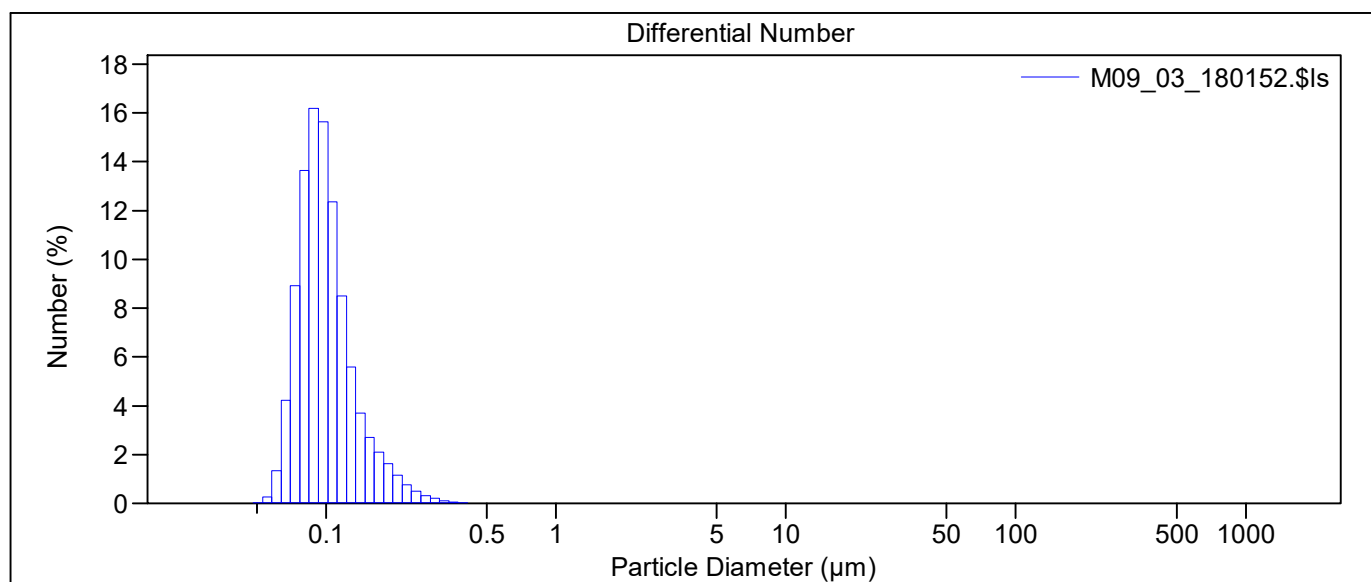
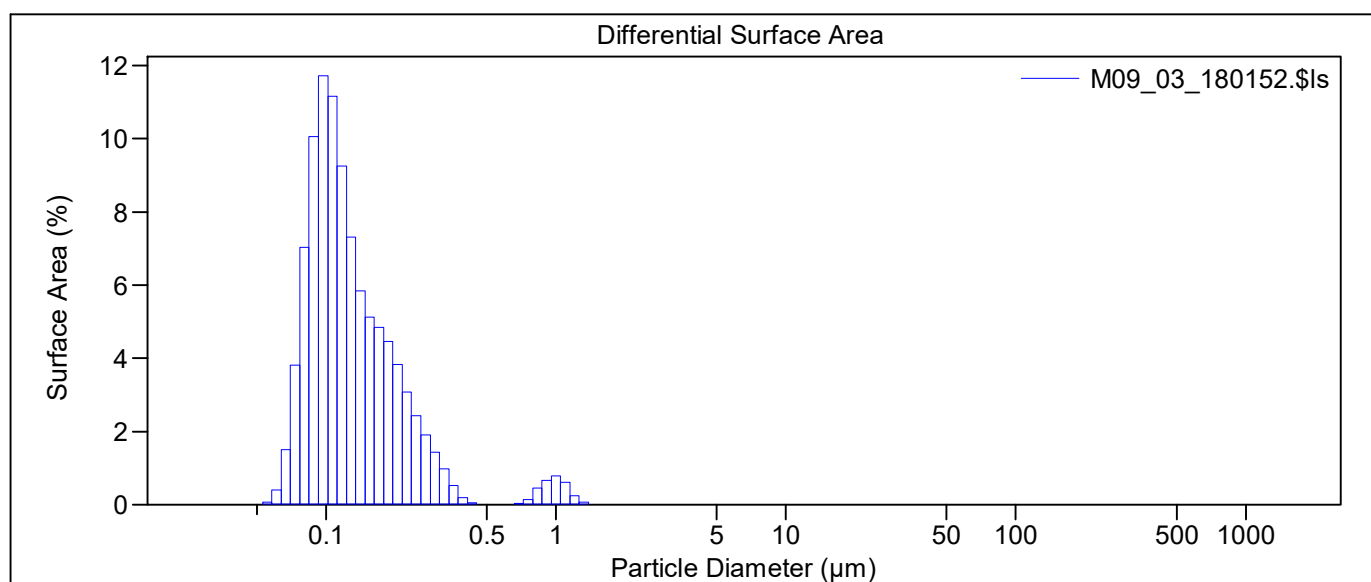
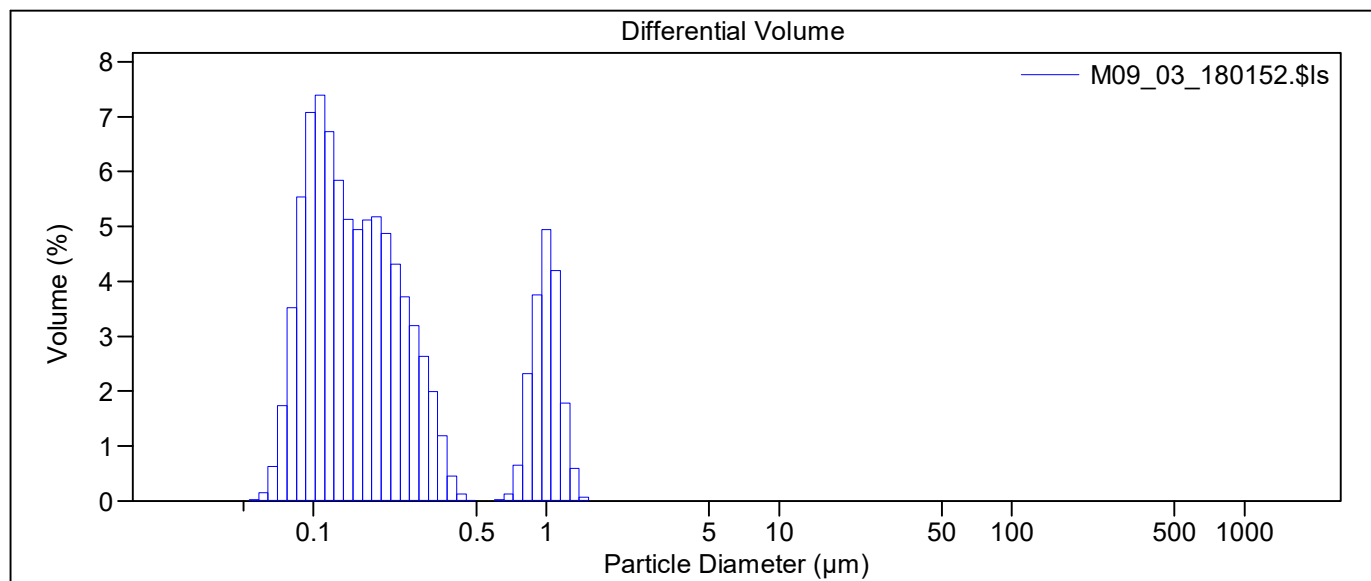
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_03_180152.\$ls		
	M09_03_180152.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.11%		
LS 13 320	Universal Liquid Module		
Start time:	18:00 10	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_03_180152.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.338 μm
Mean:	0.316 μm		Variance:	0.114 μm ²
Median:	0.166 μm		C.V.:	107%
Mean/Median ratio:	1.906		Skewness:	1.606 Right skewed
Mode:	0.106 μm		Kurtosis:	0.987 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 μm	0.110 μm	0.166 μm	0.283 μm	0.983 μm

Surface Area Statistics (Arithmetic)			M09_03_180152.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.158 µm
Mean:	0.161 µm		Variance:	0.025 µm ²
Median:	0.117 µm		C.V.:	98.5%
Mean/Median ratio:	1.377		Skewness:	4.603 Right skewed
Mode:	0.097 µm		Kurtosis:	22.89 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.094 µm	0.117 µm	0.168 µm	0.240 µm

Number Statistics (Arithmetic)			M09_03_180152.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.105 μm		Variance:	0.0016 μm ²
Median:	0.096 μm		C.V.:	37.8%
Mean/Median ratio:	1.096		Skewness:	5.970 Right skewed
Mode:	0.088 μm		Kurtosis:	102.0 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.073 μm	0.082 μm	0.096 μm	0.115 μm	0.146 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.0010	0.0032	0.016
12	0.053	0.055	0.021	0.062	0.25
13	0.058	0.061	0.15	0.40	1.35
14	0.064	0.067	0.62	1.50	4.23
15	0.070	0.073	1.74	3.81	8.91
16	0.077	0.080	3.52	7.03	13.6
17	0.084	0.088	5.54	10.1	16.2
18	0.093	0.097	7.07	11.7	15.6
19	0.102	0.106	7.40	11.2	12.4
20	0.112	0.117	6.73	9.25	8.51
21	0.122	0.128	5.85	7.32	5.59
22	0.134	0.141	5.13	5.85	3.70
23	0.148	0.155	4.94	5.13	2.70
24	0.162	0.170	5.11	4.84	2.11
25	0.178	0.186	5.18	4.46	1.62
26	0.195	0.205	4.87	3.83	1.15
27	0.214	0.225	4.31	3.08	0.77
28	0.235	0.247	3.72	2.43	0.50
29	0.258	0.271	3.20	1.90	0.33
30	0.284	0.297	2.64	1.43	0.20
31	0.311	0.326	1.99	0.98	0.12
32	0.342	0.358	1.18	0.53	0.052
33	0.375	0.393	0.45	0.18	0.015
34	0.412	0.431	0.12	0.046	0.0031
35	0.452	0.474	0.014	0.0046	0.00026
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0.022	0.0057	0.00018
39	0.656	0.688	0.13	0.031	0.00082
40	0.721	0.755	0.65	0.14	0.0031
41	0.791	0.829	2.32	0.45	0.0082
42	0.868	0.910	3.76	0.66	0.010
43	0.953	0.999	4.95	0.80	0.010
44	1.047	1.097	4.20	0.61	0.0064
45	1.149	1.204	1.78	0.24	0.0021
46	1.261	1.321	0.59	0.072	0.00052
47	1.385	1.451	0.073	0.0080	0.000048
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

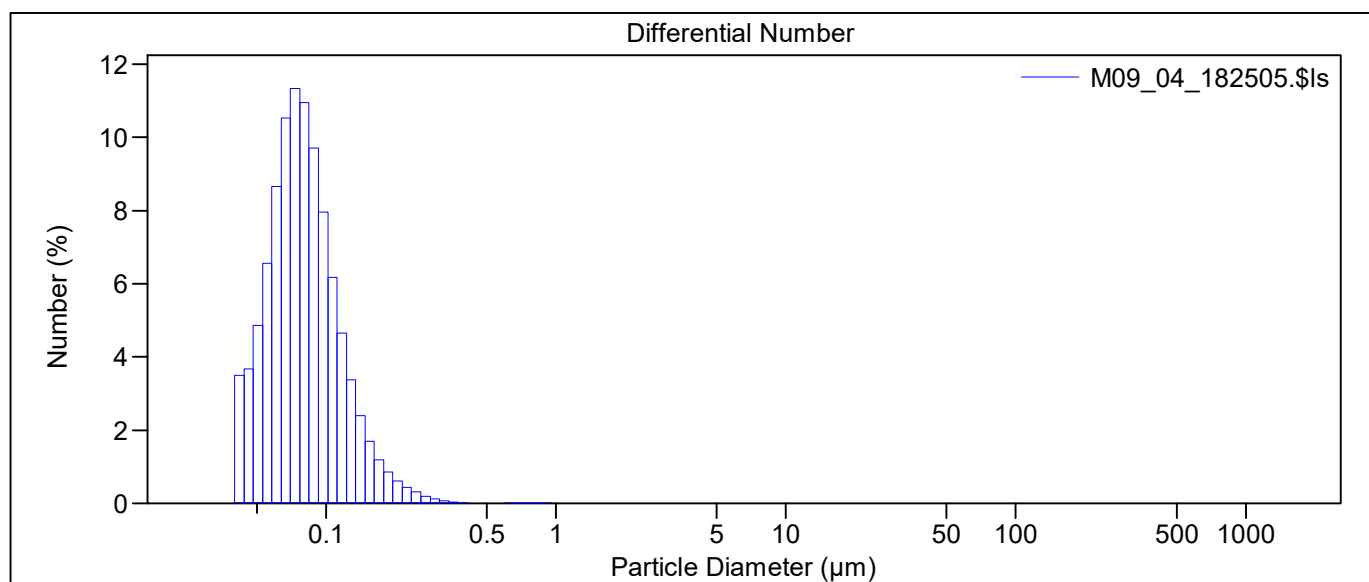
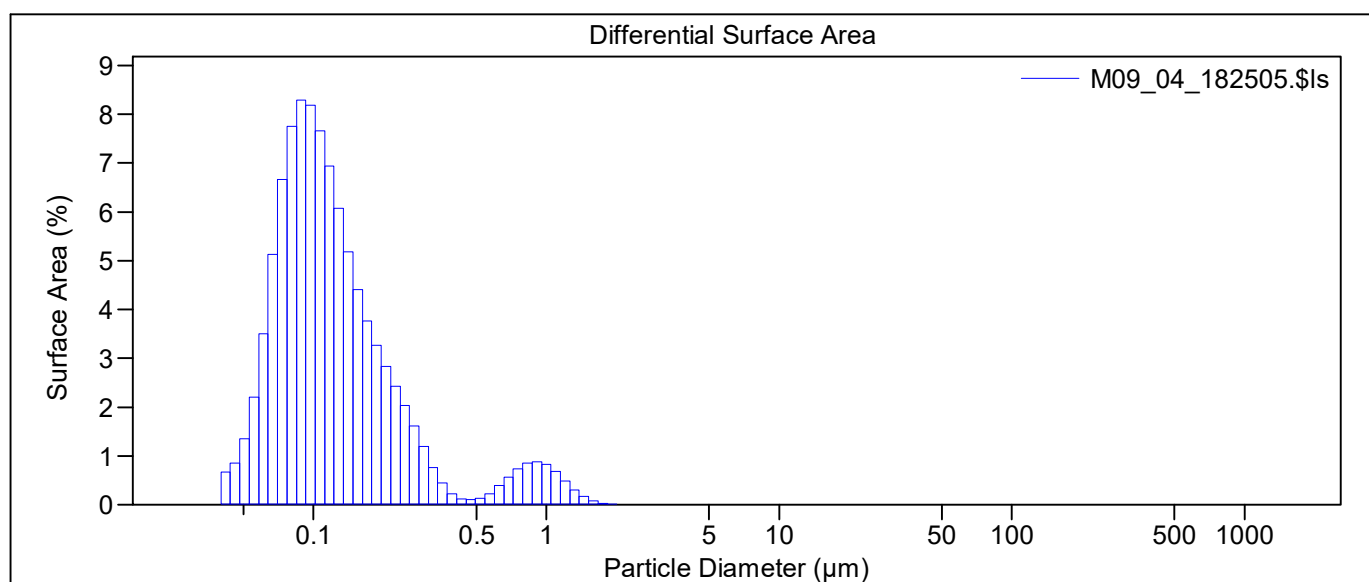
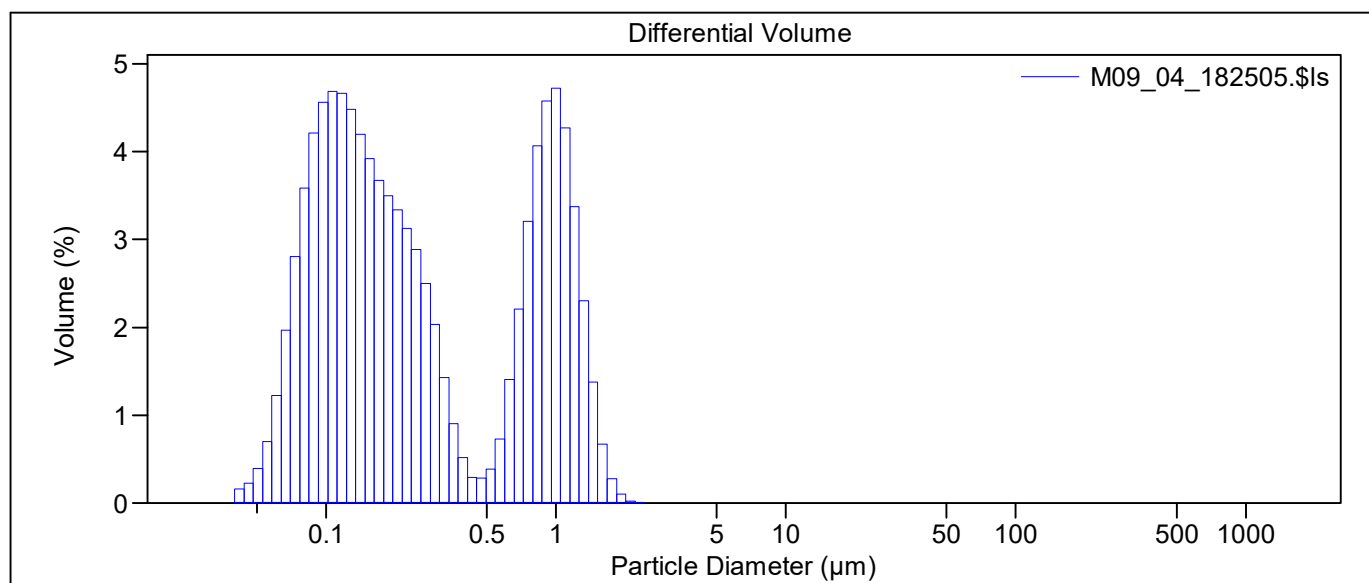
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File name:	D:\PP_PROFARB\POMIARY\M09\M09_04_182505.\$ls		
	M09_04_182505.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.81%		
LS 13 320	Universal Liquid Module		
Start time:	18:23 10	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	-3%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_04_182505.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.425 μm
Mean:	0.436 μm		Variance:	0.181 μm ²
Median:	0.201 μm		C.V.:	97.5%
Mean/Median ratio:	2.169		Skewness:	1.026 Right skewed
Mode:	0.999 μm		Kurtosis:	-0.230 Platykurtic
<10%	<25%	<50%	<75%	<90%
0.082 μm	0.113 μm	0.201 μm	0.806 μm	1.104 μm

Surface Area Statistics (Arithmetic)			M09_04_182505.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.214 µm
Mean:	0.174 µm		Variance:	0.046 µm ²
Median:	0.109 µm		C.V.:	123%
Mean/Median ratio:	1.601		Skewness:	3.643 Right skewed
Mode:	0.088 µm		Kurtosis:	14.03 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.065 µm	0.081 µm	0.109 µm	0.162 µm	0.271 µm

Number Statistics (Arithmetic)			M09_04_182505.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.042 μm
Mean:	0.086 μm		Variance:	0.0018 μm ²
Median:	0.077 μm		C.V.:	48.8%
Mean/Median ratio:	1.110		Skewness:	6.806 Right skewed
Mode:	0.073 μm		Kurtosis:	122.5 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.062 μm	0.077 μm	0.098 μm	0.127 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.16	0.67	3.50
10	0.044	0.046	0.22	0.85	3.68
11	0.048	0.050	0.39	1.35	4.86
12	0.053	0.055	0.70	2.20	6.56
13	0.058	0.061	1.23	3.50	8.66
14	0.064	0.067	1.97	5.13	10.5
15	0.070	0.073	2.81	6.66	11.3
16	0.077	0.080	3.59	7.75	11.0
17	0.084	0.088	4.21	8.29	9.72
18	0.093	0.097	4.57	8.19	7.96
19	0.102	0.106	4.69	7.66	6.18
20	0.112	0.117	4.67	6.94	4.65
21	0.122	0.128	4.48	6.08	3.38
22	0.134	0.141	4.20	5.19	2.39
23	0.148	0.155	3.92	4.41	1.69
24	0.162	0.170	3.67	3.76	1.20
25	0.178	0.186	3.50	3.26	0.86
26	0.195	0.205	3.34	2.84	0.62
27	0.214	0.225	3.13	2.42	0.44
28	0.235	0.247	2.88	2.03	0.31
29	0.258	0.271	2.50	1.61	0.20
30	0.284	0.297	2.03	1.19	0.12
31	0.311	0.326	1.43	0.76	0.066
32	0.342	0.358	0.91	0.44	0.031
33	0.375	0.393	0.51	0.23	0.013
34	0.412	0.431	0.29	0.12	0.0058
35	0.452	0.474	0.28	0.10	0.0043
36	0.496	0.520	0.39	0.13	0.0044
37	0.545	0.571	0.73	0.22	0.0062
38	0.598	0.627	1.41	0.39	0.0091
39	0.656	0.688	2.21	0.56	0.011
40	0.721	0.755	3.20	0.74	0.012
41	0.791	0.829	4.07	0.85	0.011
42	0.868	0.910	4.58	0.88	0.0097
43	0.953	0.999	4.72	0.82	0.0075
44	1.047	1.097	4.27	0.68	0.0052
45	1.149	1.204	3.38	0.49	0.0031

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	2.30	0.30	0.0016
47	1.385	1.451	1.37	0.16	0.00072
48	1.520	1.592	0.67	0.074	0.00027
49	1.668	1.748	0.28	0.028	0.000083
50	1.832	1.919	0.099	0.0090	0.000022
51	2.011	2.107	0.024	0.0020	0.000004
52	2.207	2.313	0.0055	0.00041	0.000001
53	2.423	2.539	0.00074	0.000051	7.18E-8
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

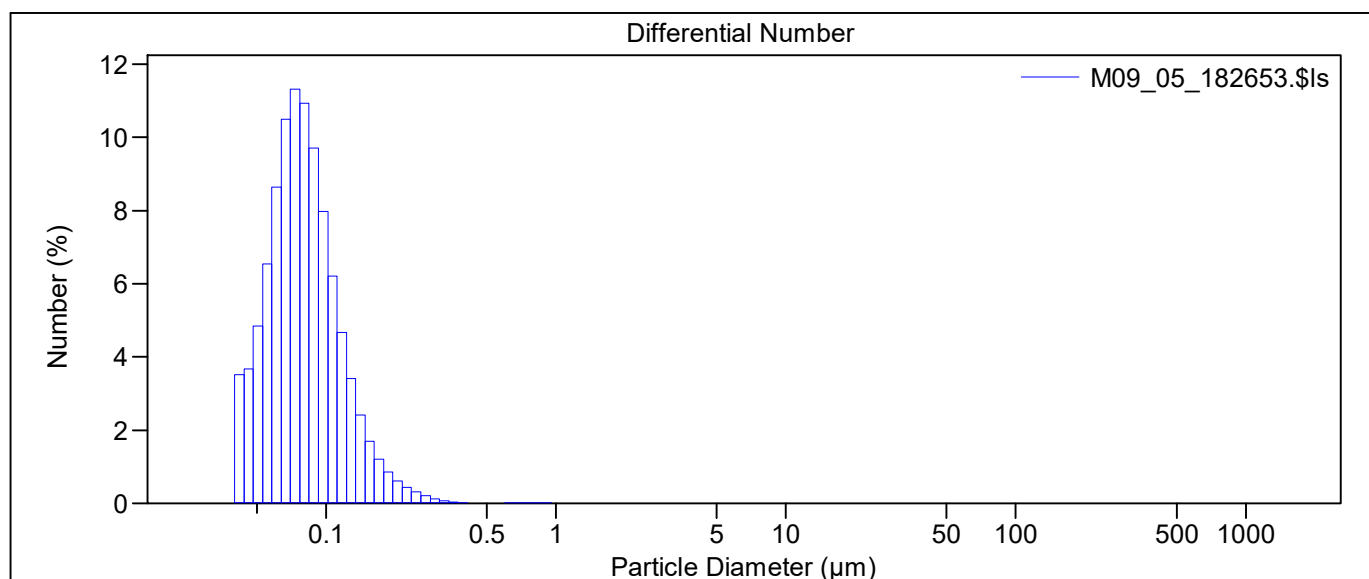
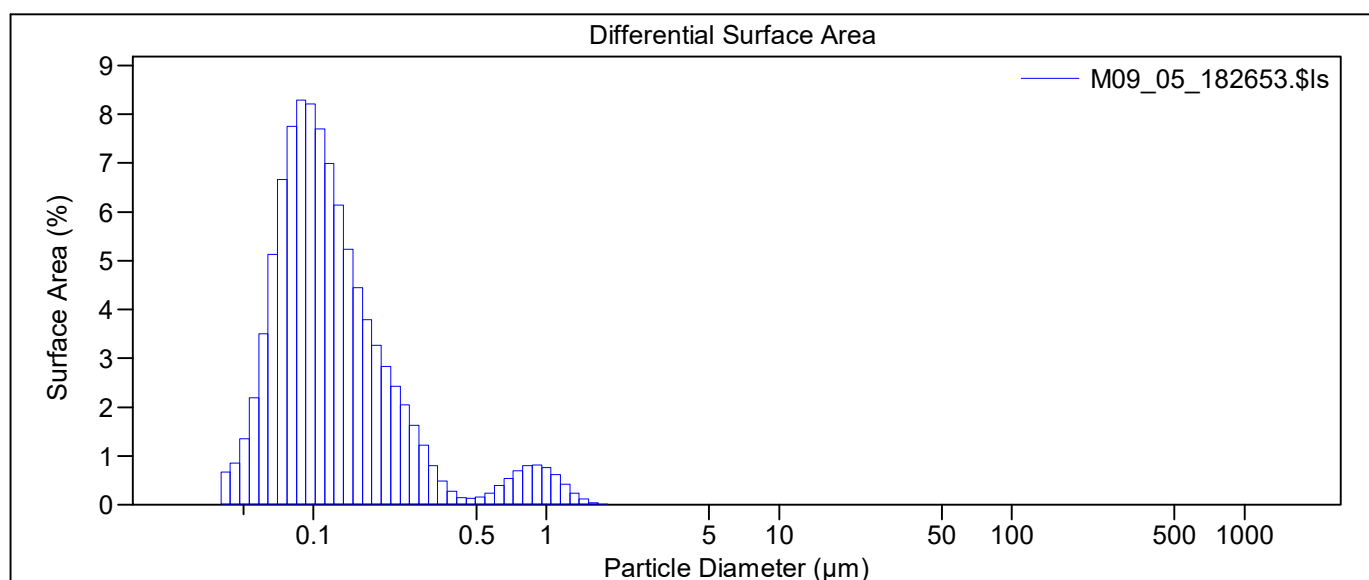
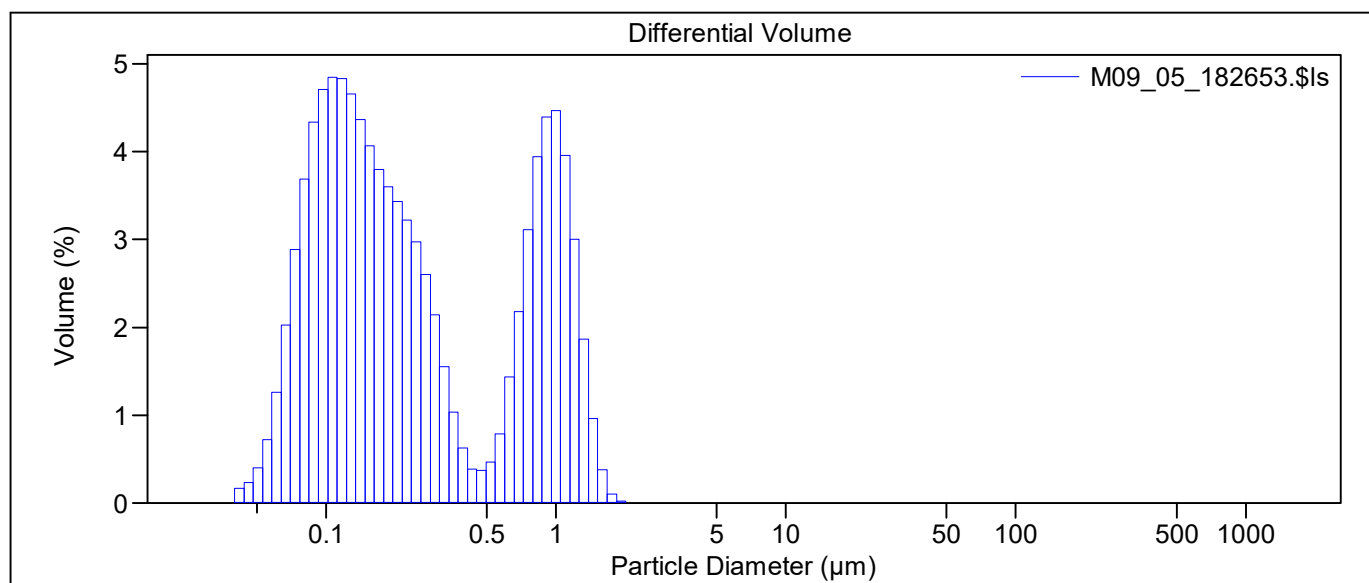
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_05_182653.\$ls		
	M09_05_182653.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.86%		
LS 13 320	Universal Liquid Module		
Start time:	18:25 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-1%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_05_182653.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.399 μm
Mean:	0.406 μm		Variance:	0.159 μm ²
Median:	0.192 μm		C.V.:	98.2%
Mean/Median ratio:	2.112		Skewness:	1.087 Right skewed
Mode:	0.106 μm		Kurtosis:	-0.174 Platykurtic
<10%	<25%	<50%	<75%	<90%
0.082 μm	0.111 μm	0.192 μm	0.748 μm	1.054 μm

Surface Area Statistics (Arithmetic)		M09_05_182653.\$ls		
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%			
Mean:	0.169 µm	S.D.:	0.200 µm	
Median:	0.109 µm	Variance:	0.040 µm ²	
Mean/Median ratio:	1.558	C.V.:	118%	
Mode:	0.088 µm	Skewness:	3.694 Right skewed	
		Kurtosis:	14.46 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.065 µm	0.081 µm	0.109 µm	0.162 µm	0.266 µm

Number Statistics (Arithmetic)			M09_05_182653.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.042 μm
Mean:	0.086 μm		Variance:	0.0017 μm ²
Median:	0.078 μm		C.V.:	48.4%
Mean/Median ratio:	1.110		Skewness:	6.389 Right skewed
Mode:	0.073 μm		Kurtosis:	109.4 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 μm	0.062 μm	0.078 μm	0.099 μm	0.128 μm



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M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.67	3.51
10	0.044	0.046	0.23	0.85	3.68
11	0.048	0.050	0.40	1.35	4.84
12	0.053	0.055	0.72	2.20	6.53
13	0.058	0.061	1.26	3.50	8.63
14	0.064	0.067	2.02	5.12	10.5
15	0.070	0.073	2.89	6.66	11.3
16	0.077	0.080	3.69	7.75	10.9
17	0.084	0.088	4.33	8.30	9.71
18	0.093	0.097	4.71	8.21	7.97
19	0.102	0.106	4.85	7.70	6.21
20	0.112	0.117	4.83	6.99	4.68
21	0.122	0.128	4.66	6.14	3.41
22	0.134	0.141	4.36	5.24	2.41
23	0.148	0.155	4.07	4.45	1.70
24	0.162	0.170	3.80	3.79	1.20
25	0.178	0.186	3.60	3.27	0.86
26	0.195	0.205	3.43	2.84	0.62
27	0.214	0.225	3.22	2.42	0.44
28	0.235	0.247	2.98	2.04	0.31
29	0.258	0.271	2.60	1.63	0.20
30	0.284	0.297	2.14	1.22	0.13
31	0.311	0.326	1.55	0.80	0.069
32	0.342	0.358	1.03	0.49	0.035
33	0.375	0.393	0.63	0.27	0.016
34	0.412	0.431	0.38	0.15	0.0074
35	0.452	0.474	0.37	0.13	0.0054
36	0.496	0.520	0.47	0.15	0.0051
37	0.545	0.571	0.79	0.23	0.0066
38	0.598	0.627	1.44	0.39	0.0090
39	0.656	0.688	2.18	0.54	0.010
40	0.721	0.755	3.11	0.70	0.011
41	0.791	0.829	3.94	0.80	0.011
42	0.868	0.910	4.39	0.82	0.0090
43	0.953	0.999	4.47	0.76	0.0069
44	1.047	1.097	3.96	0.61	0.0046
45	1.149	1.204	3.00	0.42	0.0027
46	1.261	1.321	1.86	0.24	0.0012
47	1.385	1.451	0.96	0.11	0.00049
48	1.520	1.592	0.38	0.040	0.00014
49	1.668	1.748	0.10	0.0099	0.000029
50	1.832	1.919	0.020	0.0018	0.000004
51	2.011	2.107	0.0012	0.000093	1.92E-7
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

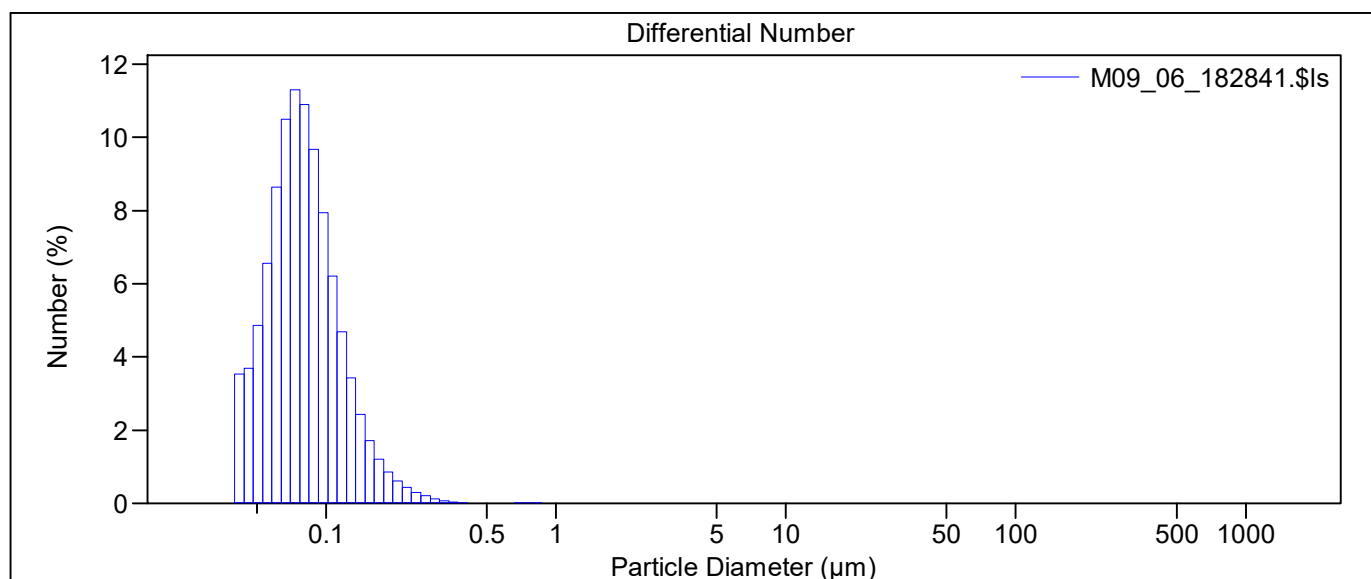
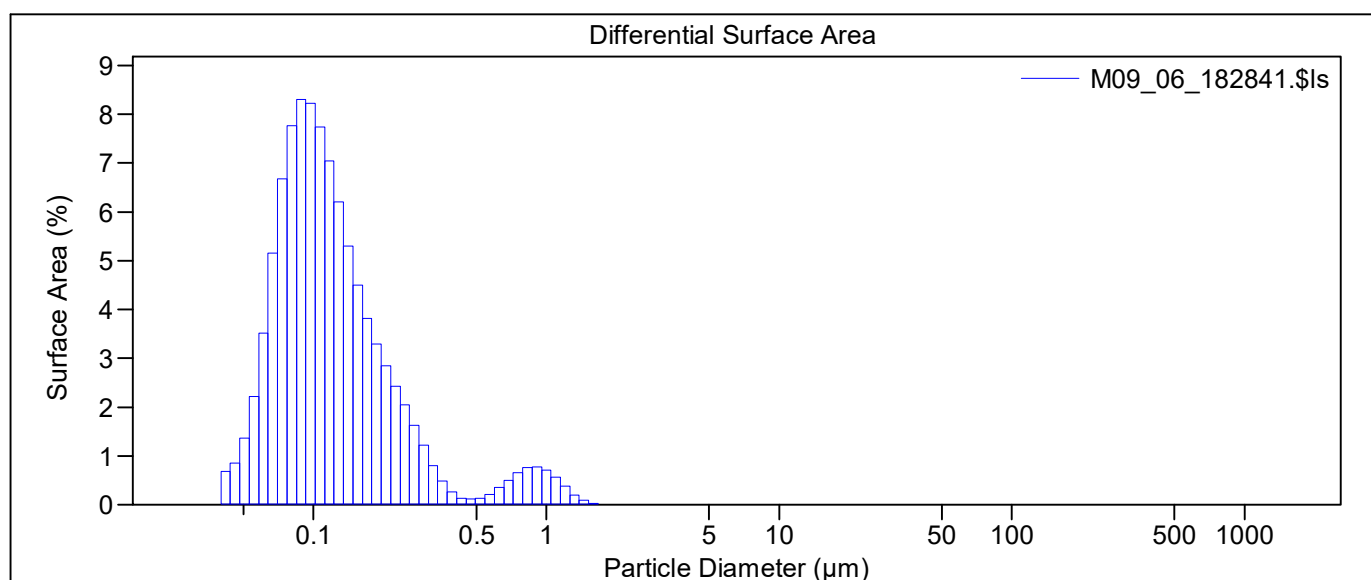
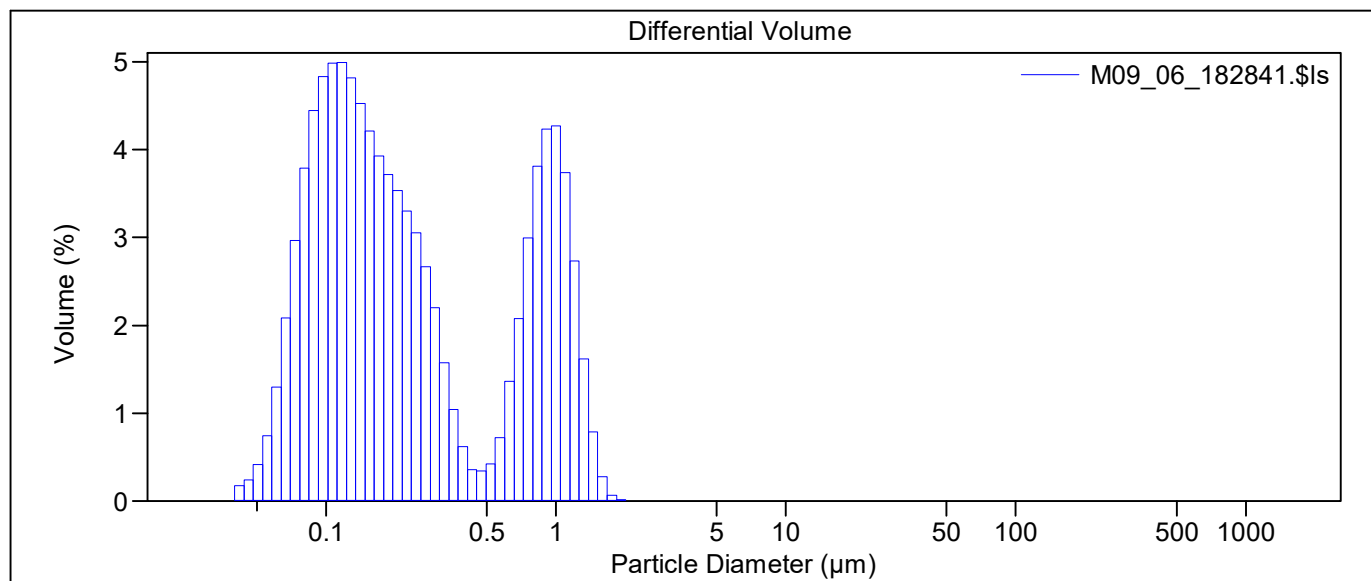
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File name:	D:\PP_PROFARB\POMIARY\M09\M09_06_182841.\$ls		
	M09_06_182841.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.90%		
LS 13 320	Universal Liquid Module		
Start time:	18:27 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-4%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_06_182841.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.387 µm
Mean:	0.388 µm		Variance:	0.150 µm ²
Median:	0.185 µm		C.V.:	99.8%
Mean/Median ratio:	2.097		Skewness:	1.161 Right skewed
Mode:	0.117 µm		Kurtosis:	-0.013 Platykurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.110 µm	0.185 µm	0.707 µm	1.030 µm

Surface Area Statistics (Arithmetic)			M09_06_182841.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.192 µm
Mean:	0.165 µm		Variance:	0.037 µm ²
Median:	0.108 µm		C.V.:	116%
Mean/Median ratio:	1.524		Skewness:	3.806 Right skewed
Mode:	0.088 µm		Kurtosis:	15.50 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.065 µm	0.081 µm	0.108 µm	0.160 µm	0.258 µm

Number Statistics (Arithmetic)			M09_06_182841.\$ls	
Calculations from 0.017 µm to 2000 µm				
Number:	100%		S.D.:	0.041 µm
Mean:	0.086 µm		Variance:	0.0017 µm ²
Median:	0.077 µm		C.V.:	47.9%
Mean/Median ratio:	1.110		Skewness:	6.127 Right skewed
Mode:	0.073 µm		Kurtosis:	103.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.051 µm	0.062 µm	0.077 µm	0.099 µm	0.128 µm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0.17	0.68	3.53
10	0.044	0.046	0.24	0.86	3.69
11	0.048	0.050	0.42	1.36	4.86
12	0.053	0.055	0.74	2.21	6.55
13	0.058	0.061	1.30	3.52	8.65
14	0.064	0.067	2.08	5.15	10.5
15	0.070	0.073	2.97	6.68	11.3
16	0.077	0.080	3.79	7.77	10.9
17	0.084	0.088	4.44	8.30	9.67
18	0.093	0.097	4.83	8.22	7.95
19	0.102	0.106	4.99	7.74	6.20
20	0.112	0.117	4.99	7.05	4.69
21	0.122	0.128	4.82	6.20	3.42
22	0.134	0.141	4.53	5.30	2.43
23	0.148	0.155	4.21	4.50	1.71
24	0.162	0.170	3.93	3.82	1.21
25	0.178	0.186	3.72	3.29	0.86
26	0.195	0.205	3.53	2.85	0.62
27	0.214	0.225	3.30	2.43	0.44
28	0.235	0.247	3.05	2.04	0.31
29	0.258	0.271	2.67	1.63	0.20
30	0.284	0.297	2.20	1.22	0.13
31	0.311	0.326	1.58	0.80	0.068
32	0.342	0.358	1.04	0.48	0.034
33	0.375	0.393	0.62	0.26	0.015
34	0.412	0.431	0.36	0.14	0.0067
35	0.452	0.474	0.34	0.12	0.0048
36	0.496	0.520	0.42	0.13	0.0045
37	0.545	0.571	0.72	0.21	0.0058
38	0.598	0.627	1.37	0.36	0.0083
39	0.656	0.688	2.08	0.50	0.0096
40	0.721	0.755	2.99	0.65	0.010
41	0.791	0.829	3.81	0.76	0.010
42	0.868	0.910	4.23	0.77	0.0084
43	0.953	0.999	4.27	0.71	0.0064
44	1.047	1.097	3.74	0.56	0.0043
45	1.149	1.204	2.73	0.37	0.0023

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	1.62	0.20	0.0011
47	1.385	1.451	0.79	0.090	0.00039
48	1.520	1.592	0.28	0.029	0.00010
49	1.668	1.748	0.067	0.0063	0.000019
50	1.832	1.919	0.011	0.00096	0.000002
51	2.011	2.107	0.00023	0.000018	3.73E-8
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

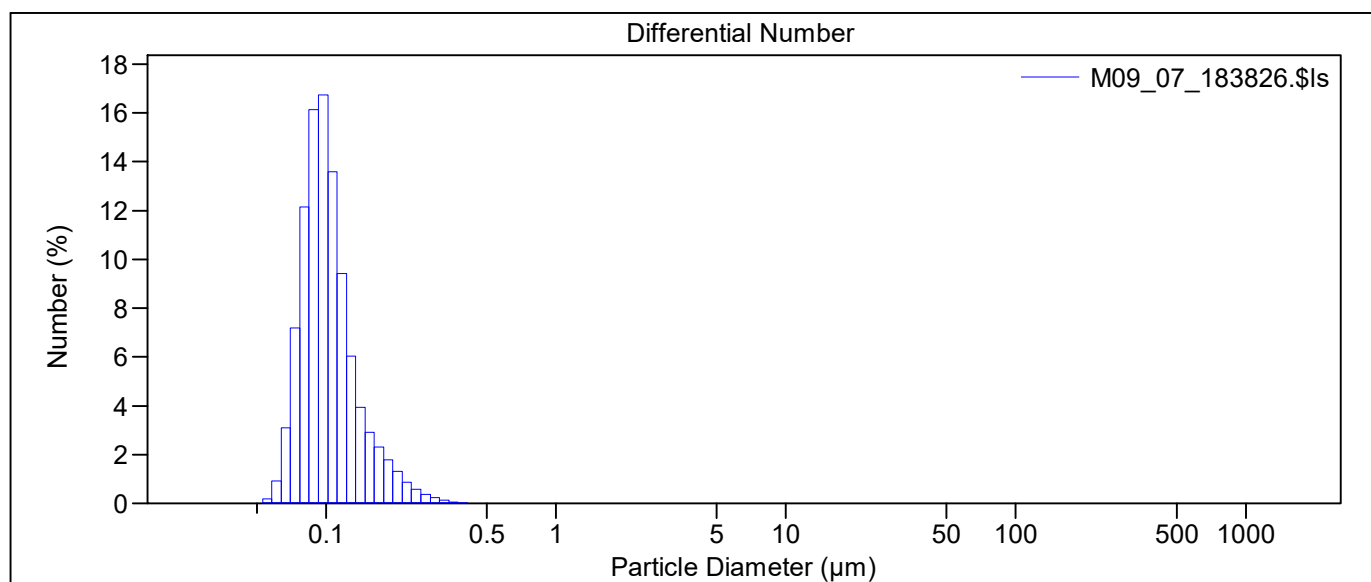
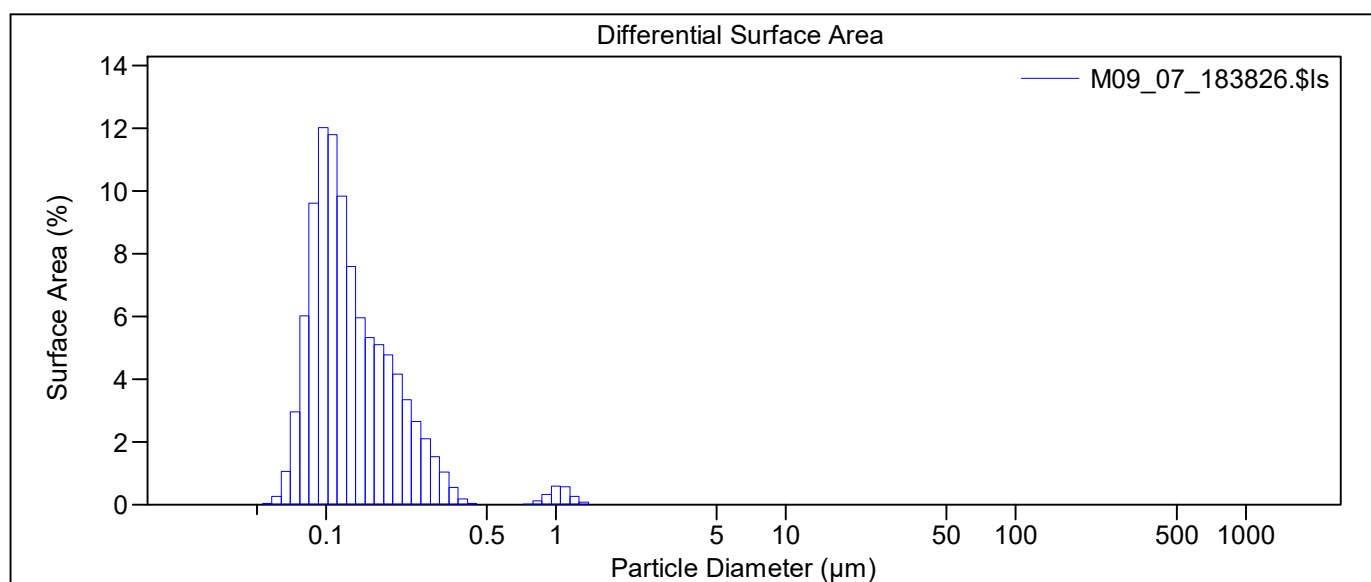
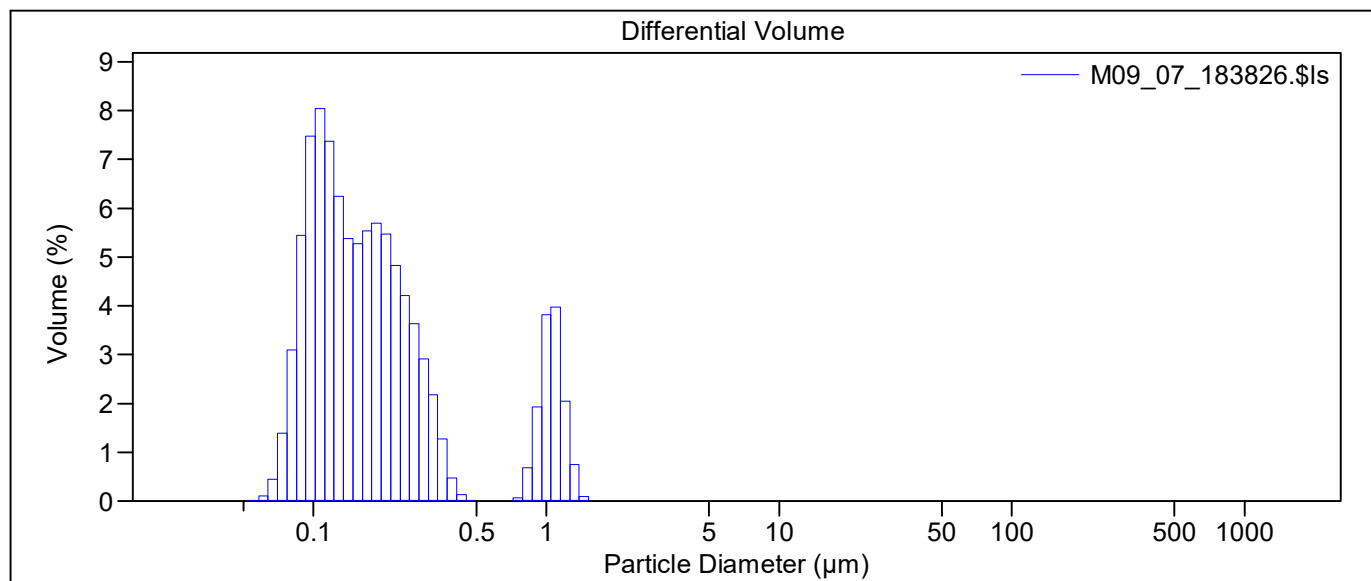
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_07_183826.\$ls		
	M09_07_183826.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.34%		
LS 13 320	Universal Liquid Module		
Start time:	18:36 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-4%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_07_183826.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.315 μm
Mean:	0.283 μm		Variance:	0.099 μm ²
Median:	0.161 μm		C.V.:	111%
Mean/Median ratio:	1.756		Skewness:	2.063 Right skewed
Mode:	0.106 μm		Kurtosis:	2.768 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.092 μm	0.110 μm	0.161 μm	0.253 μm	0.970 μm

Surface Area Statistics (Arithmetic)			M09_07_183826.\$ls	
Calculations from 0.017 μm to 2000 μm				
Surface Area:	100%		S.D.:	0.141 μm
Mean:	0.156 μm		Variance:	0.020 μm ²
Median:	0.118 μm		C.V.:	90.2%
Mean/Median ratio:	1.317		Skewness:	5.330 Right skewed
Mode:	0.097 μm		Kurtosis:	32.42 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.084 μm	0.096 μm	0.118 μm	0.170 μm	0.236 μm

Number Statistics (Arithmetic)			M09_07_183826.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.108 μm		Variance:	0.0015 μm ²
Median:	0.098 μm		C.V.:	36.4%
Mean/Median ratio:	1.095		Skewness:	5.130 Right skewed
Mode:	0.097 μm		Kurtosis:	85.43 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.075 μm	0.085 μm	0.098 μm	0.117 μm	0.151 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00080	0.0025	0.013
12	0.053	0.055	0.015	0.043	0.19
13	0.058	0.061	0.10	0.26	0.92
14	0.064	0.067	0.45	1.05	3.09
15	0.070	0.073	1.39	2.96	7.20
16	0.077	0.080	3.10	6.01	12.1
17	0.084	0.088	5.45	9.62	16.1
18	0.093	0.097	7.48	12.0	16.7
19	0.102	0.106	8.04	11.8	13.6
20	0.112	0.117	7.37	9.84	9.43
21	0.122	0.128	6.25	7.60	6.04
22	0.134	0.141	5.38	5.96	3.93
23	0.148	0.155	5.28	5.32	2.91
24	0.162	0.170	5.54	5.09	2.31
25	0.178	0.186	5.70	4.77	1.80
26	0.195	0.205	5.47	4.17	1.30
27	0.214	0.225	4.83	3.36	0.87
28	0.235	0.247	4.21	2.66	0.57
29	0.258	0.271	3.63	2.09	0.37
30	0.284	0.297	2.92	1.53	0.23
31	0.311	0.326	2.18	1.04	0.13
32	0.342	0.358	1.27	0.55	0.056
33	0.375	0.393	0.47	0.19	0.016
34	0.412	0.431	0.13	0.047	0.0033
35	0.452	0.474	0.014	0.0045	0.00027
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.069	0.014	0.00033
41	0.791	0.829	0.68	0.13	0.0024
42	0.868	0.910	1.93	0.33	0.0052
43	0.953	0.999	3.82	0.60	0.0078
44	1.047	1.097	3.97	0.56	0.0061
45	1.149	1.204	2.04	0.26	0.0024
46	1.261	1.321	0.75	0.088	0.00066
47	1.385	1.451	0.091	0.0098	0.000061
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

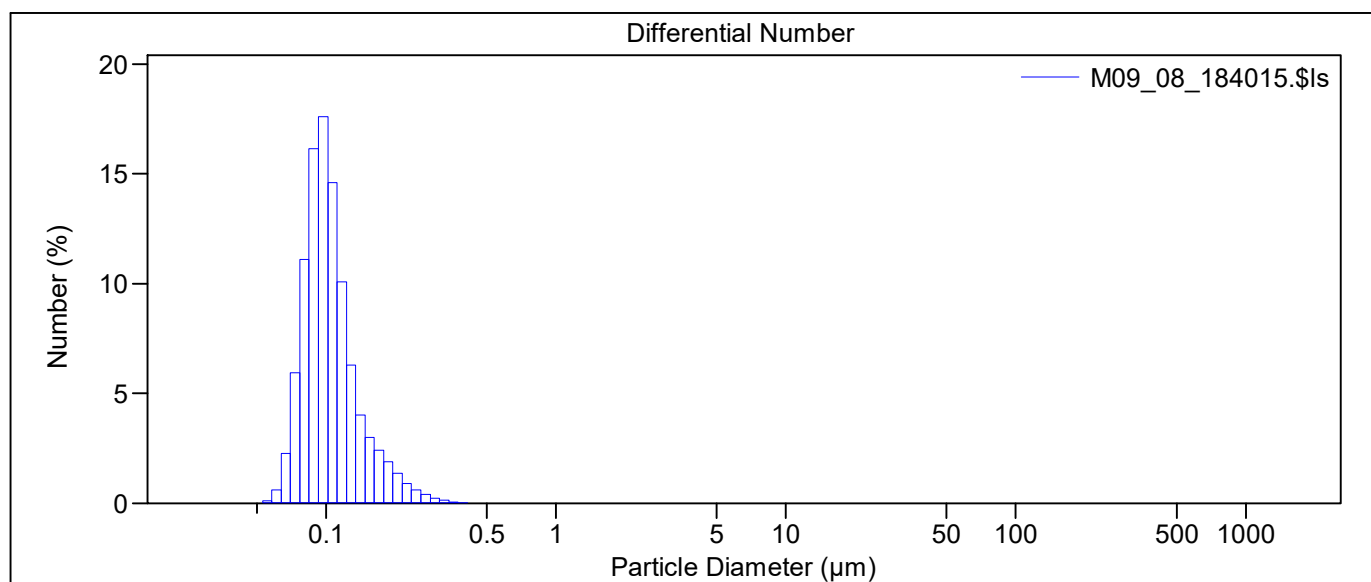
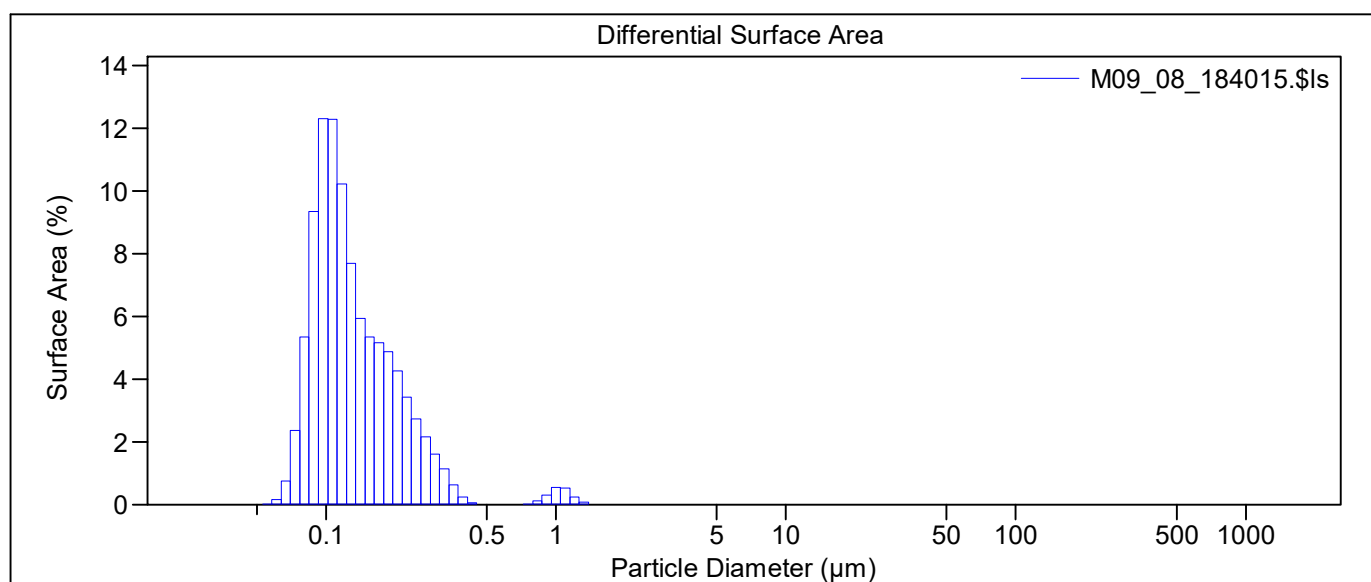
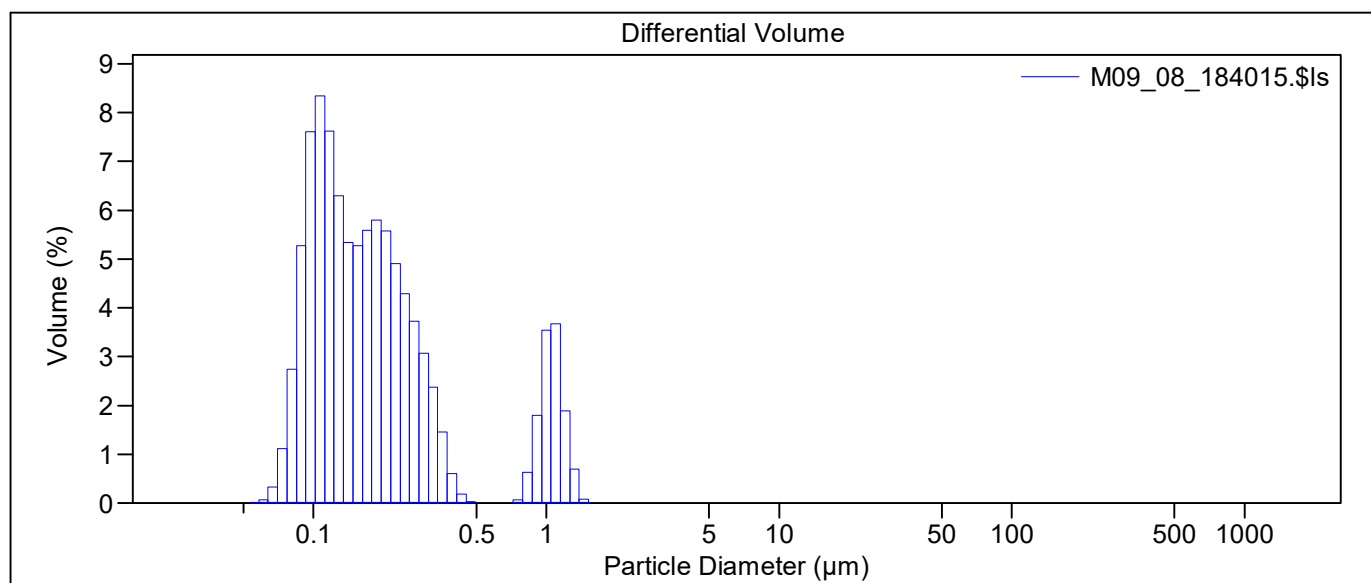
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_08_184015.\$ls		
	M09_08_184015.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.49%		
LS 13 320	Universal Liquid Module		
Start time:	18:38 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-3%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_08_184015.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.305 μm
Mean:	0.276 μm		Variance:	0.093 μm ²
Median:	0.162 μm		C.V.:	110%
Mean/Median ratio:	1.707		Skewness:	2.166 Right skewed
Mode:	0.106 μm		Kurtosis:	3.269 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.093 μm	0.111 μm	0.162 μm	0.252 μm	0.947 μm

Surface Area Statistics (Arithmetic)			M09_08_184015.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.137 µm
Mean:	0.157 µm		Variance:	0.019 µm ²
Median:	0.119 µm		C.V.:	87.4%
Mean/Median ratio:	1.312		Skewness:	5.386 Right skewed
Mode:	0.097 µm		Kurtosis:	33.67 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.086 µm	0.098 µm	0.119 µm	0.172 µm	0.239 µm

Number Statistics (Arithmetic)			M09_08_184015.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.109 μm		Variance:	0.0015 μm ²
Median:	0.100 μm		C.V.:	35.9%
Mean/Median ratio:	1.096		Skewness:	4.997 Right skewed
Mode:	0.097 μm		Kurtosis:	80.52 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.087 μm	0.100 μm	0.119 μm	0.153 μm



M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00058	0.0018	0.0095
12	0.053	0.055	0.010	0.029	0.13
13	0.058	0.061	0.065	0.17	0.61
14	0.064	0.067	0.32	0.76	2.29
15	0.070	0.073	1.11	2.38	5.95
16	0.077	0.080	2.74	5.34	11.1
17	0.084	0.088	5.27	9.35	16.1
18	0.093	0.097	7.61	12.3	17.6
19	0.102	0.106	8.34	12.3	14.6
20	0.112	0.117	7.62	10.2	10.1
21	0.122	0.128	6.30	7.69	6.30
22	0.134	0.141	5.34	5.94	4.04
23	0.148	0.155	5.28	5.35	3.01
24	0.162	0.170	5.60	5.17	2.42
25	0.178	0.186	5.80	4.88	1.89
26	0.195	0.205	5.58	4.28	1.38
27	0.214	0.225	4.91	3.42	0.91
28	0.235	0.247	4.29	2.72	0.60
29	0.258	0.271	3.72	2.16	0.40
30	0.284	0.297	3.07	1.62	0.25
31	0.311	0.326	2.38	1.14	0.14
32	0.342	0.358	1.46	0.64	0.067
33	0.375	0.393	0.61	0.24	0.021
34	0.412	0.431	0.18	0.067	0.0048
35	0.452	0.474	0.026	0.0086	0.00052
36	0.496	0.520	0.00041	0.00012	0.000006
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.065	0.013	0.00032
41	0.791	0.829	0.64	0.12	0.0024
42	0.868	0.910	1.80	0.31	0.0050
43	0.953	0.999	3.55	0.56	0.0075
44	1.047	1.097	3.67	0.52	0.0059
45	1.149	1.204	1.89	0.25	0.0023

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.69	0.082	0.00063
47	1.385	1.451	0.083	0.0089	0.000057
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

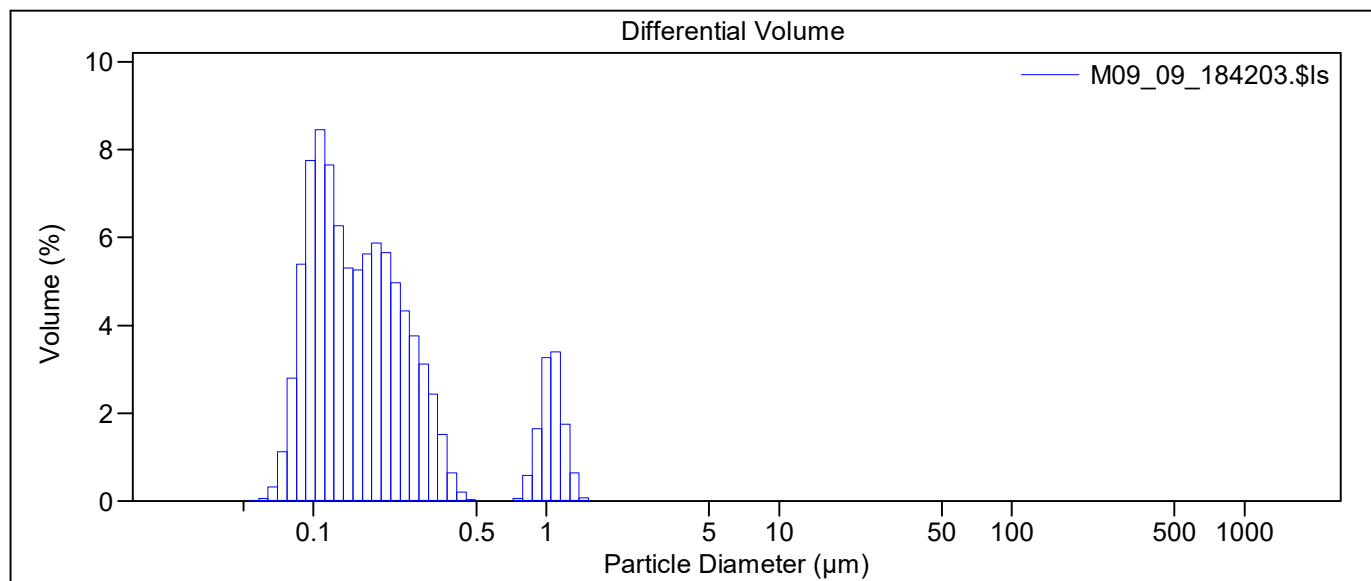
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_09_184203.\$ls		
	M09_09_184203.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.51%		
LS 13 320	Universal Liquid Module		
Start time:	18:40 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-2%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_09_184203.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.295 µm
Mean:	0.268 µm		Variance:	0.087 µm ²
Median:	0.161 µm		C.V.:	110%
Mean/Median ratio:	1.667		Skewness:	2.281 Right skewed
Mode:	0.106 µm		Kurtosis:	3.851 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.093 µm	0.110 µm	0.161 µm	0.248 µm	0.908 µm

Surface Area Statistics (Arithmetic)			M09_09_184203.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.132 µm
Mean:	0.155 µm		Variance:	0.018 µm ²
Median:	0.119 µm		C.V.:	85.3%
Mean/Median ratio:	1.304		Skewness:	5.495 Right skewed
Mode:	0.097 µm		Kurtosis:	35.69 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.085 µm	0.098 µm	0.119 µm	0.172 µm	0.238 µm

Number Statistics (Arithmetic)			M09_09_184203.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.109 μm		Variance:	0.0015 μm ²
Median:	0.099 μm		C.V.:	35.8%
Mean/Median ratio:	1.097		Skewness:	4.824 Right skewed
Mode:	0.097 μm		Kurtosis:	75.73 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.087 μm	0.099 μm	0.118 μm	0.153 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00057	0.0018	0.0092
12	0.053	0.055	0.010	0.028	0.12
13	0.058	0.061	0.065	0.17	0.60
14	0.064	0.067	0.32	0.75	2.27
15	0.070	0.073	1.13	2.39	5.96
16	0.077	0.080	2.80	5.40	11.2
17	0.084	0.088	5.39	9.48	16.3
18	0.093	0.097	7.76	12.4	17.7
19	0.102	0.106	8.45	12.3	14.6
20	0.112	0.117	7.66	10.2	10.00
21	0.122	0.128	6.28	7.59	6.19
22	0.134	0.141	5.30	5.85	3.96
23	0.148	0.155	5.27	5.29	2.97
24	0.162	0.170	5.62	5.15	2.40
25	0.178	0.186	5.87	4.89	1.89
26	0.195	0.205	5.65	4.29	1.38
27	0.214	0.225	4.96	3.43	0.91
28	0.235	0.247	4.33	2.73	0.60
29	0.258	0.271	3.76	2.16	0.40
30	0.284	0.297	3.12	1.63	0.25
31	0.311	0.326	2.44	1.16	0.15
32	0.342	0.358	1.51	0.66	0.069
33	0.375	0.393	0.65	0.26	0.022
34	0.412	0.431	0.20	0.071	0.0051
35	0.452	0.474	0.029	0.0095	0.00057
36	0.496	0.520	0.00057	0.00017	0.000009
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.059	0.012	0.00029
41	0.791	0.829	0.59	0.11	0.0021
42	0.868	0.910	1.65	0.28	0.0046
43	0.953	0.999	3.27	0.51	0.0068
44	1.047	1.097	3.39	0.48	0.0054
45	1.149	1.204	1.74	0.22	0.0021
46	1.261	1.321	0.64	0.075	0.00058
47	1.385	1.451	0.077	0.0082	0.000053
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

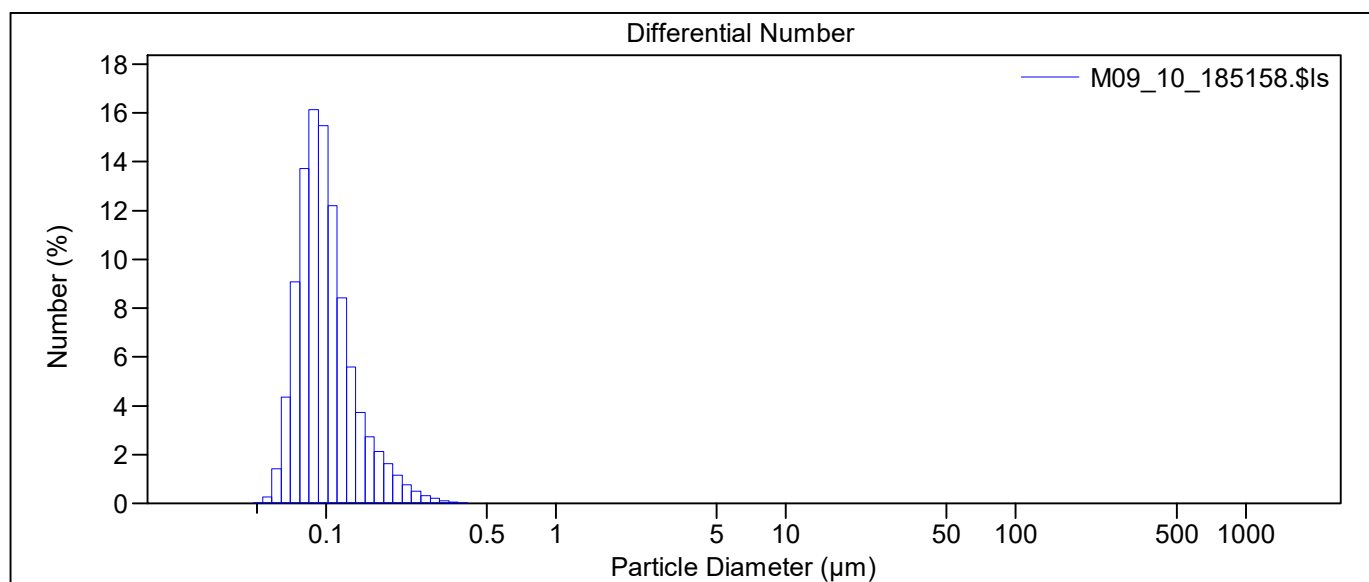
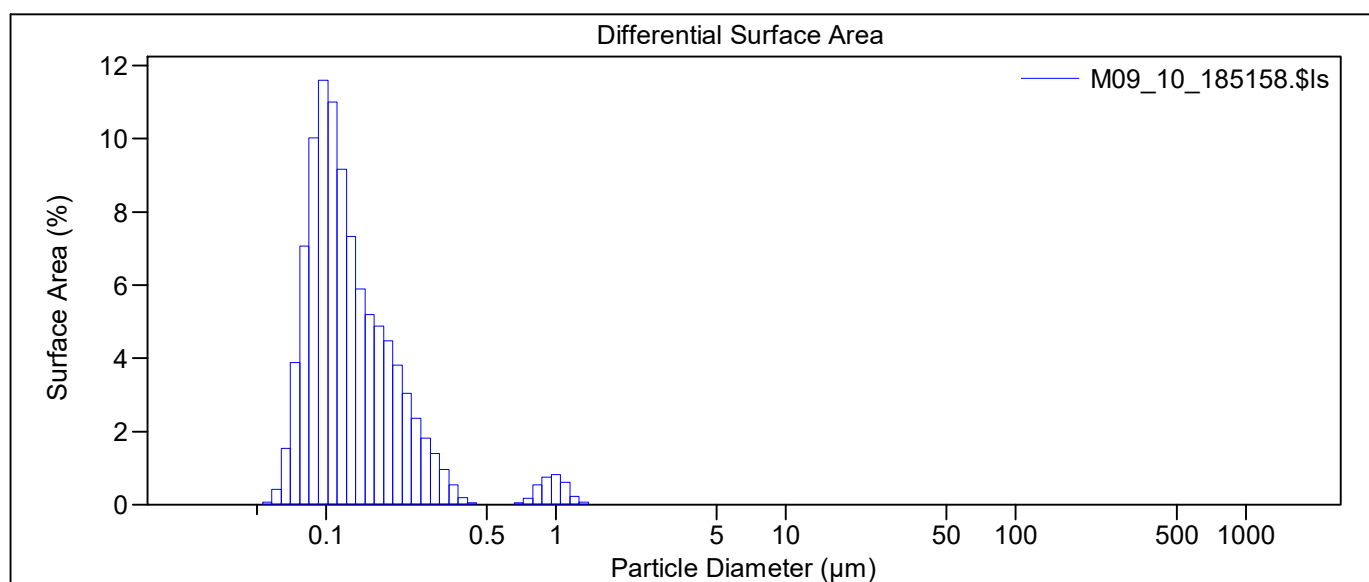
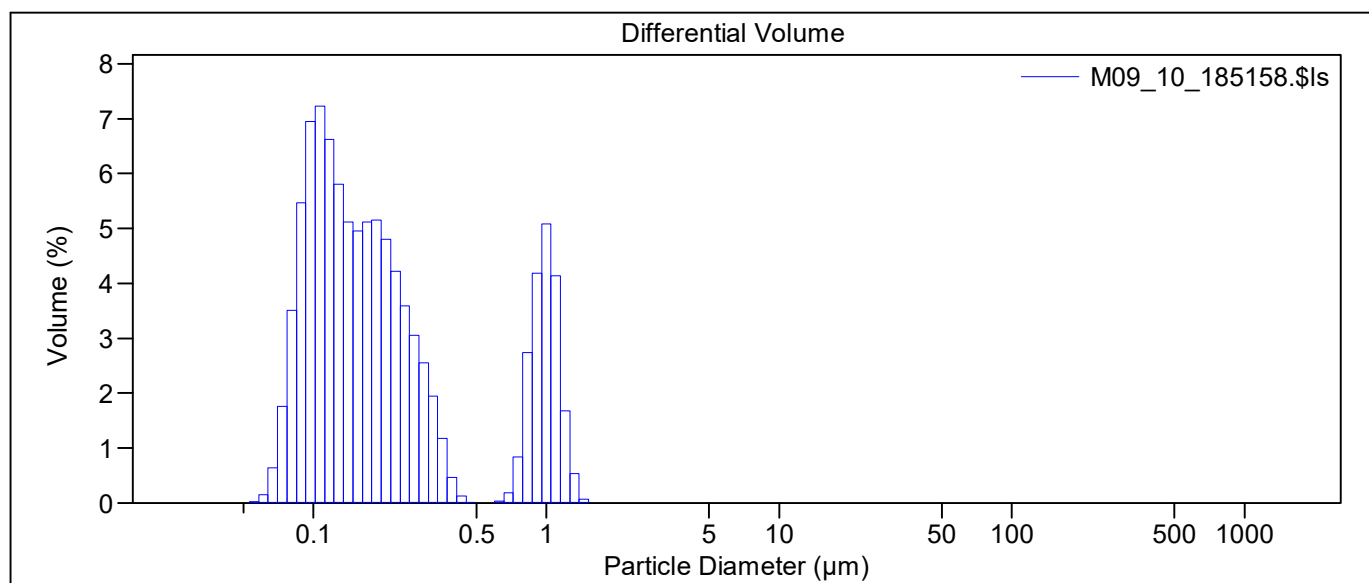
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_10_185158.\$ls		
	M09_10_185158.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.91%		
LS 13 320	Universal Liquid Module		
Start time:	18:50 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_10_185158.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.341 µm
Mean:	0.323 µm		Variance:	0.116 µm ²
Median:	0.167 µm		C.V.:	106%
Mean/Median ratio:	1.926		Skewness:	1.531 Right skewed
Mode:	0.106 µm		Kurtosis:	0.739 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 µm	0.111 µm	0.167 µm	0.292 µm	0.981 µm

Surface Area Statistics (Arithmetic)			M09_10_185158.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.161 µm
Mean:	0.162 µm		Variance:	0.026 µm ²
Median:	0.117 µm		C.V.:	99.6%
Mean/Median ratio:	1.387		Skewness:	4.468 Right skewed
Mode:	0.097 µm		Kurtosis:	21.34 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.094 µm	0.117 µm	0.168 µm	0.241 µm

Number Statistics (Arithmetic)			M09_10_185158.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.105 μm		Variance:	0.0016 μm ²
Median:	0.096 μm		C.V.:	38.0%
Mean/Median ratio:	1.097		Skewness:	6.096 Right skewed
Mode:	0.088 μm		Kurtosis:	103.9 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.073 μm	0.082 μm	0.096 μm	0.115 μm	0.146 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.0011	0.0034	0.017
12	0.053	0.055	0.022	0.065	0.27
13	0.058	0.061	0.16	0.41	1.41
14	0.064	0.067	0.64	1.55	4.35
15	0.070	0.073	1.76	3.89	9.08
16	0.077	0.080	3.52	7.07	13.7
17	0.084	0.088	5.47	10.0	16.1
18	0.093	0.097	6.95	11.6	15.5
19	0.102	0.106	7.23	11.0	12.2
20	0.112	0.117	6.62	9.17	8.43
21	0.122	0.128	5.81	7.33	5.59
22	0.134	0.141	5.12	5.89	3.73
23	0.148	0.155	4.95	5.19	2.73
24	0.162	0.170	5.12	4.88	2.13
25	0.178	0.186	5.16	4.48	1.62
26	0.195	0.205	4.81	3.81	1.14
27	0.214	0.225	4.23	3.05	0.76
28	0.235	0.247	3.59	2.36	0.49
29	0.258	0.271	3.05	1.83	0.31
30	0.284	0.297	2.55	1.39	0.20
31	0.311	0.326	1.95	0.97	0.11
32	0.342	0.358	1.18	0.54	0.052
33	0.375	0.393	0.46	0.19	0.016
34	0.412	0.431	0.13	0.047	0.0032
35	0.452	0.474	0.014	0.0048	0.00027
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0.030	0.0078	0.00025
39	0.656	0.688	0.19	0.045	0.0012
40	0.721	0.755	0.84	0.18	0.0040
41	0.791	0.829	2.74	0.54	0.0098
42	0.868	0.910	4.19	0.75	0.011
43	0.953	0.999	5.09	0.83	0.010
44	1.047	1.097	4.14	0.61	0.0064
45	1.149	1.204	1.68	0.23	0.0020

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.54	0.066	0.00047
47	1.385	1.451	0.067	0.0075	0.000044
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

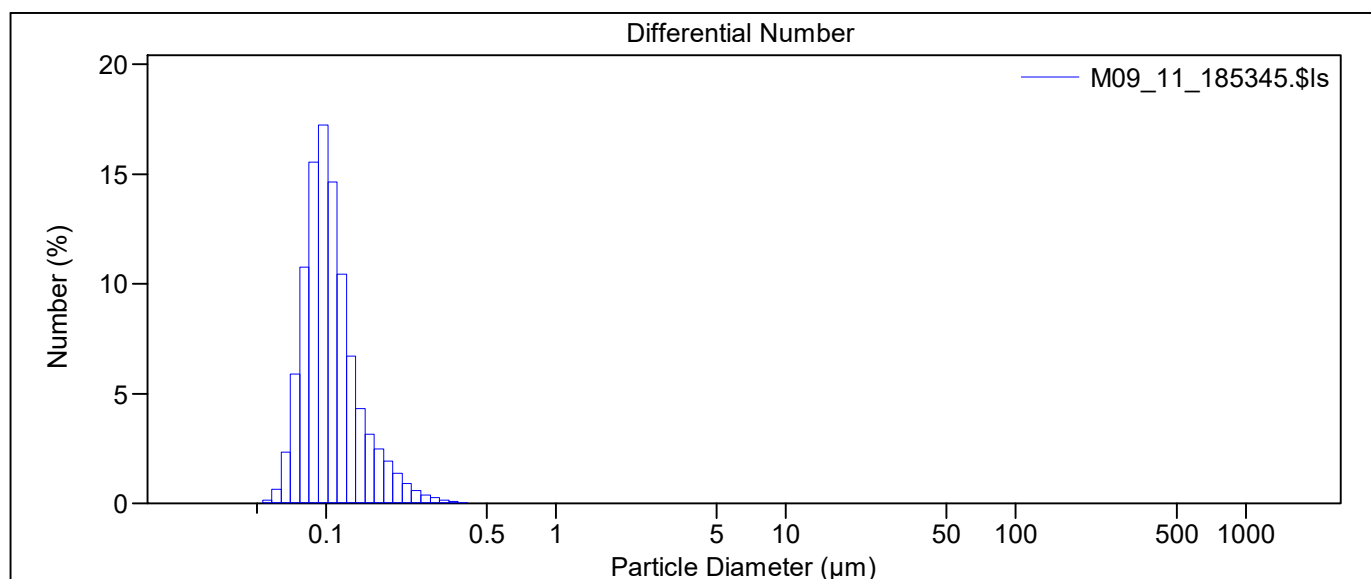
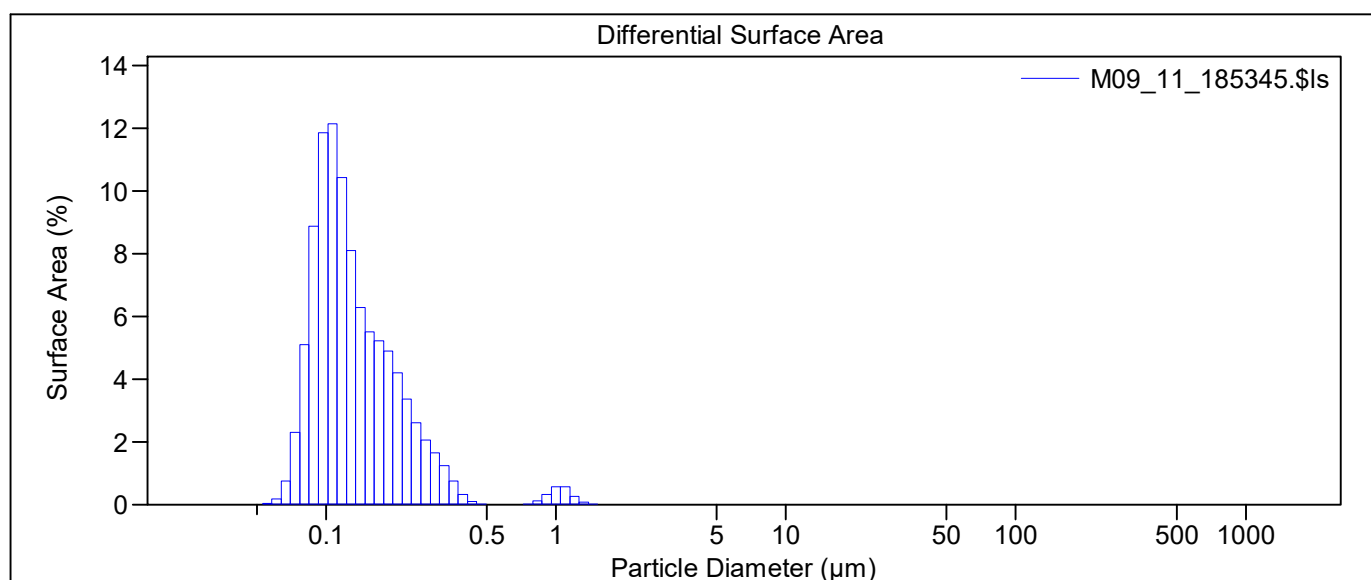
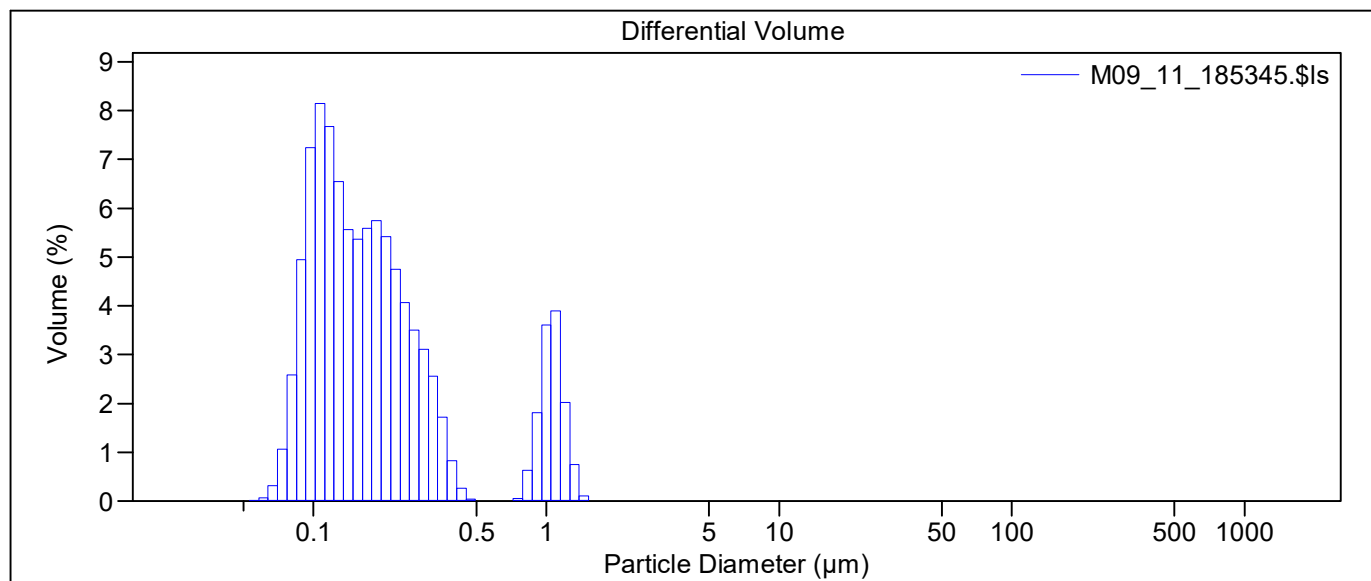
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_11_185345.\$ls		
	M09_11_185345.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.96%		
LS 13 320	Universal Liquid Module		
Start time:	18:52 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_11_185345.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.311 μm
Mean:	0.283 μm		Variance:	0.096 μm ²
Median:	0.163 μm		C.V.:	110%
Mean/Median ratio:	1.733		Skewness:	2.098 Right skewed
Mode:	0.106 μm		Kurtosis:	2.961 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.094 μm	0.112 μm	0.163 μm	0.258 μm	0.963 μm

Surface Area Statistics (Arithmetic)			M09_11_185345.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.141 µm
Mean:	0.159 µm		Variance:	0.020 µm ²
Median:	0.121 µm		C.V.:	88.5%
Mean/Median ratio:	1.316		Skewness:	5.277 Right skewed
Mode:	0.106 µm		Kurtosis:	32.09 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.086 µm	0.098 µm	0.121 µm	0.172 µm	0.242 µm

Number Statistics (Arithmetic)			M09_11_185345.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.110 μm		Variance:	0.0016 μm ²
Median:	0.100 μm		C.V.:	36.2%
Mean/Median ratio:	1.096		Skewness:	5.074 Right skewed
Mode:	0.097 μm		Kurtosis:	81.94 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.078 μm	0.087 μm	0.100 μm	0.120 μm	0.154 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.00063	0.0020	0.011
12	0.053	0.055	0.011	0.032	0.14
13	0.058	0.061	0.068	0.18	0.65
14	0.064	0.067	0.32	0.76	2.33
15	0.070	0.073	1.07	2.31	5.88
16	0.077	0.080	2.58	5.10	10.8
17	0.084	0.088	4.94	8.88	15.5
18	0.093	0.097	7.24	11.9	17.2
19	0.102	0.106	8.15	12.2	14.6
20	0.112	0.117	7.67	10.4	10.4
21	0.122	0.128	6.54	8.09	6.72
22	0.134	0.141	5.57	6.28	4.32
23	0.148	0.155	5.36	5.50	3.14
24	0.162	0.170	5.59	5.23	2.48
25	0.178	0.186	5.74	4.89	1.93
26	0.195	0.205	5.41	4.20	1.37
27	0.214	0.225	4.75	3.36	0.91
28	0.235	0.247	4.07	2.62	0.59
29	0.258	0.271	3.50	2.05	0.38
30	0.284	0.297	3.11	1.66	0.26
31	0.311	0.326	2.56	1.24	0.16
32	0.342	0.358	1.72	0.76	0.081
33	0.375	0.393	0.83	0.33	0.030
34	0.412	0.431	0.26	0.097	0.0071
35	0.452	0.474	0.044	0.015	0.00091
36	0.496	0.520	0.0016	0.00048	0.000024
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.058	0.012	0.00029
41	0.791	0.829	0.63	0.12	0.0024
42	0.868	0.910	1.81	0.32	0.0052
43	0.953	0.999	3.61	0.57	0.0079
44	1.047	1.097	3.90	0.56	0.0064
45	1.149	1.204	2.02	0.27	0.0025
46	1.261	1.321	0.75	0.090	0.00071
47	1.385	1.451	0.098	0.011	0.000070
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

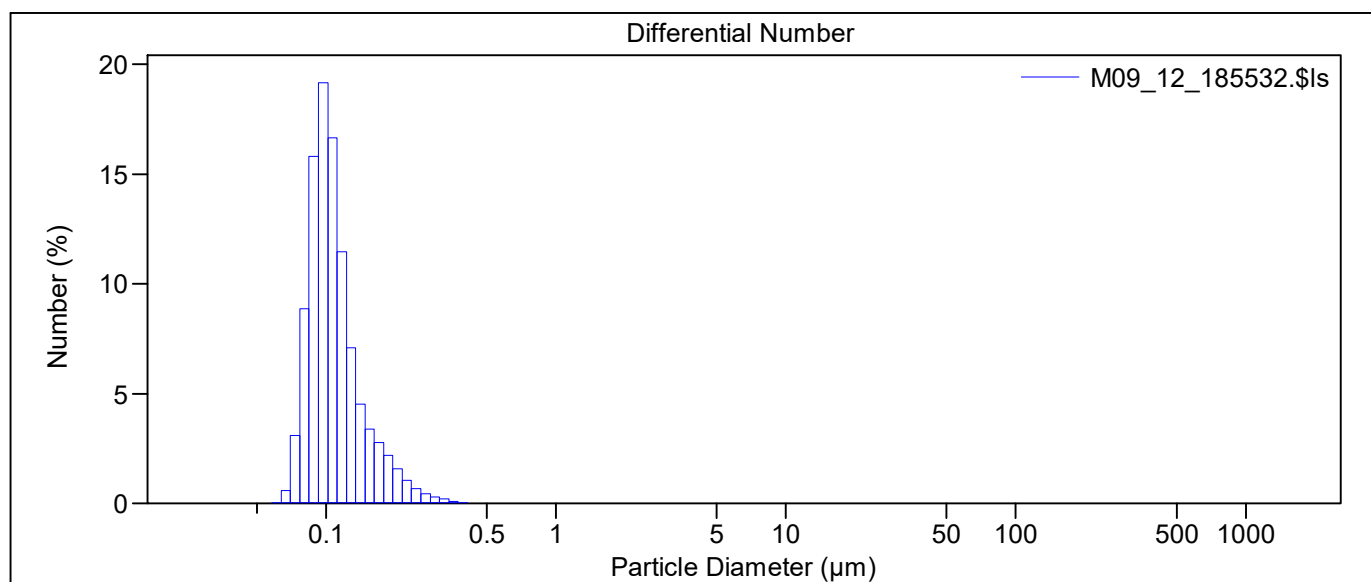
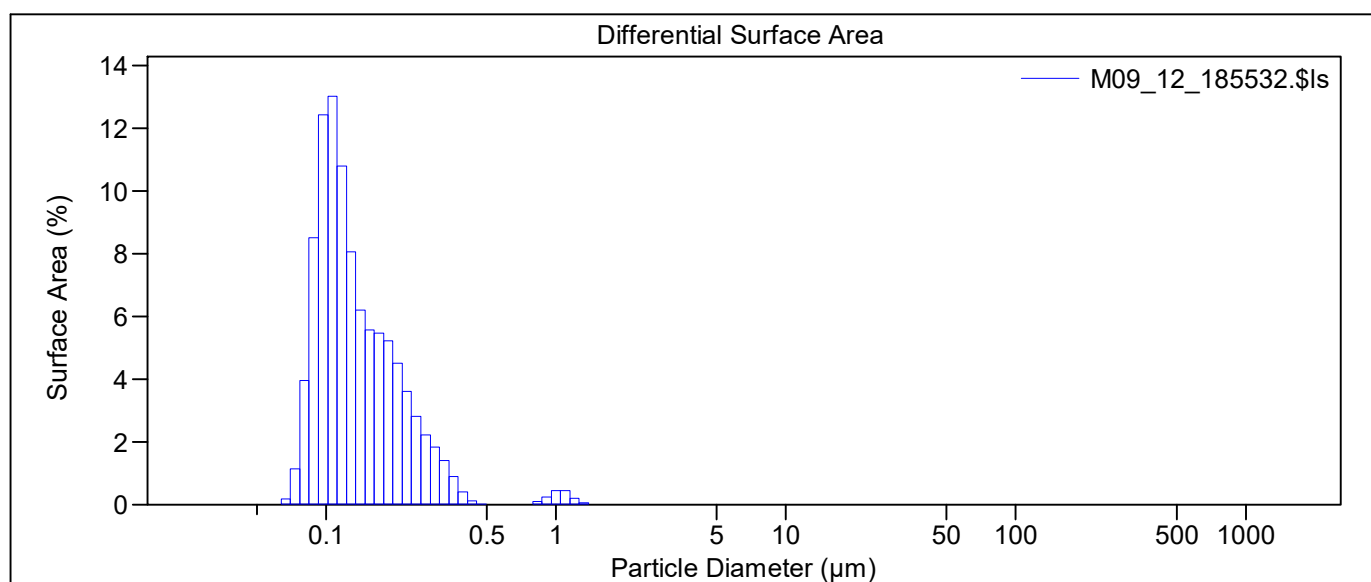
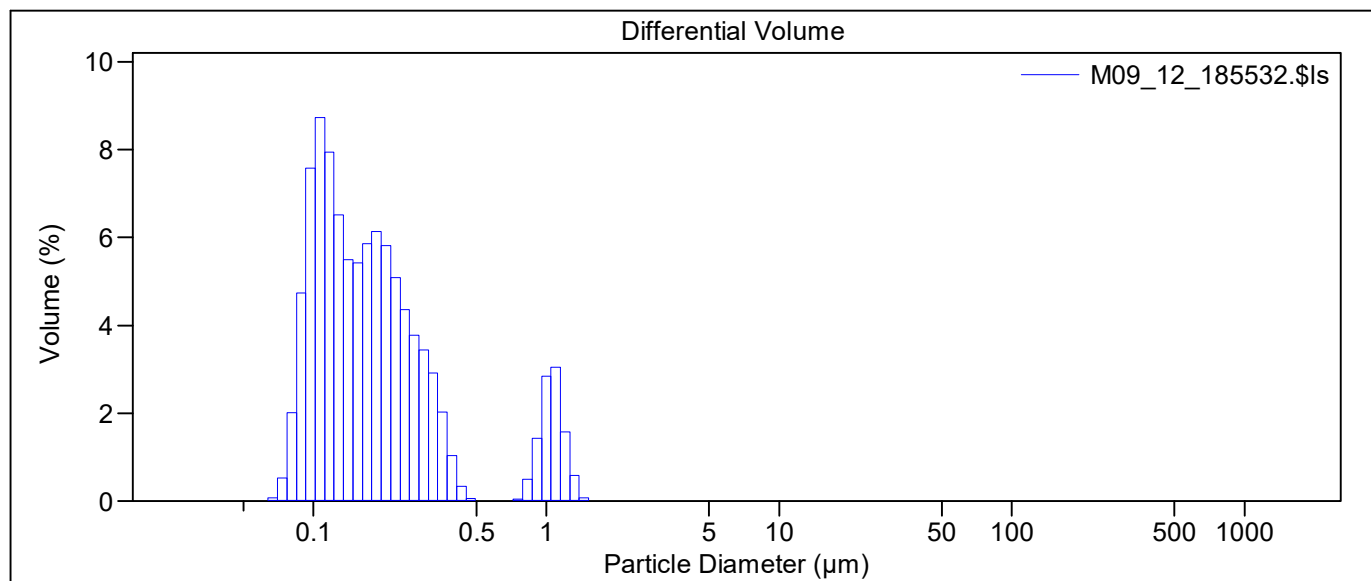
Beckman Coulter LS13320

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File ID:	M09		
Operator:	PP		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.98%		
LS 13 320	Universal Liquid Module		
Start time:	18:53 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	13%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_12_185532.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.280 µm
Mean:	0.262 µm		Variance:	0.079 µm ²
Median:	0.165 µm		C.V.:	107%
Mean/Median ratio:	1.593		Skewness:	2.436 Right skewed
Mode:	0.106 µm		Kurtosis:	4.737 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.096 µm	0.113 µm	0.165 µm	0.251 µm	0.800 µm

Surface Area Statistics (Arithmetic)			M09_12_185532.\$Is	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.128 µm
Mean:	0.159 µm		Variance:	0.016 µm ²
Median:	0.122 µm		C.V.:	80.7%
Mean/Median ratio:	1.298		Skewness:	5.491 Right skewed
Mode:	0.106 µm		Kurtosis:	36.74 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.089 µm	0.101 µm	0.122 µm	0.177 µm	0.246 µm

Number Statistics (Arithmetic)			M09_12_185532.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.114 μm		Variance:	0.0016 μm ²
Median:	0.103 μm		C.V.:	35.0%
Mean/Median ratio:	1.102		Skewness:	4.675 Right skewed
Mode:	0.097 μm		Kurtosis:	68.71 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 μm	0.091 μm	0.103 μm	0.122 μm	0.159 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0	0	0
12	0.053	0.055	0	0	0
13	0.058	0.061	0.0036	0.0093	0.036
14	0.064	0.067	0.077	0.18	0.59
15	0.070	0.073	0.53	1.15	3.10
16	0.077	0.080	2.01	3.97	8.88
17	0.084	0.088	4.73	8.51	15.8
18	0.093	0.097	7.58	12.4	19.1
19	0.102	0.106	8.73	13.0	16.7
20	0.112	0.117	7.95	10.8	11.5
21	0.122	0.128	6.51	8.06	7.10
22	0.134	0.141	5.49	6.20	4.53
23	0.148	0.155	5.42	5.57	3.38
24	0.162	0.170	5.85	5.48	2.76
25	0.178	0.186	6.14	5.23	2.19
26	0.195	0.205	5.82	4.52	1.57
27	0.214	0.225	5.09	3.60	1.04
28	0.235	0.247	4.36	2.81	0.67
29	0.258	0.271	3.78	2.22	0.44
30	0.284	0.297	3.44	1.84	0.30
31	0.311	0.326	2.91	1.42	0.19
32	0.342	0.358	2.03	0.90	0.10
33	0.375	0.393	1.03	0.42	0.039
34	0.412	0.431	0.34	0.13	0.0098
35	0.452	0.474	0.063	0.021	0.0014
36	0.496	0.520	0.0031	0.00095	0.000051
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.046	0.0098	0.00025
41	0.791	0.829	0.50	0.095	0.0020
42	0.868	0.910	1.43	0.25	0.0044
43	0.953	0.999	2.84	0.45	0.0066
44	1.047	1.097	3.05	0.44	0.0053
45	1.149	1.204	1.58	0.21	0.0021

M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.59	0.070	0.00058
47	1.385	1.451	0.076	0.0083	0.000057
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

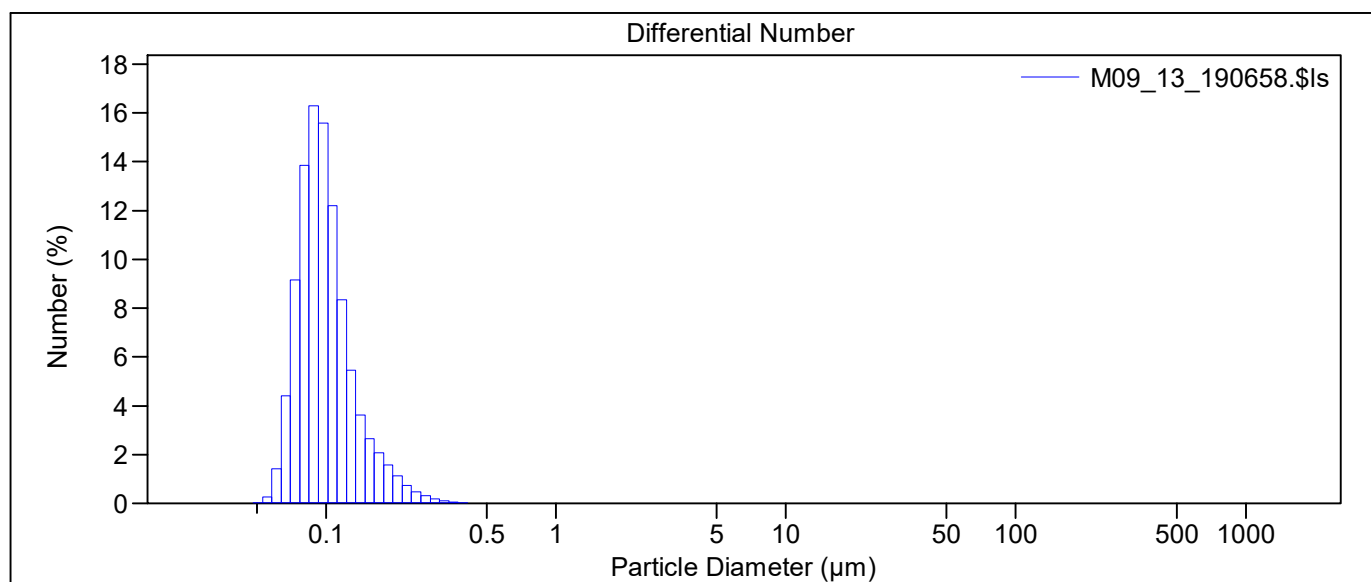
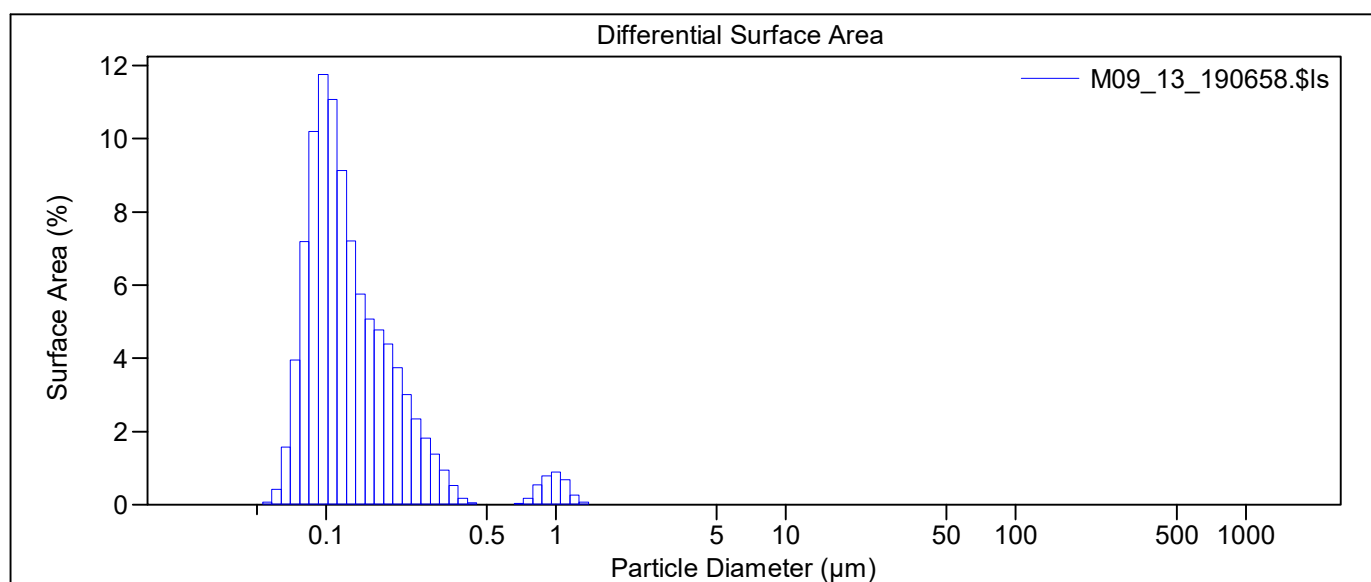
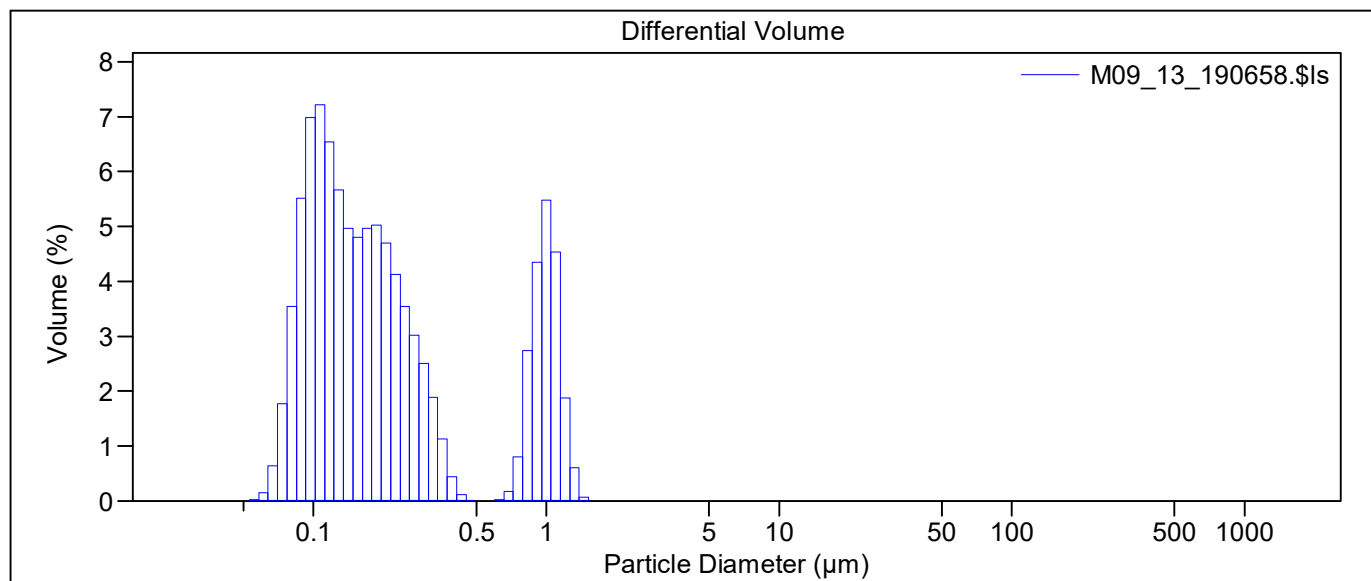
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_13_190658.\$ls		
	M09_13_190658.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.95%		
LS 13 320	Universal Liquid Module		
Start time:	19:05 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_13_190658.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.350 µm
Mean:	0.333 µm		Variance:	0.123 µm ²
Median:	0.169 µm		C.V.:	105%
Mean/Median ratio:	1.971		Skewness:	1.449 Right skewed
Mode:	0.106 µm		Kurtosis:	0.463 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 µm	0.110 µm	0.169 µm	0.303 µm	0.997 µm

Surface Area Statistics (Arithmetic)			M09_13_190658.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.166 µm
Mean:	0.163 µm		Variance:	0.028 µm ²
Median:	0.116 µm		C.V.:	102%
Mean/Median ratio:	1.406		Skewness:	4.381 Right skewed
Mode:	0.097 µm		Kurtosis:	20.26 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.094 µm	0.116 µm	0.167 µm	0.242 µm

Number Statistics (Arithmetic)		M09_13_190658.\$ls		
Calculations from 0.017 μm to 2000 μm				
Number:	100%	S.D.:	0.040 μm	
Mean:	0.104 μm	Variance:	0.0016 μm ²	
Median:	0.095 μm	C.V.:	38.2%	
Mean/Median ratio:	1.096	Skewness:	6.364 Right skewed	
Mode:	0.088 μm	Kurtosis:	110.9 Leptokurtic	
<10%	<25%	<50%	<75%	<90%
0.073 μm	0.082 μm	0.095 μm	0.114 μm	0.145 μm



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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.0011	0.0035	0.017
12	0.053	0.055	0.023	0.067	0.27
13	0.058	0.061	0.16	0.42	1.42
14	0.064	0.067	0.64	1.57	4.40
15	0.070	0.073	1.77	3.95	9.17
16	0.077	0.080	3.54	7.19	13.8
17	0.084	0.088	5.52	10.2	16.3
18	0.093	0.097	6.98	11.7	15.6
19	0.102	0.106	7.22	11.1	12.2
20	0.112	0.117	6.54	9.13	8.34
21	0.122	0.128	5.67	7.21	5.47
22	0.134	0.141	4.97	5.76	3.62
23	0.148	0.155	4.81	5.07	2.65
24	0.162	0.170	4.97	4.78	2.07
25	0.178	0.186	5.02	4.40	1.58
26	0.195	0.205	4.70	3.75	1.12
27	0.214	0.225	4.13	3.00	0.74
28	0.235	0.247	3.54	2.34	0.48
29	0.258	0.271	3.02	1.82	0.31
30	0.284	0.297	2.50	1.38	0.19
31	0.311	0.326	1.89	0.95	0.11
32	0.342	0.358	1.13	0.52	0.050
33	0.375	0.393	0.44	0.18	0.015
34	0.412	0.431	0.12	0.045	0.0030
35	0.452	0.474	0.013	0.0046	0.00026
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0.027	0.0070	0.00022
39	0.656	0.688	0.17	0.041	0.0011
40	0.721	0.755	0.81	0.17	0.0038
41	0.791	0.829	2.74	0.54	0.0098
42	0.868	0.910	4.35	0.78	0.012
43	0.953	0.999	5.48	0.90	0.011
44	1.047	1.097	4.53	0.67	0.0070
45	1.149	1.204	1.88	0.26	0.0022

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Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.61	0.075	0.00054
47	1.385	1.451	0.074	0.0084	0.000050
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

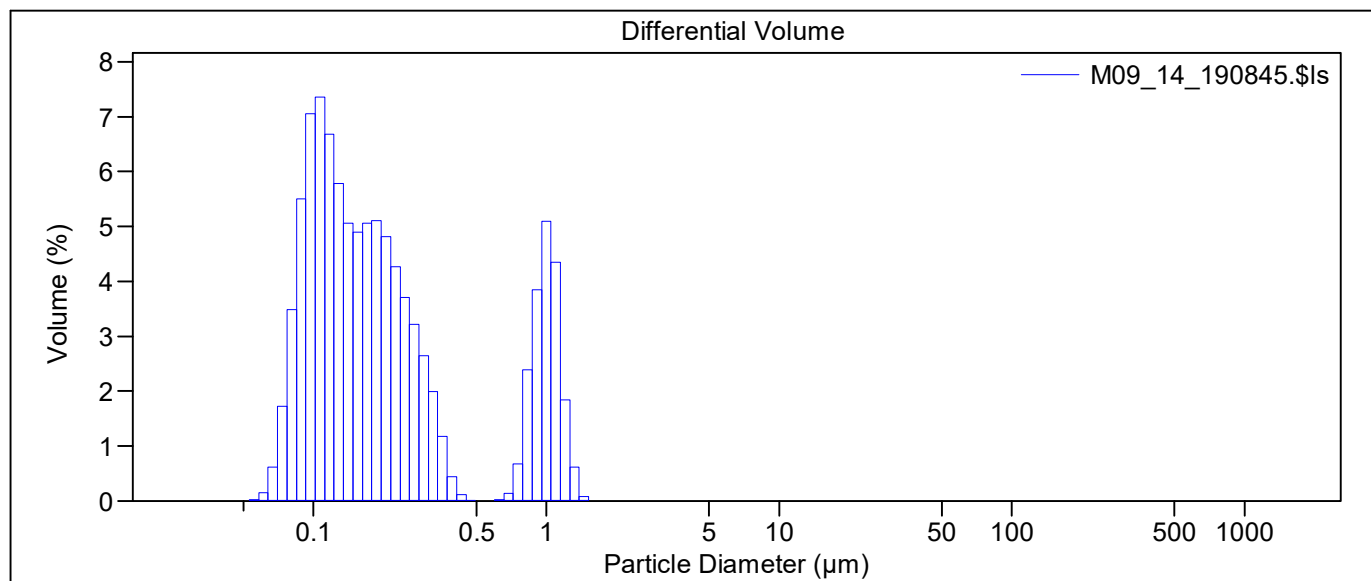
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_14_190845.\$ls		
	M09_14_190845.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.06%		
LS 13 320	Universal Liquid Module		
Start time:	19:07 10	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_14_190845.\$ls	
Calculations from 0.017 μm to 2000 μm				
Volume:	100%		S.D.:	0.342 μm
Mean:	0.322 μm		Variance:	0.117 μm ²
Median:	0.167 μm		C.V.:	106%
Mean/Median ratio:	1.923		Skewness:	1.562 Right skewed
Mode:	0.106 μm		Kurtosis:	0.835 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 μm	0.110 μm	0.167 μm	0.288 μm	0.990 μm

Surface Area Statistics (Arithmetic)			M09_14_190845.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.161 µm
Mean:	0.162 µm		Variance:	0.026 µm ²
Median:	0.117 µm		C.V.:	99.5%
Mean/Median ratio:	1.386		Skewness:	4.541 Right skewed
Mode:	0.097 µm		Kurtosis:	22.14 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.081 µm	0.094 µm	0.117 µm	0.168 µm	0.242 µm

Number Statistics (Arithmetic)			M09_14_190845.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.040 μm
Mean:	0.105 μm		Variance:	0.0016 μm ²
Median:	0.096 μm		C.V.:	37.9%
Mean/Median ratio:	1.096		Skewness:	6.075 Right skewed
Mode:	0.088 μm		Kurtosis:	104.3 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.073 μm	0.083 μm	0.096 μm	0.115 μm	0.146 μm



M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.0010	0.0033	0.016
12	0.053	0.055	0.022	0.063	0.26
13	0.058	0.061	0.15	0.40	1.35
14	0.064	0.067	0.62	1.49	4.20
15	0.070	0.073	1.72	3.79	8.88
16	0.077	0.080	3.49	7.00	13.6
17	0.084	0.088	5.51	10.1	16.2
18	0.093	0.097	7.05	11.8	15.7
19	0.102	0.106	7.36	11.2	12.4
20	0.112	0.117	6.68	9.24	8.51
21	0.122	0.128	5.78	7.29	5.57
22	0.134	0.141	5.07	5.81	3.68
23	0.148	0.155	4.90	5.12	2.69
24	0.162	0.170	5.06	4.82	2.10
25	0.178	0.186	5.11	4.43	1.61
26	0.195	0.205	4.82	3.81	1.14
27	0.214	0.225	4.27	3.07	0.77
28	0.235	0.247	3.71	2.43	0.50
29	0.258	0.271	3.22	1.92	0.33
30	0.284	0.297	2.65	1.44	0.21
31	0.311	0.326	1.99	0.99	0.12
32	0.342	0.358	1.18	0.53	0.052
33	0.375	0.393	0.45	0.18	0.015
34	0.412	0.431	0.12	0.046	0.0031
35	0.452	0.474	0.014	0.0046	0.00026
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0.024	0.0063	0.00020
39	0.656	0.688	0.14	0.032	0.00086
40	0.721	0.755	0.67	0.14	0.0032
41	0.791	0.829	2.39	0.47	0.0085
42	0.868	0.910	3.85	0.68	0.010
43	0.953	0.999	5.10	0.82	0.010
44	1.047	1.097	4.35	0.64	0.0067
45	1.149	1.204	1.85	0.25	0.0022

M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	1.261	1.321	0.62	0.076	0.00055
47	1.385	1.451	0.077	0.0085	0.000051
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0

M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				

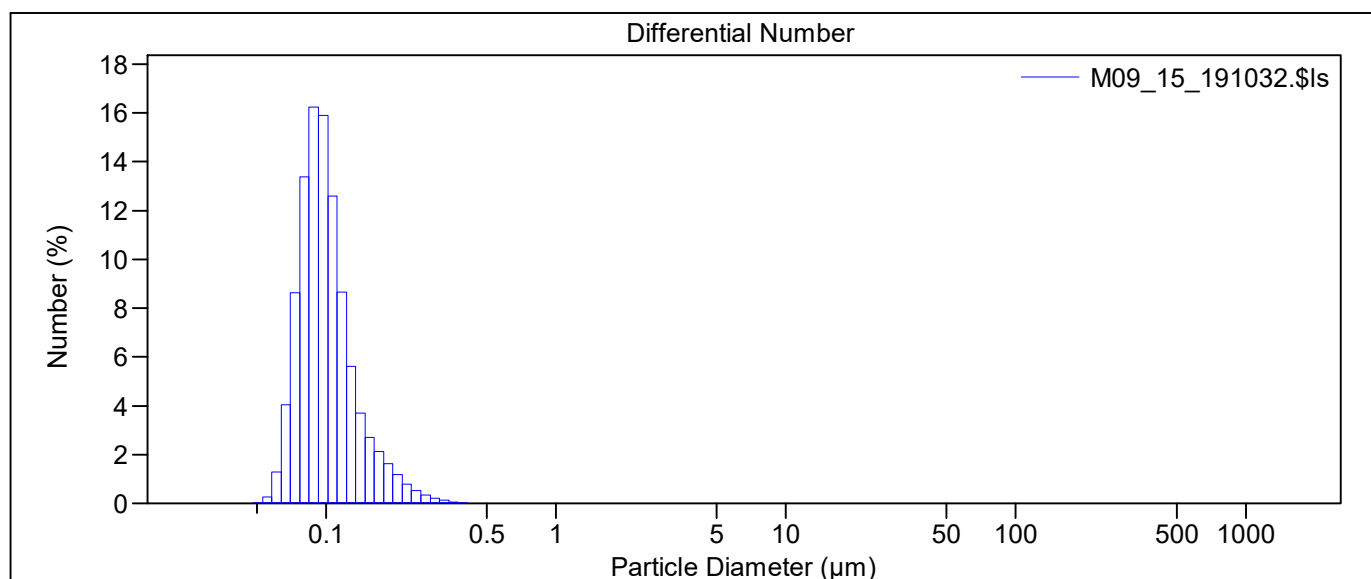
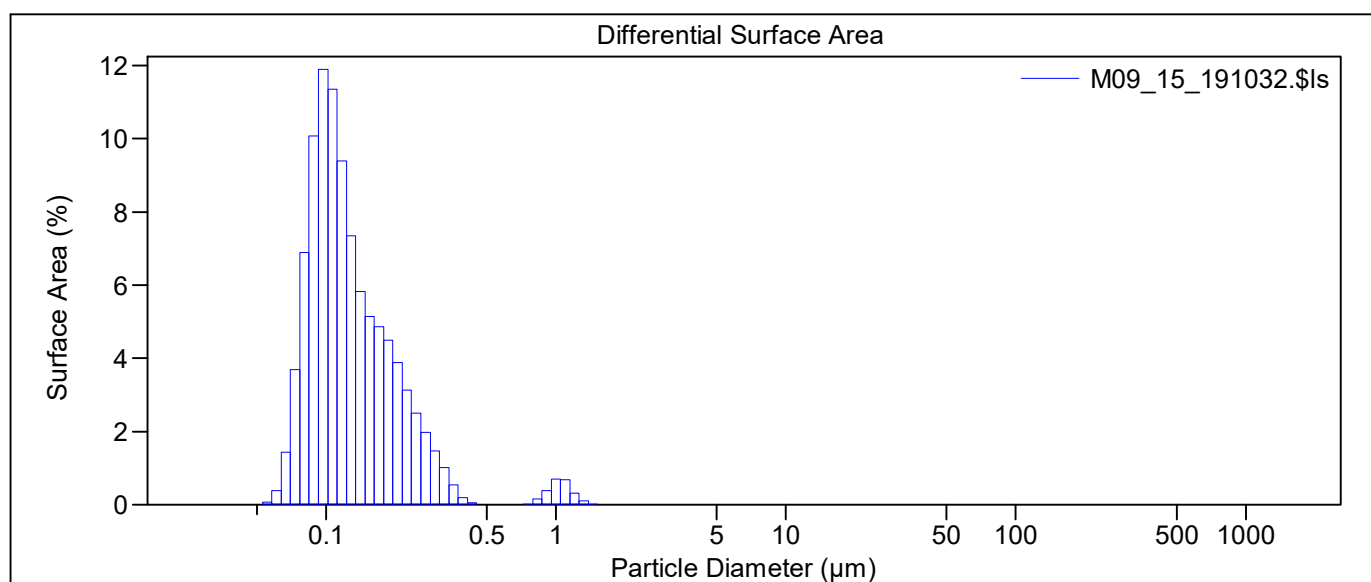
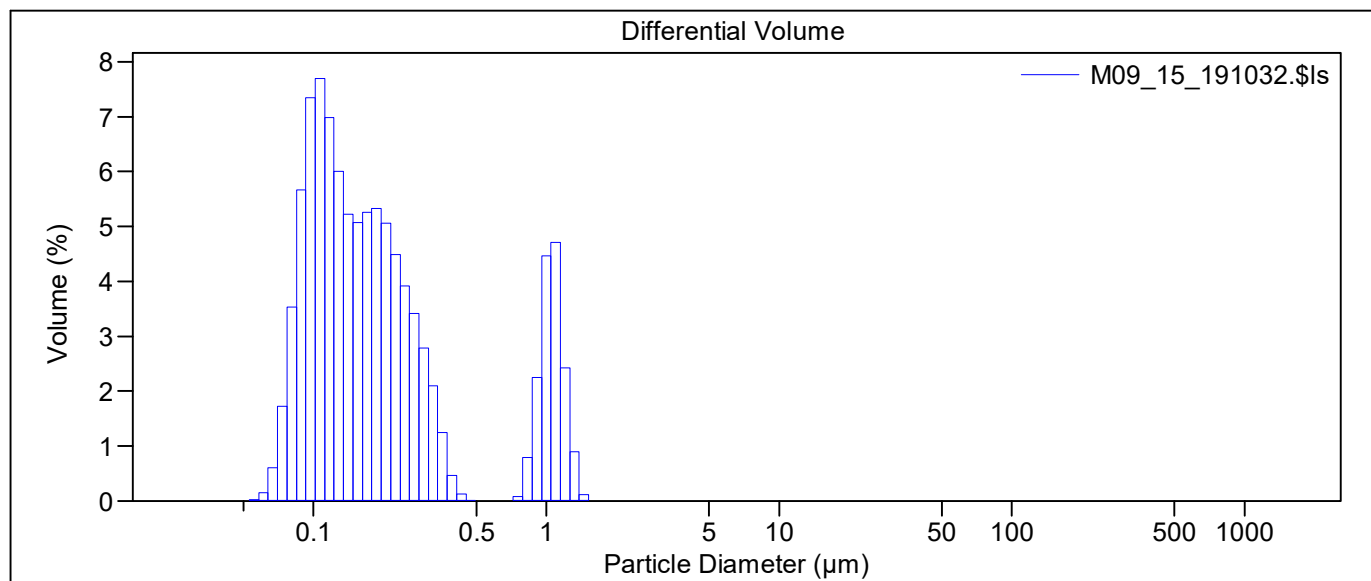
Beckman Coulter LS13320

File name:	D:\PP_PROFARB\POMIARY\M09\M09_15_191032.\$ls		
	M09_15_191032.\$ls		
File ID:	M09		
Operator:	PP		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS: Extended range		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.13%		
LS 13 320	Universal Liquid Module		
Start time:	19:08 10	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	3%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic)			M09_15_191032.\$ls	
Calculations from 0.017 µm to 2000 µm				
Volume:	100%		S.D.:	0.337 µm
Mean:	0.303 µm		Variance:	0.114 µm ²
Median:	0.162 µm		C.V.:	111%
Mean/Median ratio:	1.871		Skewness:	1.823 Right skewed
Mode:	0.106 µm		Kurtosis:	1.736 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.090 µm	0.109 µm	0.162 µm	0.265 µm	1.008 µm

Surface Area Statistics (Arithmetic)			M09_15_191032.\$ls	
Calculations from 0.017 µm to 2000 µm				
Surface Area:	100%		S.D.:	0.151 µm
Mean:	0.157 µm		Variance:	0.023 µm ²
Median:	0.116 µm		C.V.:	96.4%
Mean/Median ratio:	1.348		Skewness:	5.074 Right skewed
Mode:	0.097 µm		Kurtosis:	28.45 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.082 µm	0.094 µm	0.116 µm	0.167 µm	0.236 µm

Number Statistics (Arithmetic)			M09_15_191032.\$ls	
Calculations from 0.017 μm to 2000 μm				
Number:	100%		S.D.:	0.039 μm
Mean:	0.105 μm		Variance:	0.0015 μm ²
Median:	0.096 μm		C.V.:	37.0%
Mean/Median ratio:	1.095		Skewness:	5.632 Right skewed
Mode:	0.088 μm		Kurtosis:	99.05 Leptokurtic
<10%	<25%	<50%	<75%	<90%
0.073 μm	0.083 μm	0.096 μm	0.115 μm	0.147 μm



M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.017	0.018	0	0	0
2	0.019	0.020	0	0	0
3	0.021	0.022	0	0	0
4	0.023	0.025	0	0	0
5	0.026	0.028	0	0	0
6	0.029	0.031	0	0	0
7	0.032	0.034	0	0	0
8	0.036	0.038	0	0	0
9	0.040	0.042	0	0	0
10	0.044	0.046	0	0	0
11	0.048	0.050	0.0011	0.0033	0.016
12	0.053	0.055	0.022	0.061	0.25
13	0.058	0.061	0.15	0.38	1.29
14	0.064	0.067	0.61	1.43	4.04
15	0.070	0.073	1.72	3.68	8.62
16	0.077	0.080	3.53	6.89	13.4
17	0.084	0.088	5.67	10.1	16.2
18	0.093	0.097	7.35	11.9	15.9
19	0.102	0.106	7.70	11.4	12.6
20	0.112	0.117	6.99	9.39	8.65
21	0.122	0.128	6.01	7.35	5.62
22	0.134	0.141	5.23	5.83	3.70
23	0.148	0.155	5.07	5.15	2.71
24	0.162	0.170	5.26	4.86	2.12
25	0.178	0.186	5.33	4.49	1.63
26	0.195	0.205	5.06	3.89	1.17
27	0.214	0.225	4.49	3.14	0.78
28	0.235	0.247	3.92	2.50	0.52
29	0.258	0.271	3.42	1.98	0.34
30	0.284	0.297	2.79	1.48	0.21
31	0.311	0.326	2.10	1.01	0.12
32	0.342	0.358	1.24	0.54	0.053
33	0.375	0.393	0.47	0.19	0.015
34	0.412	0.431	0.13	0.047	0.0032
35	0.452	0.474	0.014	0.0048	0.00027
36	0.496	0.520	0	0	0
37	0.545	0.571	0	0	0
38	0.598	0.627	0	0	0
39	0.656	0.688	0	0	0
40	0.721	0.755	0.077	0.016	0.00035
41	0.791	0.829	0.79	0.15	0.0027
42	0.868	0.910	2.25	0.39	0.0059
43	0.953	0.999	4.47	0.70	0.0089
44	1.047	1.097	4.71	0.68	0.0071
45	1.149	1.204	2.43	0.32	0.0028
46	1.261	1.321	0.90	0.11	0.00077
47	1.385	1.451	0.11	0.012	0.000073
48	1.520	1.592	0	0	0
49	1.668	1.748	0	0	0
50	1.832	1.919	0	0	0
51	2.011	2.107	0	0	0
52	2.207	2.313	0	0	0
53	2.423	2.539	0	0	0
54	2.660	2.787	0	0	0
55	2.920	3.059	0	0	0
56	3.205	3.358	0	0	0
57	3.519	3.687	0	0	0
58	3.863	4.047	0	0	0
59	4.240	4.443	0	0	0
60	4.655	4.877	0	0	0
61	5.110	5.354	0	0	0
62	5.610	5.878	0	0	0
63	6.158	6.452	0	0	0
64	6.760	7.083	0	0	0
65	7.421	7.775	0	0	0

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M09.\$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	8.147	8.536	0	0	0
67	8.943	9.370	0	0	0
68	9.817	10.29	0	0	0
69	10.78	11.29	0	0	0
70	11.83	12.40	0	0	0
71	12.99	13.61	0	0	0
72	14.26	14.94	0	0	0
73	15.65	16.40	0	0	0
74	17.18	18.00	0	0	0
75	18.86	19.76	0	0	0
76	20.70	21.69	0	0	0
77	22.73	23.81	0	0	0
78	24.95	26.14	0	0	0
79	27.39	28.70	0	0	0
80	30.07	31.50	0	0	0
81	33.01	34.58	0	0	0
82	36.24	37.97	0	0	0
83	39.78	41.68	0	0	0
84	43.67	45.75	0	0	0
85	47.94	50.22	0	0	0
86	52.62	55.13	0	0	0
87	57.77	60.52	0	0	0
88	63.41	66.44	0	0	0
89	69.61	72.94	0	0	0
90	76.42	80.07	0	0	0
91	83.89	87.90	0	0	0
92	92.09	96.49	0	0	0
93	101.1	105.9	0	0	0
94	111.0	116.3	0	0	0
95	121.8	127.6	0	0	0
96	133.7	140.1	0	0	0
97	146.8	153.8	0	0	0
98	161.2	168.9	0	0	0
99	176.9	185.4	0	0	0
100	194.2	203.5	0	0	0
101	213.2	223.4	0	0	0
102	234.1	245.2	0	0	0
103	256.9	269.2	0	0	0
104	282.1	295.5	0	0	0
105	309.6	324.4	0	0	0
106	339.9	356.1	0	0	0
107	373.1	390.9	0	0	0
108	409.6	429.2	0	0	0
109	449.7	471.1	0	0	0
110	493.6	517.2	0	0	0
111	541.9	567.7	0	0	0
112	594.9	623.3	0	0	0
113	653.0	684.2	0	0	0
114	716.8	751.1	0	0	0
115	786.9	824.5	0	0	0
116	863.9	905.1	0	0	0
117	948.3	993.6	0	0	0
118	1041	1091	0	0	0
119	1143	1197	0	0	0
120	1255	1314	0	0	0
121	1377	1443	0	0	0
122	1512	1584	0	0	0
123	1660	1739	0	0	0
124	1822	1909	0	0	0
	2000				