Załącznik

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

Raporty z badań analizatorem LS 13 320

Spis treści

Próbka TiO_2 2
Próbka D1 79
Próbka D2 156
Próbka D3 234
Próbka D4 313
Próbka M1 391
Próbka M2 469
Próbka M3 549
Próbka M4 626
Próbka M5 705
Próbka M7 784
Próbka M8 863

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2.$av
	TiO2.$av
File ID:	TiO2
Operator:	KW
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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\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_11_212918.$ls D:\KW
\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_12_213105.$ls D:\KW
\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_13_213948.$ls D:\KW
\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_14_214135.$ls D:\KW
\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_15_214322.$ls

Volume Statistics (Arithmetic) TiO2.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	49.41 µm	S.D.:	84.11 µm
Median:	4.118 µm	Variance:	7074 µm^2
Mean/Median ratio:	12.00	C.V.:	170%
Mode:	2.787 µm	Skewness:	1.834 Right skewed
		Kurtosis:	2.191 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.647 µm	2.411 µm	4.118 µm	50.86 µm	204.4 µm

Number Statistics (Arithmetic) TiO2.$av

Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	1.467 µm	S.D.:	0.806 µm
Median:	1.268 µm	Variance:	0.649 µm^2
Mean/Median ratio:	1.156	C.V.:	54.9%
Mode:	0.999 µm	Skewness:	8.481 Right skewed
		Kurtosis:	1129 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.729 µm	0.931 µm	1.268 µm	1.797 µm	2.452 µm

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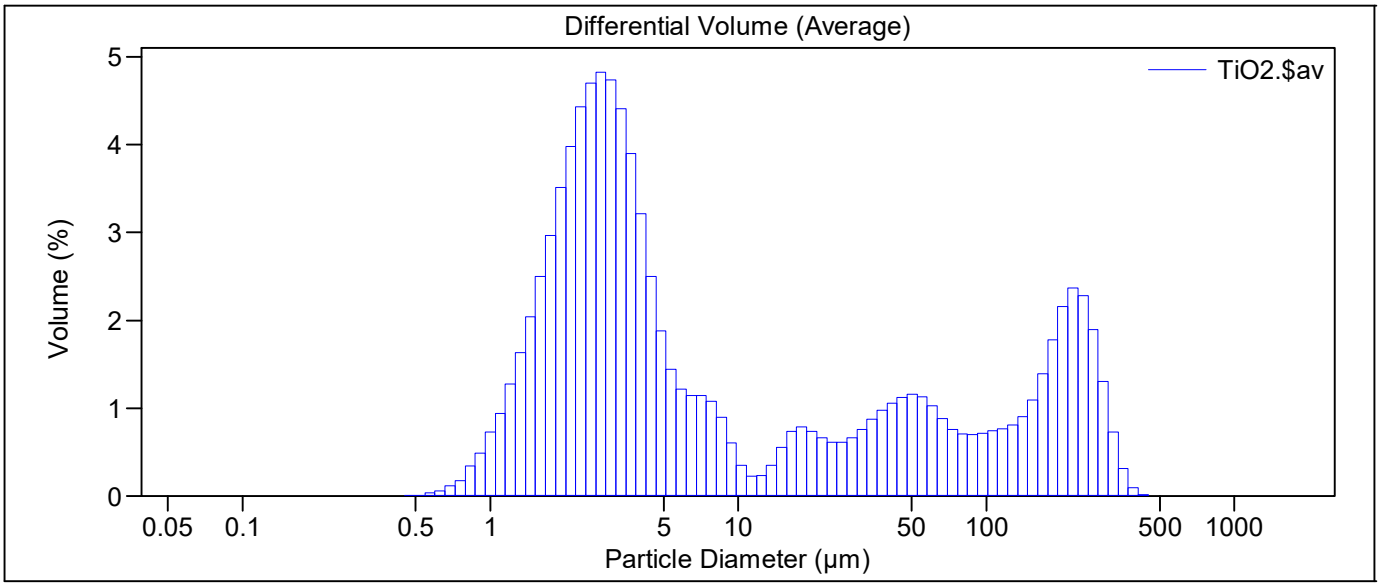

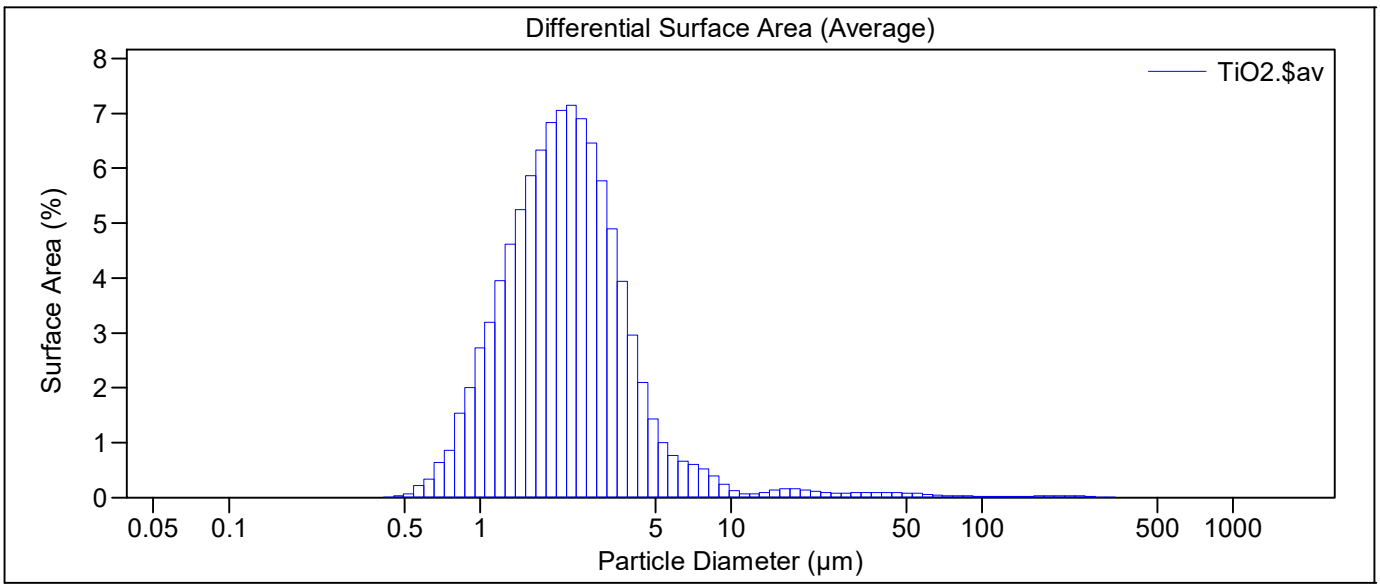

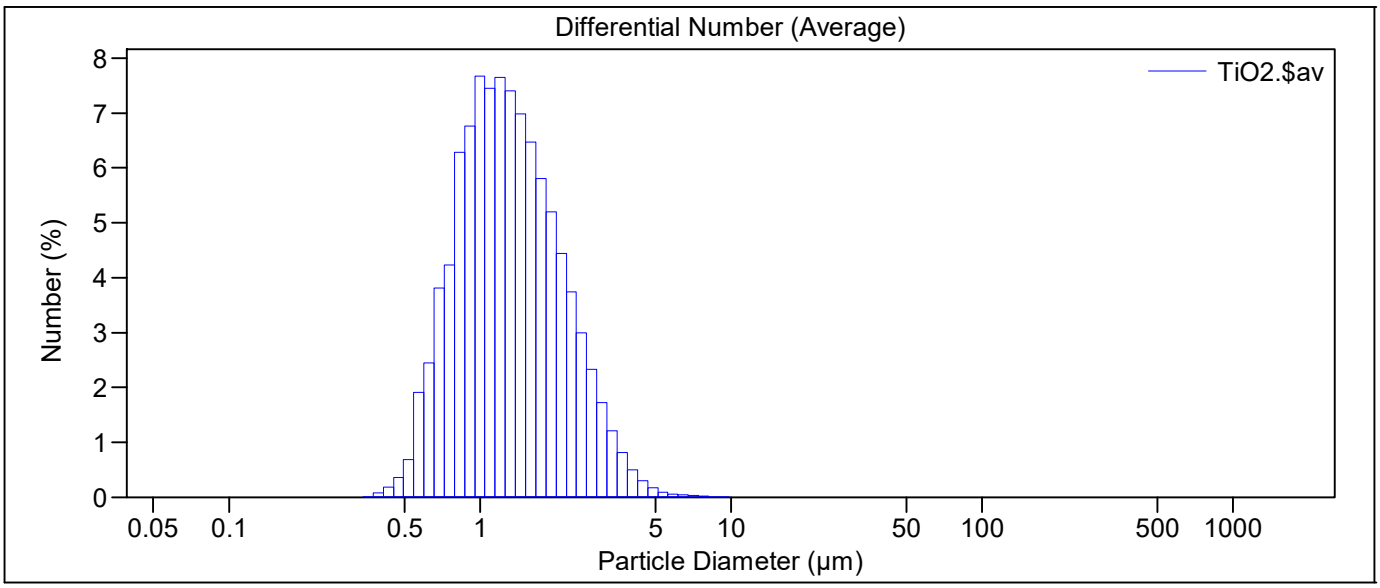

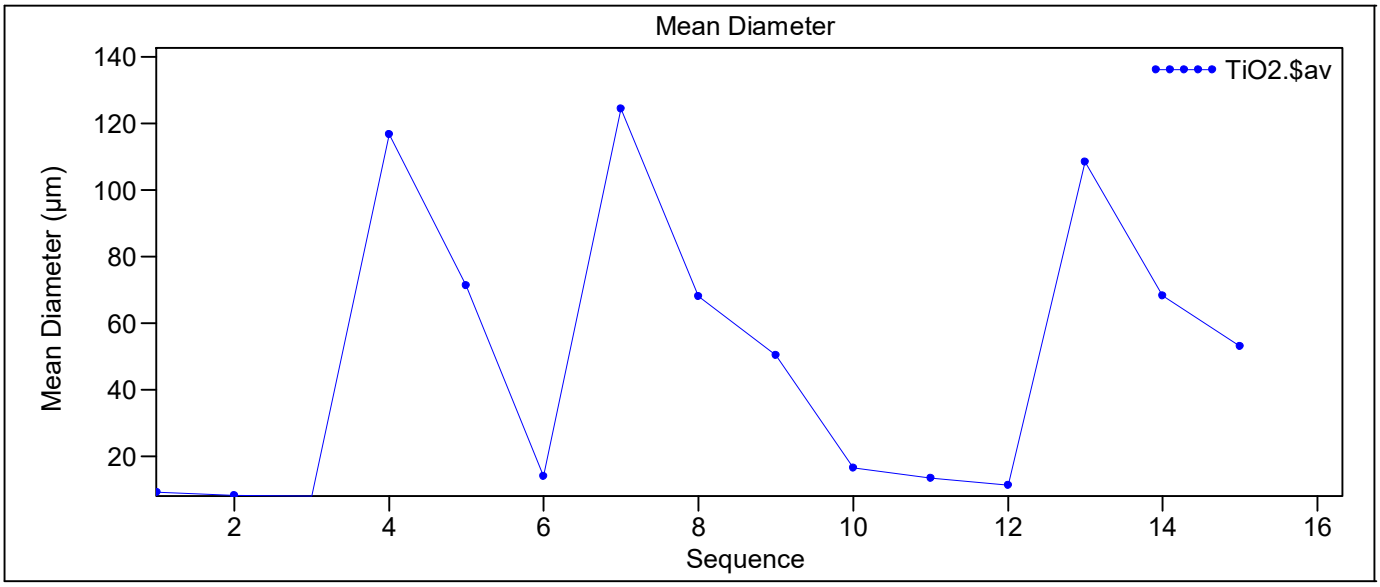

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.000047	0.00049	0.011
25	0.375	0.393	0.00048	0.0045	0.082
26	0.412	0.431	0.0014	0.012	0.19
27	0.452	0.474	0.0037	0.029	0.37
28	0.496	0.520	0.0093	0.067	0.69
29	0.545	0.571	0.034	0.22	1.91
30	0.598	0.627	0.058	0.34	2.45
31	0.656	0.688	0.12	0.64	3.82
32	0.721	0.755	0.17	0.86	4.24
33	0.791	0.829	0.34	1.54	6.29
34	0.868	0.910	0.49	2.00	6.77
35	0.953	0.999	0.73	2.73	7.67
36	1.047	1.097	0.94	3.20	7.45
37	1.149	1.204	1.28	3.96	7.65
38	1.261	1.321	1.64	4.62	7.40
39	1.385	1.451	2.04	5.25	6.99
40	1.520	1.592	2.50	5.86	6.48
41	1.668	1.748	2.97	6.33	5.80

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	3.52	6.83	5.20
43	2.011	2.107	3.98	7.05	4.45
44	2.207	2.313	4.43	7.15	3.74
45	2.423	2.539	4.70	6.91	3.00
46	2.660	2.787	4.83	6.46	2.33
47	2.920	3.059	4.74	5.78	1.73
48	3.205	3.358	4.41	4.90	1.22
49	3.519	3.687	3.90	3.95	0.81
50	3.863	4.047	3.21	2.96	0.51
51	4.240	4.443	2.50	2.10	0.30
52	4.655	4.877	1.88	1.44	0.17
53	5.110	5.354	1.44	1.01	0.098
54	5.610	5.878	1.22	0.77	0.063
55	6.158	6.452	1.14	0.66	0.044
56	6.760	7.083	1.14	0.60	0.034
57	7.421	7.775	1.08	0.52	0.024
58	8.147	8.536	0.90	0.39	0.015
59	8.943	9.370	0.61	0.24	0.0077
60	9.817	10.29	0.35	0.13	0.0033
61	10.78	11.29	0.23	0.076	0.0017
62	11.83	12.40	0.23	0.070	0.0013
63	12.99	13.61	0.35	0.097	0.0015
64	14.26	14.94	0.56	0.14	0.0017
65	15.65	16.40	0.73	0.17	0.0017
66	17.18	18.00	0.79	0.16	0.0014
67	18.86	19.76	0.74	0.14	0.0010
68	20.70	21.69	0.66	0.11	0.00068
69	22.73	23.81	0.61	0.096	0.00047
70	24.95	26.14	0.61	0.087	0.00036
71	27.39	28.70	0.67	0.087	0.00029
72	30.07	31.50	0.76	0.090	0.00025
73	33.01	34.58	0.87	0.094	0.00022
74	36.24	37.97	0.98	0.096	0.00019
75	39.78	41.68	1.06	0.095	0.00015
76	43.67	45.75	1.12	0.091	0.00012
77	47.94	50.22	1.16	0.086	0.000095
78	52.62	55.13	1.13	0.077	0.000071
79	57.77	60.52	1.03	0.064	0.000049
80	63.41	66.44	0.88	0.049	0.000031
81	69.61	72.94	0.76	0.039	0.000020
82	76.42	80.07	0.70	0.033	0.000014
83	83.89	87.90	0.70	0.030	0.000011
84	92.09	96.49	0.72	0.028	0.000008
85	101.1	105.9	0.74	0.026	0.000007
86	111.0	116.3	0.76	0.025	0.000005
87	121.8	127.6	0.81	0.024	0.000004
88	133.7	140.1	0.91	0.024	0.000003
89	146.8	153.8	1.09	0.027	0.000003
90	161.2	168.9	1.39	0.031	0.000003
91	176.9	185.4	1.78	0.036	0.000003
92	194.2	203.5	2.15	0.039	0.000003
93	213.2	223.4	2.37	0.040	0.000002
94	234.1	245.2	2.28	0.035	0.000002
95	256.9	269.2	1.89	0.026	0.000001
96	282.1	295.5	1.30	0.016	0.000001
97	309.6	324.4	0.73	0.0084	2.23E-7
98	339.9	356.1	0.31	0.0032	7.17E-8
99	373.1	390.9	0.096	0.00092	1.68E-8
100	409.6	429.2	0.017	0.00014	2.2E-9
101	449.7	471.1	0.0012	0.000010	1.25E-10
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

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File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_01_204422.$ls TiO2_01_204422.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	16		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.65%		
LS 13 320	Universal Liquid Module		
Start time:	20:42 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	13%	PIDS Obscur:	60%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_01_204422.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	9.206 µm	S.D.:	15.39 µm
Median:	2.725 µm	Variance:	236.8 μm^2
Mean/Median ratio:	3.378	C.V.:	167%
Mode:	2.313 µm	Skewness:	2.342 Right skewed
		Kurtosis:	4.362 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.336 µm	1.852 µm	2.725 µm	5.339 µm	34.47 µm

Number Statistics (Arithmetic) TiO2_01_204422.$ls

Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	1.393 µm	S.D.:	0.672 µm
Median:	1.225 µm	Variance:	0.452 μm^2
Mean/Median ratio:	1.137	C.V.:	48.2%
Mode:	0.999 µm	Skewness:	5.115 Right skewed
		Kurtosis:	187.6 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.782 µm	0.937 µm	1.225 µm	1.663 µm	2.220 µm

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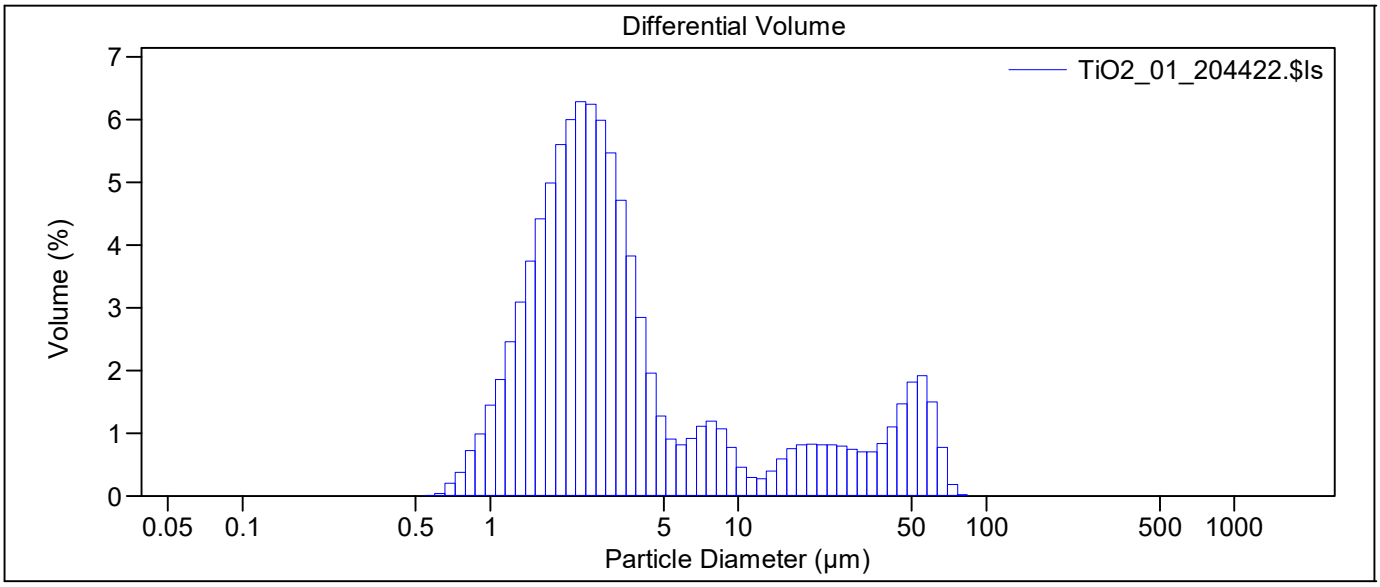

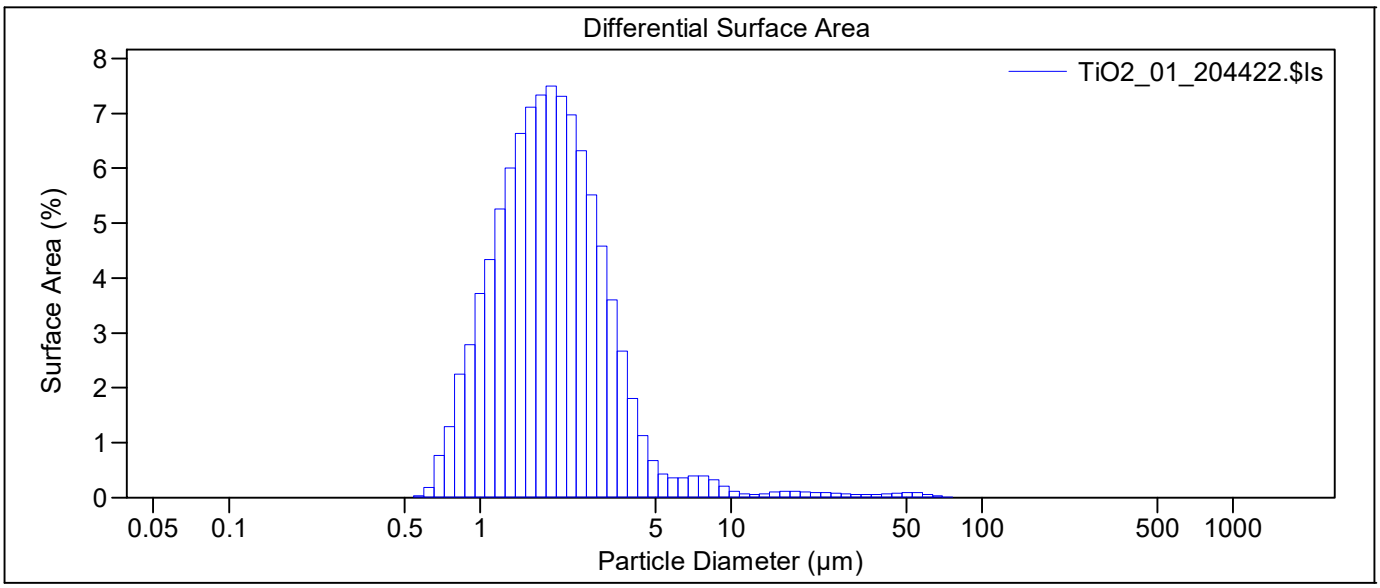

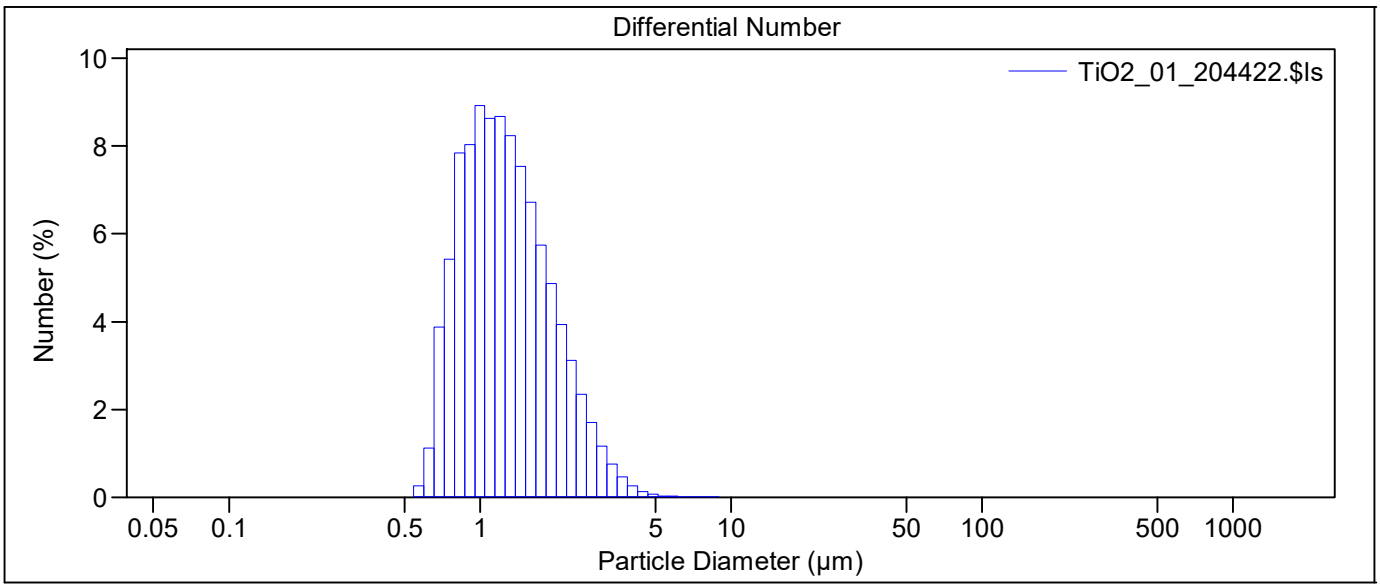

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0.0078	0.035	0.26
30	0.598	0.627	0.045	0.18	1.12
31	0.656	0.688	0.21	0.77	3.87
32	0.721	0.755	0.38	1.29	5.42
33	0.791	0.829	0.73	2.25	7.84
34	0.868	0.910	0.99	2.78	8.04
35	0.953	0.999	1.45	3.72	8.92
36	1.047	1.097	1.85	4.34	8.63
37	1.149	1.204	2.46	5.26	8.68
38	1.261	1.321	3.09	6.01	8.23
39	1.385	1.451	3.75	6.64	7.54
40	1.520	1.592	4.41	7.12	6.71
41	1.668	1.748	4.99	7.33	5.74
42	1.832	1.919	5.60	7.50	4.87
43	2.011	2.107	6.00	7.31	3.94
44	2.207	2.313	6.28	6.98	3.12
45	2.423	2.539	6.25	6.32	2.35

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TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	5.99	5.52	1.70
47	2.920	3.059	5.47	4.59	1.17
48	3.205	3.358	4.71	3.60	0.76
49	3.519	3.687	3.83	2.67	0.47
50	3.863	4.047	2.85	1.81	0.26
51	4.240	4.443	1.96	1.13	0.14
52	4.655	4.877	1.28	0.67	0.068
53	5.110	5.354	0.91	0.43	0.036
54	5.610	5.878	0.82	0.36	0.025
55	6.158	6.452	0.92	0.36	0.021
56	6.760	7.083	1.11	0.40	0.019
57	7.421	7.775	1.20	0.40	0.016
58	8.147	8.536	1.07	0.32	0.011
59	8.943	9.370	0.77	0.21	0.0058
60	9.817	10.29	0.46	0.12	0.0026
61	10.78	11.29	0.30	0.068	0.0013
62	11.83	12.40	0.28	0.058	0.00090
63	12.99	13.61	0.40	0.075	0.00097
64	14.26	14.94	0.59	0.10	0.0011
65	15.65	16.40	0.75	0.12	0.0010
66	17.18	18.00	0.82	0.12	0.00086
67	18.86	19.76	0.82	0.11	0.00066
68	20.70	21.69	0.81	0.096	0.00049
69	22.73	23.81	0.81	0.087	0.00037
70	24.95	26.14	0.79	0.078	0.00027
71	27.39	28.70	0.75	0.067	0.00019
72	30.07	31.50	0.71	0.058	0.00014
73	33.01	34.58	0.71	0.053	0.00011
74	36.24	37.97	0.83	0.056	0.000093
75	39.78	41.68	1.10	0.068	0.000093
76	43.67	45.75	1.47	0.082	0.000094
77	47.94	50.22	1.81	0.093	0.000088
78	52.62	55.13	1.92	0.090	0.000070
79	57.77	60.52	1.49	0.063	0.000041
80	63.41	66.44	0.78	0.030	0.000016
81	69.61	72.94	0.19	0.0066	0.000003
82	76.42	80.07	0.020	0.00063	2.33E-7
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

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TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_02_204608.$ls TiO2_02_204608.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	17		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.61%		
LS 13 320	Universal Liquid Module		
Start time:	20:44 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	15%	PIDS Obscur:	68%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_02_204608.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	8.226 µm	S.D.:	14.06 µm
Median:	2.916 µm	Variance:	197.8 µm^2
Mean/Median ratio:	2.821	C.V.:	171%
Mode:	2.787 µm	Skewness:	2.757 Right skewed
		Kurtosis:	6.725 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.475 µm	2.031 µm	2.916 µm	4.922 µm	24.33 µm

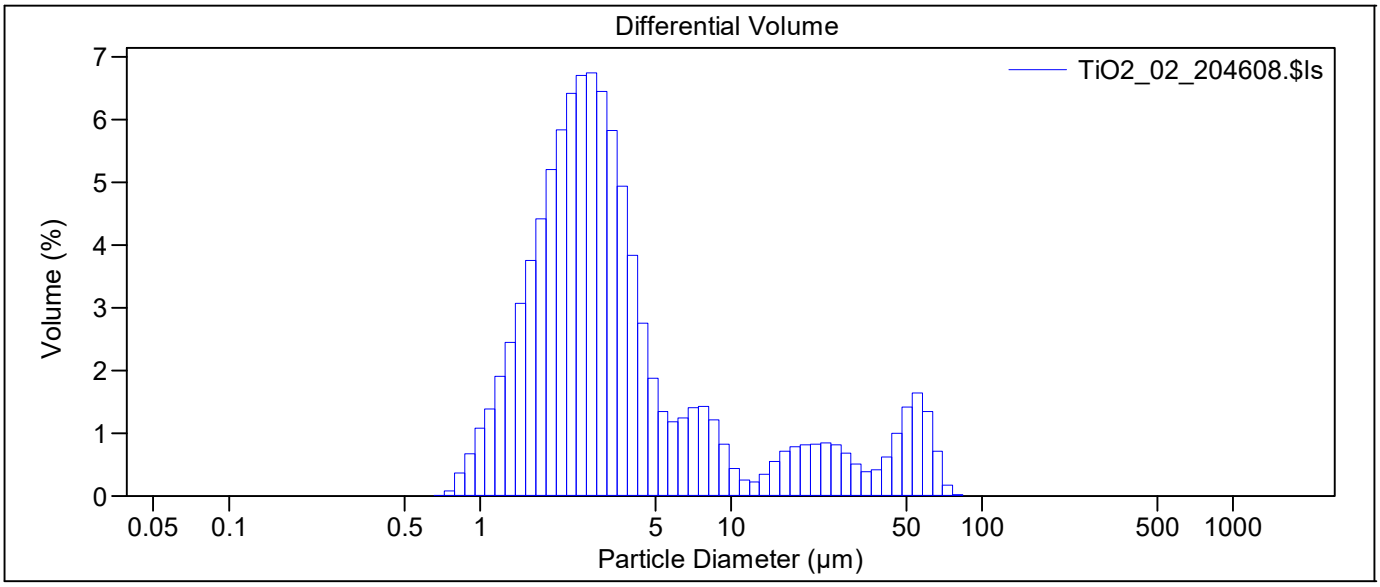
Number Statistics (Arithmetic) TiO2_02_204608.$ls

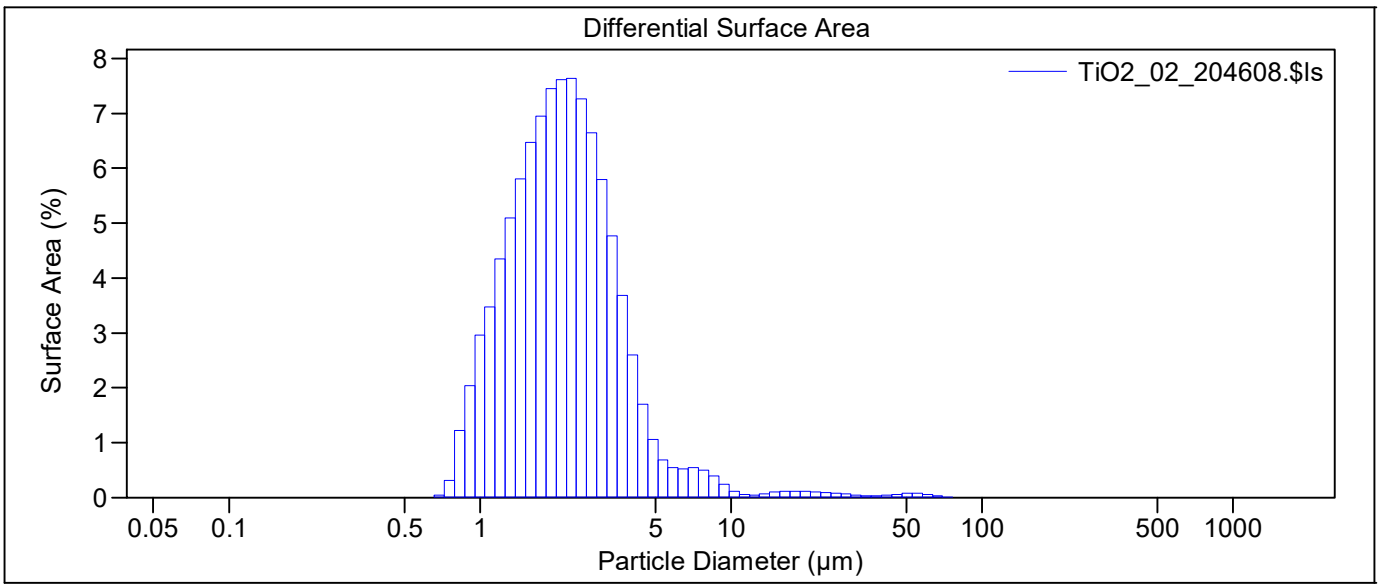
Calculations from 0.040 µm to 2000 µm

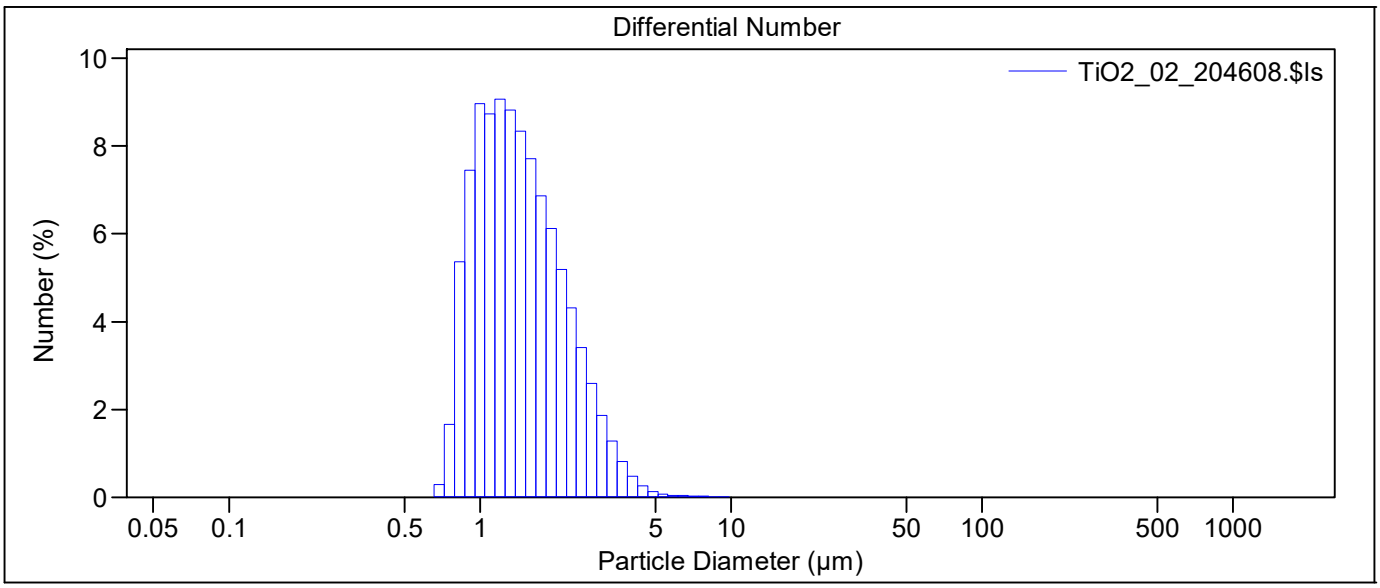
Number:	100%		
Mean:	1.573 µm	S.D.:	0.740 µm
Median:	1.379 µm	Variance:	0.548 µm^2
Mean/Median ratio:	1.140	C.V.:	47.1%
Mode:	1.204 µm	Skewness:	4.511 Right skewed
		Kurtosis:	138.7 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.899 µm	1.061 µm	1.379 µm	1.882 µm	2.499 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0	0	0
30	0.598	0.627	0	0	0
31	0.656	0.688	0.011	0.046	0.29
32	0.721	0.755	0.086	0.31	1.67
33	0.791	0.829	0.37	1.22	5.37
34	0.868	0.910	0.68	2.04	7.45
35	0.953	0.999	1.08	2.96	8.97
36	1.047	1.097	1.39	3.47	8.73
37	1.149	1.204	1.90	4.35	9.07
38	1.261	1.321	2.45	5.10	8.82
39	1.385	1.451	3.07	5.81	8.34
40	1.520	1.592	3.75	6.47	7.71
41	1.668	1.748	4.42	6.95	6.87
42	1.832	1.919	5.20	7.45	6.12
43	2.011	2.107	5.84	7.62	5.19
44	2.207	2.313	6.42	7.64	4.31
45	2.423	2.539	6.71	7.26	3.40

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	6.74	6.65	2.59
47	2.920	3.059	6.45	5.80	1.87
48	3.205	3.358	5.82	4.77	1.28
49	3.519	3.687	4.94	3.68	0.82
50	3.863	4.047	3.83	2.60	0.48
51	4.240	4.443	2.75	1.70	0.26
52	4.655	4.877	1.87	1.06	0.13
53	5.110	5.354	1.35	0.69	0.073
54	5.610	5.878	1.18	0.55	0.048
55	6.158	6.452	1.24	0.53	0.038
56	6.760	7.083	1.41	0.55	0.033
57	7.421	7.775	1.43	0.51	0.025
58	8.147	8.536	1.22	0.39	0.016
59	8.943	9.370	0.82	0.24	0.0083
60	9.817	10.29	0.44	0.12	0.0034
61	10.78	11.29	0.25	0.062	0.0015
62	11.83	12.40	0.23	0.051	0.00100
63	12.99	13.61	0.35	0.071	0.0012
64	14.26	14.94	0.55	0.10	0.0014
65	15.65	16.40	0.71	0.12	0.0013
66	17.18	18.00	0.79	0.12	0.0011
67	18.86	19.76	0.81	0.11	0.00087
68	20.70	21.69	0.83	0.11	0.00067
69	22.73	23.81	0.85	0.098	0.00052
70	24.95	26.14	0.81	0.086	0.00038
71	27.39	28.70	0.68	0.065	0.00024
72	30.07	31.50	0.51	0.045	0.00014
73	33.01	34.58	0.39	0.031	0.000079
74	36.24	37.97	0.42	0.031	0.000064
75	39.78	41.68	0.62	0.041	0.000071
76	43.67	45.75	1.00	0.060	0.000087
77	47.94	50.22	1.42	0.078	0.000093
78	52.62	55.13	1.64	0.082	0.000081
79	57.77	60.52	1.34	0.061	0.000050
80	63.41	66.44	0.72	0.030	0.000020
81	69.61	72.94	0.17	0.0066	0.000004
82	76.42	80.07	0.019	0.00064	3.01E-7
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

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File ID:	TiO2		
Operator:	KW		
Run number:	18		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.66%		
LS 13 320	Universal Liquid Module		
Start time:	20:46 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	15%	PIDS Obscur:	69%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_03_204757.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	8.039 µm	S.D.:	13.75 µm
Median:	3.095 µm	Variance:	189.2 µm^2
Mean/Median ratio:	2.598	C.V.:	171%
Mode:	2.787 µm	Skewness:	2.989 Right skewed
		Kurtosis:	8.331 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.584 µm	2.169 µm	3.095 µm	5.064 µm	21.23 µm

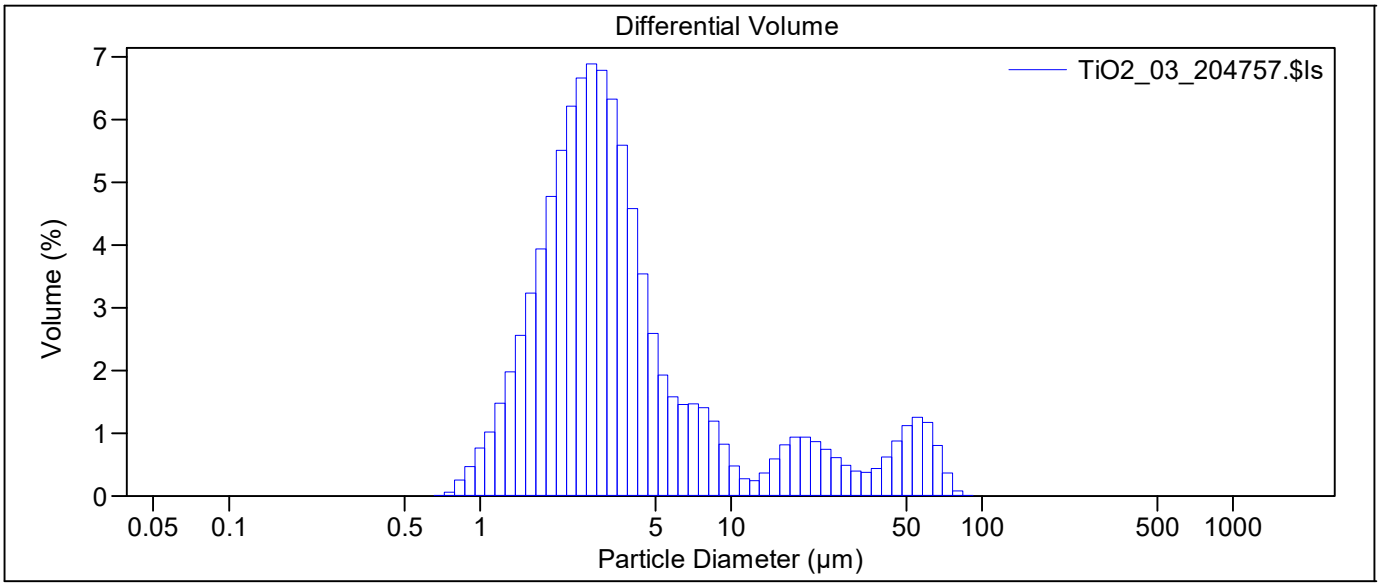
Number Statistics (Arithmetic) TiO2_03_204757.$ls

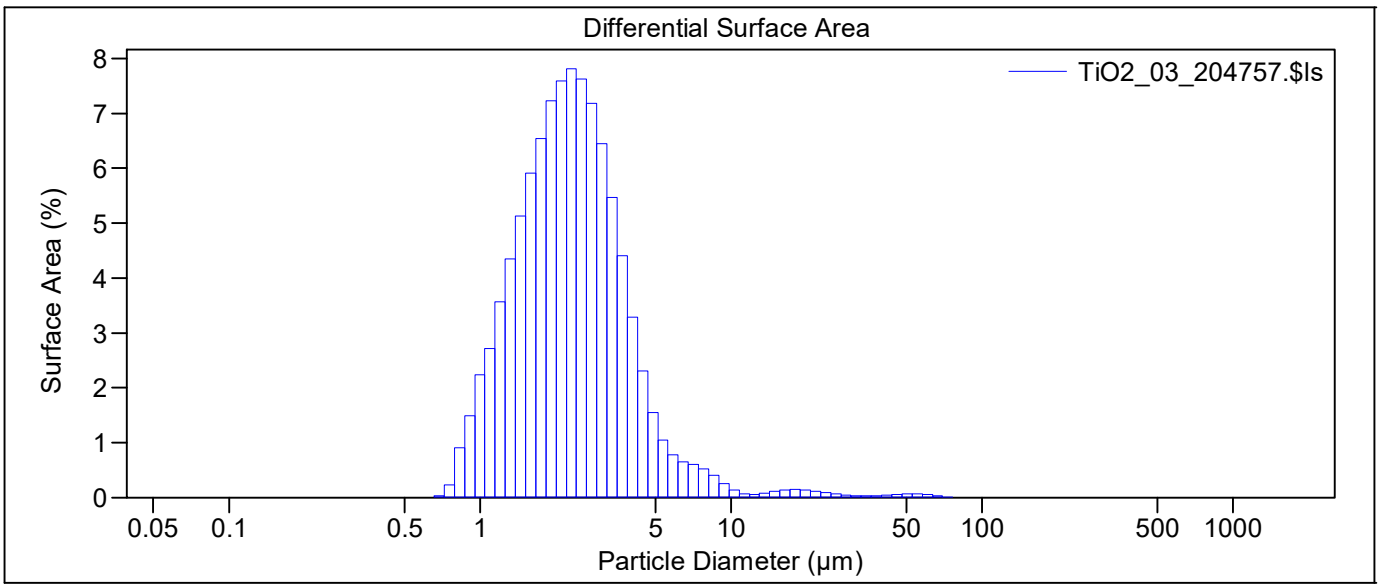
Calculations from 0.040 µm to 2000 µm

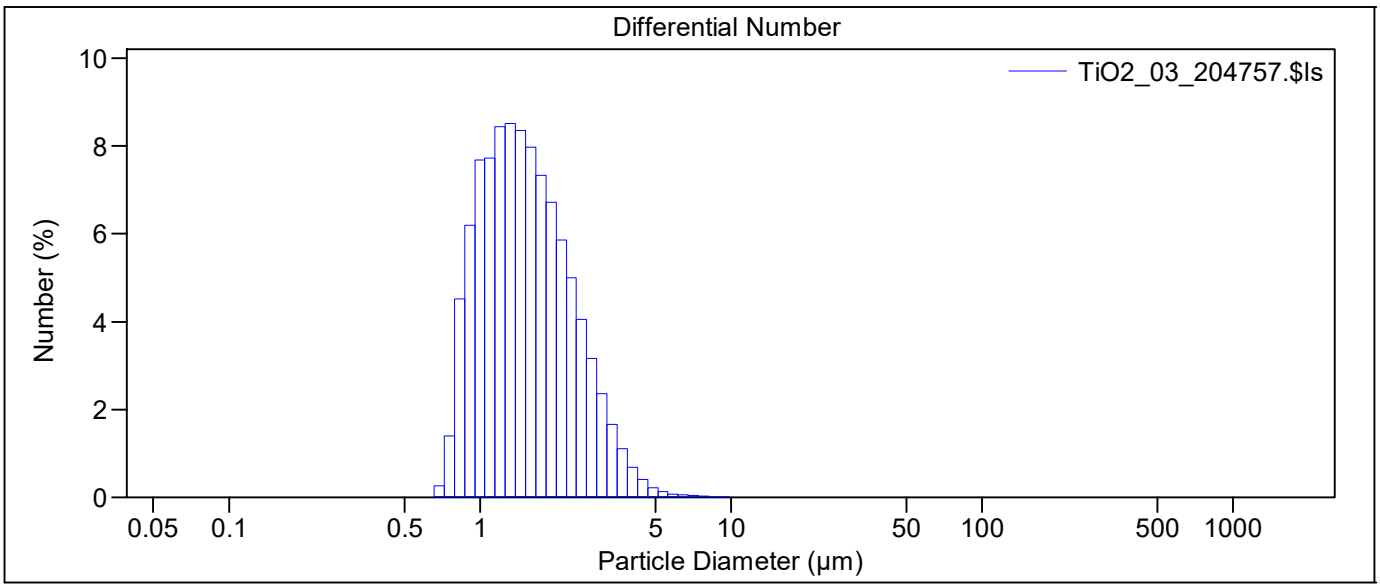
Number:	100%		
Mean:	1.668 µm	S.D.:	0.800 µm
Median:	1.470 µm	Variance:	0.641 µm^2
Mean/Median ratio:	1.135	C.V.:	48.0%
Mode:	1.321 µm	Skewness:	4.093 Right skewed
		Kurtosis:	112.7 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.921 µm	1.112 µm	1.470 µm	2.008 µm	2.658 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0	0	0
30	0.598	0.627	0	0	0
31	0.656	0.688	0.0085	0.036	0.26
32	0.721	0.755	0.061	0.23	1.40
33	0.791	0.829	0.26	0.91	4.52
34	0.868	0.910	0.47	1.50	6.19
35	0.953	0.999	0.77	2.24	7.68
36	1.047	1.097	1.03	2.72	7.73
37	1.149	1.204	1.48	3.57	8.43
38	1.261	1.321	1.98	4.35	8.52
39	1.385	1.451	2.56	5.14	8.35
40	1.520	1.592	3.24	5.91	7.97
41	1.668	1.748	3.94	6.55	7.33
42	1.832	1.919	4.77	7.23	6.72
43	2.011	2.107	5.51	7.60	5.86
44	2.207	2.313	6.22	7.81	5.00
45	2.423	2.539	6.67	7.63	4.05

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	6.89	7.18	3.16
47	2.920	3.059	6.78	6.44	2.36
48	3.205	3.358	6.33	5.47	1.66
49	3.519	3.687	5.59	4.40	1.11
50	3.863	4.047	4.59	3.29	0.69
51	4.240	4.443	3.54	2.31	0.40
52	4.655	4.877	2.60	1.55	0.22
53	5.110	5.354	1.93	1.05	0.13
54	5.610	5.878	1.58	0.78	0.077
55	6.158	6.452	1.46	0.66	0.054
56	6.760	7.083	1.47	0.60	0.041
57	7.421	7.775	1.41	0.53	0.030
58	8.147	8.536	1.19	0.41	0.019
59	8.943	9.370	0.83	0.26	0.010
60	9.817	10.29	0.48	0.13	0.0043
61	10.78	11.29	0.28	0.071	0.0019
62	11.83	12.40	0.24	0.057	0.0013
63	12.99	13.61	0.36	0.077	0.0014
64	14.26	14.94	0.59	0.11	0.0018
65	15.65	16.40	0.82	0.15	0.0018
66	17.18	18.00	0.94	0.15	0.0016
67	18.86	19.76	0.94	0.14	0.0012
68	20.70	21.69	0.86	0.12	0.00084
69	22.73	23.81	0.74	0.091	0.00055
70	24.95	26.14	0.61	0.068	0.00034
71	27.39	28.70	0.49	0.049	0.00020
72	30.07	31.50	0.40	0.037	0.00013
73	33.01	34.58	0.38	0.032	0.000090
74	36.24	37.97	0.44	0.034	0.000080
75	39.78	41.68	0.62	0.043	0.000085
76	43.67	45.75	0.87	0.056	0.000091
77	47.94	50.22	1.13	0.065	0.000088
78	52.62	55.13	1.25	0.066	0.000074
79	57.77	60.52	1.17	0.056	0.000052
80	63.41	66.44	0.80	0.035	0.000027
81	69.61	72.94	0.37	0.015	0.000009
82	76.42	80.07	0.081	0.0029	0.000002
83	83.89	87.90	0.0074	0.00025	1.09E-7
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_04_205702.$ls TiO2_04_205702.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.88%		
LS 13 320	Universal Liquid Module		
Start time:	20:55 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	17%	PIDS Obscur:	67%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_04_205702.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	116.7 µm	S.D.:	118.6 µm
Median:	69.82 µm	Variance:	14077 µm^2
Mean/Median ratio:	1.671	C.V.:	102%
Mode:	245.2 µm	Skewness:	0.413 Right skewed
		Kurtosis:	-1.439 Platykurtic

<10%	<25%	<50%	<75%	<90%
1.703 µm	2.761 µm	69.82 µm	235.1 µm	282.4 µm

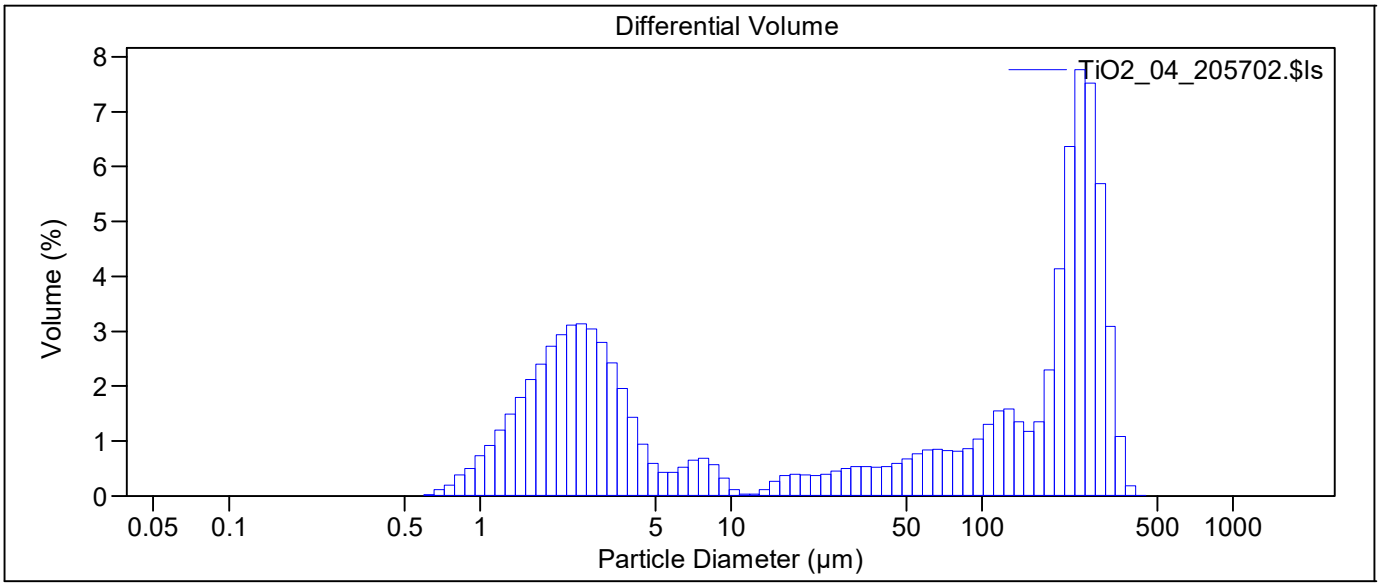
Number Statistics (Arithmetic) TiO2_04_205702.$ls

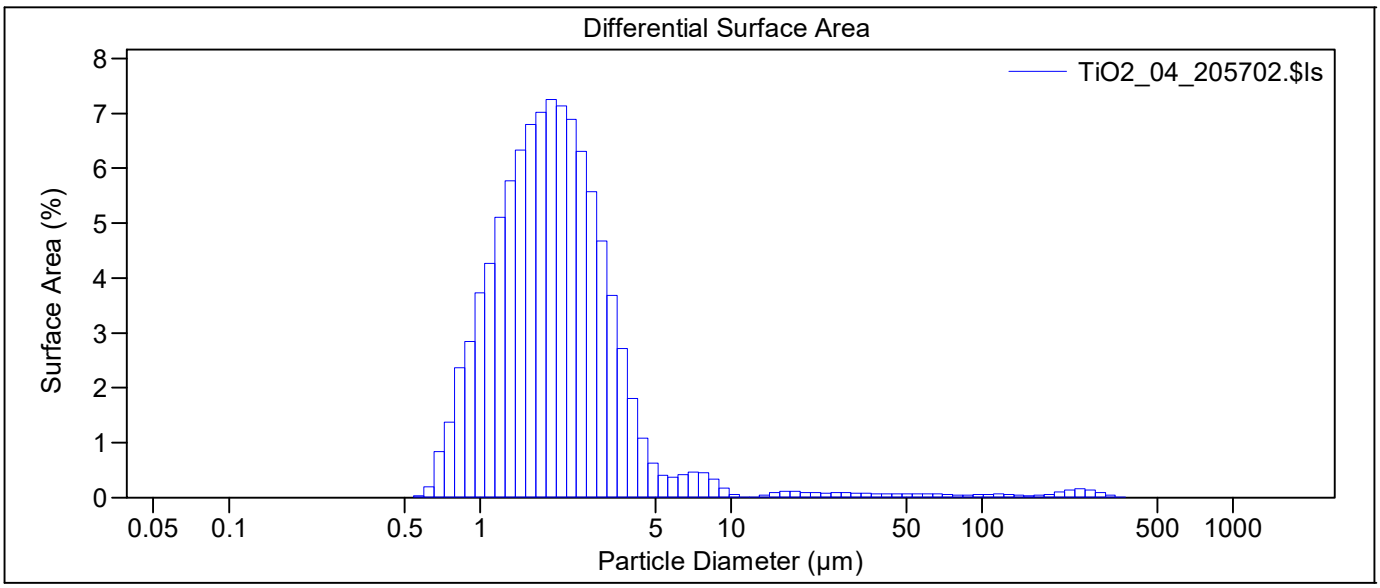
Calculations from 0.040 µm to 2000 µm

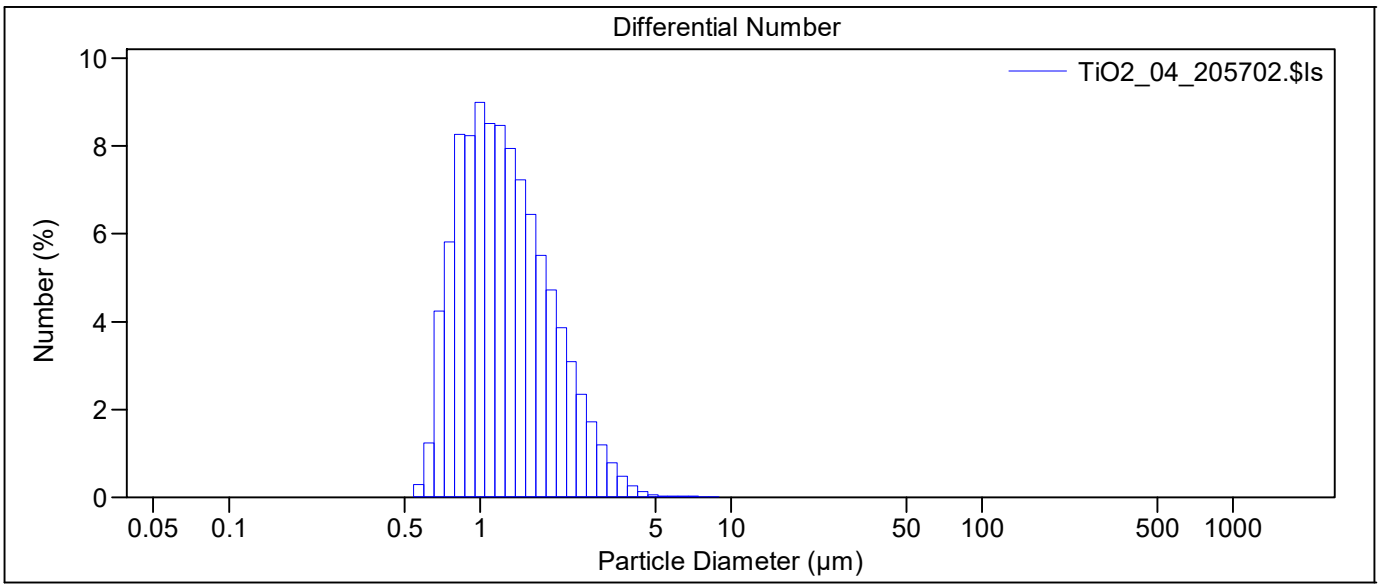
Number:	100%		
Mean:	1.383 µm	S.D.:	0.699 µm
Median:	1.207 µm	Variance:	0.489 µm^2
Mean/Median ratio:	1.145	C.V.:	50.6%
Mode:	0.999 µm	Skewness:	22.19 Right skewed
		Kurtosis:	5761 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.772 µm	0.922 µm	1.207 µm	1.653 µm	2.224 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0.0044	0.039	0.29
30	0.598	0.627	0.025	0.20	1.23
31	0.656	0.688	0.11	0.84	4.24
32	0.721	0.755	0.20	1.38	5.81
33	0.791	0.829	0.38	2.37	8.27
34	0.868	0.910	0.51	2.84	8.23
35	0.953	0.999	0.73	3.74	8.99
36	1.047	1.097	0.92	4.27	8.52
37	1.149	1.204	1.20	5.11	8.46
38	1.261	1.321	1.49	5.78	7.94
39	1.385	1.451	1.80	6.34	7.23
40	1.520	1.592	2.12	6.80	6.44
41	1.668	1.748	2.40	7.02	5.52
42	1.832	1.919	2.72	7.25	4.73
43	2.011	2.107	2.94	7.14	3.86
44	2.207	2.313	3.12	6.89	3.09
45	2.423	2.539	3.14	6.31	2.35

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	3.04	5.57	1.72
47	2.920	3.059	2.80	4.68	1.20
48	3.205	3.358	2.43	3.69	0.79
49	3.519	3.687	1.96	2.72	0.48
50	3.863	4.047	1.43	1.81	0.26
51	4.240	4.443	0.95	1.09	0.13
52	4.655	4.877	0.60	0.63	0.063
53	5.110	5.354	0.43	0.41	0.034
54	5.610	5.878	0.43	0.37	0.026
55	6.158	6.452	0.52	0.41	0.024
56	6.760	7.083	0.65	0.47	0.023
57	7.421	7.775	0.69	0.45	0.018
58	8.147	8.536	0.57	0.34	0.011
59	8.943	9.370	0.33	0.18	0.0049
60	9.817	10.29	0.12	0.060	0.0014
61	10.78	11.29	0.037	0.017	0.00032
62	11.83	12.40	0.039	0.016	0.00025
63	12.99	13.61	0.12	0.046	0.00059
64	14.26	14.94	0.27	0.091	0.00098
65	15.65	16.40	0.38	0.12	0.0011
66	17.18	18.00	0.40	0.11	0.00084
67	18.86	19.76	0.38	0.099	0.00061
68	20.70	21.69	0.37	0.088	0.00045
69	22.73	23.81	0.40	0.085	0.00036
70	24.95	26.14	0.45	0.088	0.00031
71	27.39	28.70	0.50	0.090	0.00026
72	30.07	31.50	0.53	0.086	0.00021
73	33.01	34.58	0.53	0.079	0.00016
74	36.24	37.97	0.52	0.071	0.00012
75	39.78	41.68	0.54	0.066	0.000091
76	43.67	45.75	0.59	0.066	0.000076
77	47.94	50.22	0.68	0.069	0.000066
78	52.62	55.13	0.77	0.072	0.000057
79	57.77	60.52	0.84	0.071	0.000046
80	63.41	66.44	0.85	0.065	0.000036
81	69.61	72.94	0.83	0.058	0.000026
82	76.42	80.07	0.81	0.052	0.000019
83	83.89	87.90	0.87	0.050	0.000016
84	92.09	96.49	1.04	0.055	0.000014
85	101.1	105.9	1.30	0.063	0.000013
86	111.0	116.3	1.55	0.068	0.000012
87	121.8	127.6	1.58	0.063	0.000009
88	133.7	140.1	1.36	0.049	0.000006
89	146.8	153.8	1.17	0.039	0.000004
90	161.2	168.9	1.35	0.041	0.000003

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	2.30	0.063	0.000004
92	194.2	203.5	4.14	0.10	0.000006
93	213.2	223.4	6.36	0.15	0.000007
94	234.1	245.2	7.77	0.16	0.000006
95	256.9	269.2	7.53	0.14	0.000005
96	282.1	295.5	5.69	0.098	0.000003
97	309.6	324.4	3.09	0.049	0.000001
98	339.9	356.1	1.08	0.016	2.94E-7
99	373.1	390.9	0.19	0.0025	3.87E-8
100	409.6	429.2	0.012	0.00014	1.85E-9
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_05_205849.$ls TiO2_05_205849.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.29%		
LS 13 320	Universal Liquid Module		
Start time:	20:57 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	21%	PIDS Obscur:	80%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_05_205849.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	71.33 µm	S.D.:	98.73 µm
Median:	4.905 µm	Variance:	9748 µm^2
Mean/Median ratio:	14.54	C.V.:	138%
Mode:	2.787 µm	Skewness:	1.099 Right skewed
		Kurtosis:	-0.353 Platykurtic

<10%	<25%	<50%	<75%	<90%
1.709 µm	2.533 µm	4.905 µm	147.7 µm	240.4 µm

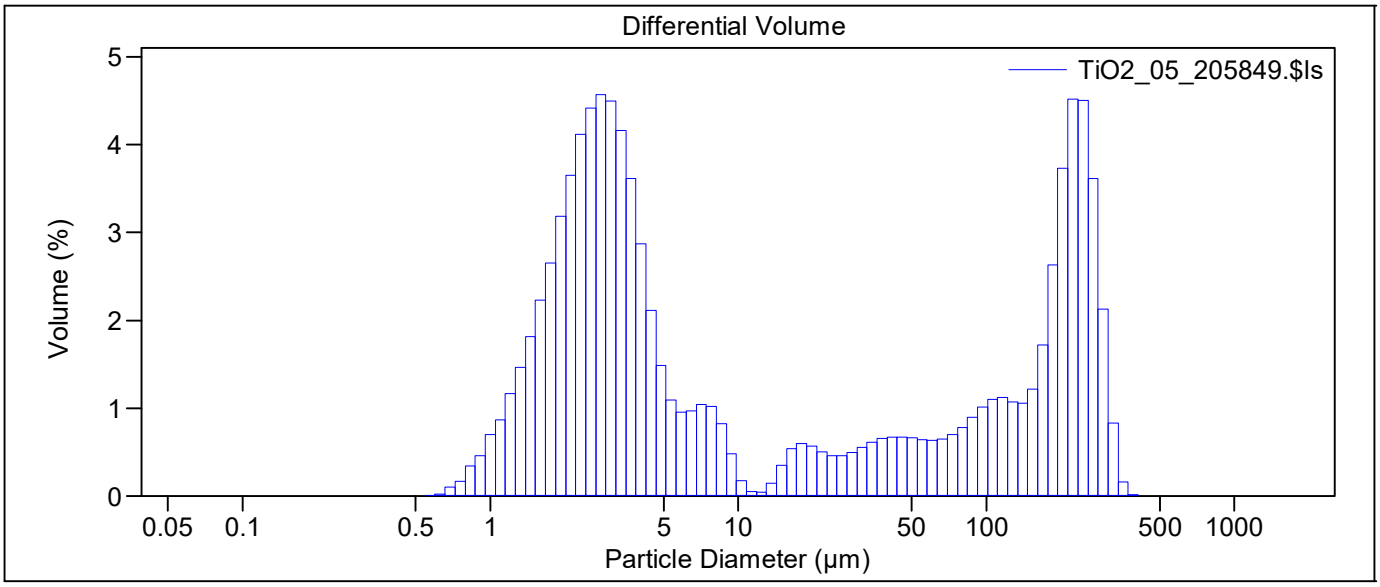
Number Statistics (Arithmetic) TiO2_05_205849.$ls

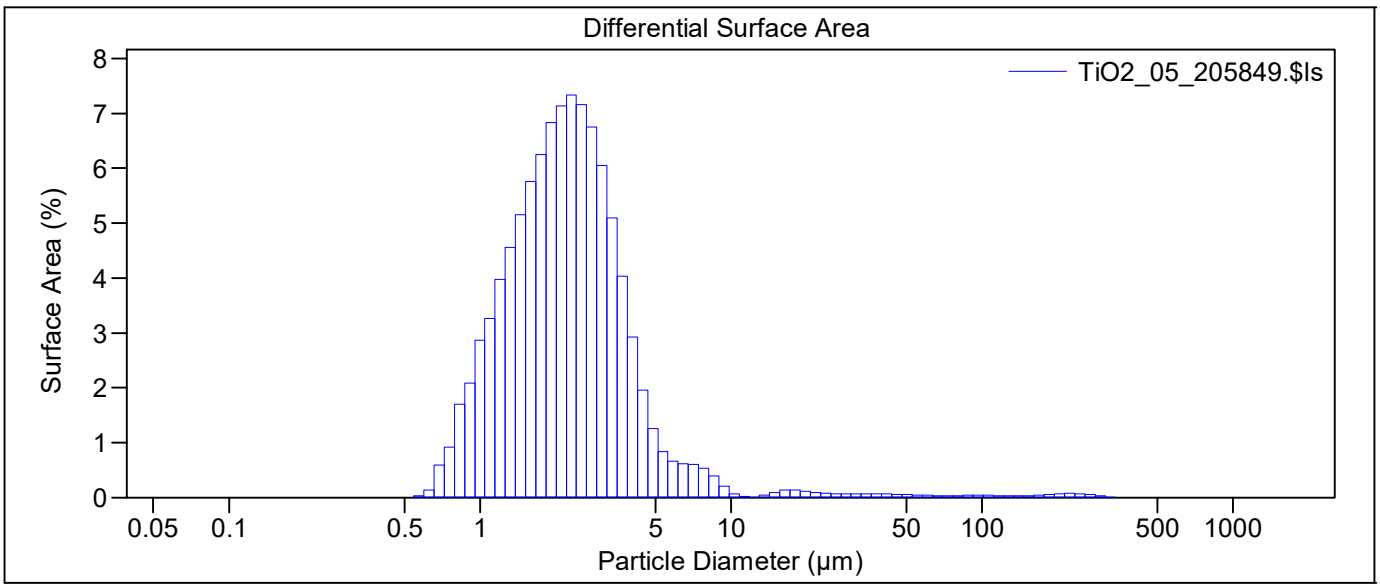
Calculations from 0.040 µm to 2000 µm

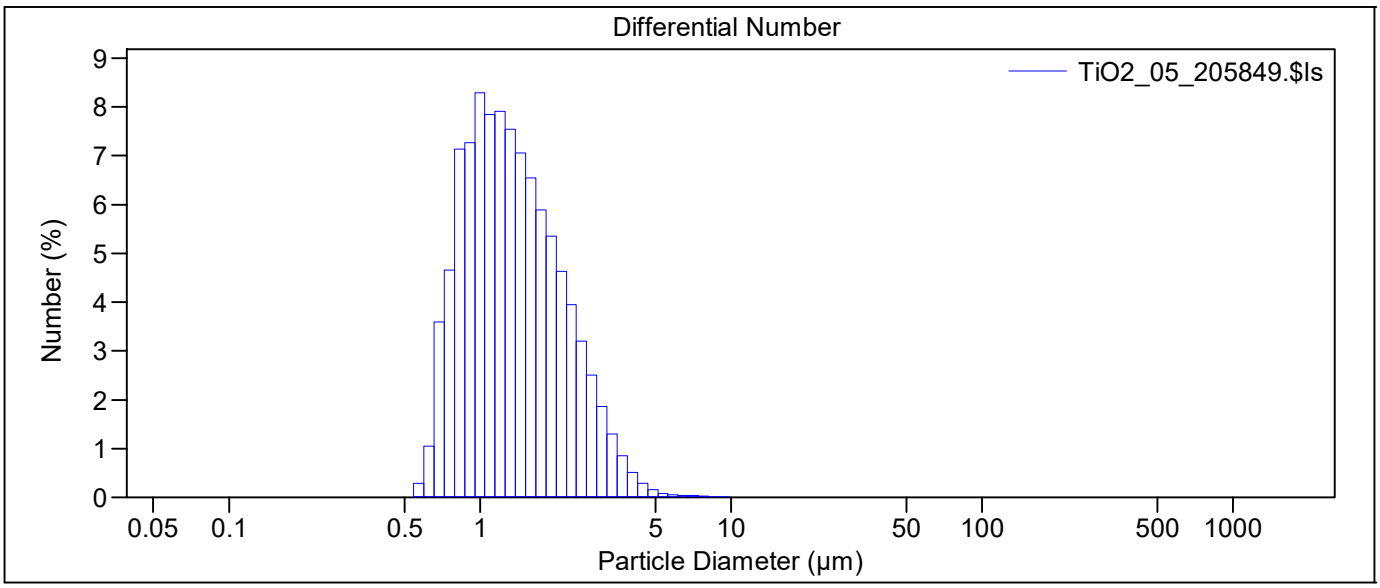
Number:	100%		
Mean:	1.502 µm	S.D.:	0.791 µm
Median:	1.293 µm	Variance:	0.626 µm^2
Mean/Median ratio:	1.162	C.V.:	52.7%
Mode:	0.999 µm	Skewness:	11.42 Right skewed
		Kurtosis:	2035 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.795 µm	0.965 µm	1.293 µm	1.829 µm	2.494 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0.0046	0.033	0.29
30	0.598	0.627	0.022	0.14	1.05
31	0.656	0.688	0.098	0.59	3.59
32	0.721	0.755	0.17	0.92	4.66
33	0.791	0.829	0.34	1.70	7.14
34	0.868	0.910	0.46	2.09	7.27
35	0.953	0.999	0.70	2.87	8.29
36	1.047	1.097	0.87	3.27	7.84
37	1.149	1.204	1.16	3.98	7.92
38	1.261	1.321	1.47	4.57	7.54
39	1.385	1.451	1.81	5.15	7.06
40	1.520	1.592	2.23	5.76	6.55
41	1.668	1.748	2.65	6.25	5.90
42	1.832	1.919	3.19	6.84	5.35
43	2.011	2.107	3.65	7.13	4.63
44	2.207	2.313	4.12	7.33	3.95
45	2.423	2.539	4.42	7.16	3.20

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	4.57	6.75	2.50
47	2.920	3.059	4.49	6.05	1.86
48	3.205	3.358	4.16	5.10	1.30
49	3.519	3.687	3.61	4.04	0.86
50	3.863	4.047	2.87	2.92	0.51
51	4.240	4.443	2.12	1.96	0.29
52	4.655	4.877	1.48	1.25	0.15
53	5.110	5.354	1.09	0.84	0.085
54	5.610	5.878	0.95	0.67	0.056
55	6.158	6.452	0.97	0.62	0.043
56	6.760	7.083	1.04	0.61	0.035
57	7.421	7.775	1.02	0.54	0.026
58	8.147	8.536	0.82	0.40	0.016
59	8.943	9.370	0.48	0.21	0.0069
60	9.817	10.29	0.18	0.071	0.0019
61	10.78	11.29	0.051	0.019	0.00042
62	11.83	12.40	0.047	0.016	0.00029
63	12.99	13.61	0.15	0.045	0.00069
64	14.26	14.94	0.35	0.097	0.0013
65	15.65	16.40	0.54	0.14	0.0014
66	17.18	18.00	0.60	0.14	0.0012
67	18.86	19.76	0.57	0.12	0.00087
68	20.70	21.69	0.51	0.096	0.00059
69	22.73	23.81	0.46	0.080	0.00041
70	24.95	26.14	0.46	0.073	0.00031
71	27.39	28.70	0.50	0.071	0.00025
72	30.07	31.50	0.56	0.073	0.00021
73	33.01	34.58	0.61	0.073	0.00018
74	36.24	37.97	0.65	0.071	0.00014
75	39.78	41.68	0.67	0.066	0.00011
76	43.67	45.75	0.67	0.061	0.000083
77	47.94	50.22	0.66	0.054	0.000062
78	52.62	55.13	0.64	0.048	0.000045
79	57.77	60.52	0.63	0.043	0.000034
80	63.41	66.44	0.65	0.040	0.000026
81	69.61	72.94	0.70	0.039	0.000021
82	76.42	80.07	0.78	0.040	0.000018
83	83.89	87.90	0.89	0.042	0.000016
84	92.09	96.49	1.01	0.043	0.000013
85	101.1	105.9	1.10	0.043	0.000011
86	111.0	116.3	1.12	0.040	0.000008
87	121.8	127.6	1.07	0.035	0.000006
88	133.7	140.1	1.05	0.031	0.000005
89	146.8	153.8	1.22	0.033	0.000004
90	161.2	168.9	1.72	0.042	0.000004

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	2.63	0.059	0.000005
92	194.2	203.5	3.73	0.076	0.000005
93	213.2	223.4	4.52	0.083	0.000005
94	234.1	245.2	4.51	0.076	0.000004
95	256.9	269.2	3.62	0.055	0.000002
96	282.1	295.5	2.13	0.030	0.000001
97	309.6	324.4	0.83	0.011	2.89E-7
98	339.9	356.1	0.16	0.0018	4.2E-8
99	373.1	390.9	0.012	0.00013	2.45E-9
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_06_210038.$ls TiO2_06_210038.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.56%		
LS 13 320	Universal Liquid Module		
Start time:	20:58 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	22%	PIDS Obscur:	82%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_06_210038.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	13.99 µm	S.D.:	25.74 µm
Median:	3.423 µm	Variance:	662.4 µm^2
Mean/Median ratio:	4.086	C.V.:	184%
Mode:	3.059 µm	Skewness:	2.585 Right skewed
		Kurtosis:	5.883 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.698 µm	2.343 µm	3.423 µm	6.935 µm	48.94 µm

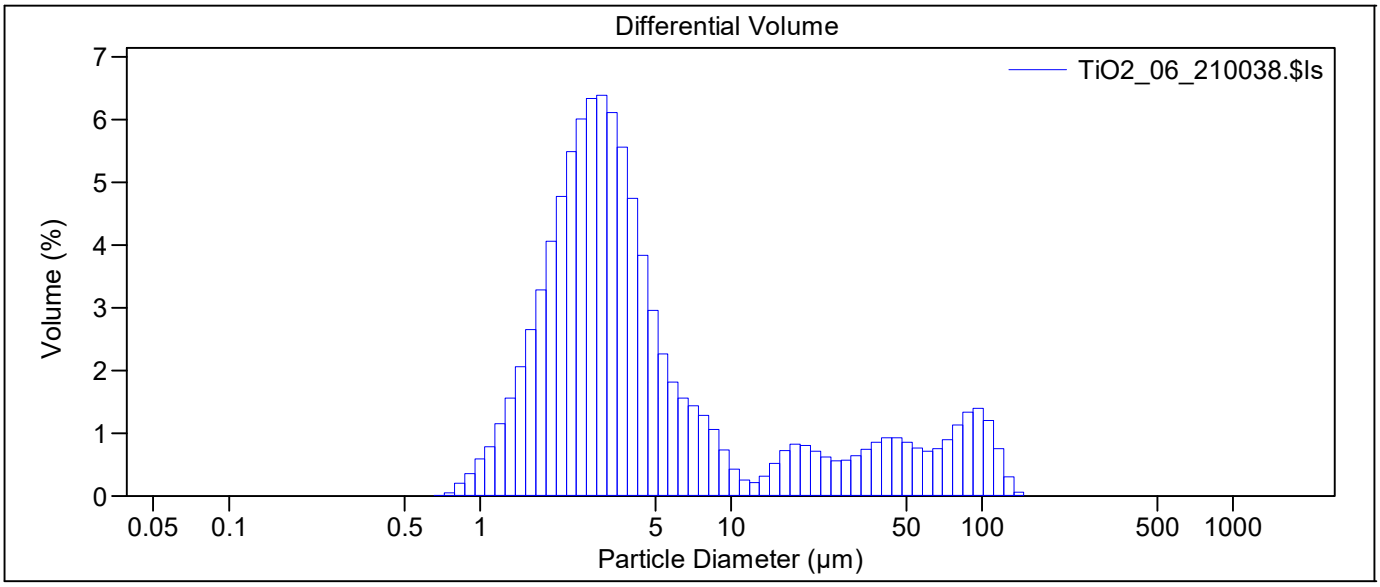
Number Statistics (Arithmetic) TiO2_06_210038.$ls

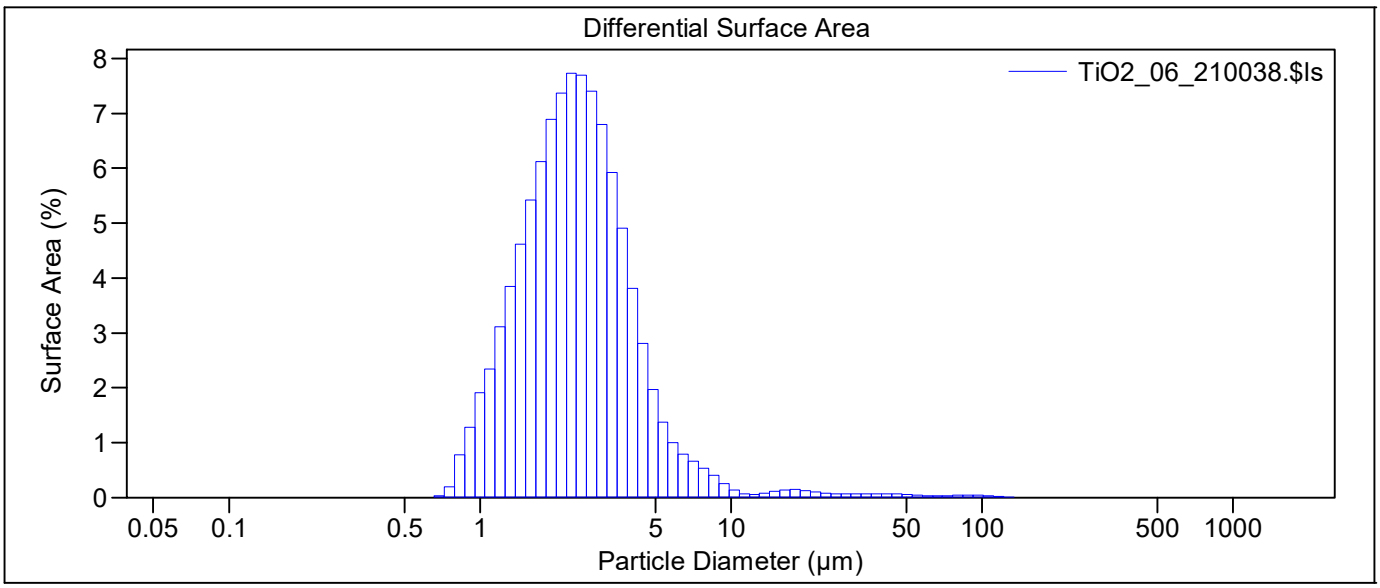
Calculations from 0.040 µm to 2000 µm

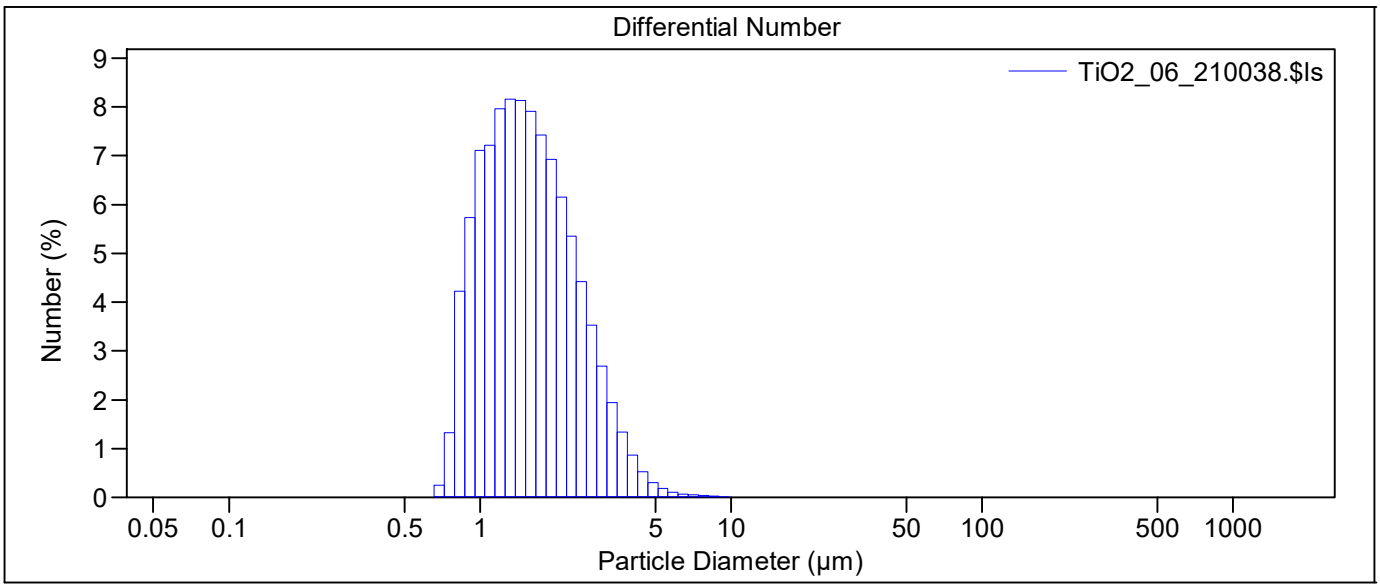
Number:	100%		
Mean:	1.726 µm	S.D.:	0.851 µm
Median:	1.518 µm	Variance:	0.724 µm^2
Mean/Median ratio:	1.137	C.V.:	49.3%
Mode:	1.321 µm	Skewness:	5.124 Right skewed
		Kurtosis:	235.2 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.931 µm	1.137 µm	1.518 µm	2.094 µm	2.784 µm

Beckman Coulter LS13320







TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0	0	0
30	0.598	0.627	0	0	0
31	0.656	0.688	0.0067	0.032	0.25
32	0.721	0.755	0.047	0.20	1.32
33	0.791	0.829	0.20	0.78	4.22
34	0.868	0.910	0.36	1.28	5.73
35	0.953	0.999	0.59	1.92	7.12
36	1.047	1.097	0.79	2.34	7.22
37	1.149	1.204	1.15	3.12	7.97
38	1.261	1.321	1.56	3.85	8.16
39	1.385	1.451	2.06	4.62	8.13
40	1.520	1.592	2.65	5.42	7.91
41	1.668	1.748	3.29	6.12	7.42
42	1.832	1.919	4.06	6.89	6.93
43	2.011	2.107	4.77	7.37	6.16
44	2.207	2.313	5.49	7.73	5.35
45	2.423	2.539	6.01	7.70	4.43
46	2.660	2.787	6.34	7.40	3.53
47	2.920	3.059	6.39	6.79	2.69
48	3.205	3.358	6.11	5.92	1.95
49	3.519	3.687	5.56	4.91	1.34
50	3.863	4.047	4.75	3.82	0.86
51	4.240	4.443	3.84	2.81	0.53
52	4.655	4.877	2.96	1.97	0.31
53	5.110	5.354	2.26	1.38	0.18
54	5.610	5.878	1.82	1.01	0.11
55	6.158	6.452	1.56	0.79	0.070
56	6.760	7.083	1.44	0.66	0.049
57	7.421	7.775	1.29	0.54	0.033
58	8.147	8.536	1.06	0.40	0.021
59	8.943	9.370	0.74	0.26	0.011
60	9.817	10.29	0.43	0.14	0.0047
61	10.78	11.29	0.25	0.072	0.0021
62	11.83	12.40	0.22	0.057	0.0014
63	12.99	13.61	0.32	0.076	0.0015
64	14.26	14.94	0.52	0.11	0.0019
65	15.65	16.40	0.73	0.14	0.0020

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	17.18	18.00	0.83	0.15	0.0017
67	18.86	19.76	0.81	0.13	0.0013
68	20.70	21.69	0.72	0.11	0.00085
69	22.73	23.81	0.62	0.084	0.00055
70	24.95	26.14	0.56	0.070	0.00038
71	27.39	28.70	0.57	0.065	0.00029
72	30.07	31.50	0.64	0.066	0.00025
73	33.01	34.58	0.75	0.071	0.00022
74	36.24	37.97	0.86	0.074	0.00019
75	39.78	41.68	0.93	0.073	0.00015
76	43.67	45.75	0.93	0.066	0.00012
77	47.94	50.22	0.86	0.056	0.000082
78	52.62	55.13	0.77	0.045	0.000055
79	57.77	60.52	0.72	0.038	0.000039
80	63.41	66.44	0.75	0.037	0.000031
81	69.61	72.94	0.90	0.040	0.000028
82	76.42	80.07	1.13	0.046	0.000026
83	83.89	87.90	1.34	0.050	0.000024
84	92.09	96.49	1.40	0.047	0.000019
85	101.1	105.9	1.20	0.037	0.000012
86	111.0	116.3	0.75	0.021	0.000006
87	121.8	127.6	0.31	0.0079	0.000002
88	133.7	140.1	0.061	0.0014	2.68E-7
89	146.8	153.8	0.0047	0.000100	1.56E-8
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_07_211121.$ls TiO2_07_211121.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.28%		
LS 13 320	Universal Liquid Module		
Start time:	21:09 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	18%	PIDS Obscur:	67%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_07_211121.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	124.4 µm	S.D.:	126.2 µm
Median:	87.82 µm	Variance:	15938 µm^2
Mean/Median ratio:	1.416	C.V.:	101%
Mode:	295.5 µm	Skewness:	0.492 Right skewed
		Kurtosis:	-1.245 Platykurtic

<10%	<25%	<50%	<75%	<90%
1.687 µm	2.871 µm	87.82 µm	244.9 µm	308.5 µm

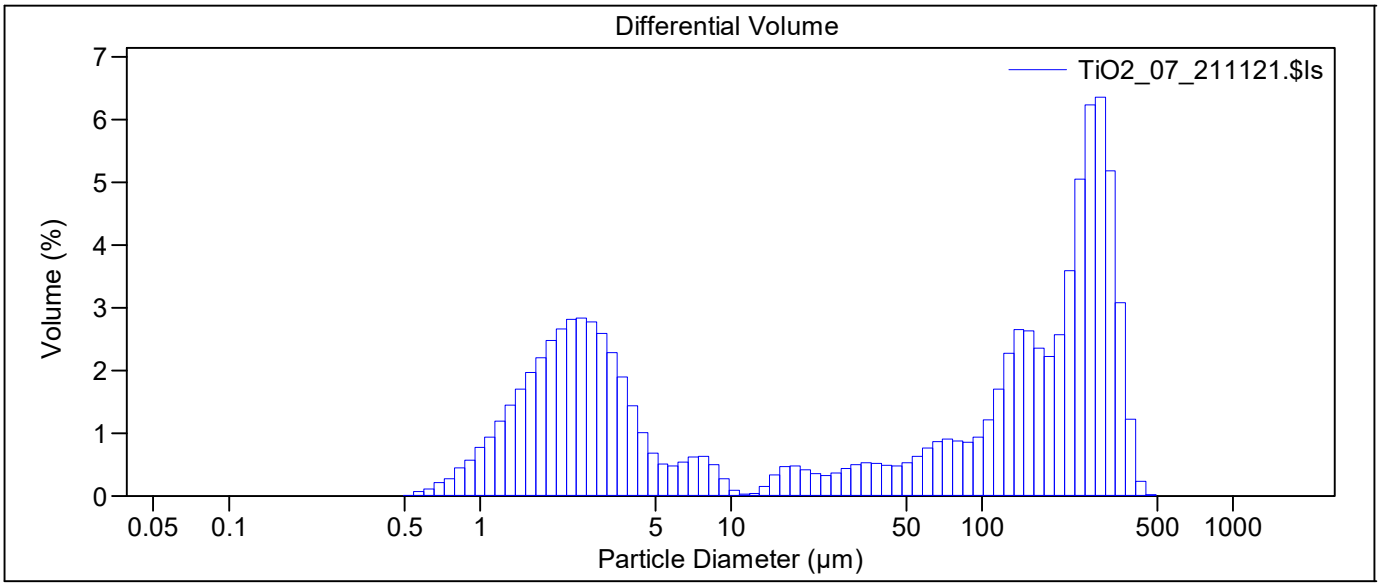
Number Statistics (Arithmetic) TiO2_07_211121.$ls

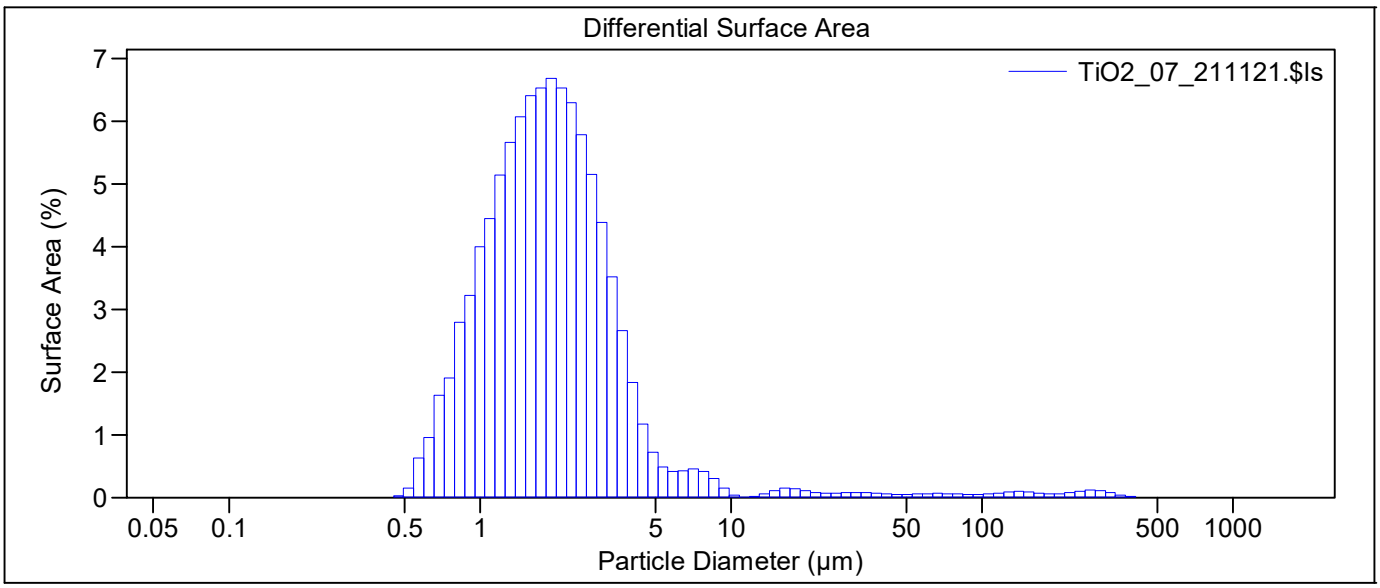
Calculations from 0.040 µm to 2000 µm

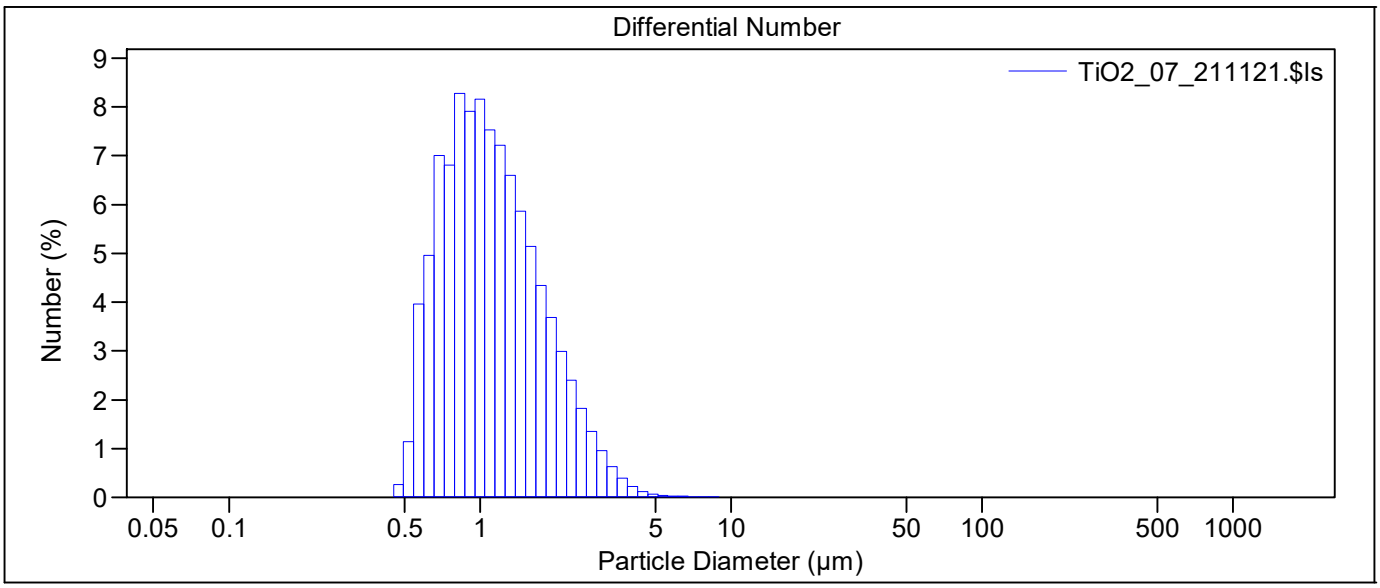
Number:	100%		
Mean:	1.248 µm	S.D.:	0.690 µm
Median:	1.067 µm	Variance:	0.476 µm^2
Mean/Median ratio:	1.170	C.V.:	55.3%
Mode:	0.829 µm	Skewness:	20.69 Right skewed
		Kurtosis:	5594 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.653 µm	0.799 µm	1.067 µm	1.503 µm	2.083 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0.0027	0.029	0.27
28	0.496	0.520	0.015	0.15	1.15
29	0.545	0.571	0.070	0.63	3.96
30	0.598	0.627	0.12	0.96	4.96
31	0.656	0.688	0.22	1.63	7.00
32	0.721	0.755	0.28	1.91	6.81
33	0.791	0.829	0.45	2.80	8.28
34	0.868	0.910	0.57	3.22	7.92
35	0.953	0.999	0.77	4.00	8.16
36	1.047	1.097	0.94	4.45	7.53
37	1.149	1.204	1.20	5.14	7.22
38	1.261	1.321	1.45	5.66	6.60
39	1.385	1.451	1.70	6.07	5.87
40	1.520	1.592	1.97	6.41	5.14
41	1.668	1.748	2.21	6.53	4.35
42	1.832	1.919	2.48	6.68	3.69
43	2.011	2.107	2.66	6.53	2.99
44	2.207	2.313	2.82	6.30	2.40
45	2.423	2.539	2.84	5.79	1.83

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	2.77	5.15	1.35
47	2.920	3.059	2.59	4.38	0.95
48	3.205	3.358	2.29	3.52	0.64
49	3.519	3.687	1.90	2.67	0.40
50	3.863	4.047	1.44	1.84	0.23
51	4.240	4.443	1.01	1.18	0.12
52	4.655	4.877	0.68	0.73	0.062
53	5.110	5.354	0.51	0.49	0.035
54	5.610	5.878	0.48	0.42	0.025
55	6.158	6.452	0.54	0.43	0.021
56	6.760	7.083	0.63	0.46	0.019
57	7.421	7.775	0.63	0.42	0.014
58	8.147	8.536	0.50	0.30	0.0085
59	8.943	9.370	0.28	0.15	0.0035
60	9.817	10.29	0.091	0.046	0.00088
61	10.78	11.29	0.029	0.013	0.00021
62	11.83	12.40	0.041	0.017	0.00023
63	12.99	13.61	0.15	0.057	0.00062
64	14.26	14.94	0.33	0.11	0.0010
65	15.65	16.40	0.47	0.15	0.0011
66	17.18	18.00	0.48	0.14	0.00087
67	18.86	19.76	0.42	0.11	0.00057
68	20.70	21.69	0.35	0.084	0.00036
69	22.73	23.81	0.33	0.072	0.00026
70	24.95	26.14	0.36	0.072	0.00021
71	27.39	28.70	0.44	0.078	0.00019
72	30.07	31.50	0.50	0.083	0.00017
73	33.01	34.58	0.53	0.080	0.00014
74	36.24	37.97	0.52	0.071	0.000100
75	39.78	41.68	0.49	0.060	0.000071
76	43.67	45.75	0.48	0.054	0.000053
77	47.94	50.22	0.53	0.054	0.000044
78	52.62	55.13	0.63	0.059	0.000040
79	57.77	60.52	0.76	0.065	0.000036
80	63.41	66.44	0.87	0.068	0.000031
81	69.61	72.94	0.91	0.064	0.000025
82	76.42	80.07	0.88	0.057	0.000018
83	83.89	87.90	0.86	0.051	0.000013
84	92.09	96.49	0.94	0.050	0.000011
85	101.1	105.9	1.22	0.059	0.000011
86	111.0	116.3	1.70	0.076	0.000011
87	121.8	127.6	2.27	0.092	0.000011
88	133.7	140.1	2.65	0.098	0.000010
89	146.8	153.8	2.63	0.089	0.000008
90	161.2	168.9	2.36	0.072	0.000005

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	2.22	0.062	0.000004
92	194.2	203.5	2.57	0.065	0.000003
93	213.2	223.4	3.59	0.083	0.000003
94	234.1	245.2	5.05	0.11	0.000004
95	256.9	269.2	6.24	0.12	0.000003
96	282.1	295.5	6.36	0.11	0.000003
97	309.6	324.4	5.18	0.083	0.000002
98	339.9	356.1	3.08	0.045	0.000001
99	373.1	390.9	1.22	0.016	2.15E-7
100	409.6	429.2	0.24	0.0029	3.16E-8
101	449.7	471.1	0.019	0.00021	1.89E-9
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_08_211308.$ls TiO2_08_211308.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.94%		
LS 13 320	Universal Liquid Module		
Start time:	21:11 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	22%	PIDS Obscur:	81%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_08_211308.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	68.07 µm	S.D.:	90.99 µm
Median:	5.225 µm	Variance:	8279 μm^2
Mean/Median ratio:	13.03	C.V.:	134%
Mode:	2.787 µm	Skewness:	1.048 Right skewed
		Kurtosis:	-0.390 Platykurtic

<10%	<25%	<50%	<75%	<90%
1.622 µm	2.499 µm	5.225 µm	142.7 µm	219.9 µm

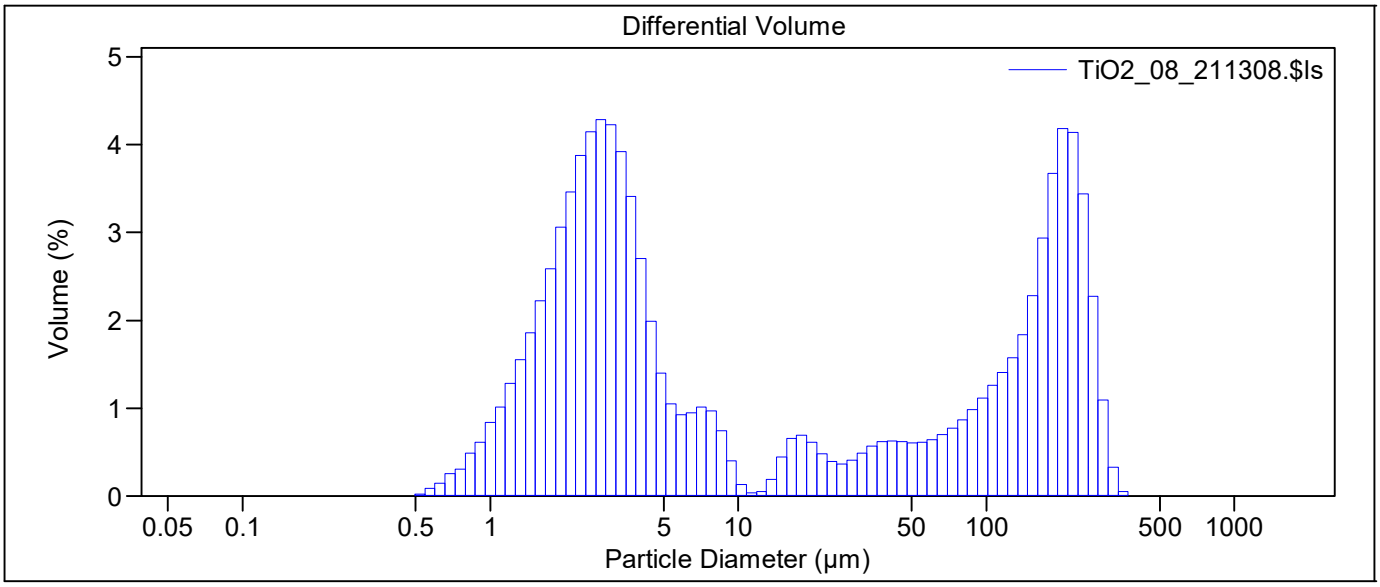
Number Statistics (Arithmetic) TiO2_08_211308.$ls

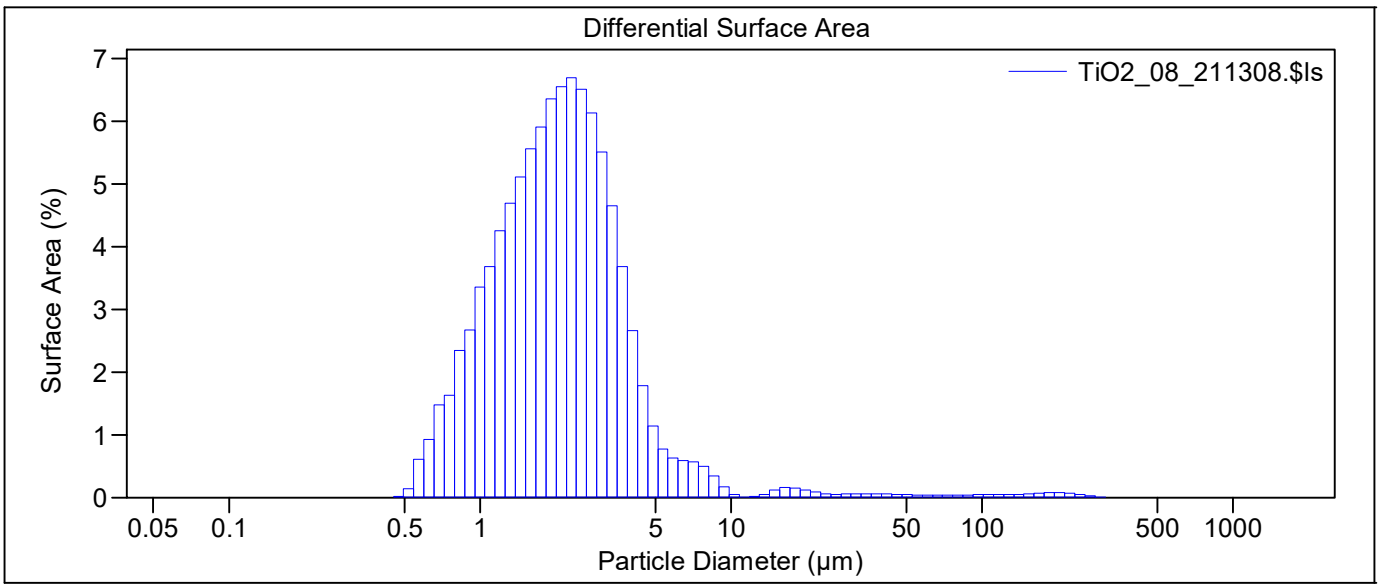
Calculations from 0.040 µm to 2000 µm

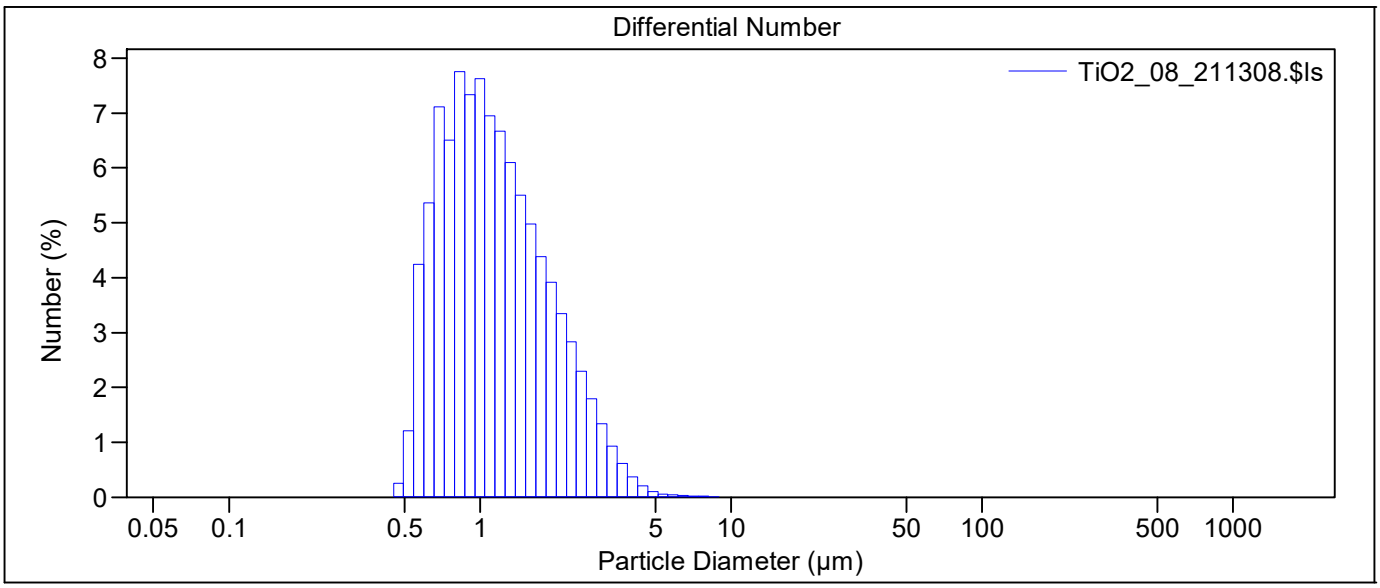
Number:	100%		
Mean:	1.302 µm	S.D.:	0.758 µm
Median:	1.084 µm	Variance:	0.575 μm^2
Mean/Median ratio:	1.201	C.V.:	58.2%
Mode:	0.829 µm	Skewness:	10.57 Right skewed
		Kurtosis:	1766 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.645 µm	0.794 µm	1.084 µm	1.590 µm	2.261 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0.0030	0.025	0.25
28	0.496	0.520	0.019	0.14	1.21
29	0.545	0.571	0.087	0.61	4.25
30	0.598	0.627	0.15	0.93	5.36
31	0.656	0.688	0.26	1.48	7.12
32	0.721	0.755	0.31	1.64	6.51
33	0.791	0.829	0.49	2.35	7.75
34	0.868	0.910	0.61	2.68	7.33
35	0.953	0.999	0.84	3.35	7.63
36	1.047	1.097	1.01	3.68	6.96
37	1.149	1.204	1.28	4.26	6.67
38	1.261	1.321	1.55	4.69	6.10
39	1.385	1.451	1.86	5.11	5.51
40	1.520	1.592	2.22	5.57	4.98
41	1.668	1.748	2.59	5.91	4.39
42	1.832	1.919	3.06	6.36	3.92
43	2.011	2.107	3.46	6.55	3.35
44	2.207	2.313	3.88	6.69	2.84
45	2.423	2.539	4.14	6.51	2.29

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	4.29	6.13	1.79
47	2.920	3.059	4.23	5.51	1.34
48	3.205	3.358	3.92	4.66	0.94
49	3.519	3.687	3.41	3.69	0.62
50	3.863	4.047	2.71	2.67	0.37
51	4.240	4.443	1.99	1.79	0.21
52	4.655	4.877	1.40	1.15	0.11
53	5.110	5.354	1.05	0.78	0.062
54	5.610	5.878	0.93	0.63	0.041
55	6.158	6.452	0.95	0.59	0.032
56	6.760	7.083	1.02	0.57	0.026
57	7.421	7.775	0.97	0.50	0.019
58	8.147	8.536	0.75	0.35	0.011
59	8.943	9.370	0.40	0.17	0.0044
60	9.817	10.29	0.13	0.050	0.0011
61	10.78	11.29	0.039	0.014	0.00024
62	11.83	12.40	0.051	0.016	0.00024
63	12.99	13.61	0.19	0.055	0.00068
64	14.26	14.94	0.44	0.12	0.0012
65	15.65	16.40	0.65	0.16	0.0013
66	17.18	18.00	0.69	0.15	0.0011
67	18.86	19.76	0.61	0.12	0.00071
68	20.70	21.69	0.48	0.089	0.00043
69	22.73	23.81	0.39	0.066	0.00026
70	24.95	26.14	0.37	0.056	0.00019
71	27.39	28.70	0.41	0.057	0.00016
72	30.07	31.50	0.49	0.062	0.00014
73	33.01	34.58	0.57	0.065	0.00012
74	36.24	37.97	0.62	0.065	0.00010
75	39.78	41.68	0.63	0.060	0.000079
76	43.67	45.75	0.62	0.054	0.000058
77	47.94	50.22	0.61	0.048	0.000043
78	52.62	55.13	0.61	0.044	0.000033
79	57.77	60.52	0.64	0.042	0.000026
80	63.41	66.44	0.70	0.042	0.000022
81	69.61	72.94	0.78	0.042	0.000018
82	76.42	80.07	0.87	0.043	0.000015
83	83.89	87.90	0.98	0.045	0.000013
84	92.09	96.49	1.12	0.046	0.000011
85	101.1	105.9	1.26	0.048	0.000010
86	111.0	116.3	1.41	0.048	0.000008
87	121.8	127.6	1.57	0.049	0.000007
88	133.7	140.1	1.84	0.052	0.000006
89	146.8	153.8	2.28	0.059	0.000006
90	161.2	168.9	2.94	0.069	0.000006

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	3.68	0.079	0.000005
92	194.2	203.5	4.18	0.082	0.000004
93	213.2	223.4	4.14	0.074	0.000003
94	234.1	245.2	3.44	0.056	0.000002
95	256.9	269.2	2.28	0.034	0.000001
96	282.1	295.5	1.09	0.015	3.84E-7
97	309.6	324.4	0.33	0.0041	8.76E-8
98	339.9	356.1	0.050	0.00056	1E-8
99	373.1	390.9	0.0024	0.000024	3.58E-10
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_09_211455.$ls TiO2_09_211455.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.53%		
LS 13 320	Universal Liquid Module		
Start time:	21:13 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	23%	PIDS Obscur:	84%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_09_211455.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	50.26 µm	S.D.:	75.99 µm
Median:	4.175 µm	Variance:	5775 μm^2
Mean/Median ratio:	12.04	C.V.:	151%
Mode:	3.059 µm	Skewness:	1.343 Right skewed
		Kurtosis:	0.299 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.686 µm	2.506 µm	4.175 µm	85.29 µm	186.2 µm

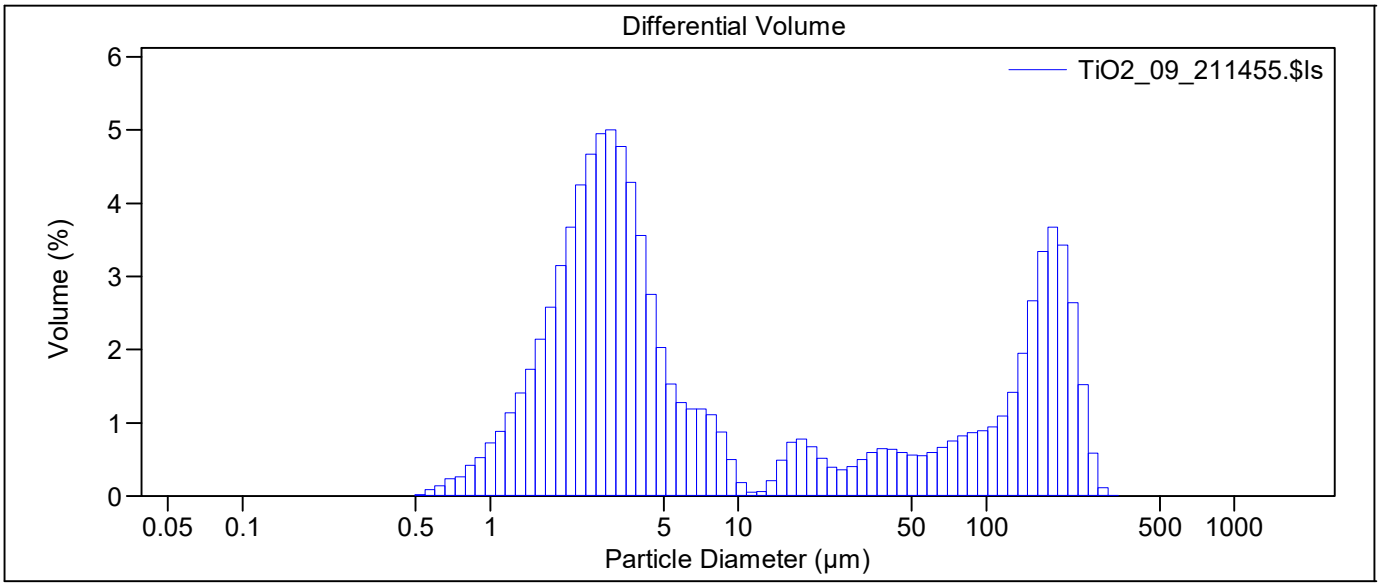
Number Statistics (Arithmetic) TiO2_09_211455.$ls

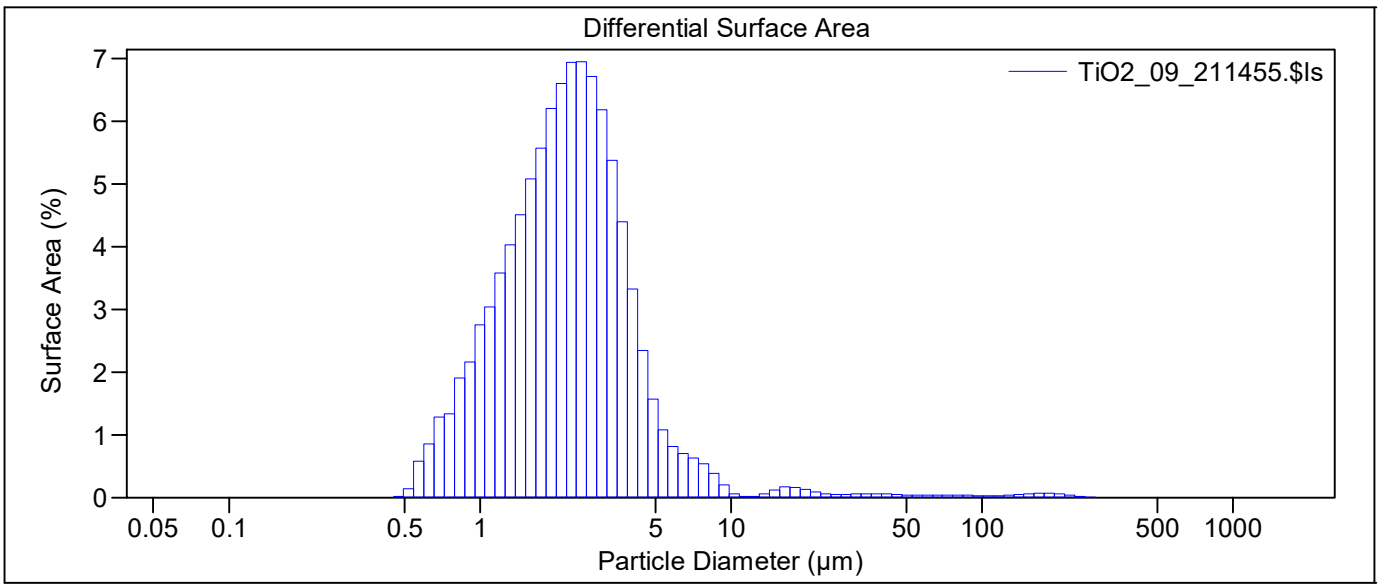
Calculations from 0.040 µm to 2000 µm

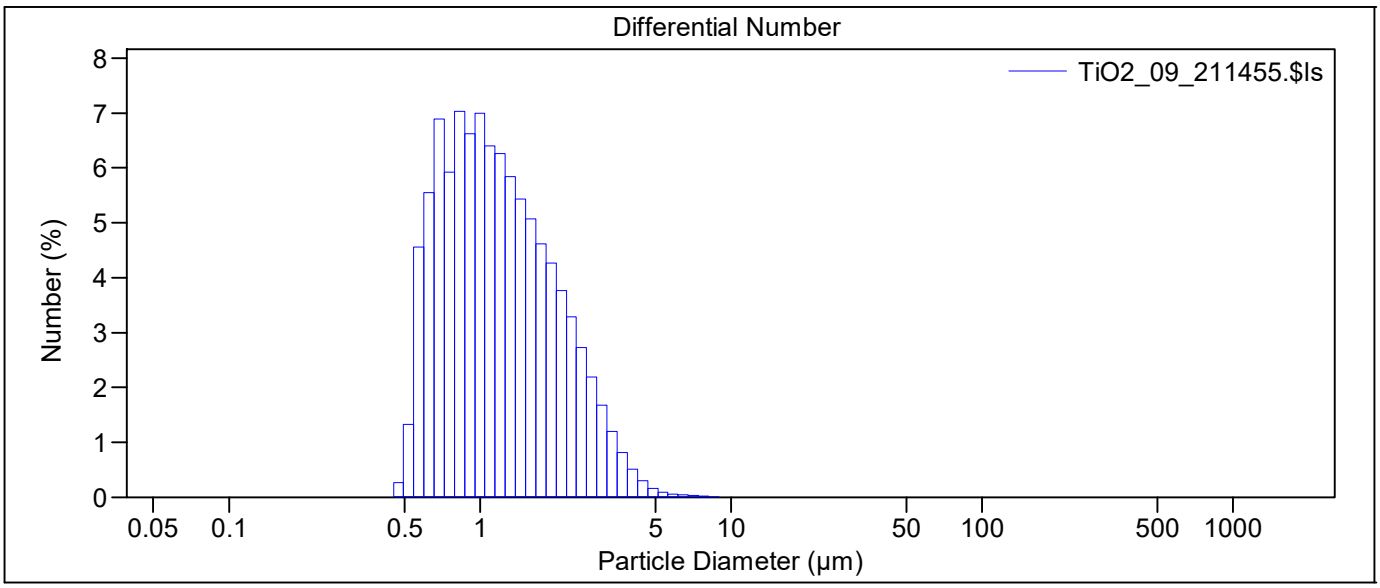
Number:	100%		
Mean:	1.363 µm	S.D.:	0.820 µm
Median:	1.124 µm	Variance:	0.673 μm^2
Mean/Median ratio:	1.213	C.V.:	60.2%
Mode:	0.829 µm	Skewness:	7.765 Right skewed
		Kurtosis:	983.8 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.639 µm	0.796 µm	1.124 µm	1.698 µm	2.415 µm

Beckman Coulter LS13320







TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0.0029	0.023	0.26
28	0.496	0.520	0.019	0.14	1.33
29	0.545	0.571	0.089	0.59	4.56
30	0.598	0.627	0.14	0.86	5.55
31	0.656	0.688	0.23	1.29	6.89
32	0.721	0.755	0.27	1.34	5.93
33	0.791	0.829	0.42	1.91	7.03
34	0.868	0.910	0.52	2.17	6.62
35	0.953	0.999	0.73	2.76	7.00
36	1.047	1.097	0.88	3.04	6.41
37	1.149	1.204	1.14	3.58	6.26
38	1.261	1.321	1.41	4.03	5.84
39	1.385	1.451	1.73	4.51	5.43
40	1.520	1.592	2.14	5.08	5.07
41	1.668	1.748	2.58	5.58	4.62
42	1.832	1.919	3.15	6.20	4.27
43	2.011	2.107	3.68	6.60	3.77
44	2.207	2.313	4.25	6.94	3.29
45	2.423	2.539	4.67	6.95	2.73
46	2.660	2.787	4.95	6.72	2.19
47	2.920	3.059	5.01	6.19	1.67
48	3.205	3.358	4.77	5.37	1.21
49	3.519	3.687	4.29	4.40	0.82
50	3.863	4.047	3.56	3.32	0.51
51	4.240	4.443	2.76	2.35	0.30
52	4.655	4.877	2.03	1.58	0.17
53	5.110	5.354	1.53	1.08	0.095
54	5.610	5.878	1.28	0.82	0.060
55	6.158	6.452	1.19	0.70	0.043
56	6.760	7.083	1.19	0.64	0.032
57	7.421	7.775	1.11	0.54	0.023
58	8.147	8.536	0.87	0.39	0.013
59	8.943	9.370	0.50	0.20	0.0058
60	9.817	10.29	0.18	0.066	0.0016
61	10.78	11.29	0.056	0.019	0.00037
62	11.83	12.40	0.063	0.019	0.00031
63	12.99	13.61	0.21	0.058	0.00080
64	14.26	14.94	0.49	0.12	0.0014
65	15.65	16.40	0.73	0.17	0.0016

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	17.18	18.00	0.78	0.16	0.0013
67	18.86	19.76	0.67	0.13	0.00084
68	20.70	21.69	0.51	0.090	0.00048
69	22.73	23.81	0.39	0.063	0.00028
70	24.95	26.14	0.36	0.051	0.00019
71	27.39	28.70	0.40	0.053	0.00016
72	30.07	31.50	0.50	0.059	0.00015
73	33.01	34.58	0.59	0.065	0.00014
74	36.24	37.97	0.65	0.064	0.00011
75	39.78	41.68	0.64	0.058	0.000085
76	43.67	45.75	0.60	0.049	0.000060
77	47.94	50.22	0.56	0.042	0.000042
78	52.62	55.13	0.55	0.038	0.000032
79	57.77	60.52	0.59	0.037	0.000026
80	63.41	66.44	0.67	0.038	0.000022
81	69.61	72.94	0.75	0.039	0.000019
82	76.42	80.07	0.82	0.039	0.000015
83	83.89	87.90	0.86	0.037	0.000012
84	92.09	96.49	0.89	0.035	0.000009
85	101.1	105.9	0.94	0.034	0.000008
86	111.0	116.3	1.09	0.036	0.000007
87	121.8	127.6	1.41	0.042	0.000007
88	133.7	140.1	1.95	0.053	0.000007
89	146.8	153.8	2.67	0.066	0.000007
90	161.2	168.9	3.34	0.075	0.000007
91	176.9	185.4	3.67	0.075	0.000006
92	194.2	203.5	3.43	0.064	0.000004
93	213.2	223.4	2.64	0.045	0.000002
94	234.1	245.2	1.52	0.023	0.000001
95	256.9	269.2	0.59	0.0083	2.9E-7
96	282.1	295.5	0.11	0.0015	4.22E-8
97	309.6	324.4	0.0090	0.00010	2.52E-9
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_10_212731.$ls TiO2_10_212731.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.67%		
LS 13 320	Universal Liquid Module		
Start time:	21:25 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_10_212731.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	16.54 µm	S.D.:	22.02 µm
Median:	4.086 µm	Variance:	484.7 µm^2
Mean/Median ratio:	4.048	C.V.:	133%
Mode:	2.787 µm	Skewness:	1.508 Right skewed
		Kurtosis:	1.130 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.720 µm	2.465 µm	4.086 µm	26.85 µm	53.69 µm

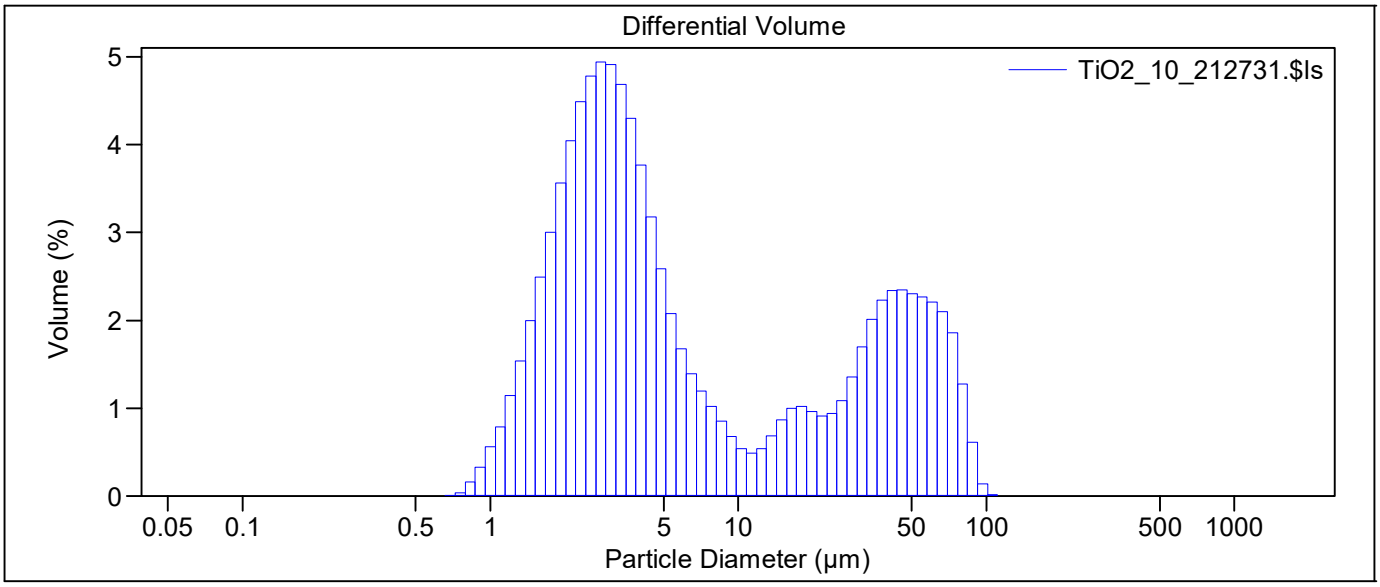
Number Statistics (Arithmetic) TiO2_10_212731.$ls

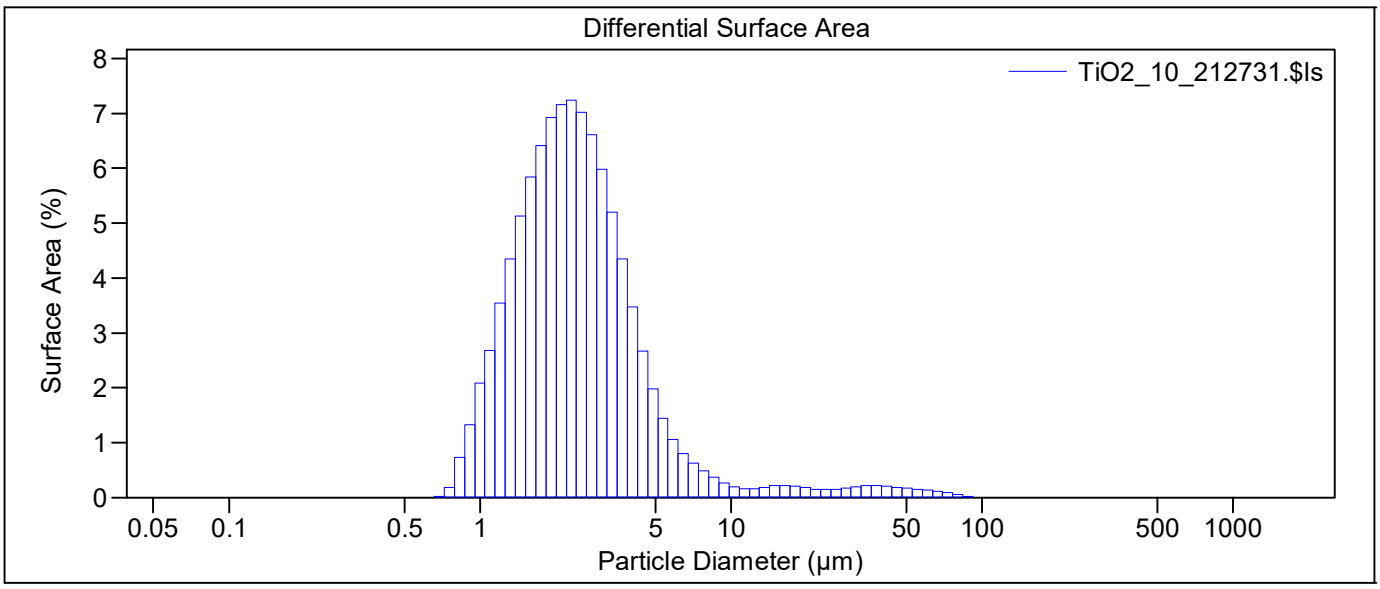
Calculations from 0.040 µm to 2000 µm

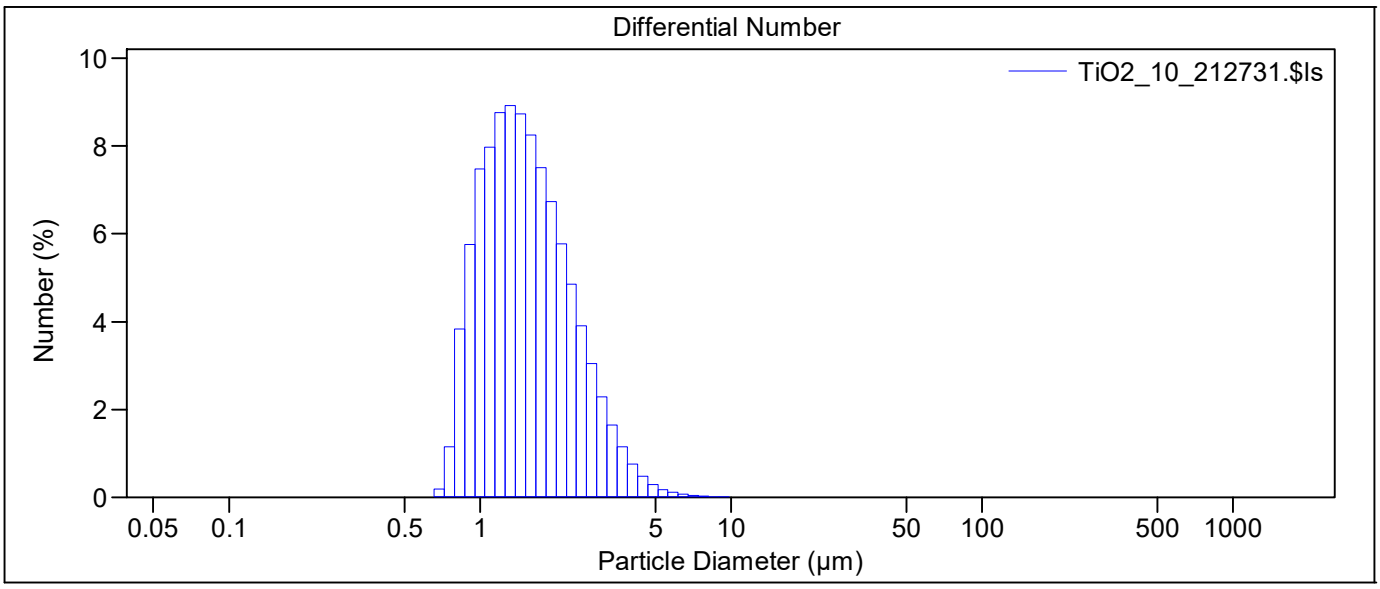
Number:	100%		
Mean:	1.686 µm	S.D.:	0.860 µm
Median:	1.477 µm	Variance:	0.739 µm^2
Mean/Median ratio:	1.142	C.V.:	51.0%
Mode:	1.321 µm	Skewness:	7.588 Right skewed
		Kurtosis:	303.5 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.940 µm	1.131 µm	1.477 µm	2.003 µm	2.675 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0	0	0
30	0.598	0.627	0	0	0
31	0.656	0.688	0.0047	0.025	0.19
32	0.721	0.755	0.037	0.18	1.15
33	0.791	0.829	0.16	0.74	3.83
34	0.868	0.910	0.33	1.33	5.76
35	0.953	0.999	0.56	2.08	7.47
36	1.047	1.097	0.79	2.68	7.97
37	1.149	1.204	1.14	3.54	8.75
38	1.261	1.321	1.54	4.35	8.92
39	1.385	1.451	2.00	5.13	8.73
40	1.520	1.592	2.50	5.85	8.25
41	1.668	1.748	3.01	6.41	7.51
42	1.832	1.919	3.56	6.92	6.73
43	2.011	2.107	4.05	7.16	5.78
44	2.207	2.313	4.49	7.24	4.85
45	2.423	2.539	4.78	7.02	3.90

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	4.94	6.61	3.05
47	2.920	3.059	4.91	5.98	2.29
48	3.205	3.358	4.69	5.20	1.65
49	3.519	3.687	4.30	4.35	1.15
50	3.863	4.047	3.77	3.47	0.76
51	4.240	4.443	3.18	2.67	0.48
52	4.655	4.877	2.59	1.98	0.30
53	5.110	5.354	2.07	1.44	0.18
54	5.610	5.878	1.68	1.06	0.11
55	6.158	6.452	1.39	0.80	0.069
56	6.760	7.083	1.19	0.63	0.045
57	7.421	7.775	1.02	0.49	0.029
58	8.147	8.536	0.85	0.37	0.018
59	8.943	9.370	0.68	0.27	0.011
60	9.817	10.29	0.54	0.20	0.0066
61	10.78	11.29	0.49	0.16	0.0045
62	11.83	12.40	0.54	0.16	0.0038
63	12.99	13.61	0.68	0.19	0.0036
64	14.26	14.94	0.87	0.22	0.0035
65	15.65	16.40	1.00	0.23	0.0030
66	17.18	18.00	1.02	0.21	0.0023
67	18.86	19.76	0.97	0.18	0.0017
68	20.70	21.69	0.91	0.16	0.0012
69	22.73	23.81	0.94	0.15	0.00093
70	24.95	26.14	1.09	0.16	0.00081
71	27.39	28.70	1.36	0.18	0.00077
72	30.07	31.50	1.69	0.20	0.00072
73	33.01	34.58	2.01	0.22	0.00065
74	36.24	37.97	2.23	0.22	0.00055
75	39.78	41.68	2.34	0.21	0.00043
76	43.67	45.75	2.34	0.19	0.00033
77	47.94	50.22	2.31	0.17	0.00024
78	52.62	55.13	2.26	0.15	0.00018
79	57.77	60.52	2.21	0.14	0.00013
80	63.41	66.44	2.10	0.12	0.000095
81	69.61	72.94	1.86	0.095	0.000064
82	76.42	80.07	1.28	0.060	0.000033
83	83.89	87.90	0.62	0.026	0.000012
84	92.09	96.49	0.14	0.0054	0.000002
85	101.1	105.9	0.013	0.00047	1.51E-7
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

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TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_11_212918.$ls TiO2_11_212918.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.71%		
LS 13 320	Universal Liquid Module		
Start time:	21:27 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	42%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_11_212918.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	13.39 µm	S.D.:	18.07 µm
Median:	3.963 µm	Variance:	326.5 μm^2
Mean/Median ratio:	3.378	C.V.:	135%
Mode:	3.059 µm	Skewness:	1.659 Right skewed
		Kurtosis:	1.585 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.746 µm	2.475 µm	3.963 µm	17.15 µm	44.75 µm

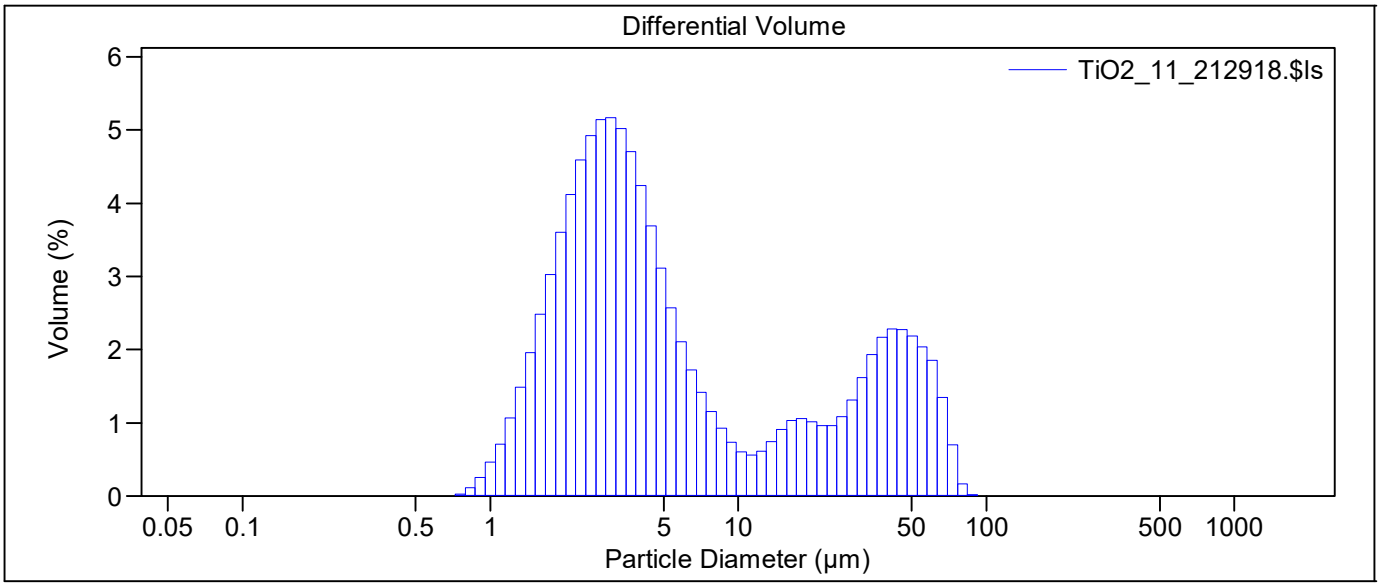
Number Statistics (Arithmetic) TiO2_11_212918.$ls

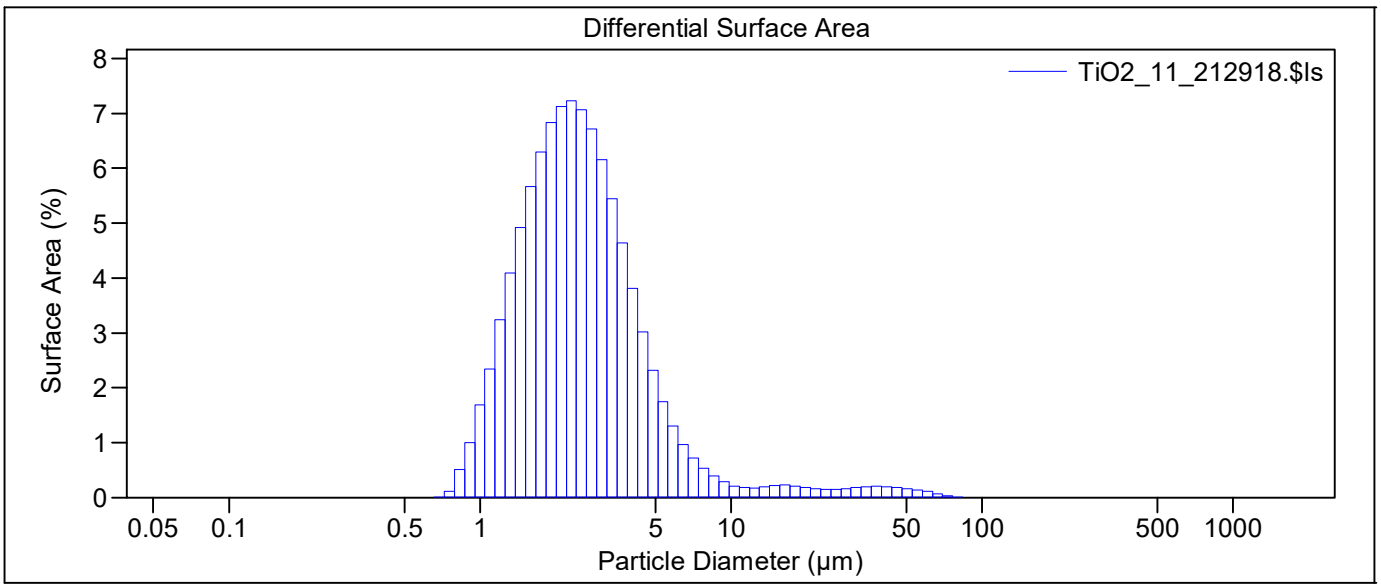
Calculations from 0.040 µm to 2000 µm

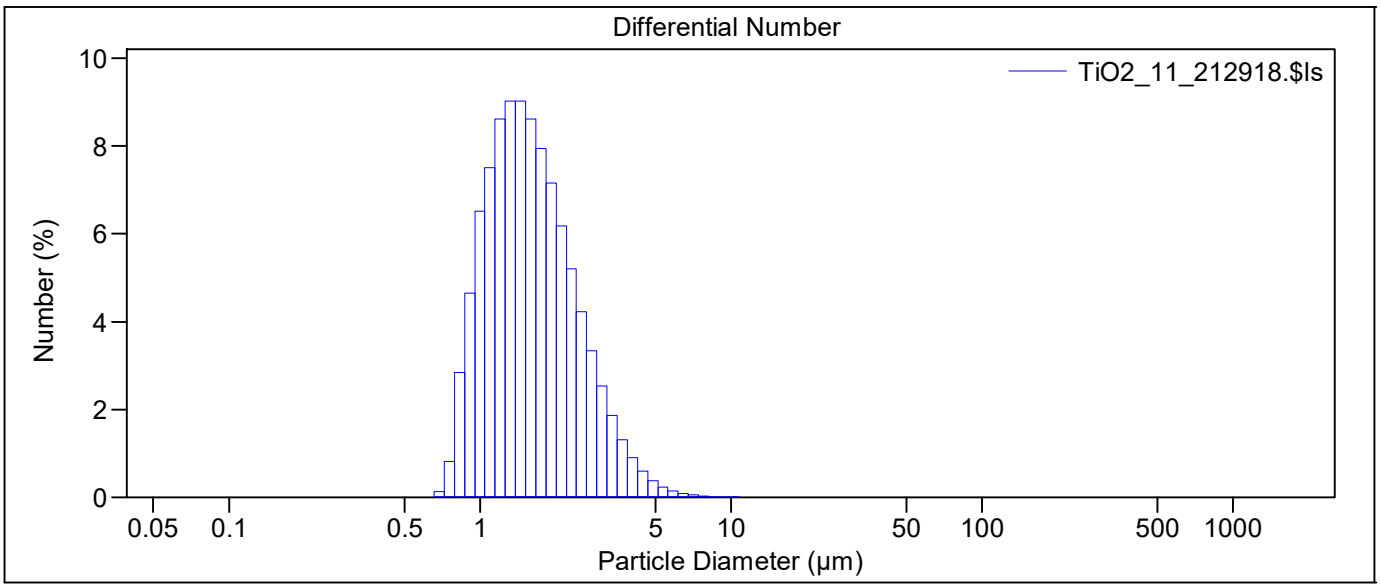
Number:	100%		
Mean:	1.751 µm	S.D.:	0.887 µm
Median:	1.535 µm	Variance:	0.787 μm^2
Mean/Median ratio:	1.141	C.V.:	50.7%
Mode:	1.321 µm	Skewness:	6.481 Right skewed
		Kurtosis:	210.5 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.976 µm	1.182 µm	1.535 µm	2.079 µm	2.780 µm

Beckman Coulter LS13320







TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0	0	0
30	0.598	0.627	0	0	0
31	0.656	0.688	0.0030	0.016	0.13
32	0.721	0.755	0.025	0.12	0.82
33	0.791	0.829	0.12	0.51	2.85
34	0.868	0.910	0.25	1.00	4.66
35	0.953	0.999	0.46	1.69	6.51
36	1.047	1.097	0.71	2.34	7.51
37	1.149	1.204	1.07	3.24	8.61
38	1.261	1.321	1.49	4.09	9.03
39	1.385	1.451	1.96	4.92	9.02
40	1.520	1.592	2.48	5.67	8.62
41	1.668	1.748	3.03	6.30	7.94
42	1.832	1.919	3.60	6.84	7.15
43	2.011	2.107	4.12	7.12	6.18
44	2.207	2.313	4.60	7.23	5.21
45	2.423	2.539	4.93	7.07	4.22
46	2.660	2.787	5.14	6.71	3.33
47	2.920	3.059	5.17	6.15	2.53
48	3.205	3.358	5.02	5.44	1.86
49	3.519	3.687	4.70	4.64	1.32
50	3.863	4.047	4.24	3.81	0.90
51	4.240	4.443	3.69	3.03	0.59
52	4.655	4.877	3.12	2.32	0.38
53	5.110	5.354	2.58	1.75	0.24
54	5.610	5.878	2.10	1.30	0.15
55	6.158	6.452	1.72	0.97	0.090
56	6.760	7.083	1.41	0.73	0.056
57	7.421	7.775	1.15	0.54	0.034
58	8.147	8.536	0.93	0.40	0.021
59	8.943	9.370	0.74	0.29	0.013
60	9.817	10.29	0.61	0.21	0.0078
61	10.78	11.29	0.56	0.18	0.0055
62	11.83	12.40	0.61	0.18	0.0045
63	12.99	13.61	0.75	0.20	0.0041
64	14.26	14.94	0.91	0.22	0.0038
65	15.65	16.40	1.03	0.23	0.0033

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
66	17.18	18.00	1.06	0.21	0.0026
67	18.86	19.76	1.01	0.19	0.0018
68	20.70	21.69	0.96	0.16	0.0013
69	22.73	23.81	0.97	0.15	0.0010
70	24.95	26.14	1.08	0.15	0.00085
71	27.39	28.70	1.31	0.17	0.00078
72	30.07	31.50	1.62	0.19	0.00073
73	33.01	34.58	1.93	0.20	0.00066
74	36.24	37.97	2.17	0.21	0.00056
75	39.78	41.68	2.28	0.20	0.00044
76	43.67	45.75	2.28	0.18	0.00033
77	47.94	50.22	2.18	0.16	0.00024
78	52.62	55.13	2.04	0.13	0.00017
79	57.77	60.52	1.86	0.11	0.00012
80	63.41	66.44	1.35	0.074	0.000064
81	69.61	72.94	0.70	0.035	0.000025
82	76.42	80.07	0.17	0.0075	0.000005
83	83.89	87.90	0.017	0.00071	3.53E-7
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_12_213105.$ls TiO2_12_213105.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.69%		
LS 13 320	Universal Liquid Module		
Start time:	21:29 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_12_213105.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	11.24 µm	S.D.:	14.70 µm
Median:	3.954 µm	Variance:	216.1 µm^2
Mean/Median ratio:	2.844	C.V.:	131%
Mode:	3.059 µm	Skewness:	1.754 Right skewed
		Kurtosis:	1.906 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.826 µm	2.538 µm	3.954 µm	12.75 µm	37.80 µm

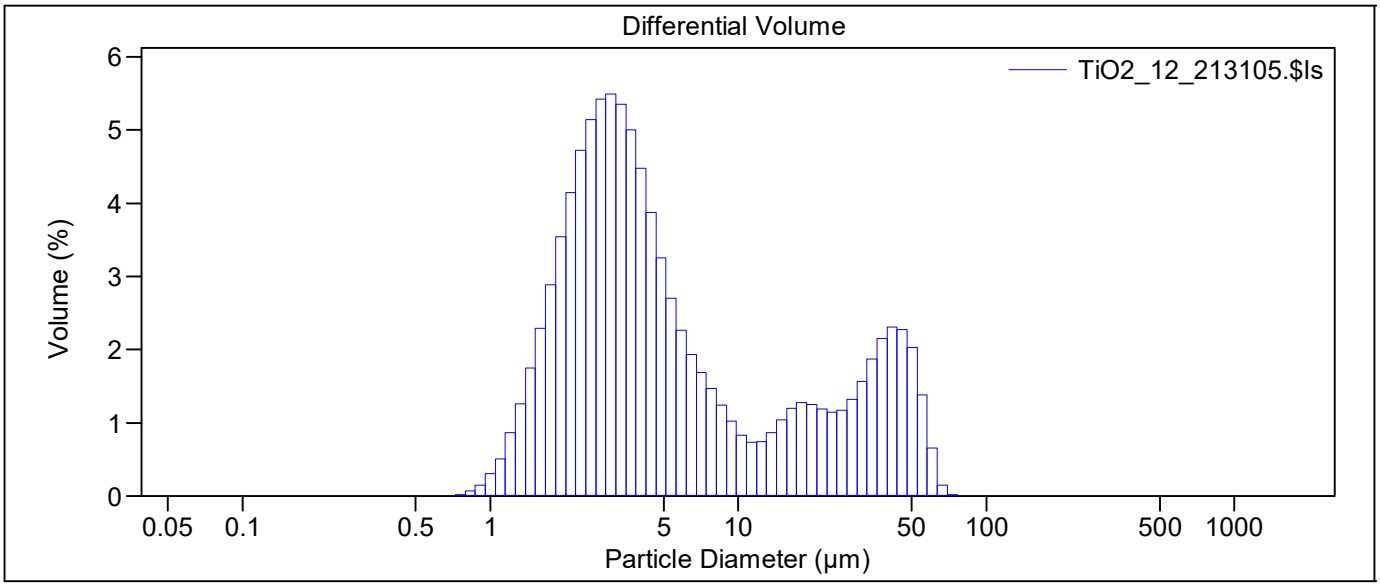
Number Statistics (Arithmetic) TiO2_12_213105.$ls

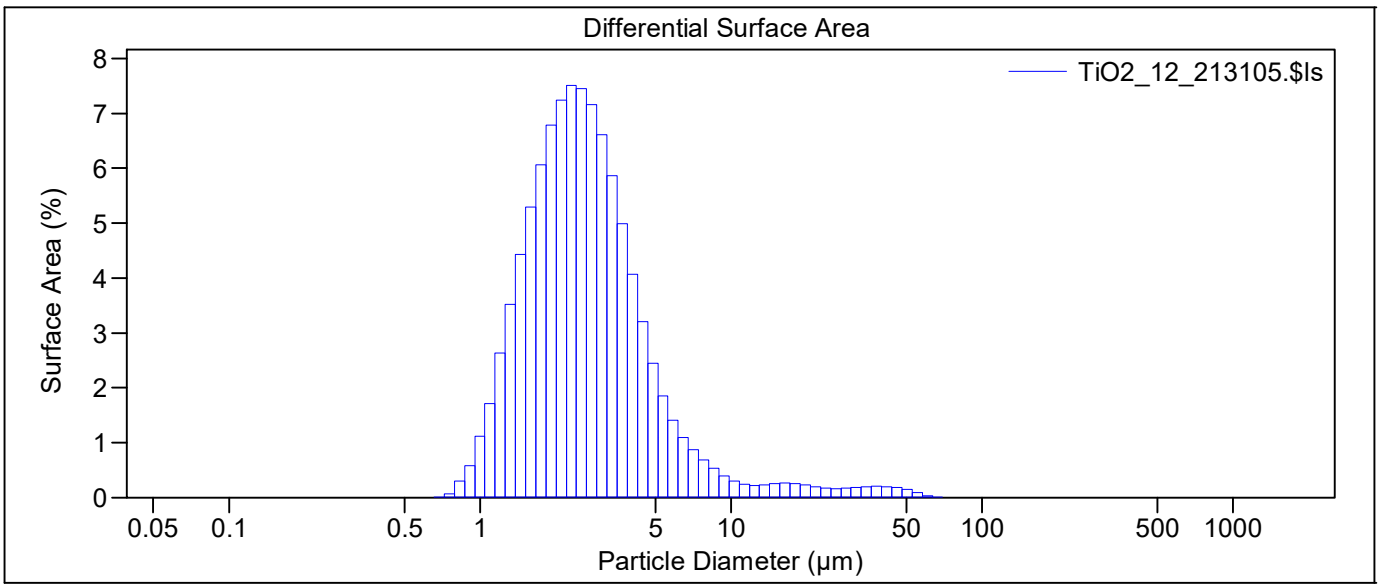
Calculations from 0.040 µm to 2000 µm

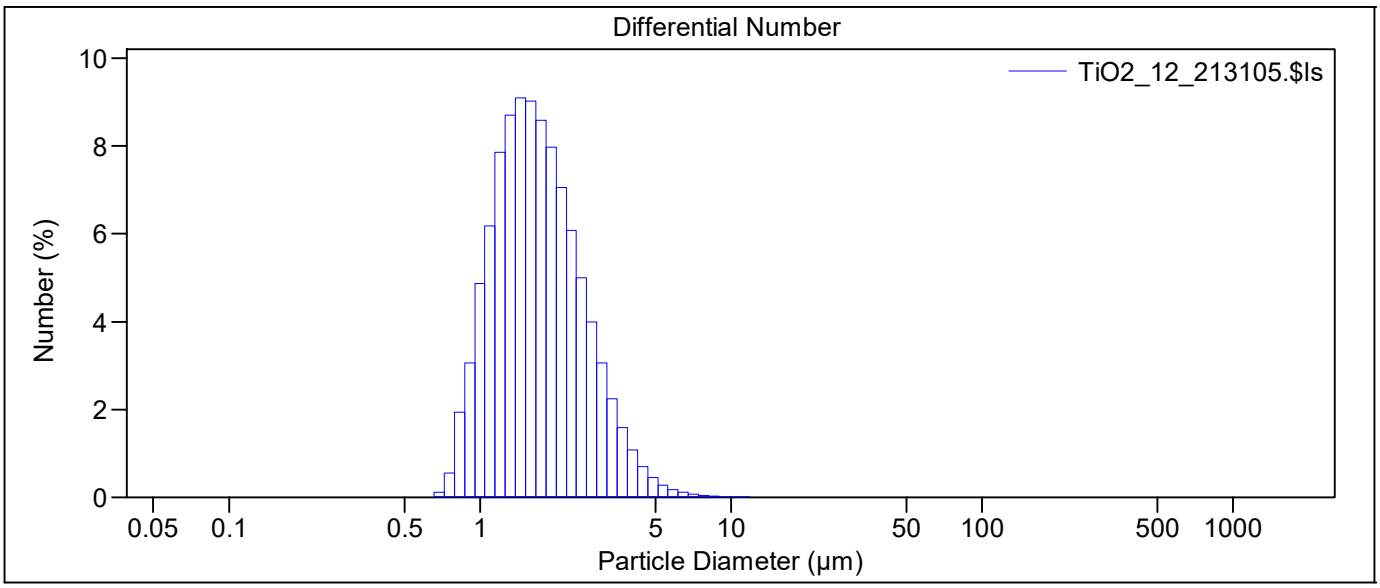
Number:	100%		
Mean:	1.860 µm	S.D.:	0.929 µm
Median:	1.645 µm	Variance:	0.863 µm^2
Mean/Median ratio:	1.131	C.V.:	49.9%
Mode:	1.451 µm	Skewness:	5.810 Right skewed
		Kurtosis:	150.6 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.037 µm	1.267 µm	1.645 µm	2.207 µm	2.915 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0	0	0
28	0.496	0.520	0	0	0
29	0.545	0.571	0	0	0
30	0.598	0.627	0	0	0
31	0.656	0.688	0.0022	0.012	0.11
32	0.721	0.755	0.015	0.073	0.55
33	0.791	0.829	0.069	0.31	1.94
34	0.868	0.910	0.15	0.59	3.07
35	0.953	0.999	0.30	1.12	4.86
36	1.047	1.097	0.51	1.72	6.17
37	1.149	1.204	0.86	2.63	7.86
38	1.261	1.321	1.26	3.52	8.71
39	1.385	1.451	1.75	4.43	9.10
40	1.520	1.592	2.29	5.29	9.03
41	1.668	1.748	2.88	6.07	8.59
42	1.832	1.919	3.54	6.79	7.97
43	2.011	2.107	4.15	7.25	7.06
44	2.207	2.313	4.72	7.51	6.08
45	2.423	2.539	5.14	7.45	5.00

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	5.43	7.16	3.99
47	2.920	3.059	5.50	6.61	3.05
48	3.205	3.358	5.35	5.86	2.25
49	3.519	3.687	5.00	4.99	1.59
50	3.863	4.047	4.48	4.07	1.08
51	4.240	4.443	3.87	3.21	0.70
52	4.655	4.877	3.25	2.45	0.45
53	5.110	5.354	2.70	1.86	0.28
54	5.610	5.878	2.26	1.42	0.18
55	6.158	6.452	1.93	1.10	0.11
56	6.760	7.083	1.69	0.88	0.076
57	7.421	7.775	1.47	0.69	0.050
58	8.147	8.536	1.25	0.54	0.032
59	8.943	9.370	1.02	0.40	0.020
60	9.817	10.29	0.83	0.30	0.012
61	10.78	11.29	0.74	0.24	0.0081
62	11.83	12.40	0.75	0.22	0.0062
63	12.99	13.61	0.86	0.23	0.0055
64	14.26	14.94	1.04	0.26	0.0050
65	15.65	16.40	1.20	0.27	0.0043
66	17.18	18.00	1.27	0.26	0.0035
67	18.86	19.76	1.25	0.23	0.0026
68	20.70	21.69	1.19	0.20	0.0019
69	22.73	23.81	1.14	0.18	0.0013
70	24.95	26.14	1.18	0.17	0.0010
71	27.39	28.70	1.32	0.17	0.00089
72	30.07	31.50	1.57	0.18	0.00080
73	33.01	34.58	1.87	0.20	0.00072
74	36.24	37.97	2.15	0.21	0.00062
75	39.78	41.68	2.31	0.20	0.00051
76	43.67	45.75	2.27	0.18	0.00038
77	47.94	50.22	2.03	0.15	0.00025
78	52.62	55.13	1.38	0.092	0.00013
79	57.77	60.52	0.66	0.040	0.000047
80	63.41	66.44	0.15	0.0081	0.000008
81	69.61	72.94	0.014	0.00071	0.000001
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_13_213948.$ls TiO2_13_213948.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	3.67%		
LS 13 320	Universal Liquid Module		
Start time:	21:38 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	18%	PIDS Obscur:	67%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_13_213948.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	108.5 µm	S.D.:	106.4 µm
Median:	77.42 µm	Variance:	11312 µm^2
Mean/Median ratio:	1.401	C.V.:	98.0%
Mode:	223.4 µm	Skewness:	0.413 Right skewed
		Kurtosis:	-1.359 Platykurtic

<10%	<25%	<50%	<75%	<90%
1.758 µm	3.033 µm	77.42 µm	210.7 µm	258.7 µm

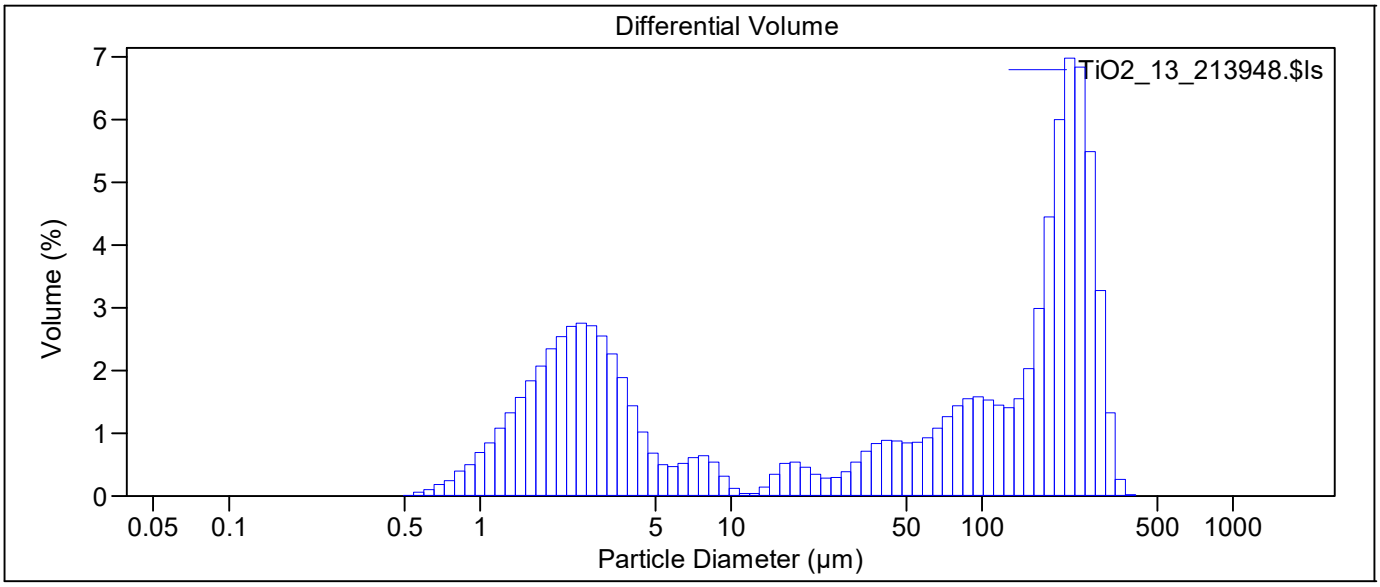
Number Statistics (Arithmetic) TiO2_13_213948.$ls

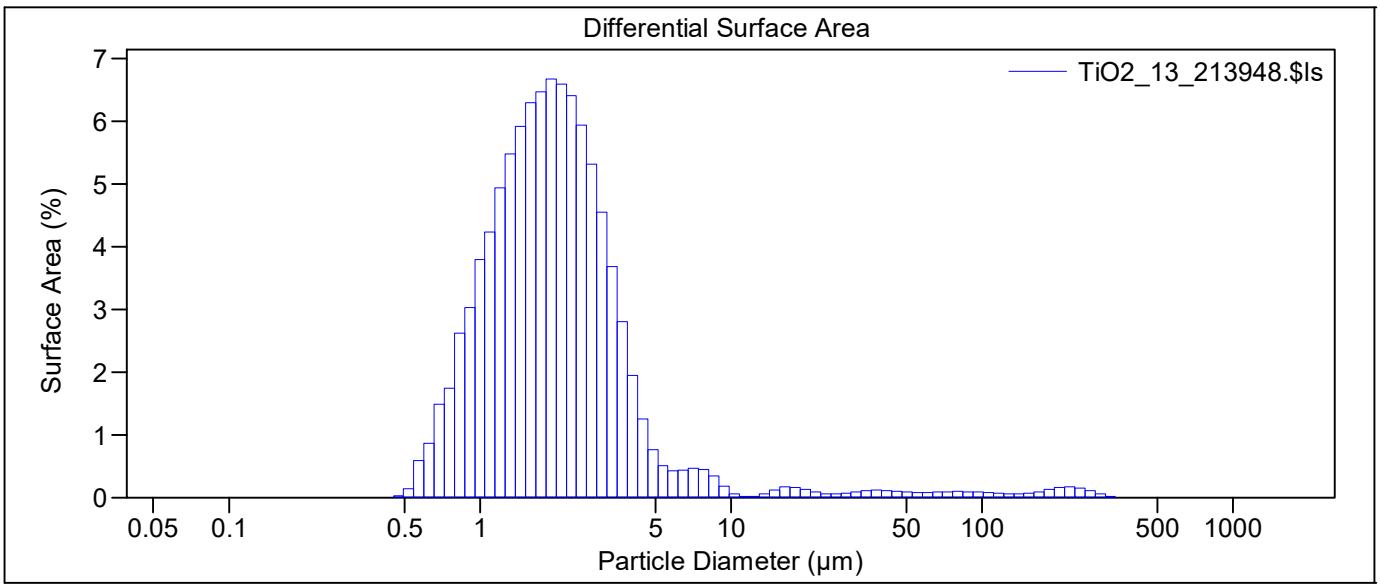
Calculations from 0.040 µm to 2000 µm

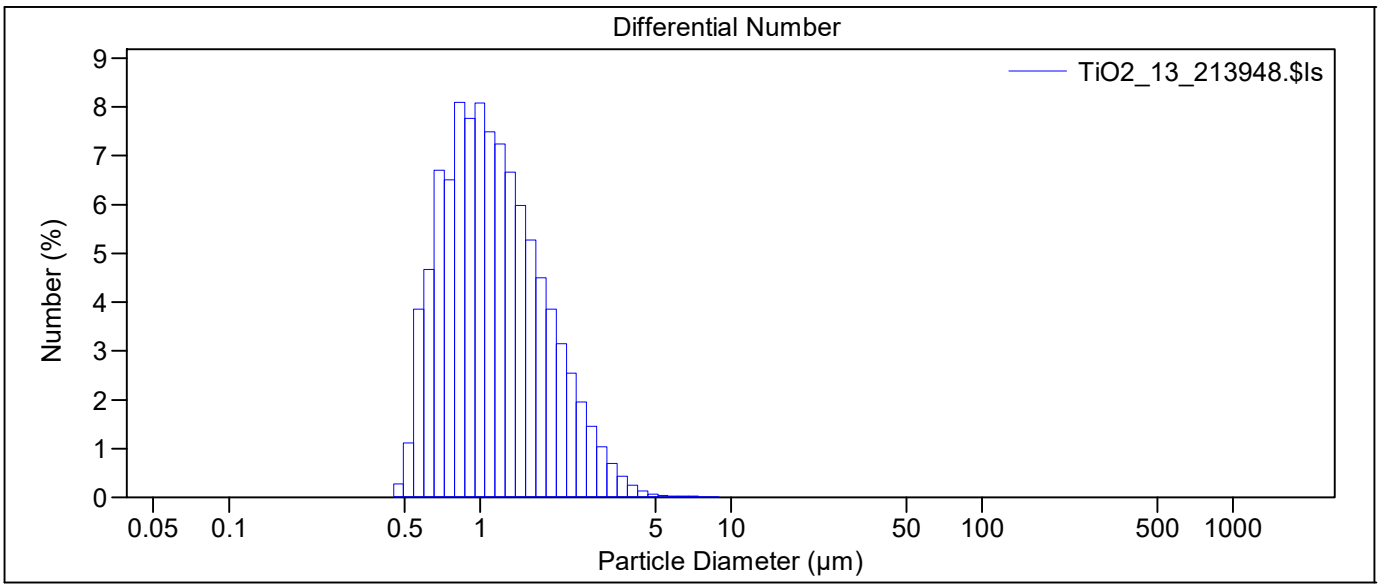
Number:	100%		
Mean:	1.270 µm	S.D.:	0.715 µm
Median:	1.086 µm	Variance:	0.511 µm^2
Mean/Median ratio:	1.170	C.V.:	56.3%
Mode:	0.829 µm	Skewness:	20.84 Right skewed
		Kurtosis:	4641 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.657 µm	0.809 µm	1.086 µm	1.534 µm	2.128 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0.0025	0.029	0.27
28	0.496	0.520	0.014	0.14	1.12
29	0.545	0.571	0.062	0.59	3.86
30	0.598	0.627	0.099	0.86	4.68
31	0.656	0.688	0.19	1.49	6.71
32	0.721	0.755	0.24	1.75	6.51
33	0.791	0.829	0.40	2.62	8.10
34	0.868	0.910	0.50	3.03	7.77
35	0.953	0.999	0.69	3.80	8.09
36	1.047	1.097	0.85	4.24	7.49
37	1.149	1.204	1.09	4.94	7.24
38	1.261	1.321	1.32	5.48	6.67
39	1.385	1.451	1.57	5.92	5.98
40	1.520	1.592	1.83	6.30	5.28
41	1.668	1.748	2.07	6.47	4.50
42	1.832	1.919	2.34	6.68	3.85
43	2.011	2.107	2.54	6.59	3.15
44	2.207	2.313	2.71	6.40	2.55
45	2.423	2.539	2.75	5.93	1.96

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	2.71	5.32	1.46
47	2.920	3.059	2.55	4.56	1.03
48	3.205	3.358	2.26	3.68	0.69
49	3.519	3.687	1.89	2.80	0.44
50	3.863	4.047	1.44	1.95	0.25
51	4.240	4.443	1.02	1.25	0.13
52	4.655	4.877	0.69	0.77	0.069
53	5.110	5.354	0.50	0.51	0.038
54	5.610	5.878	0.47	0.43	0.027
55	6.158	6.452	0.52	0.44	0.023
56	6.760	7.083	0.61	0.47	0.020
57	7.421	7.775	0.64	0.45	0.016
58	8.147	8.536	0.54	0.34	0.010
59	8.943	9.370	0.32	0.19	0.0045
60	9.817	10.29	0.12	0.064	0.0013
61	10.78	11.29	0.038	0.018	0.00031
62	11.83	12.40	0.044	0.019	0.00027
63	12.99	13.61	0.15	0.059	0.00068
64	14.26	14.94	0.35	0.13	0.0012
65	15.65	16.40	0.52	0.17	0.0014
66	17.18	18.00	0.54	0.17	0.0011
67	18.86	19.76	0.46	0.13	0.00070
68	20.70	21.69	0.35	0.088	0.00040
69	22.73	23.81	0.28	0.065	0.00024
70	24.95	26.14	0.29	0.061	0.00019
71	27.39	28.70	0.39	0.074	0.00019
72	30.07	31.50	0.55	0.095	0.00020
73	33.01	34.58	0.72	0.11	0.00020
74	36.24	37.97	0.84	0.12	0.00018
75	39.78	41.68	0.89	0.12	0.00014
76	43.67	45.75	0.88	0.10	0.00011
77	47.94	50.22	0.85	0.092	0.000078
78	52.62	55.13	0.86	0.085	0.000059
79	57.77	60.52	0.93	0.084	0.000049
80	63.41	66.44	1.08	0.089	0.000043
81	69.61	72.94	1.27	0.095	0.000038
82	76.42	80.07	1.44	0.099	0.000033
83	83.89	87.90	1.56	0.097	0.000027
84	92.09	96.49	1.59	0.090	0.000021
85	101.1	105.9	1.53	0.079	0.000015
86	111.0	116.3	1.45	0.068	0.000011
87	121.8	127.6	1.41	0.060	0.000008
88	133.7	140.1	1.55	0.061	0.000007
89	146.8	153.8	2.03	0.072	0.000006
90	161.2	168.9	2.99	0.097	0.000007

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	4.45	0.13	0.000008
92	194.2	203.5	6.00	0.16	0.000008
93	213.2	223.4	6.98	0.17	0.000007
94	234.1	245.2	6.84	0.15	0.000005
95	256.9	269.2	5.49	0.11	0.000003
96	282.1	295.5	3.28	0.061	0.000001
97	309.6	324.4	1.32	0.022	4.51E-7
98	339.9	356.1	0.26	0.0040	6.77E-8
99	373.1	390.9	0.022	0.00030	4.24E-9
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_14_214135.$ls TiO2_14_214135.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.86%		
LS 13 320	Universal Liquid Module		
Start time:	21:39 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	23%	PIDS Obscur:	82%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_14_214135.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	68.31 µm	S.D.:	88.13 µm
Median:	7.106 µm	Variance:	7767 μm^2
Mean/Median ratio:	9.613	C.V.:	129%
Mode:	203.5 µm	Skewness:	0.995 Right skewed
		Kurtosis:	-0.530 Platykurtic

<10%	<25%	<50%	<75%	<90%
1.720 µm	2.671 µm	7.106 µm	144.9 µm	214.5 µm

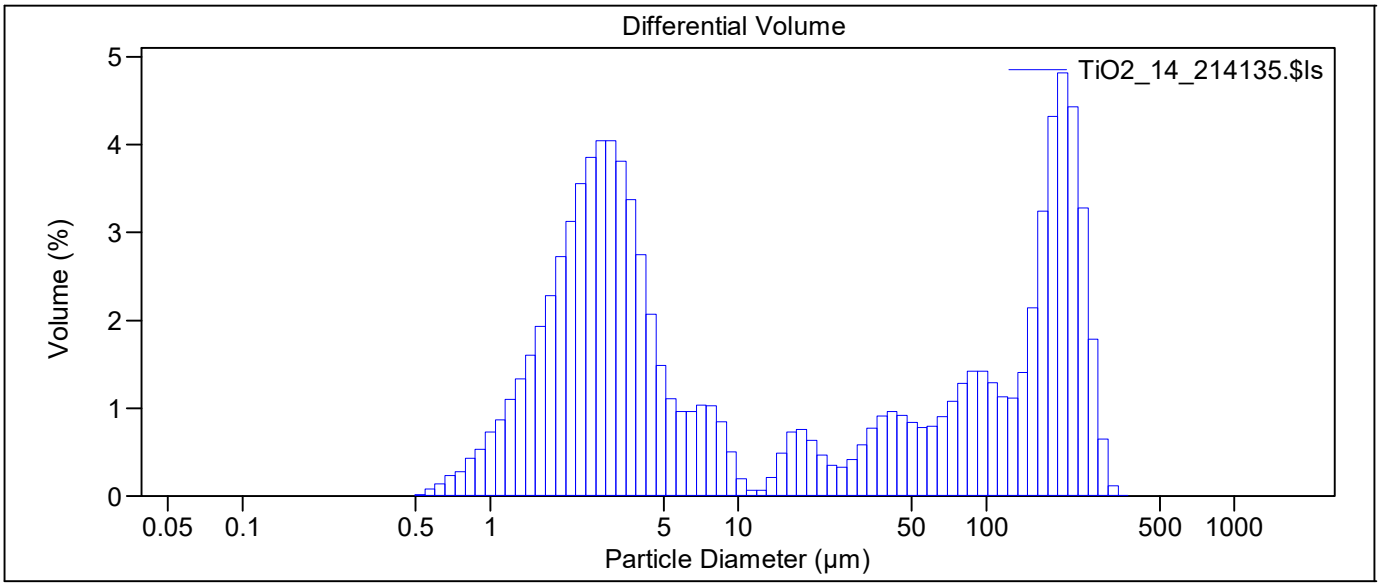
Number Statistics (Arithmetic) TiO2_14_214135.$ls

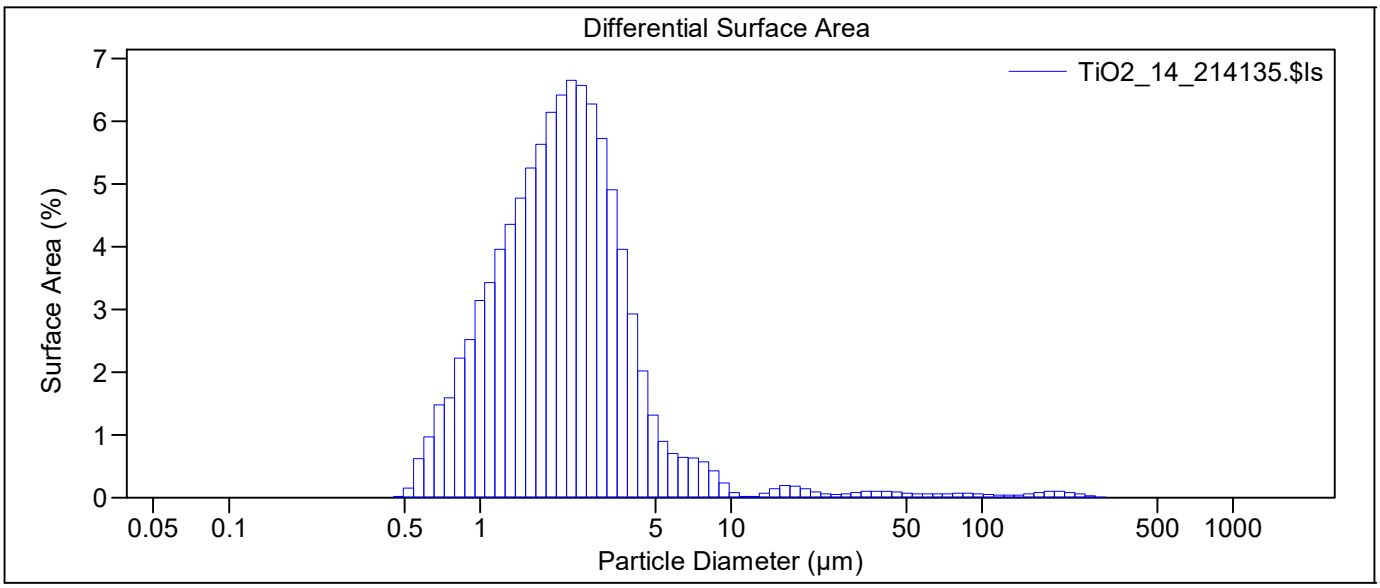
Calculations from 0.040 µm to 2000 µm

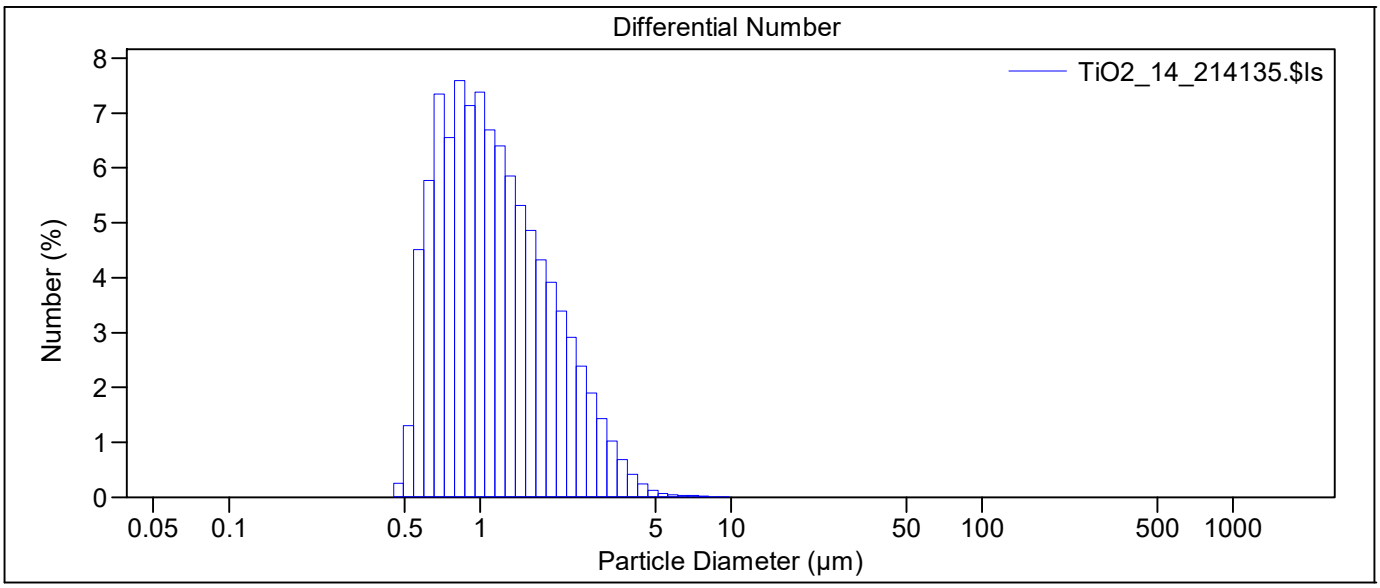
Number:	100%		
Mean:	1.311 µm	S.D.:	0.791 µm
Median:	1.079 µm	Variance:	0.626 μm^2
Mean/Median ratio:	1.215	C.V.:	60.3%
Mode:	0.829 µm	Skewness:	10.96 Right skewed
		Kurtosis:	1670 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.638 µm	0.783 µm	1.079 µm	1.607 µm	2.309 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0	0	0
26	0.412	0.431	0	0	0
27	0.452	0.474	0.0026	0.024	0.25
28	0.496	0.520	0.018	0.15	1.30
29	0.545	0.571	0.083	0.63	4.52
30	0.598	0.627	0.14	0.97	5.77
31	0.656	0.688	0.24	1.48	7.34
32	0.721	0.755	0.28	1.59	6.55
33	0.791	0.829	0.43	2.22	7.60
34	0.868	0.910	0.53	2.52	7.14
35	0.953	0.999	0.73	3.14	7.38
36	1.047	1.097	0.87	3.43	6.70
37	1.149	1.204	1.10	3.96	6.41
38	1.261	1.321	1.33	4.36	5.86
39	1.385	1.451	1.60	4.78	5.32
40	1.520	1.592	1.93	5.25	4.86
41	1.668	1.748	2.28	5.64	4.33
42	1.832	1.919	2.73	6.14	3.91
43	2.011	2.107	3.13	6.42	3.39
44	2.207	2.313	3.56	6.65	2.92
45	2.423	2.539	3.86	6.57	2.39

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	4.05	6.28	1.90
47	2.920	3.059	4.05	5.72	1.43
48	3.205	3.358	3.81	4.91	1.02
49	3.519	3.687	3.38	3.96	0.68
50	3.863	4.047	2.75	2.93	0.42
51	4.240	4.443	2.07	2.02	0.24
52	4.655	4.877	1.49	1.32	0.13
53	5.110	5.354	1.11	0.90	0.073
54	5.610	5.878	0.96	0.71	0.048
55	6.158	6.452	0.96	0.65	0.036
56	6.760	7.083	1.04	0.63	0.030
57	7.421	7.775	1.03	0.57	0.022
58	8.147	8.536	0.85	0.43	0.014
59	8.943	9.370	0.51	0.23	0.0062
60	9.817	10.29	0.19	0.081	0.0018
61	10.78	11.29	0.062	0.024	0.00044
62	11.83	12.40	0.067	0.023	0.00036
63	12.99	13.61	0.21	0.068	0.00086
64	14.26	14.94	0.49	0.14	0.0015
65	15.65	16.40	0.73	0.19	0.0017
66	17.18	18.00	0.76	0.18	0.0013
67	18.86	19.76	0.64	0.14	0.00084
68	20.70	21.69	0.46	0.093	0.00046
69	22.73	23.81	0.35	0.063	0.00026
70	24.95	26.14	0.33	0.054	0.00019
71	27.39	28.70	0.42	0.063	0.00018
72	30.07	31.50	0.58	0.080	0.00019
73	33.01	34.58	0.78	0.097	0.00019
74	36.24	37.97	0.91	0.10	0.00017
75	39.78	41.68	0.96	0.099	0.00013
76	43.67	45.75	0.92	0.087	0.000097
77	47.94	50.22	0.84	0.072	0.000067
78	52.62	55.13	0.78	0.061	0.000047
79	57.77	60.52	0.80	0.057	0.000036
80	63.41	66.44	0.90	0.059	0.000031
81	69.61	72.94	1.08	0.064	0.000028
82	76.42	80.07	1.28	0.069	0.000025
83	83.89	87.90	1.42	0.070	0.000021
84	92.09	96.49	1.42	0.064	0.000016
85	101.1	105.9	1.29	0.053	0.000011
86	111.0	116.3	1.13	0.042	0.000007
87	121.8	127.6	1.11	0.038	0.000005
88	133.7	140.1	1.41	0.043	0.000005
89	146.8	153.8	2.14	0.060	0.000006
90	161.2	168.9	3.24	0.083	0.000007

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	4.32	0.10	0.000007
92	194.2	203.5	4.82	0.10	0.000006
93	213.2	223.4	4.43	0.086	0.000004
94	234.1	245.2	3.28	0.058	0.000002
95	256.9	269.2	1.79	0.029	0.000001
96	282.1	295.5	0.65	0.0095	2.55E-7
97	309.6	324.4	0.12	0.0016	3.5E-8
98	339.9	356.1	0.0084	0.00010	1.89E-9
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\TiO2\TiO2_15_214322.$ls TiO2_15_214322.$ls		
File ID:	TiO2		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.44%		
LS 13 320	Universal Liquid Module		
Start time:	21:41 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	26%	PIDS Obscur:	85%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) TiO2_15_214322.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	52.97 µm	S.D.:	77.18 µm
Median:	5.005 µm	Variance:	5957 μm^2
Mean/Median ratio:	10.58	C.V.:	146%
Mode:	3.059 µm	Skewness:	1.336 Right skewed
		Kurtosis:	0.363 Leptokurtic

<10%	<25%	<50%	<75%	<90%
1.815 µm	2.706 µm	5.005 µm	90.11 µm	190.4 µm

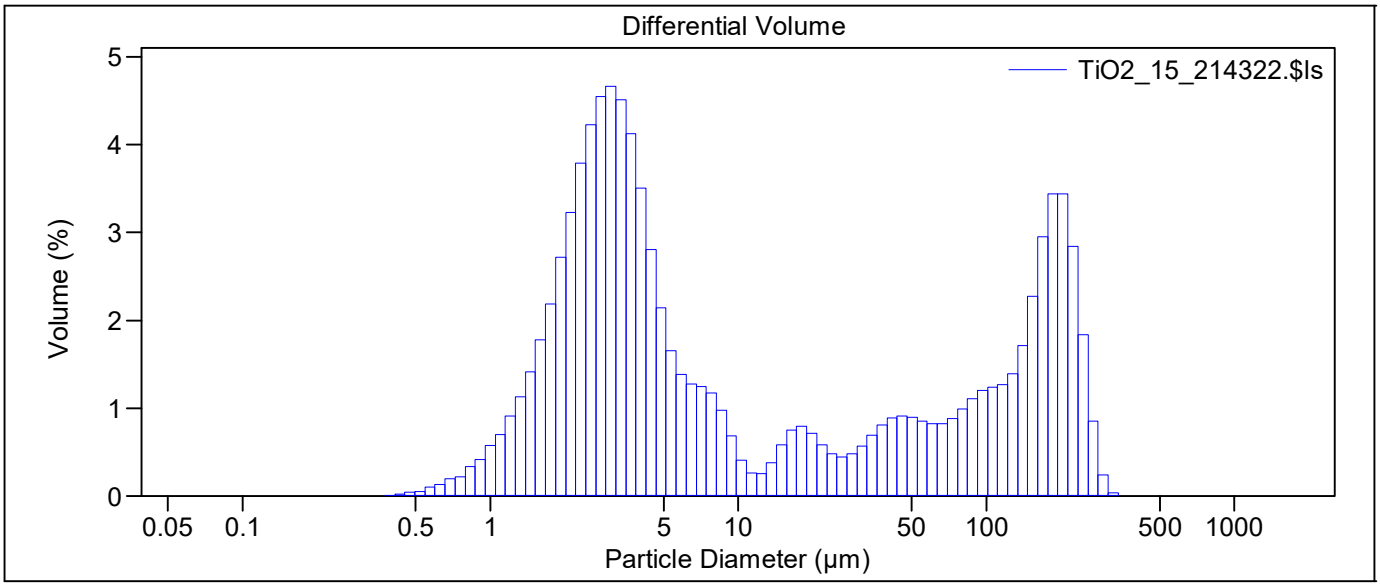
Number Statistics (Arithmetic) TiO2_15_214322.$ls

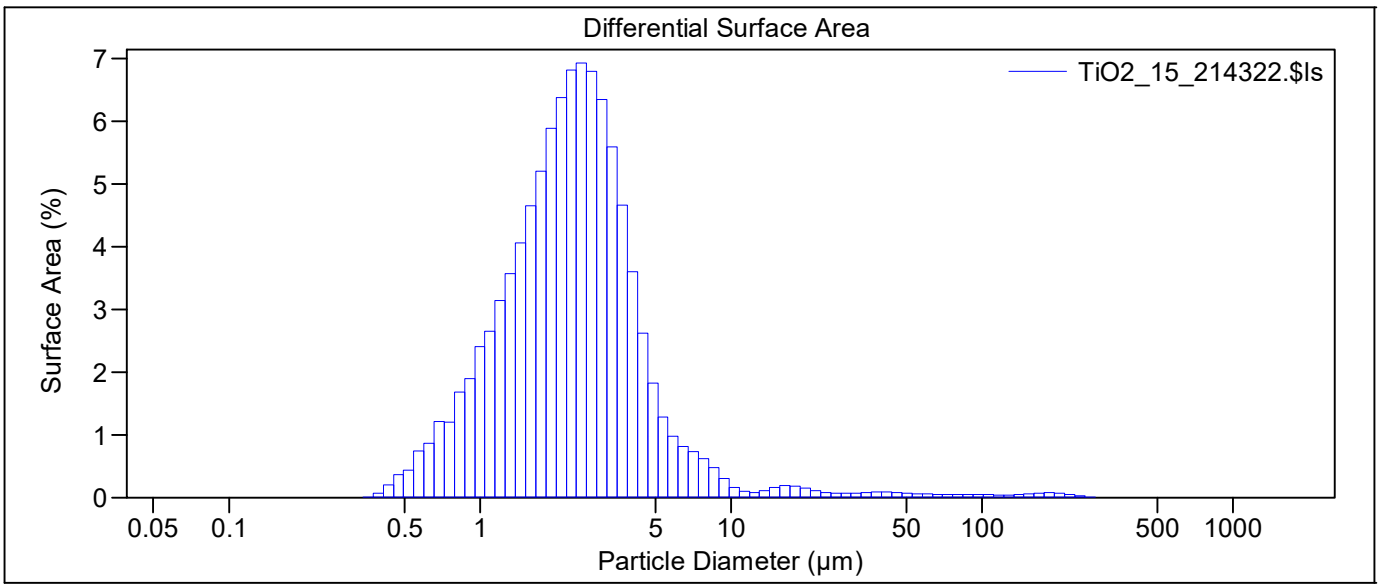
Calculations from 0.040 µm to 2000 µm

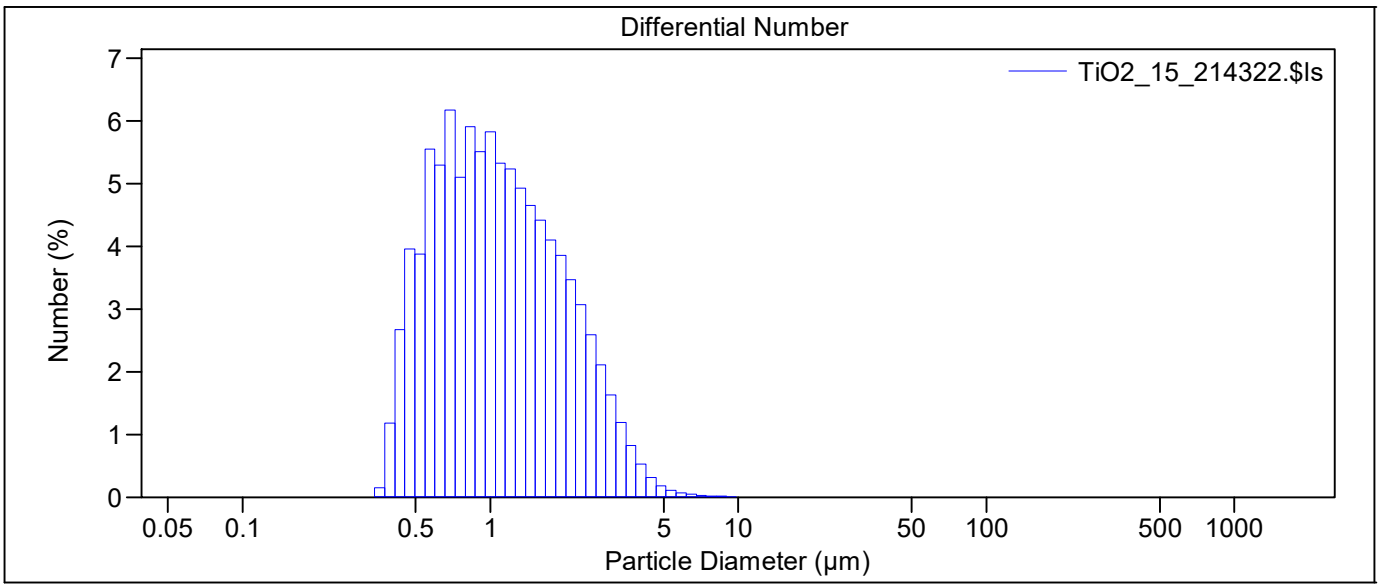
Number:	100%		
Mean:	1.285 µm	S.D.:	0.872 µm
Median:	1.027 µm	Variance:	0.760 μm^2
Mean/Median ratio:	1.252	C.V.:	67.8%
Mode:	0.688 µm	Skewness:	7.526 Right skewed
		Kurtosis:	856.1 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.522 µm	0.680 µm	1.027 µm	1.642 µm	2.404 µm

Beckman Coulter LS13320







TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.00071	0.0082	0.16
25	0.375	0.393	0.0072	0.076	1.19
26	0.412	0.431	0.021	0.21	2.67
27	0.452	0.474	0.042	0.37	3.96
28	0.496	0.520	0.054	0.43	3.88
29	0.545	0.571	0.10	0.75	5.55
30	0.598	0.627	0.13	0.86	5.30
31	0.656	0.688	0.20	1.21	6.17
32	0.721	0.755	0.22	1.21	5.10
33	0.791	0.829	0.34	1.68	5.91
34	0.868	0.910	0.41	1.89	5.51
35	0.953	0.999	0.58	2.41	5.82
36	1.047	1.097	0.70	2.65	5.32
37	1.149	1.204	0.91	3.14	5.23
38	1.261	1.321	1.13	3.57	4.93
39	1.385	1.451	1.41	4.06	4.65
40	1.520	1.592	1.78	4.65	4.42
41	1.668	1.748	2.18	5.20	4.10
42	1.832	1.919	2.72	5.89	3.86
43	2.011	2.107	3.23	6.38	3.47
44	2.207	2.313	3.79	6.82	3.07
45	2.423	2.539	4.23	6.93	2.59

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	4.55	6.80	2.11
47	2.920	3.059	4.66	6.34	1.63
48	3.205	3.358	4.51	5.59	1.20
49	3.519	3.687	4.13	4.66	0.83
50	3.863	4.047	3.51	3.61	0.53
51	4.240	4.443	2.80	2.63	0.32
52	4.655	4.877	2.14	1.83	0.19
53	5.110	5.354	1.65	1.28	0.11
54	5.610	5.878	1.38	0.98	0.068
55	6.158	6.452	1.27	0.82	0.048
56	6.760	7.083	1.25	0.73	0.035
57	7.421	7.775	1.17	0.63	0.025
58	8.147	8.536	0.98	0.48	0.016
59	8.943	9.370	0.68	0.30	0.0083
60	9.817	10.29	0.41	0.17	0.0038
61	10.78	11.29	0.26	0.097	0.0018
62	11.83	12.40	0.26	0.087	0.0014
63	12.99	13.61	0.38	0.12	0.0015
64	14.26	14.94	0.58	0.16	0.0018
65	15.65	16.40	0.75	0.19	0.0017
66	17.18	18.00	0.79	0.18	0.0014
67	18.86	19.76	0.71	0.15	0.00093
68	20.70	21.69	0.58	0.11	0.00057
69	22.73	23.81	0.48	0.084	0.00036
70	24.95	26.14	0.44	0.070	0.00025
71	27.39	28.70	0.48	0.069	0.00020
72	30.07	31.50	0.57	0.075	0.00018
73	33.01	34.58	0.69	0.084	0.00017
74	36.24	37.97	0.81	0.089	0.00015
75	39.78	41.68	0.89	0.089	0.00012
76	43.67	45.75	0.91	0.083	0.000096
77	47.94	50.22	0.90	0.074	0.000071
78	52.62	55.13	0.85	0.064	0.000051
79	57.77	60.52	0.82	0.056	0.000037
80	63.41	66.44	0.83	0.052	0.000028
81	69.61	72.94	0.88	0.050	0.000023
82	76.42	80.07	0.99	0.051	0.000019
83	83.89	87.90	1.11	0.053	0.000016
84	92.09	96.49	1.20	0.052	0.000013
85	101.1	105.9	1.24	0.049	0.000010
86	111.0	116.3	1.27	0.045	0.000008
87	121.8	127.6	1.40	0.046	0.000007
88	133.7	140.1	1.71	0.051	0.000006
89	146.8	153.8	2.27	0.061	0.000006
90	161.2	168.9	2.95	0.073	0.000006

Beckman Coulter LS13320

TiO2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	3.44	0.077	0.000005
92	194.2	203.5	3.44	0.070	0.000004
93	213.2	223.4	2.84	0.053	0.000003
94	234.1	245.2	1.84	0.031	0.000001
95	256.9	269.2	0.85	0.013	4.38E-7
96	282.1	295.5	0.24	0.0034	9.31E-8
97	309.6	324.4	0.033	0.00043	9.82E-9
98	339.9	356.1	0.0013	0.000015	2.82E-10
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1.$av D1.$av
File ID:	D1
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_01_150845.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_02_151032.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_03_151218.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_04_152108.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_05_152255.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_06_152442.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_07_153633.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_08_153821.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_09_154008.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_10_155029.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_11_155216.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_12_155403.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_13_160305.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_14_160453.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_15_160640.$ls

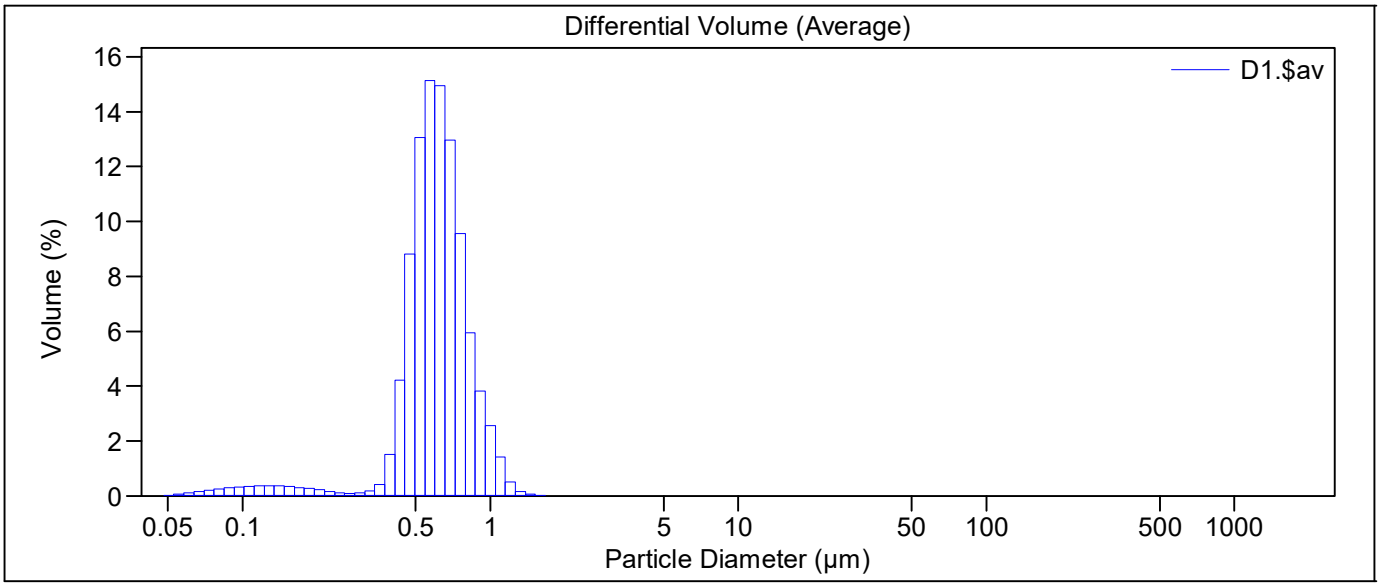
Volume Statistics (Arithmetic) D1.$av

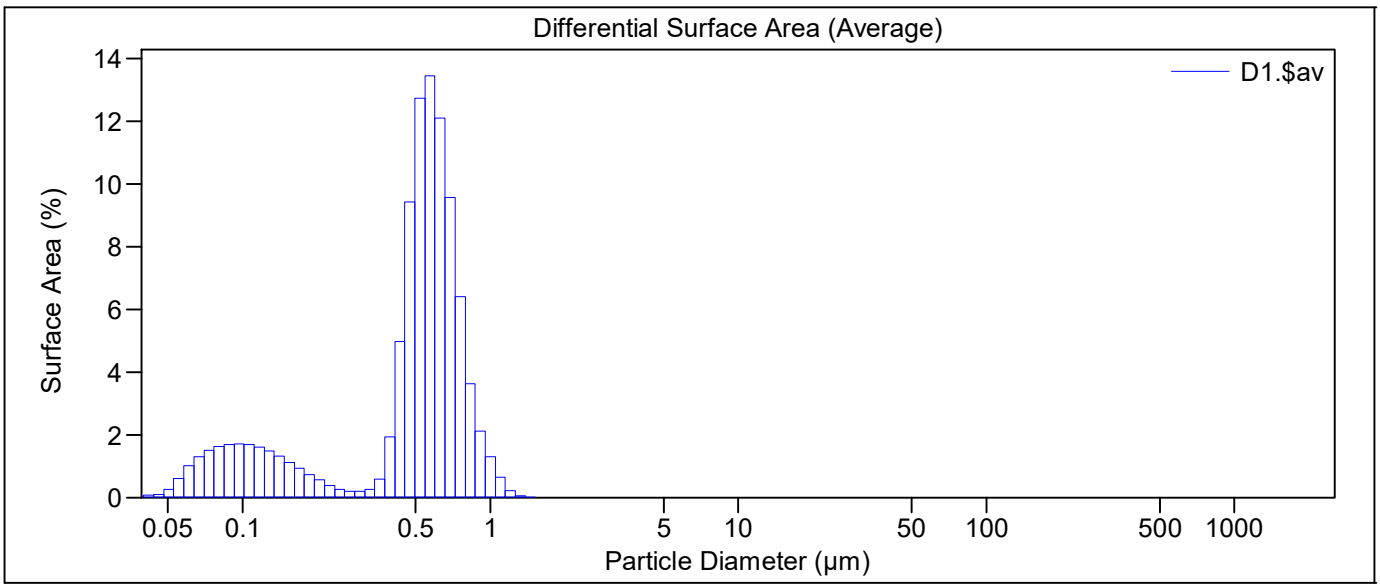
Calculations from 0.040 µm to 2000 µm

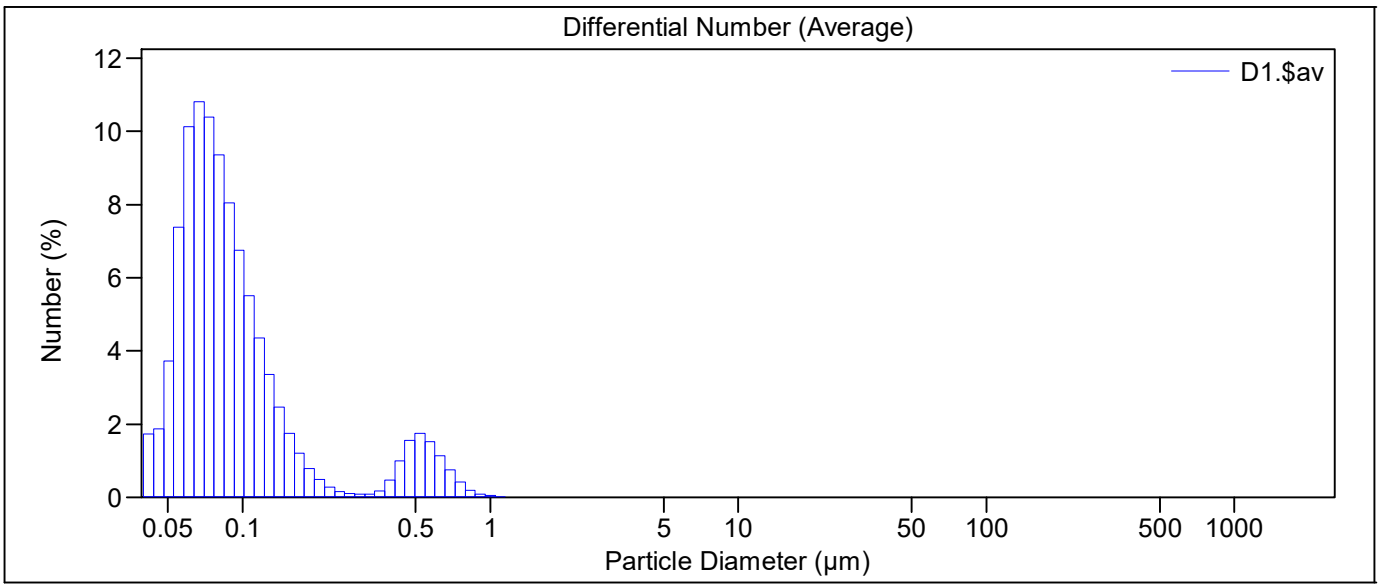
Volume:	100%		
Mean:	0.619 µm	S.D.:	0.188 µm
Median:	0.606 µm	Variance:	0.036 µm^2
Mean/Median ratio:	1.021	C.V.:	30.5%
Mode:	0.571 µm	Skewness:	0.069 Right skewed
		Kurtosis:	1.788 Leptokurtic

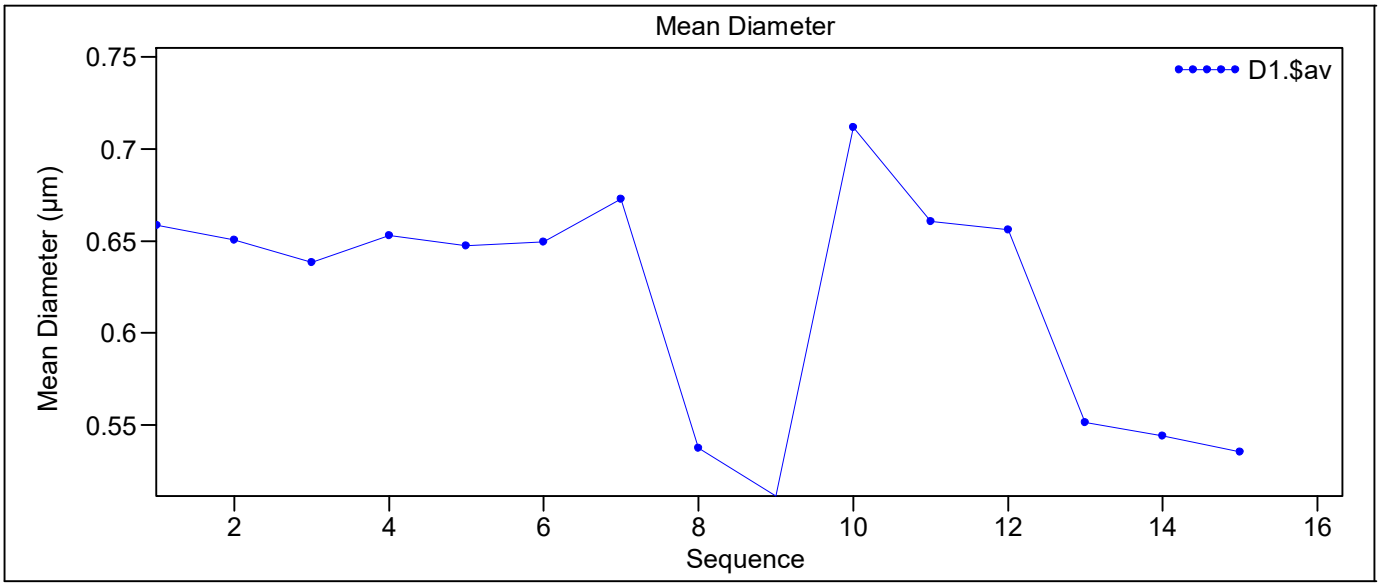
<10%	<25%	<50%	<75%	<90%
0.443 µm	0.516 µm	0.606 µm	0.716 µm	0.850 µm

Beckman Coulter LS13320









D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0068	0.082	1.73
2	0.044	0.046	0.0097	0.11	1.87
3	0.048	0.050	0.026	0.26	3.72
4	0.053	0.055	0.067	0.61	7.39
5	0.058	0.061	0.12	1.01	10.1
6	0.064	0.067	0.17	1.30	10.8
7	0.070	0.073	0.22	1.51	10.4
8	0.077	0.080	0.26	1.64	9.35
9	0.084	0.088	0.30	1.70	8.05
10	0.093	0.097	0.33	1.71	6.74
11	0.102	0.106	0.35	1.69	5.52
12	0.112	0.117	0.37	1.61	4.36
13	0.122	0.128	0.38	1.49	3.35
14	0.134	0.141	0.37	1.33	2.47
15	0.148	0.155	0.35	1.13	1.75
16	0.162	0.170	0.31	0.94	1.20
17	0.178	0.186	0.27	0.74	0.79
18	0.195	0.205	0.23	0.56	0.50
19	0.214	0.225	0.17	0.39	0.29
20	0.235	0.247	0.13	0.26	0.16
21	0.258	0.271	0.10	0.20	0.099
22	0.284	0.297	0.12	0.21	0.087
23	0.311	0.326	0.18	0.27	0.095
24	0.342	0.358	0.42	0.60	0.17
25	0.375	0.393	1.51	1.94	0.47
26	0.412	0.431	4.23	4.97	0.99
27	0.452	0.474	8.81	9.43	1.56
28	0.496	0.520	13.1	12.7	1.74
29	0.545	0.571	15.1	13.4	1.53
30	0.598	0.627	15.0	12.1	1.14
31	0.656	0.688	13.0	9.56	0.75
32	0.721	0.755	9.55	6.41	0.42
33	0.791	0.829	5.94	3.63	0.20
34	0.868	0.910	3.82	2.13	0.095
35	0.953	0.999	2.58	1.31	0.049
36	1.047	1.097	1.43	0.66	0.020
37	1.149	1.204	0.52	0.22	0.0056
38	1.261	1.321	0.16	0.063	0.0013
39	1.385	1.451	0.060	0.021	0.00037
40	1.520	1.592	0.014	0.0044	0.000064
41	1.668	1.748	0.0018	0.00052	0.000006

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.000063	0.000017	1.68E-7
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

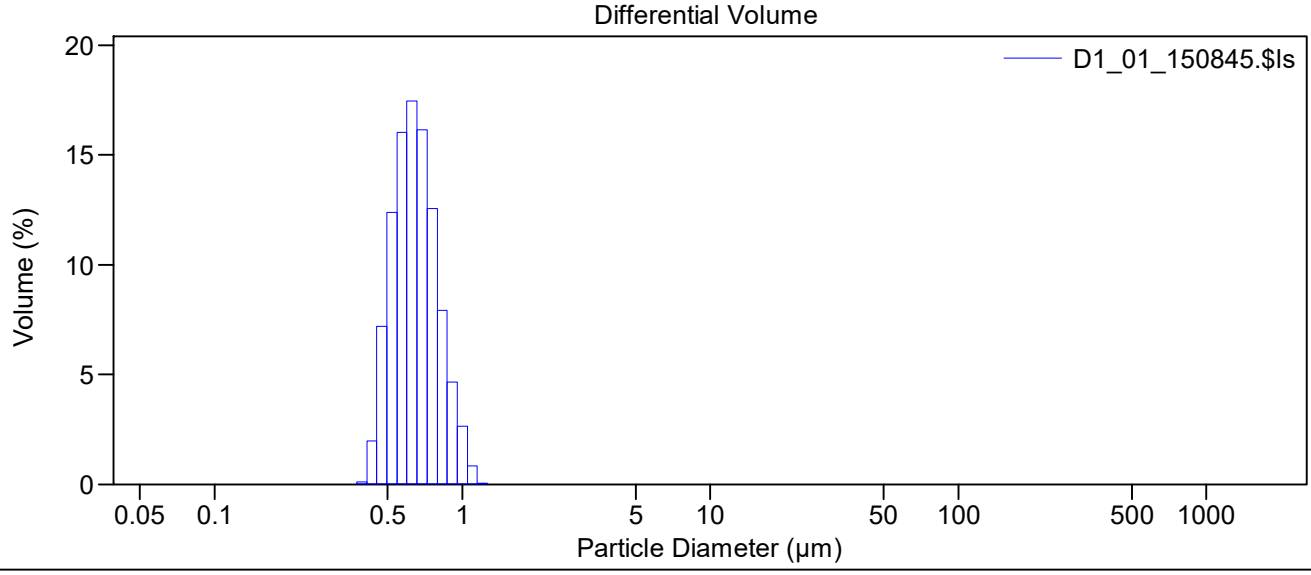
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_01_150845.$ls D1_01_150845.$ls		
File ID:	D1		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.97%		
LS 13 320	Universal Liquid Module		
Start time:	15:07 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	49%
Fluid:	water		
Software:	6.01	Firmware:	2.02

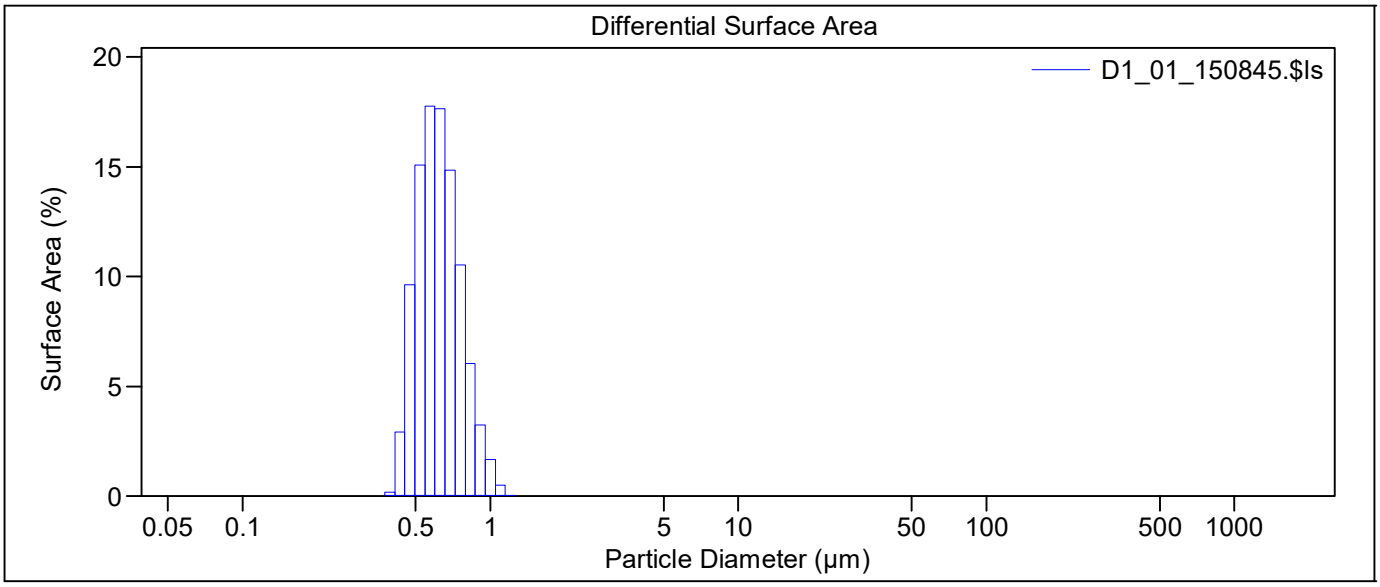
Volume Statistics (Arithmetic) D1_01_150845.$ls

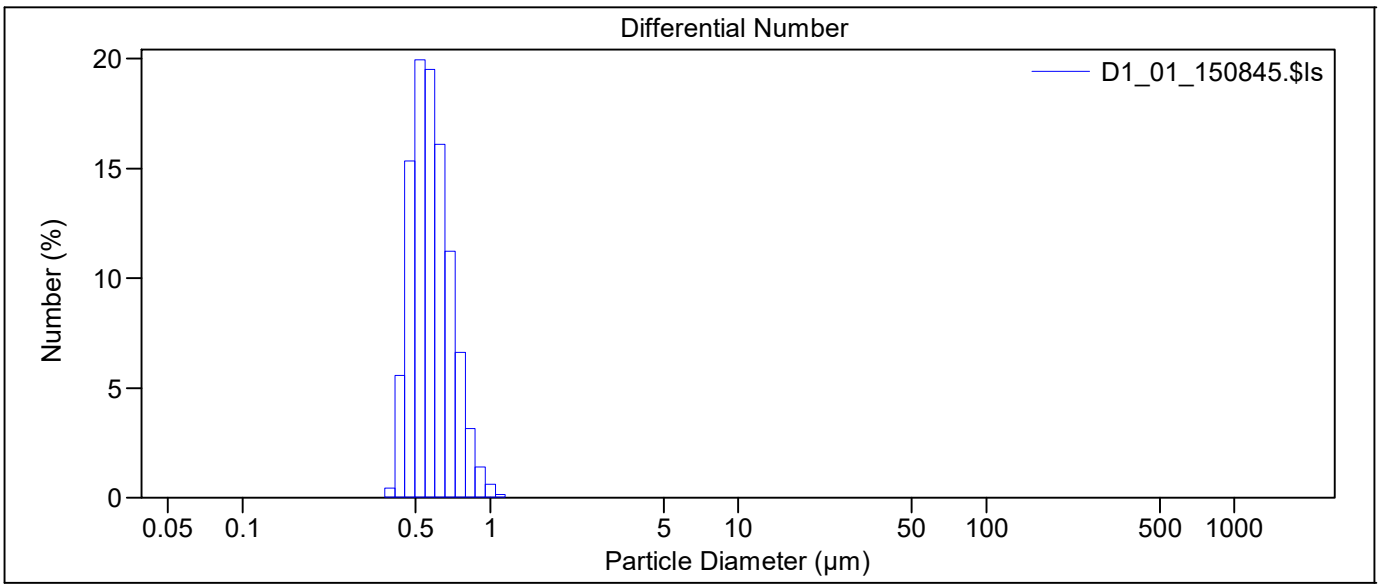
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.659 µm	S.D.:	0.137 µm
Median:	0.639 µm	Variance:	0.019 µm^2
Mean/Median ratio:	1.031	C.V.:	20.8%
Mode:	0.627 µm	Skewness:	0.753 Right skewed
		Kurtosis:	0.347 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.499 µm	0.556 µm	0.639 µm	0.741 µm	0.851 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0.11	0.18	0.43
26	0.412	0.431	1.98	2.90	5.58
27	0.452	0.474	7.20	9.61	15.3
28	0.496	0.520	12.4	15.1	19.9
29	0.545	0.571	16.0	17.8	19.5
30	0.598	0.627	17.5	17.6	16.1
31	0.656	0.688	16.1	14.8	11.2
32	0.721	0.755	12.6	10.5	6.61
33	0.791	0.829	7.92	6.04	3.15
34	0.868	0.910	4.66	3.24	1.40
35	0.953	0.999	2.64	1.67	0.60
36	1.047	1.097	0.84	0.49	0.14
37	1.149	1.204	0.060	0.032	0.0078
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

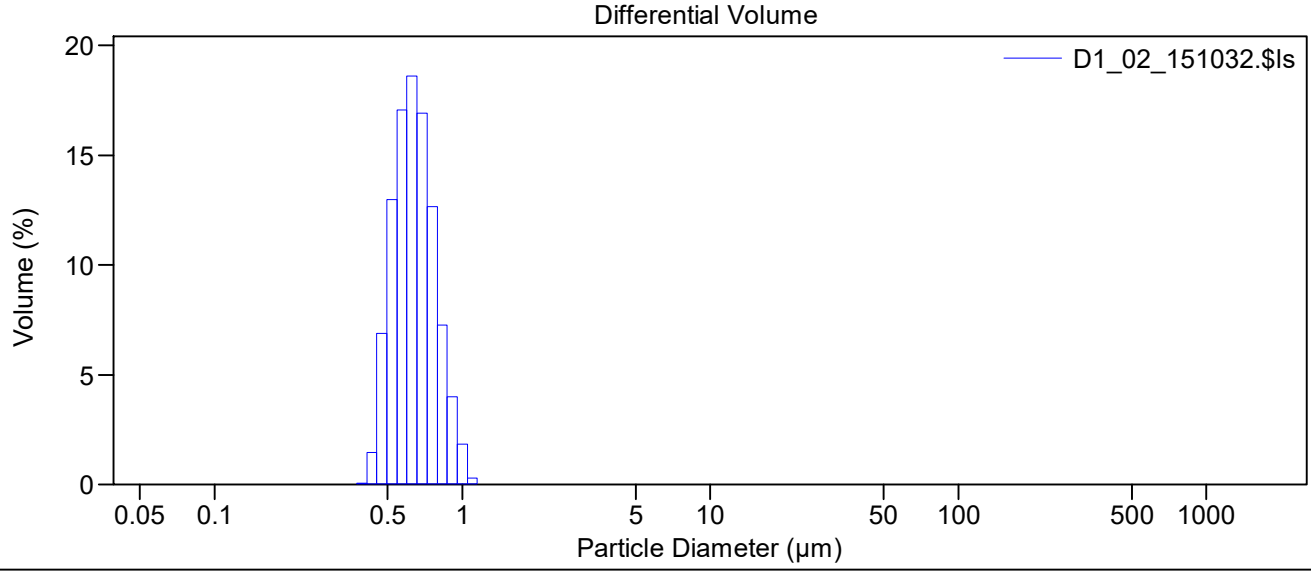
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_02_151032.$ls D1_02_151032.$ls		
File ID:	D1		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.14%		
LS 13 320	Universal Liquid Module		
Start time:	15:08 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	49%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D1_02_151032.$ls

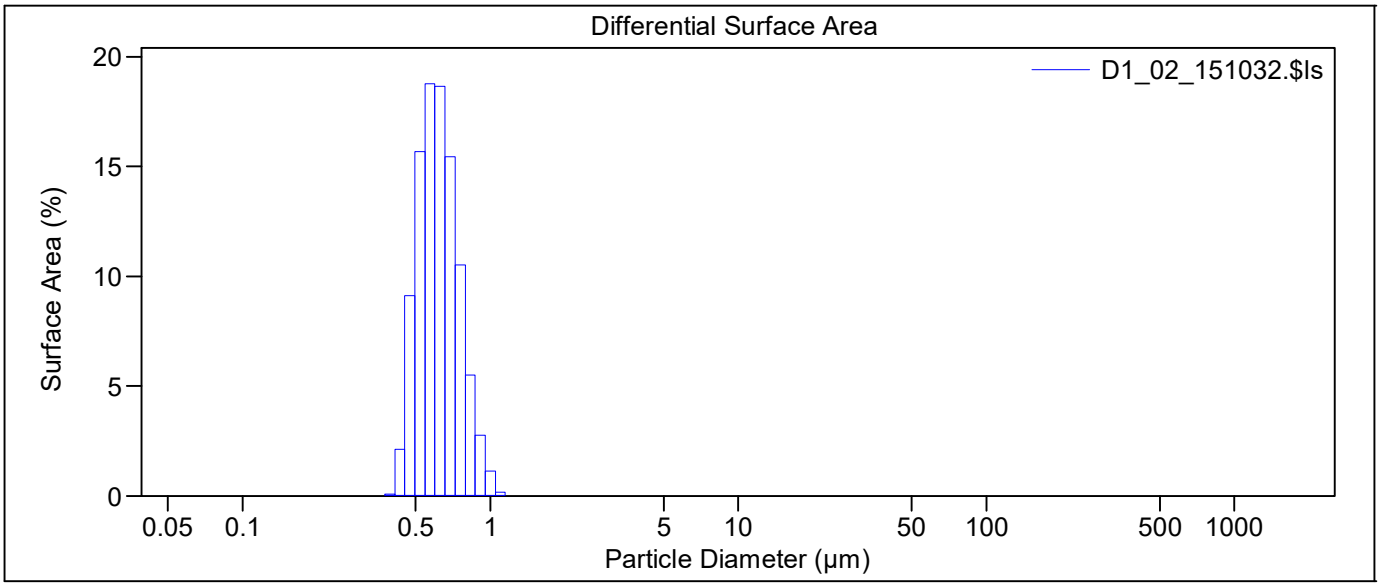
Calculations from 0.040 µm to 2000 µm

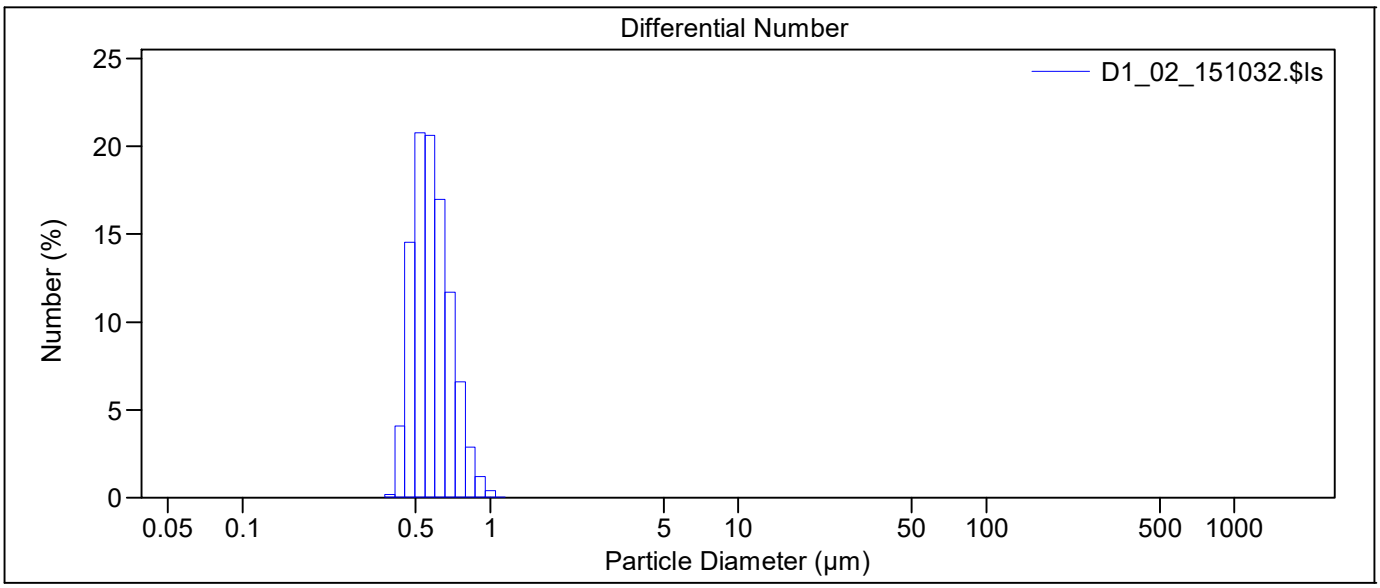
Volume:	100%		
Mean:	0.651 µm	S.D.:	0.125 µm
Median:	0.634 µm	Variance:	0.016 µm^2
Mean/Median ratio:	1.026	C.V.:	19.3%
Mode:	0.627 µm	Skewness:	0.702 Right skewed
		Kurtosis:	0.270 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.502 µm	0.556 µm	0.634 µm	0.726 µm	0.827 µm



Beckman Coulter LS13320





D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0.054	0.086	0.20
26	0.412	0.431	1.46	2.12	4.08
27	0.452	0.474	6.88	9.13	14.6
28	0.496	0.520	13.0	15.7	20.8
29	0.545	0.571	17.1	18.8	20.6
30	0.598	0.627	18.6	18.7	17.0
31	0.656	0.688	16.9	15.5	11.7
32	0.721	0.755	12.6	10.5	6.60
33	0.791	0.829	7.26	5.50	2.87
34	0.868	0.910	4.00	2.76	1.19
35	0.953	0.999	1.83	1.15	0.41
36	1.047	1.097	0.30	0.17	0.051
37	1.149	1.204	0.0060	0.0031	0.00077
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	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 %
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

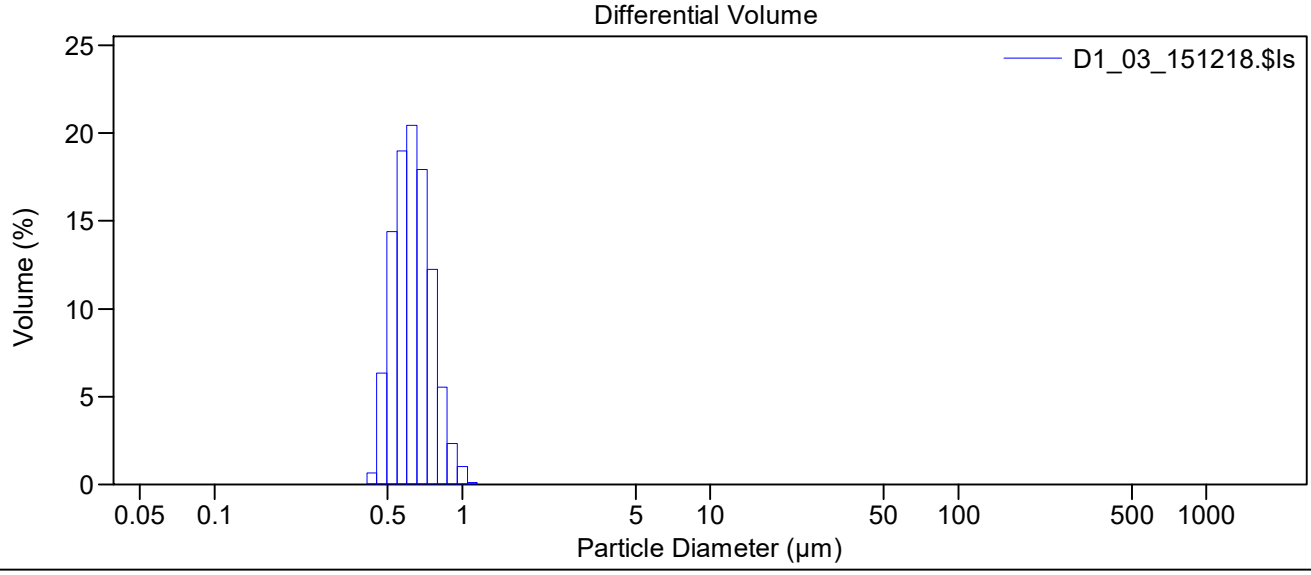
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_03_151218.$ls D1_03_151218.$ls		
File ID:	D1		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.43%		
LS 13 320	Universal Liquid Module		
Start time:	15:10 14	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	50%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D1_03_151218.$ls

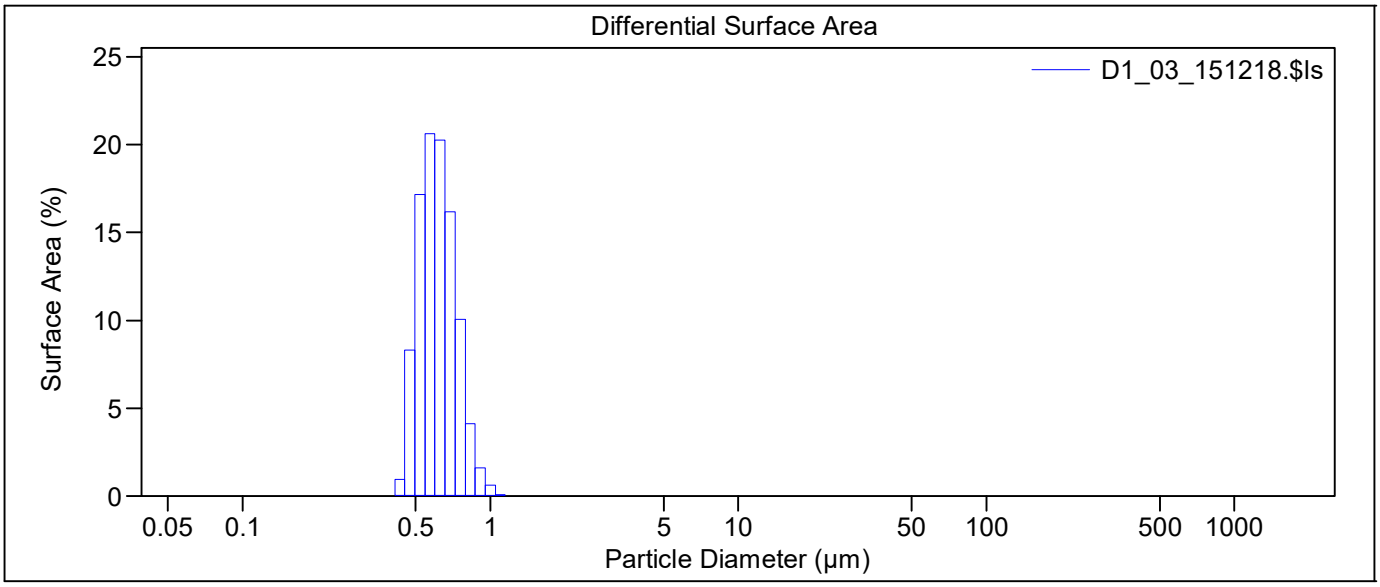
Calculations from 0.040 µm to 2000 µm

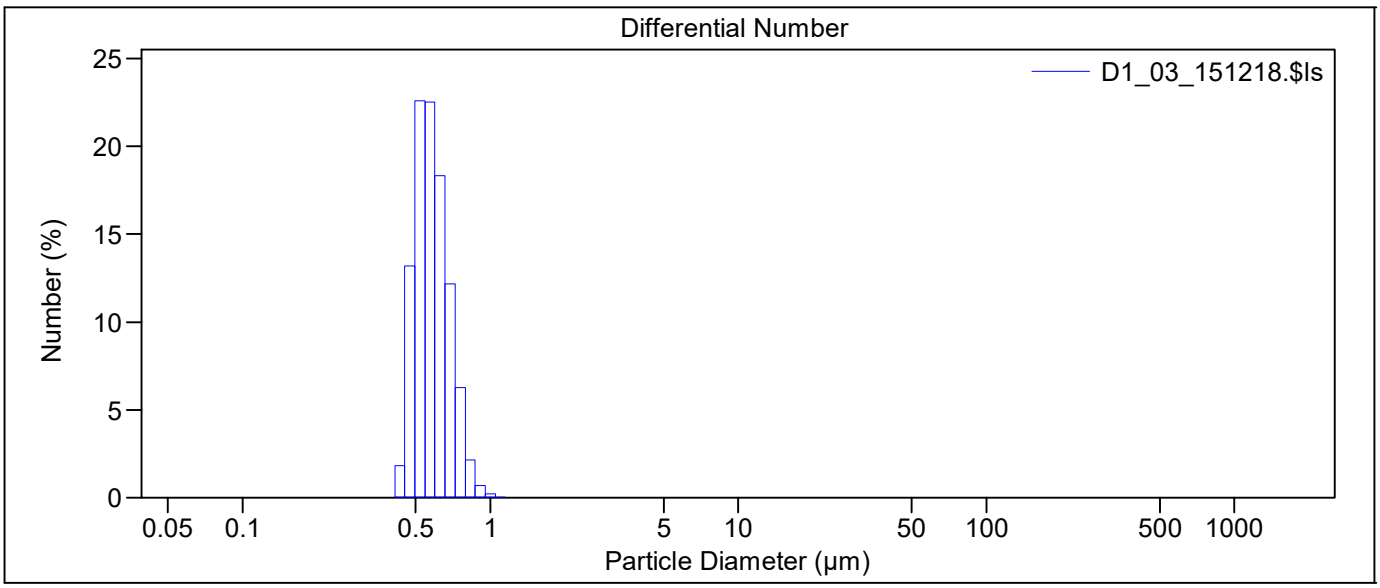
Volume:	100%		
Mean:	0.638 µm	S.D.:	0.111 µm
Median:	0.626 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.021	C.V.:	17.4%
Mode:	0.627 µm	Skewness:	0.735 Right skewed
		Kurtosis:	0.529 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.506 µm	0.555 µm	0.626 µm	0.707 µm	0.785 µm



Beckman Coulter LS13320





D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0.00055	0.00087	0.0020
26	0.412	0.431	0.66	0.95	1.82
27	0.452	0.474	6.35	8.32	13.2
28	0.496	0.520	14.4	17.2	22.6
29	0.545	0.571	19.0	20.6	22.5
30	0.598	0.627	20.4	20.2	18.3
31	0.656	0.688	17.9	16.2	12.2
32	0.721	0.755	12.2	10.1	6.27
33	0.791	0.829	5.52	4.13	2.14
34	0.868	0.910	2.34	1.59	0.69
35	0.953	0.999	1.01	0.63	0.22
36	1.047	1.097	0.11	0.063	0.019
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

Beckman Coulter LS13320

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

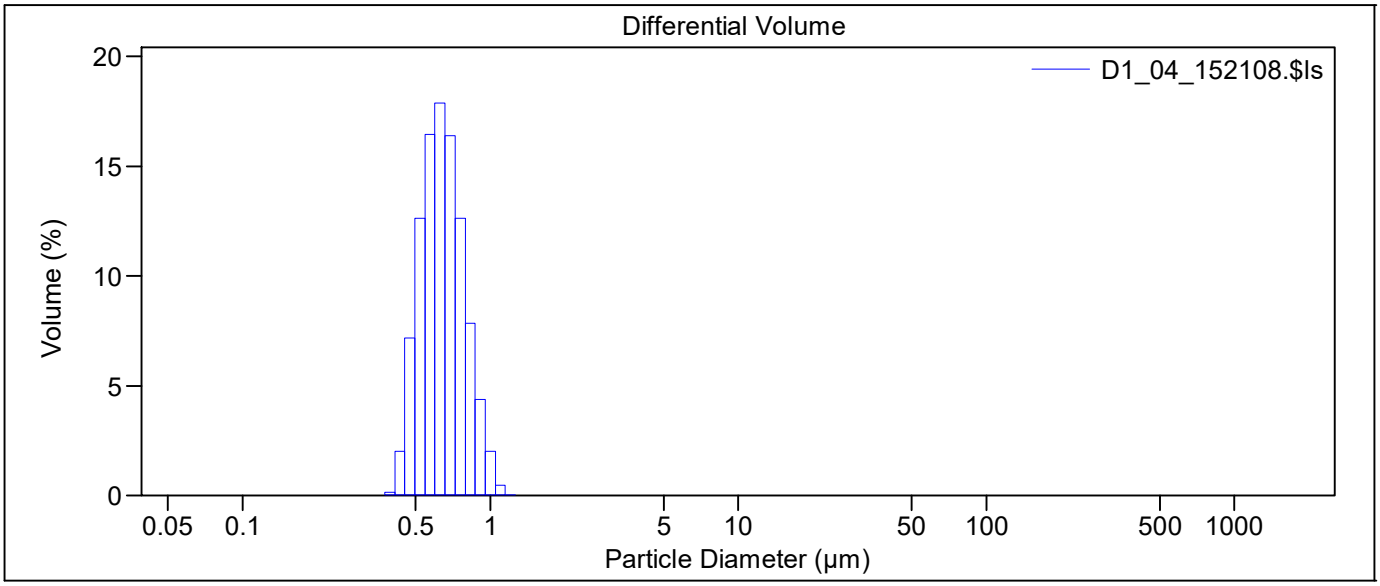
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_04_152108.$ls D1_04_152108.$ls		
File ID:	D1		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.06%		
LS 13 320	Universal Liquid Module		
Start time:	15:19 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

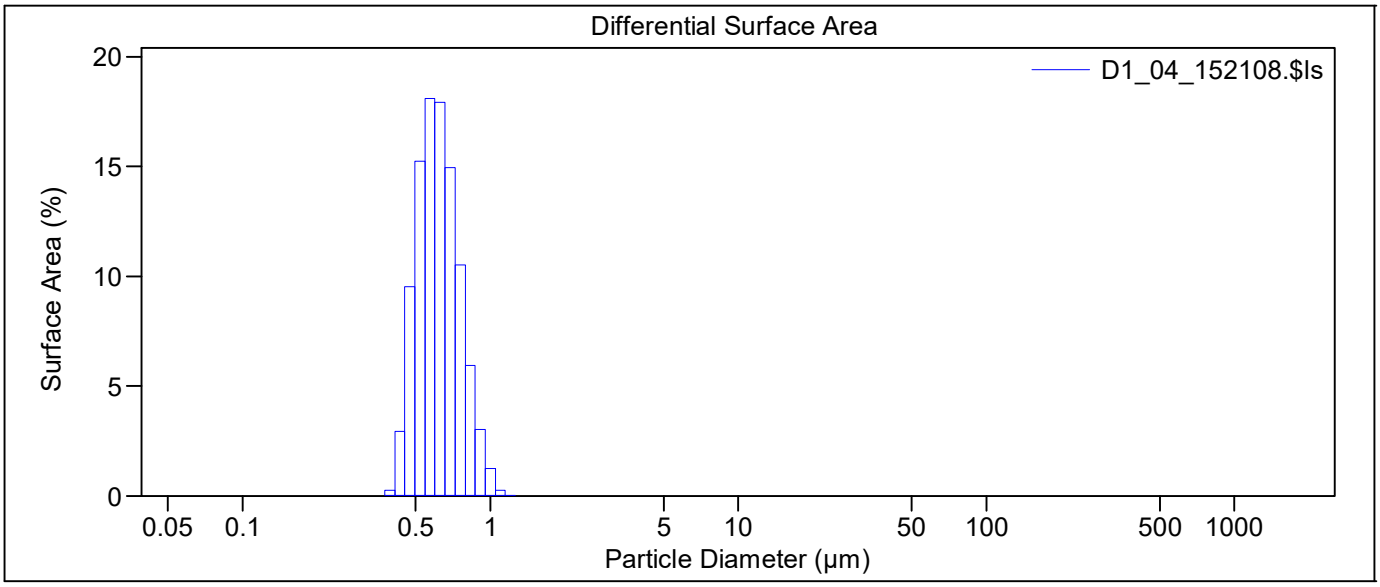
Volume Statistics (Arithmetic) D1_04_152108.$ls

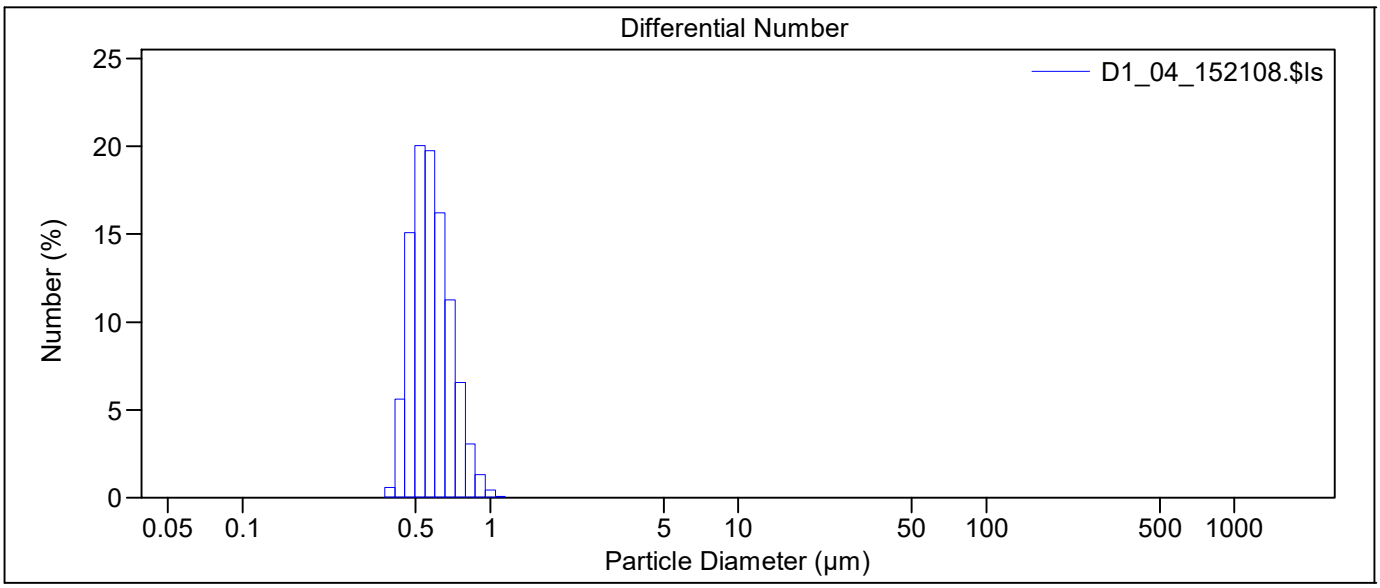
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.653 µm	S.D.:	0.131 µm
Median:	0.636 µm	Variance:	0.017 µm^2
Mean/Median ratio:	1.027	C.V.:	20.0%
Mode:	0.627 µm	Skewness:	0.692 Right skewed
		Kurtosis:	0.259 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.499 µm	0.555 µm	0.636 µm	0.734 µm	0.838 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.0012	0.0021	0.0059
25	0.375	0.393	0.16	0.25	0.57
26	0.412	0.431	2.01	2.93	5.60
27	0.452	0.474	7.17	9.52	15.1
28	0.496	0.520	12.6	15.3	20.1
29	0.545	0.571	16.4	18.1	19.8
30	0.598	0.627	17.9	17.9	16.2
31	0.656	0.688	16.4	15.0	11.2
32	0.721	0.755	12.6	10.5	6.55
33	0.791	0.829	7.83	5.94	3.07
34	0.868	0.910	4.38	3.02	1.30
35	0.953	0.999	2.01	1.27	0.45
36	1.047	1.097	0.47	0.27	0.080
37	1.149	1.204	0.032	0.016	0.0040
38	1.261	1.321	0.00023	0.00011	0.000022
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

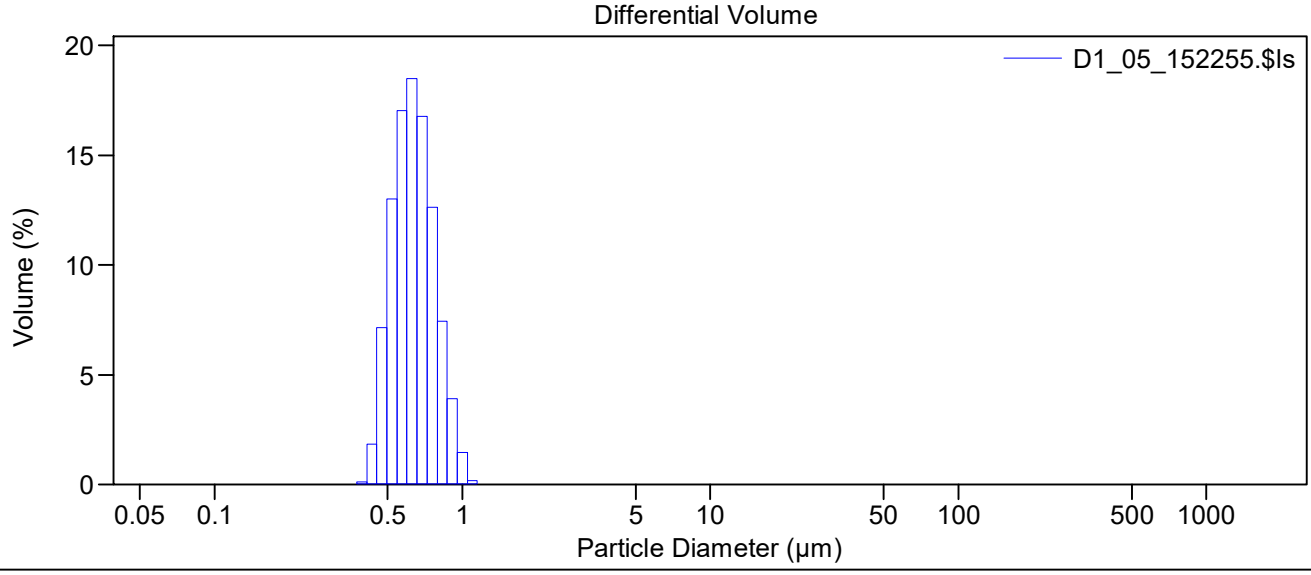
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_05_152255.$ls D1_05_152255.$ls		
File ID:	D1		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.14%		
LS 13 320	Universal Liquid Module		
Start time:	15:21 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

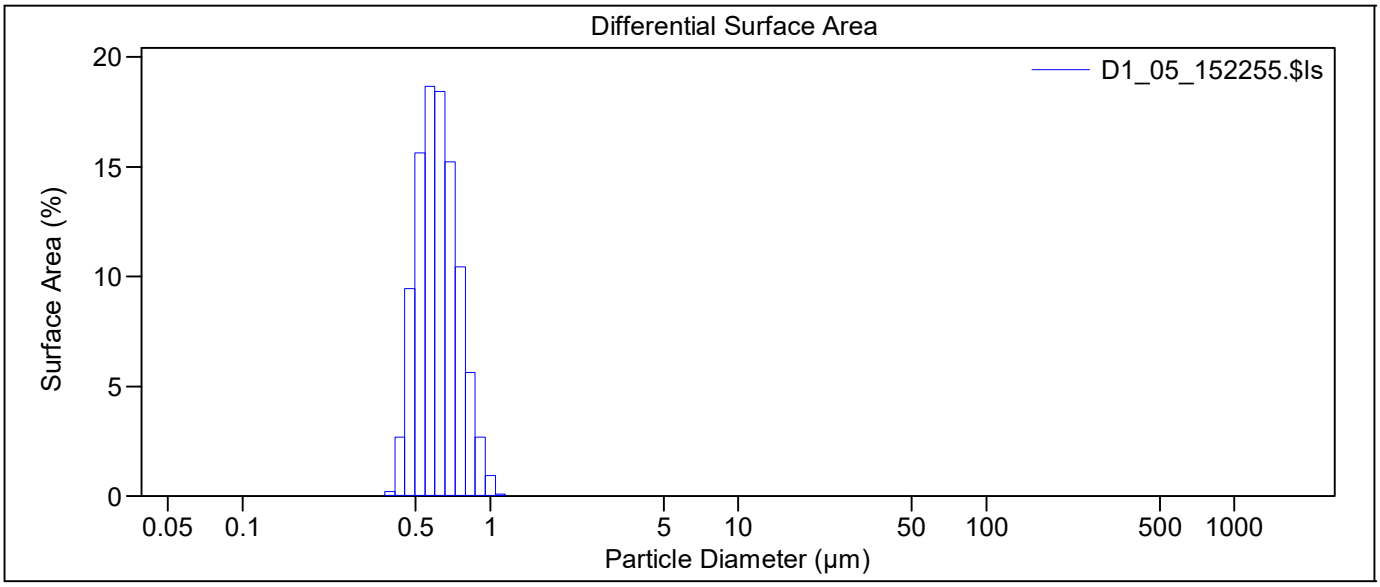
Volume Statistics (Arithmetic) D1_05_152255.$ls

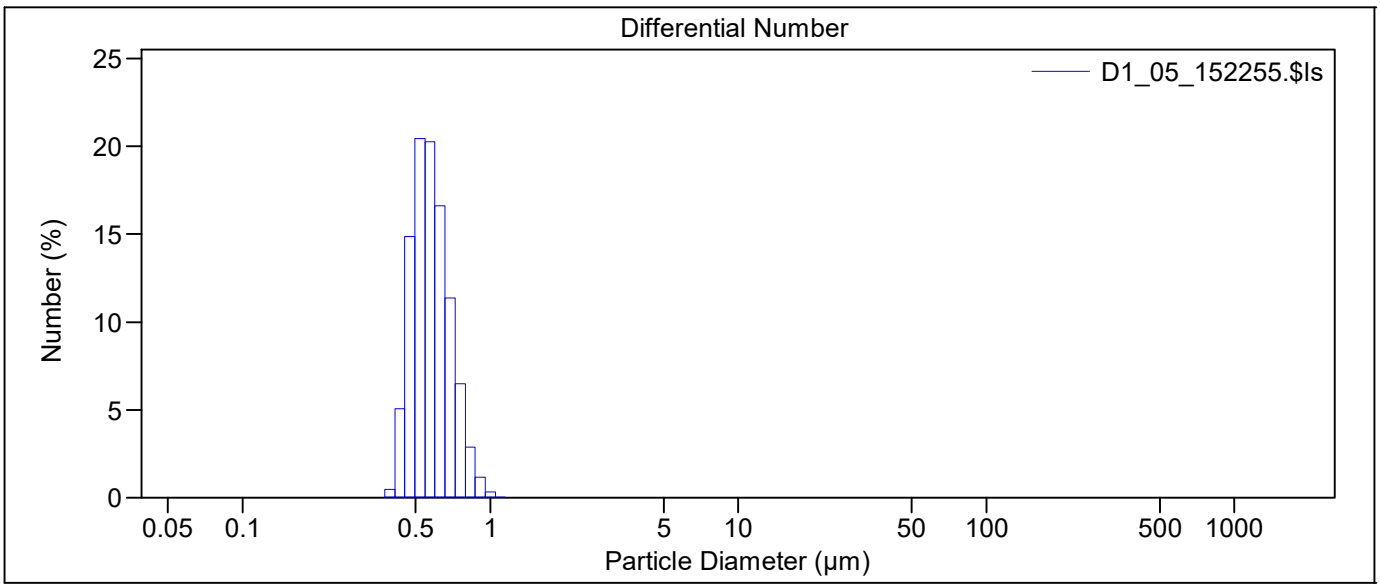
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.647 µm	S.D.:	0.124 µm
Median:	0.632 µm	Variance:	0.015 µm^2
Mean/Median ratio:	1.024	C.V.:	19.1%
Mode:	0.627 µm	Skewness:	0.626 Right skewed
		Kurtosis:	0.097 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.500 µm	0.554 µm	0.632 µm	0.724 µm	0.822 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.00094	0.0016	0.0045
25	0.375	0.393	0.13	0.20	0.47
26	0.412	0.431	1.84	2.67	5.07
27	0.452	0.474	7.15	9.43	14.9
28	0.496	0.520	13.0	15.6	20.4
29	0.545	0.571	17.0	18.7	20.3
30	0.598	0.627	18.5	18.4	16.6
31	0.656	0.688	16.8	15.2	11.4
32	0.721	0.755	12.6	10.4	6.48
33	0.791	0.829	7.45	5.62	2.89
34	0.868	0.910	3.91	2.69	1.15
35	0.953	0.999	1.47	0.92	0.33
36	1.047	1.097	0.16	0.093	0.027
37	1.149	1.204	0.0015	0.00079	0.00019
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

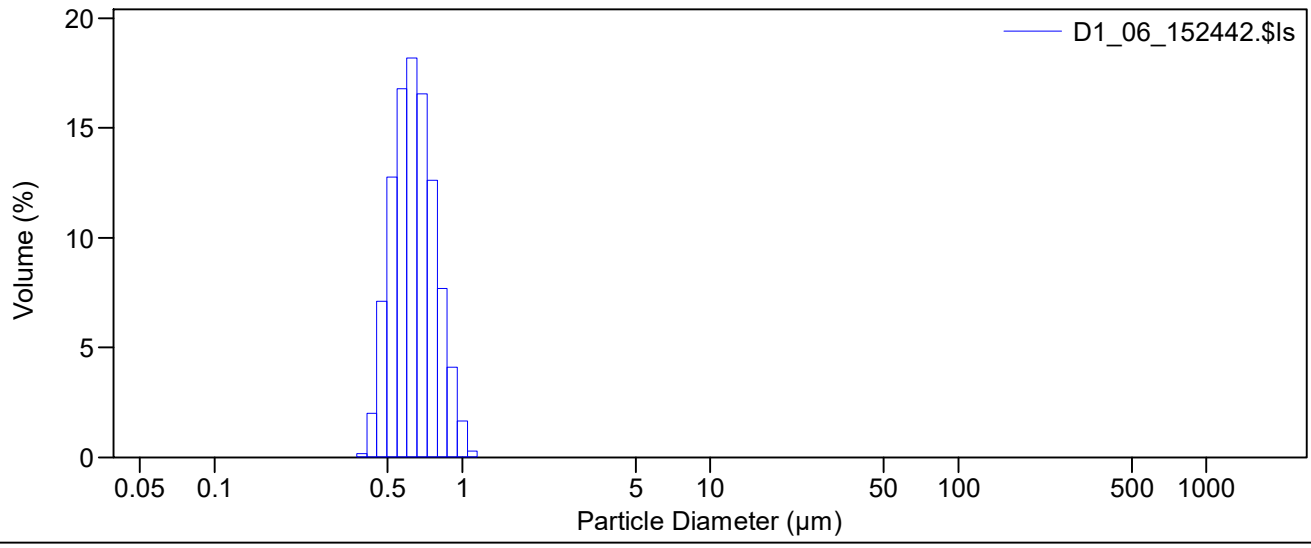
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_06_152442.$ls D1_06_152442.$ls		
File ID:	D1		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.11%		
LS 13 320	Universal Liquid Module		
Start time:	15:23 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

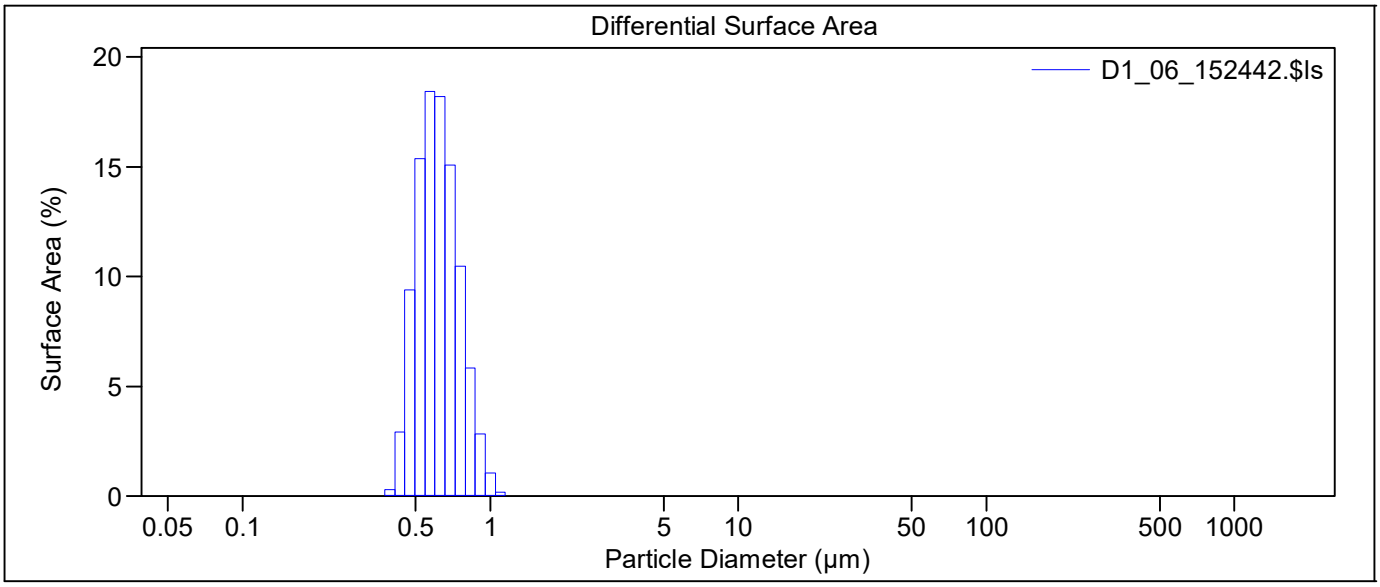
Volume Statistics (Arithmetic) D1_06_152442.$ls

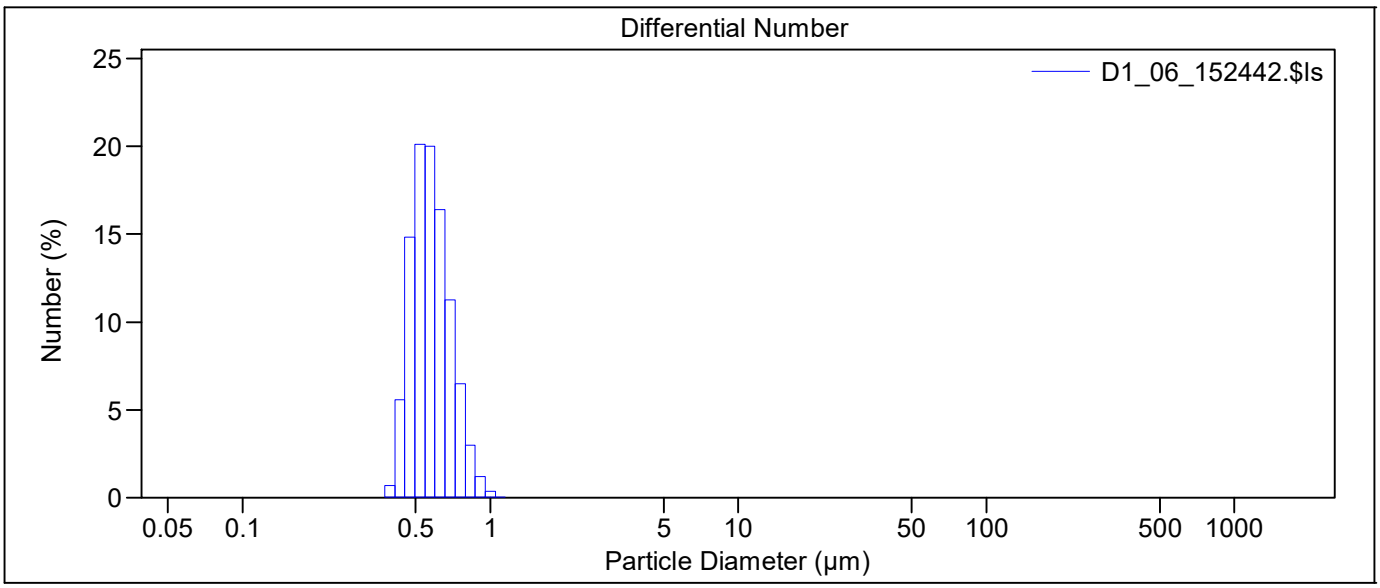
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.650 µm	S.D.:	0.127 µm
Median:	0.634 µm	Variance:	0.016 µm^2
Mean/Median ratio:	1.025	C.V.:	19.5%
Mode:	0.627 µm	Skewness:	0.647 Right skewed
		Kurtosis:	0.172 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.499 µm	0.554 µm	0.634 µm	0.728 µm	0.829 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.0034	0.0059	0.016
25	0.375	0.393	0.19	0.30	0.69
26	0.412	0.431	2.02	2.93	5.56
27	0.452	0.474	7.10	9.39	14.8
28	0.496	0.520	12.8	15.4	20.1
29	0.545	0.571	16.8	18.4	20.0
30	0.598	0.627	18.2	18.2	16.4
31	0.656	0.688	16.5	15.1	11.3
32	0.721	0.755	12.6	10.5	6.50
33	0.791	0.829	7.70	5.82	3.00
34	0.868	0.910	4.12	2.84	1.21
35	0.953	0.999	1.65	1.04	0.37
36	1.047	1.097	0.29	0.16	0.048
37	1.149	1.204	0.014	0.0075	0.0018
38	1.261	1.321	0.00010	0.000048	0.000010
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

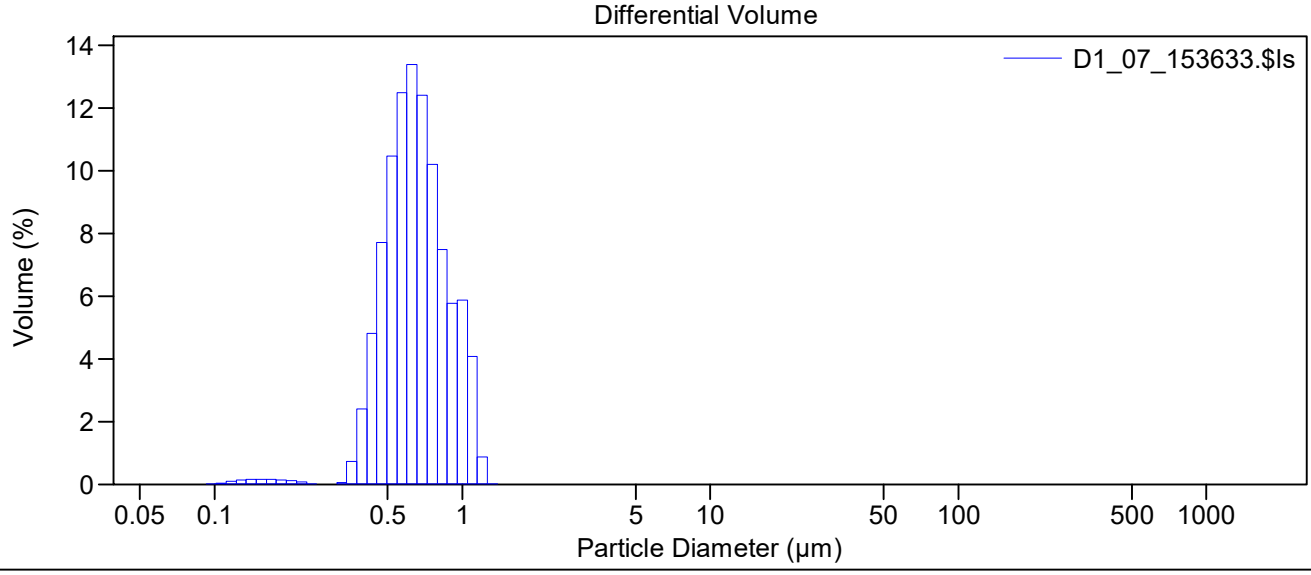
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_07_153633.$ls D1_07_153633.$ls		
File ID:	D1		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.55%		
LS 13 320	Universal Liquid Module		
Start time:	15:34 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

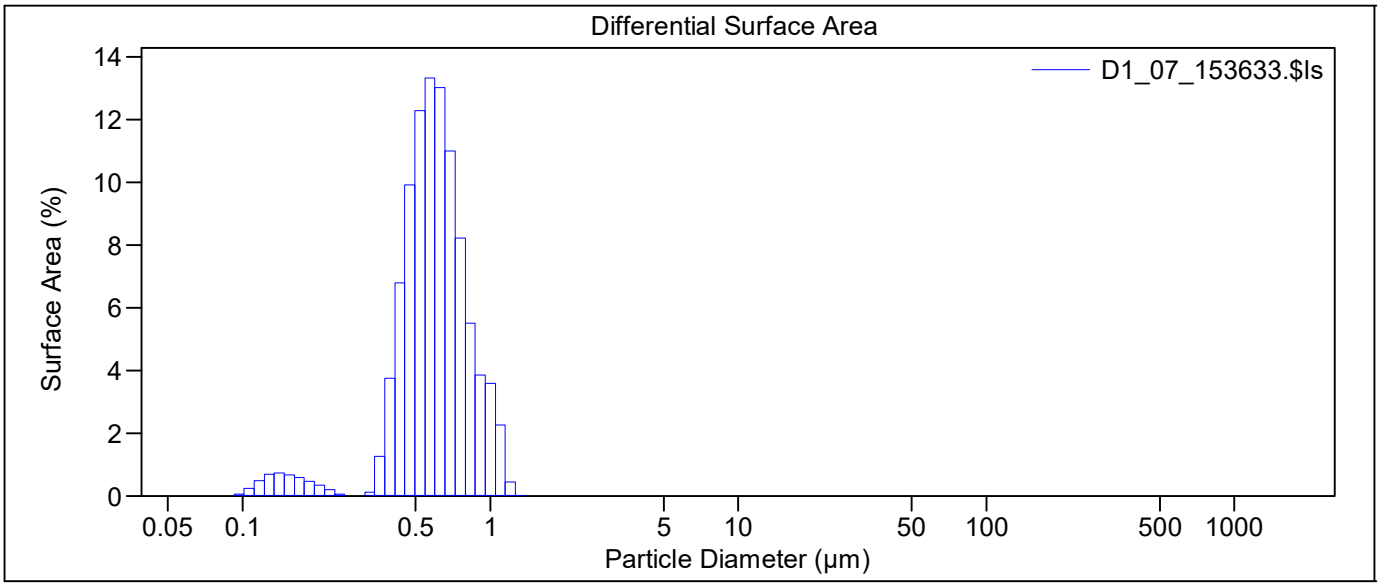
Volume Statistics (Arithmetic) D1_07_153633.$ls

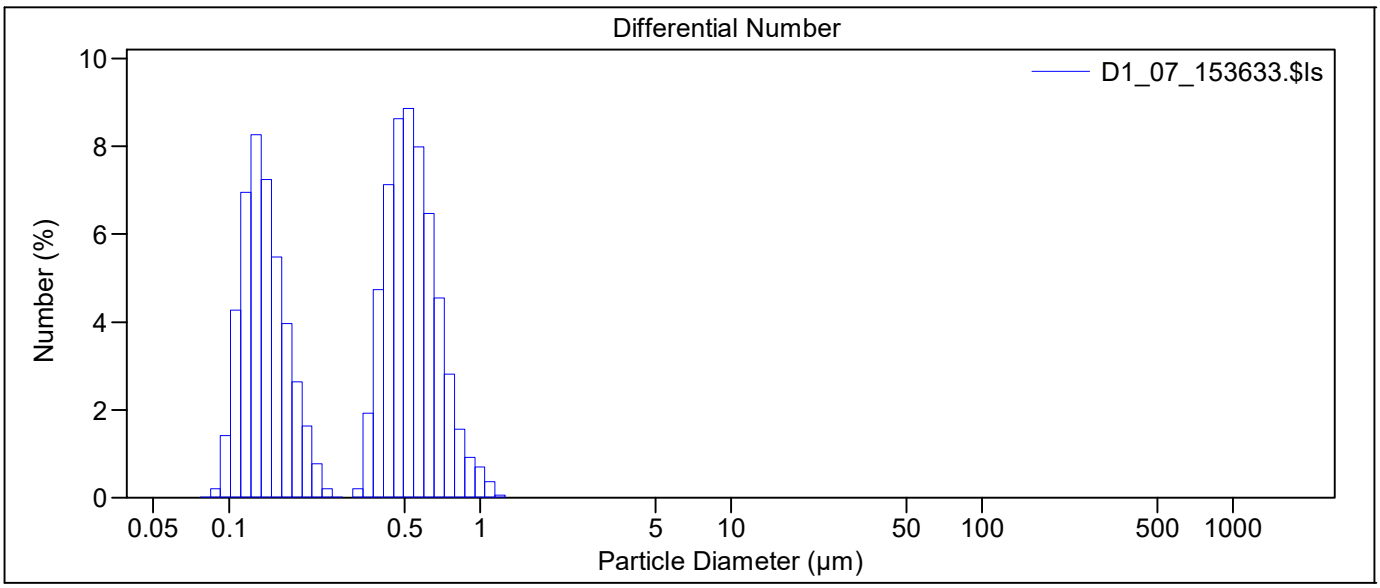
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.673 µm	S.D.:	0.194 µm
Median:	0.642 µm	Variance:	0.038 µm^2
Mean/Median ratio:	1.047	C.V.:	28.8%
Mode:	0.627 µm	Skewness:	0.481 Right skewed
		Kurtosis:	0.085 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.457 µm	0.534 µm	0.642 µm	0.785 µm	0.967 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0.000070	0.00053	0.016
9	0.084	0.088	0.0012	0.0083	0.21
10	0.093	0.097	0.011	0.068	1.42
11	0.102	0.106	0.043	0.25	4.27
12	0.112	0.117	0.093	0.49	6.95
13	0.122	0.128	0.15	0.70	8.27
14	0.134	0.141	0.17	0.74	7.24
15	0.148	0.155	0.17	0.67	5.48
16	0.162	0.170	0.16	0.59	3.97
17	0.178	0.186	0.14	0.47	2.64

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0.12	0.35	1.63
19	0.214	0.225	0.074	0.20	0.78
20	0.235	0.247	0.025	0.063	0.20
21	0.258	0.271	0.0022	0.0050	0.013
22	0.284	0.297	0	0	0
23	0.311	0.326	0.061	0.11	0.21
24	0.342	0.358	0.74	1.26	1.92
25	0.375	0.393	2.42	3.75	4.73
26	0.412	0.431	4.81	6.80	7.13
27	0.452	0.474	7.71	9.92	8.63
28	0.496	0.520	10.5	12.3	8.87
29	0.545	0.571	12.5	13.3	7.99
30	0.598	0.627	13.4	13.0	6.47
31	0.656	0.688	12.4	11.0	4.54
32	0.721	0.755	10.2	8.23	2.82
33	0.791	0.829	7.49	5.51	1.57
34	0.868	0.910	5.77	3.87	0.91
35	0.953	0.999	5.89	3.59	0.70
36	1.047	1.097	4.08	2.27	0.37
37	1.149	1.204	0.88	0.45	0.060
38	1.261	1.321	0.029	0.013	0.0015
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

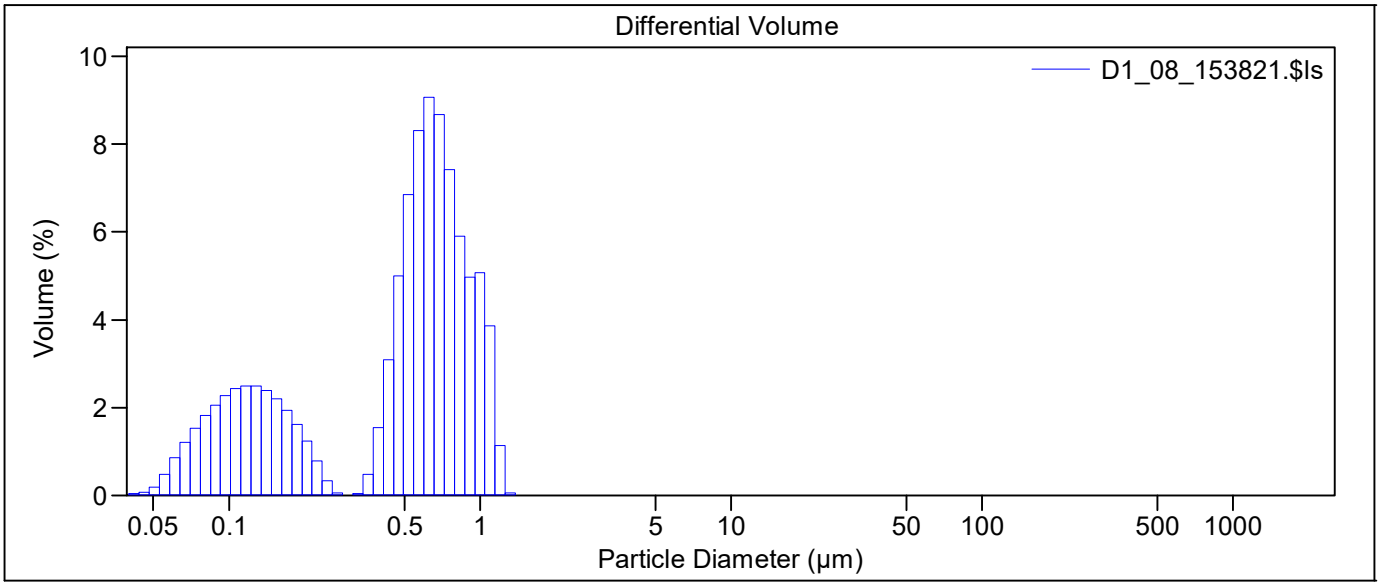
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_08_153821.$ls D1_08_153821.$ls		
File ID:	D1		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.44%		
LS 13 320	Universal Liquid Module		
Start time:	15:36 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

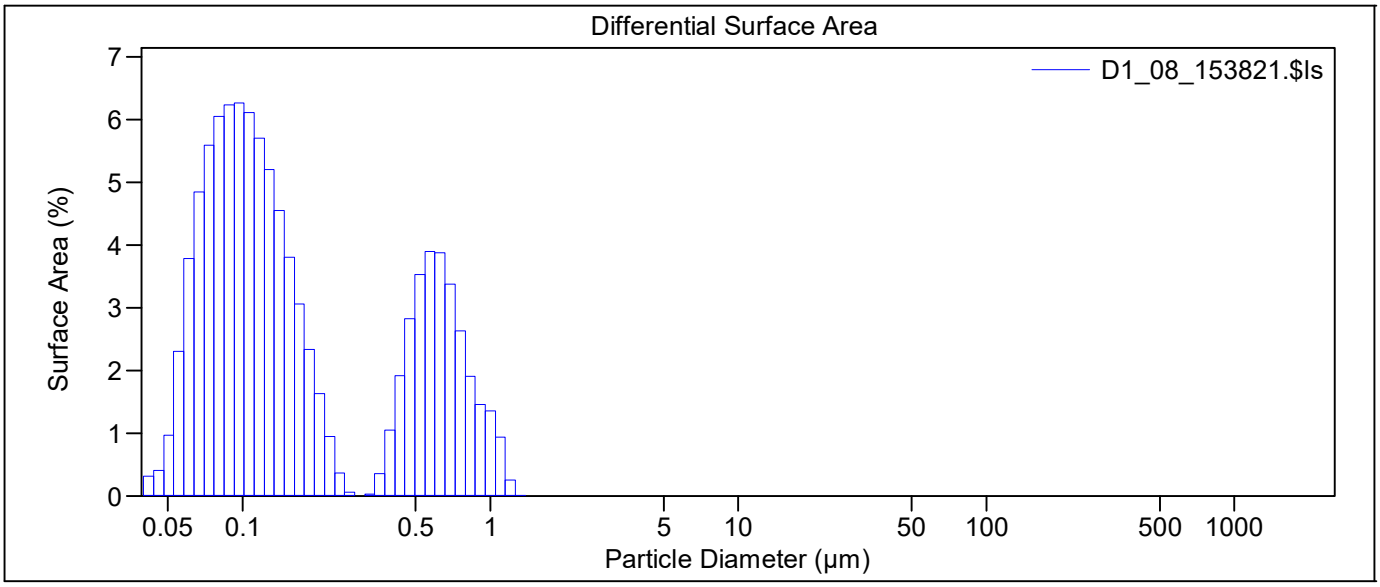
Volume Statistics (Arithmetic) D1_08_153821.$ls

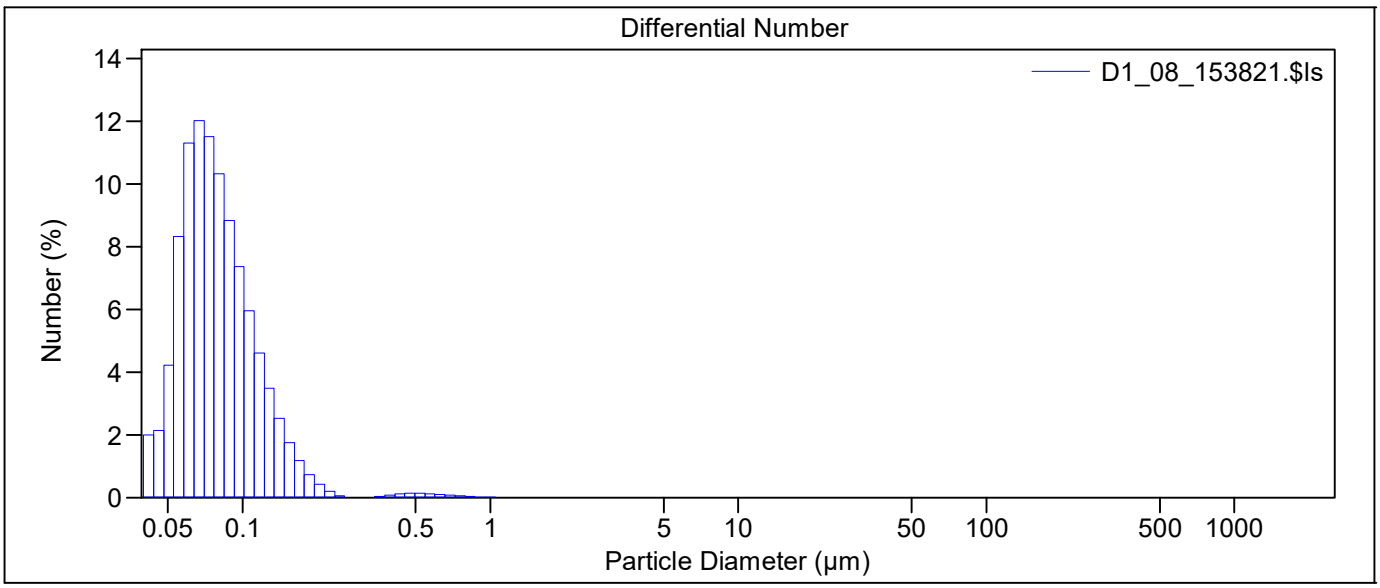
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.538 µm	S.D.:	0.311 µm
Median:	0.573 µm	Variance:	0.097 µm^2
Mean/Median ratio:	0.937	C.V.:	57.9%
Mode:	0.627 µm	Skewness:	-0.014 Left skewed
		Kurtosis:	-0.967 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.100 µm	0.184 µm	0.573 µm	0.753 µm	0.956 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.050	0.32	2.00
2	0.044	0.046	0.070	0.41	2.13
3	0.048	0.050	0.18	0.97	4.22
4	0.053	0.055	0.48	2.31	8.32
5	0.058	0.061	0.86	3.79	11.3
6	0.064	0.067	1.21	4.85	12.0
7	0.070	0.073	1.53	5.59	11.5
8	0.077	0.080	1.82	6.05	10.3
9	0.084	0.088	2.06	6.24	8.83
10	0.093	0.097	2.27	6.26	7.37
11	0.102	0.106	2.43	6.11	5.96
12	0.112	0.117	2.49	5.70	4.62
13	0.122	0.128	2.49	5.20	3.49
14	0.134	0.141	2.39	4.55	2.54
15	0.148	0.155	2.19	3.80	1.76
16	0.162	0.170	1.94	3.06	1.18
17	0.178	0.186	1.62	2.33	0.74

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	1.25	1.63	0.43
19	0.214	0.225	0.79	0.94	0.21
20	0.235	0.247	0.34	0.37	0.067
21	0.258	0.271	0.065	0.065	0.0098
22	0.284	0.297	0.0027	0.0025	0.00031
23	0.311	0.326	0.041	0.034	0.0035
24	0.342	0.358	0.48	0.36	0.031
25	0.375	0.393	1.54	1.05	0.075
26	0.412	0.431	3.09	1.92	0.11
27	0.452	0.474	5.00	2.83	0.14
28	0.496	0.520	6.85	3.53	0.14
29	0.545	0.571	8.31	3.90	0.13
30	0.598	0.627	9.07	3.88	0.11
31	0.656	0.688	8.67	3.38	0.079
32	0.721	0.755	7.42	2.63	0.051
33	0.791	0.829	5.90	1.91	0.031
34	0.868	0.910	4.96	1.46	0.020
35	0.953	0.999	5.07	1.36	0.015
36	1.047	1.097	3.86	0.94	0.0087
37	1.149	1.204	1.14	0.25	0.0019
38	1.261	1.321	0.065	0.013	0.000084
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

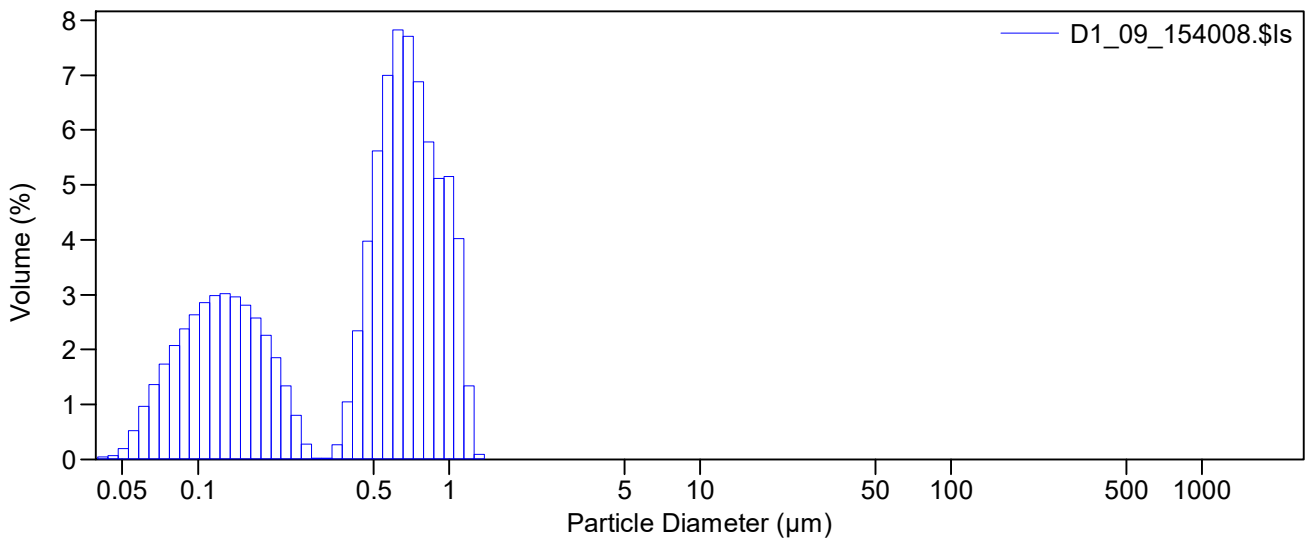
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_09_154008.$ls D1_09_154008.$ls		
File ID:	D1		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.34%		
LS 13 320	Universal Liquid Module		
Start time:	15:38 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

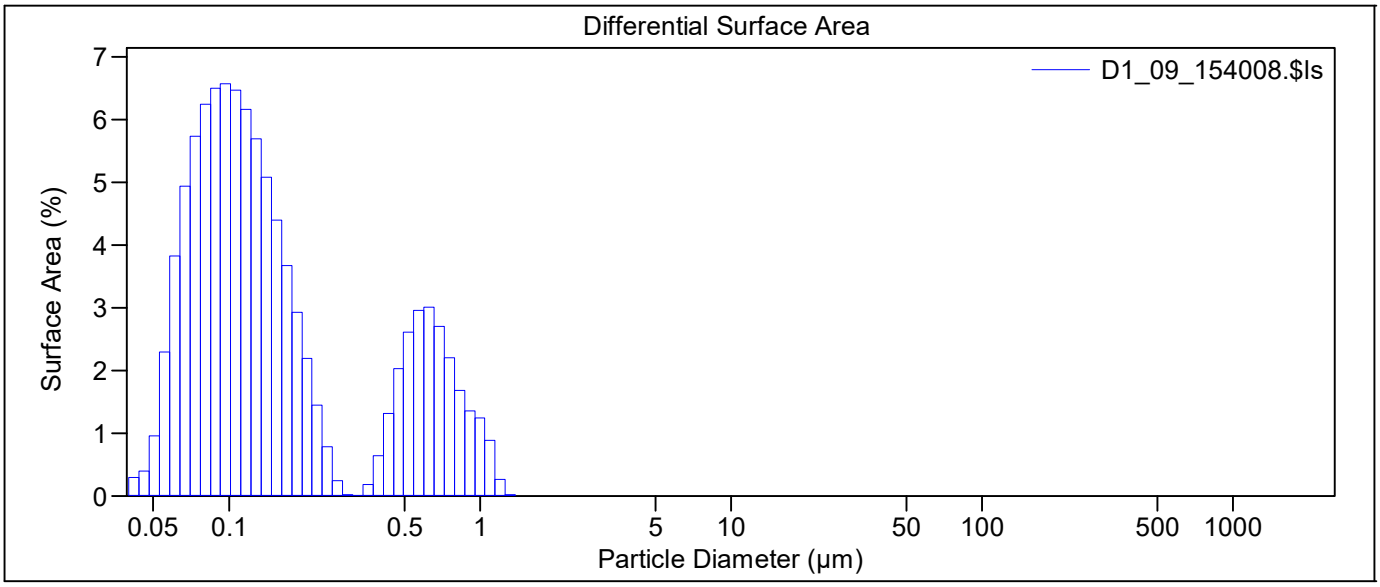
Volume Statistics (Arithmetic) D1_09_154008.$ls

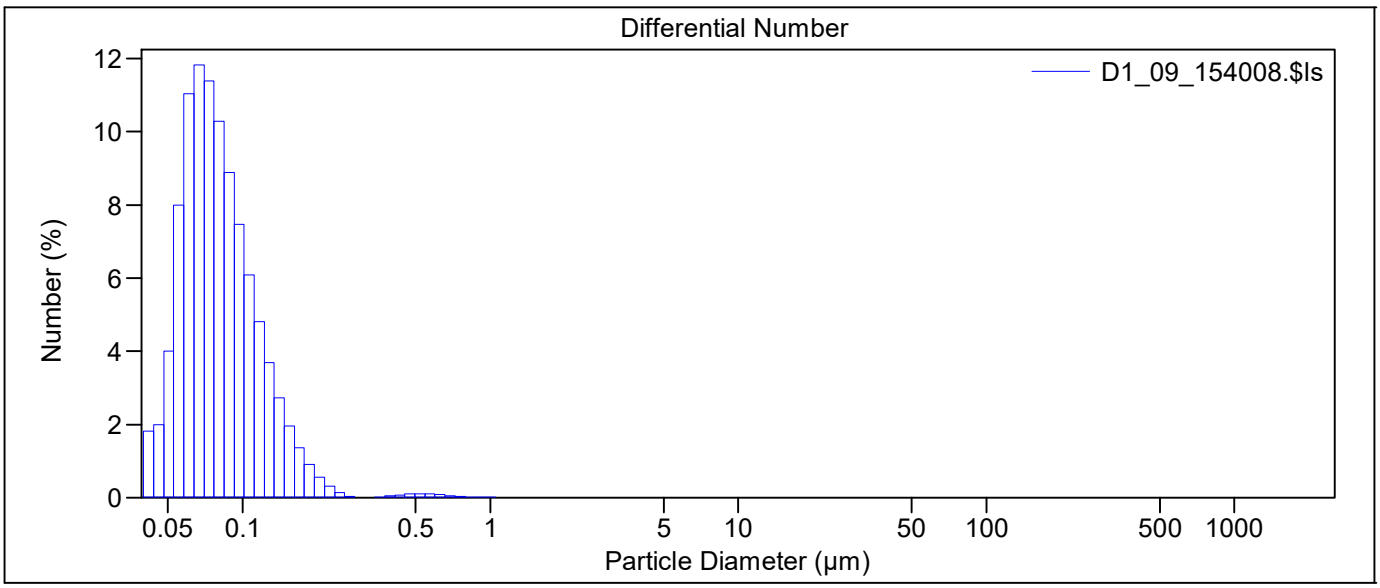
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.511 µm	S.D.:	0.329 µm
Median:	0.552 µm	Variance:	0.108 µm^2
Mean/Median ratio:	0.927	C.V.:	64.3%
Mode:	0.627 µm	Skewness:	0.135 Right skewed
		Kurtosis:	-1.151 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.095 µm	0.154 µm	0.552 µm	0.755 µm	0.965 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.052	0.30	1.83
2	0.044	0.046	0.076	0.40	2.00
3	0.048	0.050	0.20	0.96	4.01
4	0.053	0.055	0.53	2.30	7.99
5	0.058	0.061	0.96	3.82	11.0
6	0.064	0.067	1.37	4.94	11.8
7	0.070	0.073	1.74	5.73	11.4
8	0.077	0.080	2.08	6.24	10.3
9	0.084	0.088	2.38	6.50	8.89
10	0.093	0.097	2.64	6.57	7.46
11	0.102	0.106	2.85	6.47	6.09
12	0.112	0.117	2.98	6.16	4.82
13	0.122	0.128	3.02	5.69	3.69
14	0.134	0.141	2.97	5.08	2.74
15	0.148	0.155	2.81	4.39	1.96
16	0.162	0.170	2.58	3.67	1.36
17	0.178	0.186	2.26	2.93	0.90

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	1.85	2.19	0.56
19	0.214	0.225	1.35	1.45	0.31
20	0.235	0.247	0.80	0.79	0.14
21	0.258	0.271	0.28	0.25	0.036
22	0.284	0.297	0.022	0.018	0.0022
23	0.311	0.326	0.018	0.013	0.0013
24	0.342	0.358	0.27	0.18	0.015
25	0.375	0.393	1.05	0.65	0.045
26	0.412	0.431	2.35	1.31	0.075
27	0.452	0.474	3.97	2.03	0.096
28	0.496	0.520	5.62	2.61	0.10
29	0.545	0.571	6.99	2.96	0.097
30	0.598	0.627	7.82	3.02	0.082
31	0.656	0.688	7.71	2.71	0.061
32	0.721	0.755	6.88	2.20	0.041
33	0.791	0.829	5.78	1.68	0.026
34	0.868	0.910	5.12	1.36	0.018
35	0.953	0.999	5.16	1.25	0.013
36	1.047	1.097	4.03	0.89	0.0079
37	1.149	1.204	1.35	0.27	0.0020
38	1.261	1.321	0.091	0.017	0.00010
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

Beckman Coulter LS13320

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

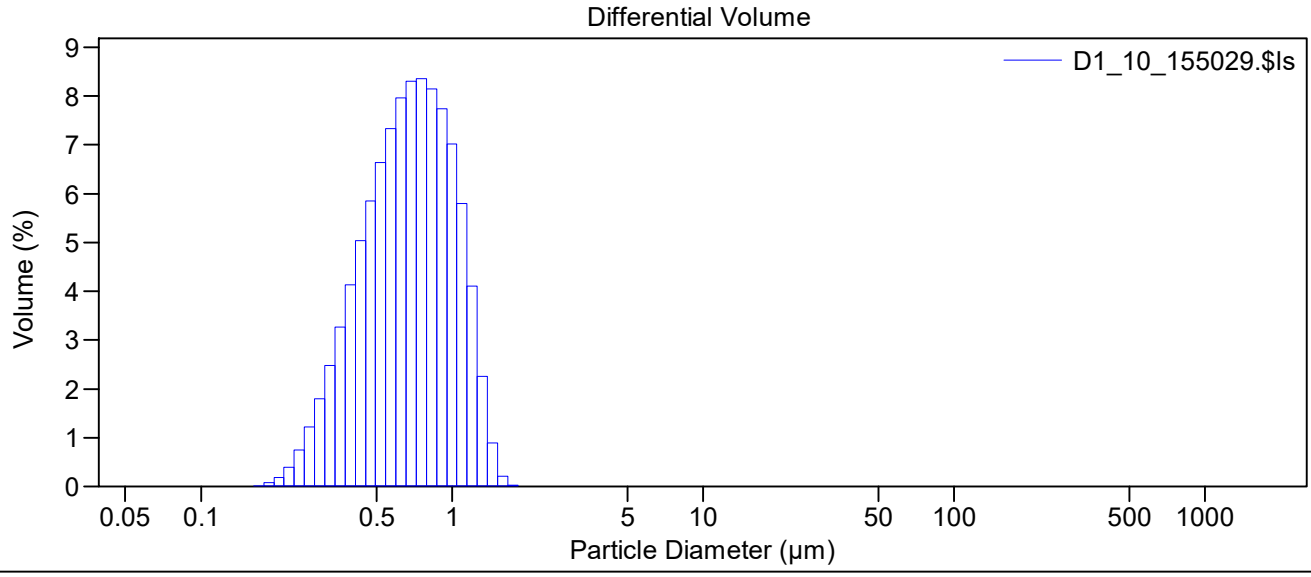
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_10_155029.$ls D1_10_155029.$ls		
File ID:	D1		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.93%		
LS 13 320	Universal Liquid Module		
Start time:	15:48 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

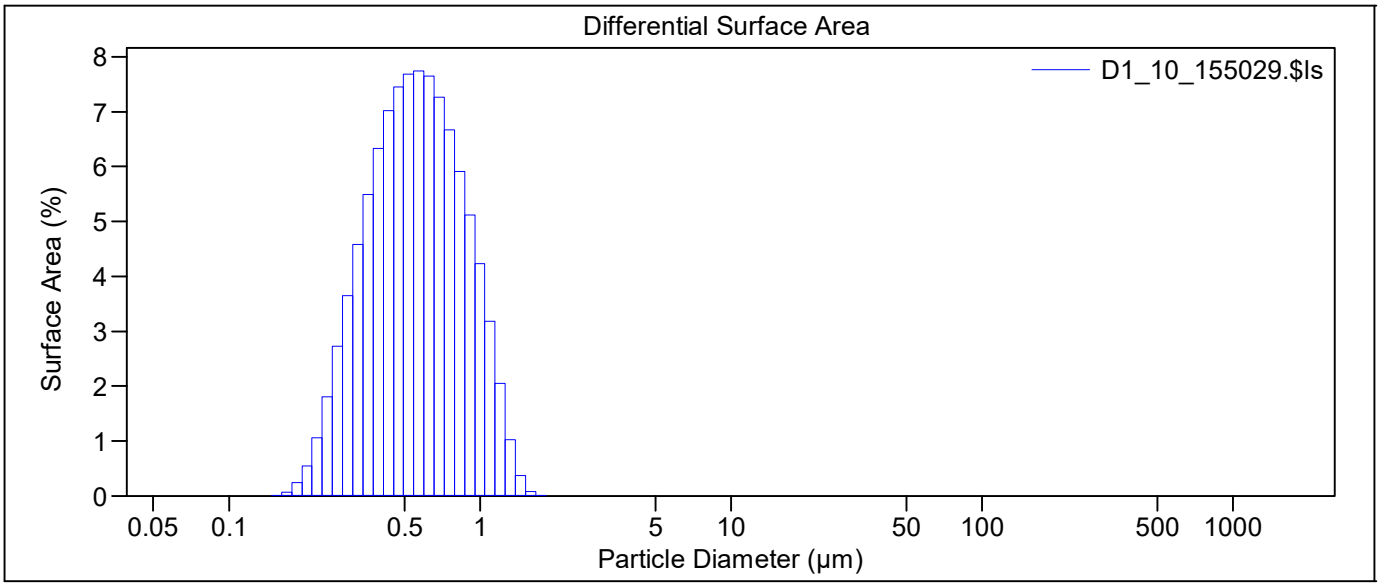
Volume Statistics (Arithmetic) D1_10_155029.$ls

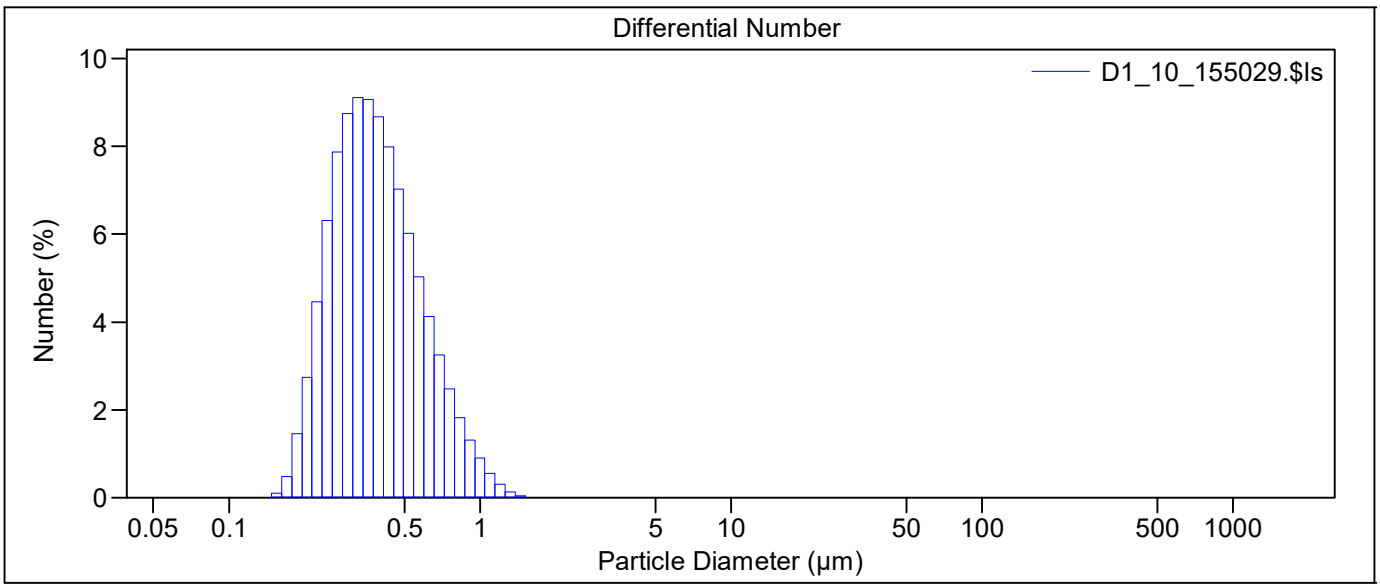
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.712 µm	S.D.:	0.276 µm
Median:	0.679 µm	Variance:	0.076 µm^2
Mean/Median ratio:	1.049	C.V.:	38.8%
Mode:	0.755 µm	Skewness:	0.490 Right skewed
		Kurtosis:	-0.336 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.373 µm	0.495 µm	0.679 µm	0.902 µm	1.105 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0.00015	0.00063	0.0067
15	0.148	0.155	0.0031	0.012	0.11
16	0.162	0.170	0.019	0.066	0.48
17	0.178	0.186	0.074	0.24	1.46

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0.18	0.54	2.74
19	0.214	0.225	0.40	1.06	4.46
20	0.235	0.247	0.74	1.81	6.31
21	0.258	0.271	1.22	2.72	7.87
22	0.284	0.297	1.80	3.65	8.75
23	0.311	0.326	2.48	4.58	9.11
24	0.342	0.358	3.26	5.49	9.06
25	0.375	0.393	4.13	6.33	8.67
26	0.412	0.431	5.03	7.02	7.98
27	0.452	0.474	5.86	7.45	7.02
28	0.496	0.520	6.64	7.69	6.02
29	0.545	0.571	7.34	7.74	5.03
30	0.598	0.627	7.96	7.65	4.12
31	0.656	0.688	8.30	7.27	3.25
32	0.721	0.755	8.36	6.67	2.47
33	0.791	0.829	8.14	5.92	1.82
34	0.868	0.910	7.73	5.12	1.31
35	0.953	0.999	7.02	4.23	0.90
36	1.047	1.097	5.81	3.19	0.56
37	1.149	1.204	4.11	2.05	0.30
38	1.261	1.321	2.26	1.03	0.12
39	1.385	1.451	0.90	0.37	0.037
40	1.520	1.592	0.21	0.078	0.0065
41	1.668	1.748	0.027	0.0093	0.00064
42	1.832	1.919	0.00095	0.00030	0.000017
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	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 %
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

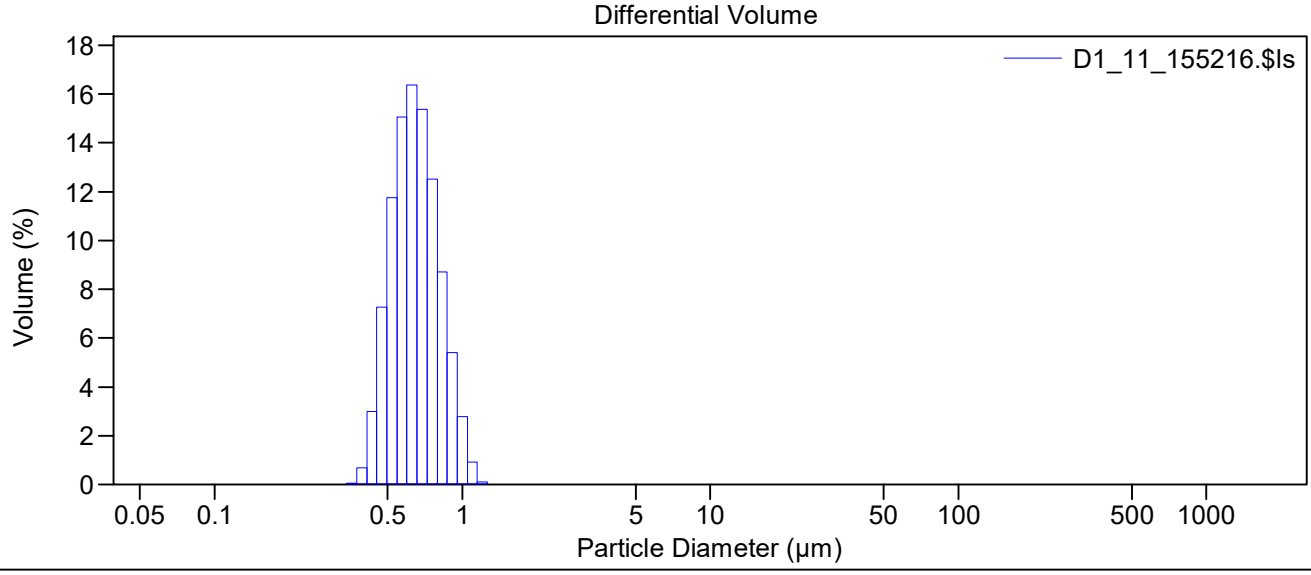
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_11_155216.$ls D1_11_155216.$ls		
File ID:	D1		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.14%		
LS 13 320	Universal Liquid Module		
Start time:	15:50 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

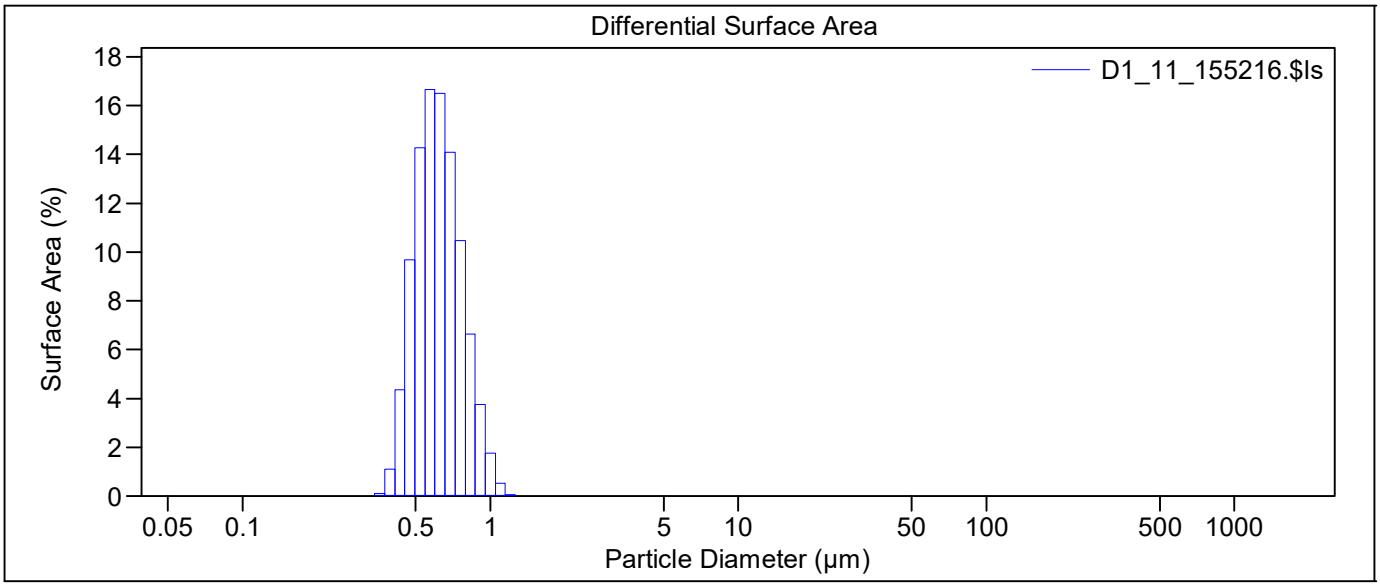
Volume Statistics (Arithmetic) D1_11_155216.$ls

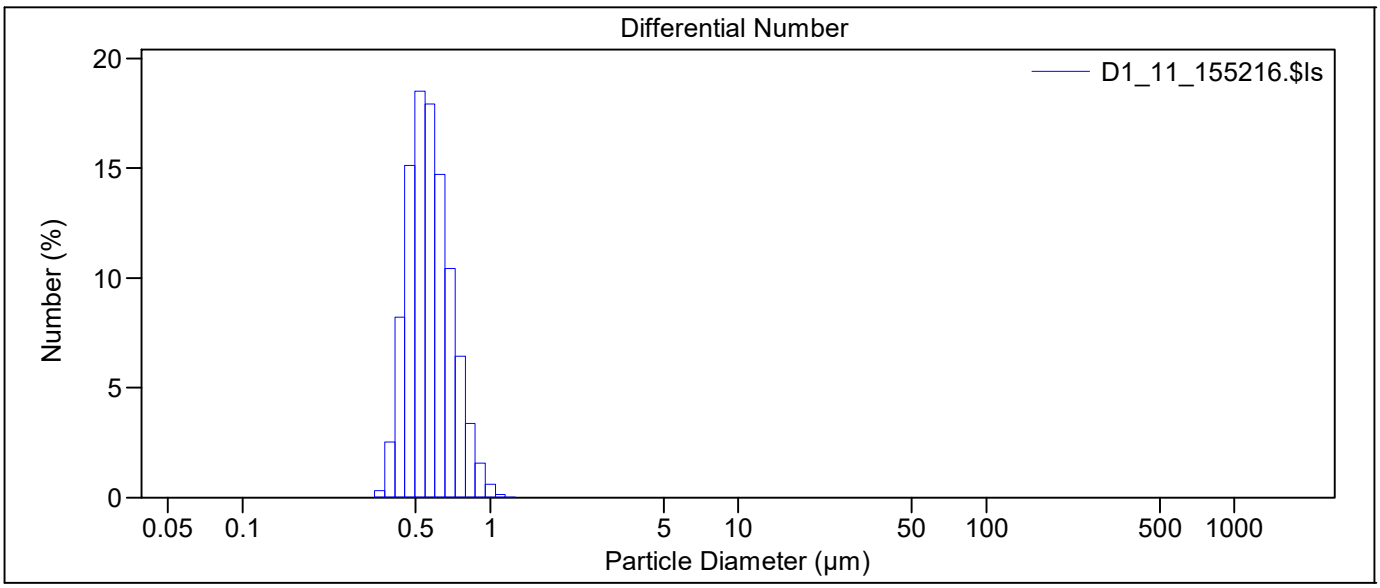
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.661 µm	S.D.:	0.144 µm
Median:	0.641 µm	Variance:	0.021 µm^2
Mean/Median ratio:	1.030	C.V.:	21.8%
Mode:	0.627 µm	Skewness:	0.656 Right skewed
		Kurtosis:	0.162 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.490 µm	0.553 µm	0.641 µm	0.751 µm	0.861 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0017	0.0033	0.011
24	0.342	0.358	0.065	0.12	0.31
25	0.375	0.393	0.69	1.11	2.52
26	0.412	0.431	2.98	4.37	8.22
27	0.452	0.474	7.26	9.68	15.1
28	0.496	0.520	11.8	14.3	18.5
29	0.545	0.571	15.1	16.7	17.9
30	0.598	0.627	16.4	16.5	14.7
31	0.656	0.688	15.4	14.1	10.4
32	0.721	0.755	12.5	10.5	6.44
33	0.791	0.829	8.71	6.63	3.38
34	0.868	0.910	5.40	3.75	1.59
35	0.953	0.999	2.78	1.75	0.62
36	1.047	1.097	0.91	0.52	0.15
37	1.149	1.204	0.12	0.061	0.015
38	1.261	1.321	0.0038	0.0018	0.00037
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

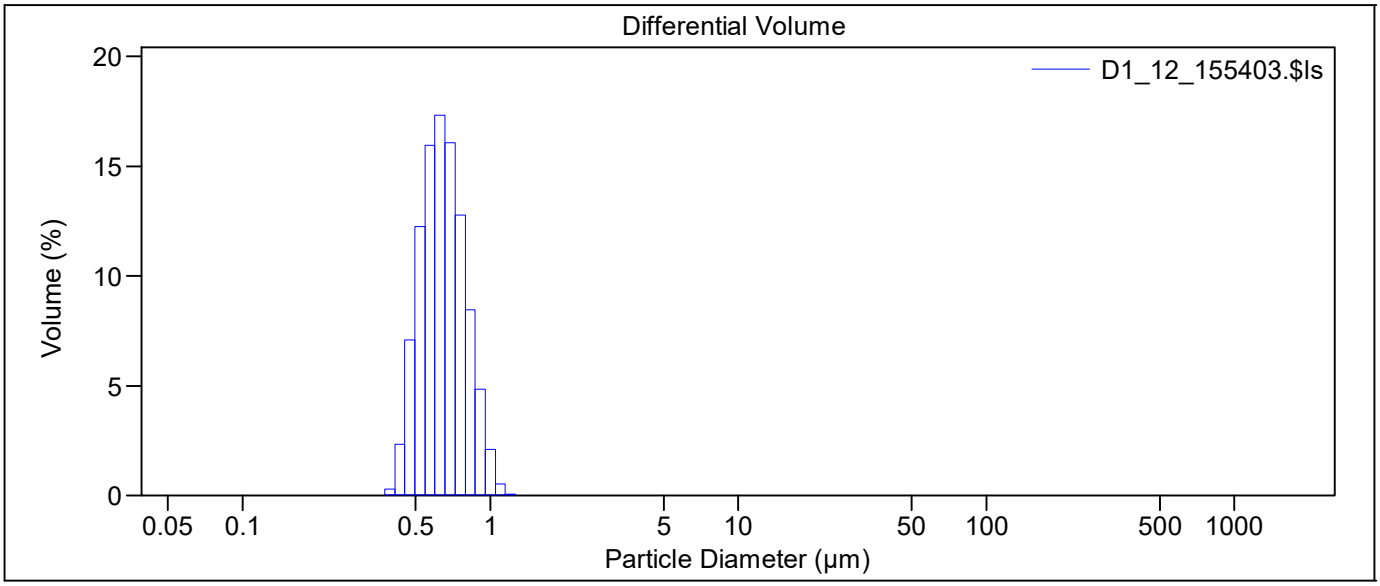
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_12_155403.$ls D1_12_155403.$ls		
File ID:	D1		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.28%		
LS 13 320	Universal Liquid Module		
Start time:	15:52 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

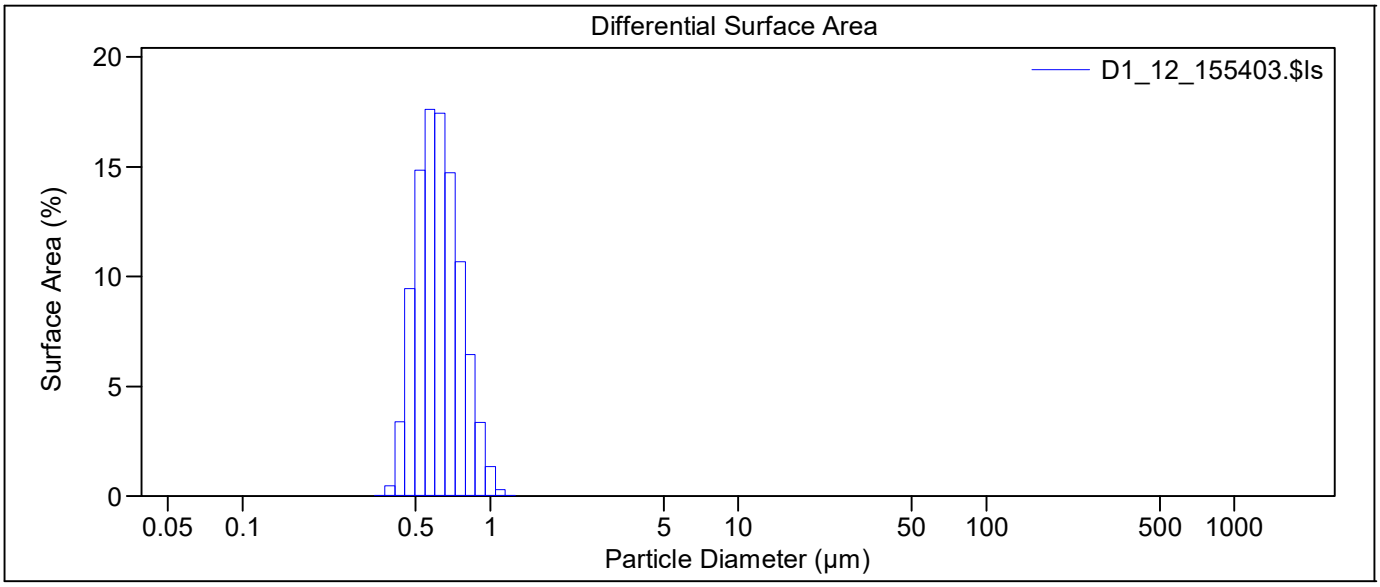
Volume Statistics (Arithmetic) D1_12_155403.$ls

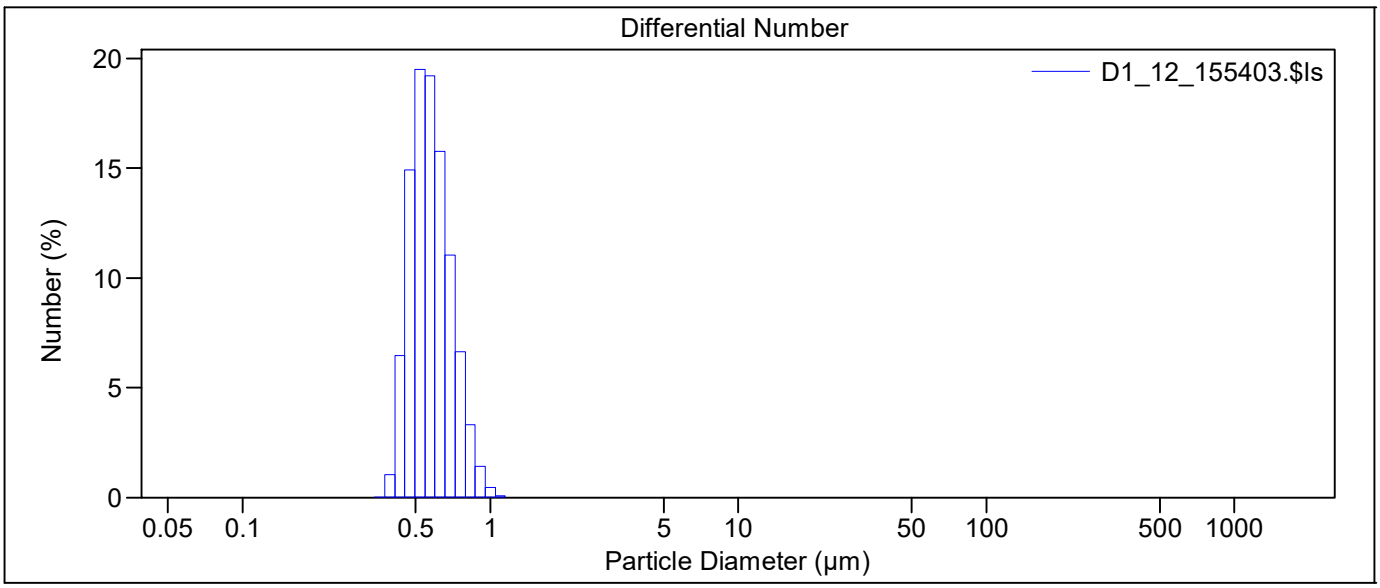
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.656 µm	S.D.:	0.134 µm
Median:	0.639 µm	Variance:	0.018 µm^2
Mean/Median ratio:	1.027	C.V.:	20.5%
Mode:	0.627 µm	Skewness:	0.650 Right skewed
		Kurtosis:	0.162 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.497 µm	0.555 µm	0.639 µm	0.741 µm	0.846 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.0087	0.015	0.043
25	0.375	0.393	0.29	0.46	1.05
26	0.412	0.431	2.32	3.39	6.47
27	0.452	0.474	7.09	9.44	14.9
28	0.496	0.520	12.2	14.8	19.5
29	0.545	0.571	15.9	17.6	19.2
30	0.598	0.627	17.3	17.4	15.8
31	0.656	0.688	16.1	14.7	11.1
32	0.721	0.755	12.8	10.7	6.65
33	0.791	0.829	8.46	6.43	3.33
34	0.868	0.910	4.83	3.35	1.44
35	0.953	0.999	2.11	1.33	0.47
36	1.047	1.097	0.52	0.30	0.089
37	1.149	1.204	0.051	0.027	0.0066
38	1.261	1.321	0.0012	0.00058	0.00012
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

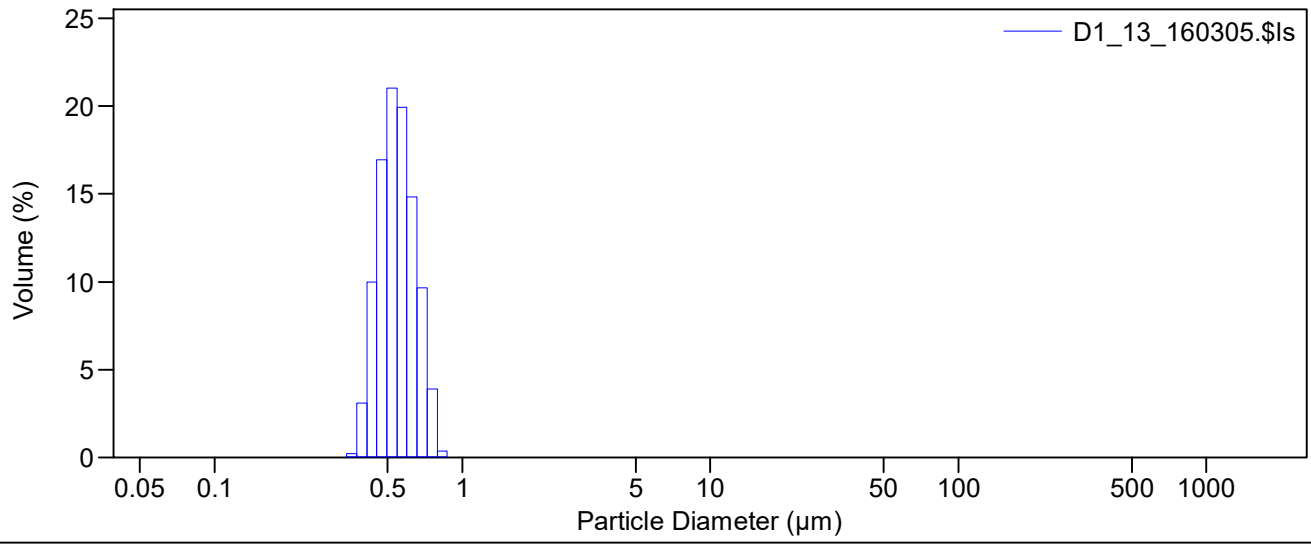
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_13_160305.$ls D1_13_160305.$ls		
File ID:	D1		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	5.19%		
LS 13 320	Universal Liquid Module		
Start time:	16:01 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

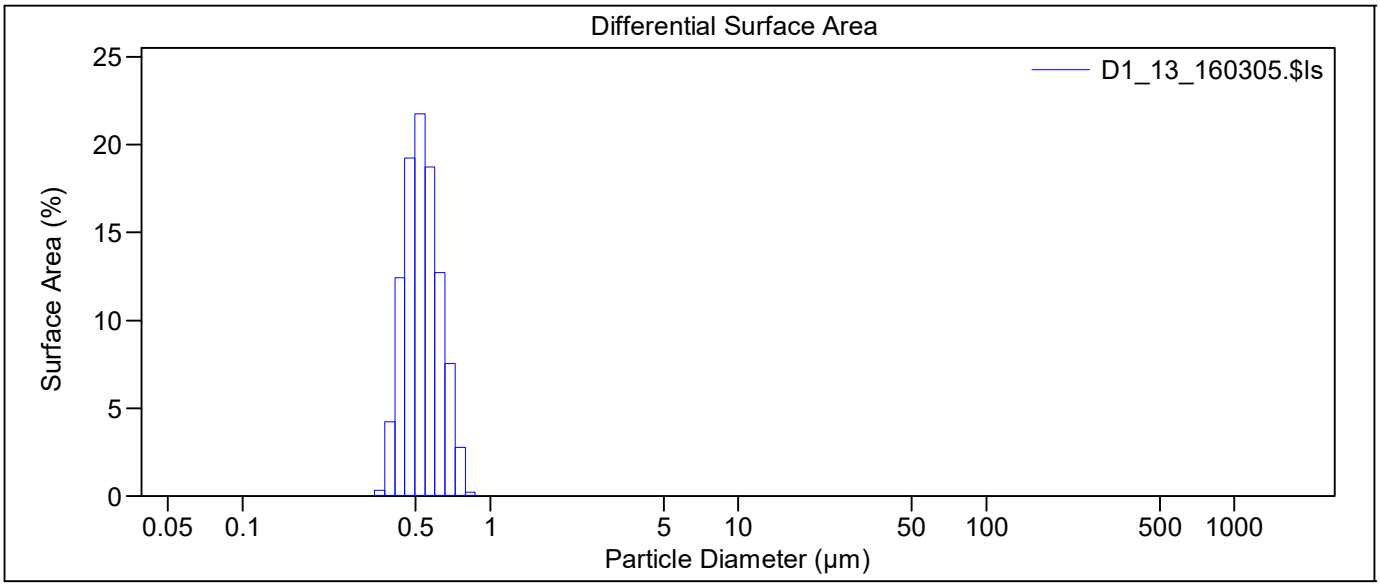
Volume Statistics (Arithmetic) D1_13_160305.$ls

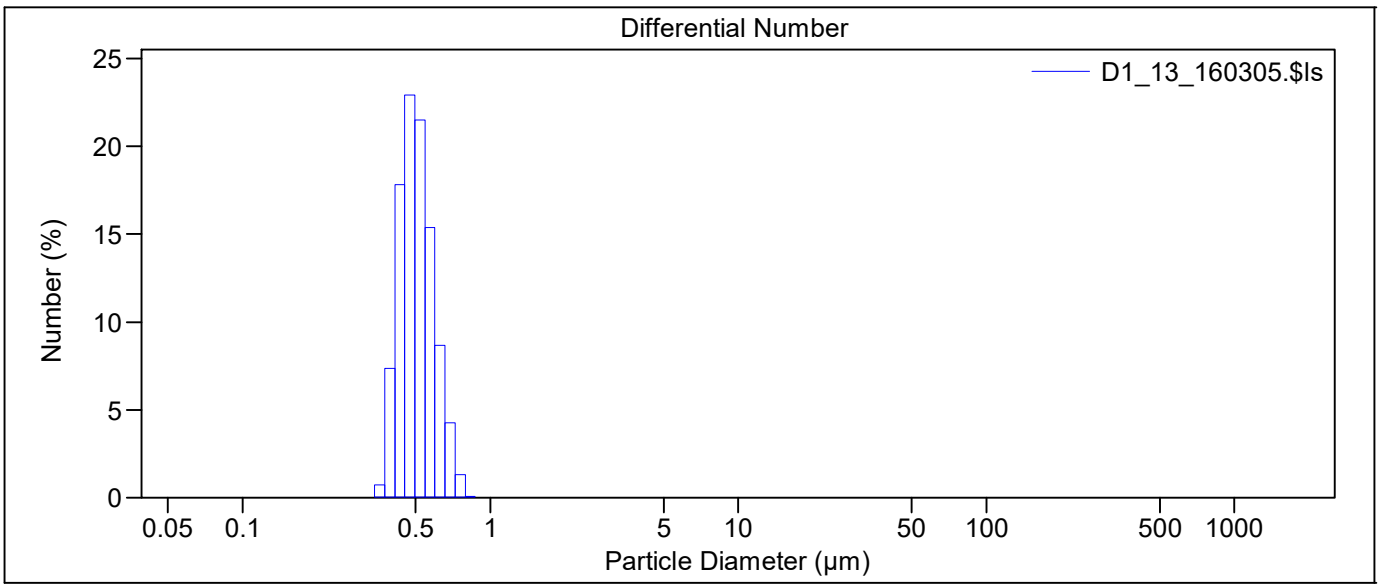
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.551 µm	S.D.:	0.090 µm
Median:	0.542 µm	Variance:	0.0081 µm^2
Mean/Median ratio:	1.018	C.V.:	16.4%
Mode:	0.520 µm	Skewness:	0.433 Right skewed
		Kurtosis:	-0.338 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.439 µm	0.483 µm	0.542 µm	0.613 µm	0.683 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.23	0.34	0.71
25	0.375	0.393	3.11	4.25	7.35
26	0.412	0.431	9.97	12.4	17.8
27	0.452	0.474	17.0	19.2	22.9
28	0.496	0.520	21.0	21.7	21.5
29	0.545	0.571	19.9	18.7	15.4
30	0.598	0.627	14.8	12.7	8.66
31	0.656	0.688	9.68	7.56	4.27
32	0.721	0.755	3.91	2.78	1.31
33	0.791	0.829	0.36	0.23	0.091
34	0.868	0.910	0	0	0
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

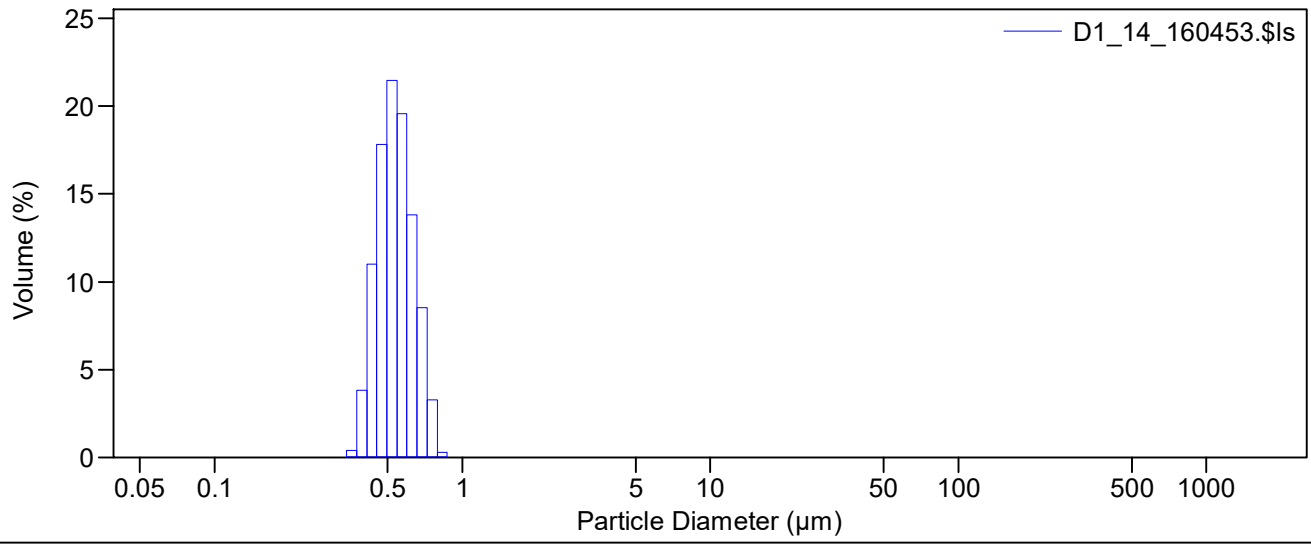
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_14_160453.$ls D1_14_160453.$ls		
File ID:	D1		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	5.46%		
LS 13 320	Universal Liquid Module		
Start time:	16:03 14	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D1_14_160453.$ls

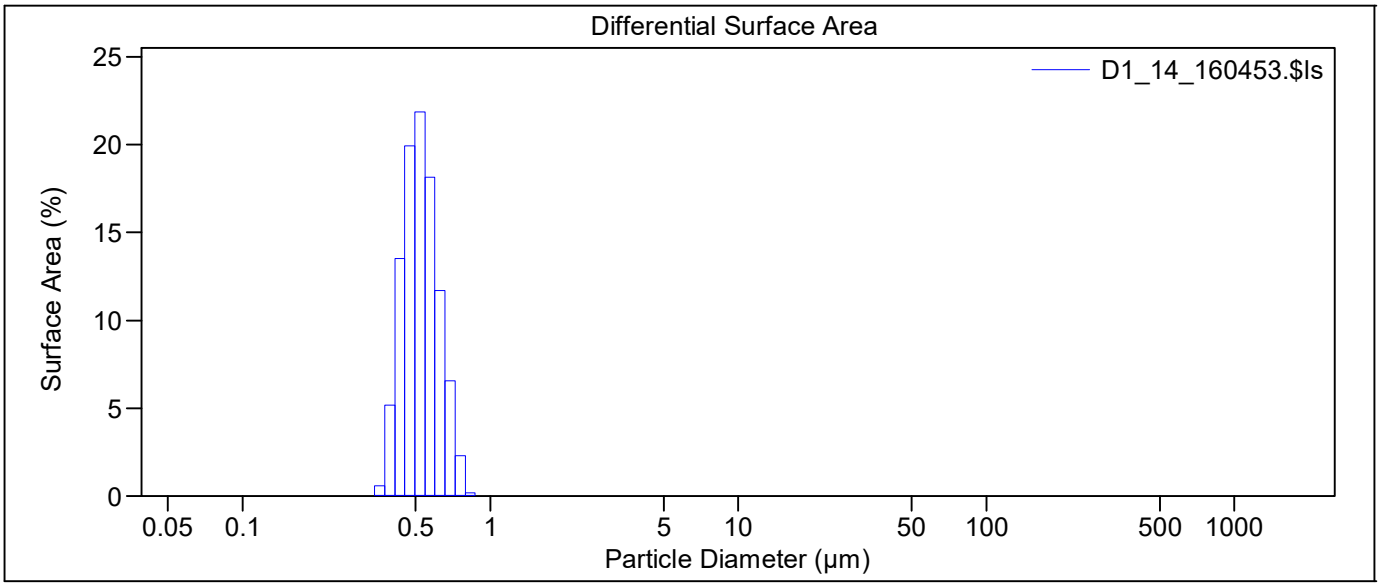
Calculations from 0.040 µm to 2000 µm

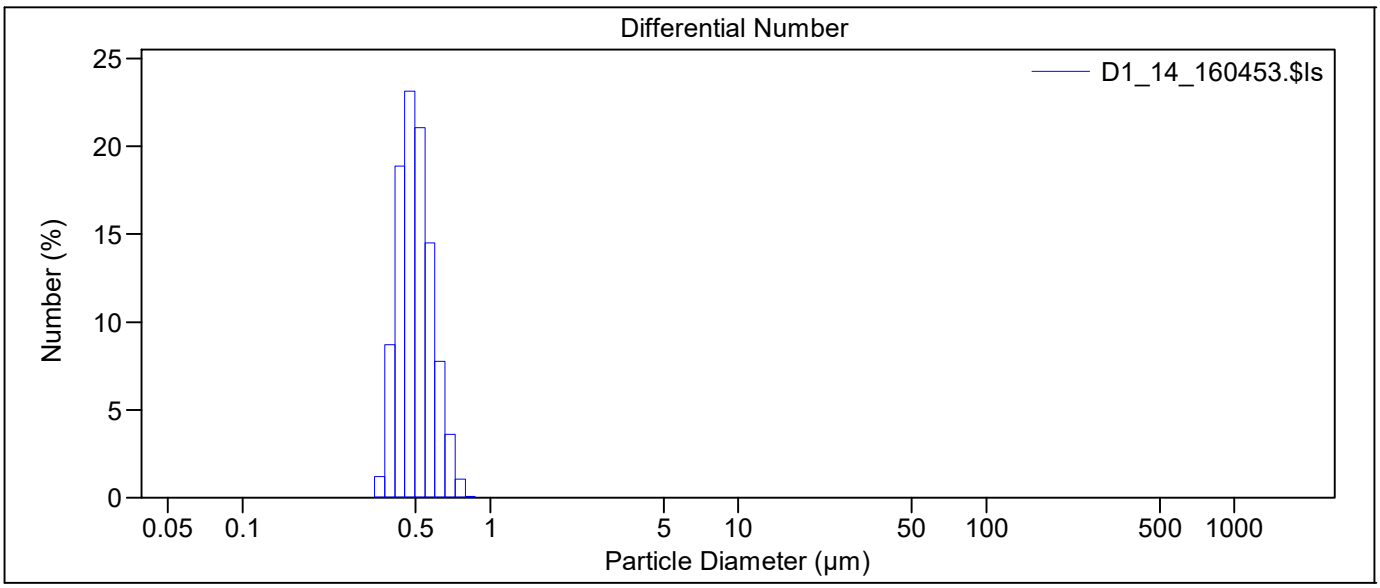
Volume:	100%		
Mean:	0.544 µm	S.D.:	0.089 µm
Median:	0.535 µm	Variance:	0.0080 µm^2
Mean/Median ratio:	1.018	C.V.:	16.4%
Mode:	0.520 µm	Skewness:	0.466 Right skewed
		Kurtosis:	-0.248 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.433 µm	0.476 µm	0.535 µm	0.602 µm	0.672 µm



Beckman Coulter LS13320





D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0032	0.0051	0.013
24	0.342	0.358	0.41	0.60	1.22
25	0.375	0.393	3.84	5.17	8.71
26	0.412	0.431	11.0	13.5	18.9
27	0.452	0.474	17.8	19.9	23.1
28	0.496	0.520	21.5	21.9	21.1
29	0.545	0.571	19.6	18.2	14.5
30	0.598	0.627	13.8	11.7	7.75
31	0.656	0.688	8.51	6.56	3.61
32	0.721	0.755	3.29	2.31	1.05
33	0.791	0.829	0.29	0.19	0.071
34	0.868	0.910	0	0	0
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

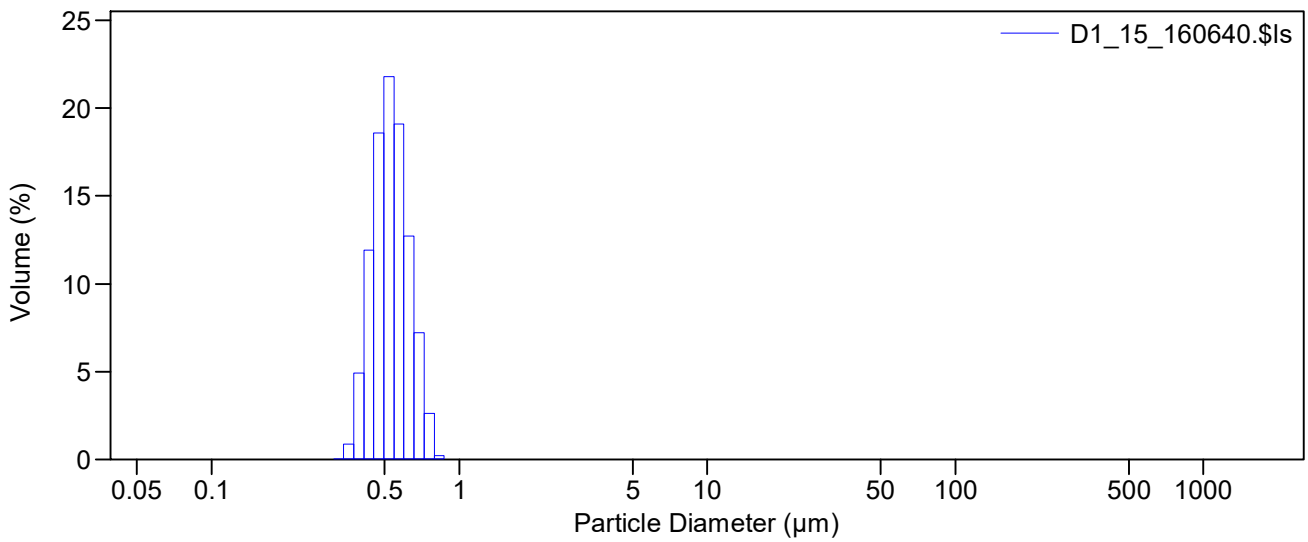
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D1\D1_15_160640.$ls D1_15_160640.$ls		
File ID:	D1		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	5.77%		
LS 13 320	Universal Liquid Module		
Start time:	16:04 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	2%	PIDS Obscur:	53%
Fluid:	water		
Software:	6.01	Firmware:	2.02

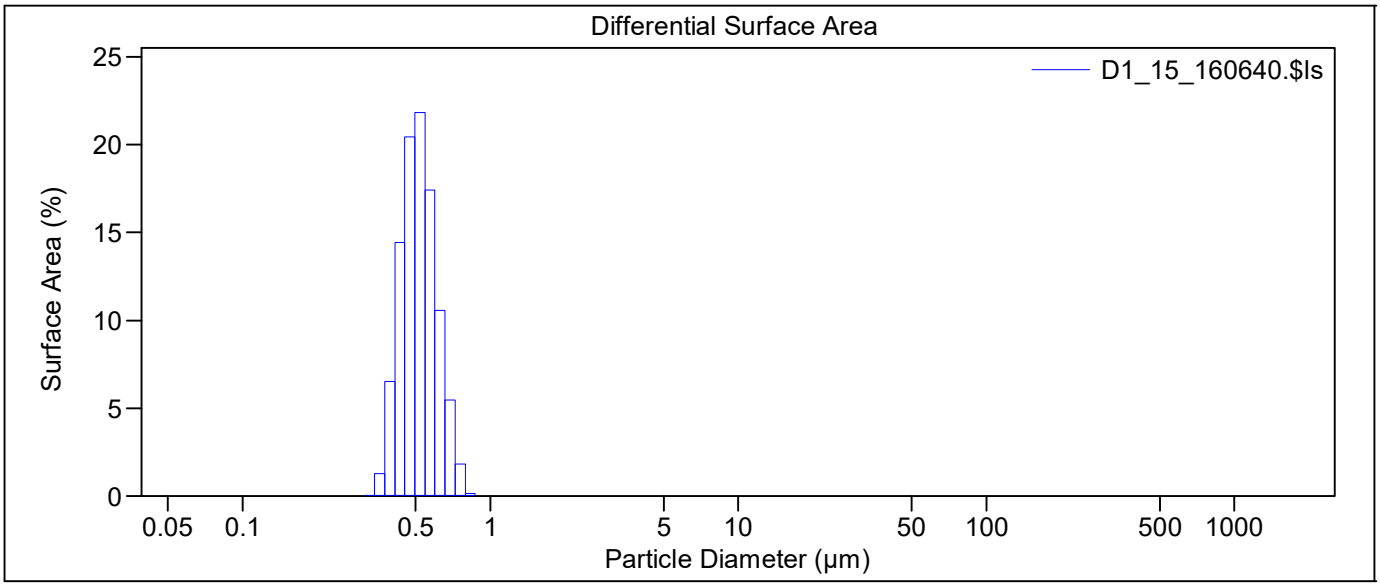
Volume Statistics (Arithmetic) D1_15_160640.$ls

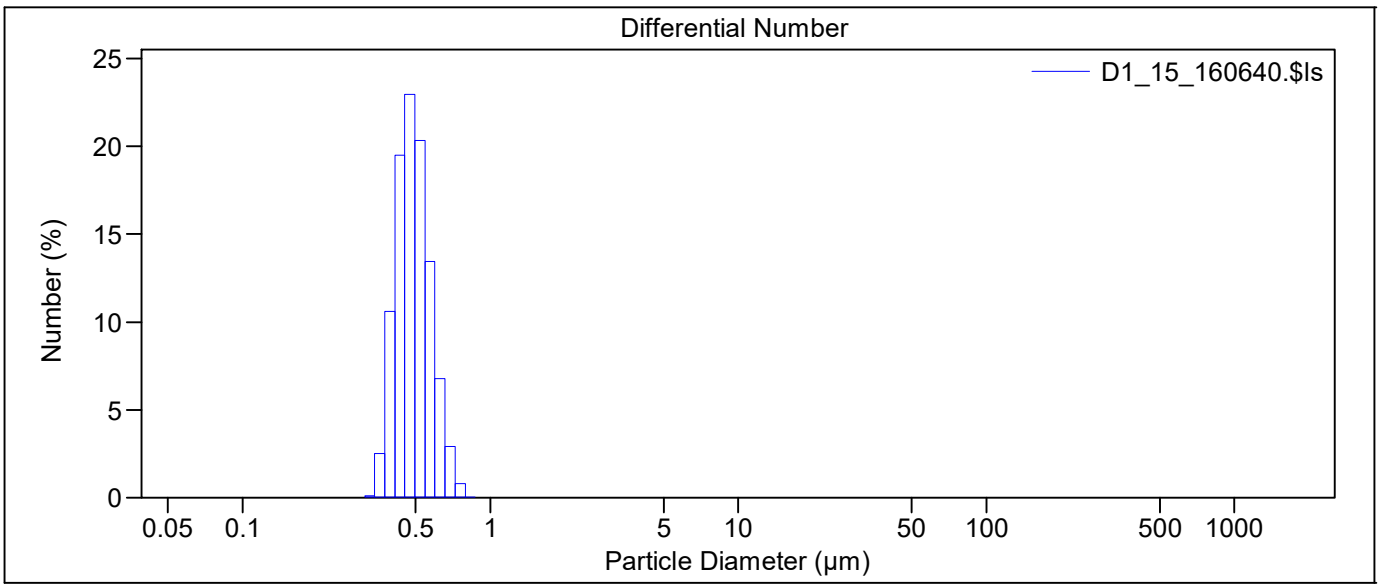
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.535 µm	S.D.:	0.088 µm
Median:	0.527 µm	Variance:	0.0078 µm^2
Mean/Median ratio:	1.016	C.V.:	16.5%
Mode:	0.520 µm	Skewness:	0.475 Right skewed
		Kurtosis:	-0.148 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.426 µm	0.469 µm	0.527 µm	0.592 µm	0.657 µm







D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.033	0.053	0.13
24	0.342	0.358	0.88	1.28	2.51
25	0.375	0.393	4.91	6.51	10.6
26	0.412	0.431	11.9	14.4	19.5
27	0.452	0.474	18.6	20.5	22.9
28	0.496	0.520	21.8	21.8	20.3
29	0.545	0.571	19.1	17.4	13.5
30	0.598	0.627	12.7	10.6	6.77
31	0.656	0.688	7.22	5.47	2.91
32	0.721	0.755	2.62	1.81	0.80
33	0.791	0.829	0.23	0.14	0.052
34	0.868	0.910	0	0	0
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	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 %
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2.$av D2.$av
File ID:	D2
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_01_161913.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_02_162100.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_03_162248.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_04_163239.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_05_163426.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_06_163614.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_07_164649.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_08_164836.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_09_165023.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_10_165909.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_11_170057.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_12_170244.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_13_171200.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_14_171347.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_15_171534.$ls

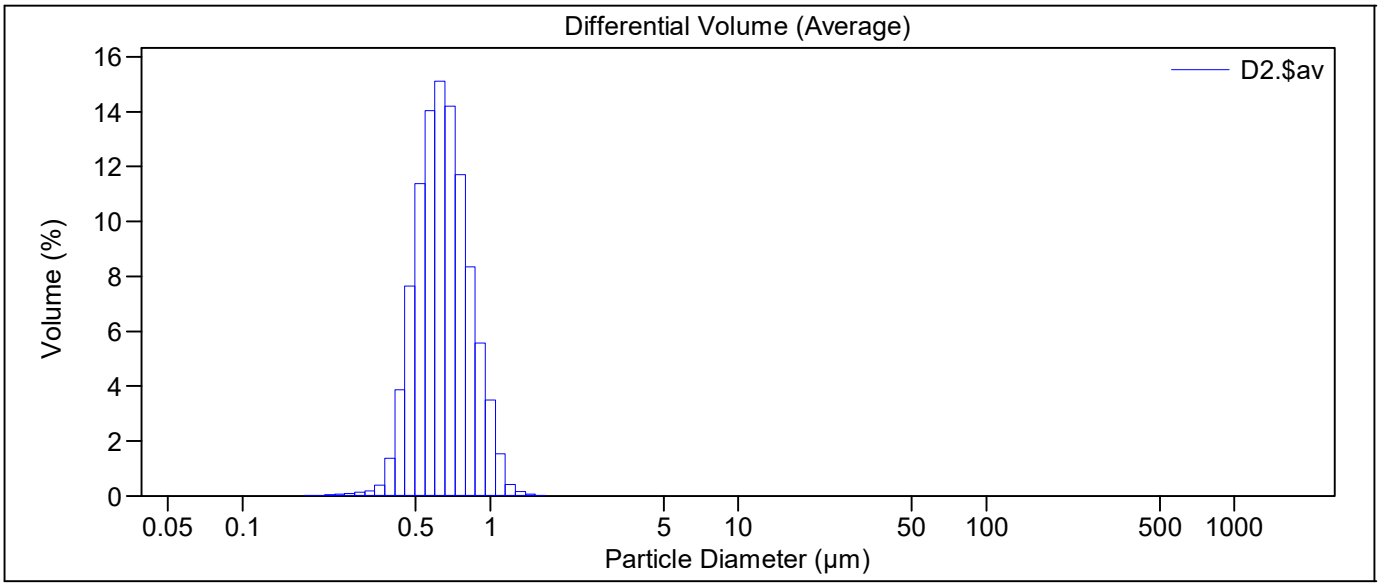
Volume Statistics (Arithmetic) D2.$av

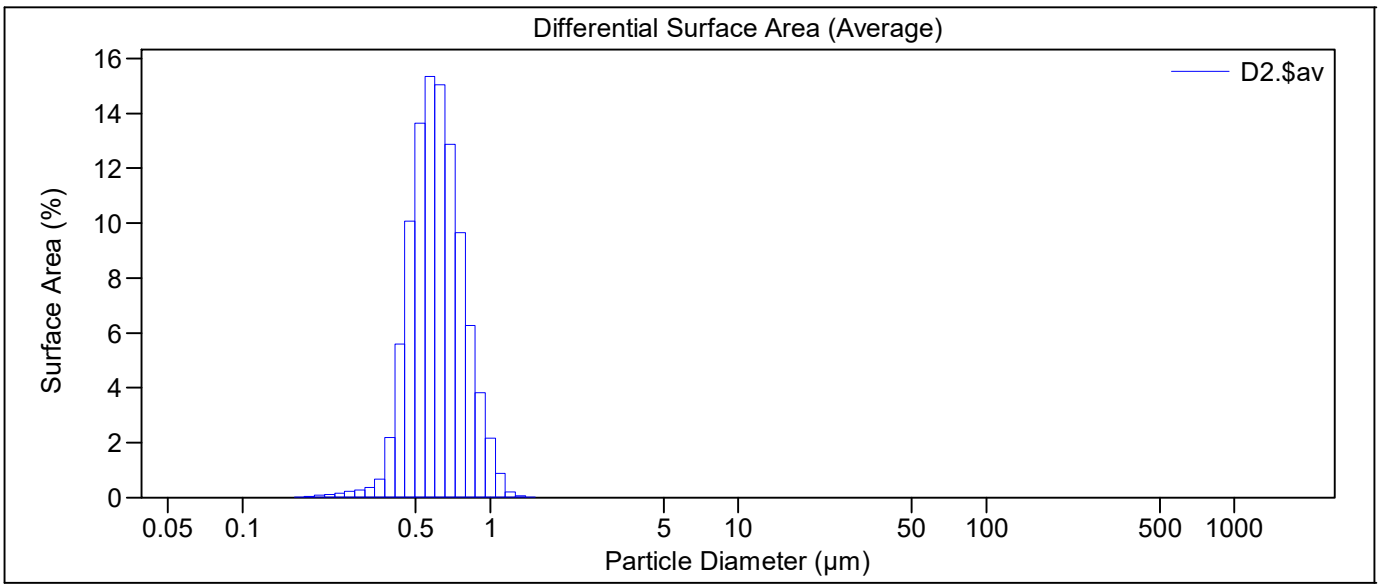
Calculations from 0.040 µm to 2000 µm

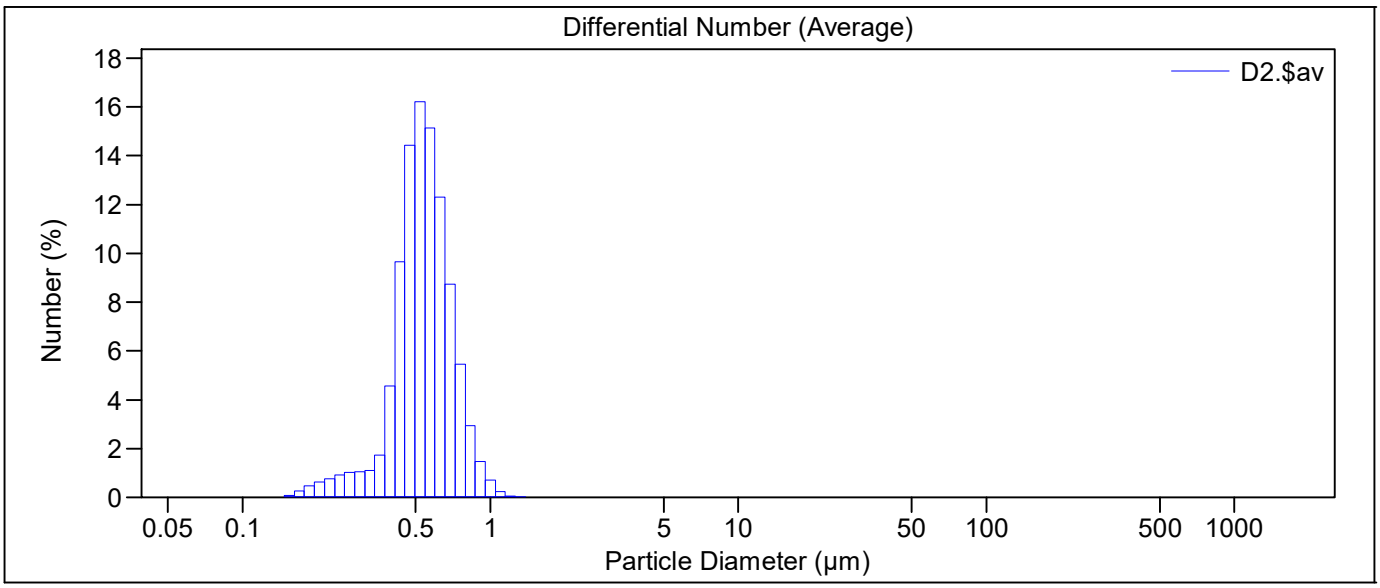
Volume:	100%		
Mean:	0.662 µm	S.D.:	0.165 µm
Median:	0.639 µm	Variance:	0.027 µm^2
Mean/Median ratio:	1.036	C.V.:	24.9%
Mode:	0.627 µm	Skewness:	0.796 Right skewed
		Kurtosis:	1.080 Leptokurtic

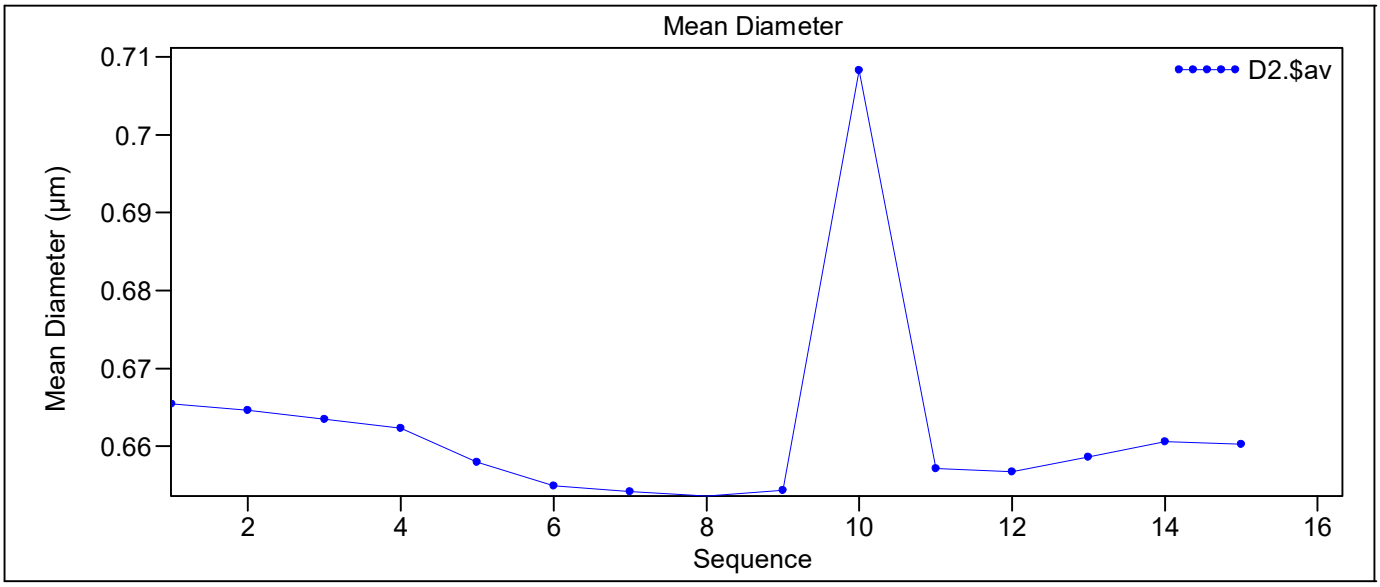
<10%	<25%	<50%	<75%	<90%
0.474 µm	0.544 µm	0.639 µm	0.759 µm	0.888 µm

Beckman Coulter LS13320









D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0.000001	0.000006	0.00012
14	0.134	0.141	0.00014	0.00063	0.010
15	0.148	0.155	0.0014	0.0058	0.078
16	0.162	0.170	0.0064	0.023	0.26
17	0.178	0.186	0.015	0.051	0.47
18	0.195	0.205	0.027	0.082	0.63
19	0.214	0.225	0.044	0.12	0.77
20	0.235	0.247	0.069	0.17	0.92
21	0.258	0.271	0.10	0.23	1.02
22	0.284	0.297	0.14	0.29	1.06
23	0.311	0.326	0.19	0.36	1.10
24	0.342	0.358	0.39	0.69	1.72
25	0.375	0.393	1.39	2.20	4.58
26	0.412	0.431	3.88	5.60	9.67
27	0.452	0.474	7.65	10.1	14.4
28	0.496	0.520	11.4	13.7	16.2
29	0.545	0.571	14.0	15.3	15.1
30	0.598	0.627	15.1	15.1	12.3
31	0.656	0.688	14.2	12.9	8.74
32	0.721	0.755	11.7	9.66	5.45
33	0.791	0.829	8.35	6.28	2.94
34	0.868	0.910	5.57	3.81	1.48
35	0.953	0.999	3.49	2.18	0.70
36	1.047	1.097	1.54	0.88	0.23
37	1.149	1.204	0.42	0.22	0.049
38	1.261	1.321	0.17	0.081	0.015
39	1.385	1.451	0.076	0.033	0.0050
40	1.520	1.592	0.023	0.0089	0.0011
41	1.668	1.748	0.0038	0.0014	0.00014

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.00028	0.000091	0.000008
43	2.011	2.107	0.000002	0.000001	4.6E-8
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

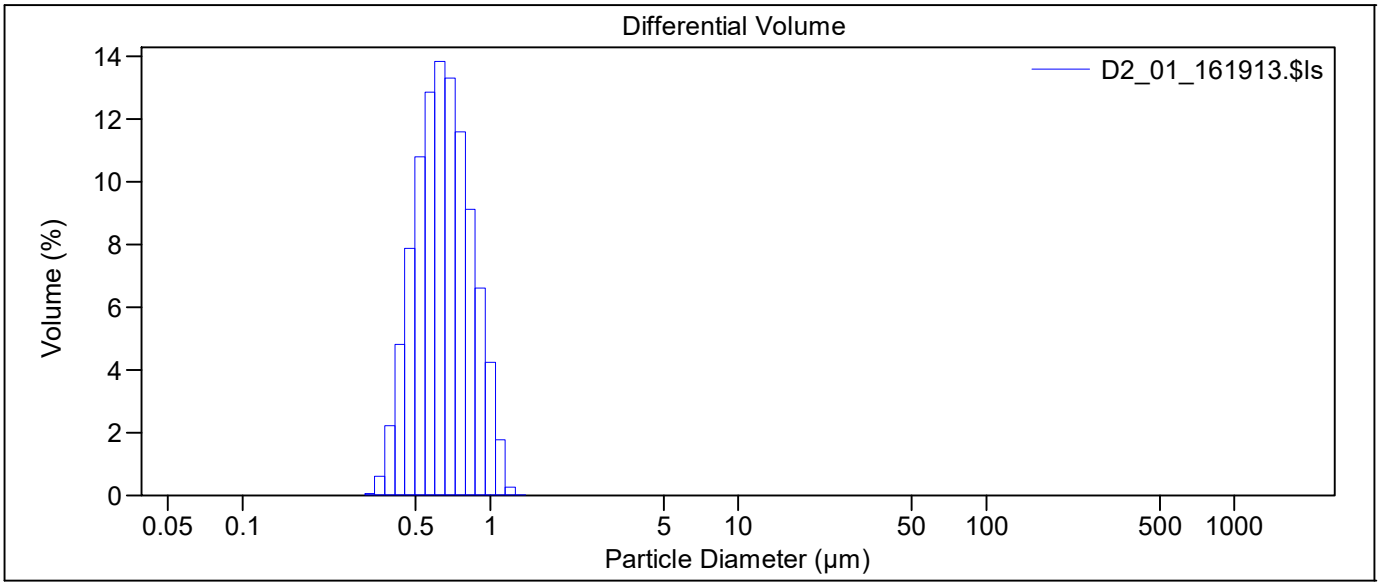
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_01_161913.$ls D2_01_161913.$ls		
File ID:	D2		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.80%		
LS 13 320	Universal Liquid Module		
Start time:	16:17 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

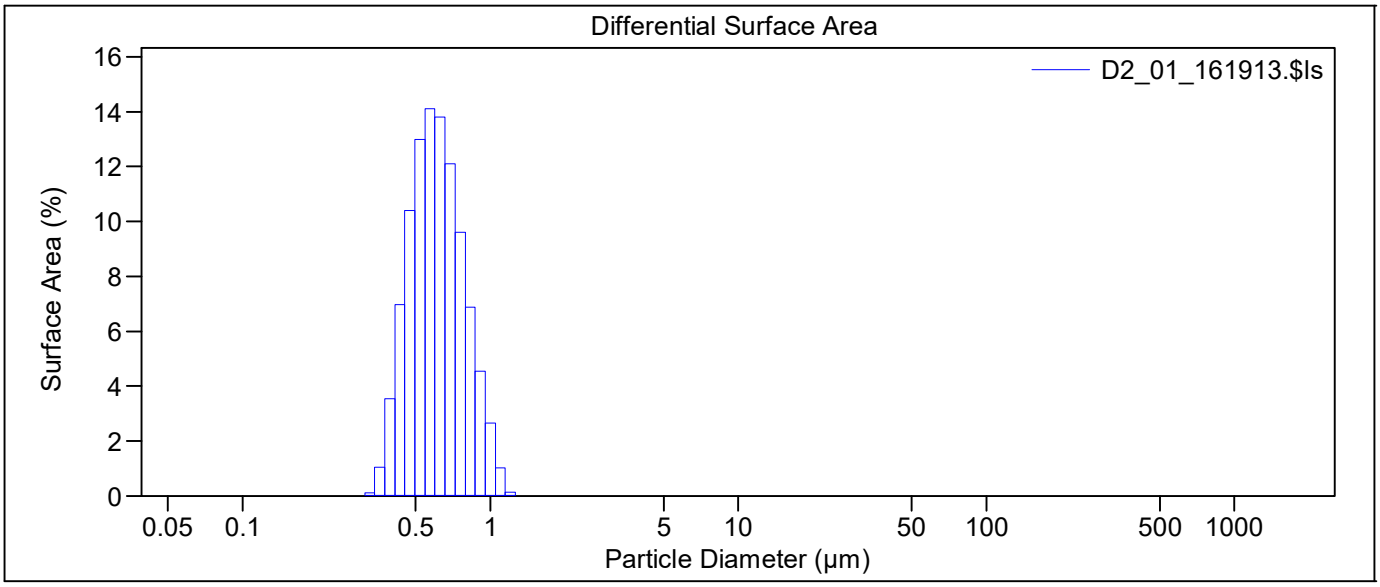
Volume Statistics (Arithmetic) D2_01_161913.$ls

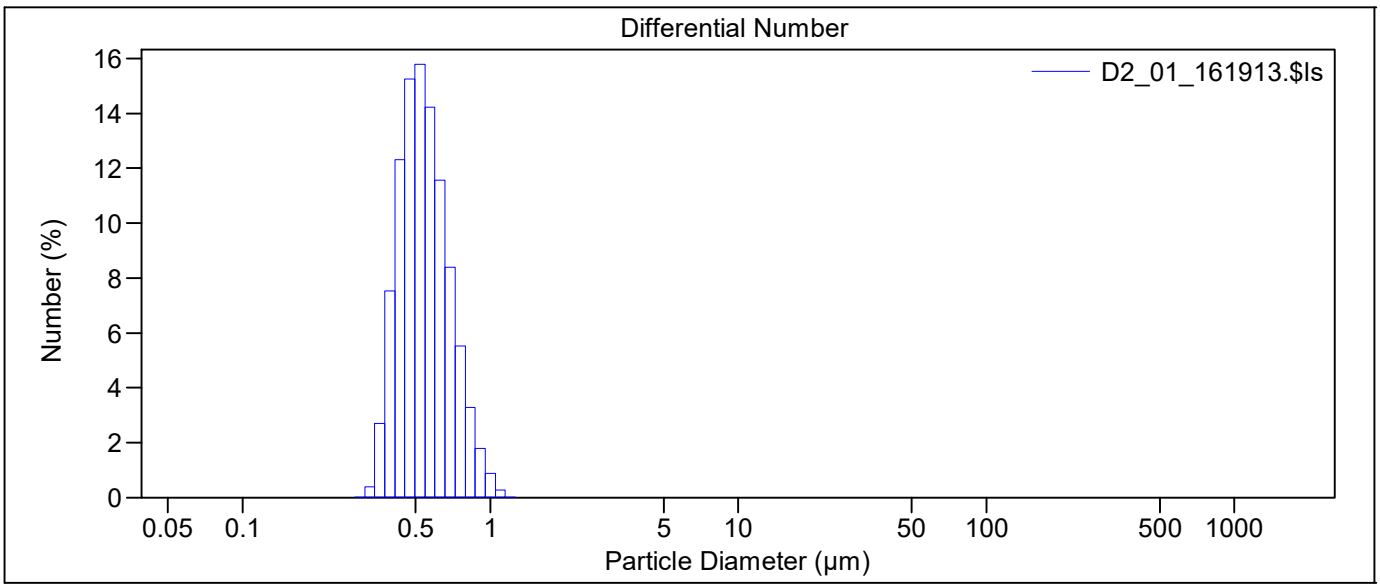
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.665 µm	S.D.:	0.166 µm
Median:	0.643 µm	Variance:	0.028 µm^2
Mean/Median ratio:	1.034	C.V.:	25.0%
Mode:	0.627 µm	Skewness:	0.569 Right skewed
		Kurtosis:	-0.150 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.465 µm	0.539 µm	0.643 µm	0.773 µm	0.906 µm







D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0018	0.0038	0.014
23	0.311	0.326	0.066	0.13	0.39
24	0.342	0.358	0.61	1.06	2.71
25	0.375	0.393	2.22	3.54	7.53
26	0.412	0.431	4.81	6.98	12.3
27	0.452	0.474	7.88	10.4	15.2
28	0.496	0.520	10.8	13.0	15.8
29	0.545	0.571	12.9	14.1	14.2
30	0.598	0.627	13.8	13.8	11.6
31	0.656	0.688	13.3	12.1	8.40
32	0.721	0.755	11.6	9.61	5.54
33	0.791	0.829	9.11	6.88	3.29
34	0.868	0.910	6.61	4.54	1.80
35	0.953	0.999	4.25	2.66	0.88
36	1.047	1.097	1.78	1.02	0.28
37	1.149	1.204	0.27	0.14	0.032
38	1.261	1.321	0.010	0.0050	0.00093
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

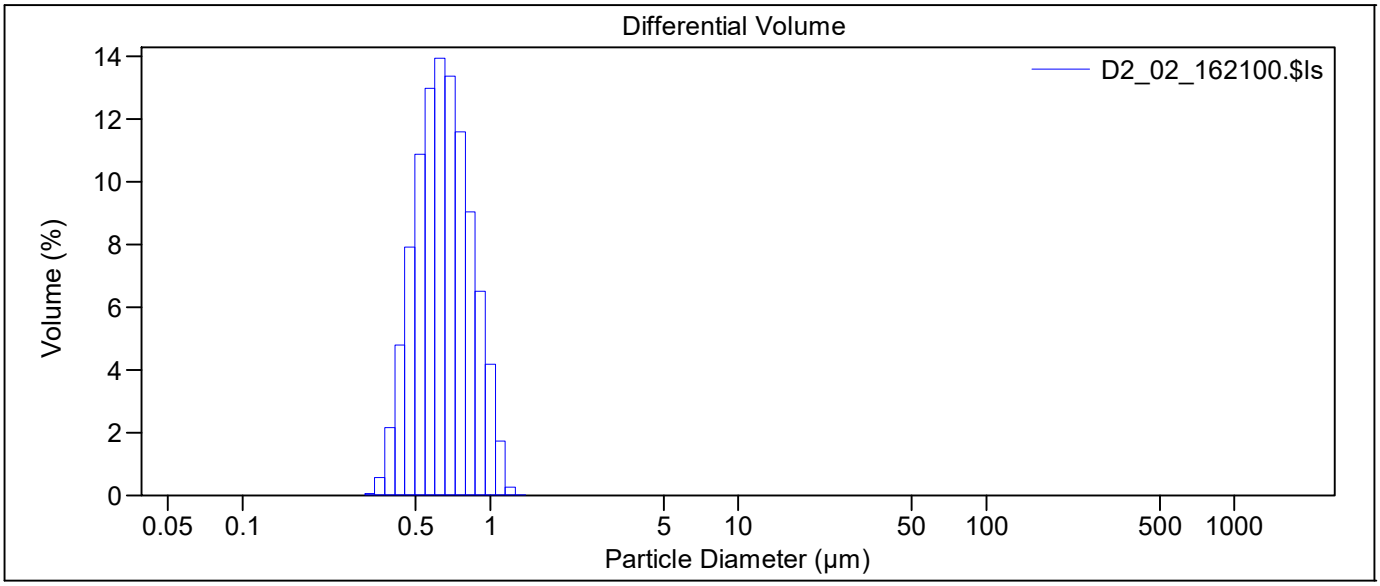
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_02_162100.$ls D2_02_162100.$ls		
File ID:	D2		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.82%		
LS 13 320	Universal Liquid Module		
Start time:	16:19 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	42%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_02_162100.$ls

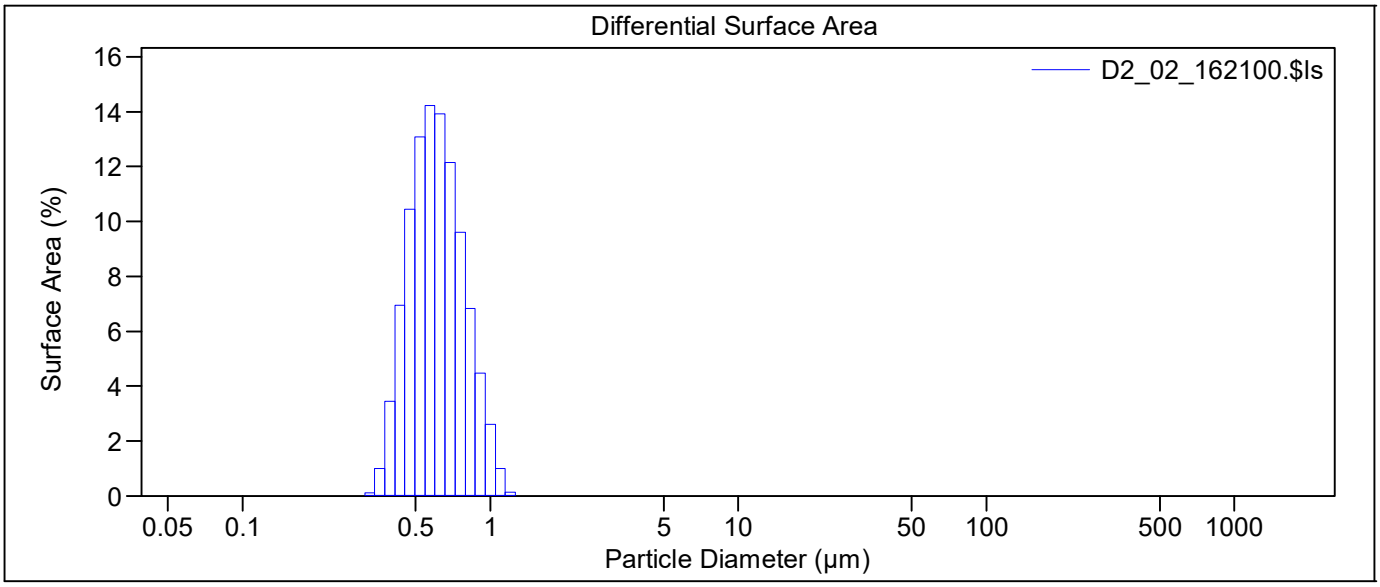
Calculations from 0.040 µm to 2000 µm

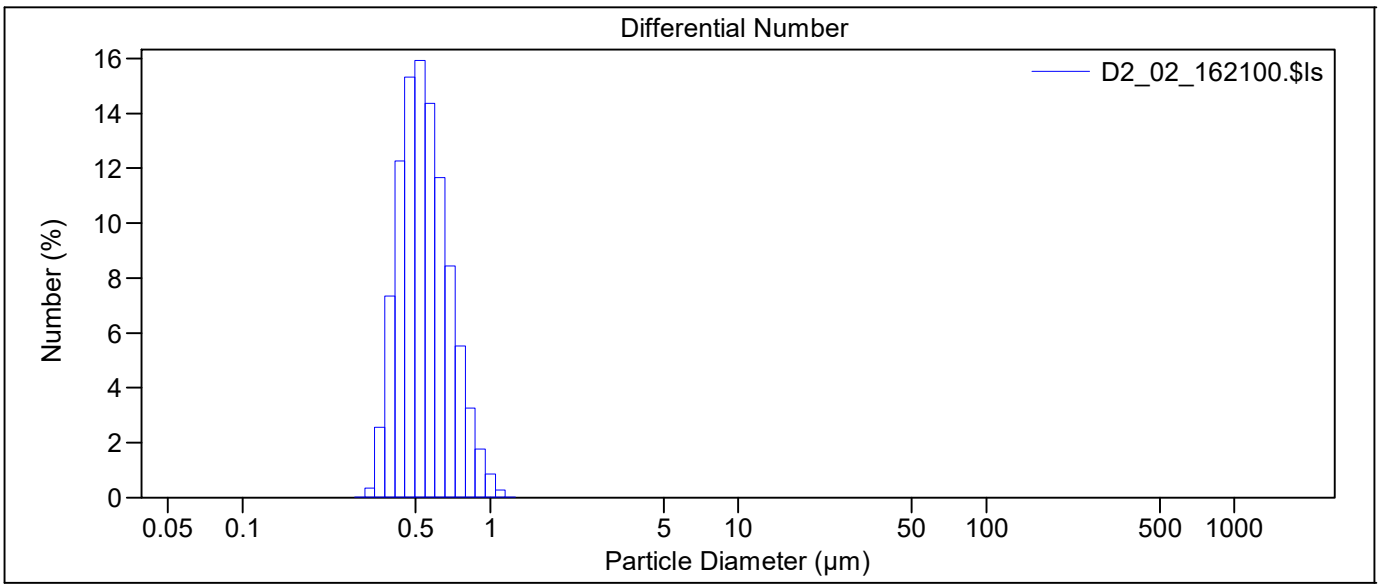
Volume:	100%		
Mean:	0.665 µm	S.D.:	0.166 µm
Median:	0.643 µm	Variance:	0.027 µm^2
Mean/Median ratio:	1.034	C.V.:	24.9%
Mode:	0.627 µm	Skewness:	0.579 Right skewed
		Kurtosis:	-0.128 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.466 µm	0.539 µm	0.643 µm	0.771 µm	0.904 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0016	0.0033	0.012
23	0.311	0.326	0.060	0.11	0.35
24	0.342	0.358	0.57	1.00	2.55
25	0.375	0.393	2.17	3.46	7.36
26	0.412	0.431	4.79	6.94	12.3
27	0.452	0.474	7.91	10.4	15.3
28	0.496	0.520	10.9	13.1	15.9
29	0.545	0.571	13.0	14.2	14.4
30	0.598	0.627	13.9	13.9	11.7
31	0.656	0.688	13.4	12.2	8.45
32	0.721	0.755	11.6	9.60	5.54
33	0.791	0.829	9.04	6.82	3.27
34	0.868	0.910	6.51	4.48	1.78
35	0.953	0.999	4.17	2.61	0.86
36	1.047	1.097	1.74	0.99	0.27
37	1.149	1.204	0.26	0.14	0.031
38	1.261	1.321	0.010	0.0048	0.00091
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

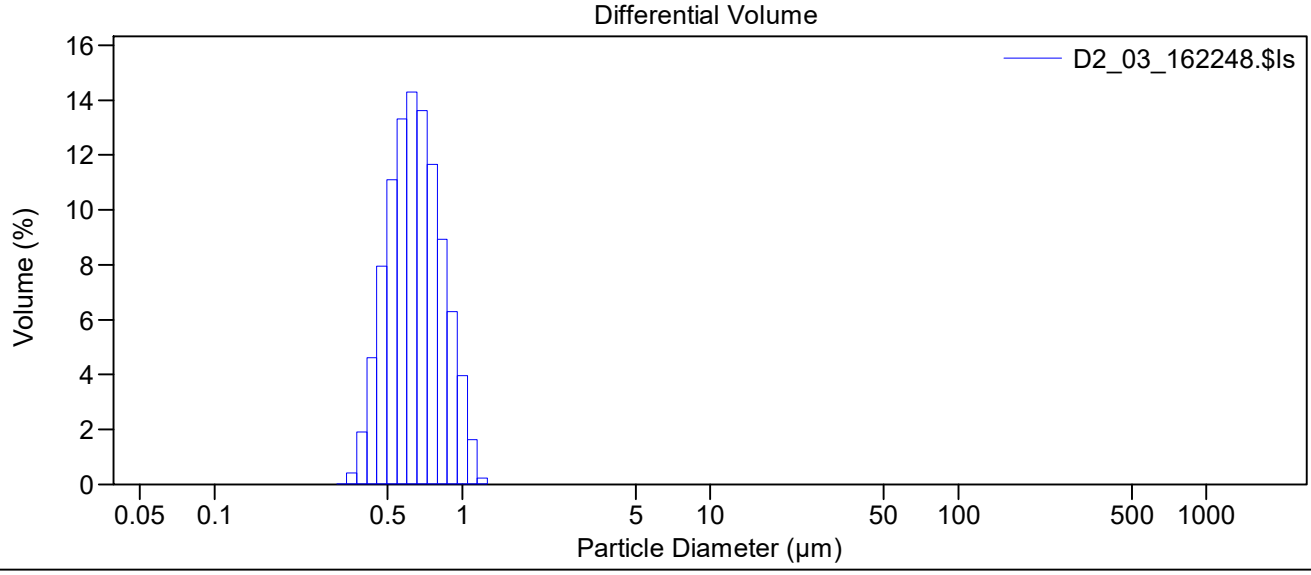
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_03_162248.$ls D2_03_162248.$ls		
File ID:	D2		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.82%		
LS 13 320	Universal Liquid Module		
Start time:	16:21 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	42%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_03_162248.$ls

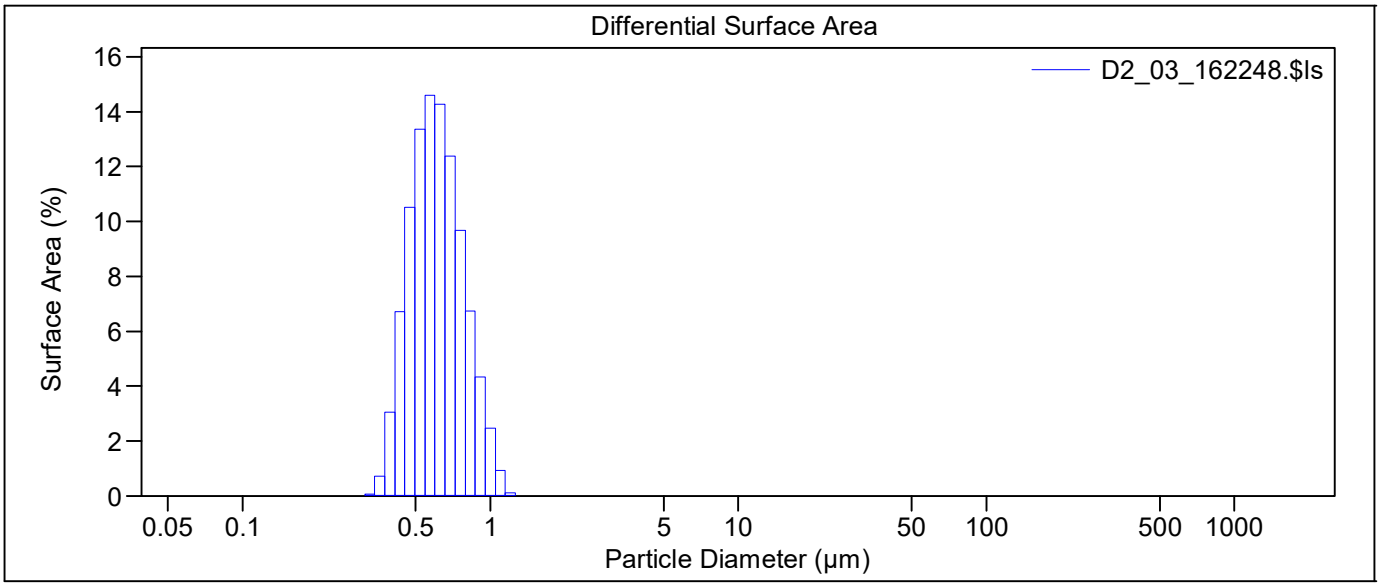
Calculations from 0.040 µm to 2000 µm

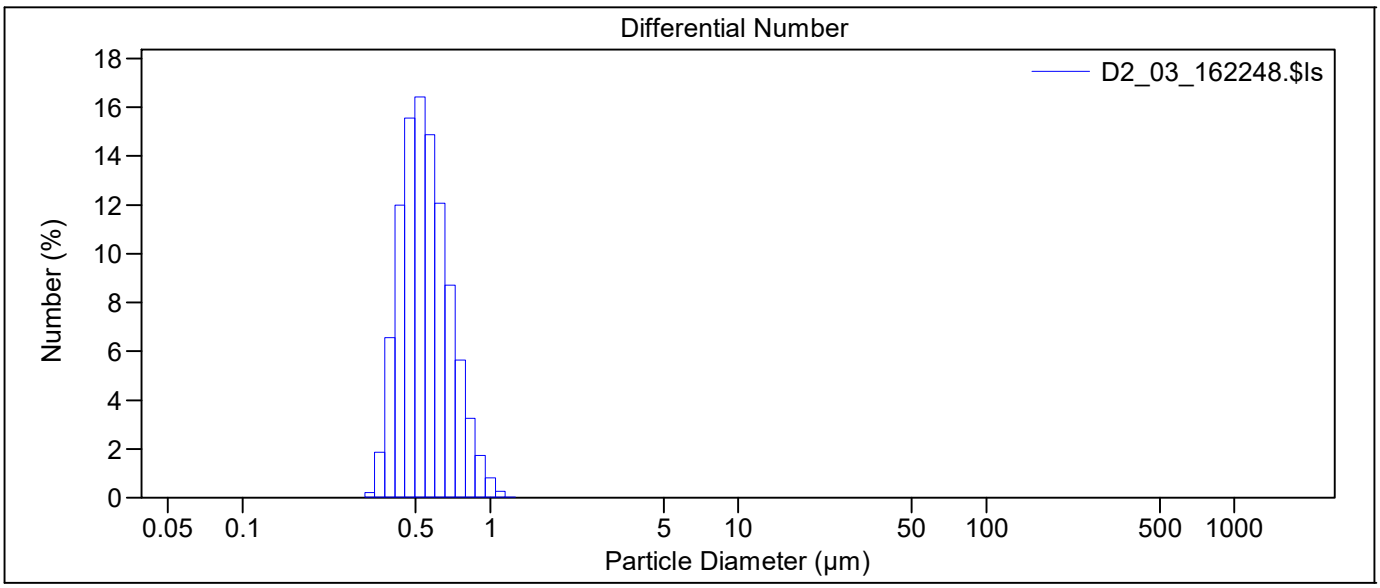
Volume:	100%		
Mean:	0.663 µm	S.D.:	0.162 µm
Median:	0.642 µm	Variance:	0.026 µm^2
Mean/Median ratio:	1.034	C.V.:	24.5%
Mode:	0.627 µm	Skewness:	0.603 Right skewed
		Kurtosis:	-0.068 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.469 µm	0.540 µm	0.642 µm	0.767 µm	0.897 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.00060	0.0013	0.0047
23	0.311	0.326	0.034	0.065	0.20
24	0.342	0.358	0.41	0.72	1.86
25	0.375	0.393	1.91	3.05	6.56
26	0.412	0.431	4.63	6.72	12.0
27	0.452	0.474	7.95	10.5	15.6
28	0.496	0.520	11.1	13.4	16.4
29	0.545	0.571	13.3	14.6	14.9
30	0.598	0.627	14.3	14.3	12.1
31	0.656	0.688	13.6	12.4	8.70
32	0.721	0.755	11.7	9.67	5.63
33	0.791	0.829	8.93	6.74	3.26
34	0.868	0.910	6.30	4.33	1.74
35	0.953	0.999	3.96	2.48	0.83
36	1.047	1.097	1.62	0.93	0.26
37	1.149	1.204	0.24	0.13	0.029
38	1.261	1.321	0.0093	0.0044	0.00084
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

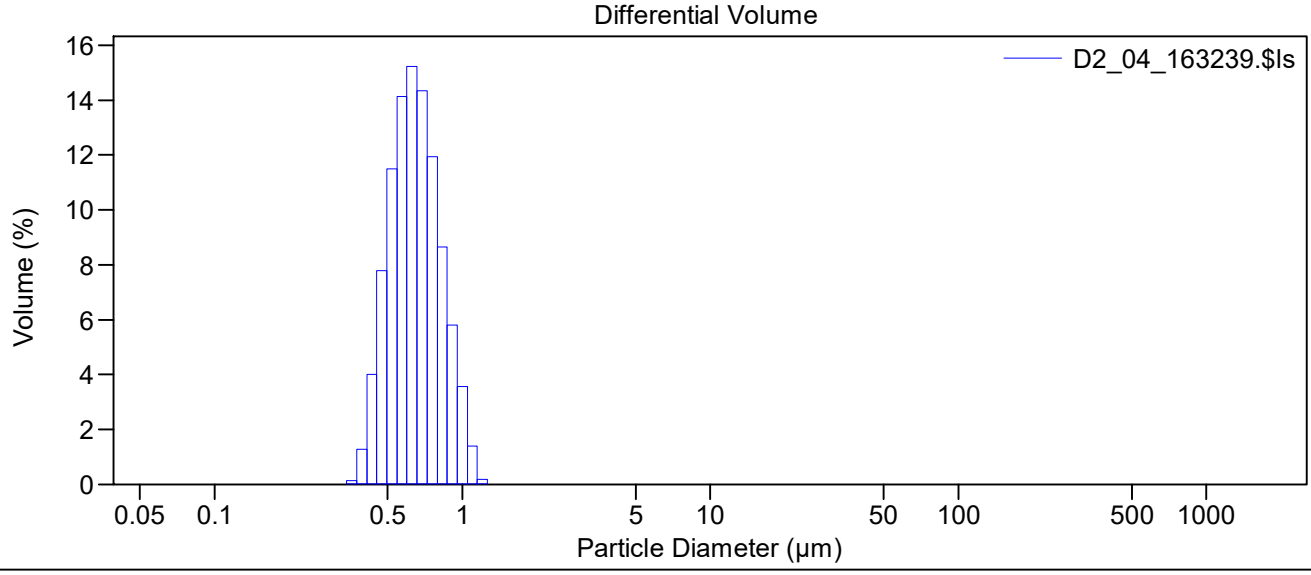
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_04_163239.$ls D2_04_163239.$ls		
File ID:	D2		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.85%		
LS 13 320	Universal Liquid Module		
Start time:	16:30 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

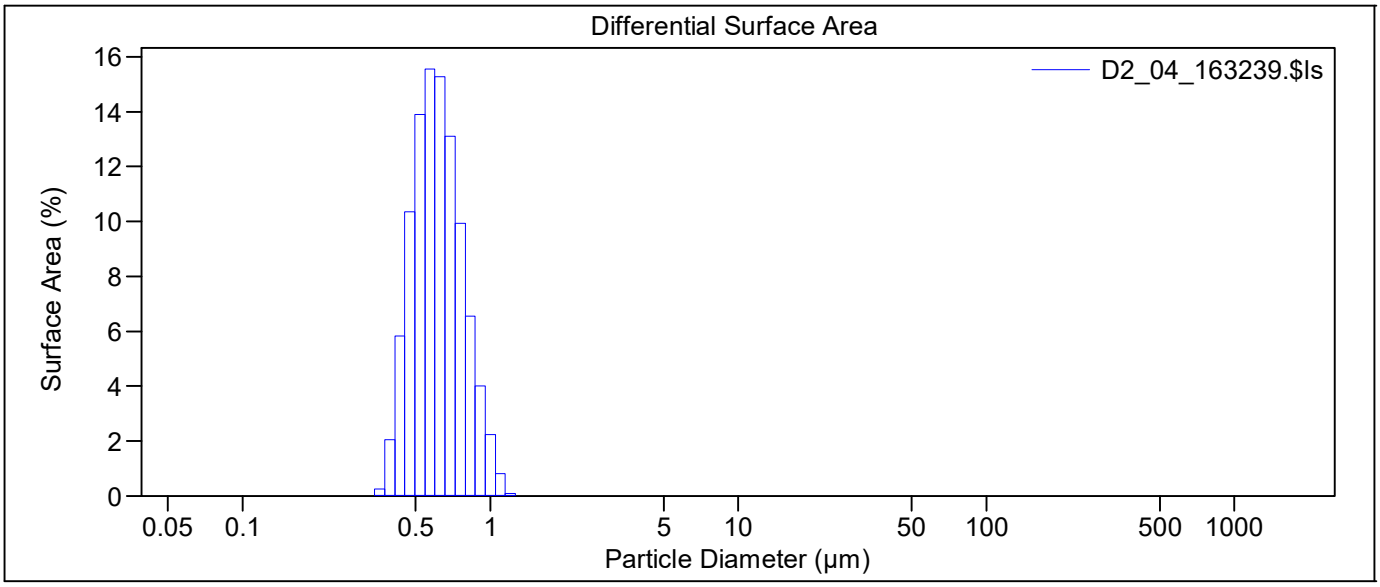
Volume Statistics (Arithmetic) D2_04_163239.$ls

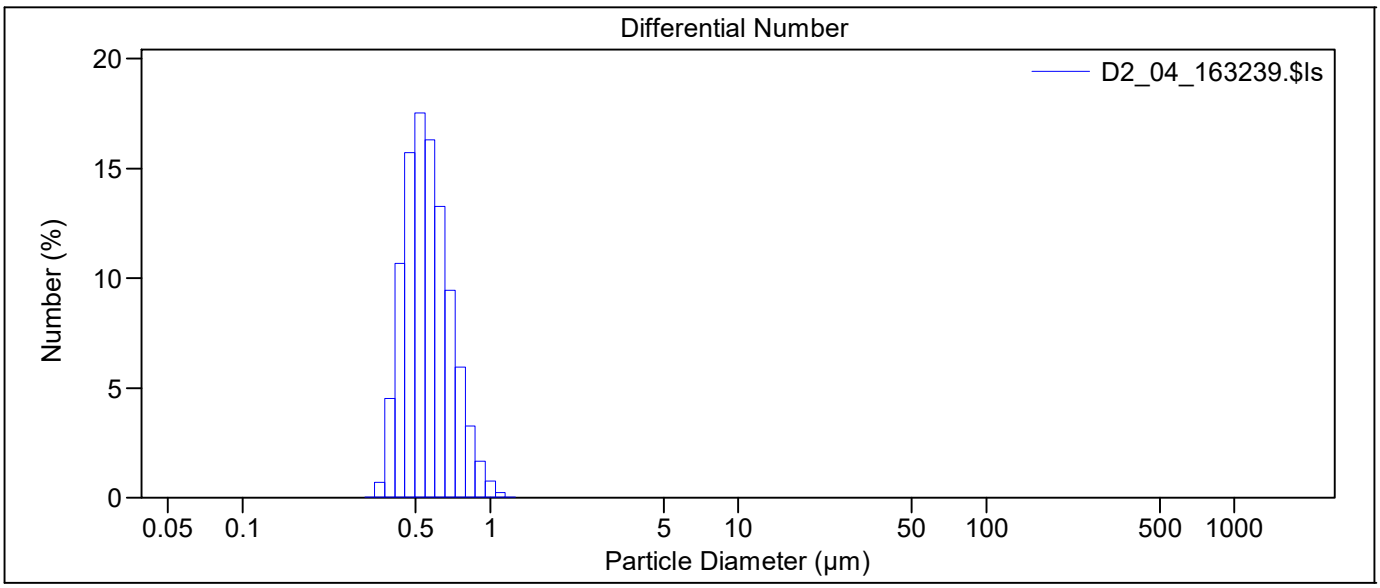
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.662 µm	S.D.:	0.155 µm
Median:	0.641 µm	Variance:	0.024 µm^2
Mean/Median ratio:	1.034	C.V.:	23.4%
Mode:	0.627 µm	Skewness:	0.654 Right skewed
		Kurtosis:	0.062 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.478 µm	0.546 µm	0.641 µm	0.759 µm	0.883 µm







D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0033	0.0064	0.021
24	0.342	0.358	0.15	0.26	0.69
25	0.375	0.393	1.28	2.05	4.52
26	0.412	0.431	4.00	5.83	10.7
27	0.452	0.474	7.80	10.3	15.7
28	0.496	0.520	11.5	13.9	17.5
29	0.545	0.571	14.1	15.6	16.3
30	0.598	0.627	15.2	15.3	13.3
31	0.656	0.688	14.3	13.1	9.44
32	0.721	0.755	11.9	9.93	5.94
33	0.791	0.829	8.65	6.56	3.25
34	0.868	0.910	5.80	4.01	1.65
35	0.953	0.999	3.57	2.25	0.77
36	1.047	1.097	1.41	0.81	0.23
37	1.149	1.204	0.18	0.094	0.022
38	1.261	1.321	0.0043	0.0020	0.00040
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

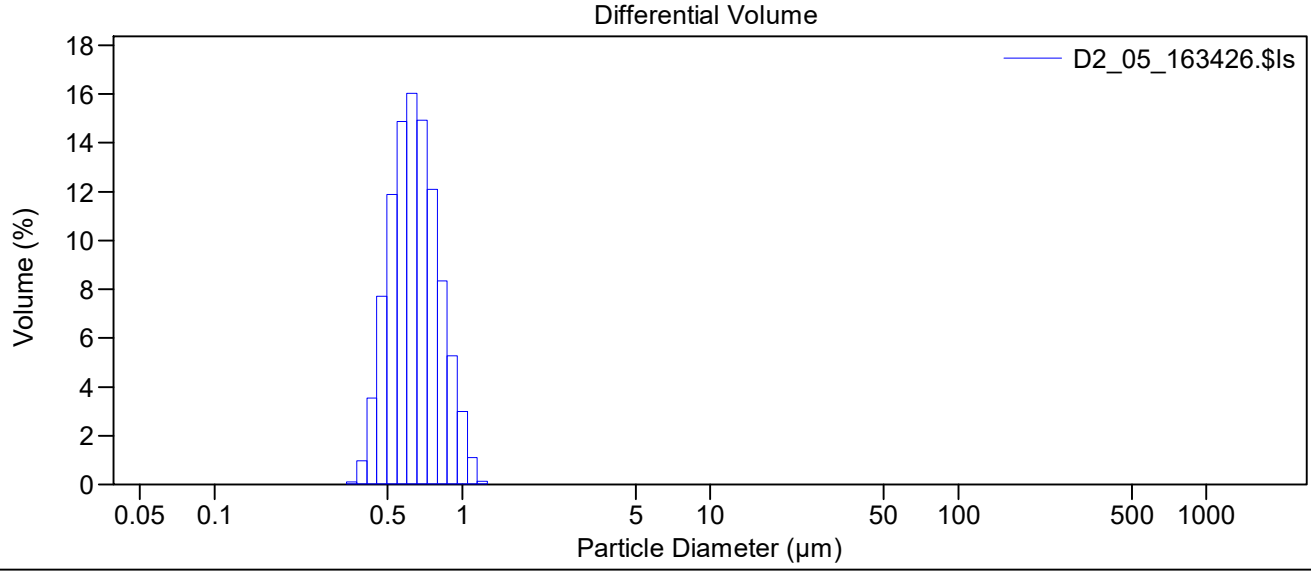
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_05_163426.$ls D2_05_163426.$ls		
File ID:	D2		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.95%		
LS 13 320	Universal Liquid Module		
Start time:	16:32 14	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_05_163426.$ls

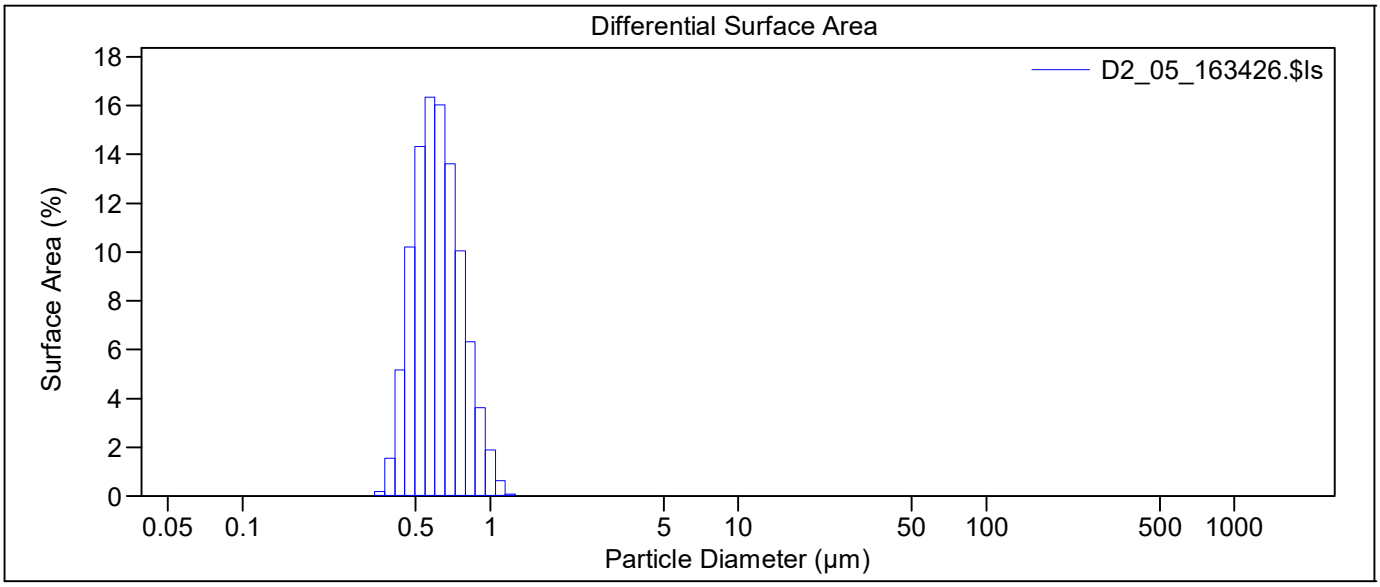
Calculations from 0.040 µm to 2000 µm

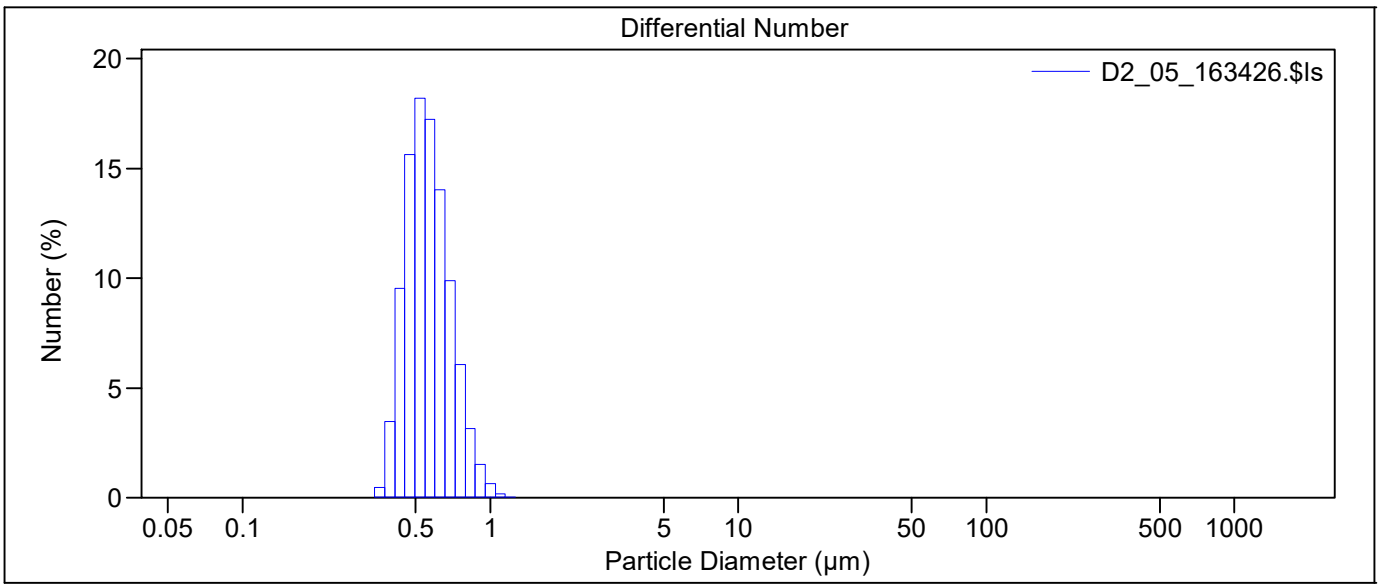
Volume:	100%		
Mean:	0.658 µm	S.D.:	0.148 µm
Median:	0.638 µm	Variance:	0.022 µm^2
Mean/Median ratio:	1.032	C.V.:	22.5%
Mode:	0.627 µm	Skewness:	0.679 Right skewed
		Kurtosis:	0.188 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.483 µm	0.548 µm	0.638 µm	0.749 µm	0.864 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0021	0.0040	0.013
24	0.342	0.358	0.10	0.18	0.47
25	0.375	0.393	0.98	1.56	3.47
26	0.412	0.431	3.55	5.16	9.52
27	0.452	0.474	7.71	10.2	15.6
28	0.496	0.520	11.9	14.3	18.2
29	0.545	0.571	14.9	16.3	17.2
30	0.598	0.627	16.0	16.0	14.0
31	0.656	0.688	14.9	13.6	9.88
32	0.721	0.755	12.1	10.0	6.05
33	0.791	0.829	8.36	6.32	3.16
34	0.868	0.910	5.27	3.63	1.51
35	0.953	0.999	3.00	1.88	0.65
36	1.047	1.097	1.09	0.62	0.18
37	1.149	1.204	0.13	0.070	0.016
38	1.261	1.321	0.0031	0.0015	0.00029
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

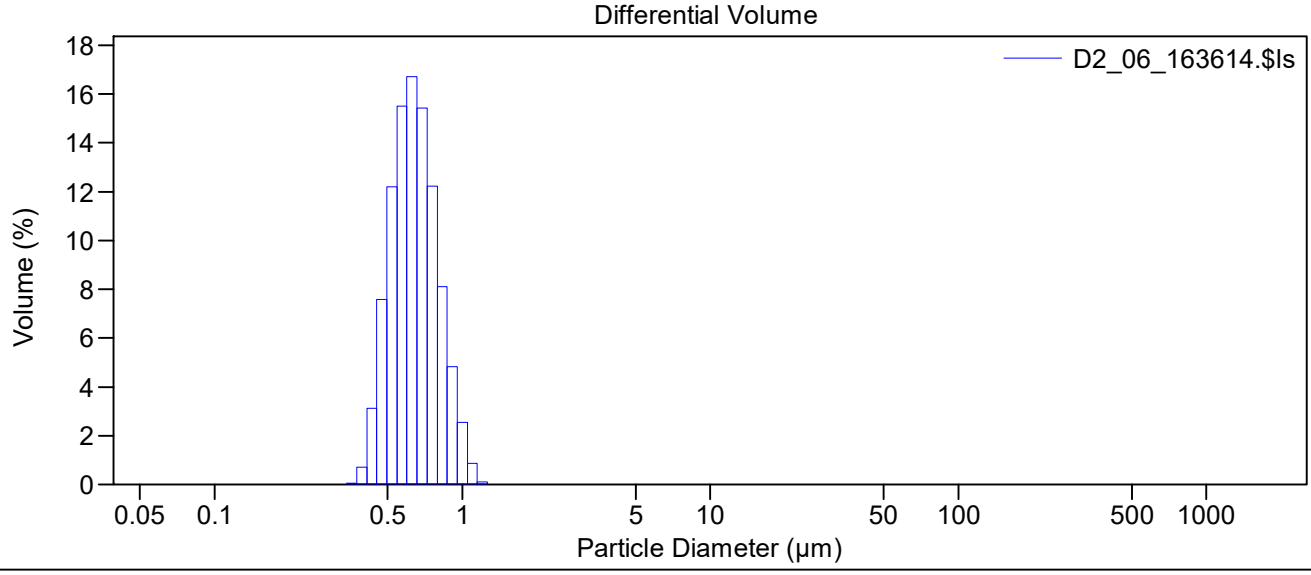
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_06_163614.$ls D2_06_163614.$ls		
File ID:	D2		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.98%		
LS 13 320	Universal Liquid Module		
Start time:	16:34 14	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_06_163614.$ls

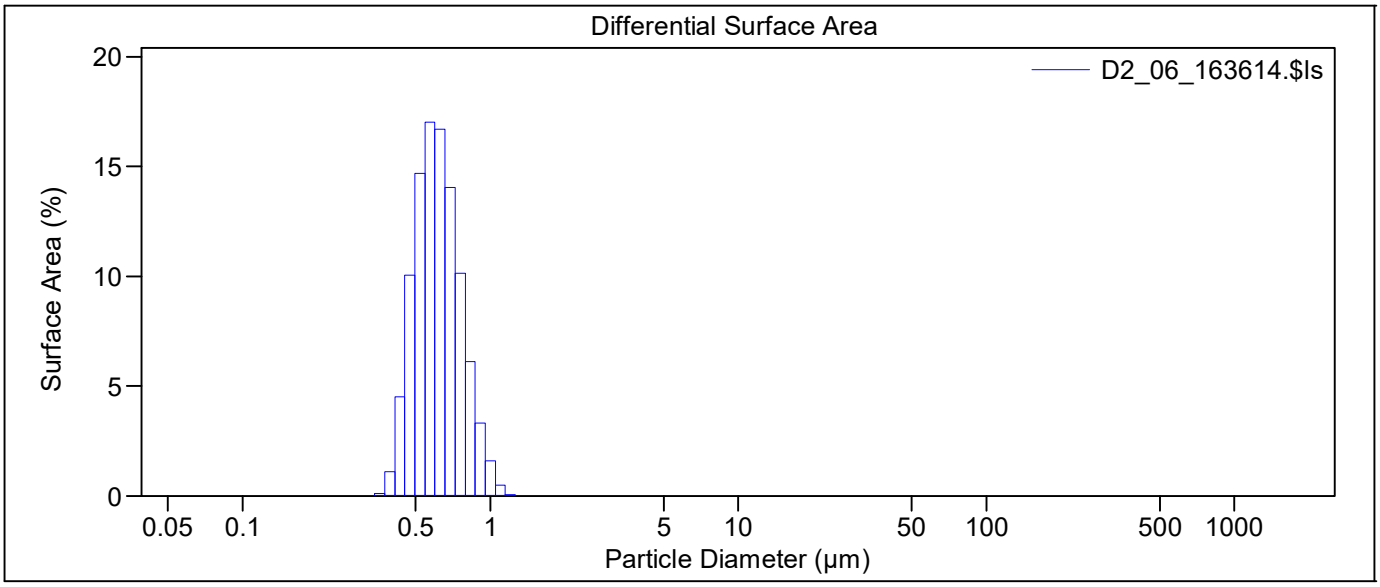
Calculations from 0.040 µm to 2000 µm

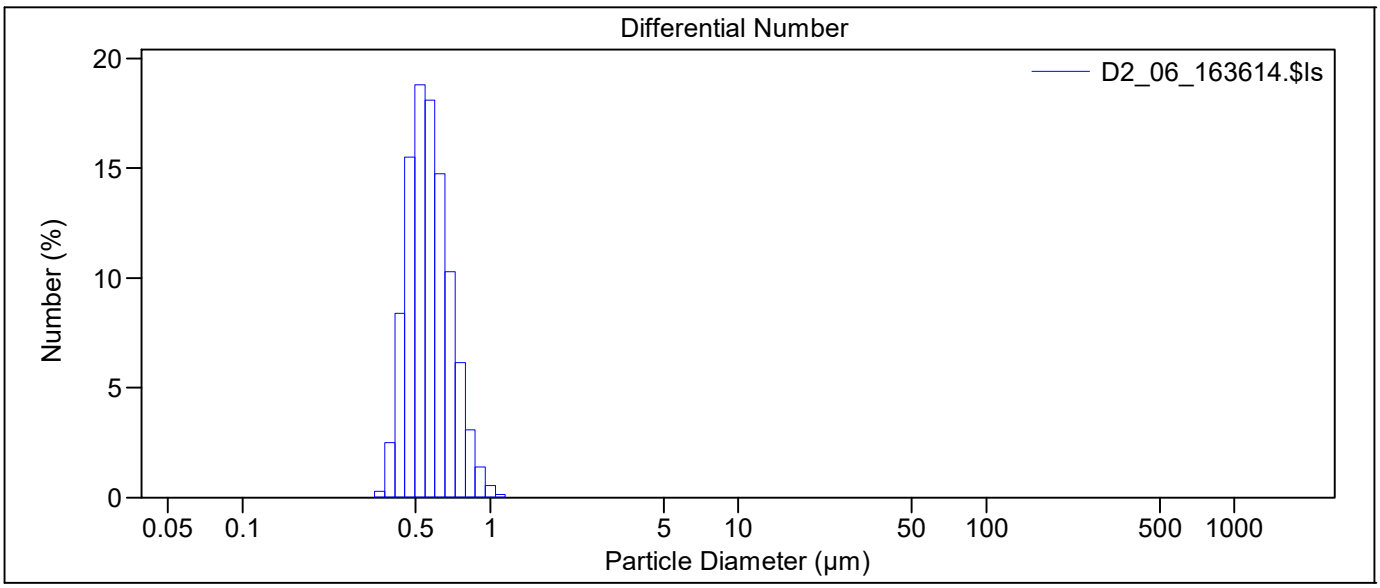
Volume:	100%		
Mean:	0.655 µm	S.D.:	0.142 µm
Median:	0.636 µm	Variance:	0.020 µm^2
Mean/Median ratio:	1.030	C.V.:	21.6%
Mode:	0.627 µm	Skewness:	0.697 Right skewed
		Kurtosis:	0.281 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.488 µm	0.549 µm	0.636 µm	0.742 µm	0.853 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0011	0.0020	0.0066
24	0.342	0.358	0.059	0.10	0.28
25	0.375	0.393	0.70	1.11	2.49
26	0.412	0.431	3.11	4.52	8.41
27	0.452	0.474	7.60	10.0	15.5
28	0.496	0.520	12.2	14.7	18.8
29	0.545	0.571	15.5	17.0	18.1
30	0.598	0.627	16.7	16.7	14.7
31	0.656	0.688	15.4	14.1	10.3
32	0.721	0.755	12.2	10.1	6.16
33	0.791	0.829	8.10	6.12	3.09
34	0.868	0.910	4.84	3.33	1.39
35	0.953	0.999	2.55	1.60	0.56
36	1.047	1.097	0.86	0.49	0.14
37	1.149	1.204	0.10	0.052	0.013
38	1.261	1.321	0.0023	0.0011	0.00021
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

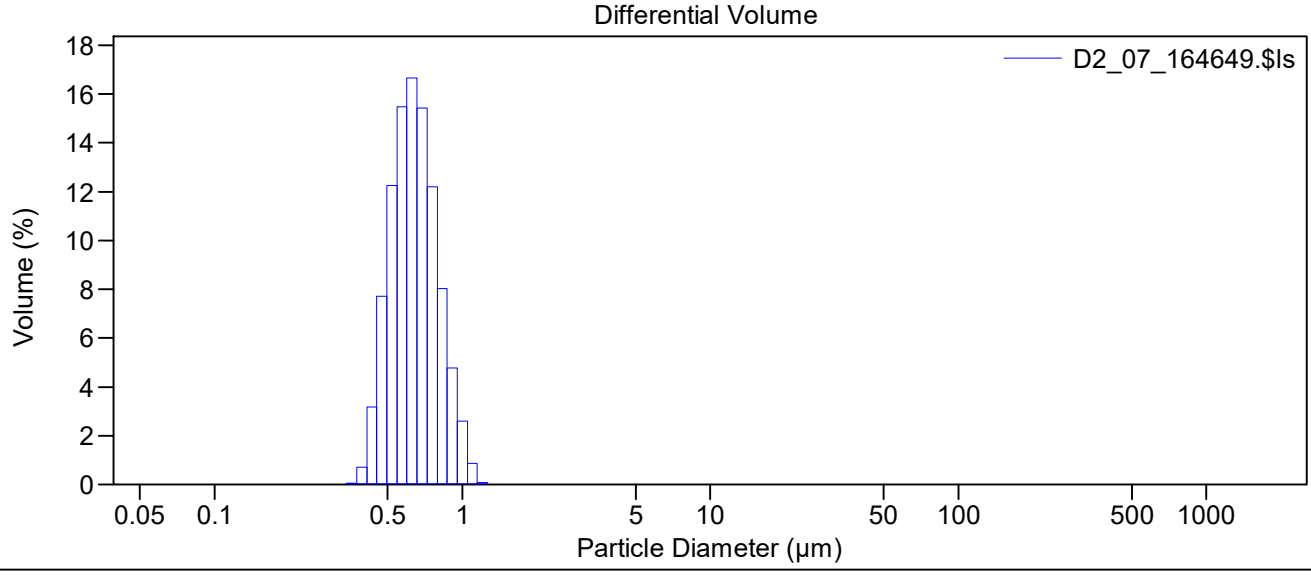
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_07_164649.$ls D2_07_164649.$ls		
File ID:	D2		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.89%		
LS 13 320	Universal Liquid Module		
Start time:	16:45 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

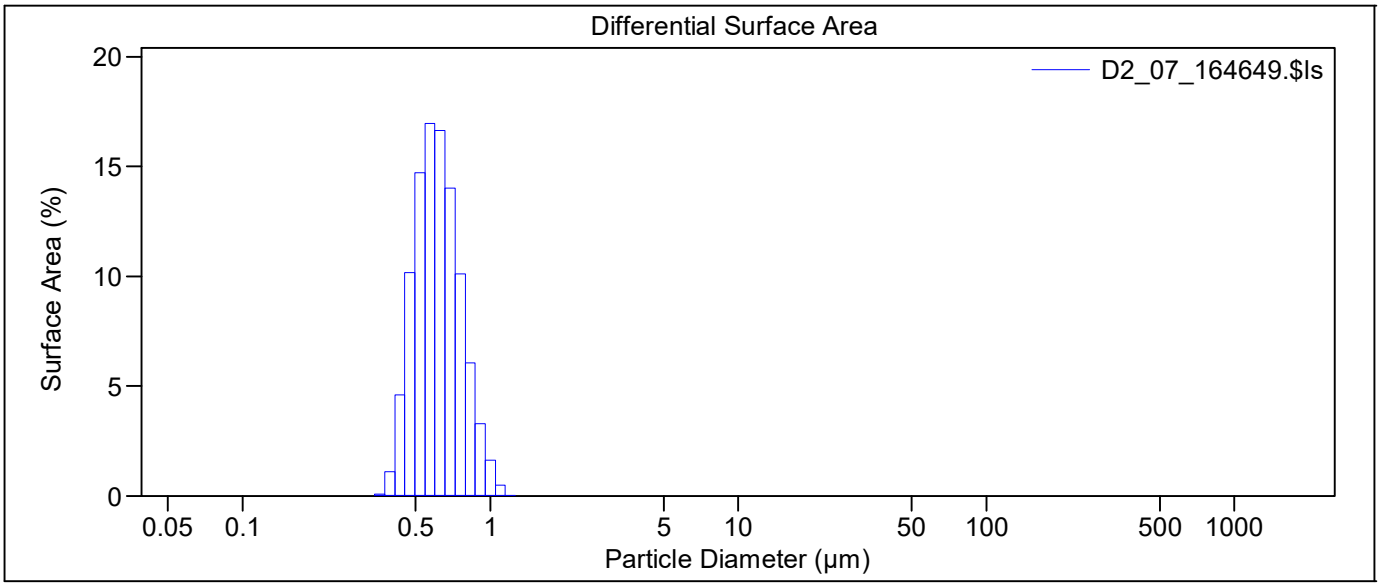
Volume Statistics (Arithmetic) D2_07_164649.$ls

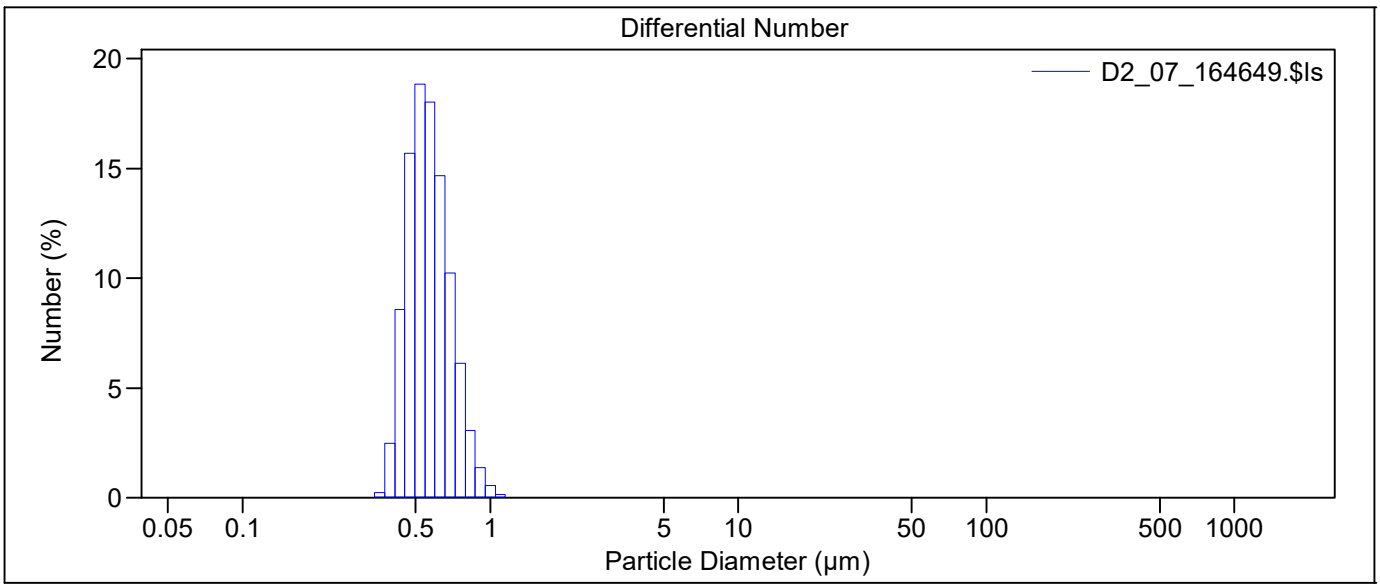
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.654 µm	S.D.:	0.141 µm
Median:	0.635 µm	Variance:	0.020 µm^2
Mean/Median ratio:	1.030	C.V.:	21.6%
Mode:	0.627 µm	Skewness:	0.694 Right skewed
		Kurtosis:	0.258 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.487 µm	0.549 µm	0.635 µm	0.741 µm	0.852 µm







D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00040	0.00077	0.0025
24	0.342	0.358	0.051	0.090	0.24
25	0.375	0.393	0.70	1.11	2.49
26	0.412	0.431	3.18	4.61	8.57
27	0.452	0.474	7.71	10.2	15.7
28	0.496	0.520	12.2	14.7	18.8
29	0.545	0.571	15.5	17.0	18.0
30	0.598	0.627	16.7	16.7	14.7
31	0.656	0.688	15.4	14.0	10.2
32	0.721	0.755	12.2	10.1	6.13
33	0.791	0.829	8.03	6.06	3.05
34	0.868	0.910	4.78	3.29	1.37
35	0.953	0.999	2.59	1.62	0.56
36	1.047	1.097	0.85	0.49	0.14
37	1.149	1.204	0.083	0.043	0.010
38	1.261	1.321	0.00073	0.00034	0.000068
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

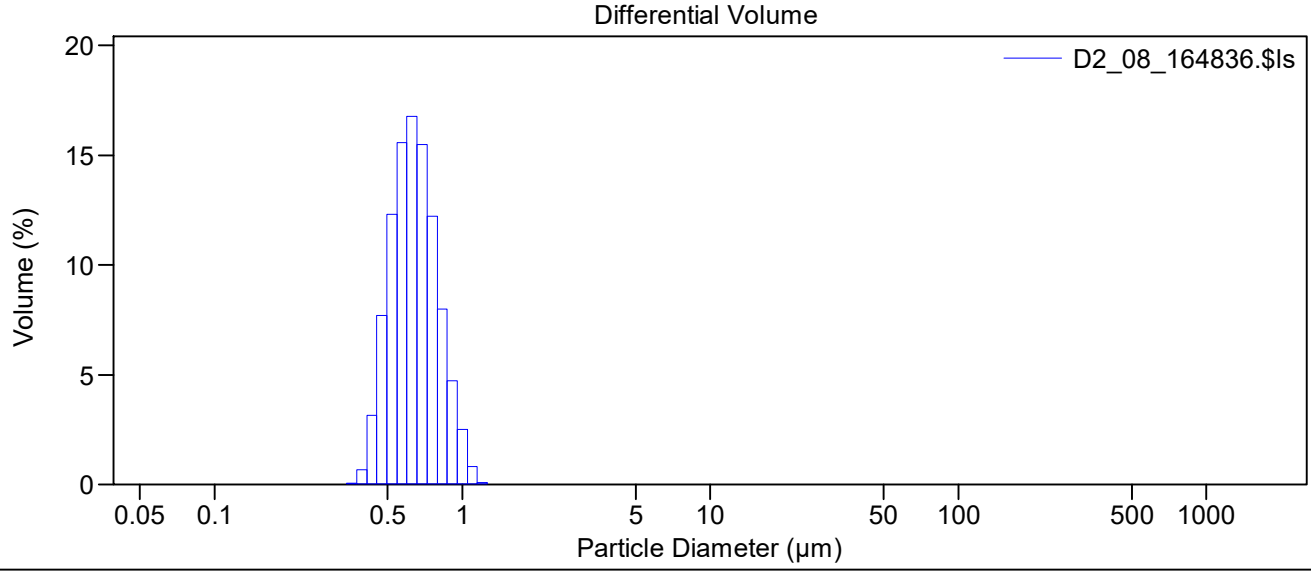
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_08_164836.$ls D2_08_164836.$ls		
File ID:	D2		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.92%		
LS 13 320	Universal Liquid Module		
Start time:	16:46 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_08_164836.$ls

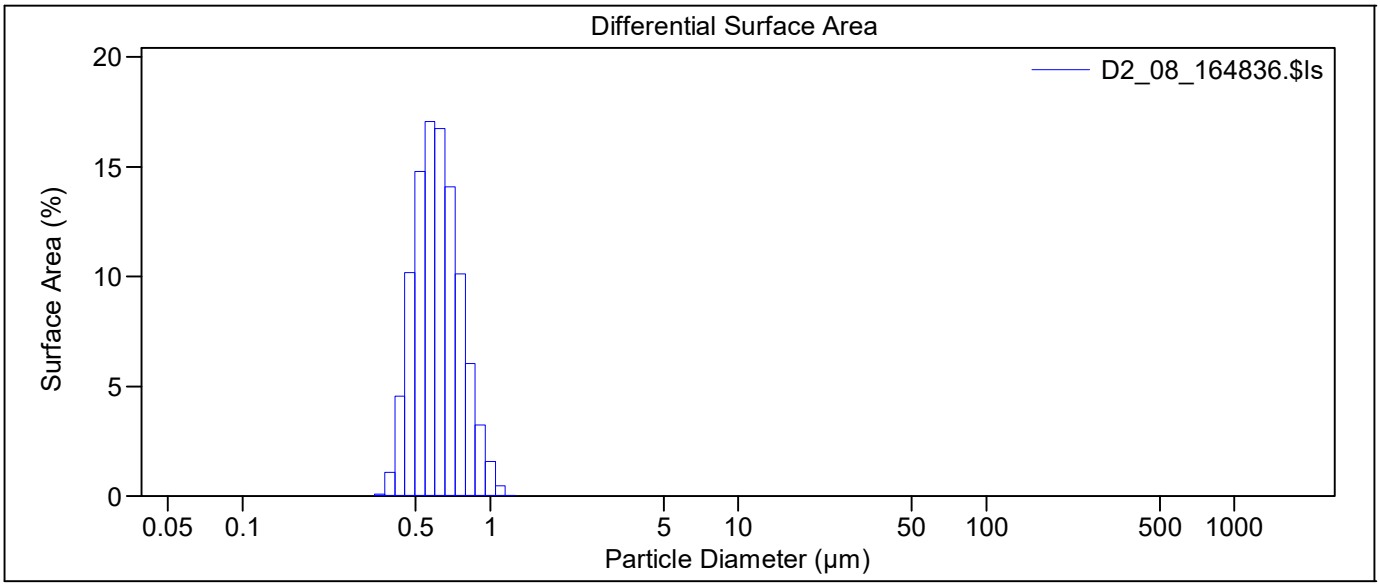
Calculations from 0.040 µm to 2000 µm

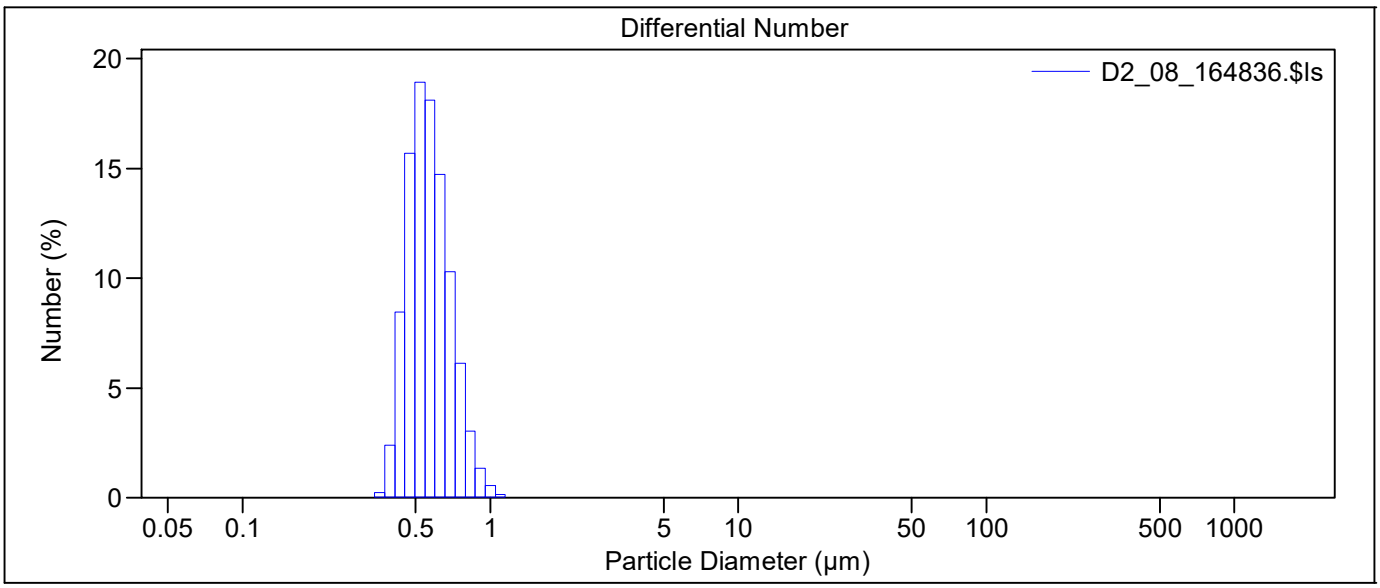
Volume:	100%		
Mean:	0.654 µm	S.D.:	0.141 µm
Median:	0.635 µm	Variance:	0.020 µm^2
Mean/Median ratio:	1.029	C.V.:	21.5%
Mode:	0.627 µm	Skewness:	0.696 Right skewed
		Kurtosis:	0.269 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.487 µm	0.549 µm	0.635 µm	0.740 µm	0.850 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00037	0.00071	0.0023
24	0.342	0.358	0.048	0.084	0.23
25	0.375	0.393	0.67	1.07	2.39
26	0.412	0.431	3.14	4.55	8.45
27	0.452	0.474	7.71	10.2	15.7
28	0.496	0.520	12.3	14.8	18.9
29	0.545	0.571	15.6	17.1	18.1
30	0.598	0.627	16.8	16.7	14.7
31	0.656	0.688	15.5	14.1	10.3
32	0.721	0.755	12.2	10.1	6.14
33	0.791	0.829	7.99	6.03	3.03
34	0.868	0.910	4.72	3.24	1.35
35	0.953	0.999	2.52	1.58	0.55
36	1.047	1.097	0.82	0.47	0.13
37	1.149	1.204	0.079	0.041	0.0098
38	1.261	1.321	0.00069	0.00033	0.000065
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

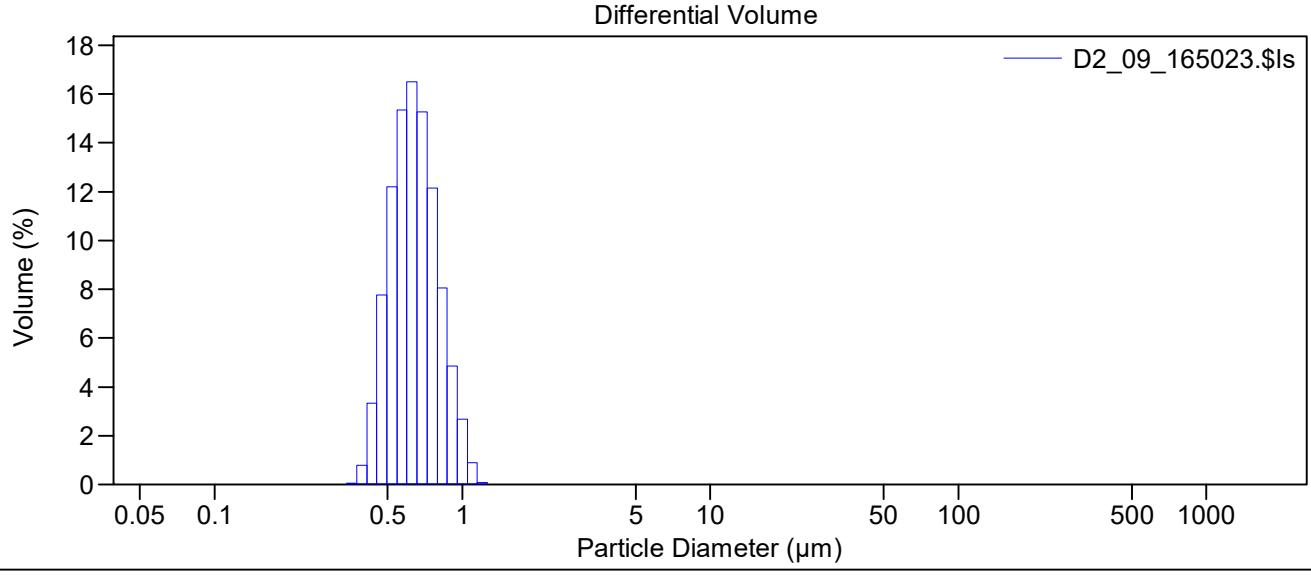
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_09_165023.$ls D2_09_165023.$ls		
File ID:	D2		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.91%		
LS 13 320	Universal Liquid Module		
Start time:	16:48 14	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_09_165023.$ls

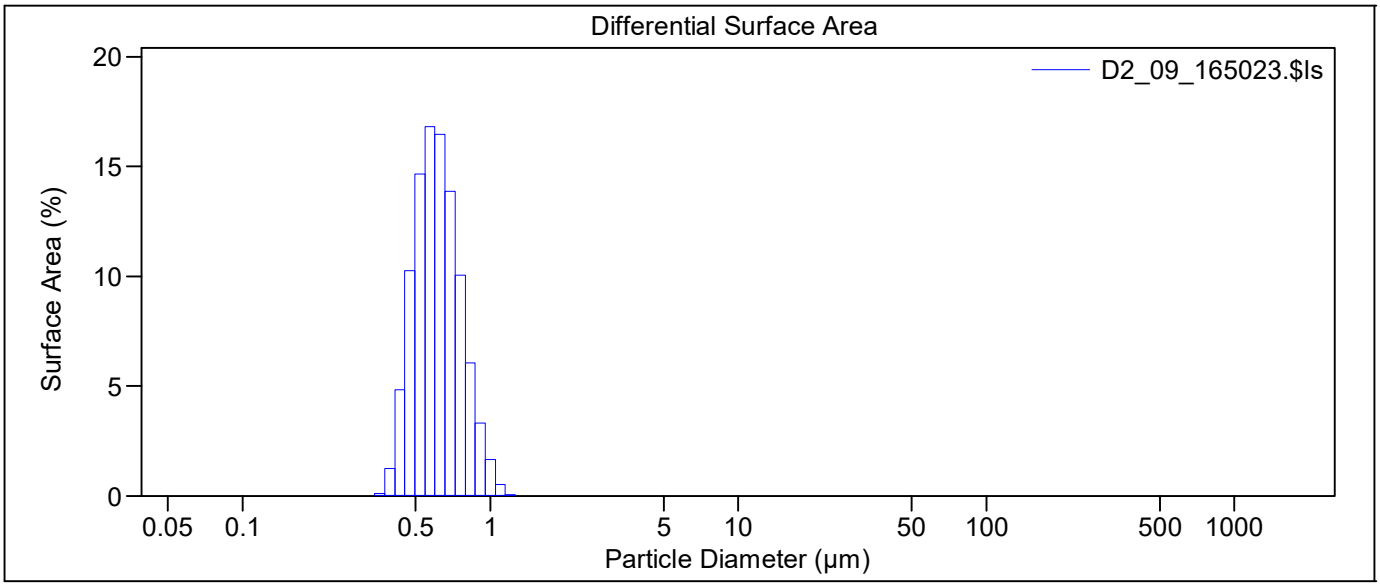
Calculations from 0.040 µm to 2000 µm

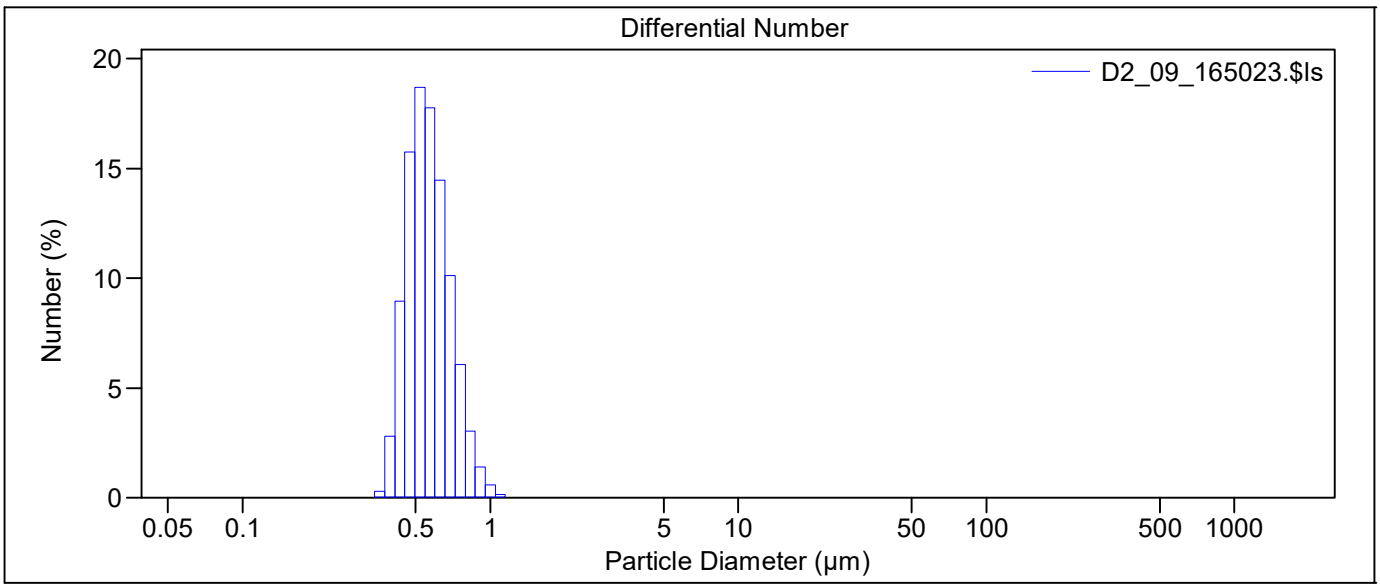
Volume:	100%		
Mean:	0.654 µm	S.D.:	0.143 µm
Median:	0.635 µm	Variance:	0.020 µm^2
Mean/Median ratio:	1.030	C.V.:	21.8%
Mode:	0.627 µm	Skewness:	0.692 Right skewed
		Kurtosis:	0.245 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.485 µm	0.548 µm	0.635 µm	0.742 µm	0.854 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00050	0.00096	0.0031
24	0.342	0.358	0.062	0.11	0.29
25	0.375	0.393	0.79	1.25	2.79
26	0.412	0.431	3.34	4.83	8.94
27	0.452	0.474	7.77	10.3	15.7
28	0.496	0.520	12.2	14.7	18.7
29	0.545	0.571	15.3	16.8	17.8
30	0.598	0.627	16.5	16.5	14.4
31	0.656	0.688	15.3	13.9	10.1
32	0.721	0.755	12.1	10.1	6.07
33	0.791	0.829	8.05	6.07	3.04
34	0.868	0.910	4.85	3.33	1.38
35	0.953	0.999	2.67	1.67	0.58
36	1.047	1.097	0.90	0.52	0.15
37	1.149	1.204	0.089	0.046	0.011
38	1.261	1.321	0.00079	0.00037	0.000073
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

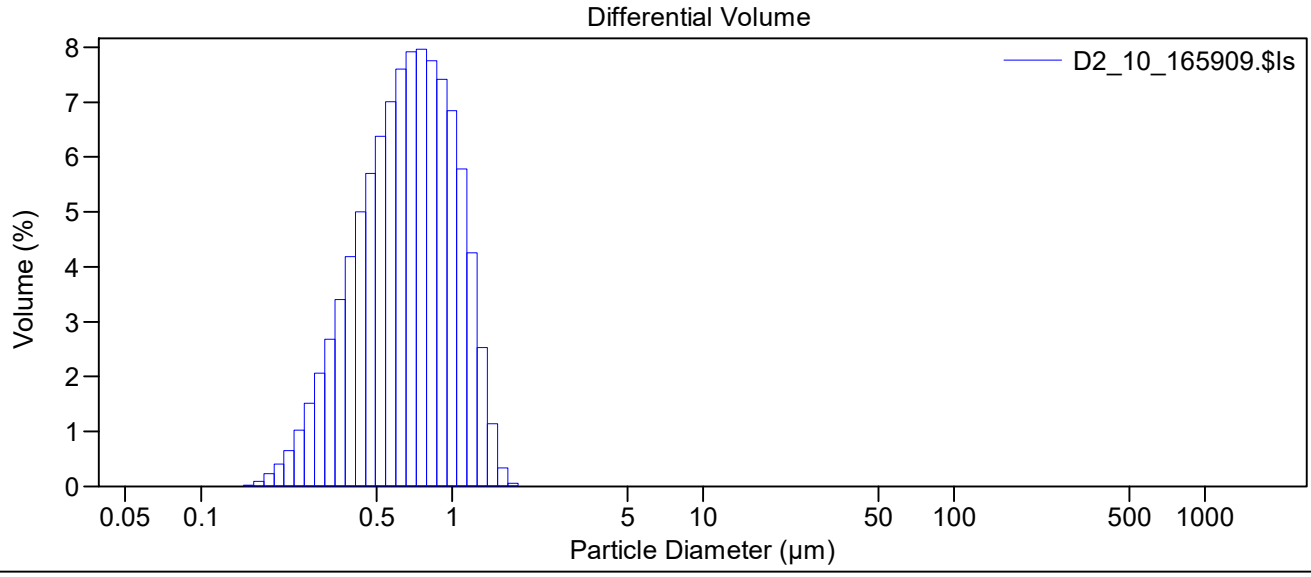
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_10_165909.$ls D2_10_165909.$ls		
File ID:	D2		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.08%		
LS 13 320	Universal Liquid Module		
Start time:	16:57 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	10%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_10_165909.$ls

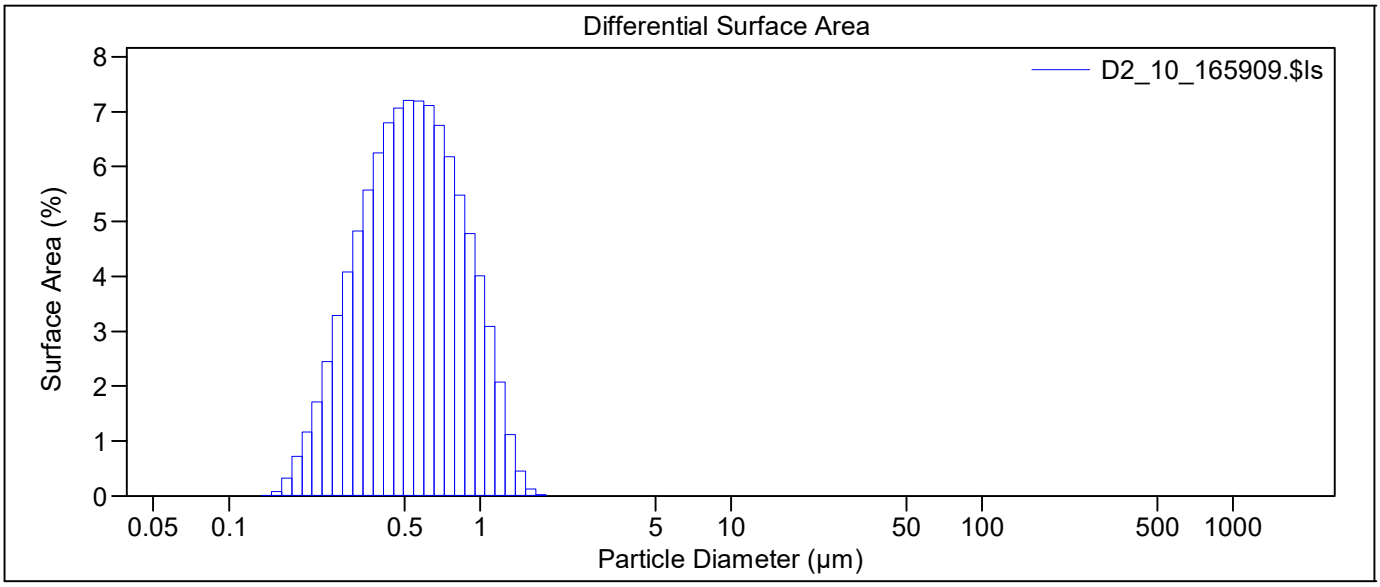
Calculations from 0.040 µm to 2000 µm

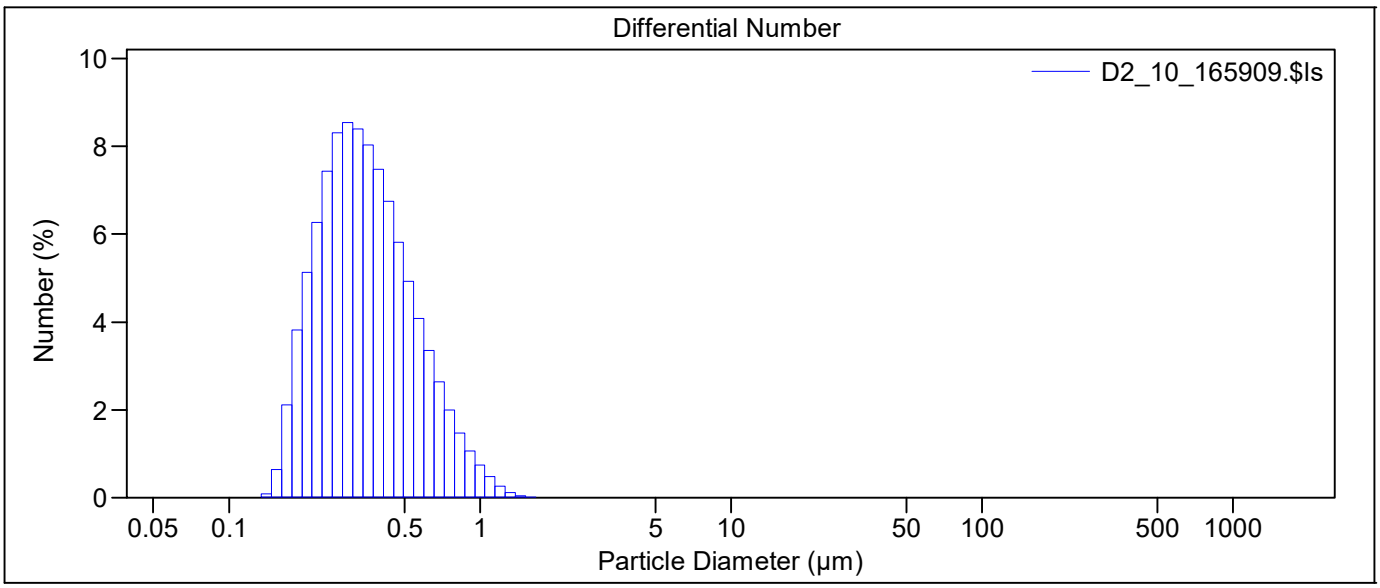
Volume:	100%		
Mean:	0.708 µm	S.D.:	0.290 µm
Median:	0.673 µm	Variance:	0.084 µm^2
Mean/Median ratio:	1.053	C.V.:	40.9%
Mode:	0.755 µm	Skewness:	0.508 Right skewed
		Kurtosis:	-0.304 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.354 µm	0.481 µm	0.673 µm	0.907 µm	1.119 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0.000019	0.000085	0.00096
14	0.134	0.141	0.0021	0.0089	0.083
15	0.148	0.155	0.022	0.082	0.64
16	0.162	0.170	0.096	0.33	2.12
17	0.178	0.186	0.23	0.72	3.82

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0.41	1.16	5.13
19	0.214	0.225	0.65	1.71	6.26
20	0.235	0.247	1.03	2.45	7.43
21	0.258	0.271	1.52	3.29	8.31
22	0.284	0.297	2.07	4.08	8.55
23	0.311	0.326	2.69	4.83	8.39
24	0.342	0.358	3.40	5.57	8.03
25	0.375	0.393	4.19	6.25	7.48
26	0.412	0.431	5.00	6.80	6.74
27	0.452	0.474	5.71	7.07	5.82
28	0.496	0.520	6.38	7.20	4.92
29	0.545	0.571	7.00	7.20	4.08
30	0.598	0.627	7.60	7.12	3.35
31	0.656	0.688	7.92	6.76	2.64
32	0.721	0.755	7.96	6.19	2.00
33	0.791	0.829	7.75	5.48	1.47
34	0.868	0.910	7.42	4.78	1.07
35	0.953	0.999	6.84	4.02	0.74
36	1.047	1.097	5.78	3.09	0.48
37	1.149	1.204	4.26	2.07	0.26
38	1.261	1.321	2.53	1.12	0.12
39	1.385	1.451	1.14	0.46	0.040
40	1.520	1.592	0.34	0.13	0.0092
41	1.668	1.748	0.057	0.019	0.0012
42	1.832	1.919	0.0042	0.0013	0.000064
43	2.011	2.107	0.000032	0.000009	3.74E-7
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	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 %
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

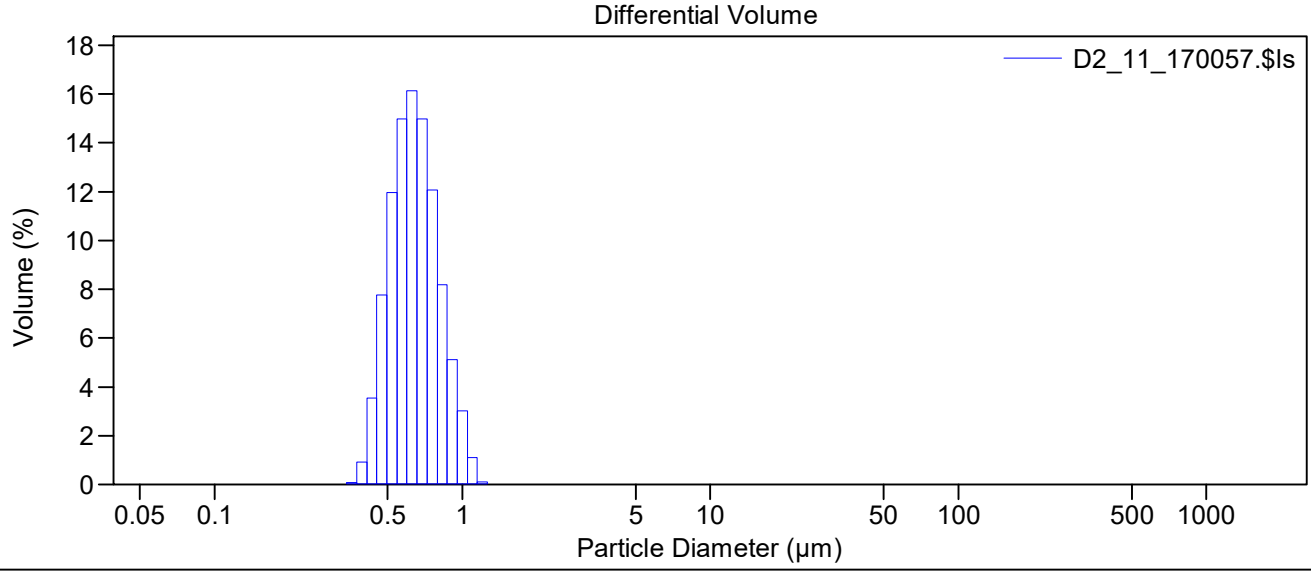
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_11_170057.$ls D2_11_170057.$ls		
File ID:	D2		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.91%		
LS 13 320	Universal Liquid Module		
Start time:	16:59 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

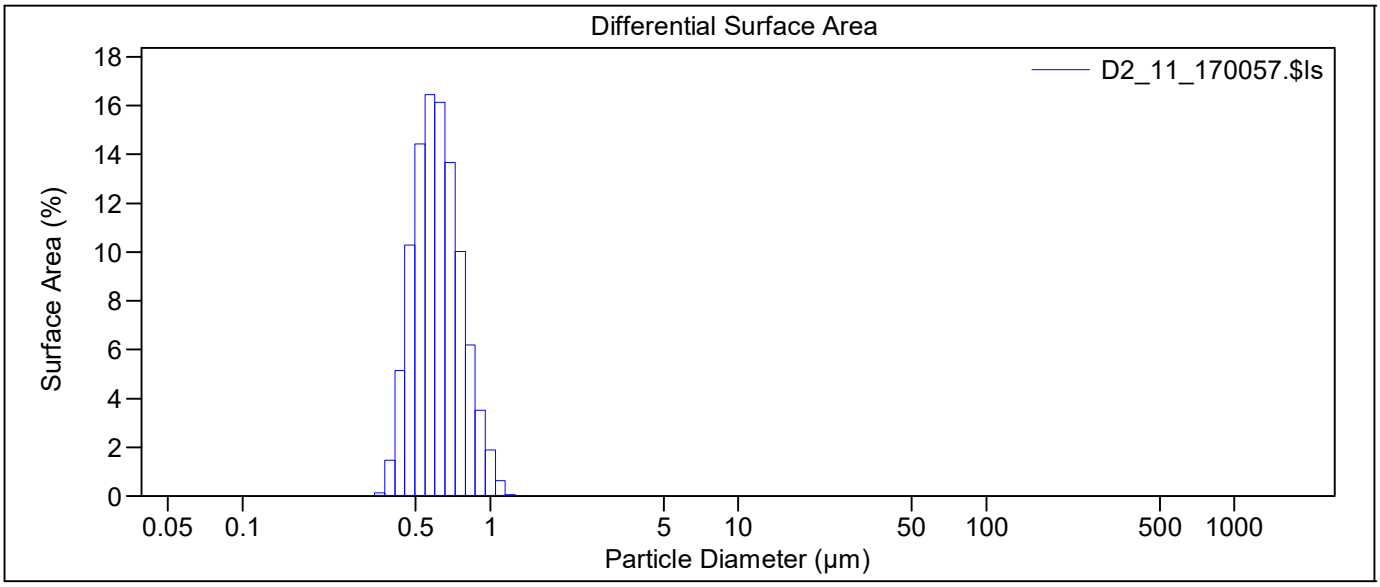
Volume Statistics (Arithmetic) D2_11_170057.$ls

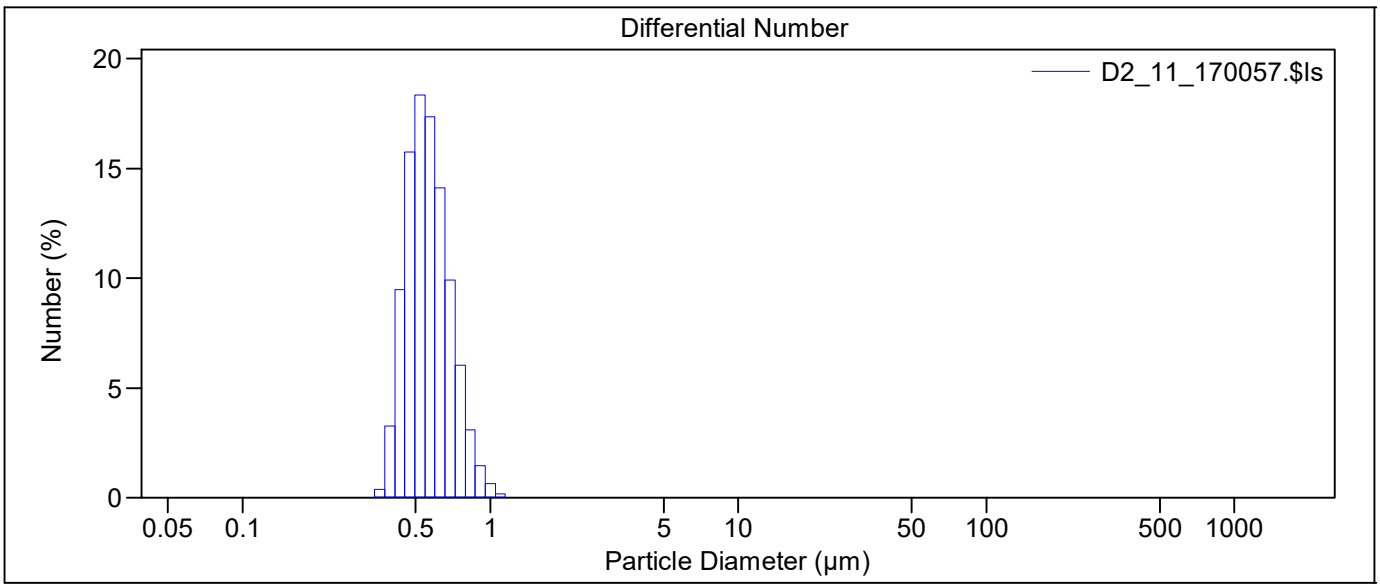
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.657 µm	S.D.:	0.147 µm
Median:	0.637 µm	Variance:	0.022 µm^2
Mean/Median ratio:	1.032	C.V.:	22.4%
Mode:	0.627 µm	Skewness:	0.690 Right skewed
		Kurtosis:	0.201 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.483 µm	0.547 µm	0.637 µm	0.748 µm	0.862 µm







D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	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 %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00066	0.0013	0.0041
24	0.342	0.358	0.079	0.14	0.37
25	0.375	0.393	0.92	1.47	3.27
26	0.412	0.431	3.54	5.13	9.48
27	0.452	0.474	7.77	10.3	15.7
28	0.496	0.520	12.0	14.4	18.3
29	0.545	0.571	15.0	16.4	17.3
30	0.598	0.627	16.1	16.1	14.1
31	0.656	0.688	15.0	13.7	9.92
32	0.721	0.755	12.1	10.0	6.03
33	0.791	0.829	8.20	6.20	3.10
34	0.868	0.910	5.12	3.53	1.46
35	0.953	0.999	3.01	1.89	0.65
36	1.047	1.097	1.10	0.63	0.18
37	1.149	1.204	0.11	0.059	0.014
38	1.261	1.321	0.0010	0.00049	0.000095
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

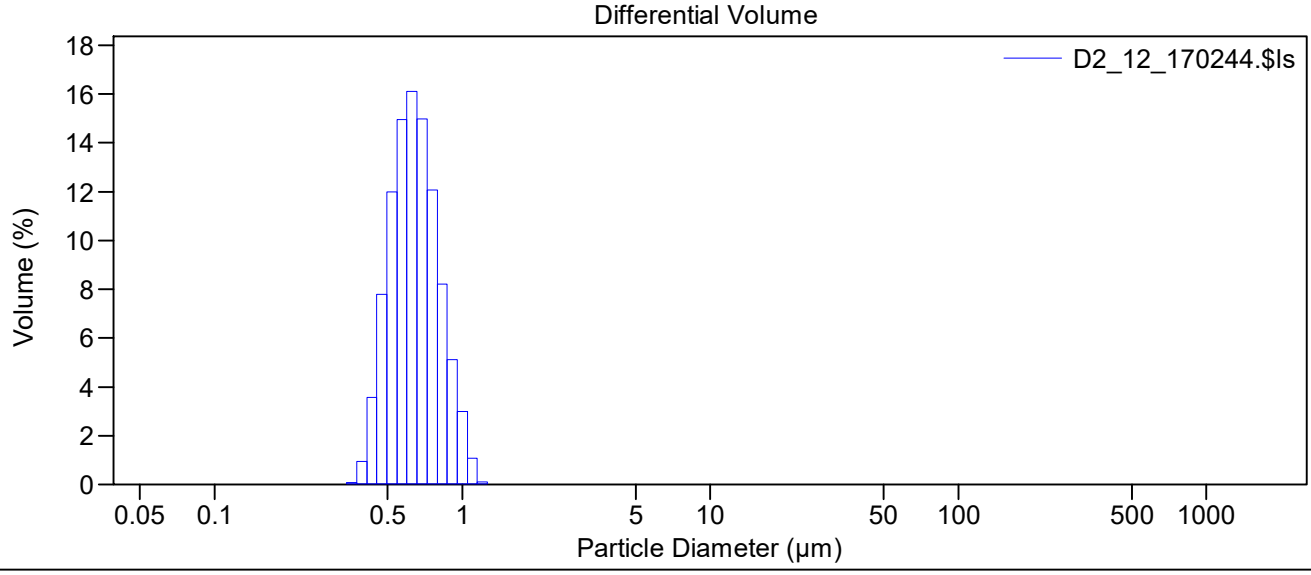
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_12_170244.$ls D2_12_170244.$ls		
File ID:	D2		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.94%		
LS 13 320	Universal Liquid Module		
Start time:	17:01 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

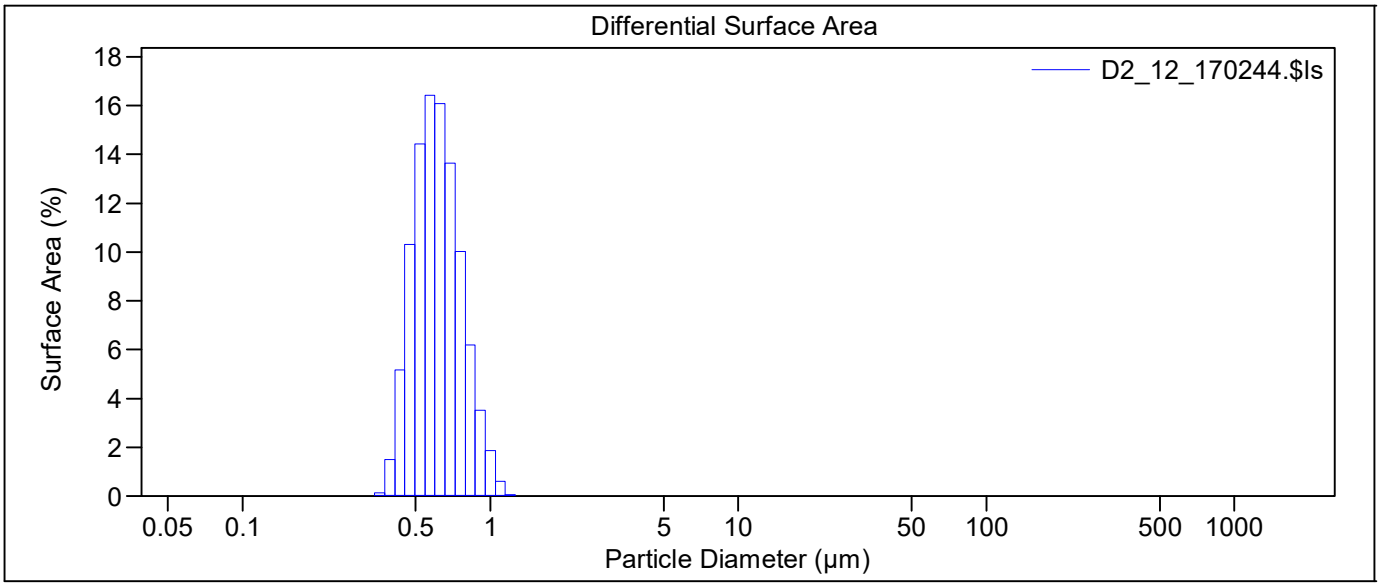
Volume Statistics (Arithmetic) D2_12_170244.$ls

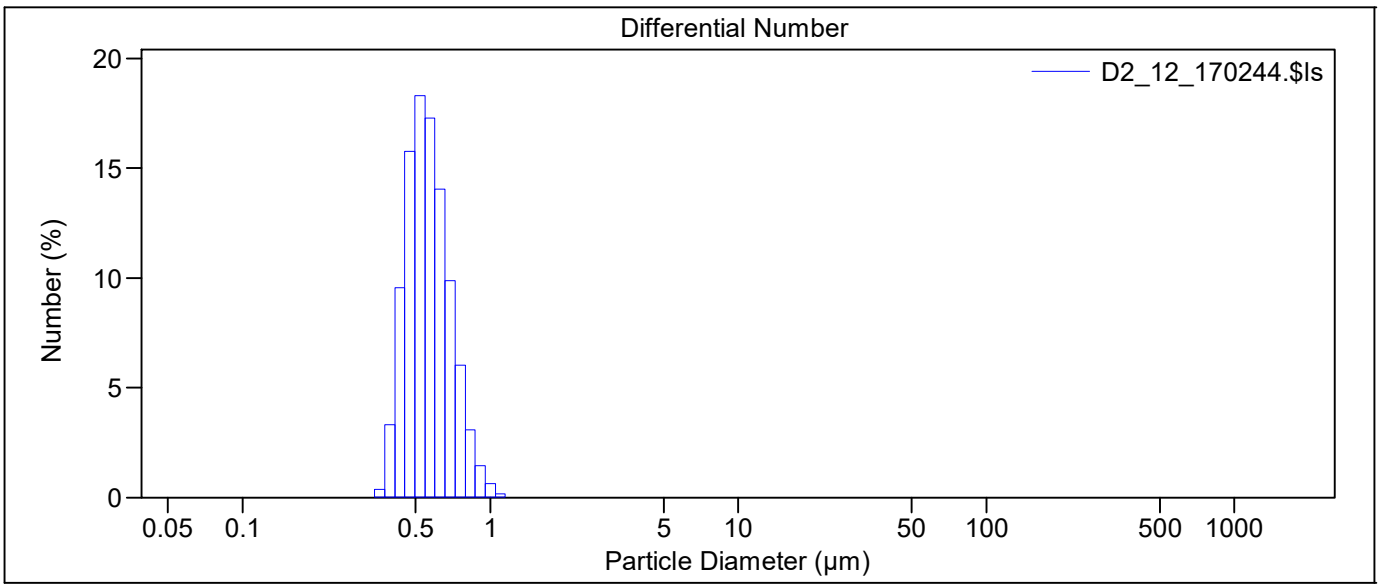
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.657 µm	S.D.:	0.147 µm
Median:	0.637 µm	Variance:	0.022 µm^2
Mean/Median ratio:	1.031	C.V.:	22.4%
Mode:	0.627 µm	Skewness:	0.685 Right skewed
		Kurtosis:	0.192 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.483 µm	0.547 µm	0.637 µm	0.747 µm	0.862 µm







D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00068	0.0013	0.0042
24	0.342	0.358	0.081	0.14	0.38
25	0.375	0.393	0.94	1.50	3.33
26	0.412	0.431	3.57	5.18	9.55
27	0.452	0.474	7.80	10.3	15.8
28	0.496	0.520	12.0	14.4	18.3
29	0.545	0.571	15.0	16.4	17.3
30	0.598	0.627	16.1	16.1	14.1
31	0.656	0.688	15.0	13.6	9.89
32	0.721	0.755	12.1	10.0	6.02
33	0.791	0.829	8.21	6.20	3.10
34	0.868	0.910	5.12	3.53	1.46
35	0.953	0.999	2.98	1.87	0.64
36	1.047	1.097	1.07	0.61	0.17
37	1.149	1.204	0.11	0.057	0.014
38	1.261	1.321	0.00098	0.00047	0.000091
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

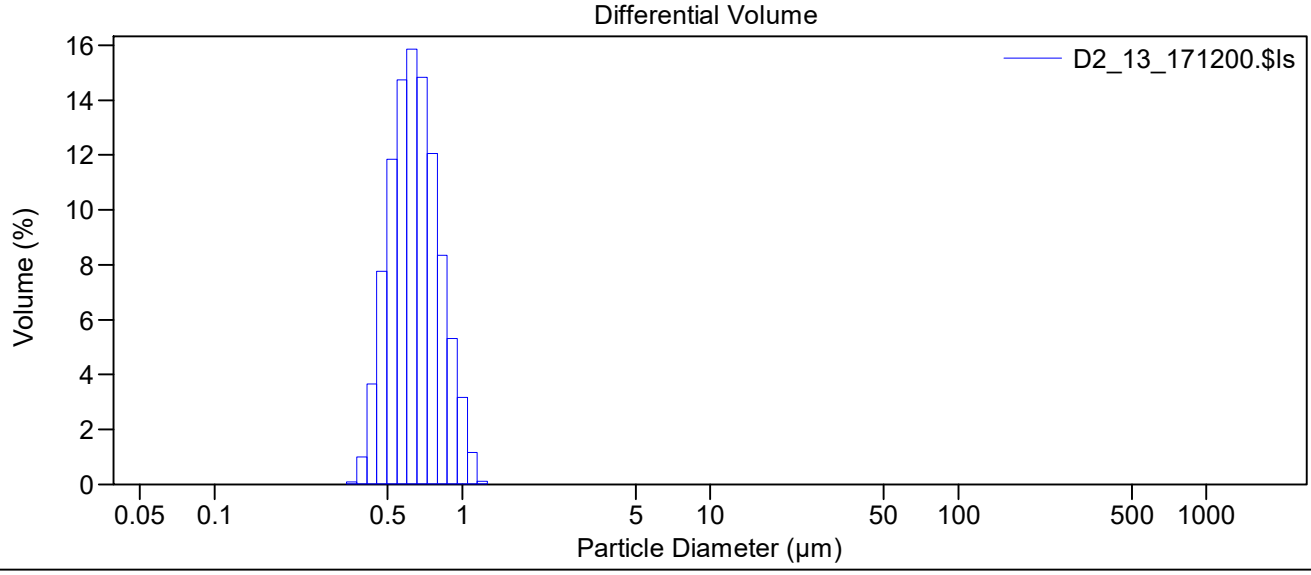
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_13_171200.$ls D2_13_171200.$ls		
File ID:	D2		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.86%		
LS 13 320	Universal Liquid Module		
Start time:	17:10 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_13_171200.$ls

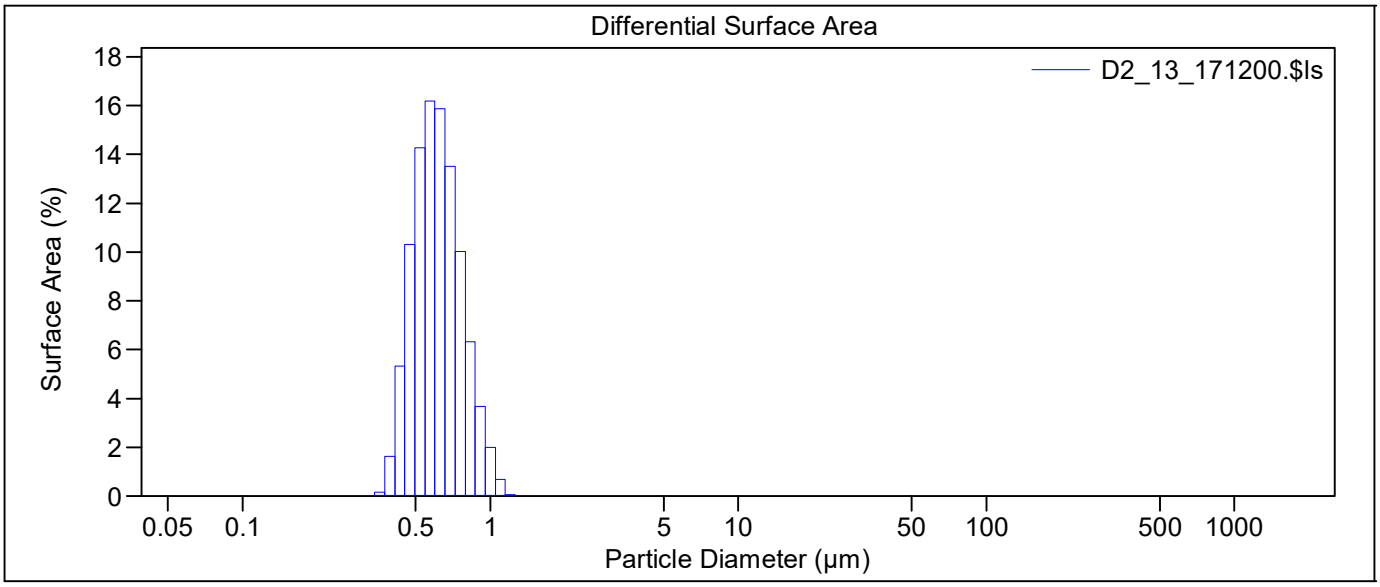
Calculations from 0.040 µm to 2000 µm

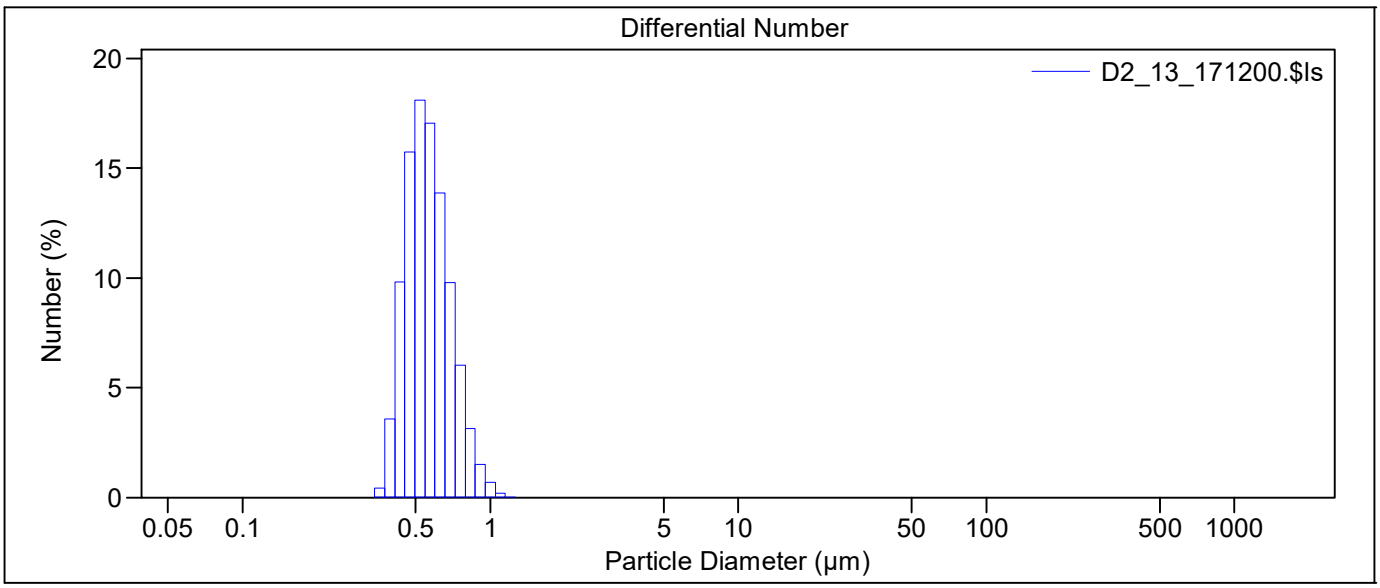
Volume:	100%		
Mean:	0.659 µm	S.D.:	0.149 µm
Median:	0.638 µm	Variance:	0.022 µm^2
Mean/Median ratio:	1.032	C.V.:	22.6%
Mode:	0.627 µm	Skewness:	0.677 Right skewed
		Kurtosis:	0.150 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.482 µm	0.547 µm	0.638 µm	0.751 µm	0.866 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00077	0.0015	0.0048
24	0.342	0.358	0.090	0.16	0.42
25	0.375	0.393	1.01	1.62	3.59
26	0.412	0.431	3.67	5.34	9.83
27	0.452	0.474	7.78	10.3	15.7
28	0.496	0.520	11.8	14.3	18.1
29	0.545	0.571	14.7	16.2	17.0
30	0.598	0.627	15.9	15.9	13.9
31	0.656	0.688	14.8	13.5	9.80
32	0.721	0.755	12.1	10.0	6.02
33	0.791	0.829	8.34	6.31	3.15
34	0.868	0.910	5.31	3.66	1.52
35	0.953	0.999	3.18	1.99	0.69
36	1.047	1.097	1.17	0.67	0.19
37	1.149	1.204	0.12	0.064	0.015
38	1.261	1.321	0.0011	0.00052	0.00010
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	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 %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

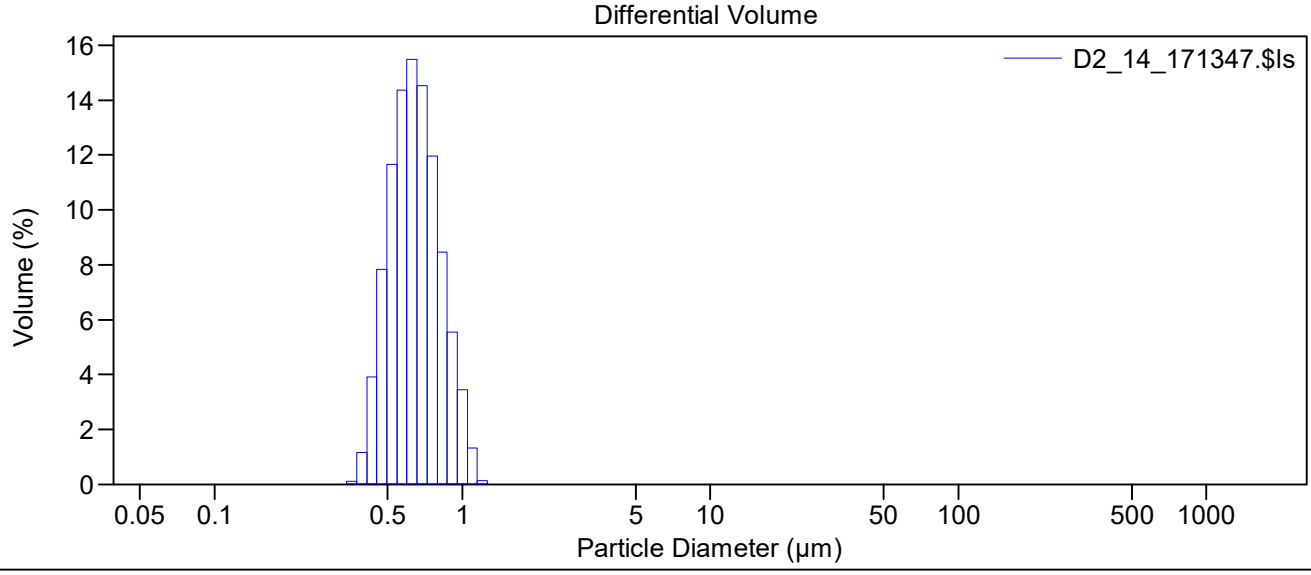
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_14_171347.$ls D2_14_171347.$ls		
File ID:	D2		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.85%		
LS 13 320	Universal Liquid Module		
Start time:	17:12 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

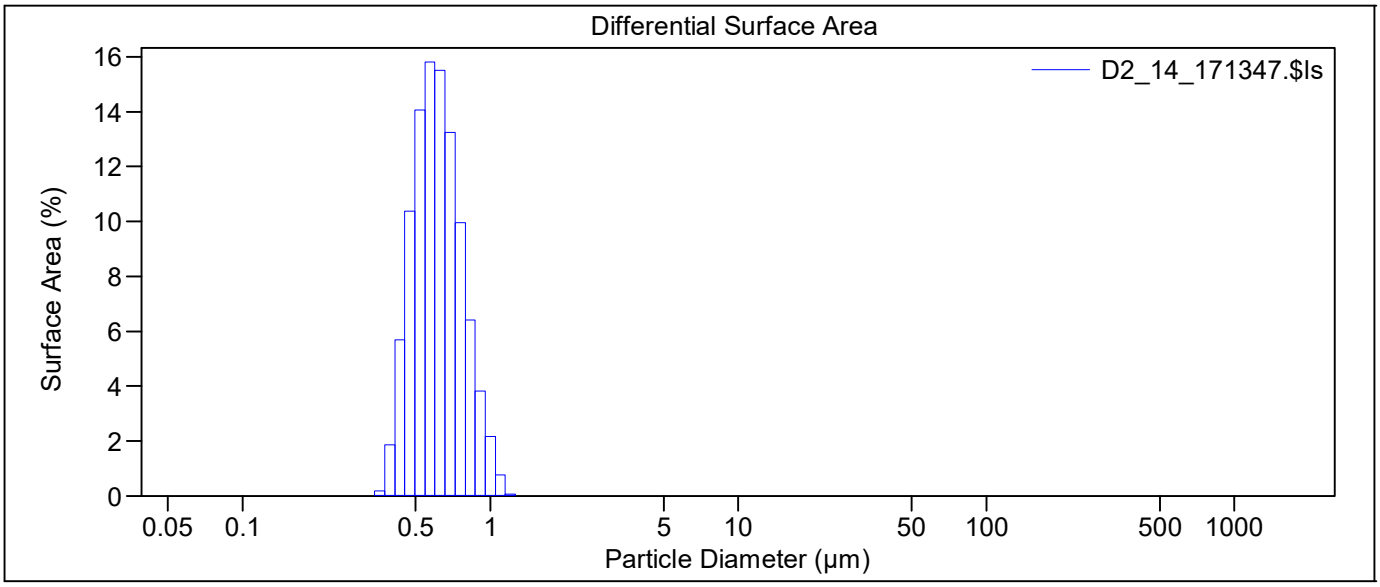
Volume Statistics (Arithmetic) D2_14_171347.$ls

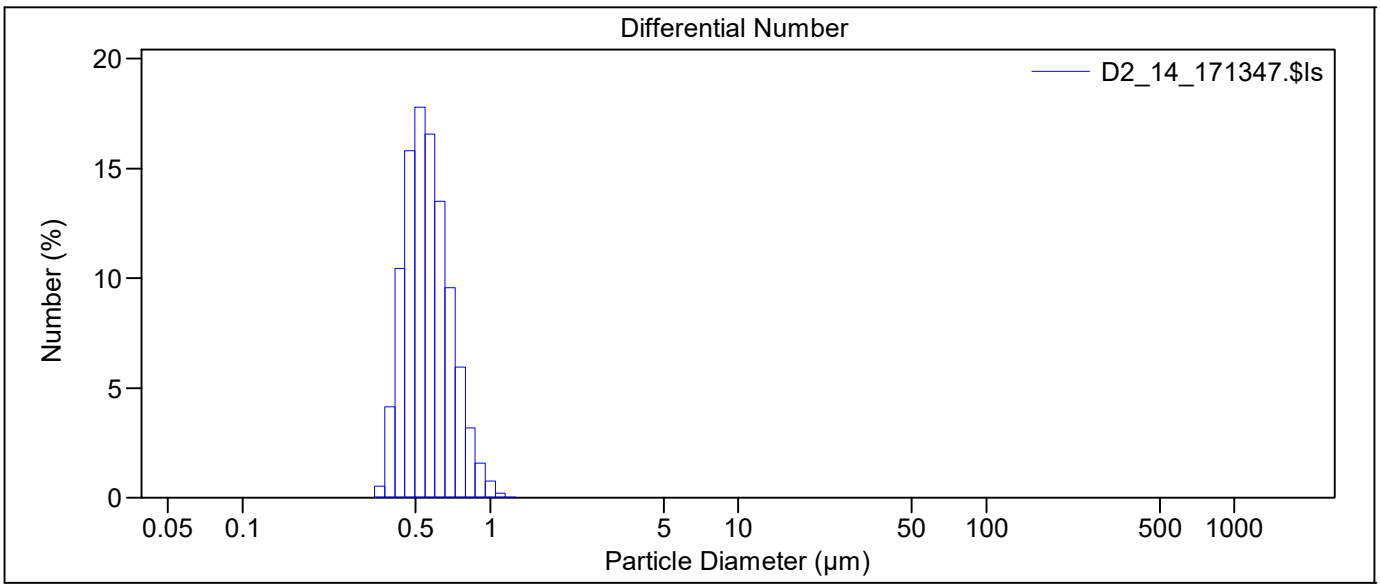
Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.661 µm	S.D.:	0.153 µm
Median:	0.639 µm	Variance:	0.023 µm^2
Mean/Median ratio:	1.033	C.V.:	23.1%
Mode:	0.627 µm	Skewness:	0.665 Right skewed
		Kurtosis:	0.088 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.479 µm	0.546 µm	0.639 µm	0.756 µm	0.876 µm







D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00097	0.0019	0.0060
24	0.342	0.358	0.11	0.19	0.52
25	0.375	0.393	1.17	1.87	4.14
26	0.412	0.431	3.92	5.70	10.5
27	0.452	0.474	7.83	10.4	15.8
28	0.496	0.520	11.7	14.1	17.8
29	0.545	0.571	14.4	15.8	16.6
30	0.598	0.627	15.5	15.5	13.5
31	0.656	0.688	14.5	13.3	9.57
32	0.721	0.755	12.0	9.95	5.96
33	0.791	0.829	8.48	6.42	3.19
34	0.868	0.910	5.56	3.83	1.58
35	0.953	0.999	3.46	2.17	0.74
36	1.047	1.097	1.33	0.76	0.22
37	1.149	1.204	0.14	0.074	0.017
38	1.261	1.321	0.0013	0.00061	0.00012
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

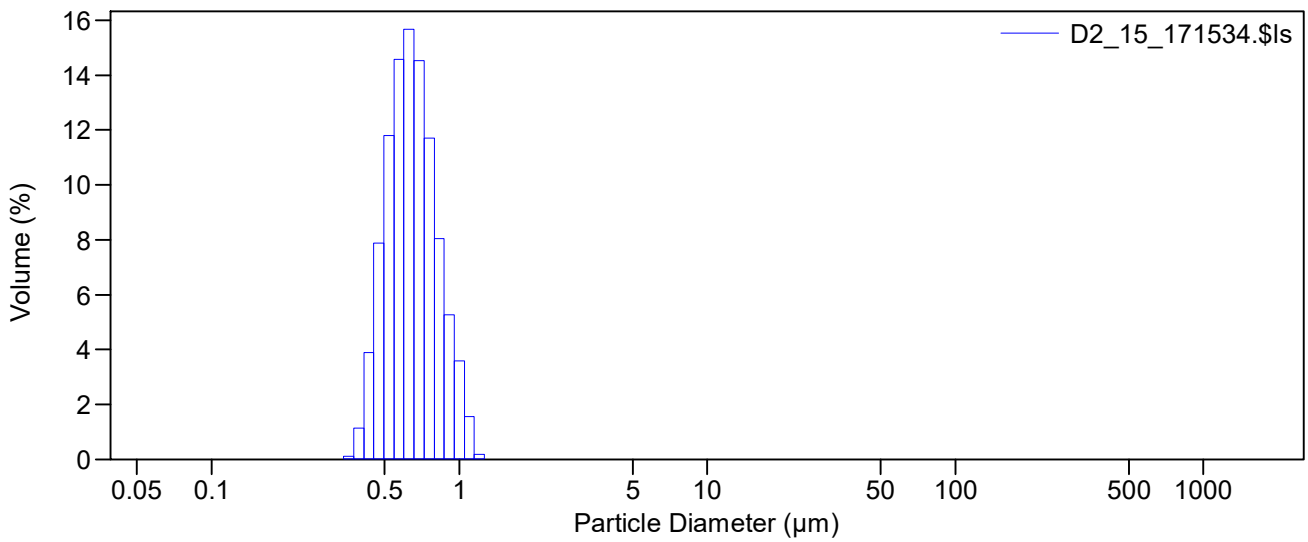
File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D2\D2_15_171534.$ls D2_15_171534.$ls		
File ID:	D2		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.77%		
LS 13 320	Universal Liquid Module		
Start time:	17:13 14	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D2_15_171534.$ls

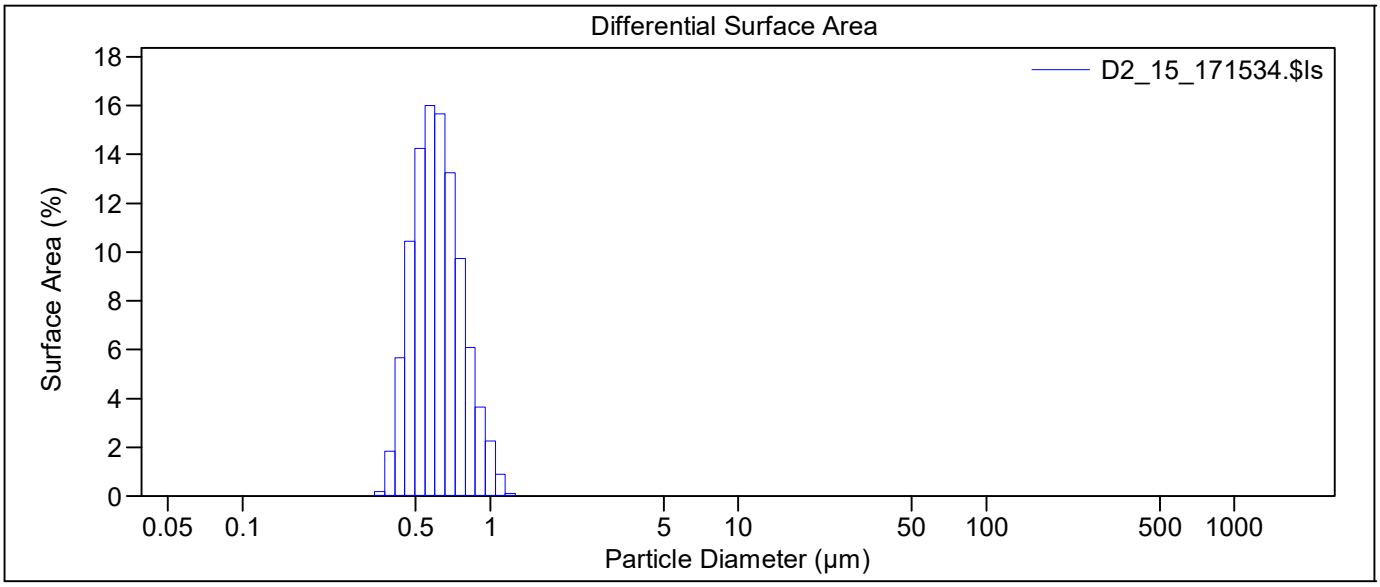
Calculations from 0.040 µm to 2000 µm

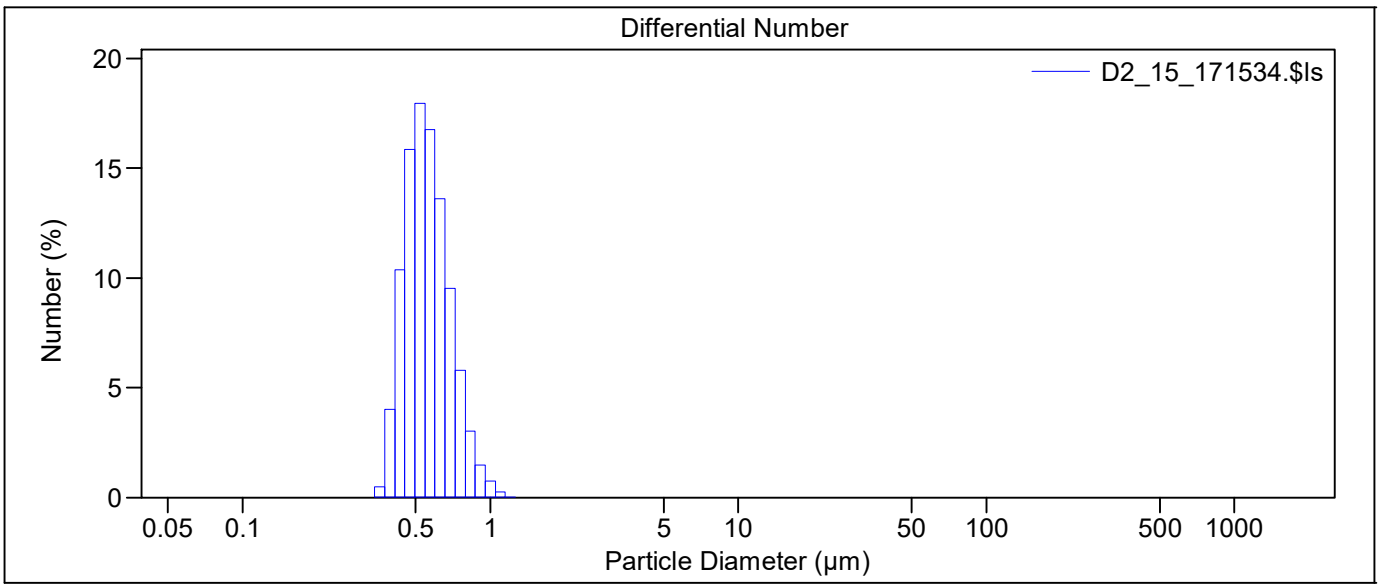
Volume:	100%		
Mean:	0.660 µm	S.D.:	0.154 µm
Median:	0.638 µm	Variance:	0.024 µm^2
Mean/Median ratio:	1.036	C.V.:	23.3%
Mode:	0.627 µm	Skewness:	0.720 Right skewed
		Kurtosis:	0.198 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.479 µm	0.545 µm	0.638 µm	0.753 µm	0.878 µm



Beckman Coulter LS13320





D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0

Beckman Coulter LS13320

D2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00093	0.0018	0.0057
24	0.342	0.358	0.11	0.19	0.50
25	0.375	0.393	1.15	1.83	4.04
26	0.412	0.431	3.90	5.66	10.4
27	0.452	0.474	7.88	10.4	15.9
28	0.496	0.520	11.8	14.2	17.9
29	0.545	0.571	14.6	16.0	16.8
30	0.598	0.627	15.7	15.7	13.6
31	0.656	0.688	14.5	13.2	9.54
32	0.721	0.755	11.7	9.73	5.81
33	0.791	0.829	8.06	6.10	3.02
34	0.868	0.910	5.27	3.63	1.50
35	0.953	0.999	3.60	2.26	0.77
36	1.047	1.097	1.56	0.89	0.25
37	1.149	1.204	0.18	0.094	0.022
38	1.261	1.321	0.0017	0.00080	0.00016
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	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 %
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3.$av D3.$av
File ID:	D3
Operator:	KW
Optical model:	TiO2.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a TiO2\D3\D3_01_133732.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_02_133919.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_03_134107.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_04_135243.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_05_135431.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_06_135619.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_07_140838.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_08_141026.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_09_141215.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_10_142411.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_11_142558.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_12_142745.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_13_143633.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_14_143822.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_15_144009.$ls

Volume Statistics (Arithmetic) D3.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.878 µm	S.D.:	1.252 µm
Median:	0.622 µm	Variance:	1.566 µm^2
Mean/Median ratio:	1.412	C.V.:	143%
Mode:	0.627 µm	Skewness:	6.038 Right skewed
		Kurtosis:	40.35 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.445 µm	0.521 µm	0.622 µm	0.758 µm	1.000 µm

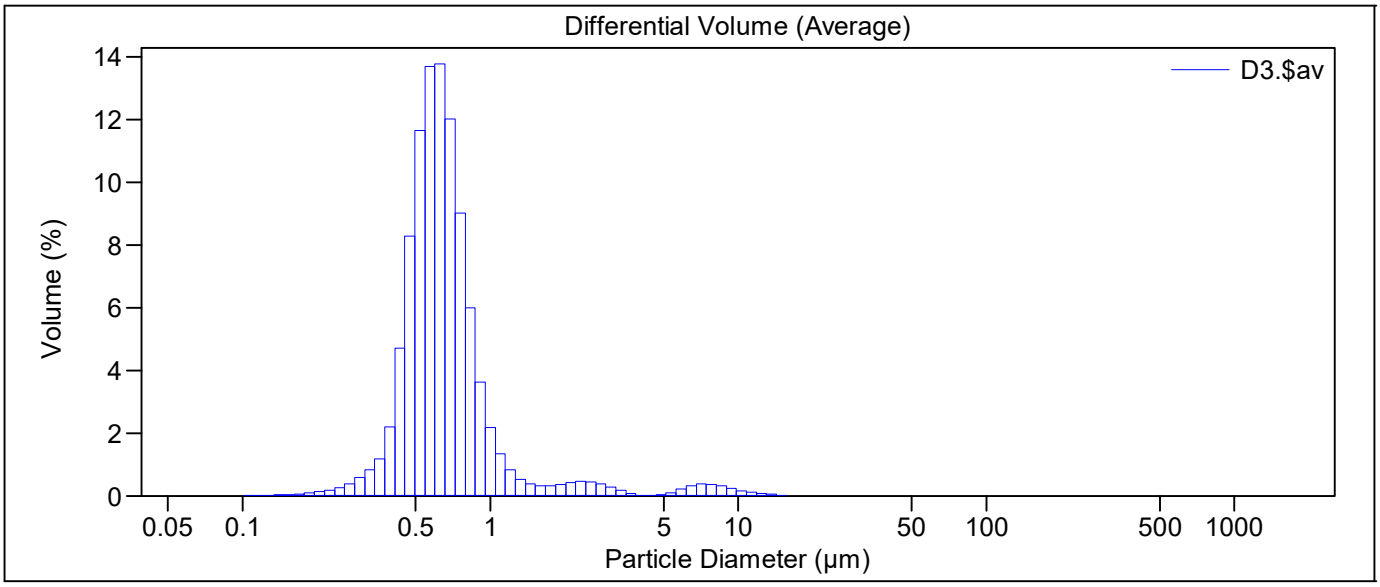
Number Statistics (Arithmetic) D3.$av

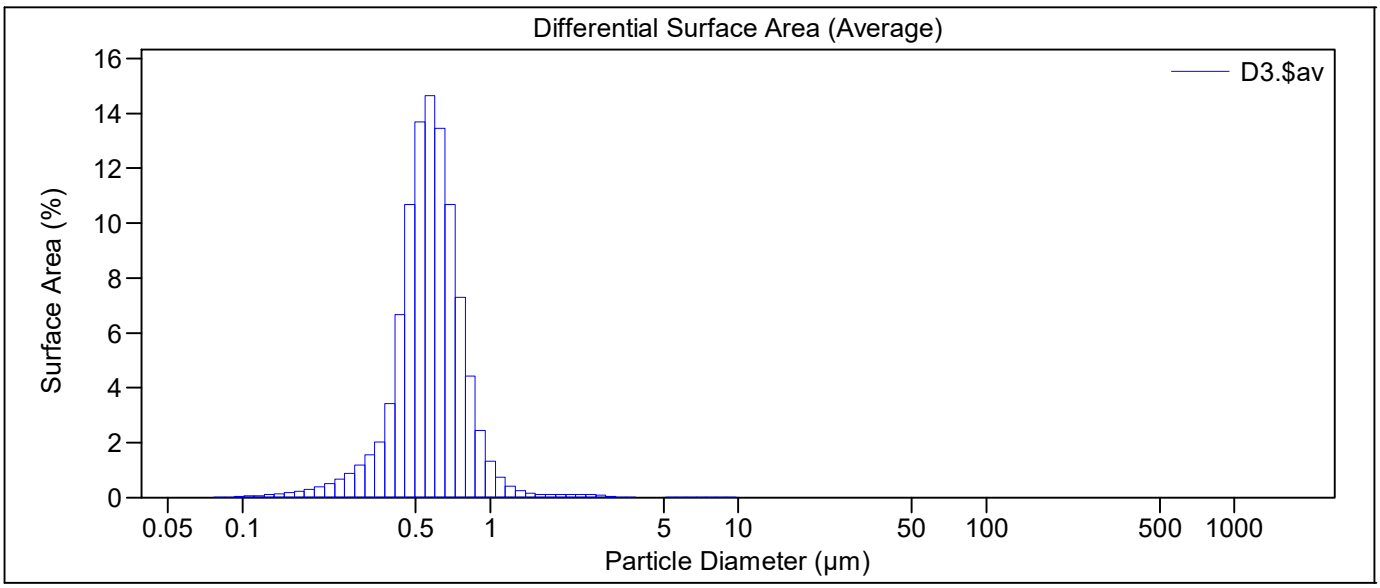
Calculations from 0.040 µm to 2000 µm

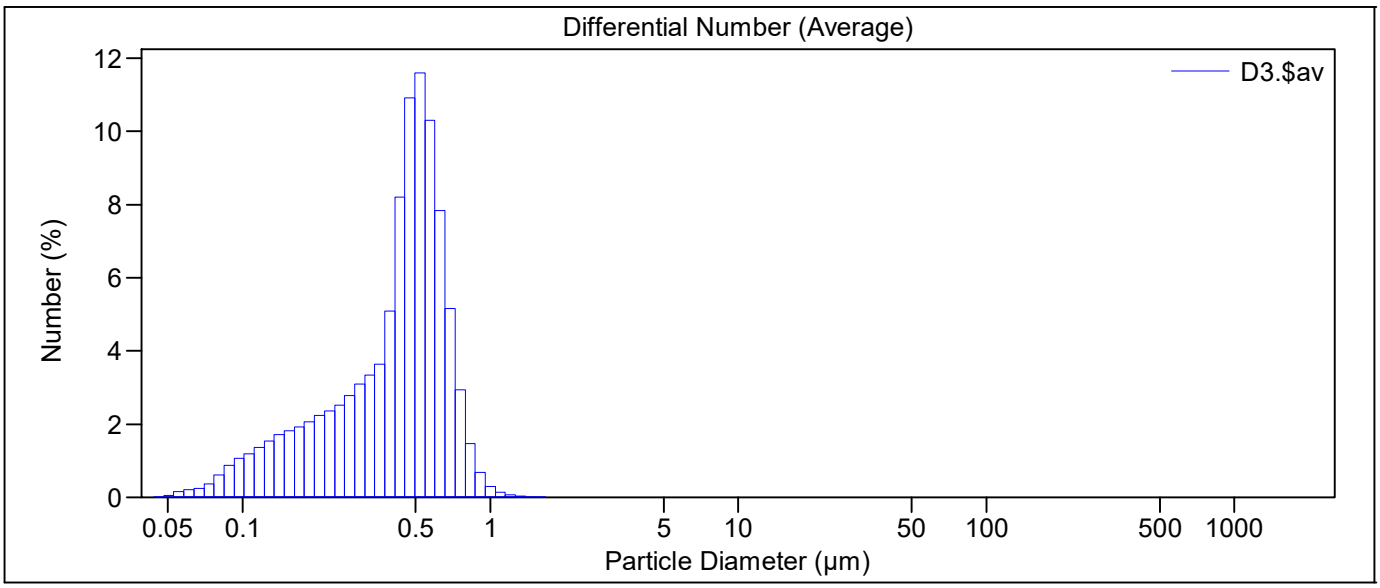
Number:	100%		
Mean:	0.435 µm	S.D.:	0.198 µm
Median:	0.458 µm	Variance:	0.039 µm^2
Mean/Median ratio:	0.950	C.V.:	45.6%
Mode:	0.520 µm	Skewness:	0.768 Right skewed
		Kurtosis:	17.47 Leptokurtic

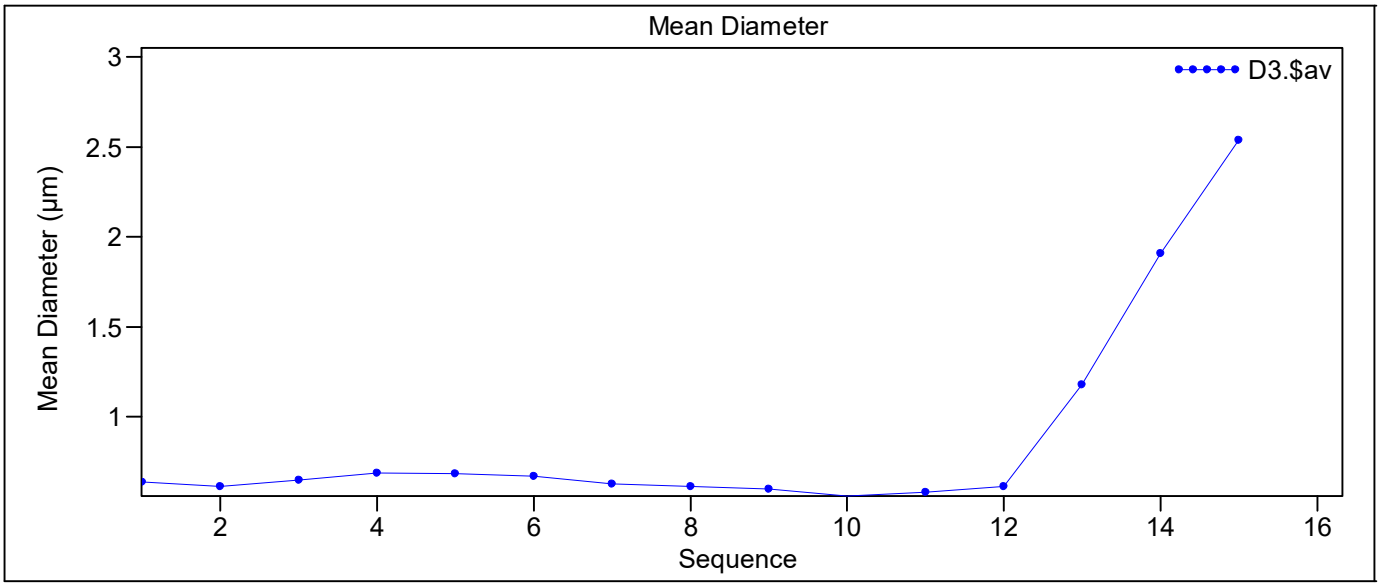
<10%	<25%	<50%	<75%	<90%
0.152 µm	0.282 µm	0.458 µm	0.565 µm	0.667 µm

Beckman Coulter LS13320









D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	2.27E-7	0.000003	0.00043
2	0.044	0.046	0.000007	0.000087	0.0094
3	0.048	0.050	0.000056	0.00068	0.061
4	0.053	0.055	0.00019	0.0021	0.16
5	0.058	0.061	0.00035	0.0035	0.21
6	0.064	0.067	0.00053	0.0049	0.25
7	0.070	0.073	0.0010	0.0087	0.37
8	0.077	0.080	0.0023	0.018	0.62
9	0.084	0.088	0.0043	0.030	0.88
10	0.093	0.097	0.0069	0.044	1.06
11	0.102	0.106	0.010	0.059	1.19
12	0.112	0.117	0.015	0.081	1.36
13	0.122	0.128	0.023	0.11	1.54
14	0.134	0.141	0.034	0.15	1.71
15	0.148	0.155	0.048	0.19	1.82
16	0.162	0.170	0.067	0.24	1.93
17	0.178	0.186	0.096	0.31	2.07
18	0.195	0.205	0.14	0.41	2.23
19	0.214	0.225	0.19	0.52	2.37
20	0.235	0.247	0.27	0.67	2.51
21	0.258	0.271	0.39	0.89	2.77
22	0.284	0.297	0.58	1.20	3.10
23	0.311	0.326	0.83	1.56	3.35
24	0.342	0.358	1.19	2.03	3.63
25	0.375	0.393	2.21	3.43	5.09
26	0.412	0.431	4.71	6.68	8.21
27	0.452	0.474	8.29	10.7	10.9
28	0.496	0.520	11.6	13.7	11.6
29	0.545	0.571	13.7	14.7	10.3
30	0.598	0.627	13.8	13.4	7.84
31	0.656	0.688	12.0	10.7	5.17
32	0.721	0.755	9.03	7.31	2.93
33	0.791	0.829	6.00	4.42	1.47
34	0.868	0.910	3.63	2.44	0.67
35	0.953	0.999	2.18	1.33	0.31
36	1.047	1.097	1.34	0.75	0.14
37	1.149	1.204	0.83	0.42	0.067
38	1.261	1.321	0.54	0.25	0.033
39	1.385	1.451	0.38	0.16	0.017
40	1.520	1.592	0.32	0.12	0.011
41	1.668	1.748	0.33	0.11	0.0085

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.37	0.12	0.0073
43	2.011	2.107	0.43	0.12	0.0064
44	2.207	2.313	0.47	0.12	0.0053
45	2.423	2.539	0.46	0.11	0.0039
46	2.660	2.787	0.39	0.086	0.0025
47	2.920	3.059	0.29	0.058	0.0014
48	3.205	3.358	0.17	0.032	0.00064
49	3.519	3.687	0.078	0.013	0.00022
50	3.863	4.047	0.025	0.0038	0.000054
51	4.240	4.443	0.019	0.0026	0.000030
52	4.655	4.877	0.040	0.0050	0.000048
53	5.110	5.354	0.10	0.012	0.000094
54	5.610	5.878	0.22	0.023	0.00015
55	6.158	6.452	0.33	0.032	0.00017
56	6.760	7.083	0.39	0.034	0.00015
57	7.421	7.775	0.38	0.030	0.00011
58	8.147	8.536	0.32	0.023	0.000073
59	8.943	9.370	0.24	0.016	0.000041
60	9.817	10.29	0.16	0.0096	0.000021
61	10.78	11.29	0.12	0.0067	0.000012
62	11.83	12.40	0.091	0.0045	0.000007
63	12.99	13.61	0.052	0.0023	0.000003
64	14.26	14.94	0.013	0.00054	0.000001
65	15.65	16.40	0.0015	0.000056	4.77E-8
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_01_133732.$ls D3_01_133732.$ls		
File ID:	D3		
Operator:	KW		
Run number:	1		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	2.45%		
LS 13 320	Universal Liquid Module		
Start time:	13:35 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_01_133732.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.637 µm	S.D.:	0.128 µm
Median:	0.626 µm	Variance:	0.016 μm^2
Mean/Median ratio:	1.018	C.V.:	20.0%
Mode:	0.627 µm	Skewness:	0.399 Right skewed
		Kurtosis:	-0.340 Platykurtic

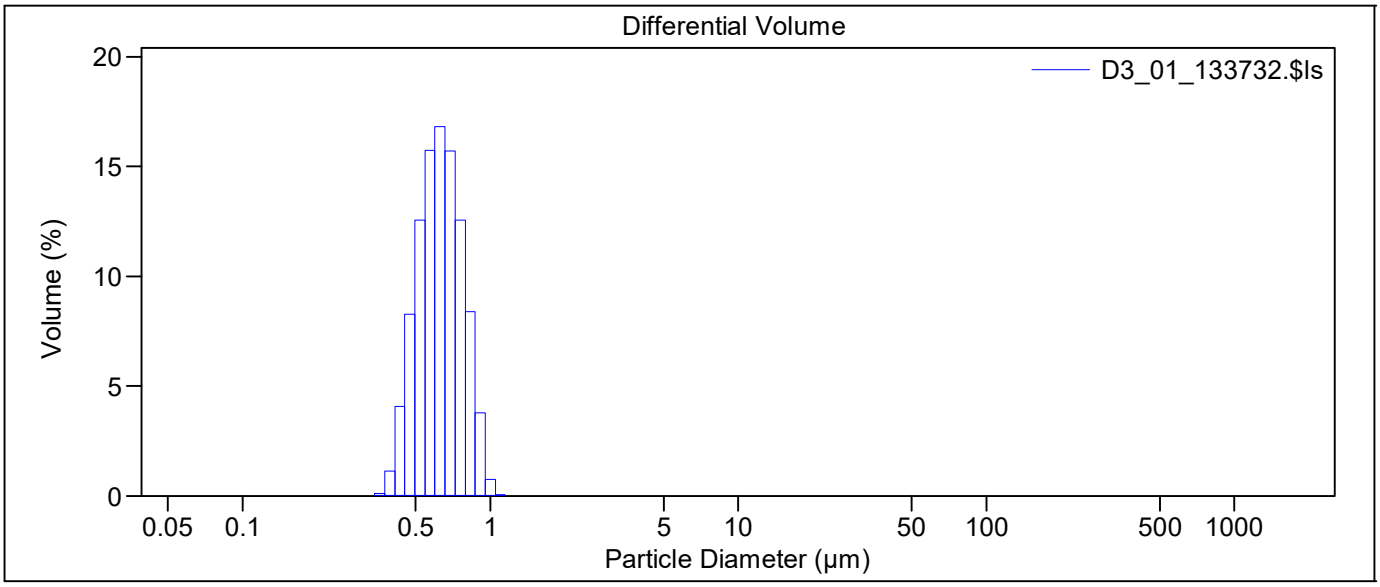
<10%	<25%	<50%	<75%	<90%
0.477 µm	0.540 µm	0.626 µm	0.724 µm	0.819 µm

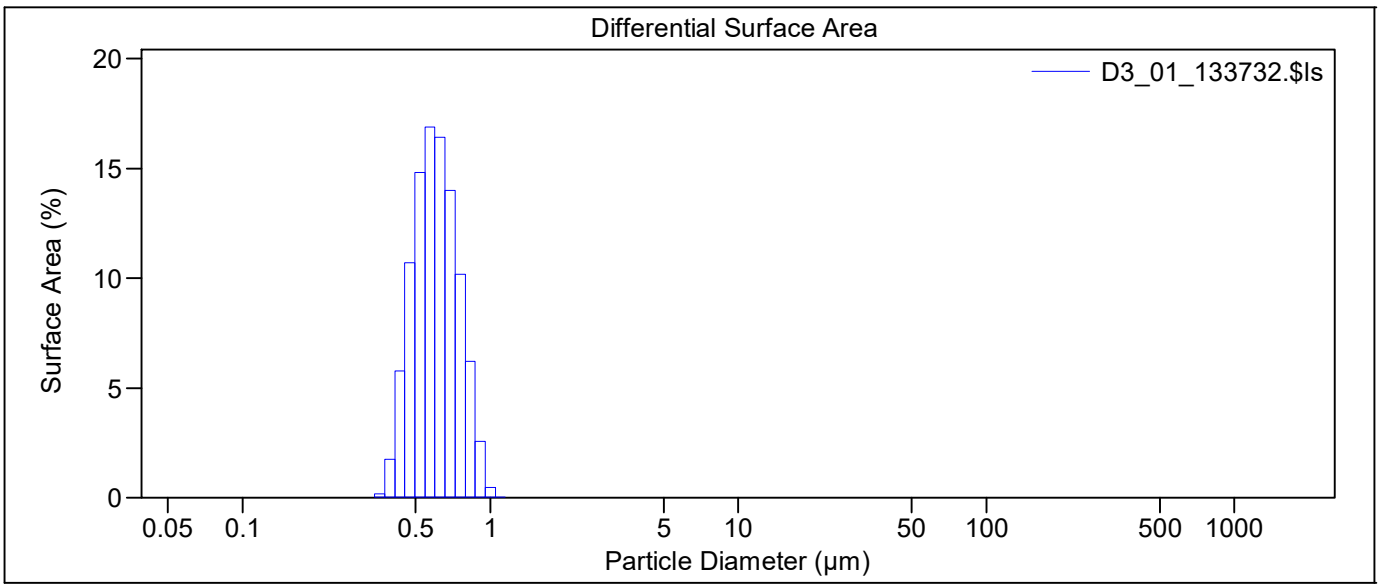
Number Statistics (Arithmetic) D3_01_133732.$ls

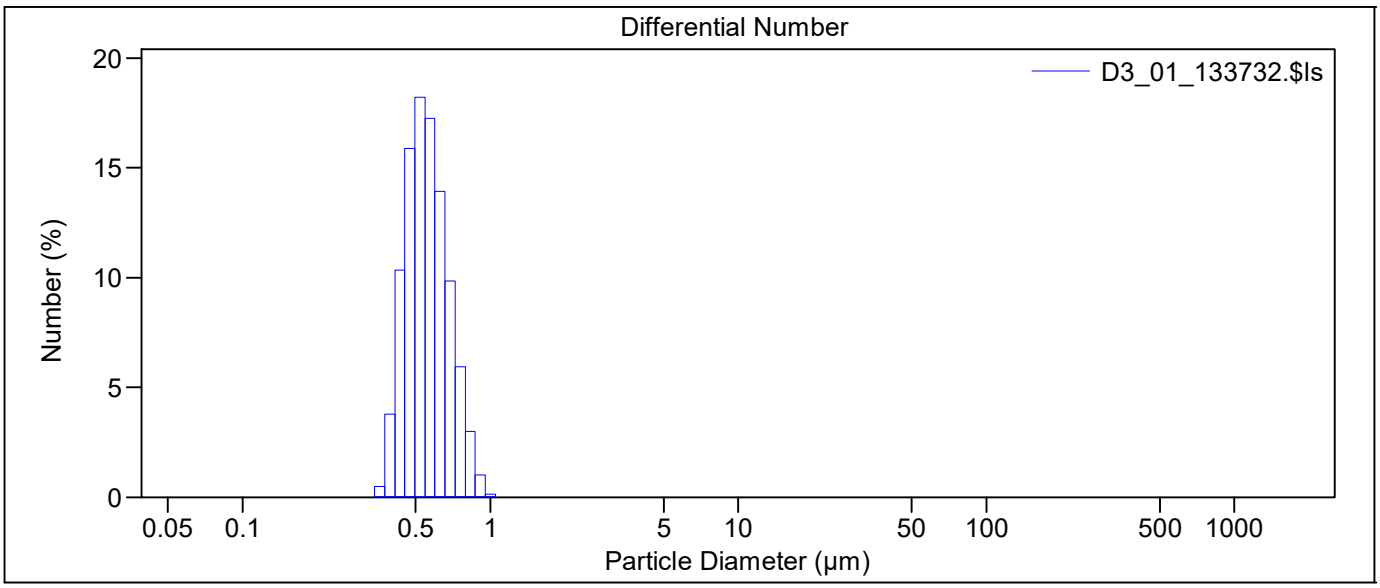
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.566 µm	S.D.:	0.113 µm
Median:	0.549 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.032	C.V.:	19.9%
Mode:	0.520 µm	Skewness:	0.752 Right skewed
		Kurtosis:	0.342 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.434 µm	0.481 µm	0.549 µm	0.636 µm	0.722 µm


Differential Volume
D3_01_133732.$ls
Volume (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
D3_01_133732.$ls
Surface Area (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
D3_01_133732.$ls
Number (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0021	0.0040	0.012
24	0.342	0.358	0.11	0.19	0.49
25	0.375	0.393	1.13	1.76	3.80
26	0.412	0.431	4.08	5.78	10.4
27	0.452	0.474	8.28	10.7	15.9
28	0.496	0.520	12.6	14.8	18.2
29	0.545	0.571	15.7	16.9	17.3
30	0.598	0.627	16.8	16.4	13.9
31	0.656	0.688	15.7	14.0	9.86
32	0.721	0.755	12.6	10.2	5.95
33	0.791	0.829	8.39	6.20	3.01
34	0.868	0.910	3.80	2.56	1.03
35	0.953	0.999	0.77	0.47	0.16
36	1.047	1.097	0.049	0.027	0.0075
37	1.149	1.204	0.00054	0.00028	0.000064
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_02_133919.$ls D3_02_133919.$ls		
File ID:	D3		
Operator:	KW		
Run number:	2		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	3.06%		
LS 13 320	Universal Liquid Module		
Start time:	13:37 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_02_133919.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.615 µm	S.D.:	0.114 µm
Median:	0.604 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.017	C.V.:	18.6%
Mode:	0.627 µm	Skewness:	0.433 Right skewed
		Kurtosis:	-0.221 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.472 µm	0.528 µm	0.604 µm	0.692 µm	0.775 µm

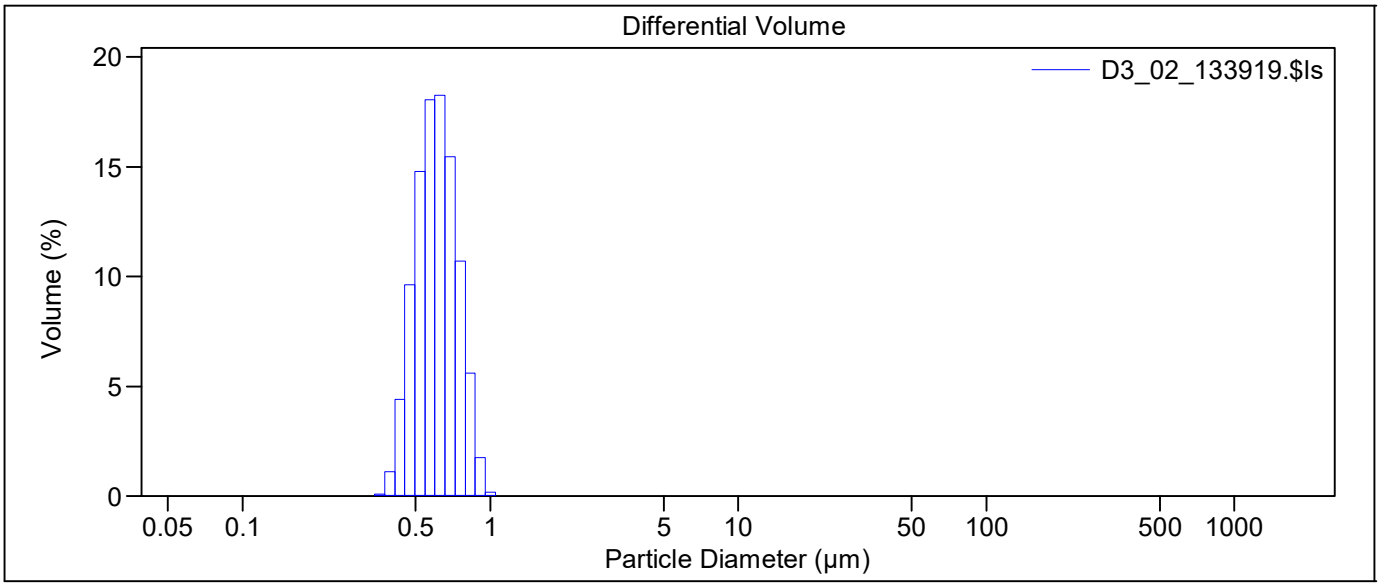
Number Statistics (Arithmetic) D3_02_133919.$ls

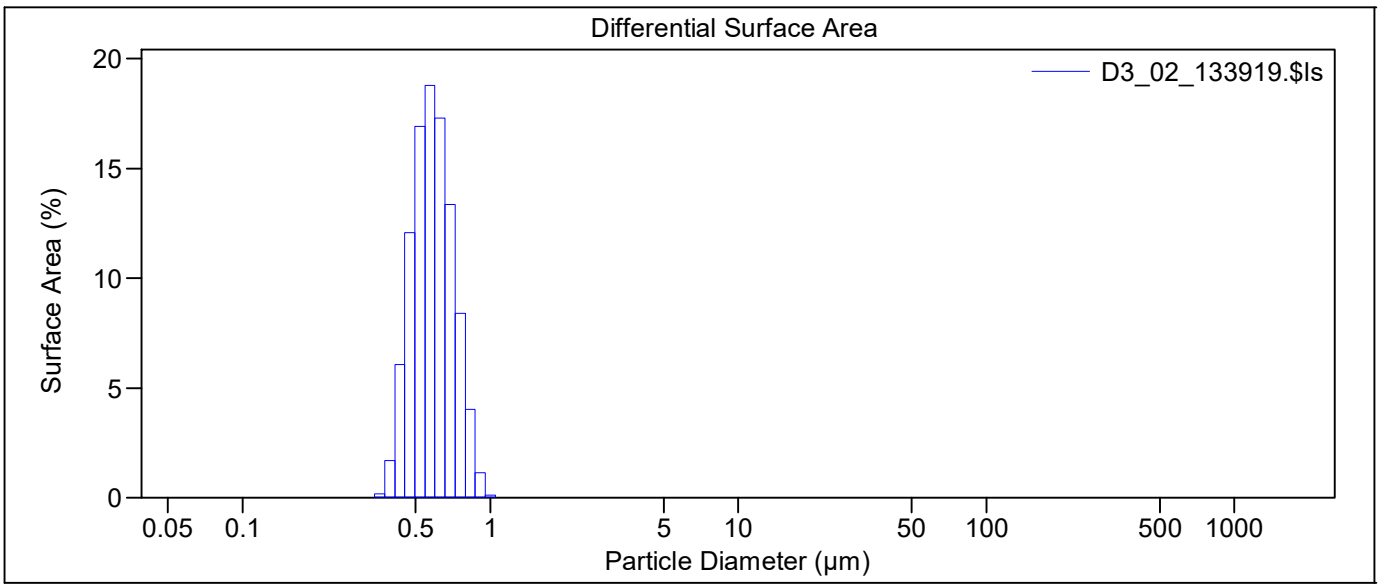
Calculations from 0.040 µm to 2000 µm

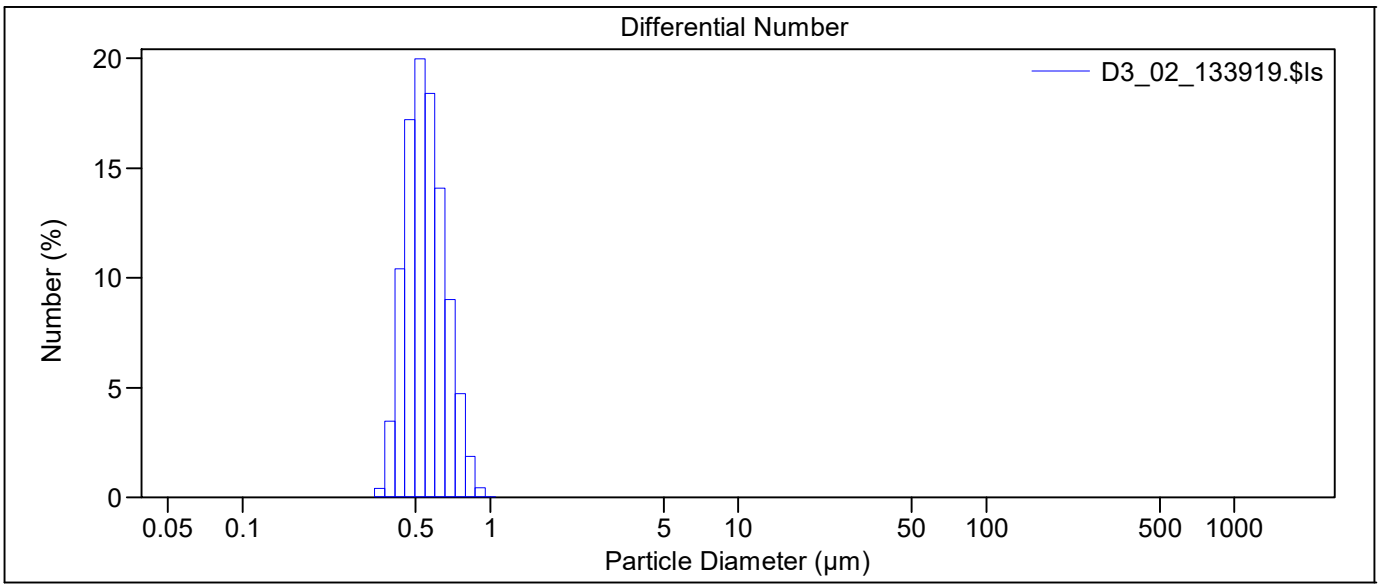
Number:	100%		
Mean:	0.556 µm	S.D.:	0.102 µm
Median:	0.541 µm	Variance:	0.010 μm^2
Mean/Median ratio:	1.027	C.V.:	18.3%
Mode:	0.520 µm	Skewness:	0.713 Right skewed
		Kurtosis:	0.346 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.435 µm	0.480 µm	0.541 µm	0.619 µm	0.700 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0018	0.0033	0.010
24	0.342	0.358	0.10	0.17	0.42
25	0.375	0.393	1.11	1.68	3.47
26	0.412	0.431	4.41	6.07	10.4
27	0.452	0.474	9.63	12.1	17.2
28	0.496	0.520	14.8	16.9	20.0
29	0.545	0.571	18.0	18.8	18.4
30	0.598	0.627	18.2	17.3	14.1
31	0.656	0.688	15.5	13.3	9.01
32	0.721	0.755	10.7	8.41	4.71
33	0.791	0.829	5.60	4.01	1.87
34	0.868	0.910	1.74	1.13	0.44
35	0.953	0.999	0.19	0.11	0.036
36	1.047	1.097	0.0040	0.0022	0.00058
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_03_134107.$ls D3_03_134107.$ls		
File ID:	D3		
Operator:	KW		
Run number:	3		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	2.22%		
LS 13 320	Universal Liquid Module		
Start time:	13:39 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_03_134107.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.649 µm	S.D.:	0.144 µm
Median:	0.636 µm	Variance:	0.021 μm^2
Mean/Median ratio:	1.020	C.V.:	22.2%
Mode:	0.627 µm	Skewness:	0.385 Right skewed
		Kurtosis:	-0.360 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.468 µm	0.539 µm	0.636 µm	0.749 µm	0.851 µm

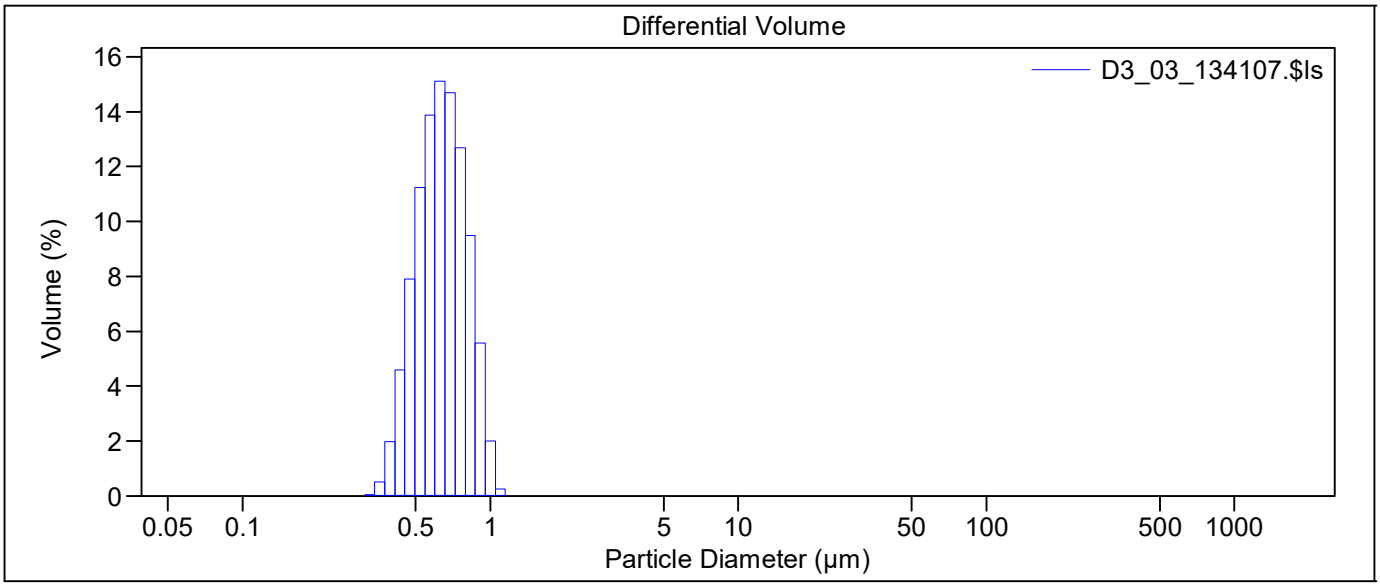
Number Statistics (Arithmetic) D3_03_134107.$ls

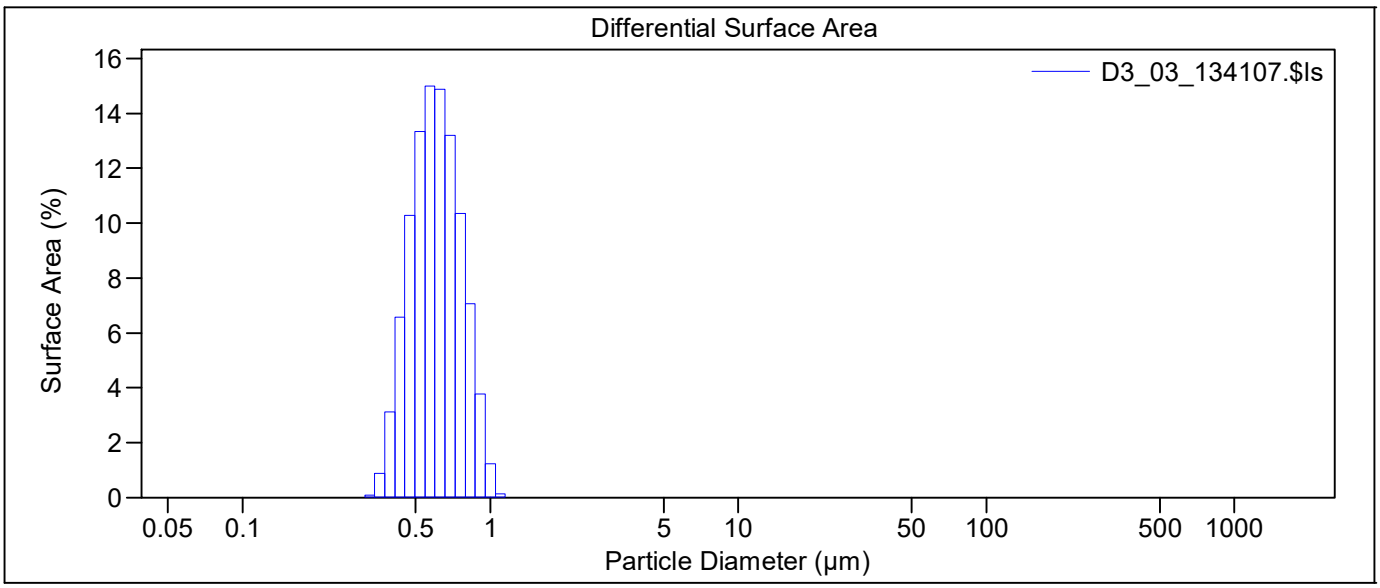
Calculations from 0.040 µm to 2000 µm

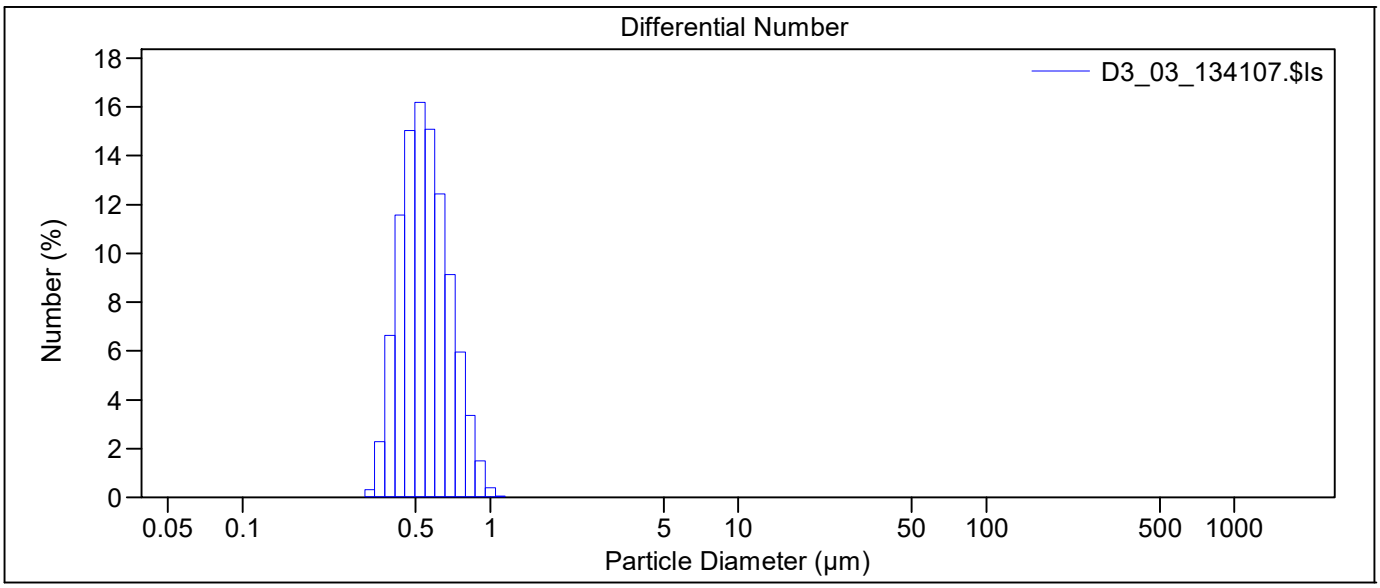
Number:	100%		
Mean:	0.559 µm	S.D.:	0.126 µm
Median:	0.539 µm	Variance:	0.016 μm^2
Mean/Median ratio:	1.037	C.V.:	22.5%
Mode:	0.520 µm	Skewness:	0.780 Right skewed
		Kurtosis:	0.414 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.414 µm	0.464 µm	0.539 µm	0.635 µm	0.736 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0016	0.0032	0.012
23	0.311	0.326	0.055	0.10	0.32
24	0.342	0.358	0.52	0.89	2.29
25	0.375	0.393	1.99	3.12	6.63
26	0.412	0.431	4.60	6.57	11.6
27	0.452	0.474	7.90	10.3	15.0
28	0.496	0.520	11.2	13.3	16.2
29	0.545	0.571	13.9	15.0	15.1
30	0.598	0.627	15.1	14.9	12.4
31	0.656	0.688	14.7	13.2	9.14
32	0.721	0.755	12.7	10.4	5.96
33	0.791	0.829	9.48	7.06	3.37
34	0.868	0.910	5.58	3.78	1.50
35	0.953	0.999	2.00	1.23	0.41
36	1.047	1.097	0.27	0.15	0.041
37	1.149	1.204	0.0093	0.0048	0.0011
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_04_135243.$ls D3_04_135243.$ls		
File ID:	D3		
Operator:	KW		
Run number:	4		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	1.73%		
LS 13 320	Universal Liquid Module		
Start time:	13:51 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_04_135243.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.687 µm	S.D.:	0.230 µm
Median:	0.661 µm	Variance:	0.053 µm^2
Mean/Median ratio:	1.039	C.V.:	33.5%
Mode:	0.688 µm	Skewness:	0.460 Right skewed
		Kurtosis:	-0.346 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.401 µm	0.508 µm	0.661 µm	0.846 µm	1.012 µm

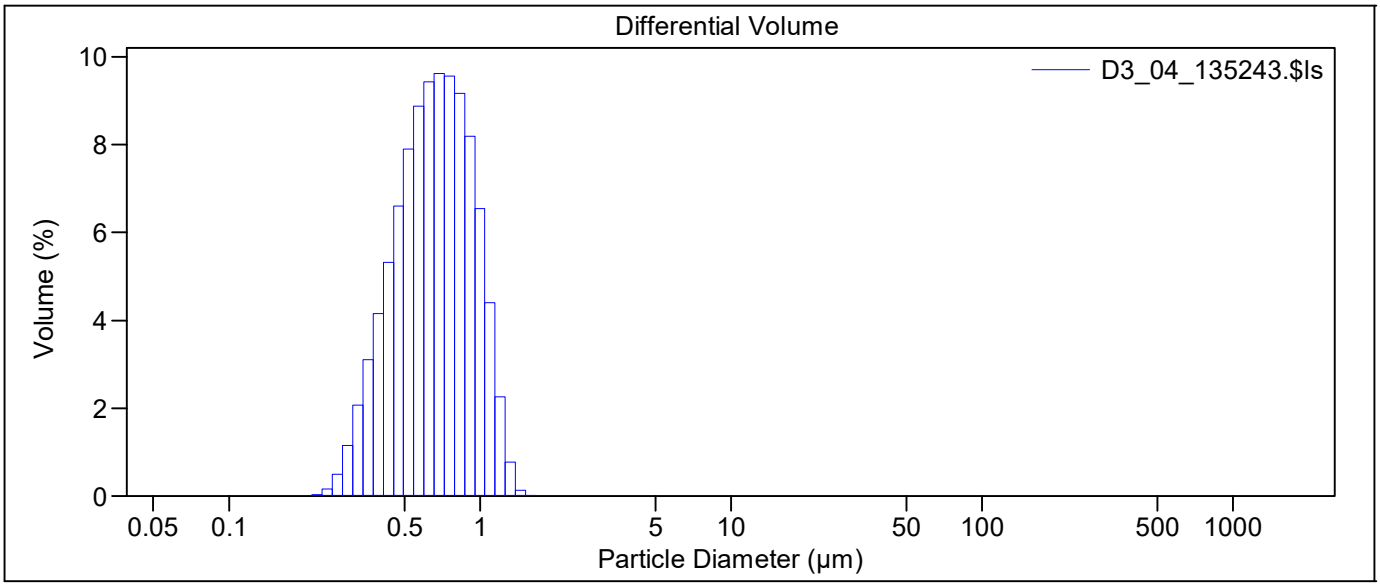
Number Statistics (Arithmetic) D3_04_135243.$ls

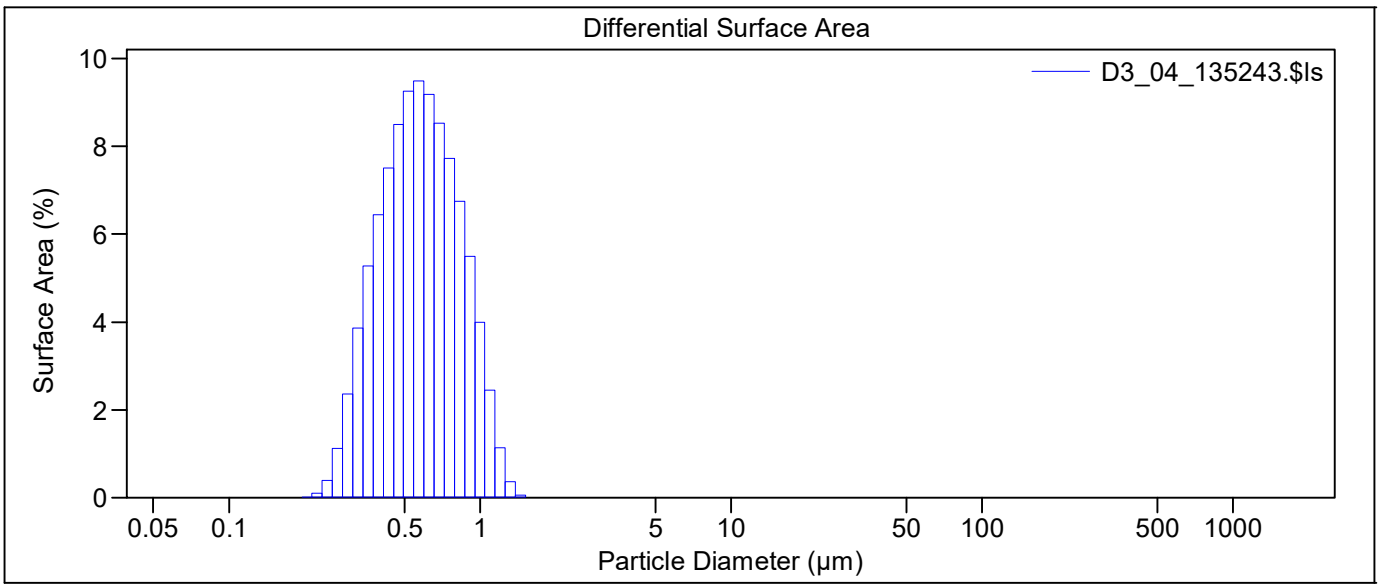
Calculations from 0.040 µm to 2000 µm

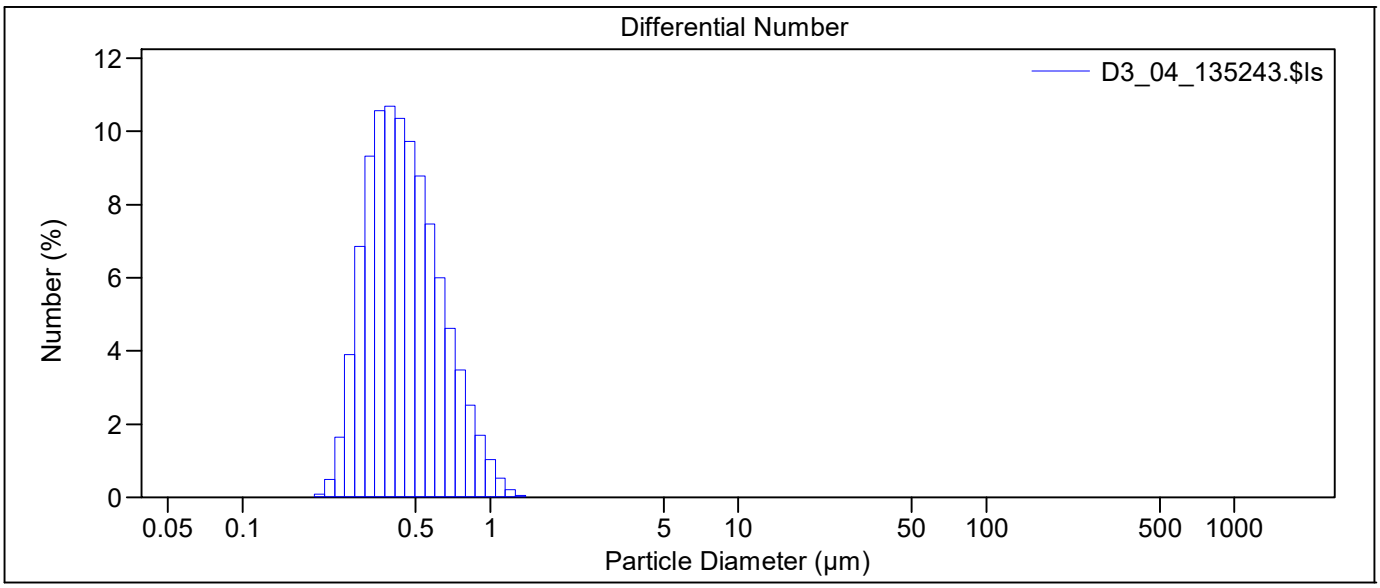
Number:	100%		
Mean:	0.477 µm	S.D.:	0.171 µm
Median:	0.437 µm	Variance:	0.029 µm^2
Mean/Median ratio:	1.091	C.V.:	35.9%
Mode:	0.393 µm	Skewness:	1.242 Right skewed
		Kurtosis:	1.734 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.299 µm	0.350 µm	0.437 µm	0.563 µm	0.714 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0.00030	0.00098	0.0073
18	0.195	0.205	0.0046	0.014	0.084
19	0.214	0.225	0.035	0.096	0.49
20	0.235	0.247	0.16	0.39	1.64
21	0.258	0.271	0.50	1.12	3.90
22	0.284	0.297	1.15	2.36	6.85
23	0.311	0.326	2.07	3.87	9.32
24	0.342	0.358	3.10	5.28	10.6
25	0.375	0.393	4.15	6.44	10.7
26	0.412	0.431	5.32	7.51	10.3
27	0.452	0.474	6.61	8.50	9.72
28	0.496	0.520	7.90	9.26	8.78
29	0.545	0.571	8.88	9.48	7.46
30	0.598	0.627	9.44	9.18	6.00
31	0.656	0.688	9.63	8.53	4.62
32	0.721	0.755	9.57	7.72	3.47
33	0.791	0.829	9.18	6.75	2.52
34	0.868	0.910	8.19	5.49	1.70
35	0.953	0.999	6.55	4.00	1.03
36	1.047	1.097	4.40	2.45	0.52
37	1.149	1.204	2.26	1.14	0.20
38	1.261	1.321	0.78	0.36	0.053
39	1.385	1.451	0.14	0.057	0.0070
40	1.520	1.592	0.0094	0.0036	0.00036
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_05_135431.$ls D3_05_135431.$ls		
File ID:	D3		
Operator:	KW		
Run number:	5		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	1.81%		
LS 13 320	Universal Liquid Module		
Start time:	13:52 15	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_05_135431.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.685 µm	S.D.:	0.225 µm
Median:	0.660 µm	Variance:	0.050 µm^2
Mean/Median ratio:	1.038	C.V.:	32.8%
Mode:	0.688 µm	Skewness:	0.476 Right skewed
		Kurtosis:	-0.299 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.408 µm	0.511 µm	0.660 µm	0.840 µm	1.002 µm

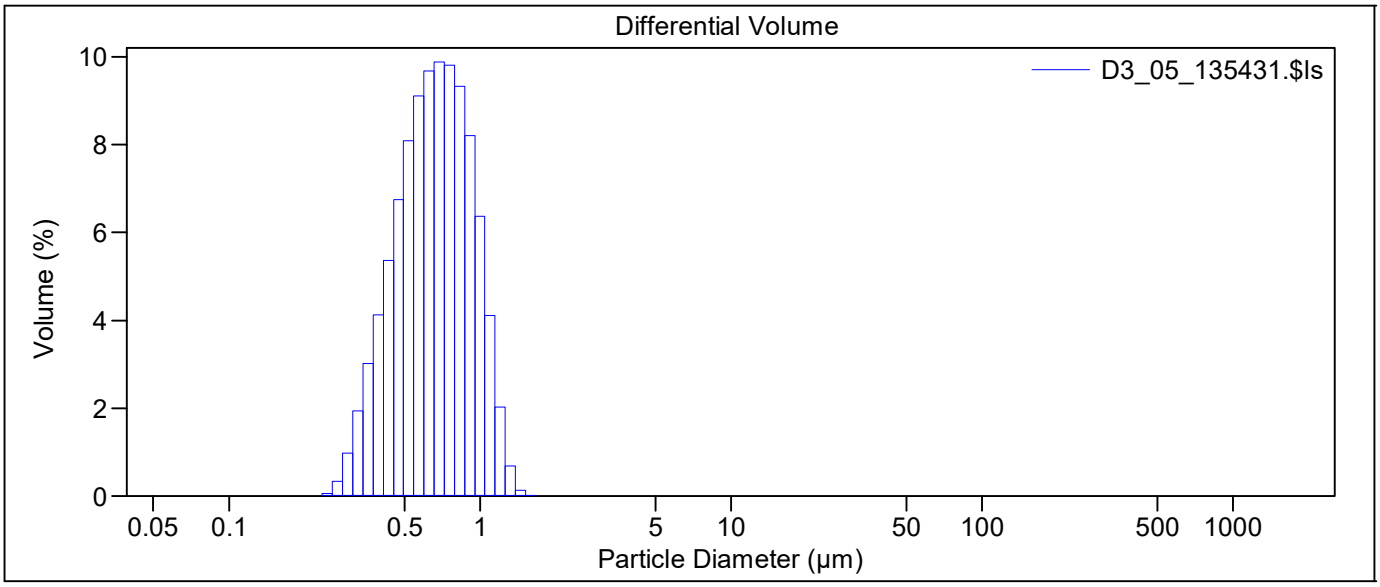
Number Statistics (Arithmetic) D3_05_135431.$ls

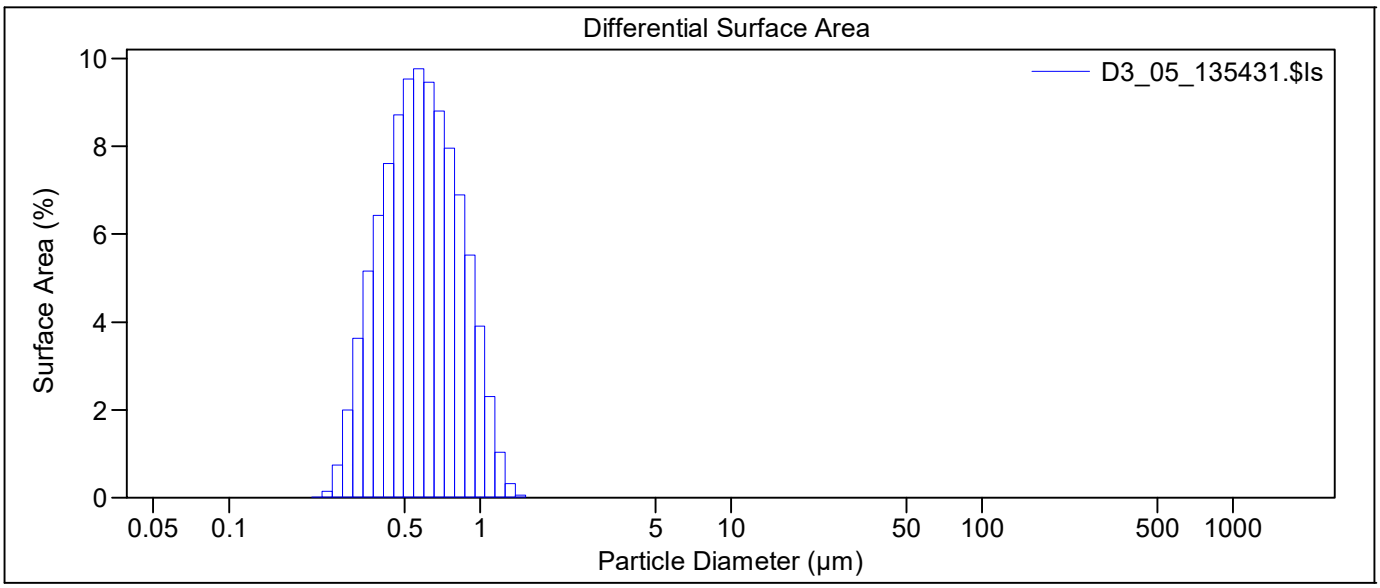
Calculations from 0.040 µm to 2000 µm

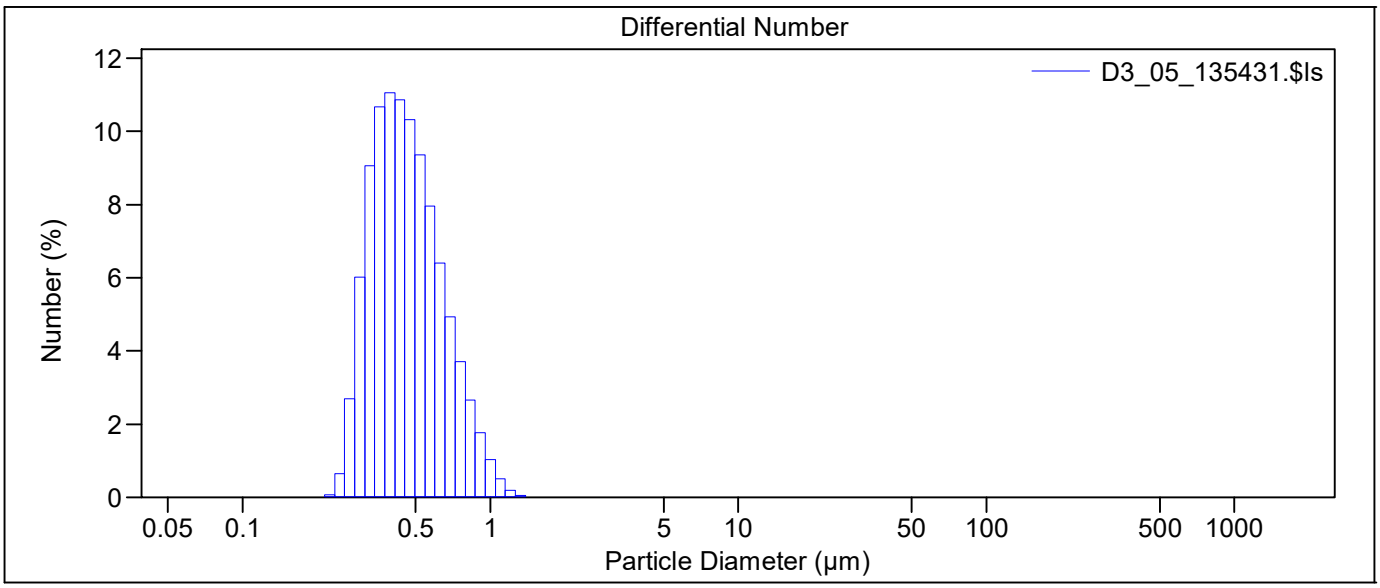
Number:	100%		
Mean:	0.487 µm	S.D.:	0.168 µm
Median:	0.448 µm	Variance:	0.028 µm^2
Mean/Median ratio:	1.087	C.V.:	34.4%
Mode:	0.393 µm	Skewness:	1.229 Right skewed
		Kurtosis:	1.670 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.313 µm	0.362 µm	0.448 µm	0.573 µm	0.720 µm

Beckman Coulter LS13320







D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0.000039	0.00012	0.00073
19	0.214	0.225	0.0048	0.013	0.069
20	0.235	0.247	0.060	0.15	0.65
21	0.258	0.271	0.33	0.74	2.70
22	0.284	0.297	0.97	2.00	6.02
23	0.311	0.326	1.94	3.63	9.07
24	0.342	0.358	3.01	5.15	10.7
25	0.375	0.393	4.13	6.43	11.1
26	0.412	0.431	5.37	7.61	10.9
27	0.452	0.474	6.74	8.72	10.3
28	0.496	0.520	8.09	9.53	9.36
29	0.545	0.571	9.11	9.77	7.96
30	0.598	0.627	9.68	9.46	6.40
31	0.656	0.688	9.88	8.80	4.94
32	0.721	0.755	9.82	7.96	3.71
33	0.791	0.829	9.33	6.90	2.66
34	0.868	0.910	8.20	5.52	1.77
35	0.953	0.999	6.37	3.91	1.04
36	1.047	1.097	4.11	2.30	0.51
37	1.149	1.204	2.03	1.03	0.19
38	1.261	1.321	0.68	0.31	0.048
39	1.385	1.451	0.12	0.052	0.0066
40	1.520	1.592	0.010	0.0039	0.00041
41	1.668	1.748	0.000083	0.000029	0.000003
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_06_135619.$ls D3_06_135619.$ls		
File ID:	D3		
Operator:	KW		
Run number:	6		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	1.96%		
LS 13 320	Universal Liquid Module		
Start time:	13:54 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_06_135619.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.672 µm	S.D.:	0.181 µm
Median:	0.664 µm	Variance:	0.033 μm^2
Mean/Median ratio:	1.013	C.V.:	26.9%
Mode:	0.688 µm	Skewness:	0.162 Right skewed
		Kurtosis:	-0.489 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.440 µm	0.539 µm	0.664 µm	0.801 µm	0.924 µm

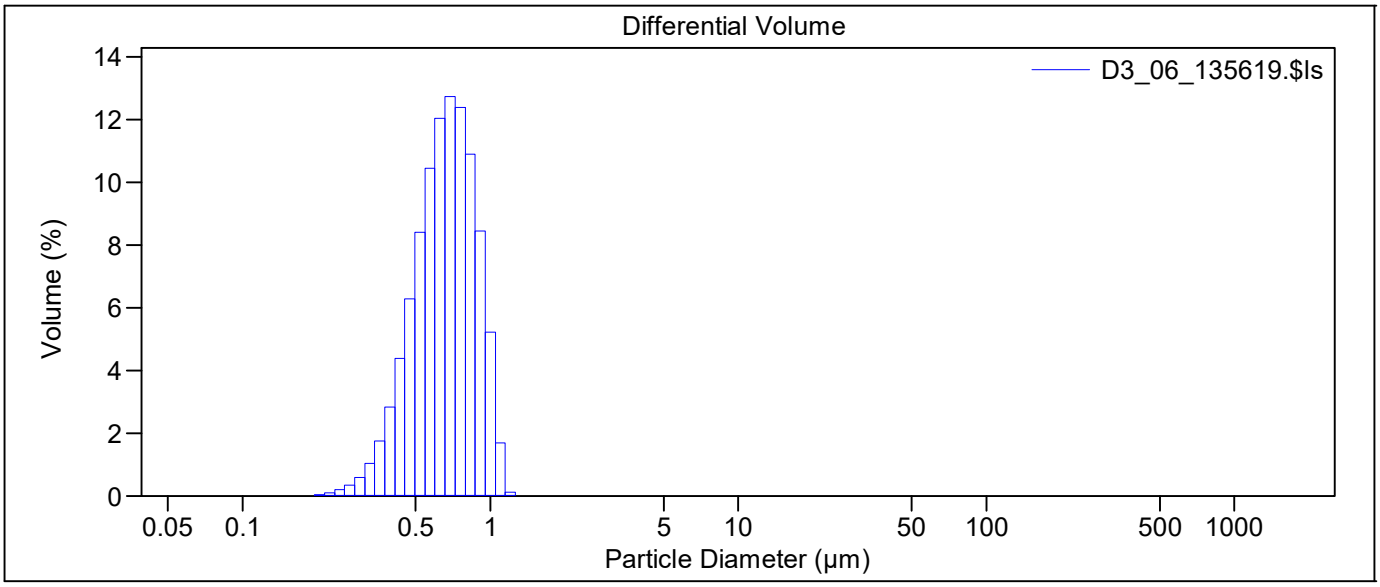
Number Statistics (Arithmetic) D3_06_135619.$ls

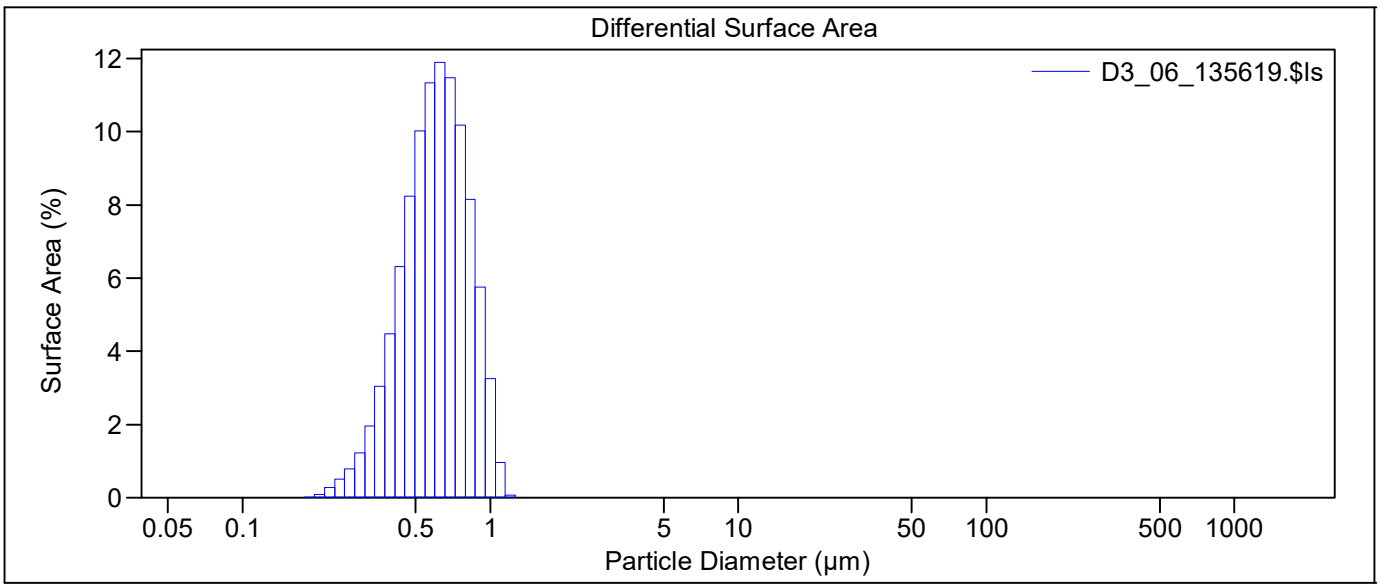
Calculations from 0.040 µm to 2000 µm

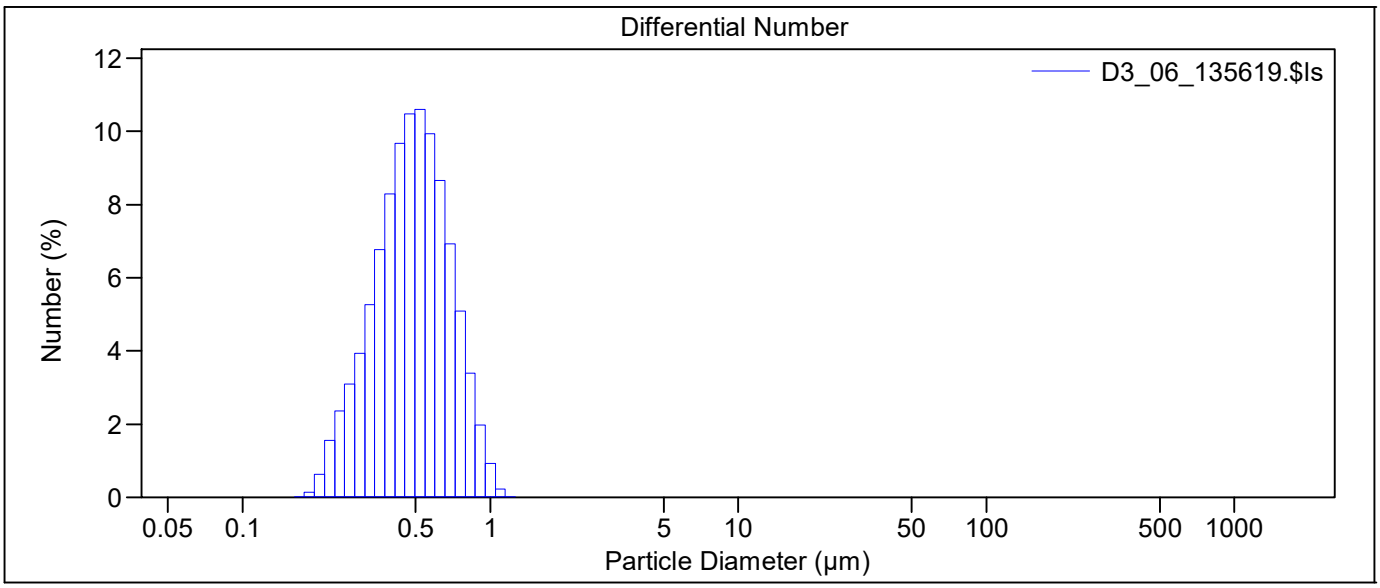
Number:	100%		
Mean:	0.507 µm	S.D.:	0.170 µm
Median:	0.487 µm	Variance:	0.029 μm^2
Mean/Median ratio:	1.041	C.V.:	33.6%
Mode:	0.520 µm	Skewness:	0.601 Right skewed
		Kurtosis:	0.087 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.299 µm	0.380 µm	0.487 µm	0.613 µm	0.743 µm

Beckman Coulter LS13320







D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0.00047	0.0017	0.017
17	0.178	0.186	0.0051	0.017	0.14
18	0.195	0.205	0.031	0.093	0.63
19	0.214	0.225	0.10	0.28	1.56
20	0.235	0.247	0.20	0.50	2.36
21	0.258	0.271	0.35	0.79	3.10
22	0.284	0.297	0.58	1.22	3.94
23	0.311	0.326	1.03	1.96	5.26
24	0.342	0.358	1.76	3.04	6.77
25	0.375	0.393	2.85	4.49	8.29
26	0.412	0.431	4.39	6.31	9.68
27	0.452	0.474	6.29	8.23	10.5
28	0.496	0.520	8.42	10.0	10.6
29	0.545	0.571	10.4	11.3	9.94
30	0.598	0.627	12.0	11.9	8.66
31	0.656	0.688	12.7	11.5	6.93
32	0.721	0.755	12.4	10.2	5.10
33	0.791	0.829	10.9	8.15	3.39
34	0.868	0.910	8.44	5.75	1.98
35	0.953	0.999	5.23	3.25	0.93
36	1.047	1.097	1.69	0.95	0.23
37	1.149	1.204	0.12	0.062	0.012
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_07_140838.$ls D3_07_140838.$ls		
File ID:	D3		
Operator:	KW		
Run number:	7		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	2.59%		
LS 13 320	Universal Liquid Module		
Start time:	14:06 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_07_140838.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.628 µm	S.D.:	0.117 µm
Median:	0.617 µm	Variance:	0.014 μm^2
Mean/Median ratio:	1.017	C.V.:	18.7%
Mode:	0.627 µm	Skewness:	0.396 Right skewed
		Kurtosis:	-0.381 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.480 µm	0.538 µm	0.617 µm	0.708 µm	0.791 µm

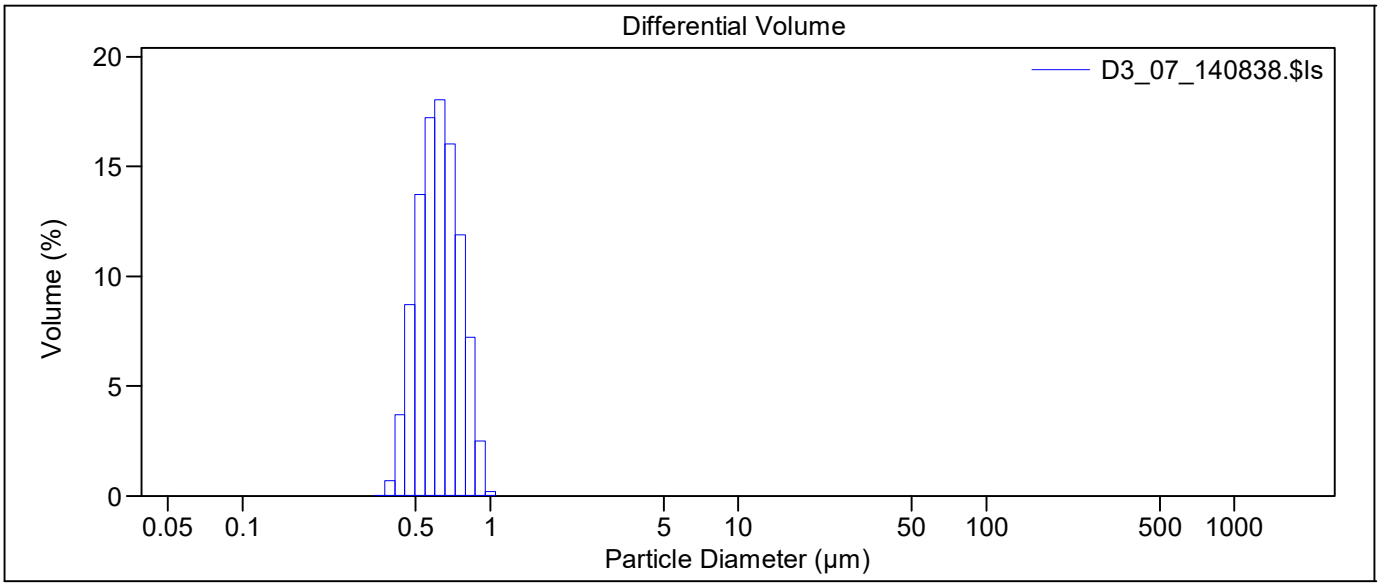
Number Statistics (Arithmetic) D3_07_140838.$ls

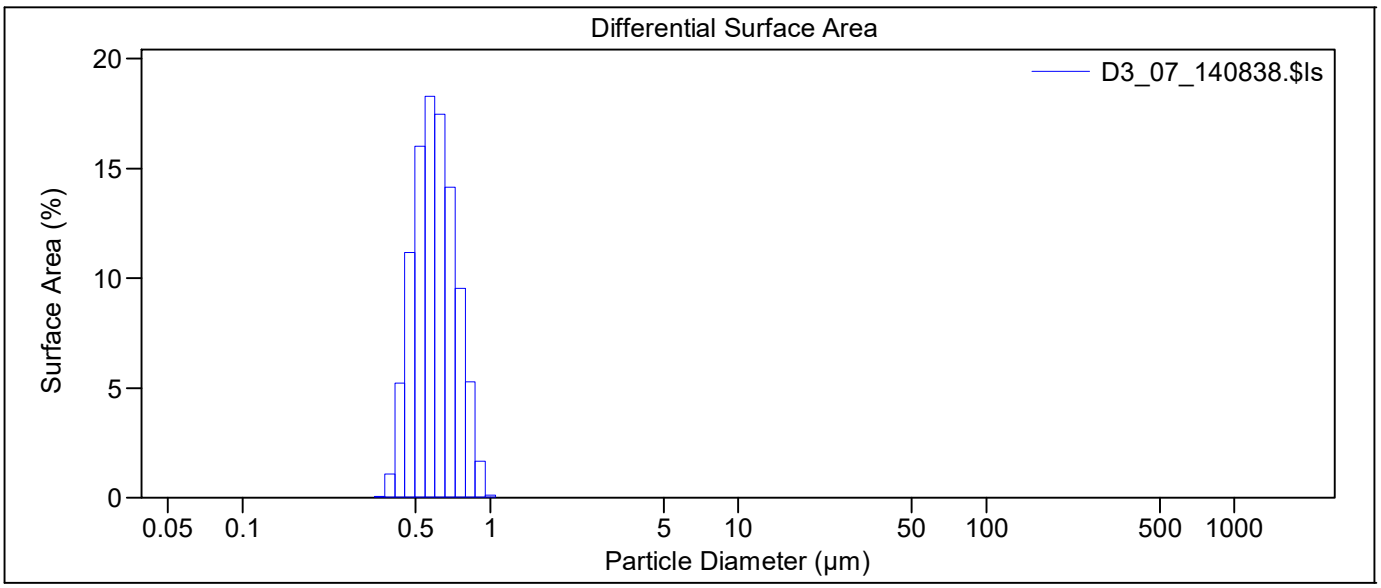
Calculations from 0.040 µm to 2000 µm

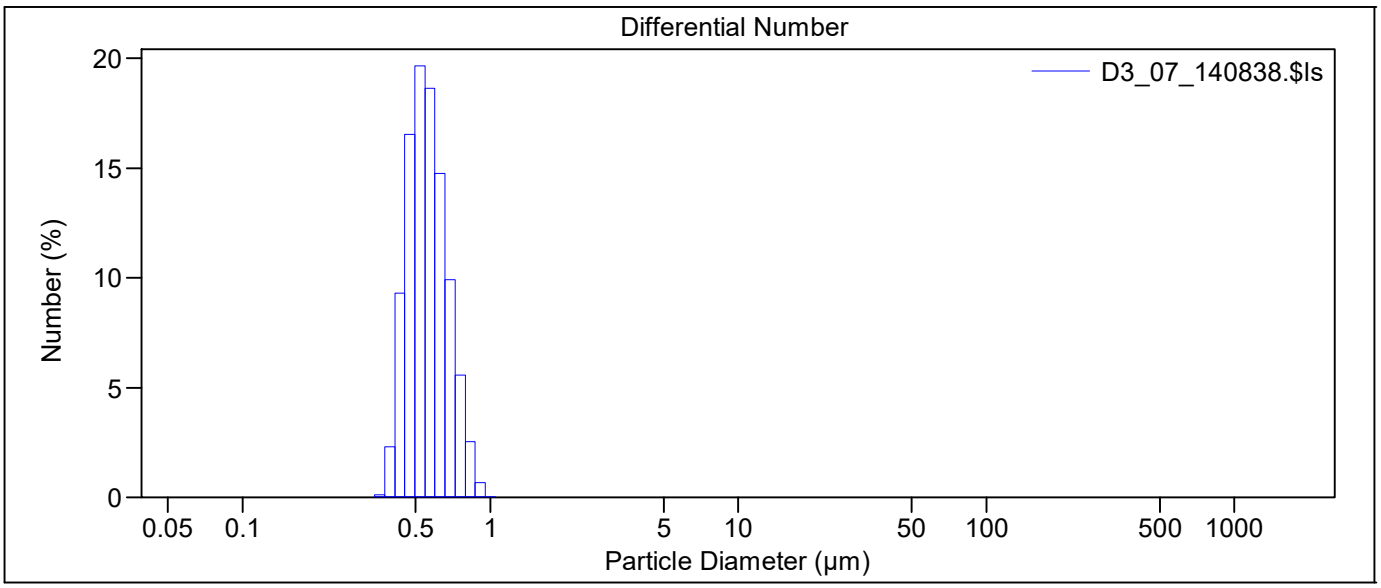
Number:	100%		
Mean:	0.567 µm	S.D.:	0.104 µm
Median:	0.551 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.029	C.V.:	18.4%
Mode:	0.520 µm	Skewness:	0.733 Right skewed
		Kurtosis:	0.282 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.445 µm	0.488 µm	0.551 µm	0.632 µm	0.713 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.027	0.046	0.12
25	0.375	0.393	0.70	1.07	2.30
26	0.412	0.431	3.71	5.21	9.29
27	0.452	0.474	8.72	11.2	16.5
28	0.496	0.520	13.7	16.0	19.7
29	0.545	0.571	17.2	18.3	18.6
30	0.598	0.627	18.0	17.5	14.8
31	0.656	0.688	16.0	14.1	9.92
32	0.721	0.755	11.9	9.55	5.56
33	0.791	0.829	7.22	5.28	2.55
34	0.868	0.910	2.50	1.66	0.67
35	0.953	0.999	0.20	0.12	0.040
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_08_141026.$ls D3_08_141026.$ls		
File ID:	D3		
Operator:	KW		
Run number:	8		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	2.90%		
LS 13 320	Universal Liquid Module		
Start time:	14:08 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_08_141026.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.613 µm	S.D.:	0.106 µm
Median:	0.603 µm	Variance:	0.011 µm^2
Mean/Median ratio:	1.016	C.V.:	17.3%
Mode:	0.627 µm	Skewness:	0.422 Right skewed
		Kurtosis:	-0.269 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.479 µm	0.532 µm	0.603 µm	0.686 µm	0.763 µm

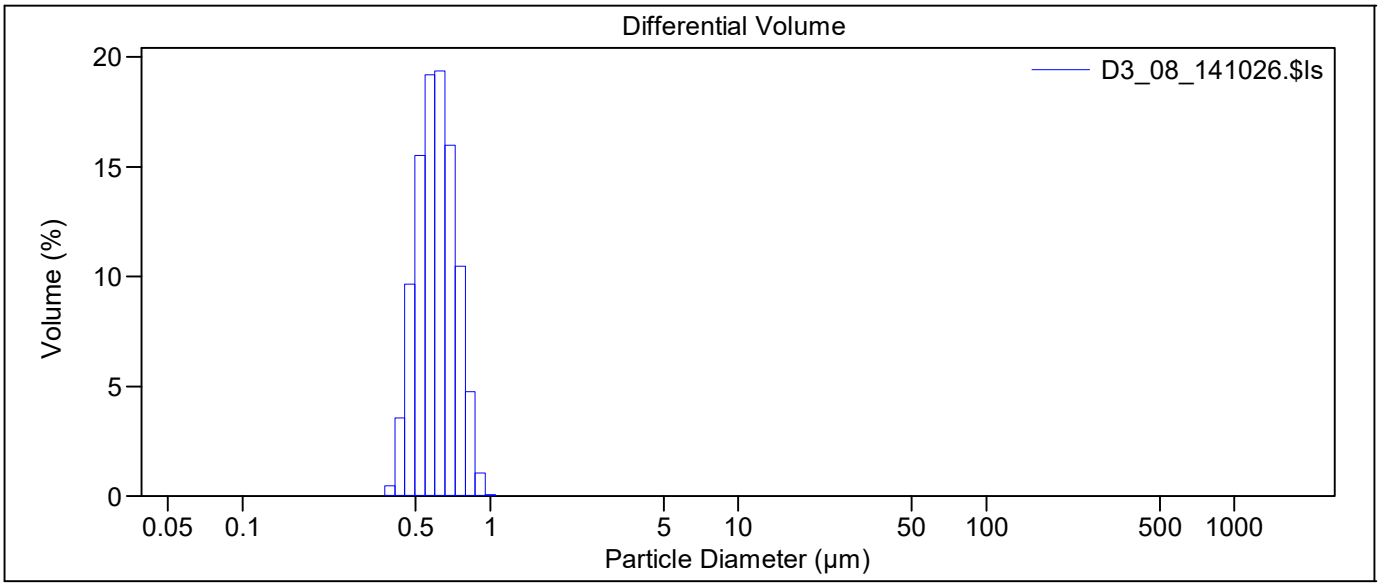
Number Statistics (Arithmetic) D3_08_141026.$ls

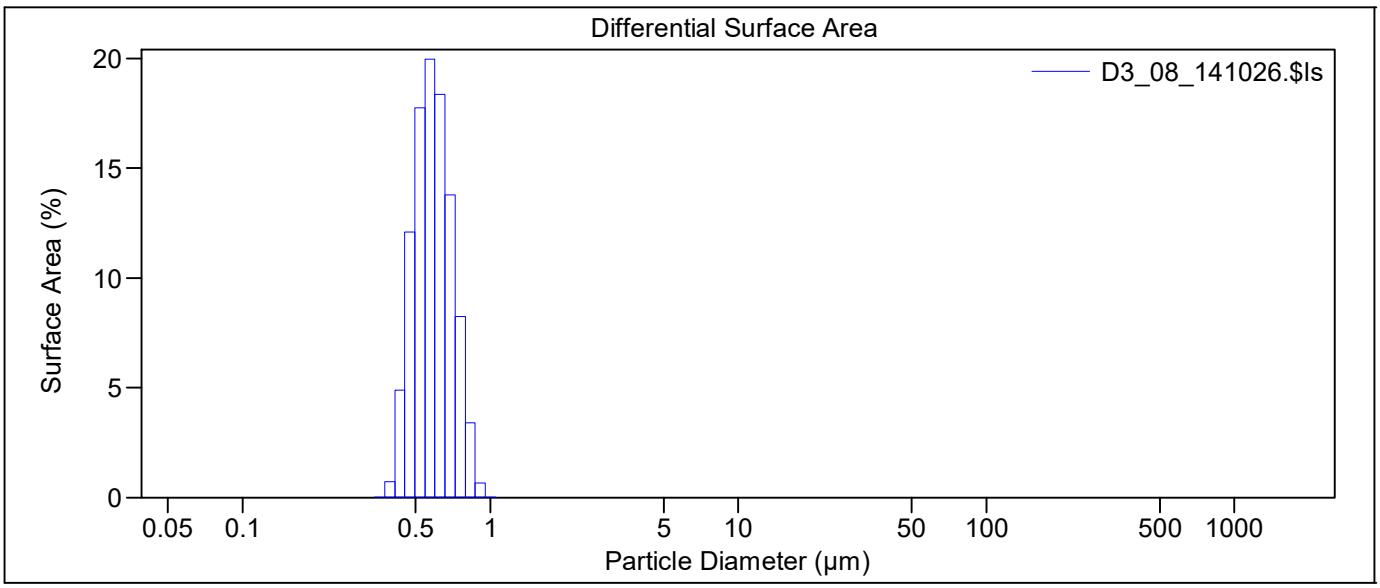
Calculations from 0.040 µm to 2000 µm

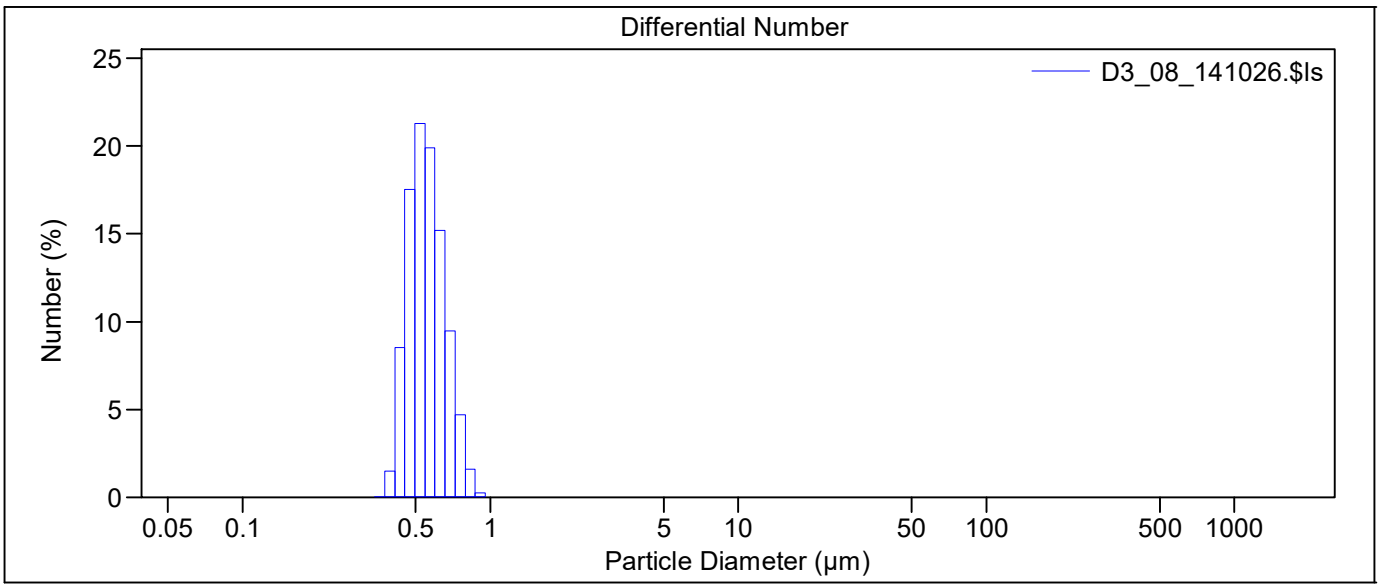
Number:	100%		
Mean:	0.562 µm	S.D.:	0.095 µm
Median:	0.548 µm	Variance:	0.0090 µm^2
Mean/Median ratio:	1.025	C.V.:	16.9%
Mode:	0.520 µm	Skewness:	0.703 Right skewed
		Kurtosis:	0.267 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.452 µm	0.490 µm	0.548 µm	0.622 µm	0.697 µm

Beckman Coulter LS13320







D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.010	0.017	0.042
25	0.375	0.393	0.47	0.72	1.51
26	0.412	0.431	3.55	4.89	8.52
27	0.452	0.474	9.65	12.1	17.5
28	0.496	0.520	15.5	17.7	21.3
29	0.545	0.571	19.2	20.0	19.9
30	0.598	0.627	19.4	18.4	15.2
31	0.656	0.688	16.0	13.8	9.46
32	0.721	0.755	10.5	8.24	4.69
33	0.791	0.829	4.75	3.40	1.61
34	0.868	0.910	1.05	0.68	0.27
35	0.953	0.999	0.054	0.032	0.010
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_09_141215.$ls D3_09_141215.$ls		
File ID:	D3		
Operator:	KW		
Run number:	9		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	3.22%		
LS 13 320	Universal Liquid Module		
Start time:	14:10 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	54%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_09_141215.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.600 µm	S.D.:	0.098 µm
Median:	0.593 µm	Variance:	0.0095 µm^2
Mean/Median ratio:	1.013	C.V.:	16.3%
Mode:	0.571 µm	Skewness:	0.343 Right skewed
		Kurtosis:	-0.410 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.476 µm	0.525 µm	0.593 µm	0.669 µm	0.739 µm

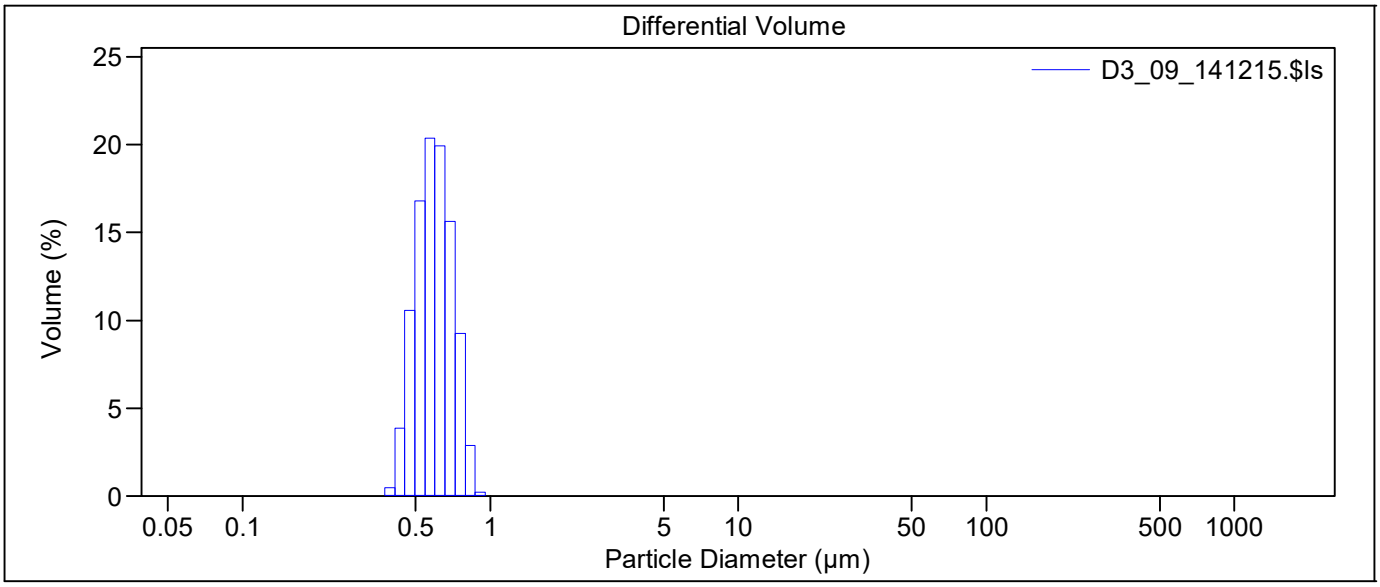
Number Statistics (Arithmetic) D3_09_141215.$ls

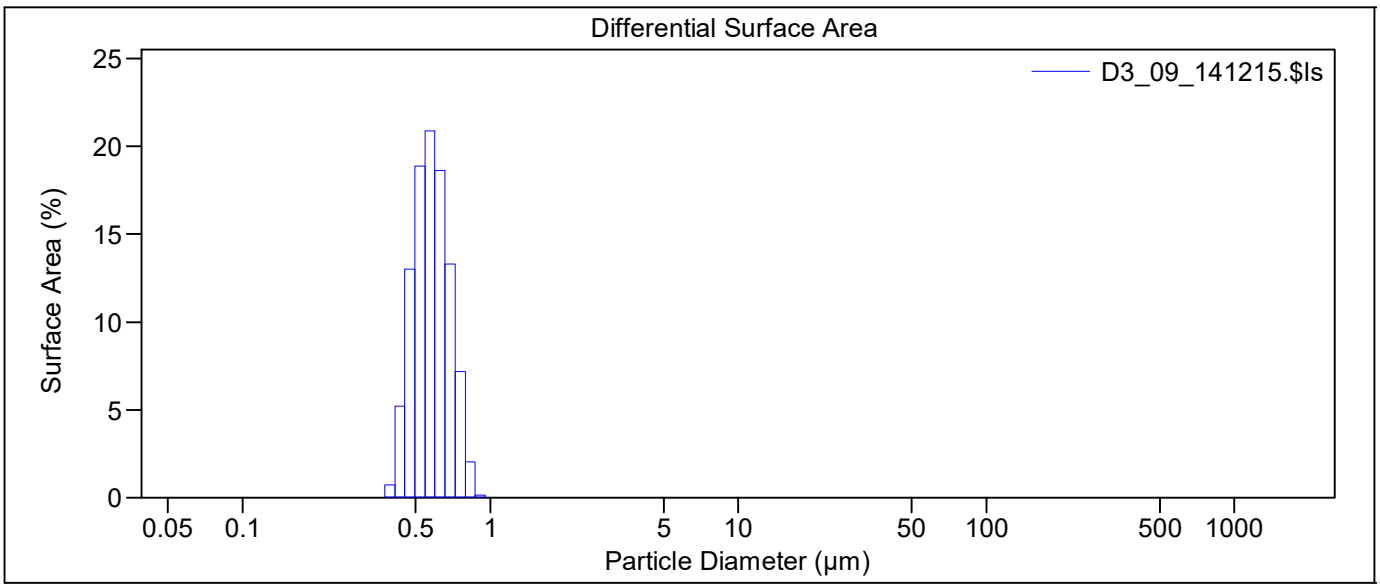
Calculations from 0.040 µm to 2000 µm

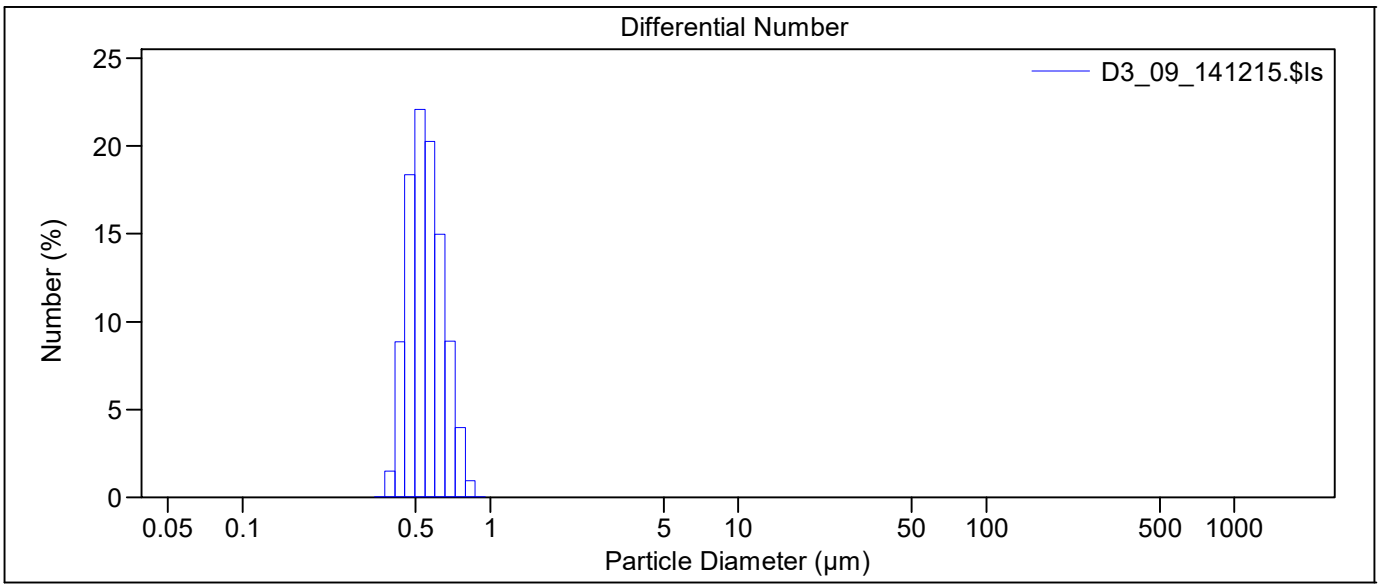
Number:	100%		
Mean:	0.555 µm	S.D.:	0.089 µm
Median:	0.543 µm	Variance:	0.0080 µm^2
Mean/Median ratio:	1.023	C.V.:	16.1%
Mode:	0.520 µm	Skewness:	0.628 Right skewed
		Kurtosis:	0.060 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.450 µm	0.487 µm	0.543 µm	0.613 µm	0.684 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.0091	0.015	0.037
25	0.375	0.393	0.49	0.73	1.50
26	0.412	0.431	3.85	5.22	8.87
27	0.452	0.474	10.6	13.0	18.4
28	0.496	0.520	16.8	18.9	22.1
29	0.545	0.571	20.4	20.9	20.3
30	0.598	0.627	19.9	18.6	15.0
31	0.656	0.688	15.6	13.3	8.89
32	0.721	0.755	9.26	7.17	3.98
33	0.791	0.829	2.89	2.04	0.94
34	0.868	0.910	0.21	0.13	0.051
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_10_142411.$ls D3_10_142411.$ls		
File ID:	D3		
Operator:	KW		
Run number:	10		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	3.89%		
LS 13 320	Universal Liquid Module		
Start time:	14:22 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_10_142411.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.561 µm	S.D.:	0.089 µm
Median:	0.555 µm	Variance:	0.0080 µm^2
Mean/Median ratio:	1.009	C.V.:	15.9%
Mode:	0.571 µm	Skewness:	0.281 Right skewed
		Kurtosis:	-0.436 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.447 µm	0.493 µm	0.555 µm	0.625 µm	0.687 µm

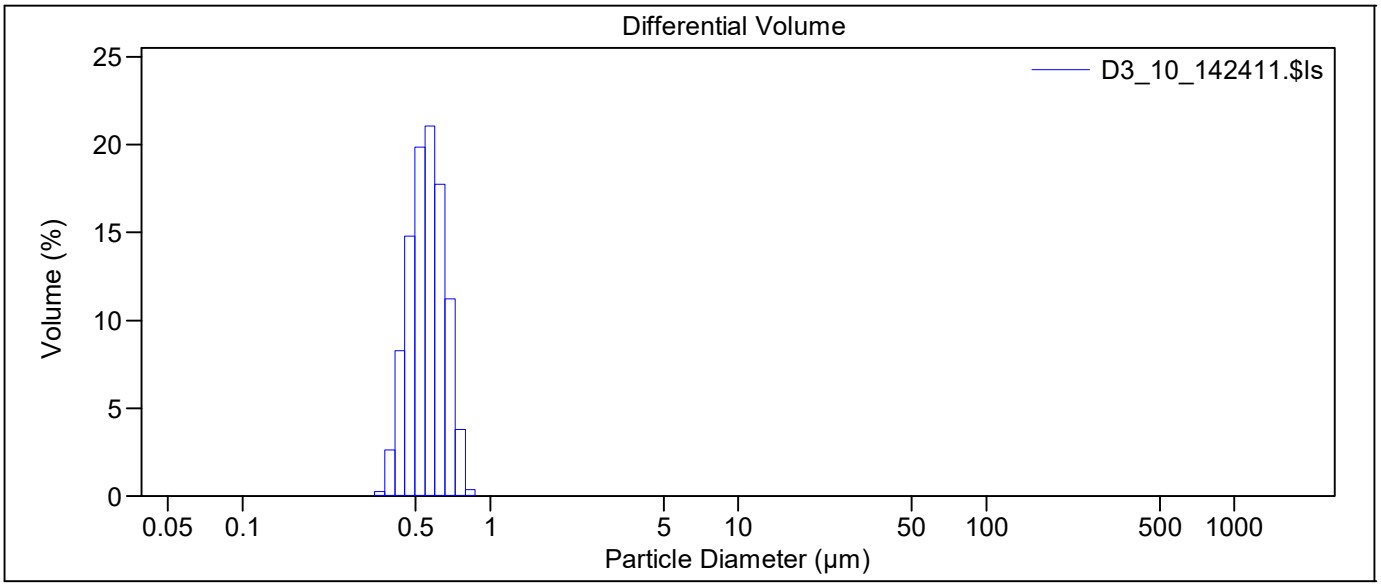
Number Statistics (Arithmetic) D3_10_142411.$ls

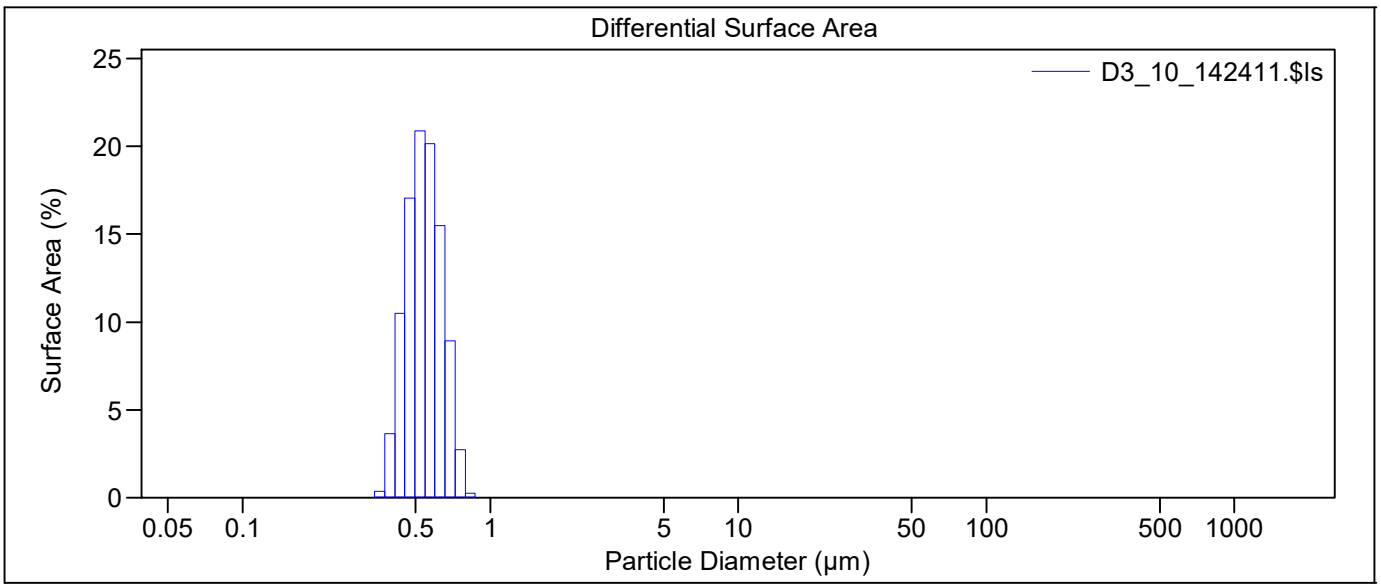
Calculations from 0.040 µm to 2000 µm

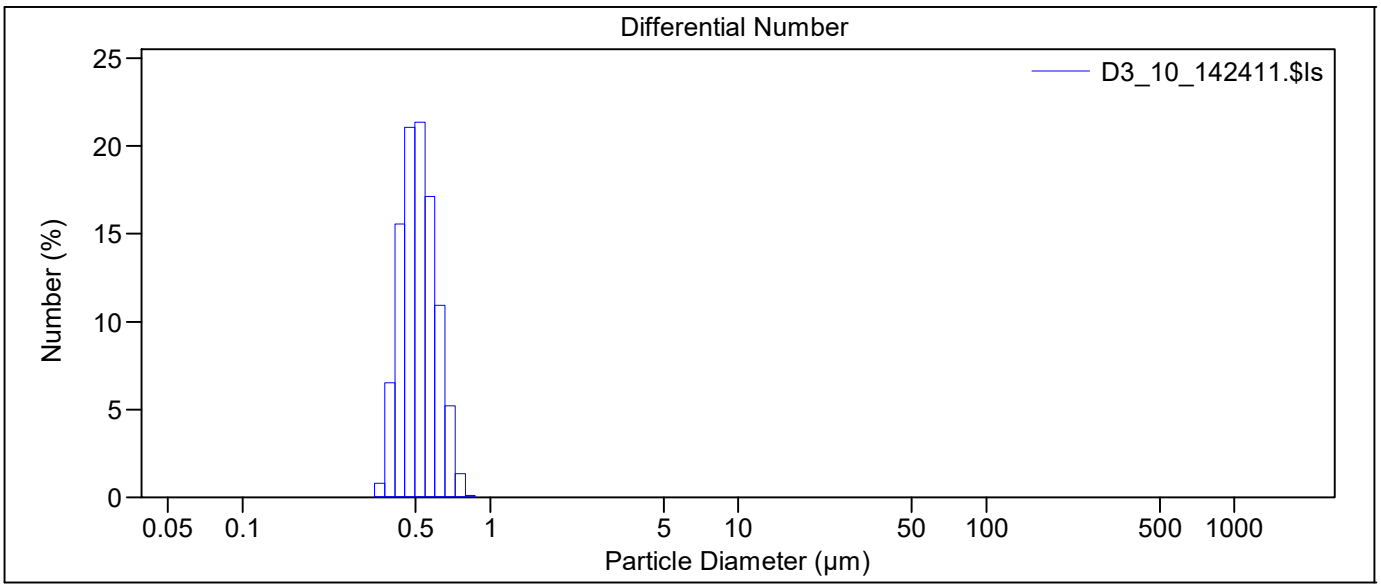
Number:	100%		
Mean:	0.519 µm	S.D.:	0.083 µm
Median:	0.510 µm	Variance:	0.0069 µm^2
Mean/Median ratio:	1.018	C.V.:	16.0%
Mode:	0.520 µm	Skewness:	0.554 Right skewed
		Kurtosis:	-0.071 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.419 µm	0.456 µm	0.510 µm	0.575 µm	0.639 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0021	0.0035	0.0092
24	0.342	0.358	0.25	0.37	0.81
25	0.375	0.393	2.62	3.64	6.52
26	0.412	0.431	8.27	10.5	15.6
27	0.452	0.474	14.8	17.1	21.0
28	0.496	0.520	19.9	20.9	21.4
29	0.545	0.571	21.1	20.2	17.1
30	0.598	0.627	17.8	15.5	10.9
31	0.656	0.688	11.2	8.92	5.22
32	0.721	0.755	3.80	2.75	1.33
33	0.791	0.829	0.36	0.24	0.096
34	0.868	0.910	0.0031	0.0019	0.00062
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_11_142558.$ls D3_11_142558.$ls		
File ID:	D3		
Operator:	KW		
Run number:	11		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	3.03%		
LS 13 320	Universal Liquid Module		
Start time:	14:24 15	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_11_142558.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.582 µm	S.D.:	0.098 µm
Median:	0.575 µm	Variance:	0.0096 µm^2
Mean/Median ratio:	1.012	C.V.:	16.9%
Mode:	0.571 µm	Skewness:	0.350 Right skewed
		Kurtosis:	-0.324 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.458 µm	0.508 µm	0.575 µm	0.649 µm	0.716 µm

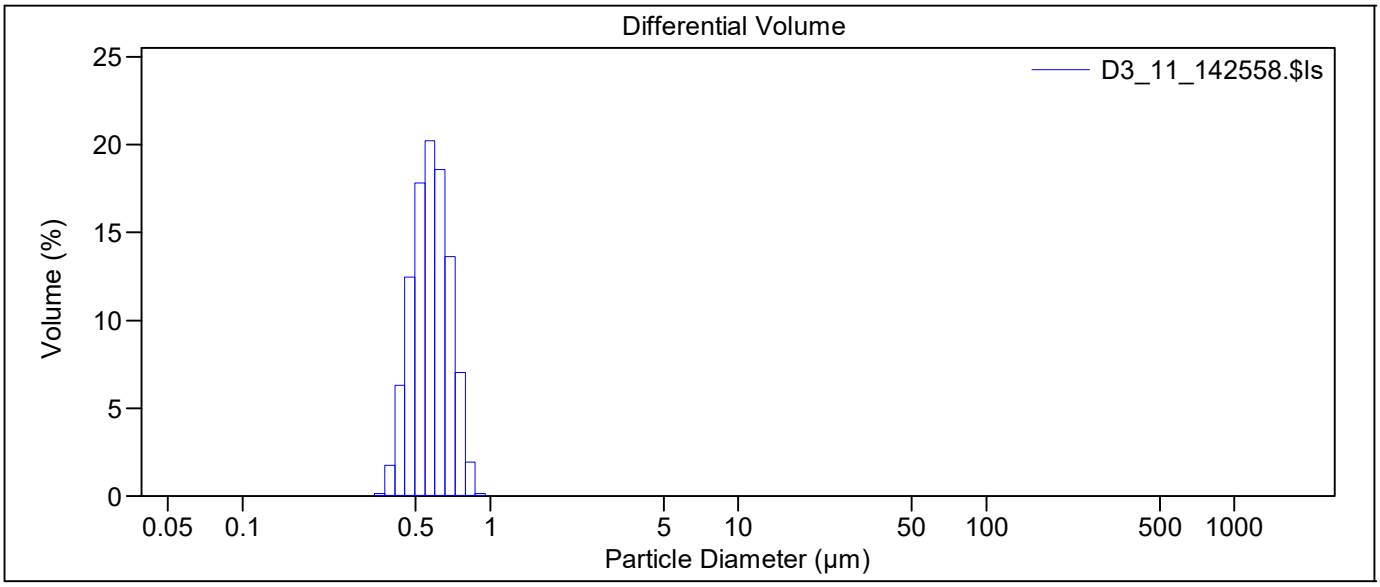
Number Statistics (Arithmetic) D3_11_142558.$ls

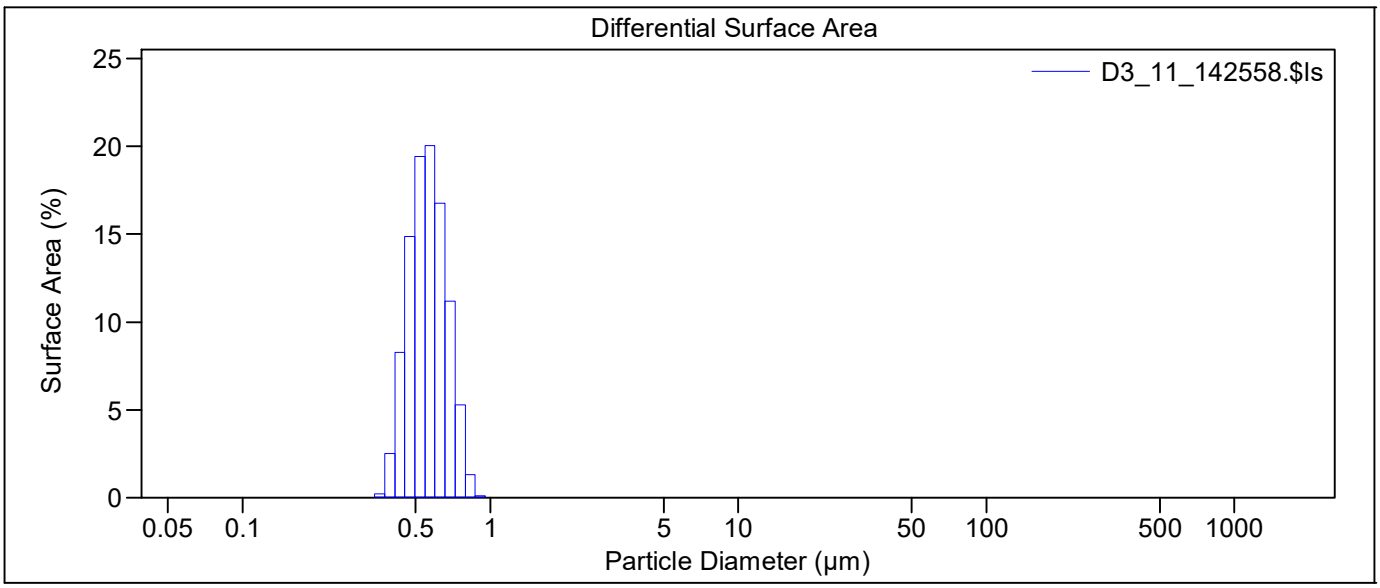
Calculations from 0.040 µm to 2000 µm

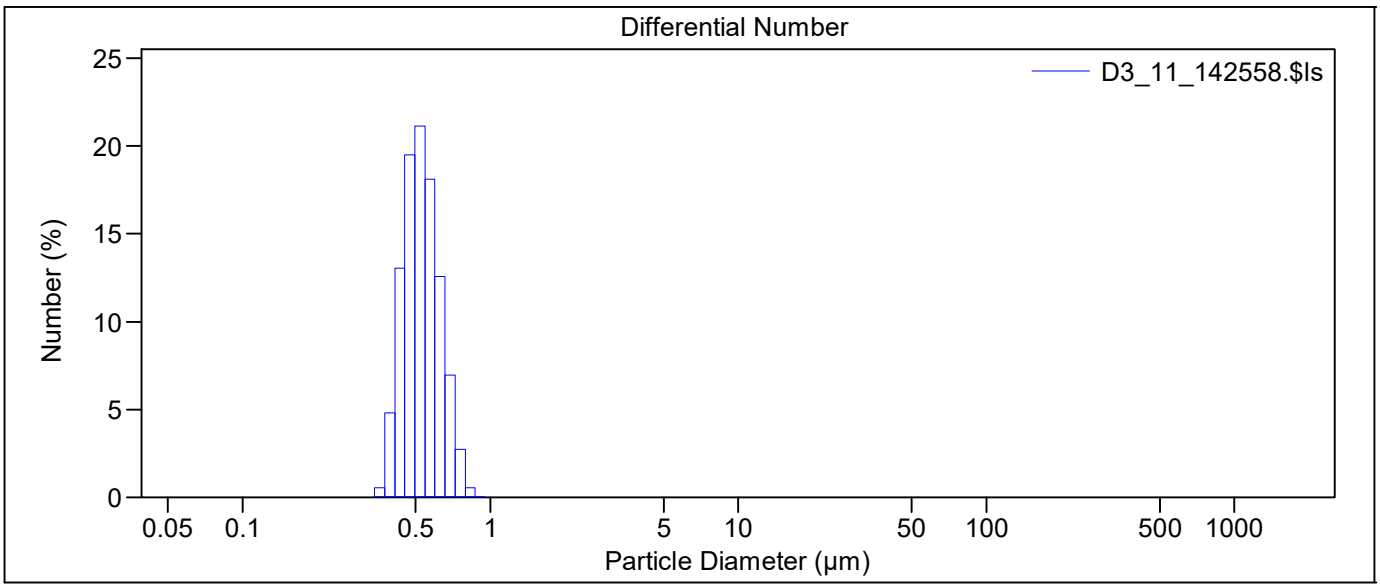
Number:	100%		
Mean:	0.535 µm	S.D.:	0.090 µm
Median:	0.524 µm	Variance:	0.0081 µm^2
Mean/Median ratio:	1.021	C.V.:	16.8%
Mode:	0.520 µm	Skewness:	0.615 Right skewed
		Kurtosis:	0.097 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.426 µm	0.467 µm	0.524 µm	0.592 µm	0.659 µm

Beckman Coulter LS13320







D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0012	0.0021	0.0059
24	0.342	0.358	0.15	0.23	0.54
25	0.375	0.393	1.75	2.52	4.80
26	0.412	0.431	6.30	8.26	13.1
27	0.452	0.474	12.5	14.9	19.5
28	0.496	0.520	17.8	19.4	21.1
29	0.545	0.571	20.2	20.1	18.1
30	0.598	0.627	18.6	16.8	12.6
31	0.656	0.688	13.6	11.2	6.97
32	0.721	0.755	7.03	5.27	2.72
33	0.791	0.829	1.91	1.31	0.56
34	0.868	0.910	0.16	0.098	0.035
35	0.953	0.999	0.0013	0.00072	0.00021
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_12_142745.$ls D3_12_142745.$ls		
File ID:	D3		
Operator:	KW		
Run number:	12		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	2.16%		
LS 13 320	Universal Liquid Module		
Start time:	14:26 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_12_142745.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.614 µm	S.D.:	0.120 µm
Median:	0.603 µm	Variance:	0.014 μm^2
Mean/Median ratio:	1.018	C.V.:	19.5%
Mode:	0.627 µm	Skewness:	0.401 Right skewed
		Kurtosis:	-0.346 Platykurtic

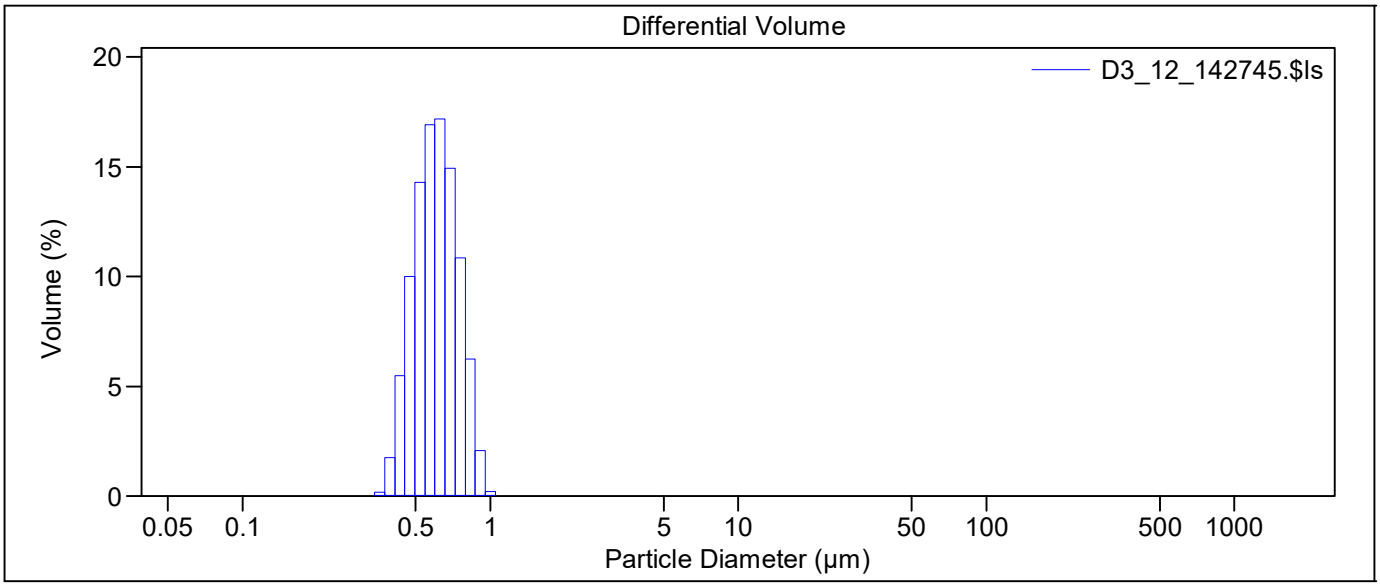
<10%	<25%	<50%	<75%	<90%
0.464 µm	0.522 µm	0.603 µm	0.696 µm	0.781 µm

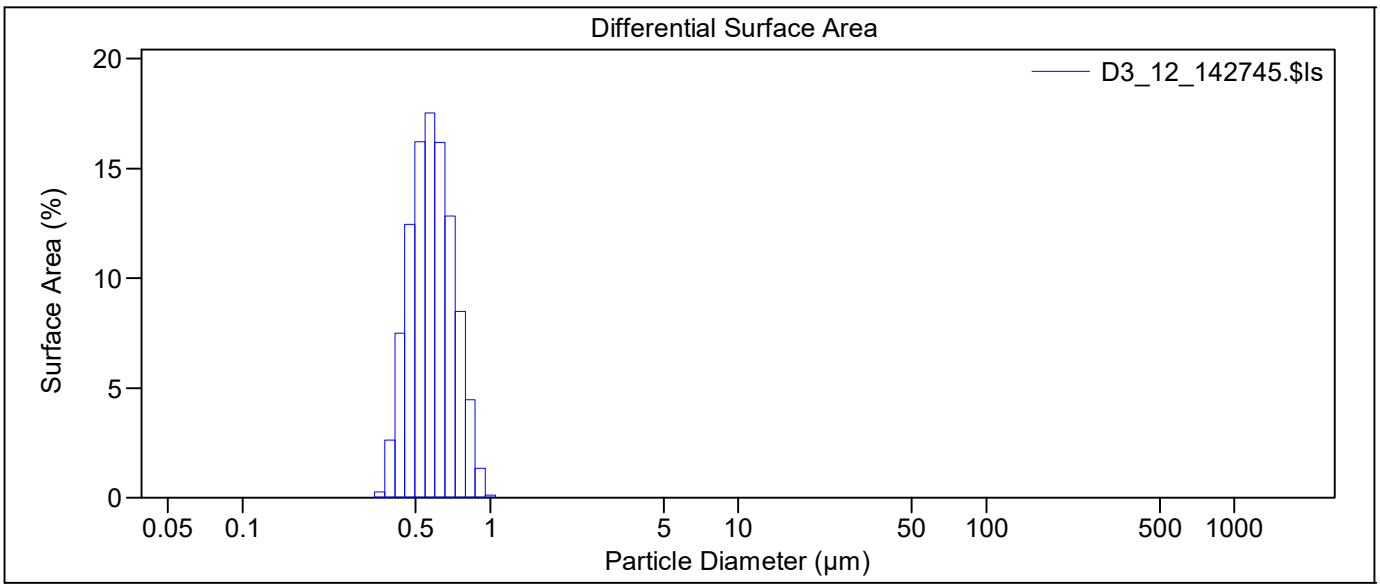
Number Statistics (Arithmetic) D3_12_142745.$ls

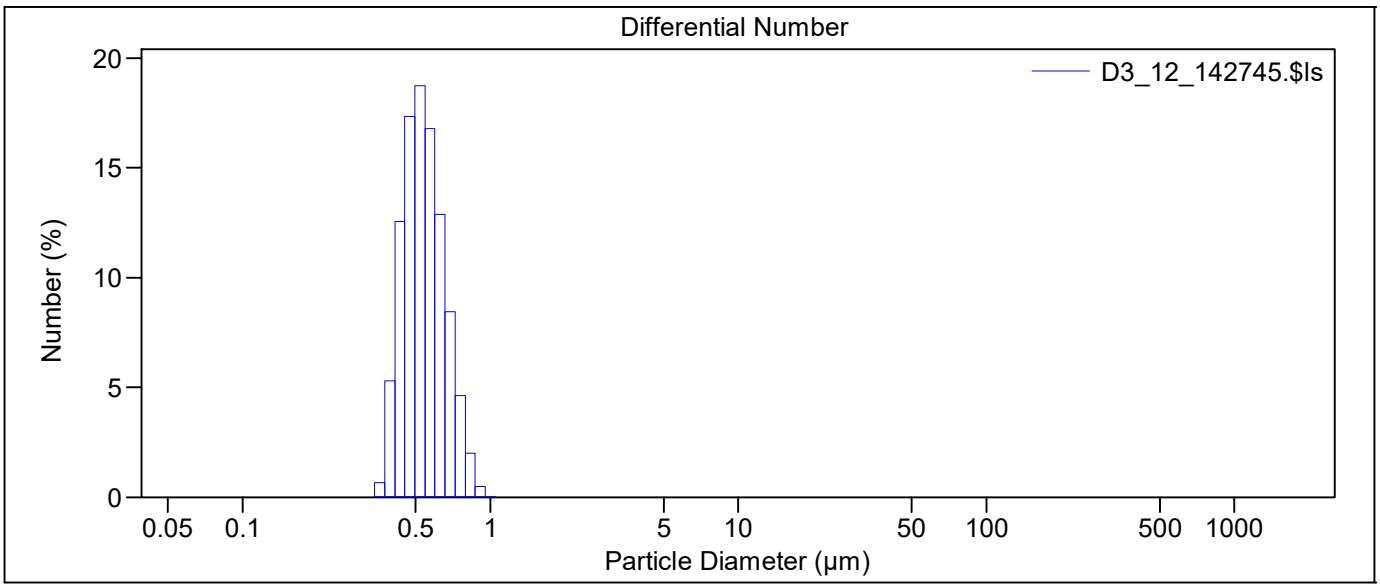
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.549 µm	S.D.:	0.106 µm
Median:	0.533 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.030	C.V.:	19.3%
Mode:	0.520 µm	Skewness:	0.748 Right skewed
		Kurtosis:	0.320 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.425 µm	0.468 µm	0.533 µm	0.614 µm	0.700 µm


Differential Volume
D3_12_142745.$ls
Volume (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
D3_12_142745.$ls
Surface Area (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
D3_12_142745.$ls
Number (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0014	0.0026	0.0077
24	0.342	0.358	0.17	0.27	0.67
25	0.375	0.393	1.75	2.63	5.31
26	0.412	0.431	5.47	7.49	12.6
27	0.452	0.474	9.99	12.5	17.4
28	0.496	0.520	14.3	16.2	18.7
29	0.545	0.571	16.9	17.5	16.8
30	0.598	0.627	17.2	16.2	12.9
31	0.656	0.688	14.9	12.8	8.46
32	0.721	0.755	10.8	8.48	4.65
33	0.791	0.829	6.24	4.45	2.02
34	0.868	0.910	2.06	1.34	0.51
35	0.953	0.999	0.20	0.12	0.037
36	1.047	1.097	0.0017	0.00093	0.00024
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_13_143633.$ls D3_13_143633.$ls		
File ID:	D3		
Operator:	KW		
Run number:	13		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	0.54%		
LS 13 320	Universal Liquid Module		
Start time:	14:34 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	14%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_13_143633.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	1.179 µm	S.D.:	1.425 µm
Median:	0.723 µm	Variance:	2.029 µm^2
Mean/Median ratio:	1.632	C.V.:	121%
Mode:	0.688 µm	Skewness:	2.794 Right skewed
		Kurtosis:	7.443 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.286 µm	0.445 µm	0.723 µm	1.185 µm	2.333 µm

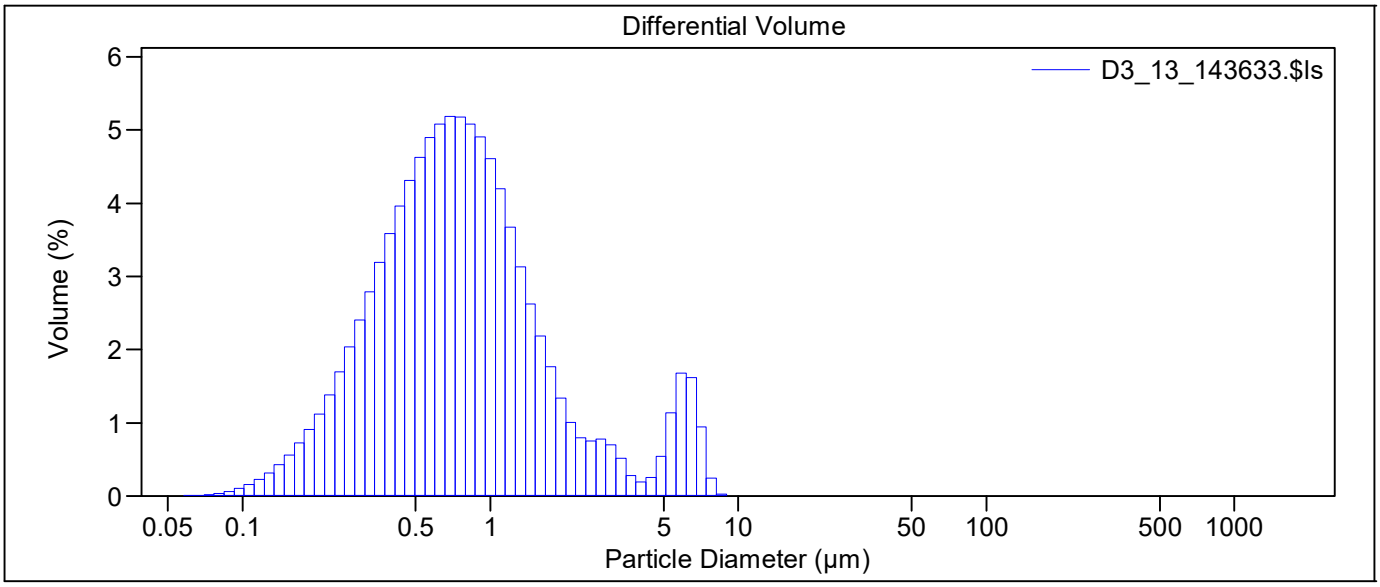
Number Statistics (Arithmetic) D3_13_143633.$ls

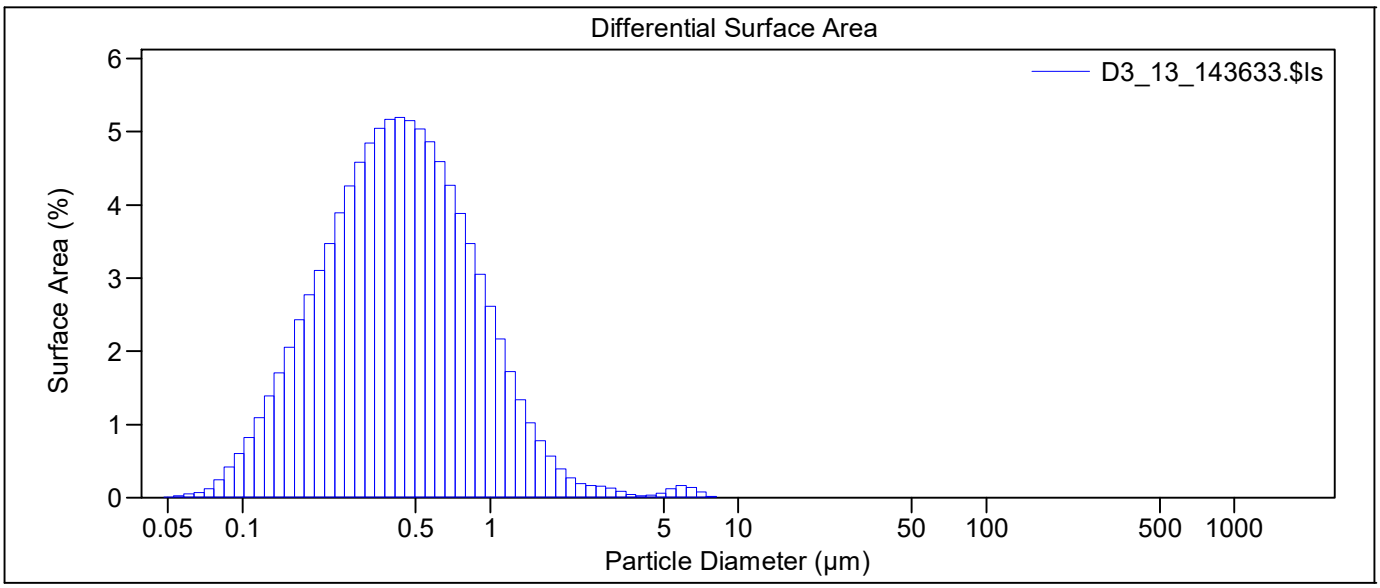
Calculations from 0.040 µm to 2000 µm

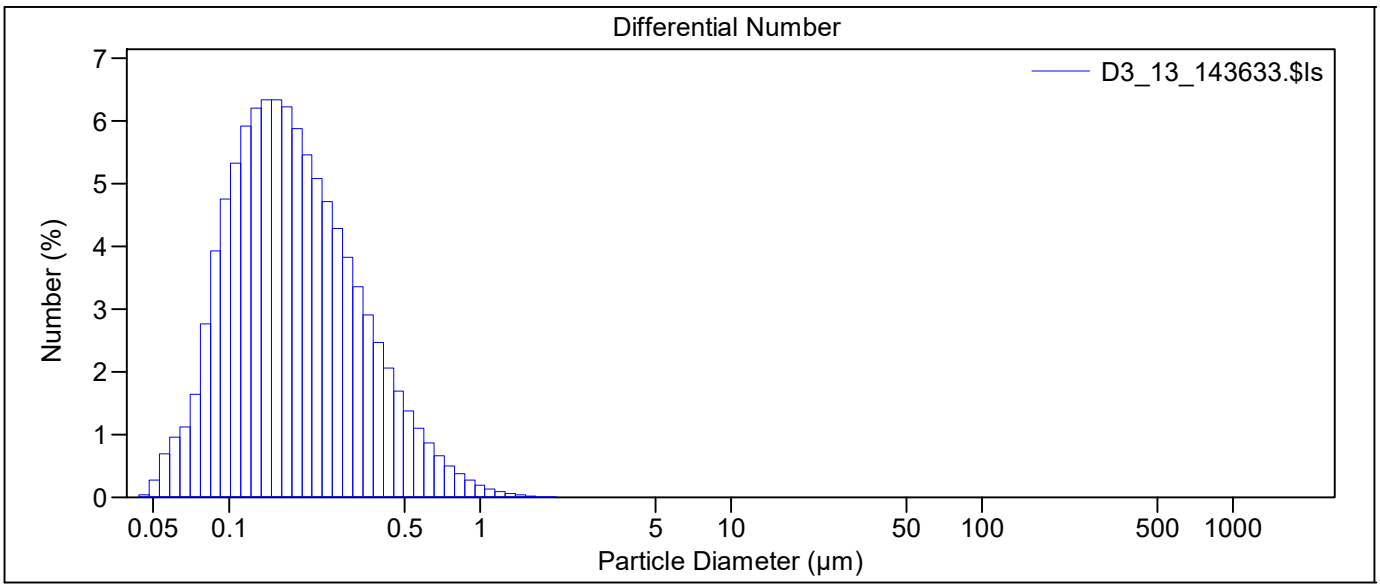
Number:	100%		
Mean:	0.219 µm	S.D.:	0.161 µm
Median:	0.171 µm	Variance:	0.026 µm^2
Mean/Median ratio:	1.278	C.V.:	73.3%
Mode:	0.155 µm	Skewness:	3.453 Right skewed
		Kurtosis:	37.58 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.090 µm	0.118 µm	0.171 µm	0.266 µm	0.404 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.000003	0.000046	0.0019
2	0.044	0.046	0.000098	0.0012	0.042
3	0.048	0.050	0.00084	0.0094	0.27
4	0.053	0.055	0.0028	0.029	0.69
5	0.058	0.061	0.0052	0.048	0.96
6	0.064	0.067	0.0080	0.068	1.12
7	0.070	0.073	0.016	0.12	1.65
8	0.077	0.080	0.035	0.24	2.77
9	0.084	0.088	0.065	0.42	3.93
10	0.093	0.097	0.10	0.61	4.76
11	0.102	0.106	0.15	0.82	5.33
12	0.112	0.117	0.23	1.10	5.91
13	0.122	0.128	0.31	1.39	6.21
14	0.134	0.141	0.42	1.71	6.34
15	0.148	0.155	0.56	2.06	6.34
16	0.162	0.170	0.73	2.43	6.22
17	0.178	0.186	0.91	2.77	5.88
18	0.195	0.205	1.12	3.10	5.46
19	0.214	0.225	1.38	3.48	5.08
20	0.235	0.247	1.69	3.89	4.72
21	0.258	0.271	2.04	4.26	4.29
22	0.284	0.297	2.41	4.59	3.83
23	0.311	0.326	2.79	4.85	3.36
24	0.342	0.358	3.20	5.05	2.90
25	0.375	0.393	3.59	5.17	2.47
26	0.412	0.431	3.96	5.20	2.06
27	0.452	0.474	4.31	5.15	1.69
28	0.496	0.520	4.63	5.04	1.37
29	0.545	0.571	4.90	4.86	1.10
30	0.598	0.627	5.08	4.59	0.86
31	0.656	0.688	5.18	4.26	0.66
32	0.721	0.755	5.18	3.88	0.50
33	0.791	0.829	5.09	3.47	0.37
34	0.868	0.910	4.90	3.05	0.27
35	0.953	0.999	4.61	2.61	0.19
36	1.047	1.097	4.20	2.17	0.13
37	1.149	1.204	3.67	1.73	0.088
38	1.261	1.321	3.13	1.34	0.057
39	1.385	1.451	2.63	1.03	0.036
40	1.520	1.592	2.18	0.78	0.023
41	1.668	1.748	1.76	0.57	0.014
42	1.832	1.919	1.34	0.39	0.0079
43	2.011	2.107	1.01	0.27	0.0045
44	2.207	2.313	0.79	0.19	0.0027
45	2.423	2.539	0.75	0.17	0.0019

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0.78	0.16	0.0015
47	2.920	3.059	0.70	0.13	0.0010
48	3.205	3.358	0.52	0.087	0.00057
49	3.519	3.687	0.28	0.043	0.00023
50	3.863	4.047	0.19	0.027	0.00012
51	4.240	4.443	0.26	0.033	0.00012
52	4.655	4.877	0.55	0.063	0.00020
53	5.110	5.354	1.14	0.12	0.00031
54	5.610	5.878	1.68	0.16	0.00035
55	6.158	6.452	1.62	0.14	0.00025
56	6.760	7.083	0.94	0.075	0.00011
57	7.421	7.775	0.24	0.018	0.000021
58	8.147	8.536	0.028	0.0019	0.000002
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_14_143822.$ls D3_14_143822.$ls		
File ID:	D3		
Operator:	KW		
Run number:	14		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	0.53%		
LS 13 320	Universal Liquid Module		
Start time:	14:36 15	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	19%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_14_143822.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	1.908 µm	S.D.:	2.406 µm
Median:	0.834 µm	Variance:	5.791 μm^2
Mean/Median ratio:	2.287	C.V.:	126%
Mode:	0.688 µm	Skewness:	2.000 Right skewed
		Kurtosis:	2.844 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.367 µm	0.523 µm	0.834 µm	2.161 µm	6.767 µm

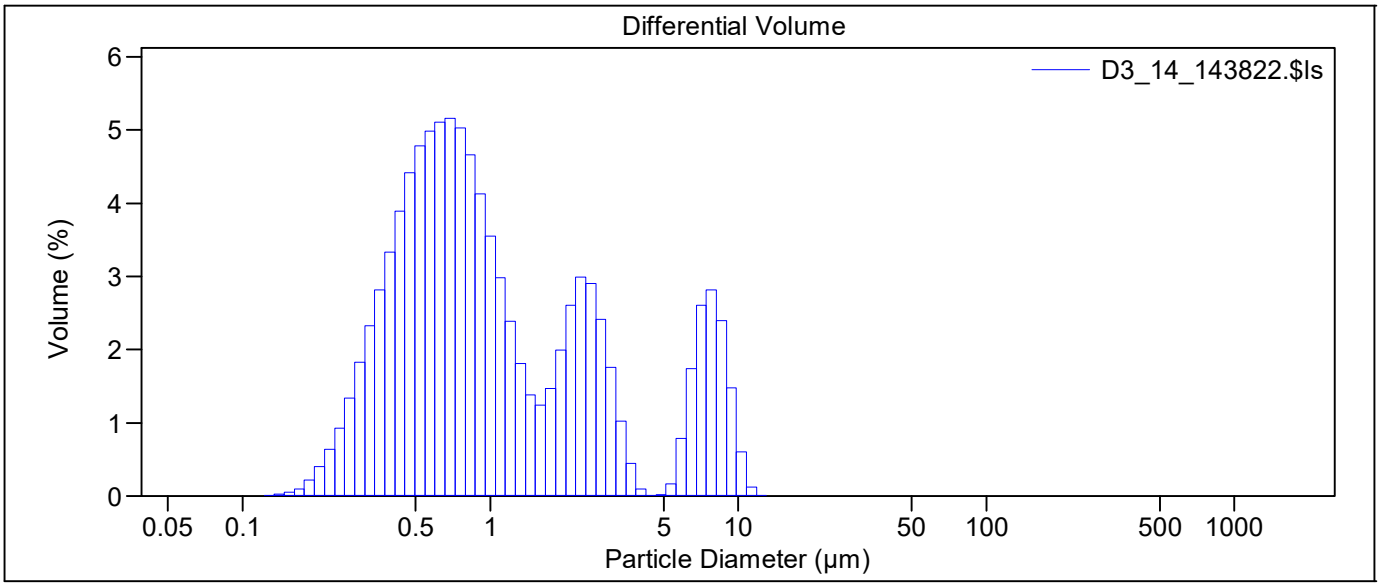
Number Statistics (Arithmetic) D3_14_143822.$ls

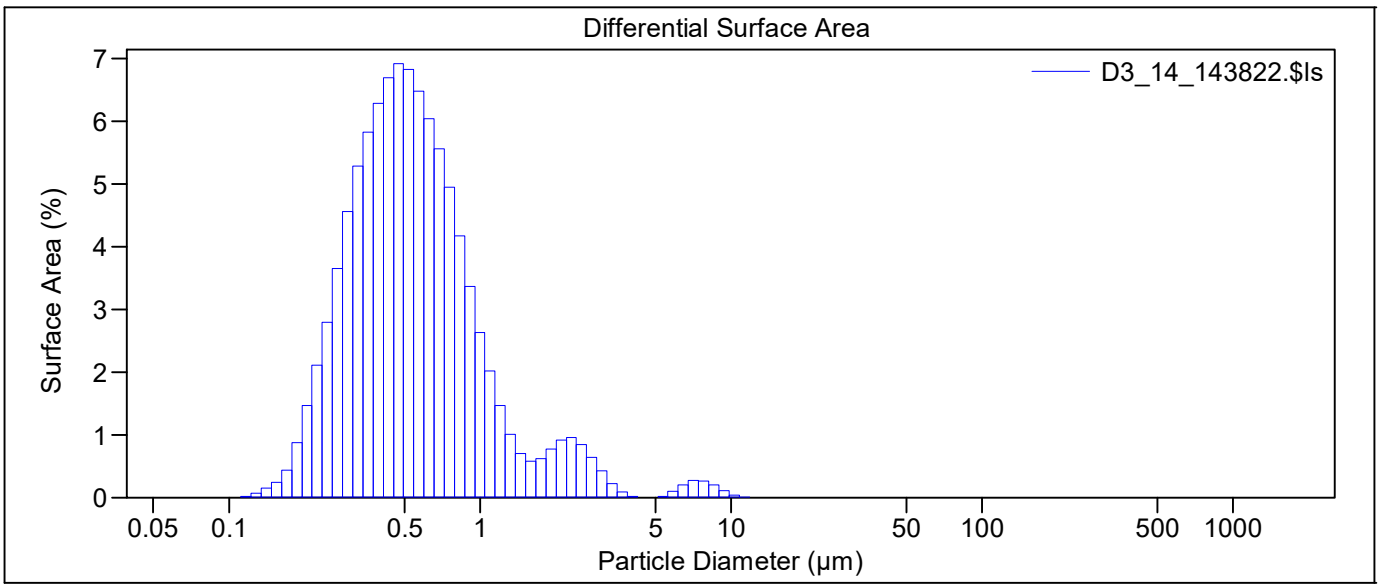
Calculations from 0.040 µm to 2000 µm

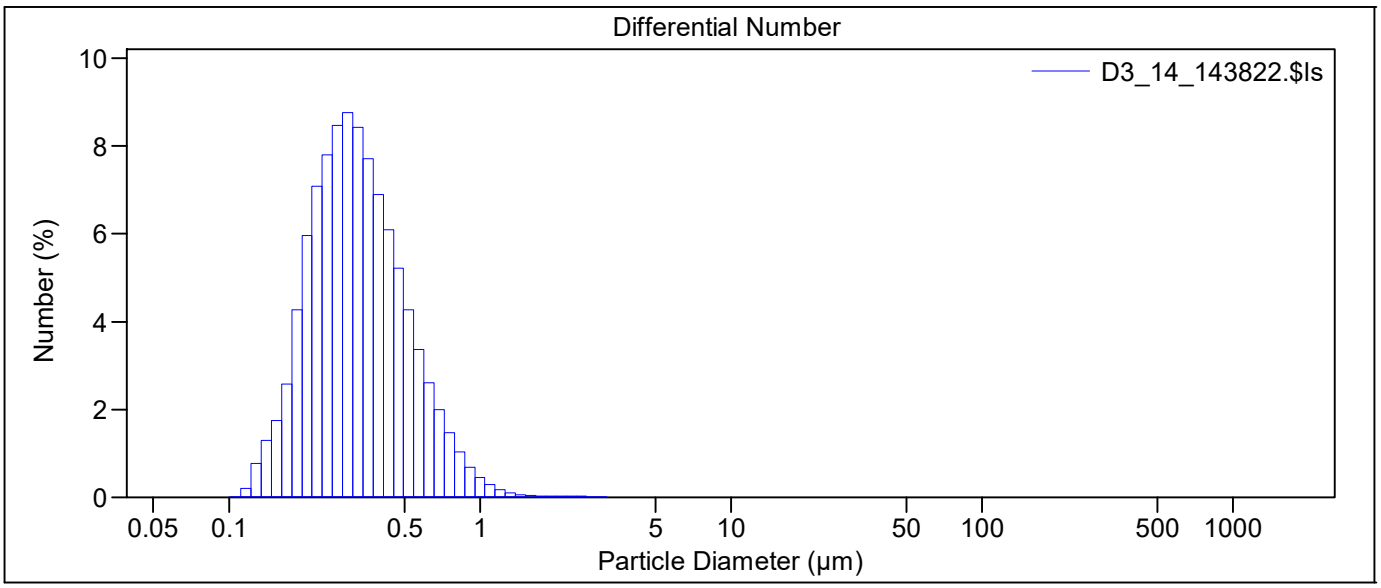
Number:	100%		
Mean:	0.362 µm	S.D.:	0.197 µm
Median:	0.315 µm	Variance:	0.039 μm^2
Mean/Median ratio:	1.148	C.V.:	54.3%
Mode:	0.297 µm	Skewness:	4.807 Right skewed
		Kurtosis:	90.68 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.192 µm	0.238 µm	0.315 µm	0.432 µm	0.583 µm

Beckman Coulter LS13320







D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0.00015	0.0010	0.015
12	0.112	0.117	0.0026	0.017	0.21
13	0.122	0.128	0.013	0.075	0.77
14	0.134	0.141	0.029	0.15	1.30
15	0.148	0.155	0.051	0.25	1.74
16	0.162	0.170	0.10	0.44	2.58
17	0.178	0.186	0.22	0.87	4.27
18	0.195	0.205	0.41	1.47	5.96
19	0.214	0.225	0.64	2.11	7.08
20	0.235	0.247	0.93	2.80	7.79
21	0.258	0.271	1.33	3.66	8.46
22	0.284	0.297	1.83	4.56	8.75
23	0.311	0.326	2.32	5.29	8.42
24	0.342	0.358	2.81	5.83	7.71
25	0.375	0.393	3.33	6.29	6.90
26	0.412	0.431	3.89	6.70	6.10
27	0.452	0.474	4.41	6.91	5.22
28	0.496	0.520	4.78	6.82	4.28
29	0.545	0.571	4.98	6.48	3.37
30	0.598	0.627	5.11	6.05	2.61
31	0.656	0.688	5.16	5.56	1.99
32	0.721	0.755	5.03	4.94	1.47
33	0.791	0.829	4.66	4.17	1.03
34	0.868	0.910	4.12	3.36	0.69
35	0.953	0.999	3.55	2.64	0.45
36	1.047	1.097	2.98	2.02	0.28
37	1.149	1.204	2.39	1.47	0.17
38	1.261	1.321	1.81	1.01	0.098
39	1.385	1.451	1.38	0.71	0.057
40	1.520	1.592	1.25	0.58	0.039
41	1.668	1.748	1.47	0.62	0.035
42	1.832	1.919	1.99	0.77	0.035
43	2.011	2.107	2.61	0.92	0.035
44	2.207	2.313	2.99	0.96	0.030
45	2.423	2.539	2.90	0.85	0.022
46	2.660	2.787	2.42	0.64	0.014
47	2.920	3.059	1.76	0.43	0.0077
48	3.205	3.358	1.02	0.23	0.0034
49	3.519	3.687	0.45	0.090	0.0011
50	3.863	4.047	0.098	0.018	0.00019
51	4.240	4.443	0.010	0.0017	0.000015
52	4.655	4.877	0.015	0.0023	0.000017
53	5.110	5.354	0.17	0.023	0.00014
54	5.610	5.878	0.78	0.099	0.00049
55	6.158	6.452	1.74	0.20	0.00082
56	6.760	7.083	2.61	0.27	0.00092
57	7.421	7.775	2.81	0.27	0.00075
58	8.147	8.536	2.40	0.21	0.00048
59	8.943	9.370	1.48	0.12	0.00023
60	9.817	10.29	0.60	0.043	0.000069
61	10.78	11.29	0.12	0.0078	0.000010
62	11.83	12.40	0.0093	0.00056	0.000001
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

Beckman Coulter LS13320

D3.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D3\D3_15_144009.$ls D3_15_144009.$ls		
File ID:	D3		
Operator:	KW		
Run number:	15		
Optical model:	TiO2.rf780d PIDS included		
Fluid R.I.:	1.33	Sample R.I.:	2.69 i0.1
Residual:	0.59%		
LS 13 320	Universal Liquid Module		
Start time:	14:38 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	22%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D3_15_144009.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	2.539 µm	S.D.:	3.278 µm
Median:	0.940 µm	Variance:	10.75 μm^2
Mean/Median ratio:	2.701	C.V.:	129%
Mode:	0.627 µm	Skewness:	1.788 Right skewed
		Kurtosis:	2.096 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.364 µm	0.537 µm	0.940 µm	2.617 µm	8.300 µm

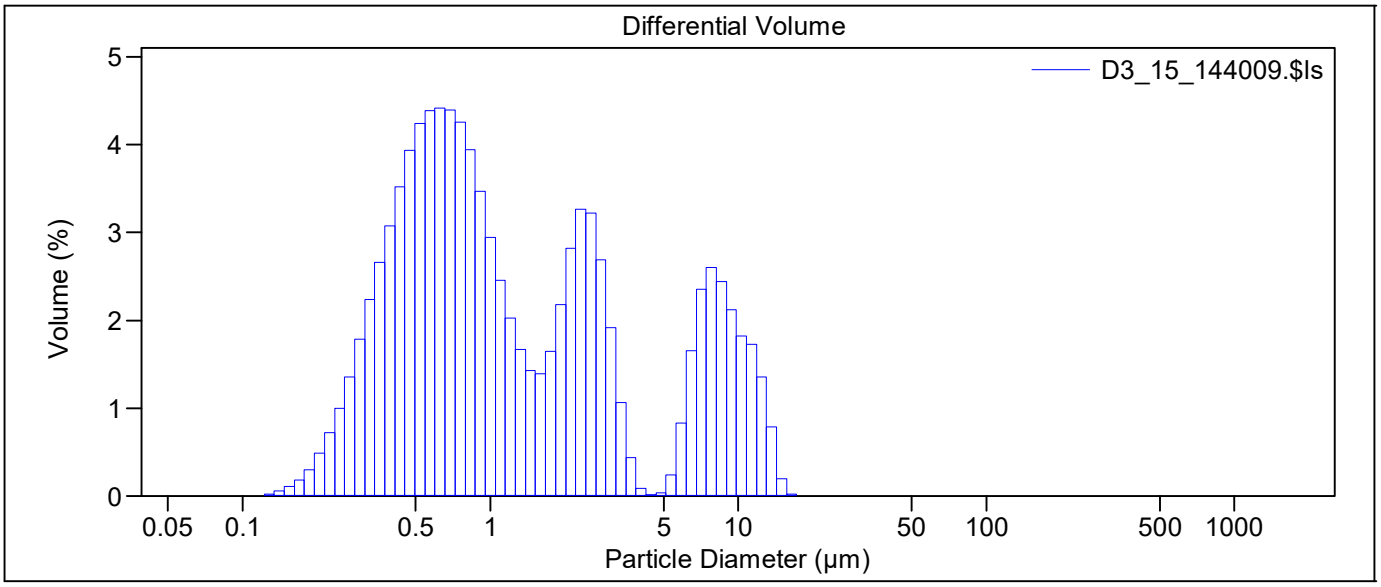
Number Statistics (Arithmetic) D3_15_144009.$ls

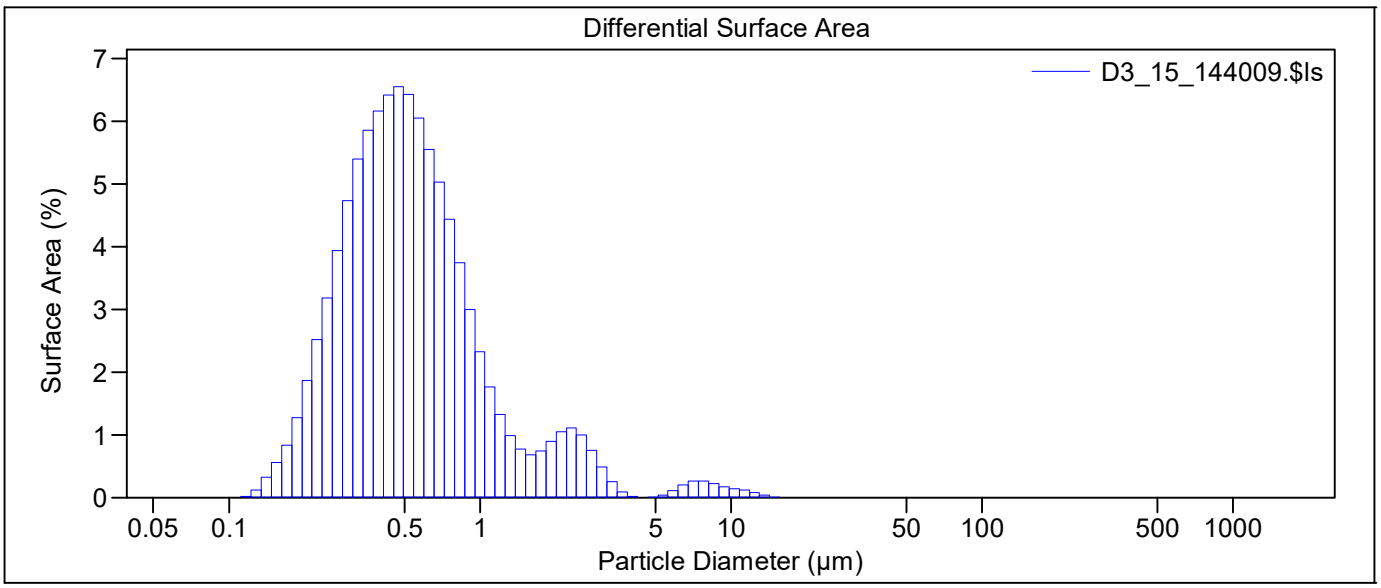
Calculations from 0.040 µm to 2000 µm

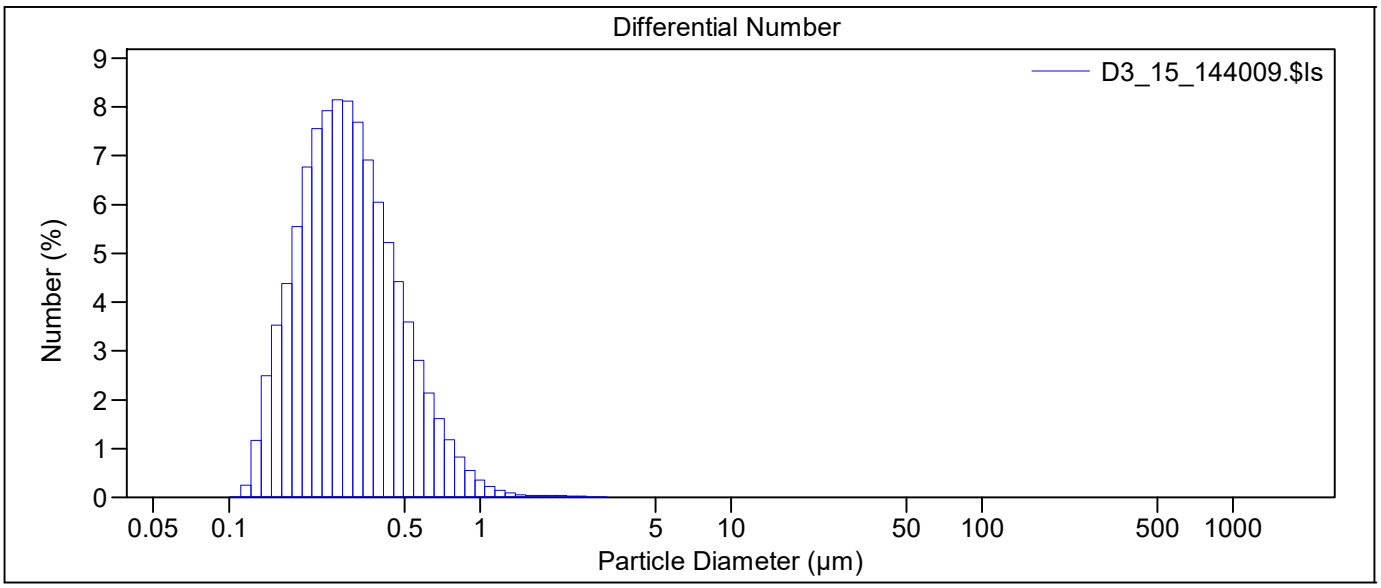
Number:	100%		
Mean:	0.337 µm	S.D.:	0.195 µm
Median:	0.291 µm	Variance:	0.038 μm^2
Mean/Median ratio:	1.157	C.V.:	57.8%
Mode:	0.271 µm	Skewness:	5.789 Right skewed
		Kurtosis:	140.8 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.171 µm	0.217 µm	0.291 µm	0.402 µm	0.549 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0.00016	0.0012	0.016
12	0.112	0.117	0.0034	0.023	0.26
13	0.122	0.128	0.021	0.13	1.16
14	0.134	0.141	0.058	0.33	2.49
15	0.148	0.155	0.11	0.56	3.52
16	0.162	0.170	0.18	0.83	4.38
17	0.178	0.186	0.30	1.27	5.55
18	0.195	0.205	0.49	1.87	6.77
19	0.214	0.225	0.72	2.52	7.56
20	0.235	0.247	1.00	3.18	7.92
21	0.258	0.271	1.35	3.94	8.14
22	0.284	0.297	1.79	4.74	8.13
23	0.311	0.326	2.23	5.40	7.68
24	0.342	0.358	2.66	5.85	6.91
25	0.375	0.393	3.08	6.17	6.04
26	0.412	0.431	3.52	6.42	5.22
27	0.452	0.474	3.94	6.55	4.42
28	0.496	0.520	4.24	6.43	3.60
29	0.545	0.571	4.38	6.05	2.81
30	0.598	0.627	4.42	5.56	2.14
31	0.656	0.688	4.39	5.03	1.61
32	0.721	0.755	4.26	4.44	1.18
33	0.791	0.829	3.94	3.75	0.83
34	0.868	0.910	3.47	3.00	0.55
35	0.953	0.999	2.95	2.32	0.35
36	1.047	1.097	2.45	1.76	0.22
37	1.149	1.204	2.03	1.33	0.14
38	1.261	1.321	1.67	0.99	0.086
39	1.385	1.451	1.43	0.77	0.056
40	1.520	1.592	1.39	0.69	0.041
41	1.668	1.748	1.65	0.74	0.037
42	1.832	1.919	2.18	0.89	0.037
43	2.011	2.107	2.82	1.06	0.036
44	2.207	2.313	3.26	1.11	0.031
45	2.423	2.539	3.22	1.00	0.023

Beckman Coulter LS13320

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	2.69	0.76	0.015
47	2.920	3.059	1.92	0.49	0.0080
48	3.205	3.358	1.07	0.25	0.0034
49	3.519	3.687	0.44	0.094	0.0010
50	3.863	4.047	0.091	0.018	0.00016
51	4.240	4.443	0.016	0.0029	0.000022
52	4.655	4.877	0.035	0.0057	0.000036
53	5.110	5.354	0.24	0.036	0.00019
54	5.610	5.878	0.83	0.11	0.00049
55	6.158	6.452	1.65	0.20	0.00073
56	6.760	7.083	2.35	0.26	0.00079
57	7.421	7.775	2.60	0.26	0.00066
58	8.147	8.536	2.44	0.23	0.00047
59	8.943	9.370	2.12	0.18	0.00031
60	9.817	10.29	1.82	0.14	0.00020
61	10.78	11.29	1.73	0.12	0.00014
62	11.83	12.40	1.35	0.086	0.000085
63	12.99	13.61	0.78	0.045	0.000037
64	14.26	14.94	0.20	0.010	0.000007
65	15.65	16.40	0.023	0.0011	0.000001
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4.$av D4.$av
File ID:	D4
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_01_151035.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_02_151222.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_03_151410.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_04_154155.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_05_154342.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_06_154529.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_07_155730.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_08_155917.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_09_160104.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_10_215517.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_11_215704.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_12_215852.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_13_220939.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_14_221127.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_15_221314.$ls

Volume Statistics (Arithmetic) D4.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.671 µm	S.D.:	0.161 µm
Median:	0.646 µm	Variance:	0.026 µm^2
Mean/Median ratio:	1.038	C.V.:	24.0%
Mode:	0.627 µm	Skewness:	0.819 Right skewed
		Kurtosis:	0.895 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.490 µm	0.555 µm	0.646 µm	0.763 µm	0.897 µm

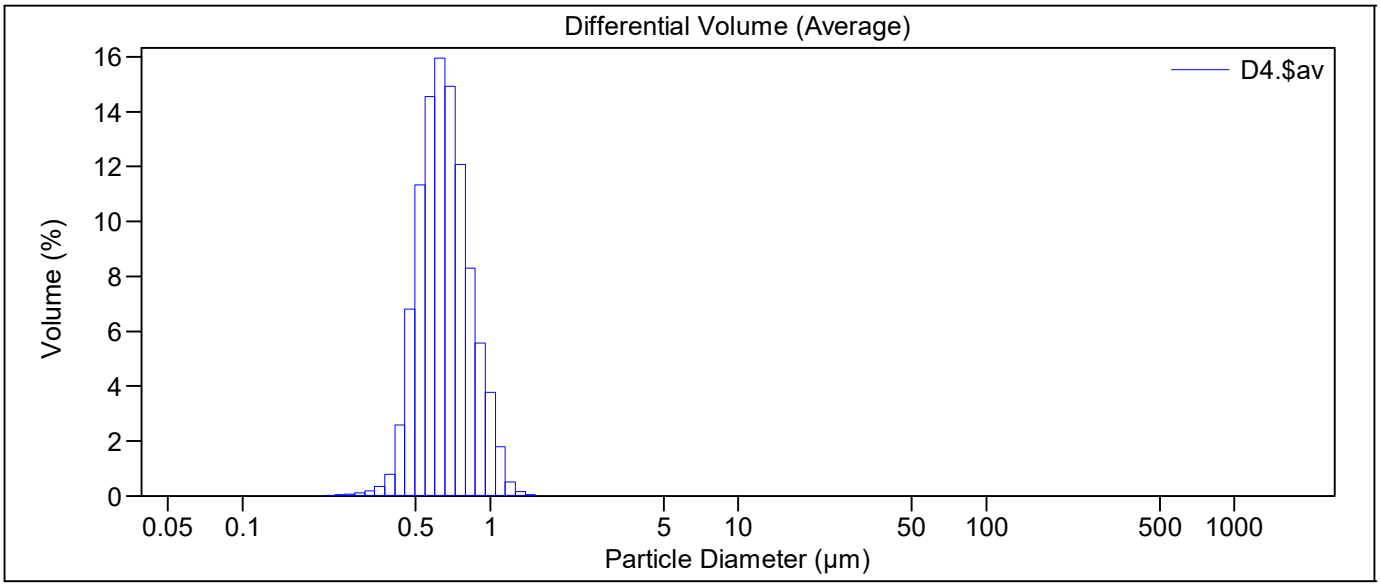
Number Statistics (Arithmetic) D4.$av

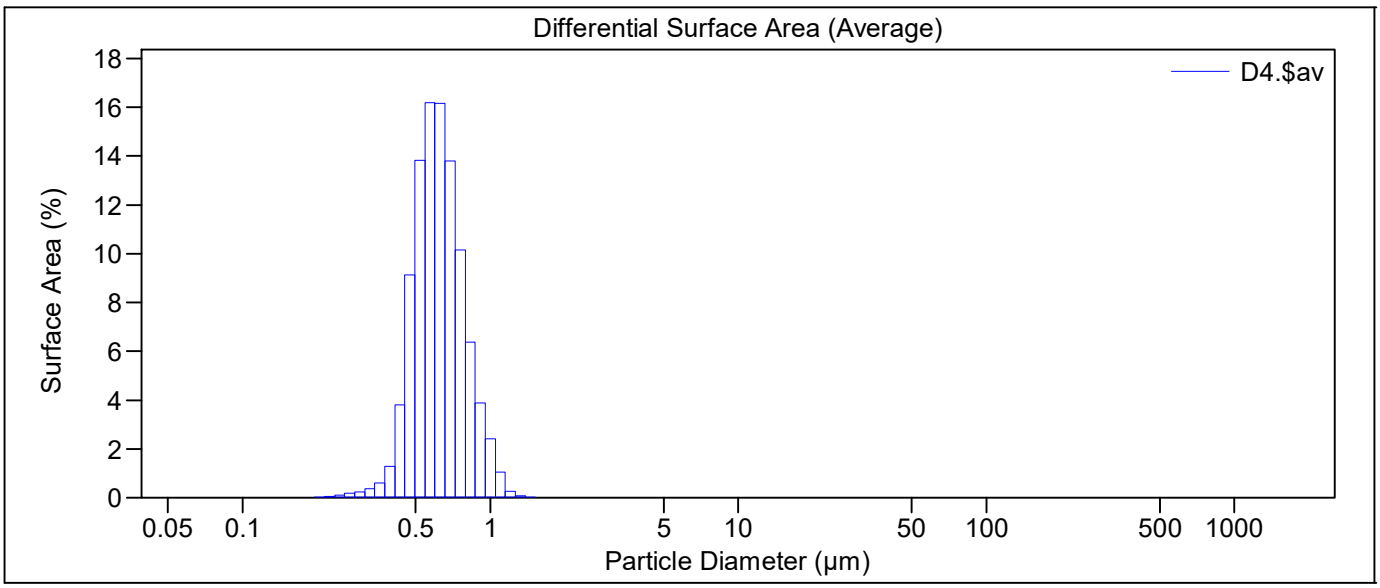
Calculations from 0.040 µm to 2000 µm

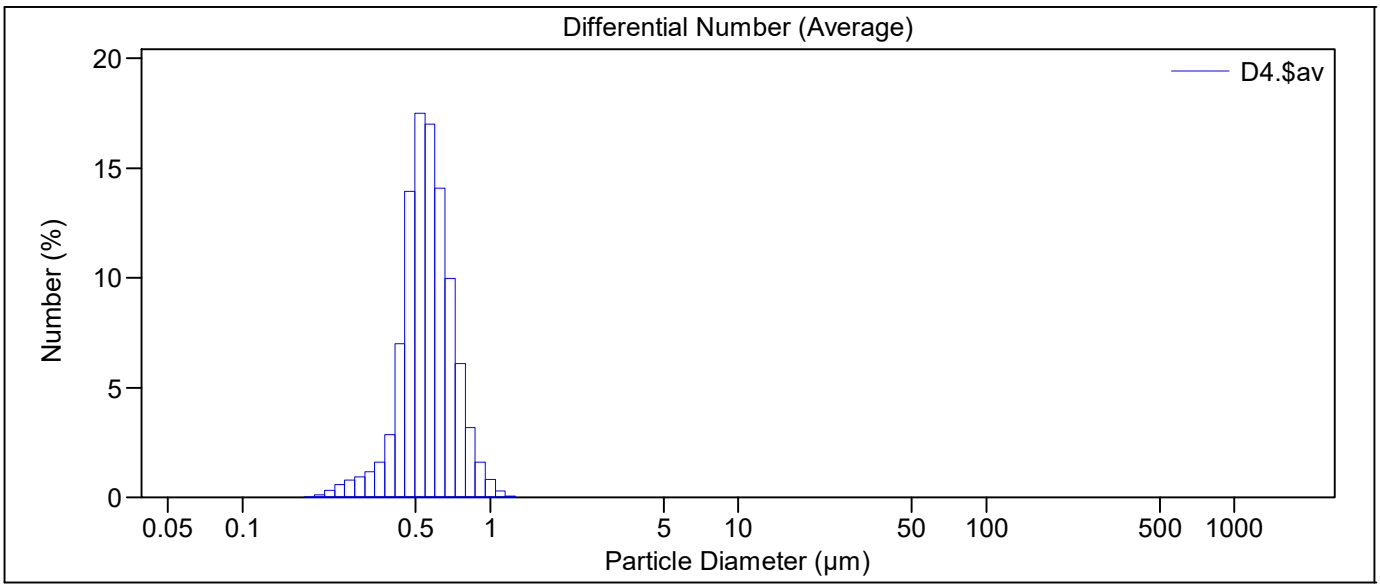
Number:	100%		
Mean:	0.569 µm	S.D.:	0.137 µm
Median:	0.555 µm	Variance:	0.019 µm^2
Mean/Median ratio:	1.025	C.V.:	24.0%
Mode:	0.520 µm	Skewness:	0.600 Right skewed
		Kurtosis:	1.425 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.421 µm	0.482 µm	0.555 µm	0.644 µm	0.745 µm

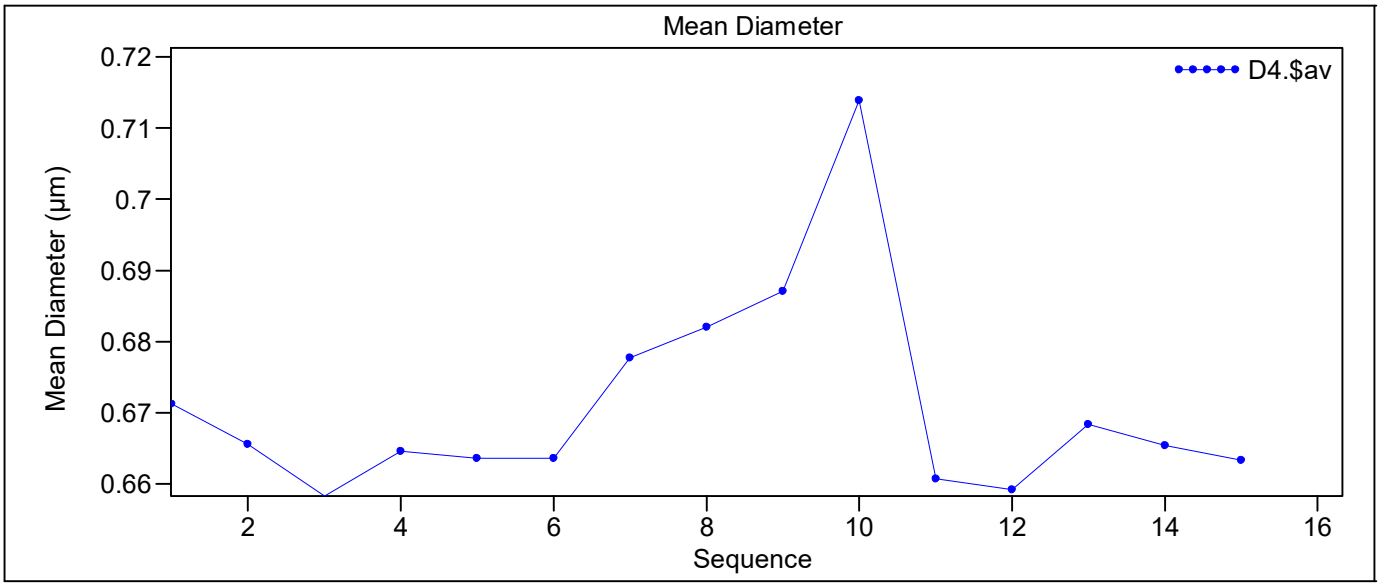
Beckman Coulter LS13320







Beckman Coulter LS13320



D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0.000013	0.000052	0.00074
16	0.162	0.170	0.00012	0.00043	0.0051
17	0.178	0.186	0.0010	0.0035	0.034
18	0.195	0.205	0.0049	0.015	0.13
19	0.214	0.225	0.017	0.049	0.33
20	0.235	0.247	0.041	0.10	0.59
21	0.258	0.271	0.073	0.17	0.80
22	0.284	0.297	0.11	0.24	0.94
23	0.311	0.326	0.19	0.36	1.17
24	0.342	0.358	0.34	0.60	1.60
25	0.375	0.393	0.79	1.28	2.84
26	0.412	0.431	2.59	3.81	7.01
27	0.452	0.474	6.82	9.14	13.9
28	0.496	0.520	11.3	13.8	17.5
29	0.545	0.571	14.5	16.2	17.0
30	0.598	0.627	15.9	16.2	14.1
31	0.656	0.688	14.9	13.8	9.97
32	0.721	0.755	12.1	10.2	6.09
33	0.791	0.829	8.31	6.37	3.17
34	0.868	0.910	5.58	3.89	1.61
35	0.953	0.999	3.78	2.40	0.82
36	1.047	1.097	1.80	1.05	0.30
37	1.149	1.204	0.51	0.27	0.063
38	1.261	1.321	0.15	0.073	0.014
39	1.385	1.451	0.049	0.022	0.0035
40	1.520	1.592	0.0086	0.0034	0.00046
41	1.668	1.748	0.00063	0.00023	0.000025

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_01_151035.$ls D4_01_151035.$ls		
File ID:	D4		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.87%		
LS 13 320	Universal Liquid Module		
Start time:	15:08 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_01_151035.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.671 µm	S.D.:	0.149 µm
Median:	0.649 µm	Variance:	0.022 μm^2
Mean/Median ratio:	1.034	C.V.:	22.2%
Mode:	0.627 µm	Skewness:	0.695 Right skewed
		Kurtosis:	0.129 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.497 µm	0.559 µm	0.649 µm	0.763 µm	0.884 µm

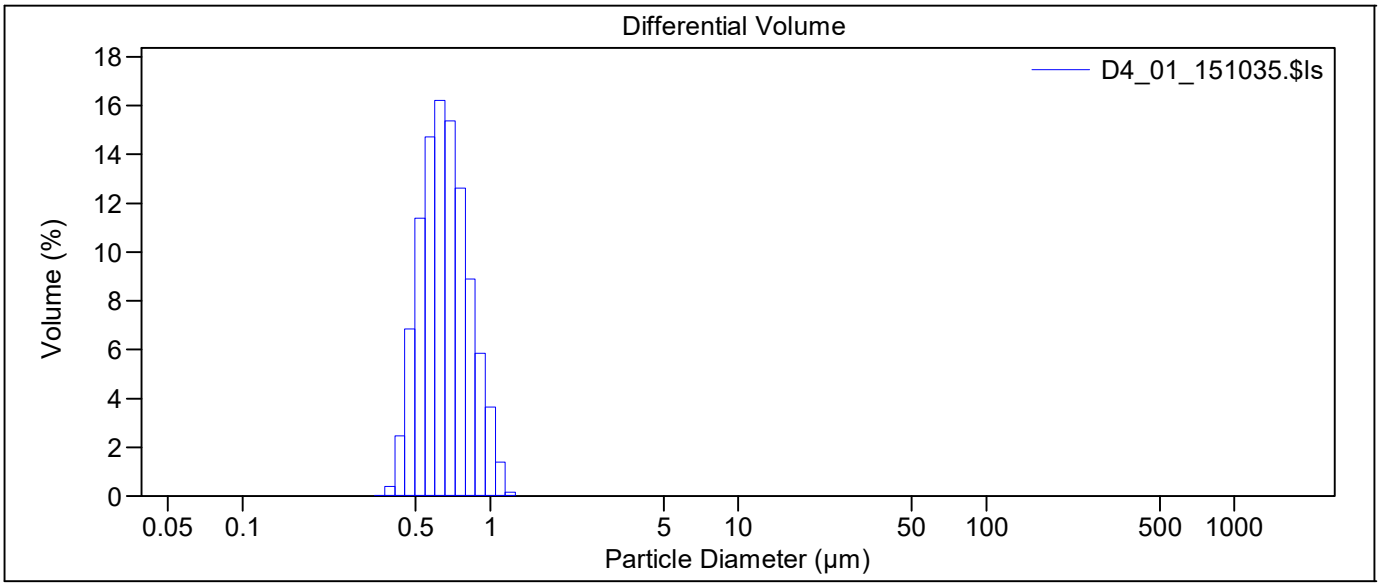
Number Statistics (Arithmetic) D4_01_151035.$ls

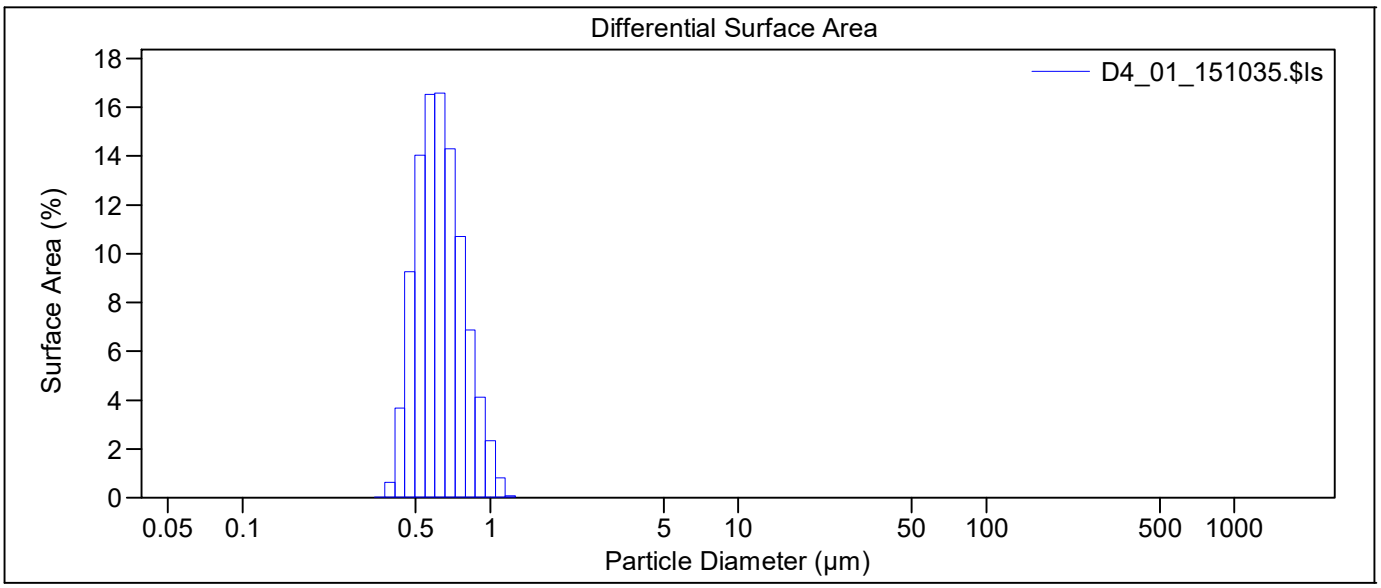
Calculations from 0.040 µm to 2000 µm

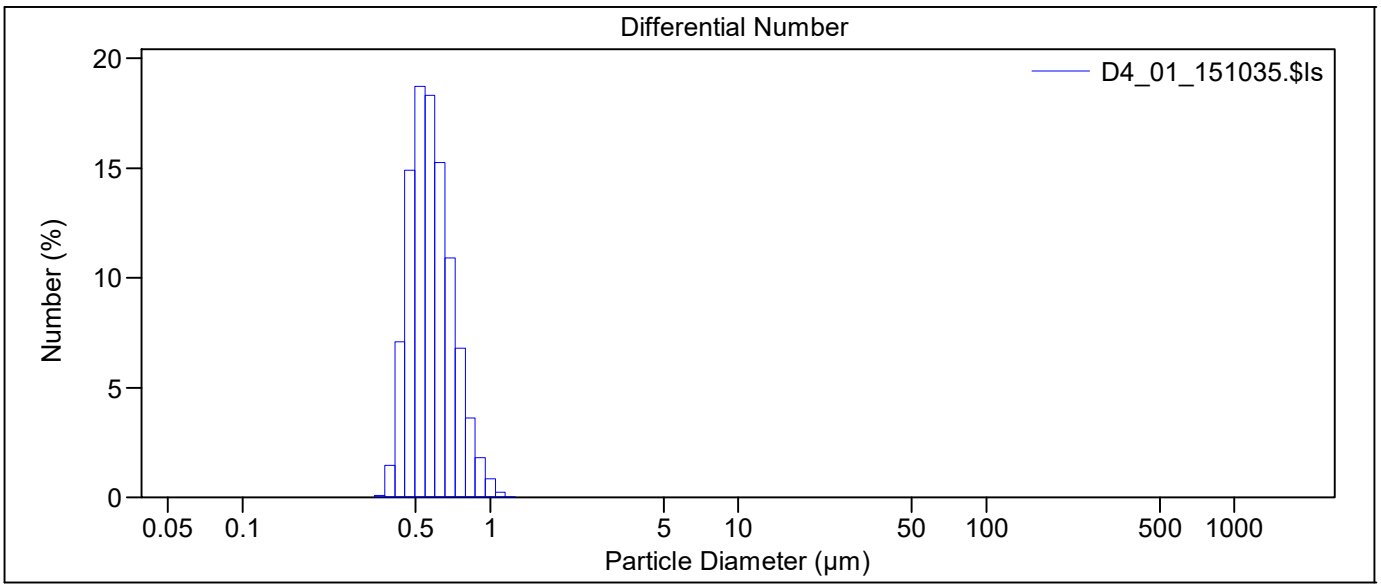
Number:	100%		
Mean:	0.588 µm	S.D.:	0.120 µm
Median:	0.567 µm	Variance:	0.015 μm^2
Mean/Median ratio:	1.037	C.V.:	20.5%
Mode:	0.520 µm	Skewness:	1.032 Right skewed
		Kurtosis:	1.302 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.456 µm	0.500 µm	0.567 µm	0.653 µm	0.755 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.00010	0.00021	0.00070
24	0.342	0.358	0.018	0.032	0.089
25	0.375	0.393	0.39	0.63	1.47
26	0.412	0.431	2.47	3.66	7.09
27	0.452	0.474	6.85	9.27	14.9
28	0.496	0.520	11.4	14.0	18.7
29	0.545	0.571	14.7	16.5	18.3
30	0.598	0.627	16.2	16.6	15.2
31	0.656	0.688	15.4	14.3	10.9
32	0.721	0.755	12.6	10.7	6.78
33	0.791	0.829	8.90	6.88	3.61
34	0.868	0.910	5.85	4.12	1.80
35	0.953	0.999	3.64	2.33	0.84
36	1.047	1.097	1.40	0.82	0.25
37	1.149	1.204	0.15	0.080	0.020
38	1.261	1.321	0.0014	0.00067	0.00014
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_02_151222.$ls D4_02_151222.$ls		
File ID:	D4		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.02%		
LS 13 320	Universal Liquid Module		
Start time:	15:10 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_02_151222.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.666 µm	S.D.:	0.140 µm
Median:	0.645 µm	Variance:	0.020 µm^2
Mean/Median ratio:	1.032	C.V.:	21.1%
Mode:	0.627 µm	Skewness:	0.745 Right skewed
		Kurtosis:	0.294 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.502 µm	0.560 µm	0.645 µm	0.751 µm	0.862 µm

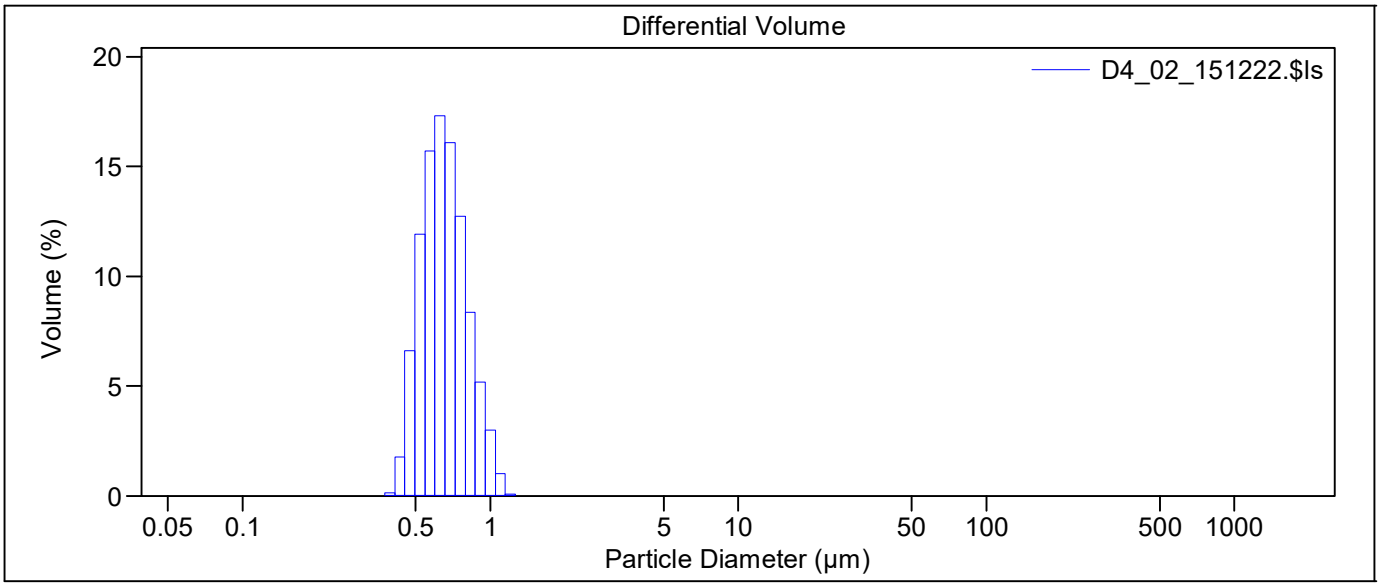
Number Statistics (Arithmetic) D4_02_151222.$ls

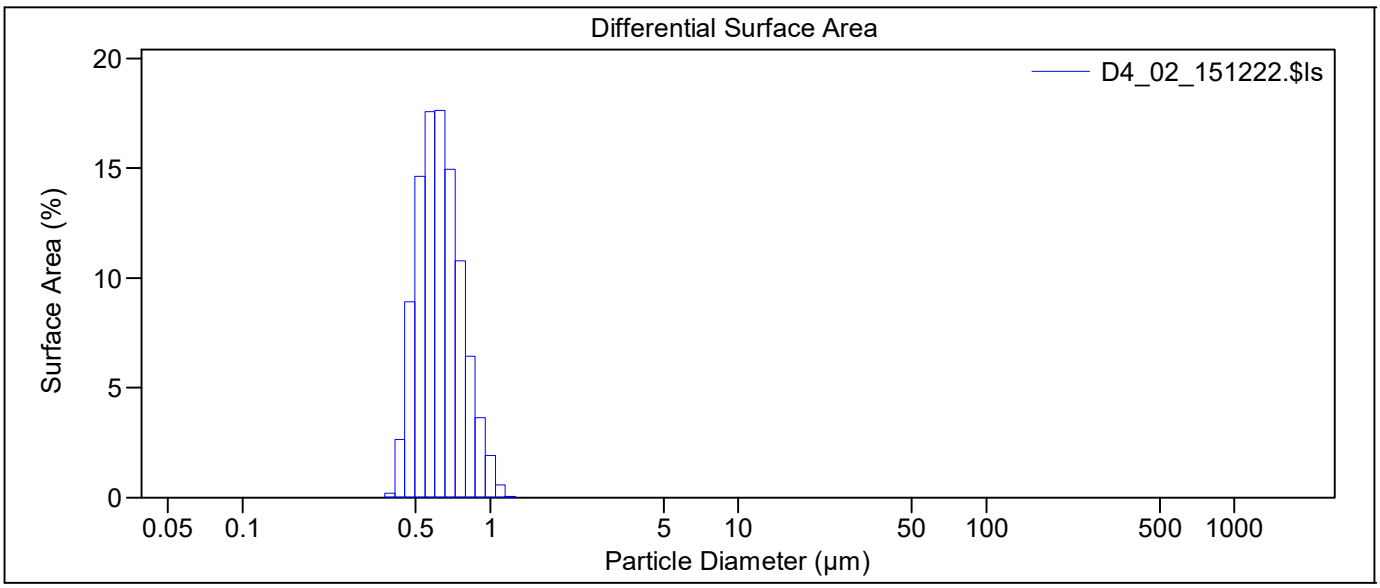
Calculations from 0.040 µm to 2000 µm

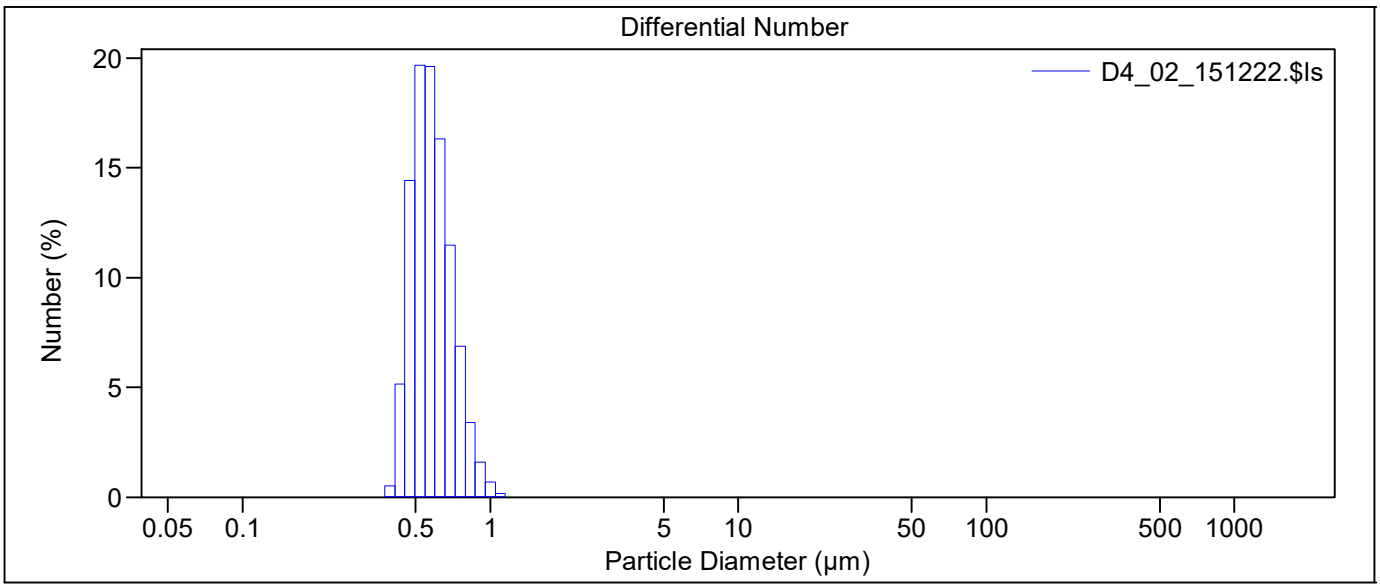
Number:	100%		
Mean:	0.592 µm	S.D.:	0.114 µm
Median:	0.572 µm	Variance:	0.013 µm^2
Mean/Median ratio:	1.034	C.V.:	19.2%
Mode:	0.520 µm	Skewness:	1.040 Right skewed
		Kurtosis:	1.363 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.465 µm	0.508 µm	0.572 µm	0.654 µm	0.749 µm

Beckman Coulter LS13320







D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.0010	0.0018	0.0052
25	0.375	0.393	0.13	0.22	0.51
26	0.412	0.431	1.79	2.64	5.16
27	0.452	0.474	6.61	8.91	14.4
28	0.496	0.520	11.9	14.6	19.7
29	0.545	0.571	15.7	17.6	19.6
30	0.598	0.627	17.3	17.6	16.3
31	0.656	0.688	16.1	14.9	11.5
32	0.721	0.755	12.7	10.8	6.87
33	0.791	0.829	8.36	6.44	3.41
34	0.868	0.910	5.19	3.64	1.60
35	0.953	0.999	3.01	1.92	0.70
36	1.047	1.097	1.01	0.59	0.18
37	1.149	1.204	0.096	0.051	0.013
38	1.261	1.321	0.00083	0.00040	0.000083
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_03_151410.$ls D4_03_151410.$ls		
File ID:	D4		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.18%		
LS 13 320	Universal Liquid Module		
Start time:	15:12 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_03_151410.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.658 µm	S.D.:	0.130 µm
Median:	0.640 µm	Variance:	0.017 µm^2
Mean/Median ratio:	1.028	C.V.:	19.7%
Mode:	0.627 µm	Skewness:	0.737 Right skewed
		Kurtosis:	0.329 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.506 µm	0.561 µm	0.640 µm	0.737 µm	0.842 µm

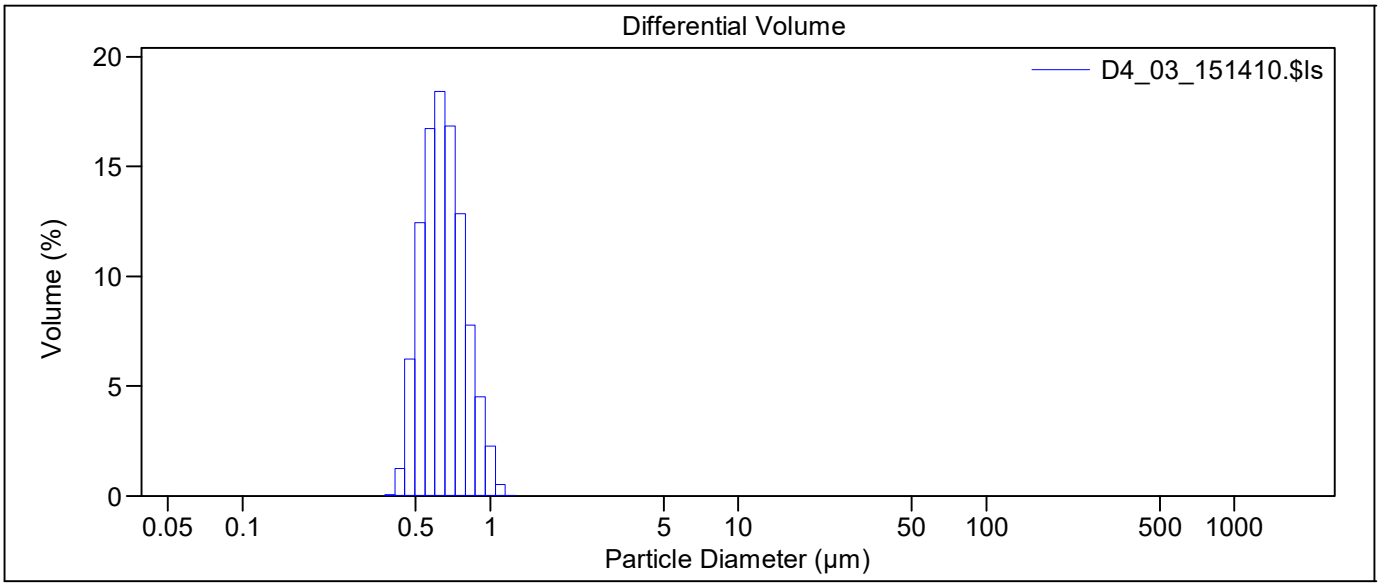
Number Statistics (Arithmetic) D4_03_151410.$ls

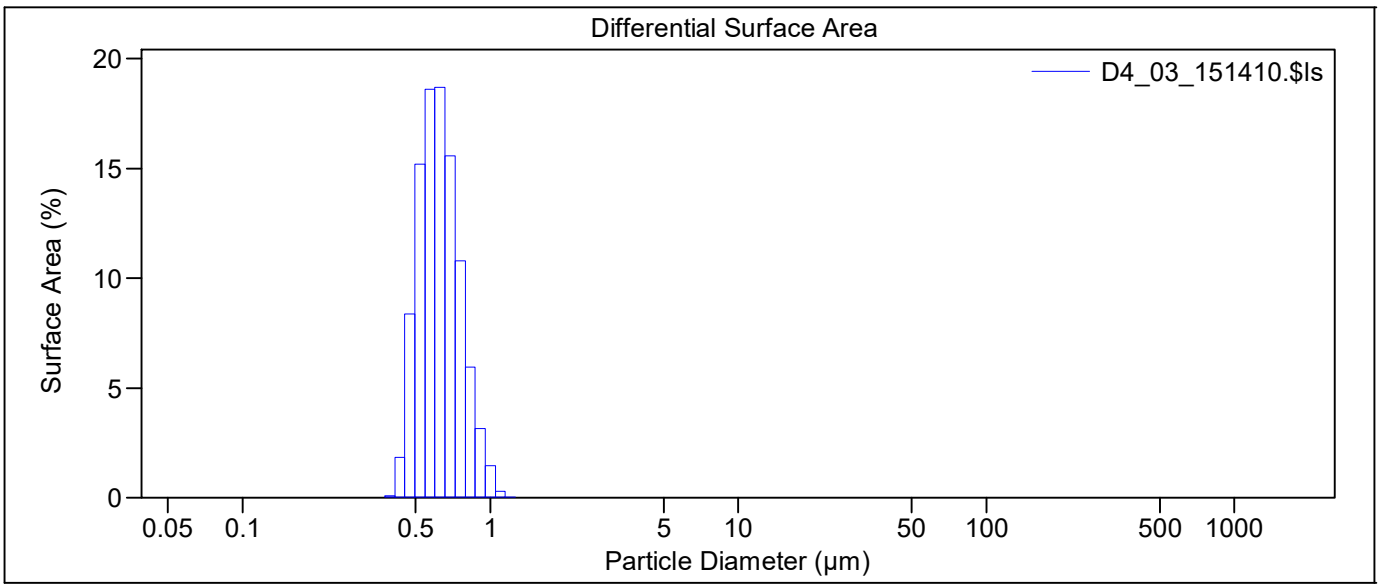
Calculations from 0.040 µm to 2000 µm

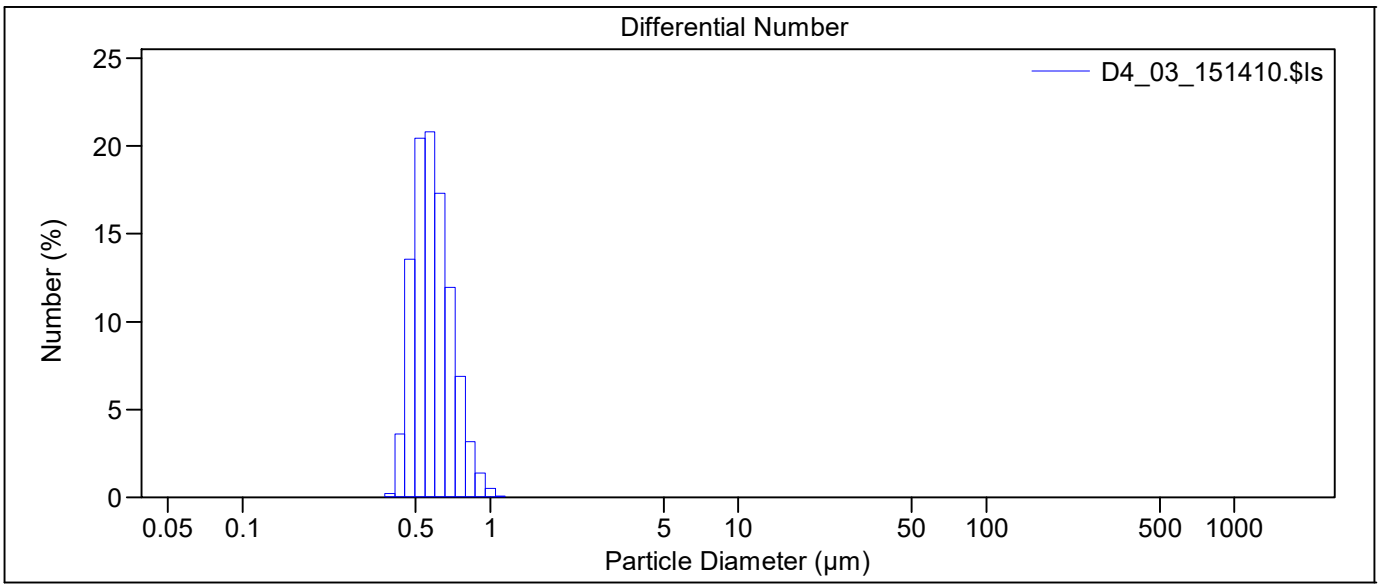
Number:	100%		
Mean:	0.594 µm	S.D.:	0.107 µm
Median:	0.576 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.031	C.V.:	18.1%
Mode:	0.571 µm	Skewness:	0.994 Right skewed
		Kurtosis:	1.232 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.472 µm	0.514 µm	0.576 µm	0.653 µm	0.742 µm

Beckman Coulter LS13320







D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.00033	0.00059	0.0017
25	0.375	0.393	0.059	0.095	0.22
26	0.412	0.431	1.25	1.84	3.60
27	0.452	0.474	6.24	8.36	13.6
28	0.496	0.520	12.4	15.2	20.5
29	0.545	0.571	16.7	18.6	20.8
30	0.598	0.627	18.4	18.7	17.3
31	0.656	0.688	16.9	15.6	12.0
32	0.721	0.755	12.8	10.8	6.90
33	0.791	0.829	7.78	5.96	3.16
34	0.868	0.910	4.53	3.16	1.39
35	0.953	0.999	2.27	1.45	0.53
36	1.047	1.097	0.52	0.30	0.091
37	1.149	1.204	0.030	0.016	0.0040
38	1.261	1.321	0.00020	0.000095	0.000020
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_04_154155.$ls D4_04_154155.$ls		
File ID:	D4		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.99%		
LS 13 320	Universal Liquid Module		
Start time:	15:40 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_04_154155.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.665 µm	S.D.:	0.139 µm
Median:	0.644 µm	Variance:	0.019 μm^2
Mean/Median ratio:	1.032	C.V.:	20.9%
Mode:	0.627 µm	Skewness:	0.749 Right skewed
		Kurtosis:	0.283 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.502 µm	0.560 µm	0.644 µm	0.749 µm	0.860 µm

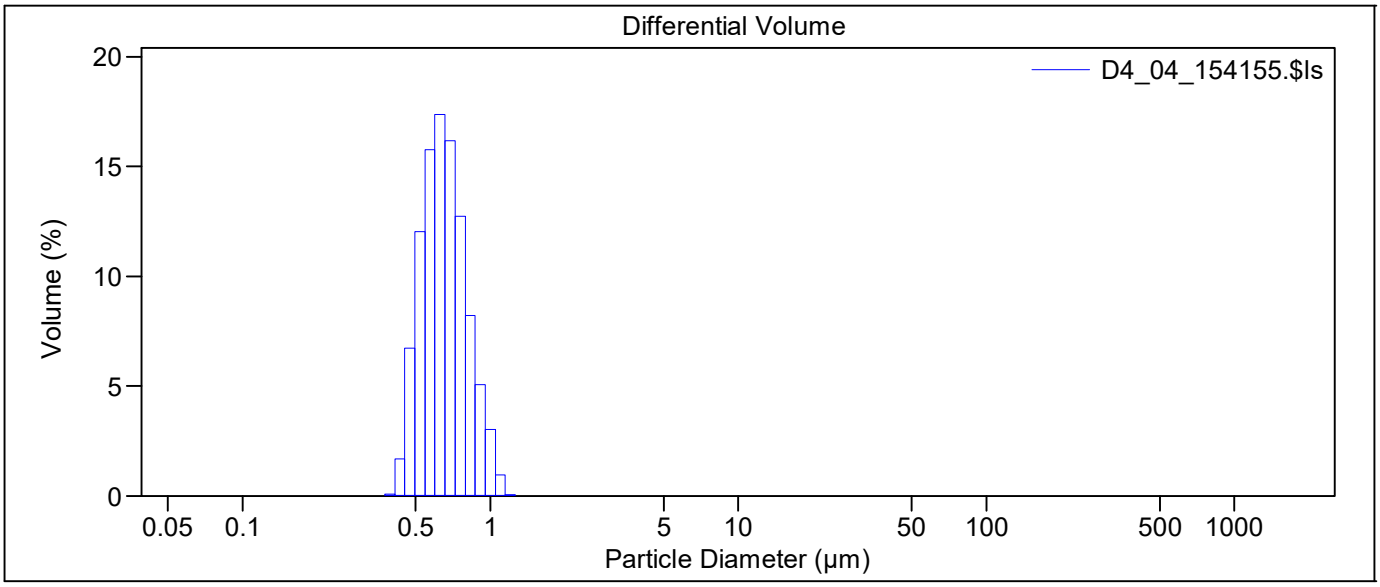
Number Statistics (Arithmetic) D4_04_154155.$ls

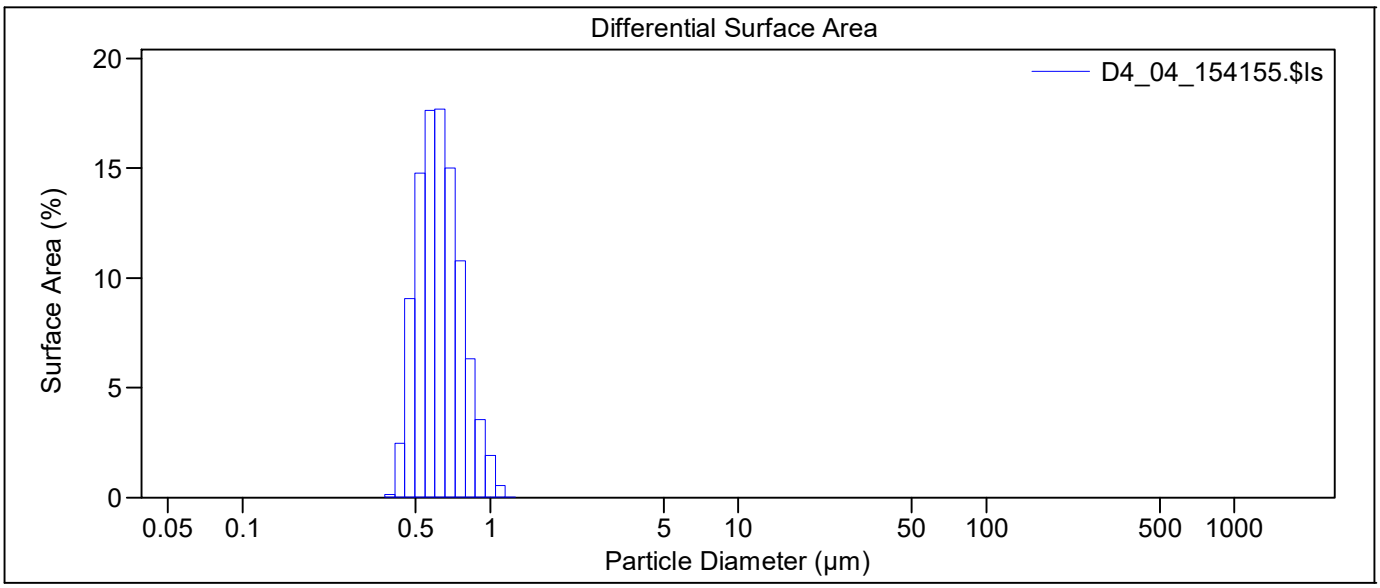
Calculations from 0.040 µm to 2000 µm

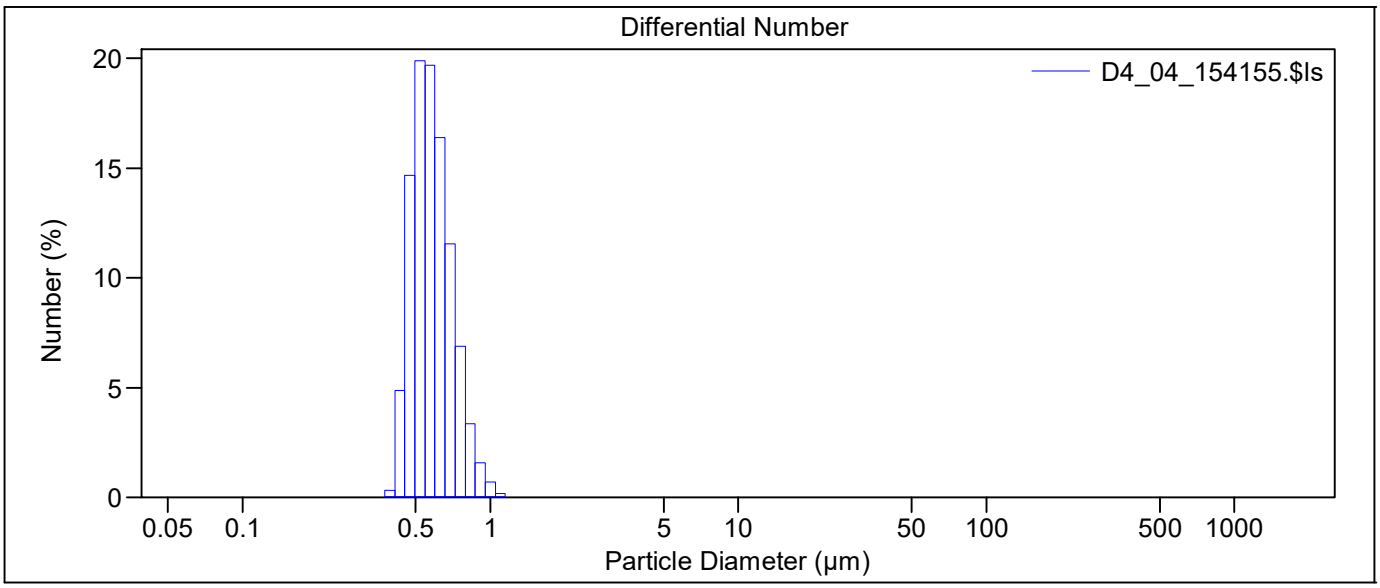
Number:	100%		
Mean:	0.592 µm	S.D.:	0.113 µm
Median:	0.573 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.034	C.V.:	19.0%
Mode:	0.520 µm	Skewness:	1.051 Right skewed
		Kurtosis:	1.378 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.467 µm	0.509 µm	0.573 µm	0.654 µm	0.748 µm

Beckman Coulter LS13320







D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0.085	0.14	0.33
26	0.412	0.431	1.68	2.49	4.86
27	0.452	0.474	6.72	9.05	14.7
28	0.496	0.520	12.0	14.8	19.9
29	0.545	0.571	15.8	17.6	19.7
30	0.598	0.627	17.4	17.7	16.4
31	0.656	0.688	16.2	15.0	11.5
32	0.721	0.755	12.8	10.8	6.87
33	0.791	0.829	8.21	6.32	3.34
34	0.868	0.910	5.07	3.56	1.56
35	0.953	0.999	3.03	1.93	0.70
36	1.047	1.097	0.97	0.56	0.17
37	1.149	1.204	0.067	0.036	0.0089
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_05_154342.$ls D4_05_154342.$ls		
File ID:	D4		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.00%		
LS 13 320	Universal Liquid Module		
Start time:	15:42 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_05_154342.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.664 µm	S.D.:	0.138 µm
Median:	0.643 µm	Variance:	0.019 μm^2
Mean/Median ratio:	1.032	C.V.:	20.8%
Mode:	0.627 µm	Skewness:	0.753 Right skewed
		Kurtosis:	0.303 Leptokurtic

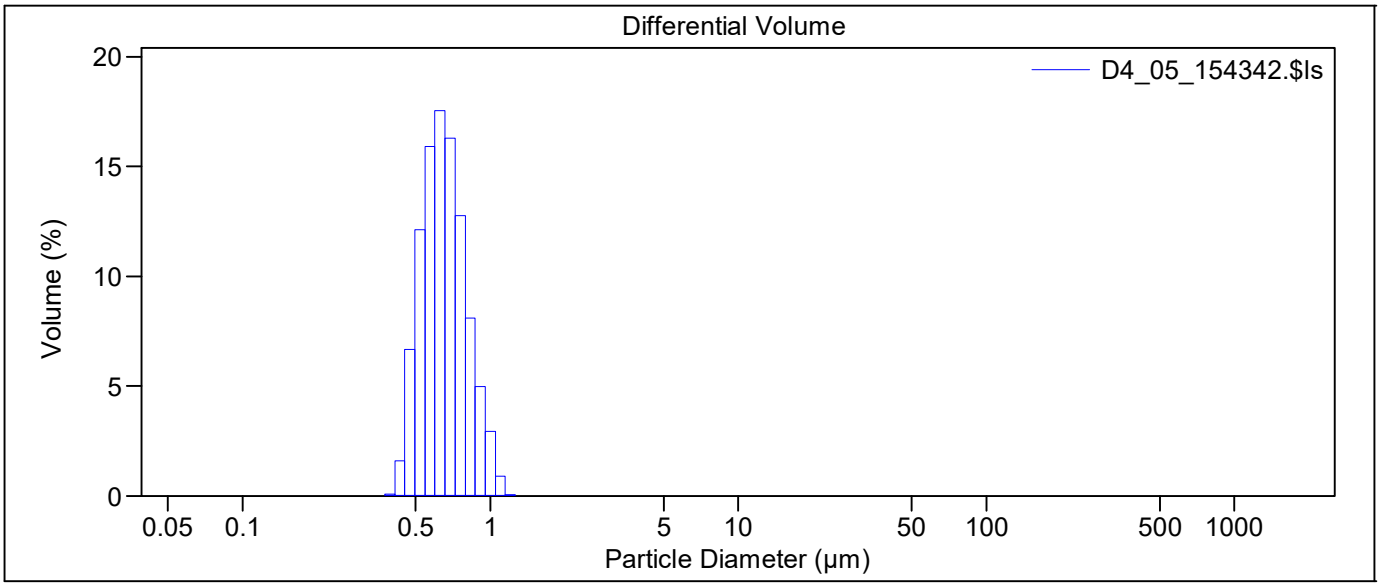
<10%	<25%	<50%	<75%	<90%
0.503 µm	0.560 µm	0.643 µm	0.747 µm	0.858 µm

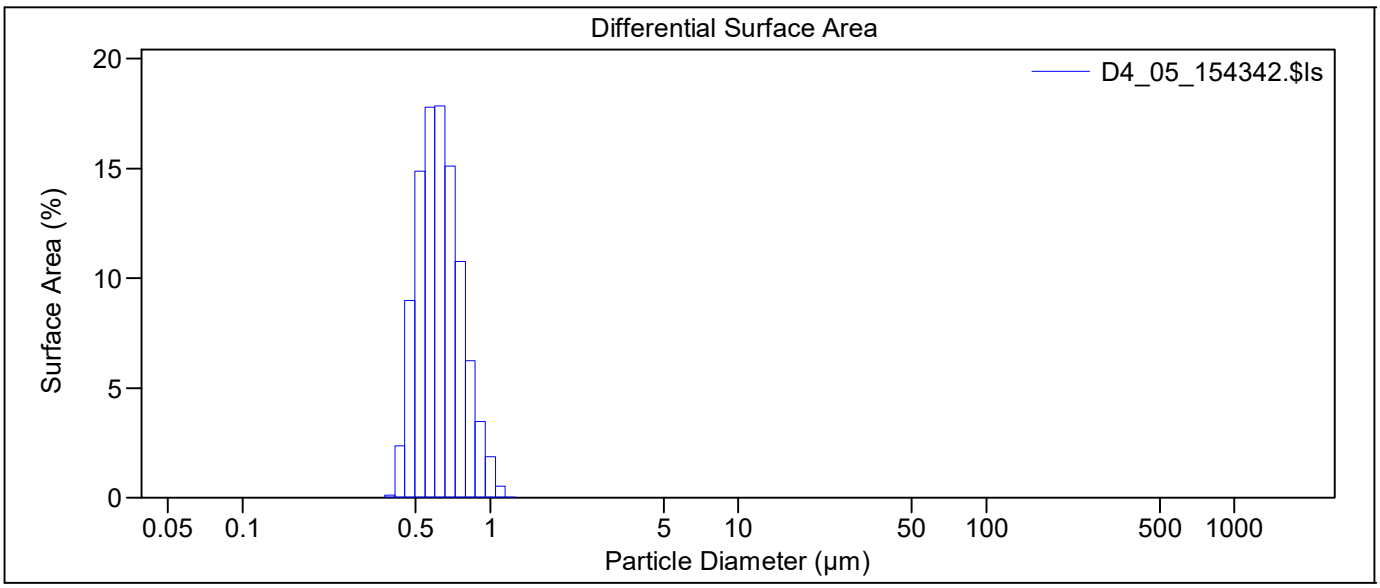
Number Statistics (Arithmetic) D4_05_154342.$ls

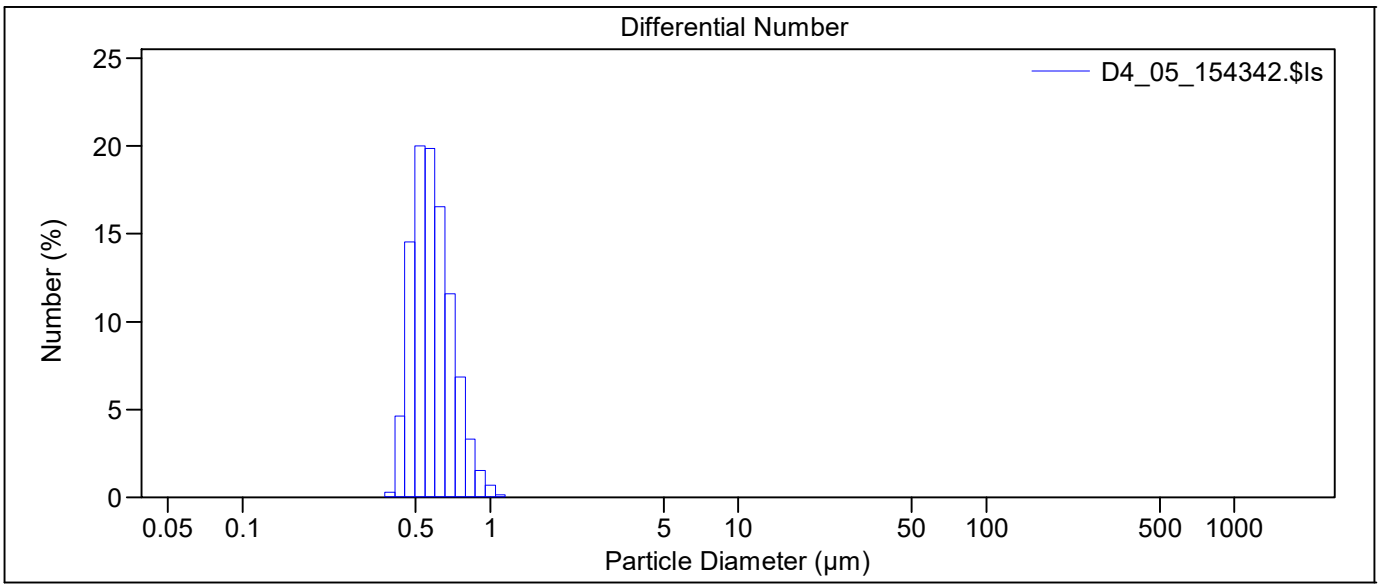
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.592 µm	S.D.:	0.112 µm
Median:	0.573 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.034	C.V.:	18.9%
Mode:	0.520 µm	Skewness:	1.048 Right skewed
		Kurtosis:	1.376 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.467 µm	0.510 µm	0.573 µm	0.653 µm	0.747 µm


Differential Volume
D4_05_154342.$ls
Volume (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
D4_05_154342.$ls
Surface Area (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
D4_05_154342.$ls
Number (%)
25
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0.076	0.12	0.29
26	0.412	0.431	1.60	2.37	4.63
27	0.452	0.474	6.67	8.98	14.6
28	0.496	0.520	12.1	14.9	20.0
29	0.545	0.571	15.9	17.8	19.9
30	0.598	0.627	17.5	17.9	16.5
31	0.656	0.688	16.3	15.1	11.6
32	0.721	0.755	12.8	10.8	6.87
33	0.791	0.829	8.11	6.23	3.30
34	0.868	0.910	4.97	3.48	1.53
35	0.953	0.999	2.93	1.87	0.68
36	1.047	1.097	0.91	0.53	0.16
37	1.149	1.204	0.060	0.032	0.0080
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_06_154529.$ls D4_06_154529.$ls		
File ID:	D4		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.01%		
LS 13 320	Universal Liquid Module		
Start time:	15:43 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_06_154529.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.664 µm	S.D.:	0.138 µm
Median:	0.643 µm	Variance:	0.019 μm^2
Mean/Median ratio:	1.032	C.V.:	20.8%
Mode:	0.627 µm	Skewness:	0.745 Right skewed
		Kurtosis:	0.284 Leptokurtic

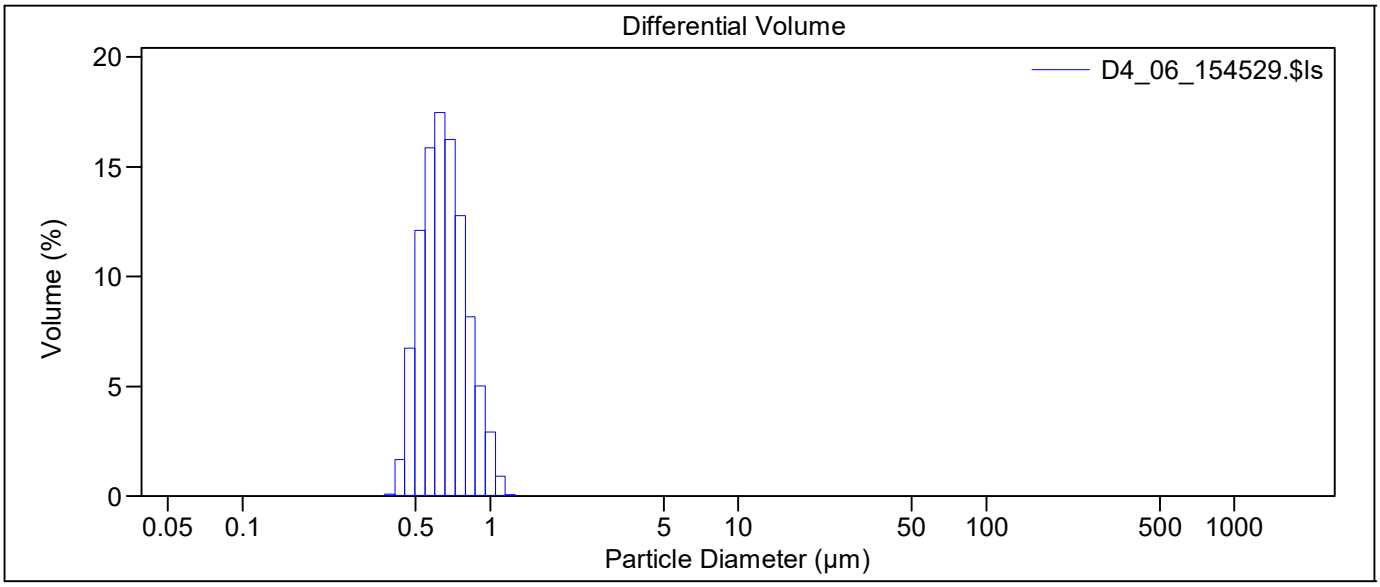
<10%	<25%	<50%	<75%	<90%
0.502 µm	0.560 µm	0.643 µm	0.747 µm	0.858 µm

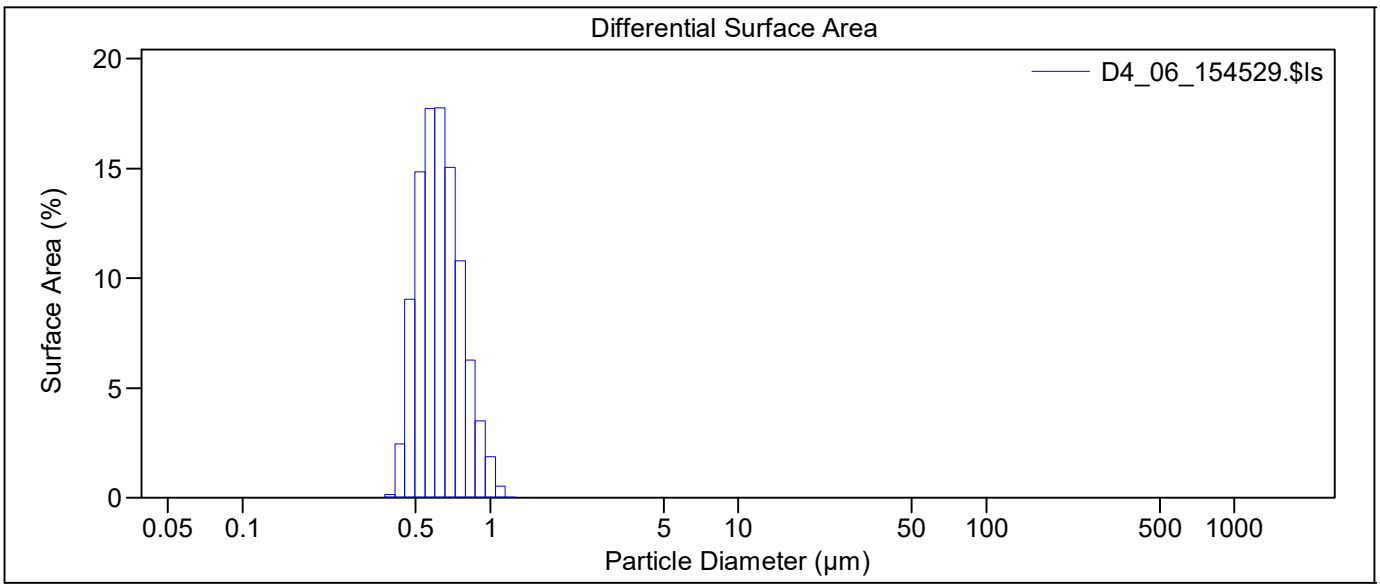
Number Statistics (Arithmetic) D4_06_154529.$ls

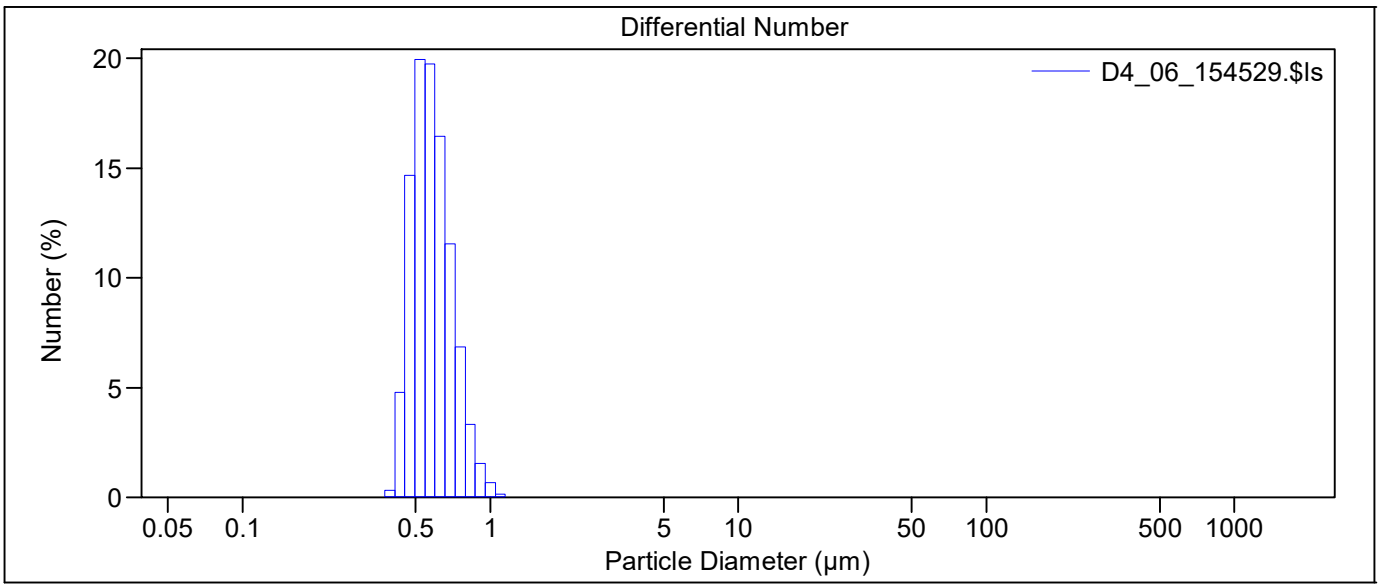
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.592 µm	S.D.:	0.112 µm
Median:	0.573 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.034	C.V.:	19.0%
Mode:	0.520 µm	Skewness:	1.044 Right skewed
		Kurtosis:	1.354 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.467 µm	0.509 µm	0.573 µm	0.653 µm	0.747 µm


Differential Volume
D4_06_154529.$ls
Volume (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
D4_06_154529.$ls
Surface Area (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
D4_06_154529.$ls
Number (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0.082	0.13	0.31
26	0.412	0.431	1.66	2.46	4.79
27	0.452	0.474	6.73	9.05	14.7
28	0.496	0.520	12.1	14.8	19.9
29	0.545	0.571	15.9	17.7	19.7
30	0.598	0.627	17.5	17.8	16.4
31	0.656	0.688	16.2	15.1	11.6
32	0.721	0.755	12.8	10.8	6.86
33	0.791	0.829	8.17	6.28	3.32
34	0.868	0.910	5.01	3.51	1.54
35	0.953	0.999	2.93	1.87	0.68
36	1.047	1.097	0.90	0.52	0.16
37	1.149	1.204	0.060	0.032	0.0080
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_07_155730.$ls D4_07_155730.$ls		
File ID:	D4		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.66%		
LS 13 320	Universal Liquid Module		
Start time:	15:55 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_07_155730.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.678 µm	S.D.:	0.170 µm
Median:	0.650 µm	Variance:	0.029 μm^2
Mean/Median ratio:	1.042	C.V.:	25.0%
Mode:	0.627 µm	Skewness:	0.646 Right skewed
		Kurtosis:	-0.144 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.477 µm	0.549 µm	0.650 µm	0.782 µm	0.932 µm

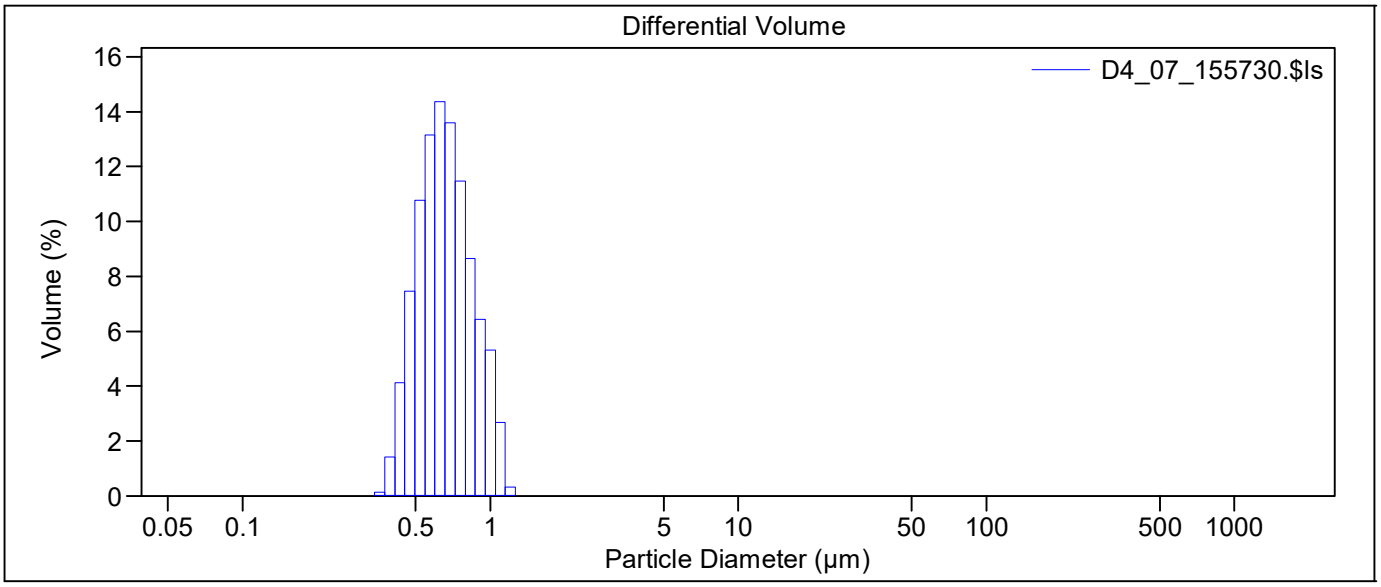
Number Statistics (Arithmetic) D4_07_155730.$ls

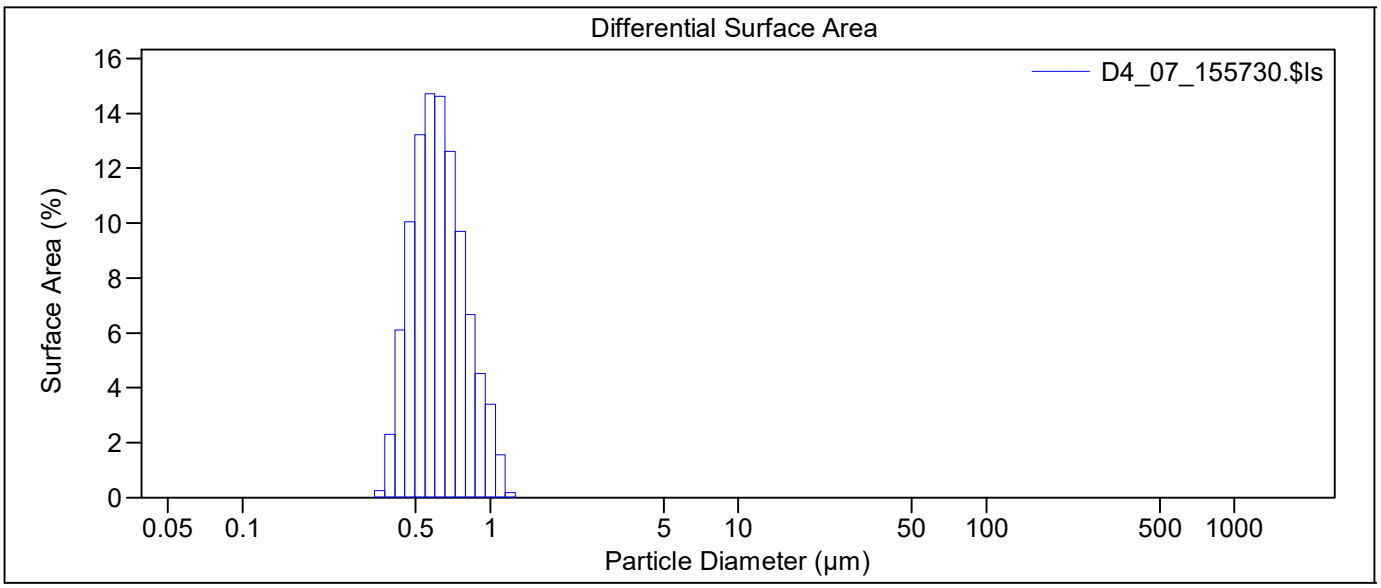
Calculations from 0.040 µm to 2000 µm

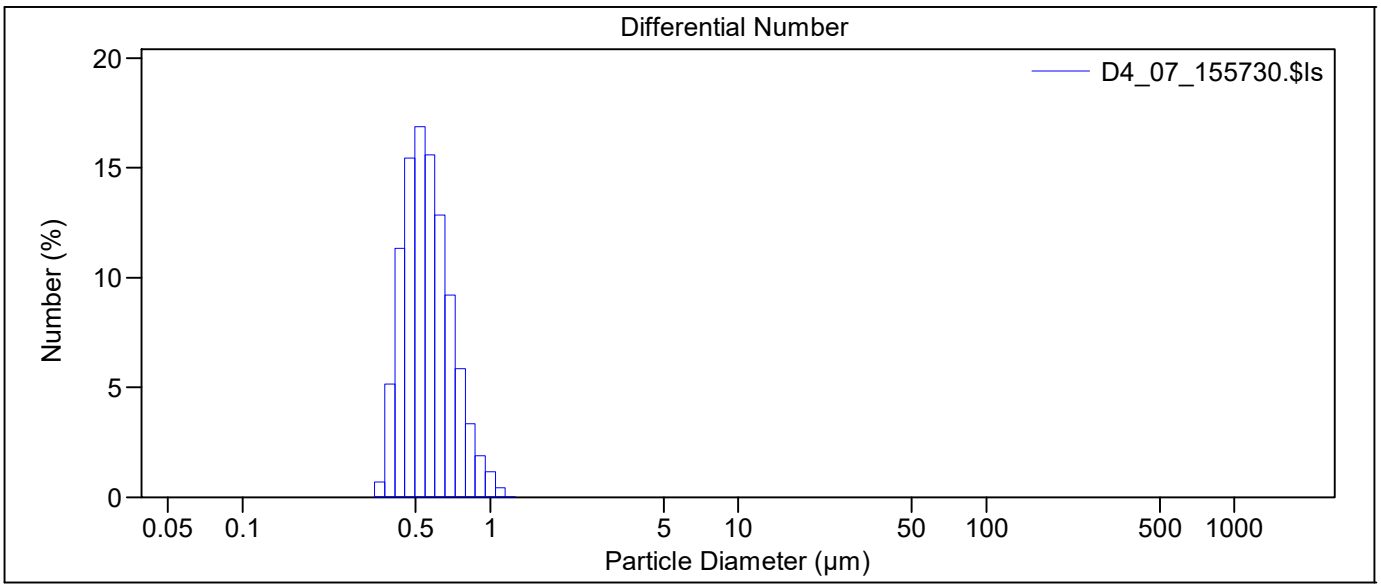
Number:	100%		
Mean:	0.572 µm	S.D.:	0.133 µm
Median:	0.546 µm	Variance:	0.018 μm^2
Mean/Median ratio:	1.047	C.V.:	23.2%
Mode:	0.520 µm	Skewness:	1.119 Right skewed
		Kurtosis:	1.483 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.426 µm	0.474 µm	0.546 µm	0.643 µm	0.754 µm

Beckman Coulter LS13320







D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0013	0.0026	0.0084
24	0.342	0.358	0.15	0.26	0.71
25	0.375	0.393	1.43	2.32	5.17
26	0.412	0.431	4.14	6.12	11.3
27	0.452	0.474	7.46	10.0	15.5
28	0.496	0.520	10.8	13.2	16.9
29	0.545	0.571	13.2	14.7	15.6
30	0.598	0.627	14.4	14.6	12.9
31	0.656	0.688	13.6	12.6	9.21
32	0.721	0.755	11.5	9.71	5.87
33	0.791	0.829	8.65	6.66	3.35
34	0.868	0.910	6.44	4.52	1.88
35	0.953	0.999	5.33	3.40	1.18
36	1.047	1.097	2.69	1.56	0.45
37	1.149	1.204	0.33	0.18	0.042
38	1.261	1.321	0.0032	0.0015	0.00030
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

D4.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_08_155917.$ls D4_08_155917.$ls		
File ID:	D4		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.52%		
LS 13 320	Universal Liquid Module		
Start time:	15:57 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_08_155917.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.682 µm	S.D.:	0.181 µm
Median:	0.651 µm	Variance:	0.033 μm^2
Mean/Median ratio:	1.048	C.V.:	26.6%
Mode:	0.627 µm	Skewness:	0.671 Right skewed
		Kurtosis:	-0.115 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.470 µm	0.545 µm	0.651 µm	0.790 µm	0.954 µm

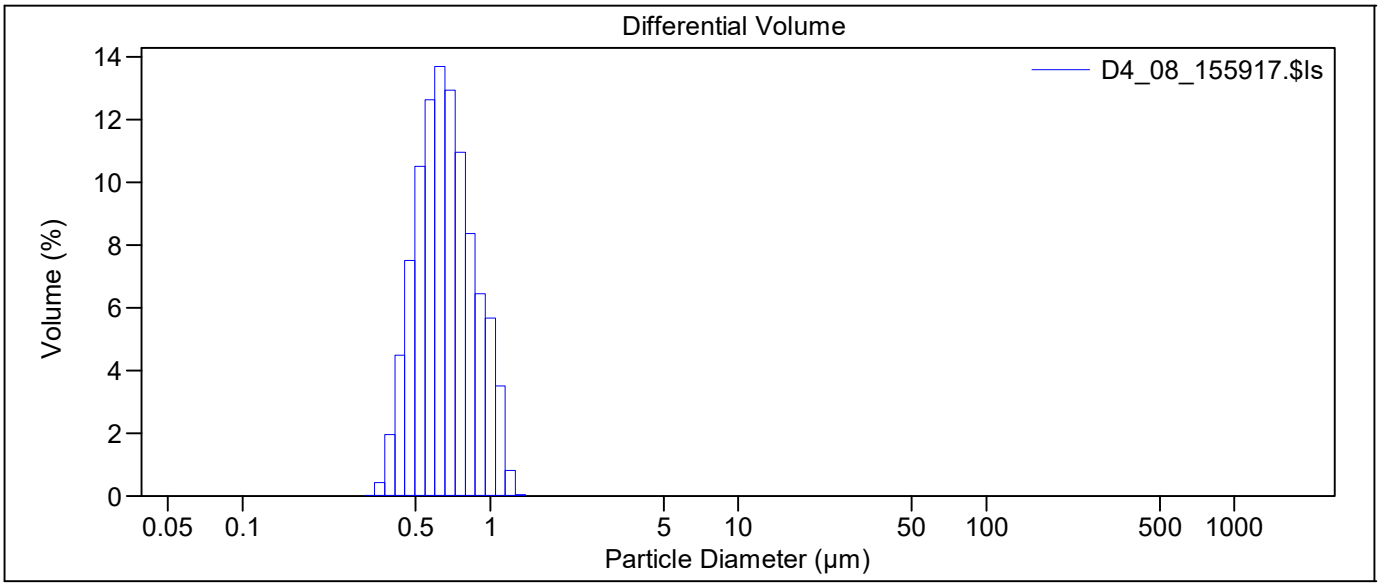
Number Statistics (Arithmetic) D4_08_155917.$ls

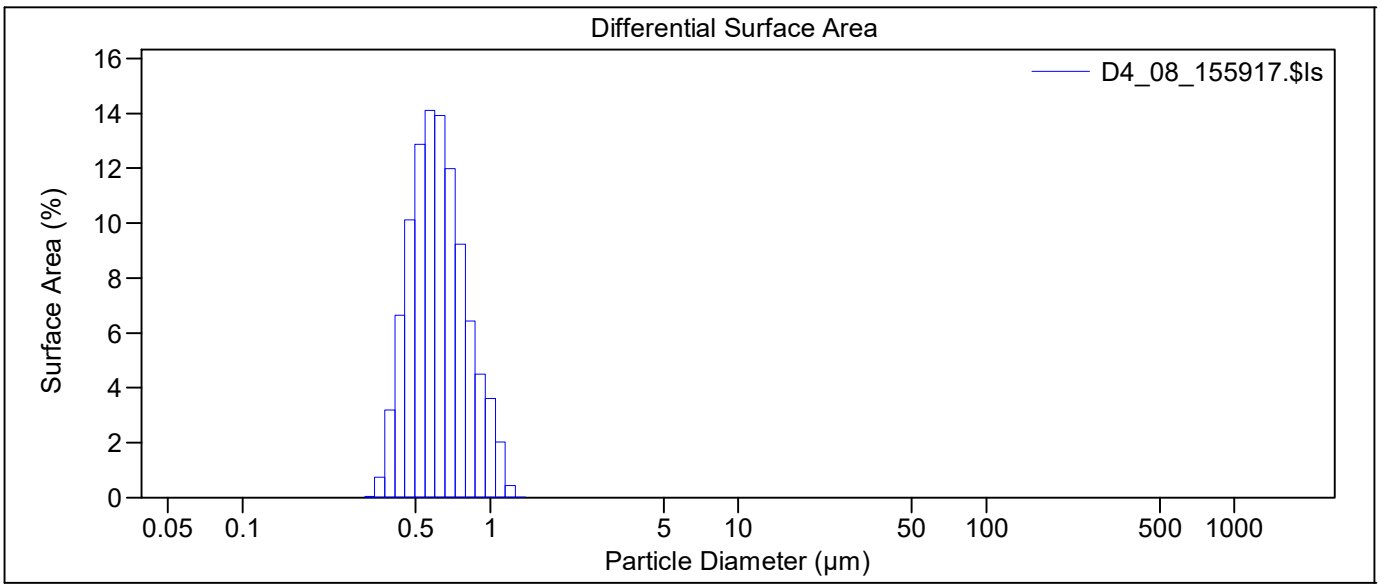
Calculations from 0.040 µm to 2000 µm

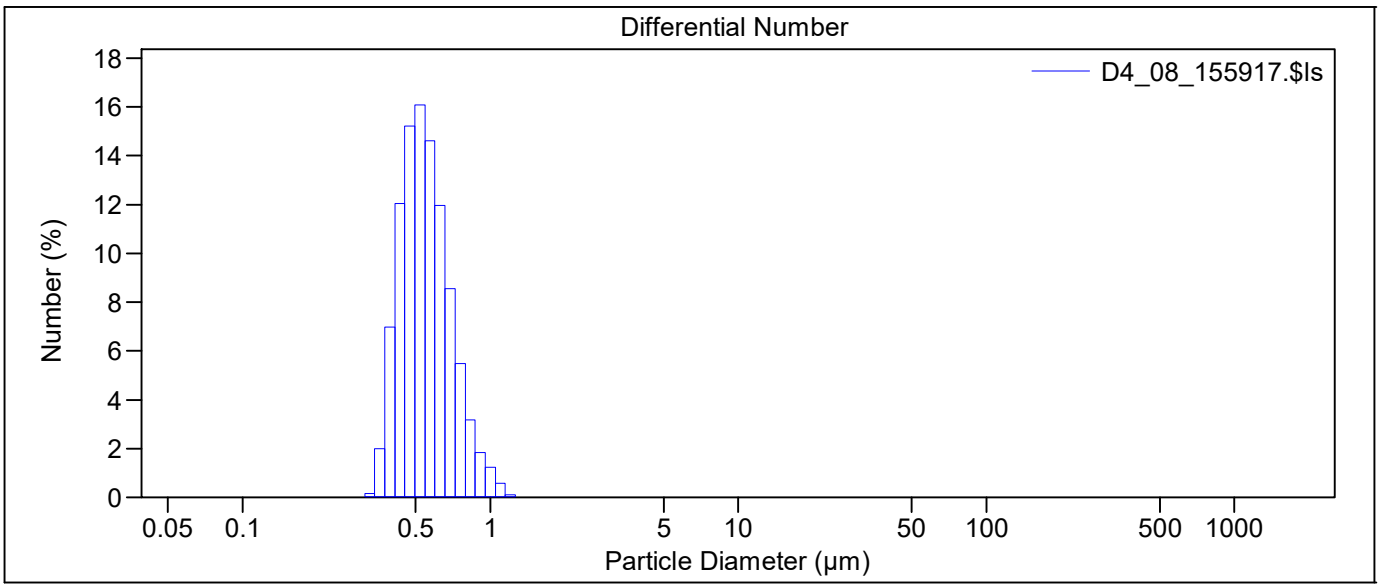
Number:	100%		
Mean:	0.564 µm	S.D.:	0.139 µm
Median:	0.537 µm	Variance:	0.019 μm^2
Mean/Median ratio:	1.050	C.V.:	24.6%
Mode:	0.520 µm	Skewness:	1.170 Right skewed
		Kurtosis:	1.715 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.415 µm	0.463 µm	0.537 µm	0.637 µm	0.751 µm

Beckman Coulter LS13320







D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.00018	0.00040	0.0015
23	0.311	0.326	0.026	0.052	0.16
24	0.342	0.358	0.43	0.76	1.99
25	0.375	0.393	1.97	3.19	6.98
26	0.412	0.431	4.49	6.64	12.0
27	0.452	0.474	7.52	10.1	15.2
28	0.496	0.520	10.5	12.9	16.1
29	0.545	0.571	12.6	14.1	14.6
30	0.598	0.627	13.7	13.9	12.0
31	0.656	0.688	12.9	12.0	8.55
32	0.721	0.755	10.9	9.25	5.47
33	0.791	0.829	8.37	6.44	3.16
34	0.868	0.910	6.44	4.51	1.84
35	0.953	0.999	5.67	3.62	1.22
36	1.047	1.097	3.51	2.04	0.57
37	1.149	1.204	0.82	0.44	0.10
38	1.261	1.321	0.047	0.023	0.0044
39	1.385	1.451	0.00030	0.00013	0.000021
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_09_160104.$ls D4_09_160104.$ls		
File ID:	D4		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.44%		
LS 13 320	Universal Liquid Module		
Start time:	15:59 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_09_160104.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.687 µm	S.D.:	0.198 µm
Median:	0.653 µm	Variance:	0.039 μm^2
Mean/Median ratio:	1.052	C.V.:	28.8%
Mode:	0.627 µm	Skewness:	0.608 Right skewed
		Kurtosis:	-0.274 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.456 µm	0.537 µm	0.653 µm	0.812 µm	0.988 µm

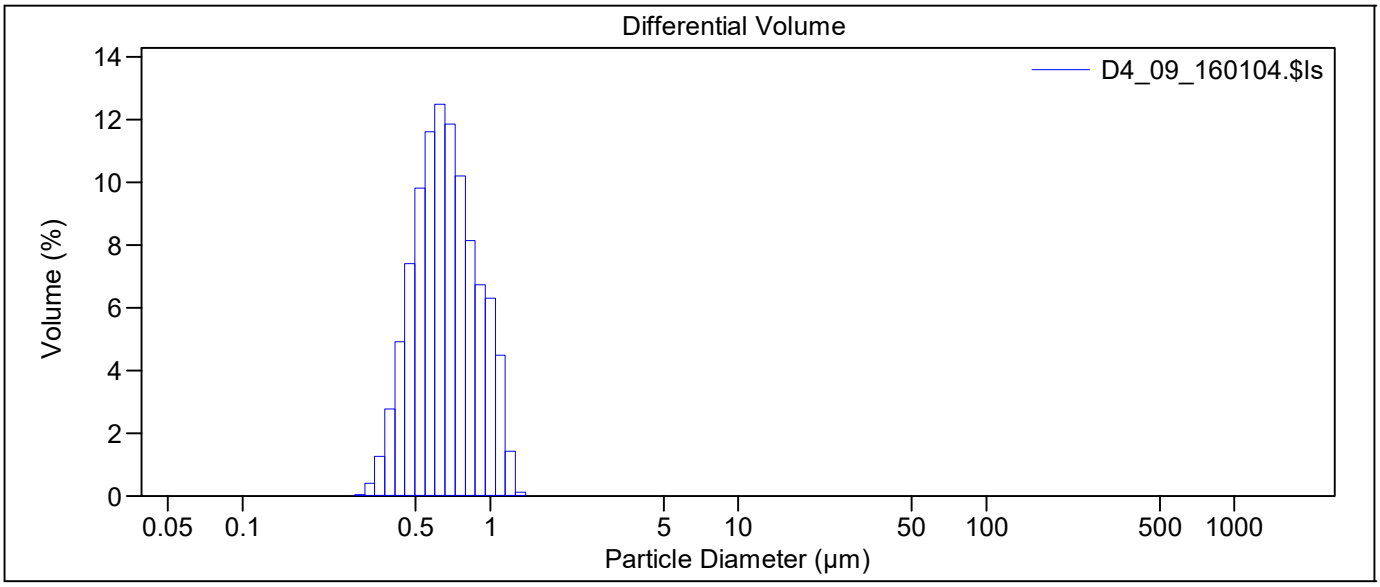
Number Statistics (Arithmetic) D4_09_160104.$ls

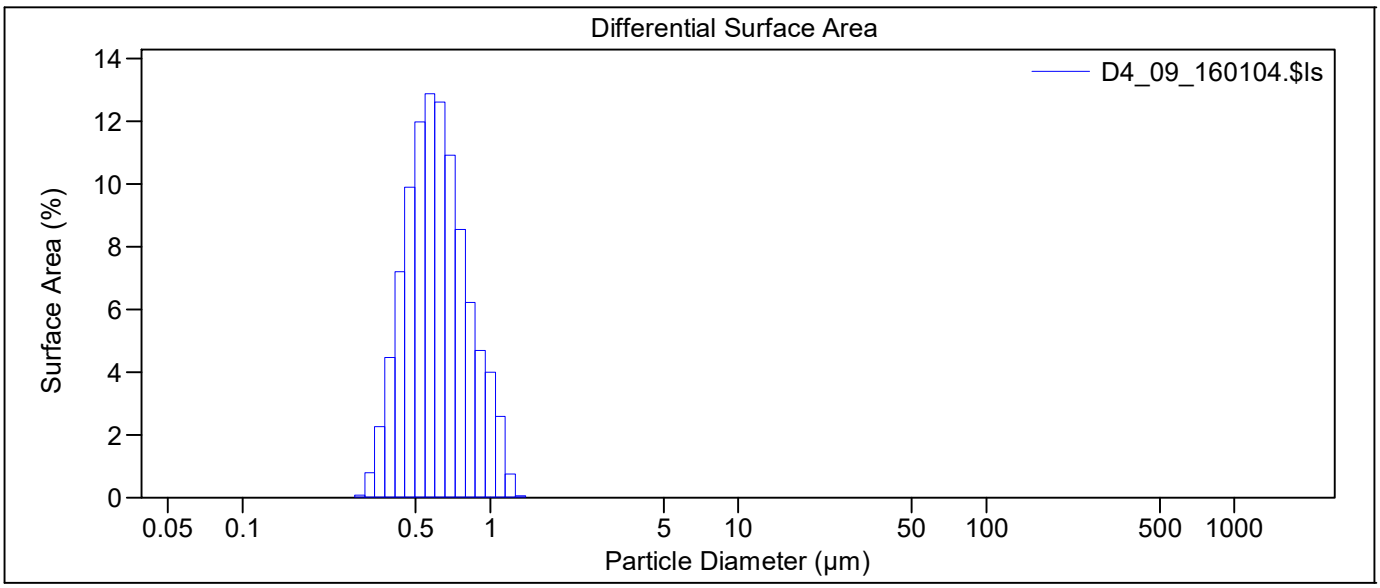
Calculations from 0.040 µm to 2000 µm

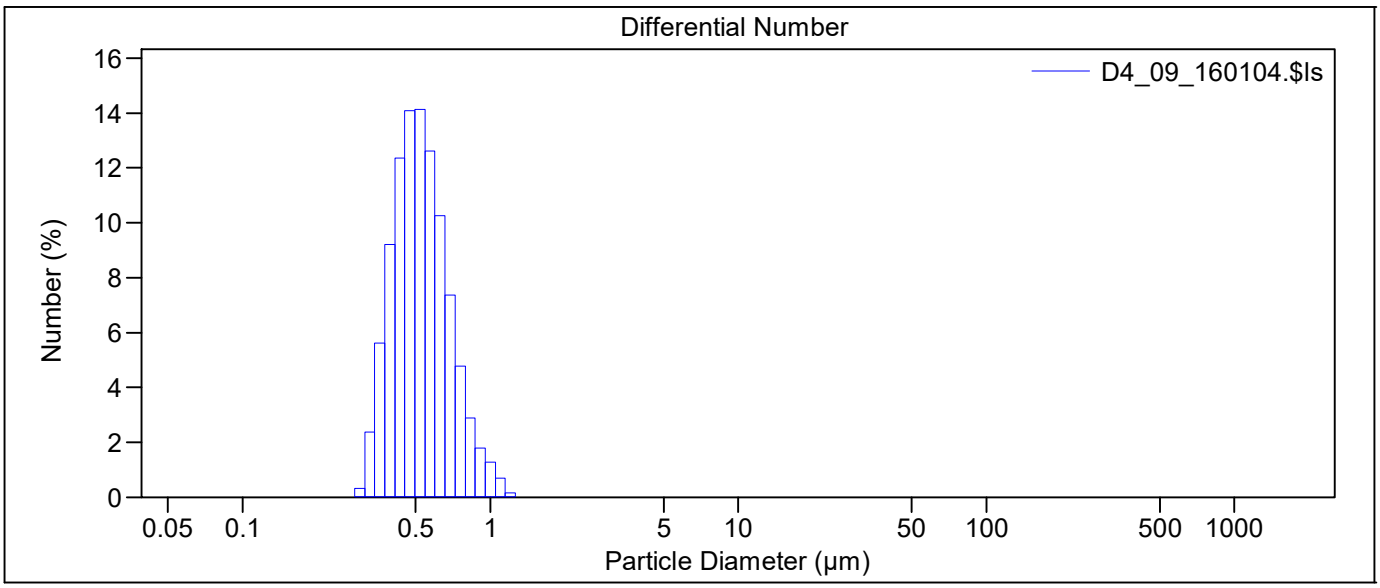
Number:	100%		
Mean:	0.545 µm	S.D.:	0.150 µm
Median:	0.517 µm	Variance:	0.022 μm^2
Mean/Median ratio:	1.054	C.V.:	27.5%
Mode:	0.520 µm	Skewness:	1.168 Right skewed
		Kurtosis:	1.722 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.382 µm	0.436 µm	0.517 µm	0.622 µm	0.745 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.00039	0.00092	0.0040
22	0.284	0.297	0.043	0.091	0.33
23	0.311	0.326	0.41	0.79	2.37
24	0.342	0.358	1.27	2.26	5.62
25	0.375	0.393	2.77	4.46	9.21
26	0.412	0.431	4.91	7.21	12.4
27	0.452	0.474	7.40	9.90	14.1
28	0.496	0.520	9.83	12.0	14.1
29	0.545	0.571	11.6	12.9	12.6
30	0.598	0.627	12.5	12.6	10.3
31	0.656	0.688	11.9	10.9	7.37
32	0.721	0.755	10.2	8.56	4.79
33	0.791	0.829	8.15	6.23	2.89
34	0.868	0.910	6.73	4.69	1.81
35	0.953	0.999	6.30	4.00	1.28
36	1.047	1.097	4.50	2.60	0.69
37	1.149	1.204	1.43	0.76	0.17
38	1.261	1.321	0.12	0.058	0.011
39	1.385	1.451	0.00097	0.00042	0.000064
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_10_215517.$ls D4_10_215517.$ls		
File ID:	D4		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.07%		
LS 13 320	Universal Liquid Module		
Start time:	21:53 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	11%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_10_215517.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.714 µm	S.D.:	0.270 µm
Median:	0.682 µm	Variance:	0.073 µm^2
Mean/Median ratio:	1.046	C.V.:	37.8%
Mode:	0.755 µm	Skewness:	0.465 Right skewed
		Kurtosis:	-0.405 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.382 µm	0.502 µm	0.682 µm	0.902 µm	1.098 µm

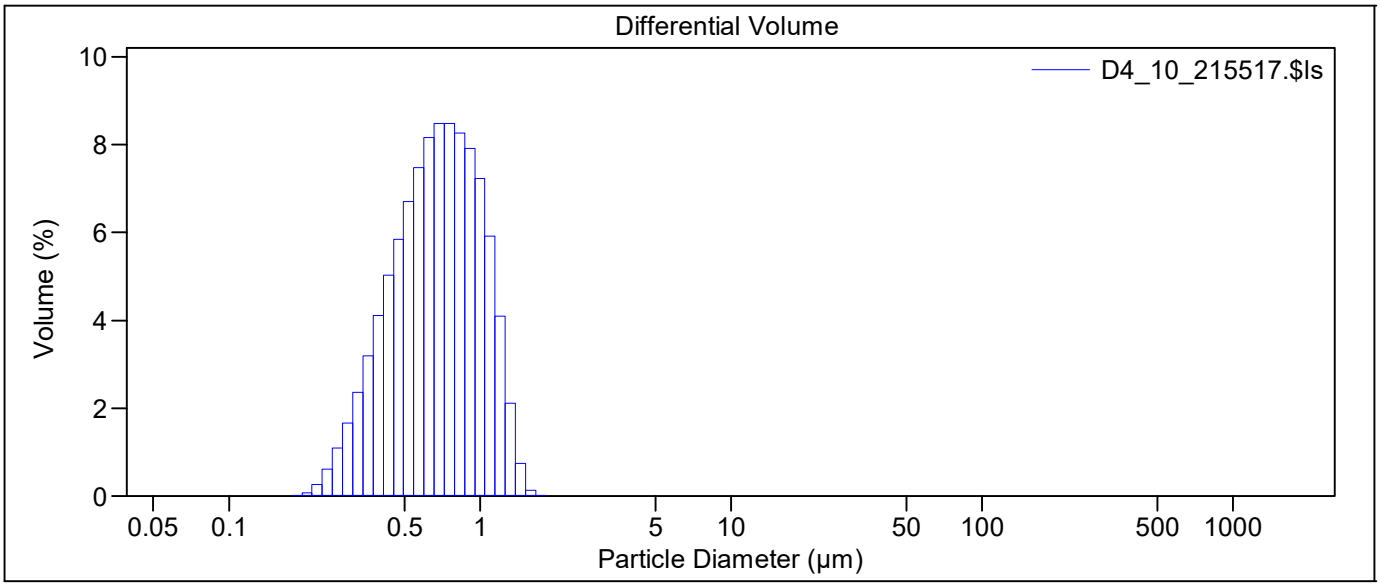
Number Statistics (Arithmetic) D4_10_215517.$ls

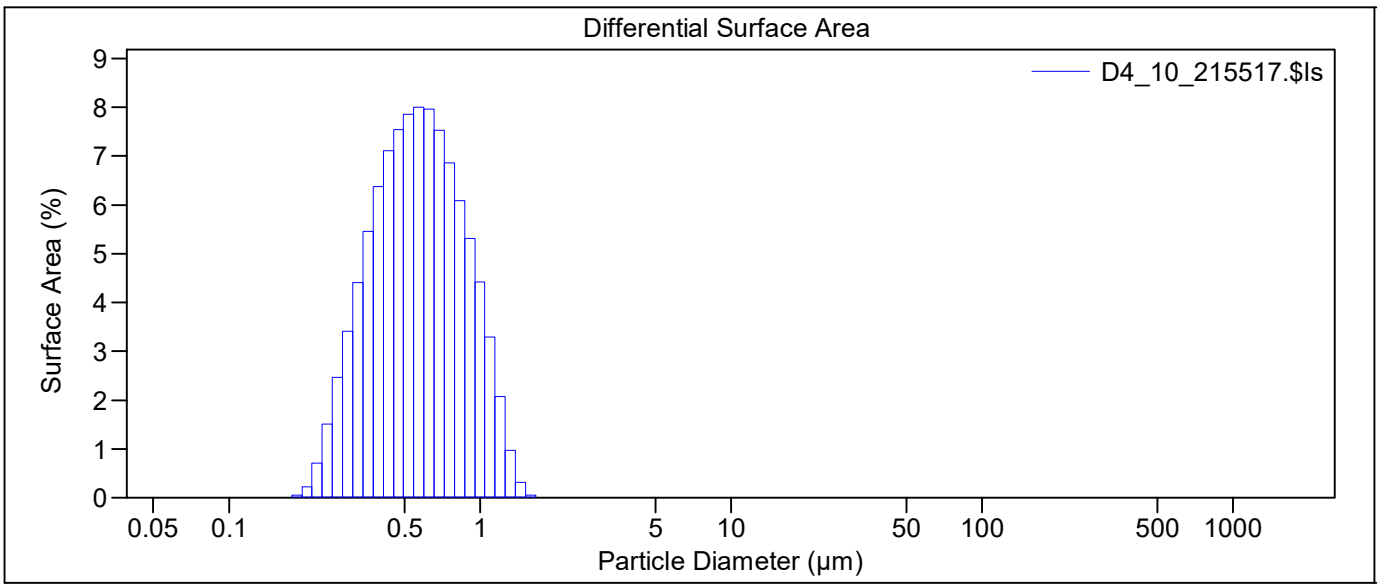
Calculations from 0.040 µm to 2000 µm

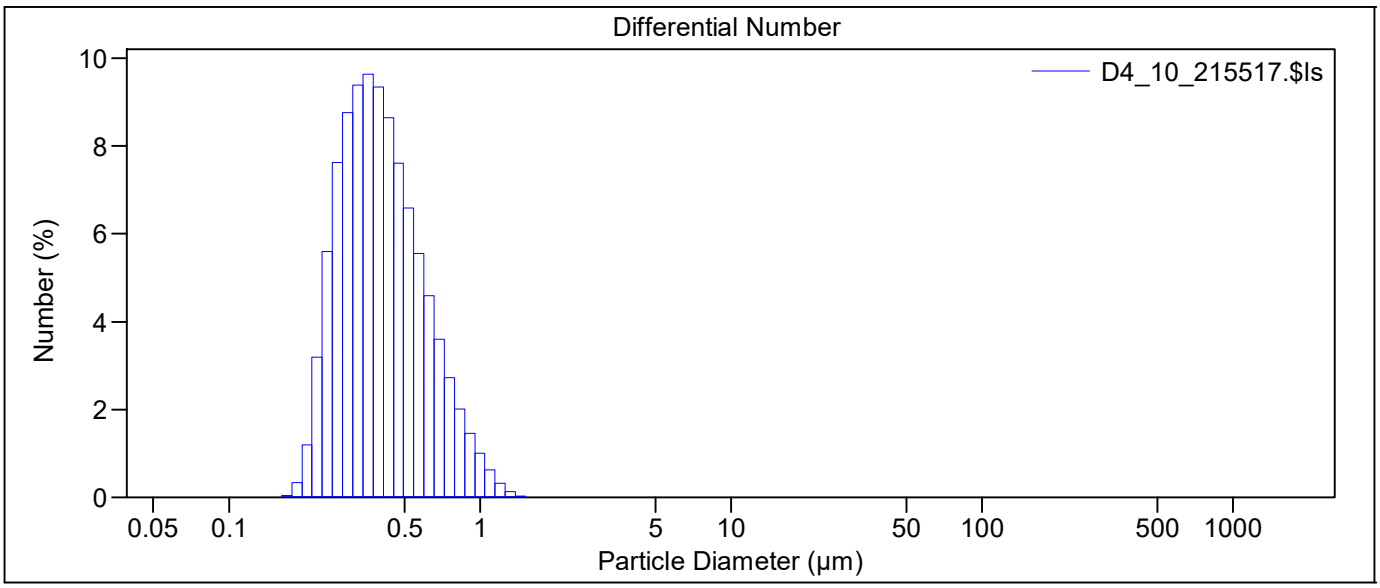
Number:	100%		
Mean:	0.439 µm	S.D.:	0.184 µm
Median:	0.392 µm	Variance:	0.034 µm^2
Mean/Median ratio:	1.120	C.V.:	41.9%
Mode:	0.358 µm	Skewness:	1.466 Right skewed
		Kurtosis:	2.624 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.257 µm	0.306 µm	0.392 µm	0.523 µm	0.690 µm

Beckman Coulter LS13320







D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0.00019	0.00075	0.0071
16	0.162	0.170	0.0017	0.0062	0.049
17	0.178	0.186	0.015	0.050	0.33
18	0.195	0.205	0.074	0.22	1.20
19	0.214	0.225	0.26	0.71	3.19
20	0.235	0.247	0.61	1.50	5.60
21	0.258	0.271	1.09	2.47	7.63
22	0.284	0.297	1.66	3.41	8.76
23	0.311	0.326	2.36	4.41	9.39
24	0.342	0.358	3.20	5.45	9.63
25	0.375	0.393	4.11	6.38	9.35
26	0.412	0.431	5.02	7.10	8.64
27	0.452	0.474	5.85	7.54	7.61
28	0.496	0.520	6.70	7.86	6.59
29	0.545	0.571	7.48	8.00	5.56
30	0.598	0.627	8.17	7.96	4.59
31	0.656	0.688	8.48	7.53	3.60
32	0.721	0.755	8.49	6.86	2.72
33	0.791	0.829	8.27	6.09	2.01
34	0.868	0.910	7.92	5.31	1.45
35	0.953	0.999	7.23	4.42	1.00
36	1.047	1.097	5.92	3.30	0.62
37	1.149	1.204	4.09	2.07	0.32
38	1.261	1.321	2.11	0.97	0.13
39	1.385	1.451	0.74	0.31	0.034
40	1.520	1.592	0.13	0.050	0.0044
41	1.668	1.748	0.0094	0.0033	0.00024
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_11_215704.$ls D4_11_215704.$ls		
File ID:	D4		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.92%		
LS 13 320	Universal Liquid Module		
Start time:	21:55 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_11_215704.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.661 µm	S.D.:	0.139 µm
Median:	0.640 µm	Variance:	0.019 μm^2
Mean/Median ratio:	1.032	C.V.:	21.0%
Mode:	0.627 µm	Skewness:	0.777 Right skewed
		Kurtosis:	0.384 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.500 µm	0.557 µm	0.640 µm	0.743 µm	0.855 µm

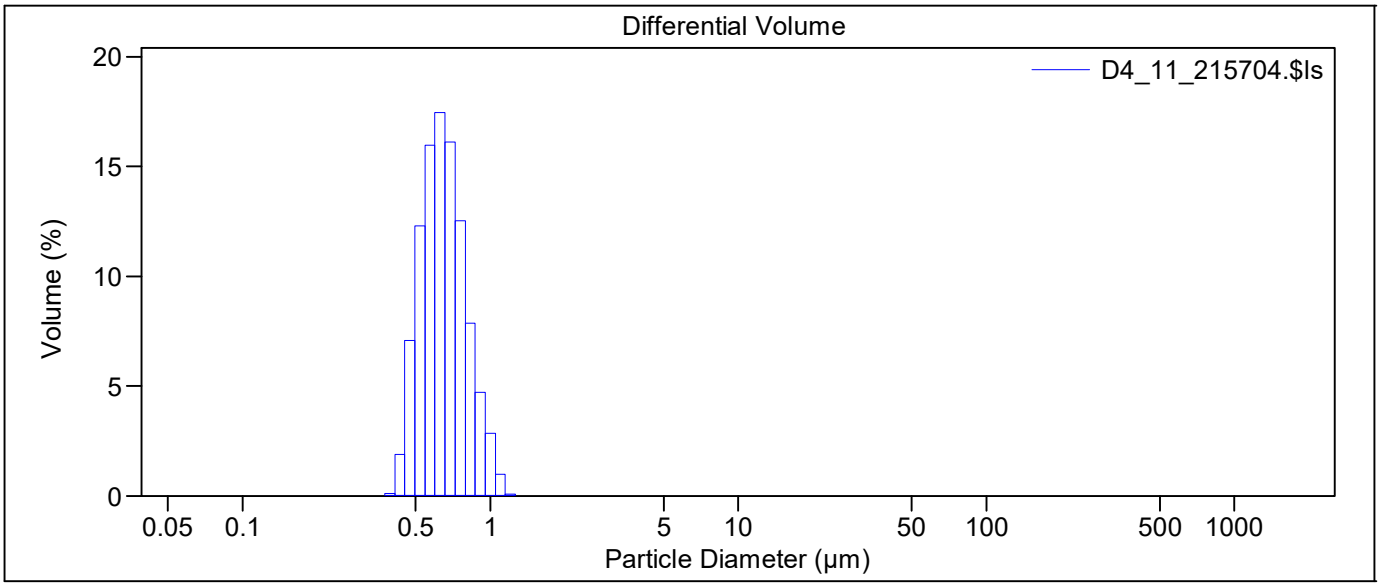
Number Statistics (Arithmetic) D4_11_215704.$ls

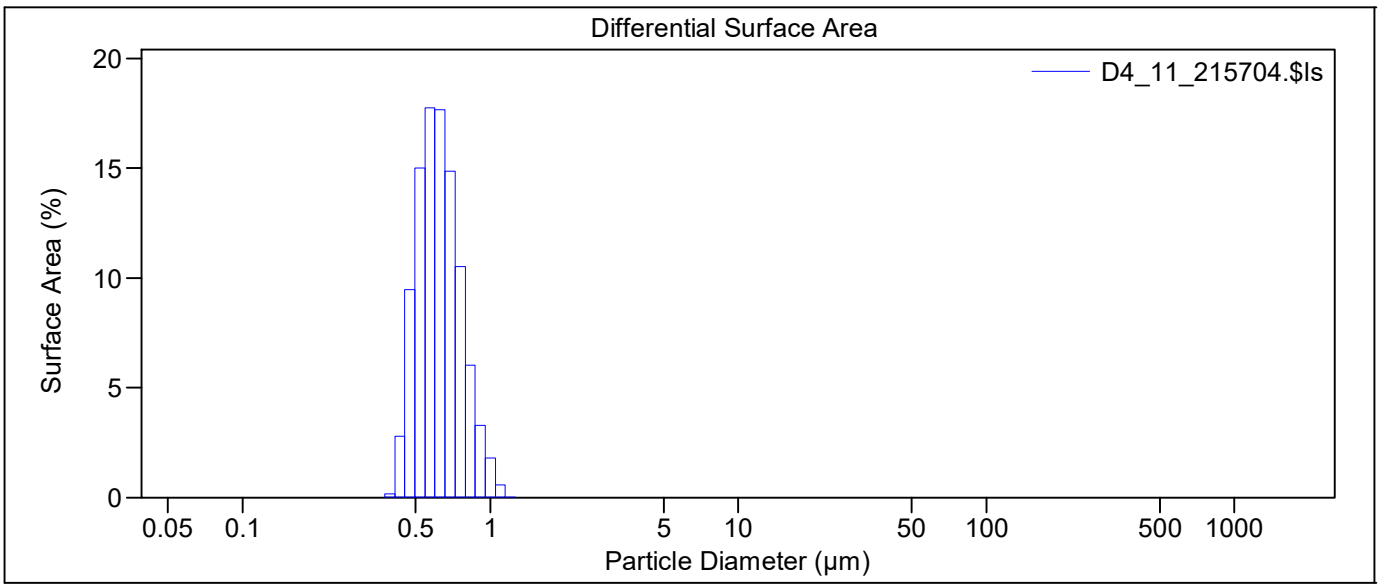
Calculations from 0.040 µm to 2000 µm

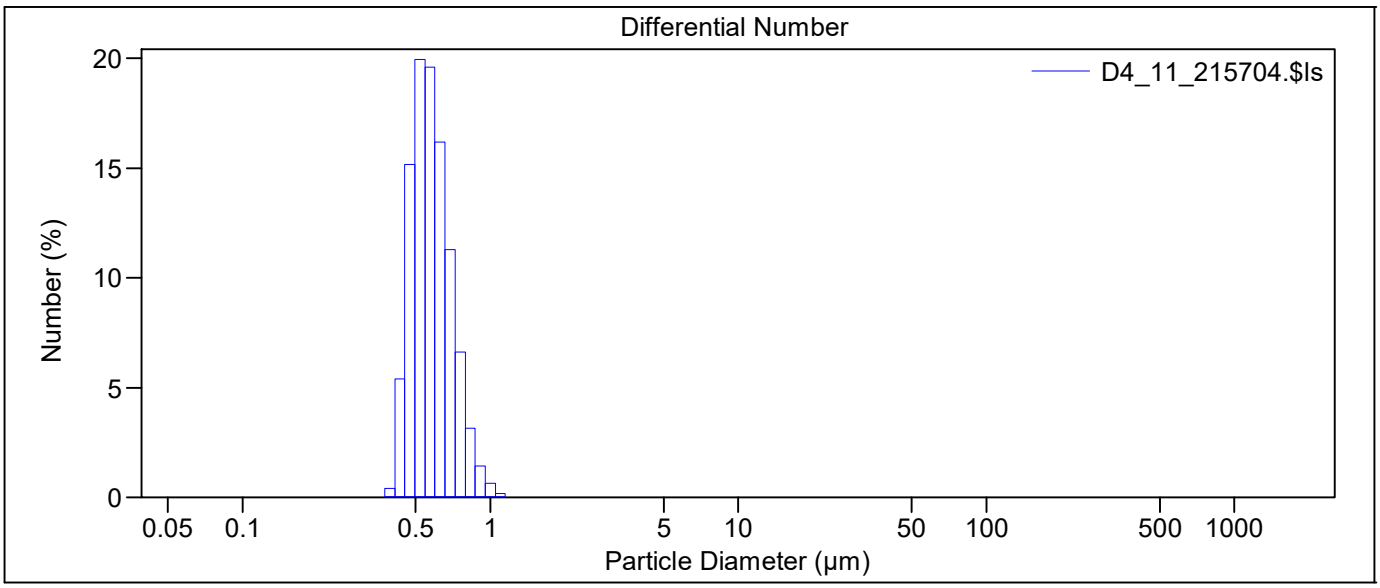
Number:	100%		
Mean:	0.589 µm	S.D.:	0.112 µm
Median:	0.570 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.034	C.V.:	19.0%
Mode:	0.520 µm	Skewness:	1.059 Right skewed
		Kurtosis:	1.449 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.464 µm	0.506 µm	0.570 µm	0.650 µm	0.742 µm

Beckman Coulter LS13320







D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0.11	0.17	0.40
26	0.412	0.431	1.90	2.79	5.39
27	0.452	0.474	7.07	9.47	15.2
28	0.496	0.520	12.3	15.0	19.9
29	0.545	0.571	16.0	17.8	19.6
30	0.598	0.627	17.5	17.7	16.2
31	0.656	0.688	16.1	14.9	11.3
32	0.721	0.755	12.5	10.5	6.63
33	0.791	0.829	7.88	6.03	3.15
34	0.868	0.910	4.72	3.29	1.43
35	0.953	0.999	2.86	1.82	0.65
36	1.047	1.097	0.98	0.57	0.17
37	1.149	1.204	0.075	0.039	0.0097
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

Beckman Coulter LS13320

D4.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_12_215852.$ls D4_12_215852.$ls		
File ID:	D4		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.94%		
LS 13 320	Universal Liquid Module		
Start time:	21:57 15	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	52%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_12_215852.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.659 µm	S.D.:	0.137 µm
Median:	0.639 µm	Variance:	0.019 μm^2
Mean/Median ratio:	1.031	C.V.:	20.7%
Mode:	0.627 µm	Skewness:	0.785 Right skewed
		Kurtosis:	0.423 Leptokurtic

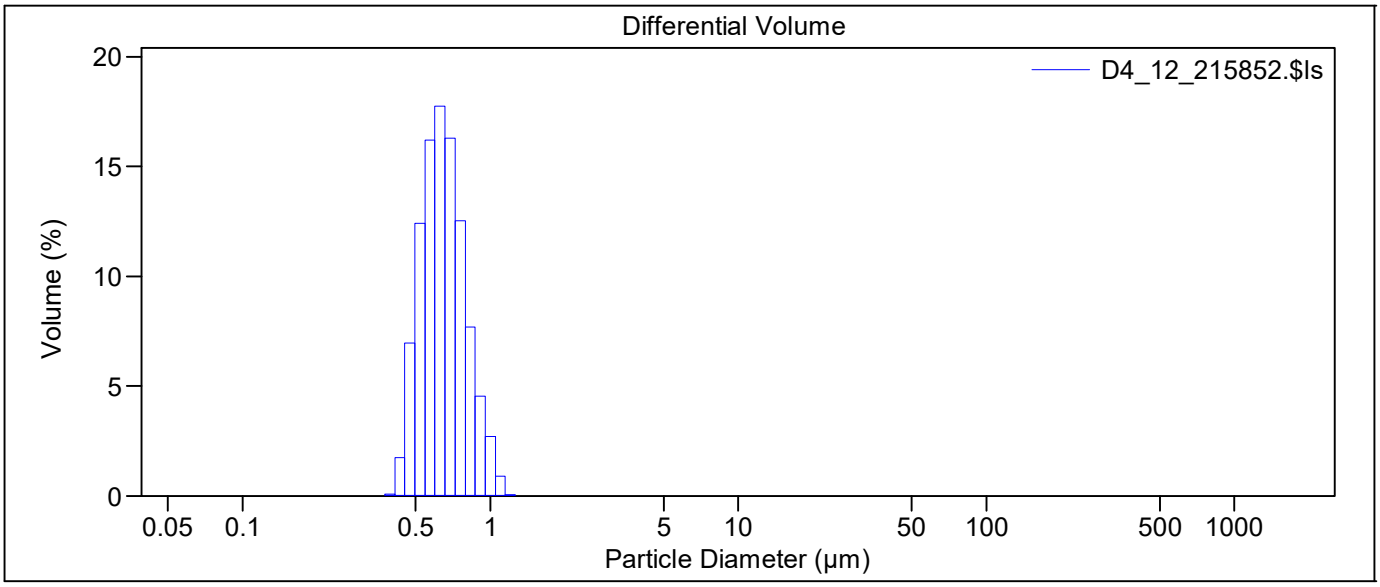
<10%	<25%	<50%	<75%	<90%
0.501 µm	0.557 µm	0.639 µm	0.740 µm	0.851 µm

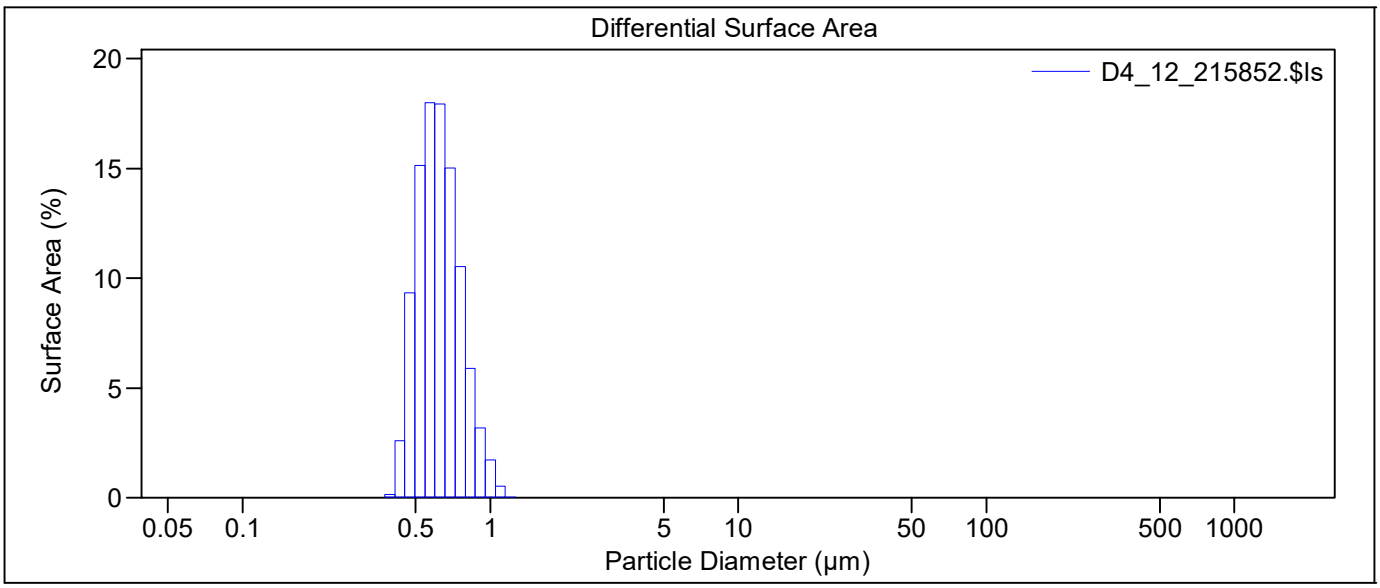
Number Statistics (Arithmetic) D4_12_215852.$ls

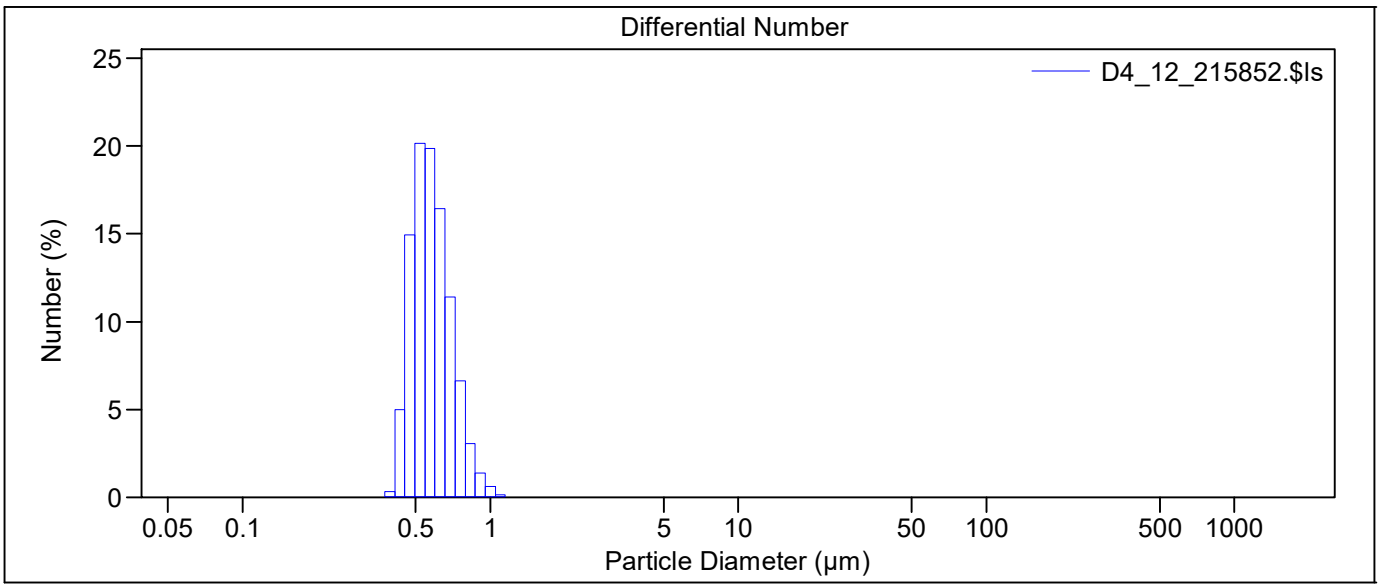
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.589 µm	S.D.:	0.111 µm
Median:	0.570 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.033	C.V.:	18.8%
Mode:	0.520 µm	Skewness:	1.052 Right skewed
		Kurtosis:	1.446 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.466 µm	0.508 µm	0.570 µm	0.650 µm	0.741 µm


Differential Volume
D4_12_215852.$ls
Volume (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
D4_12_215852.$ls
Surface Area (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
D4_12_215852.$ls
Number (%)
0
5
10
15
20
25
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0	0	0
25	0.375	0.393	0.090	0.14	0.34
26	0.412	0.431	1.76	2.58	4.99
27	0.452	0.474	6.98	9.33	15.0
28	0.496	0.520	12.4	15.1	20.1
29	0.545	0.571	16.2	18.0	19.9
30	0.598	0.627	17.7	17.9	16.4
31	0.656	0.688	16.3	15.0	11.4
32	0.721	0.755	12.5	10.5	6.63
33	0.791	0.829	7.70	5.88	3.08
34	0.868	0.910	4.55	3.17	1.38
35	0.953	0.999	2.72	1.73	0.62
36	1.047	1.097	0.89	0.52	0.15
37	1.149	1.204	0.063	0.033	0.0083
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_13_220939.$ls D4_13_220939.$ls		
File ID:	D4		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.00%		
LS 13 320	Universal Liquid Module		
Start time:	22:07 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_13_220939.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.668 µm	S.D.:	0.144 µm
Median:	0.647 µm	Variance:	0.021 μm^2
Mean/Median ratio:	1.032	C.V.:	21.6%
Mode:	0.627 µm	Skewness:	0.702 Right skewed
		Kurtosis:	0.189 Leptokurtic

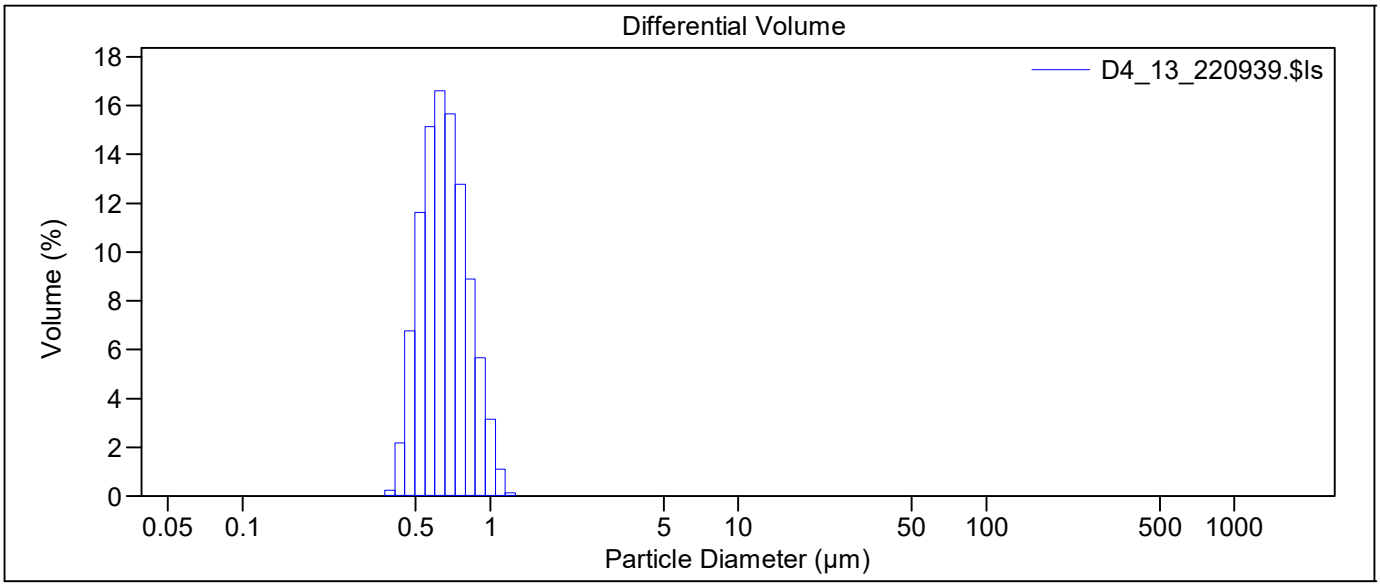
<10%	<25%	<50%	<75%	<90%
0.500 µm	0.559 µm	0.647 µm	0.758 µm	0.869 µm

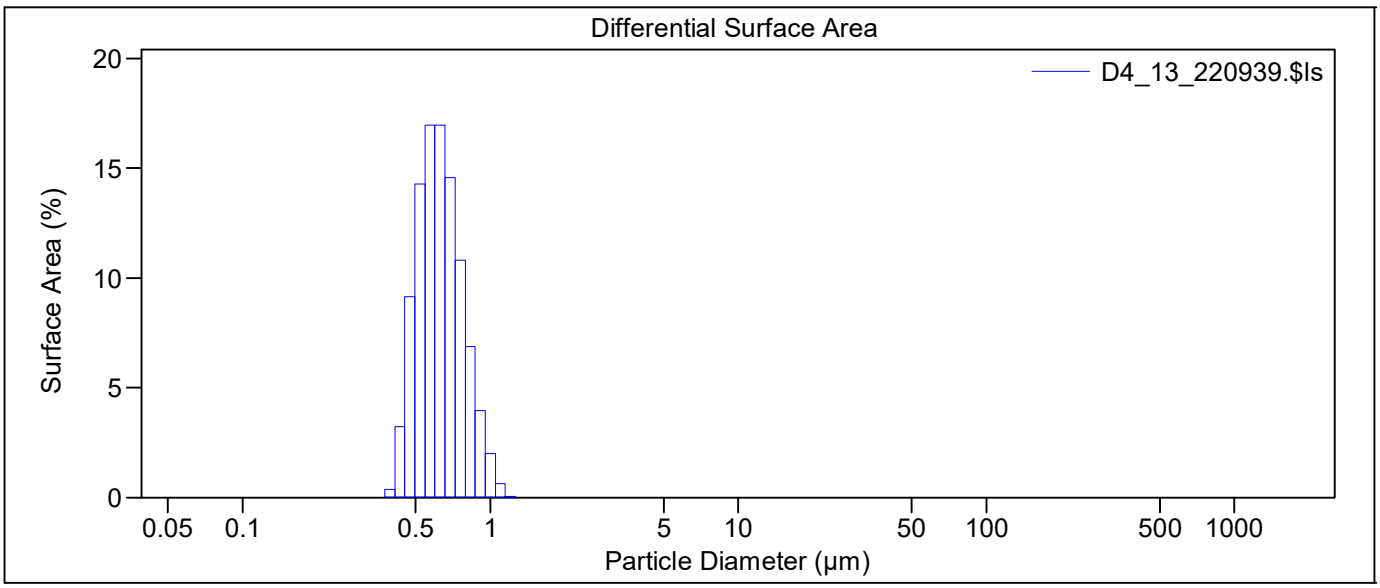
Number Statistics (Arithmetic) D4_13_220939.$ls

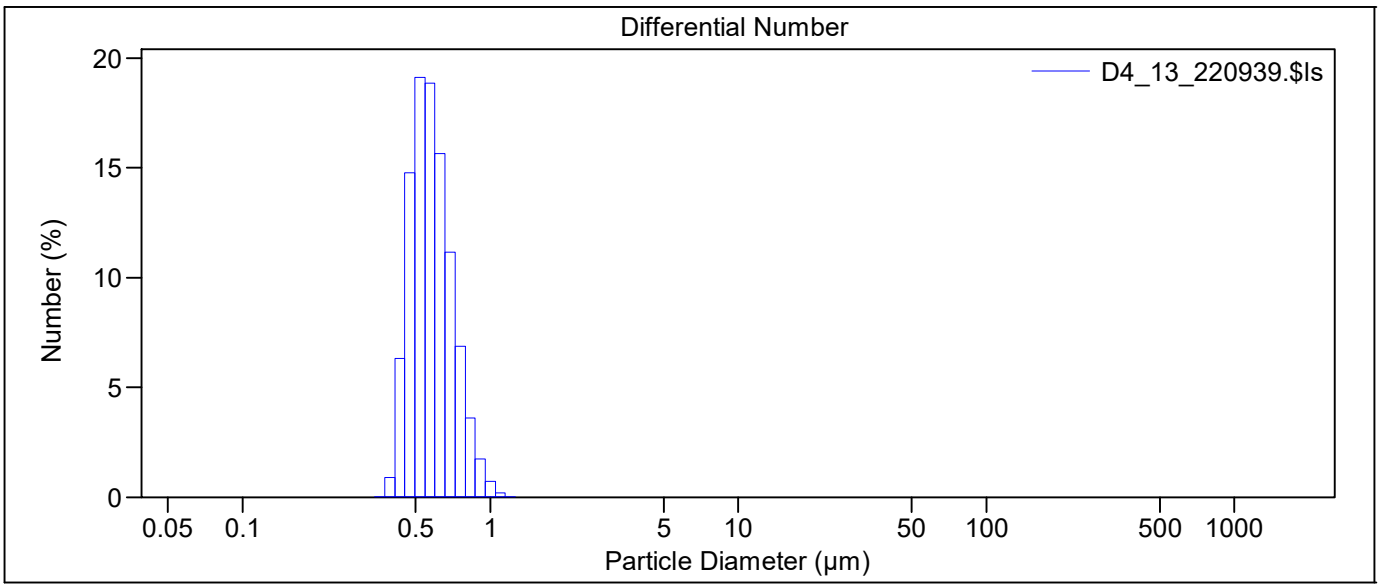
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.590 µm	S.D.:	0.117 µm
Median:	0.570 µm	Variance:	0.014 μm^2
Mean/Median ratio:	1.036	C.V.:	19.9%
Mode:	0.520 µm	Skewness:	1.022 Right skewed
		Kurtosis:	1.260 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.460 µm	0.504 µm	0.570 µm	0.654 µm	0.753 µm


Differential Volume
D4_13_220939.$ls
Volume (%)
0
2
4
6
8
10
12
14
16
18
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
D4_13_220939.$ls
Surface Area (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
D4_13_220939.$ls
Number (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.0049	0.0087	0.025
25	0.375	0.393	0.24	0.38	0.90
26	0.412	0.431	2.19	3.25	6.31
27	0.452	0.474	6.78	9.15	14.8
28	0.496	0.520	11.6	14.3	19.1
29	0.545	0.571	15.1	17.0	18.9
30	0.598	0.627	16.6	17.0	15.6
31	0.656	0.688	15.7	14.6	11.2
32	0.721	0.755	12.8	10.8	6.88
33	0.791	0.829	8.90	6.87	3.62
34	0.868	0.910	5.66	3.98	1.74
35	0.953	0.999	3.15	2.02	0.73
36	1.047	1.097	1.11	0.65	0.20
37	1.149	1.204	0.13	0.071	0.018
38	1.261	1.321	0.0030	0.0015	0.00031
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_14_221127.$ls D4_14_221127.$ls		
File ID:	D4		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.09%		
LS 13 320	Universal Liquid Module		
Start time:	22:09 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_14_221127.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.665 µm	S.D.:	0.141 µm
Median:	0.645 µm	Variance:	0.020 μm^2
Mean/Median ratio:	1.031	C.V.:	21.2%
Mode:	0.627 µm	Skewness:	0.706 Right skewed
		Kurtosis:	0.225 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.500 µm	0.559 µm	0.645 µm	0.753 µm	0.862 µm

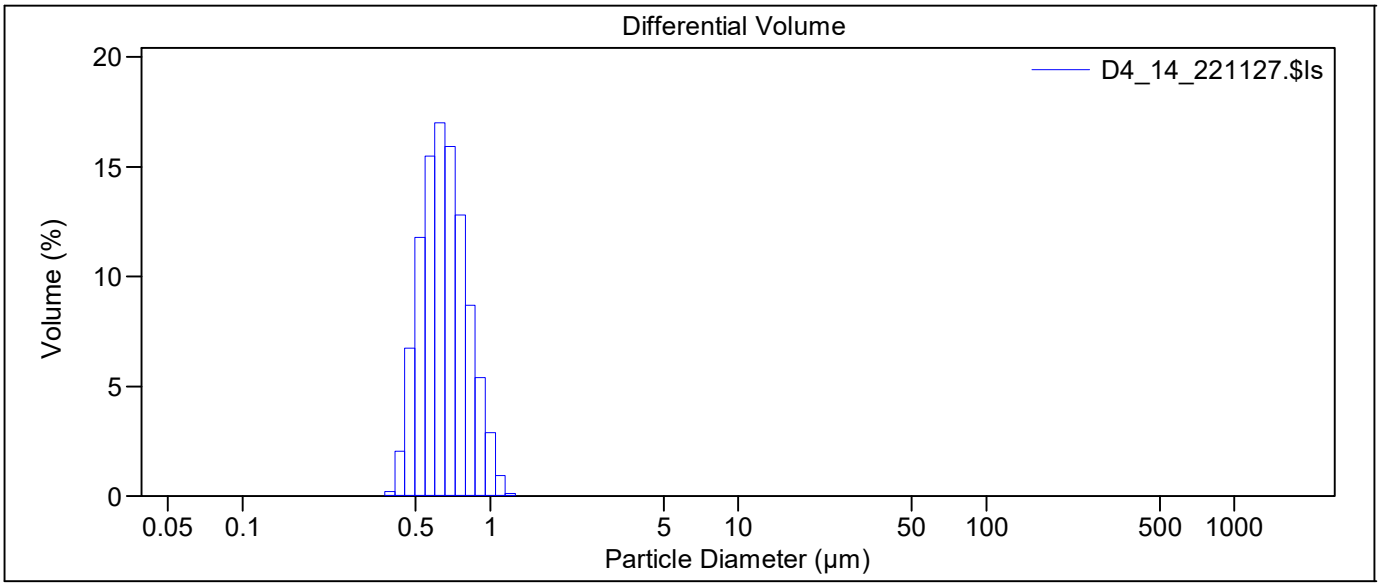
Number Statistics (Arithmetic) D4_14_221127.$ls

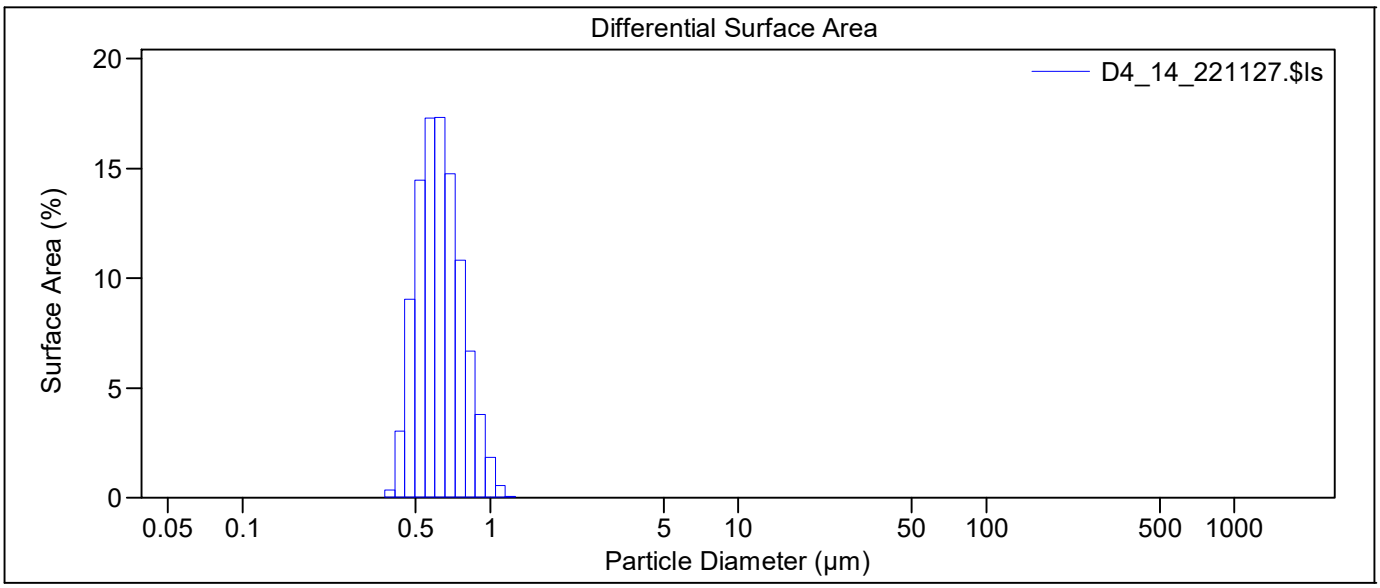
Calculations from 0.040 µm to 2000 µm

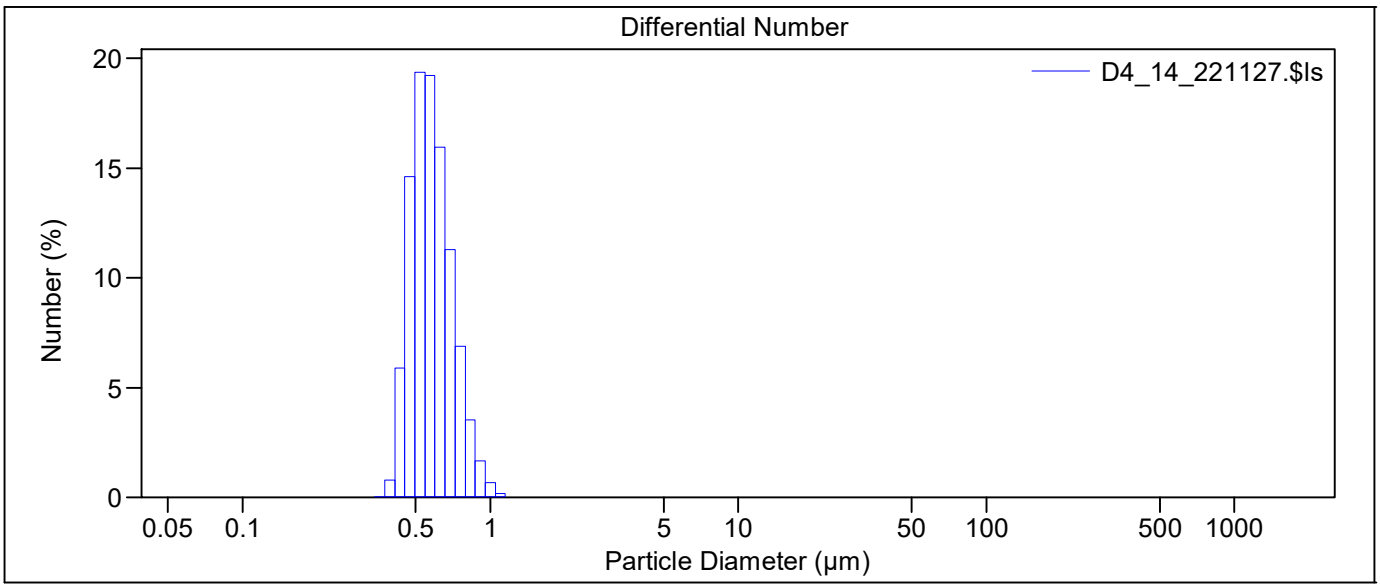
Number:	100%		
Mean:	0.590 µm	S.D.:	0.115 µm
Median:	0.571 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.035	C.V.:	19.5%
Mode:	0.520 µm	Skewness:	1.006 Right skewed
		Kurtosis:	1.232 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.462 µm	0.505 µm	0.571 µm	0.653 µm	0.750 µm

Beckman Coulter LS13320







D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.0041	0.0073	0.021
25	0.375	0.393	0.21	0.34	0.80
26	0.412	0.431	2.05	3.04	5.90
27	0.452	0.474	6.72	9.05	14.6
28	0.496	0.520	11.8	14.5	19.4
29	0.545	0.571	15.5	17.3	19.2
30	0.598	0.627	17.0	17.3	15.9
31	0.656	0.688	15.9	14.8	11.3
32	0.721	0.755	12.8	10.8	6.87
33	0.791	0.829	8.69	6.69	3.52
34	0.868	0.910	5.39	3.78	1.65
35	0.953	0.999	2.89	1.84	0.67
36	1.047	1.097	0.94	0.55	0.16
37	1.149	1.204	0.10	0.056	0.014
38	1.261	1.321	0.0023	0.0011	0.00023
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\D4\D4_15_221314.$ls D4_15_221314.$ls		
File ID:	D4		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.14%		
LS 13 320	Universal Liquid Module		
Start time:	22:11 15	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) D4_15_221314.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.663 µm	S.D.:	0.138 µm
Median:	0.644 µm	Variance:	0.019 μm^2
Mean/Median ratio:	1.030	C.V.:	20.8%
Mode:	0.627 µm	Skewness:	0.708 Right skewed
		Kurtosis:	0.247 Leptokurtic

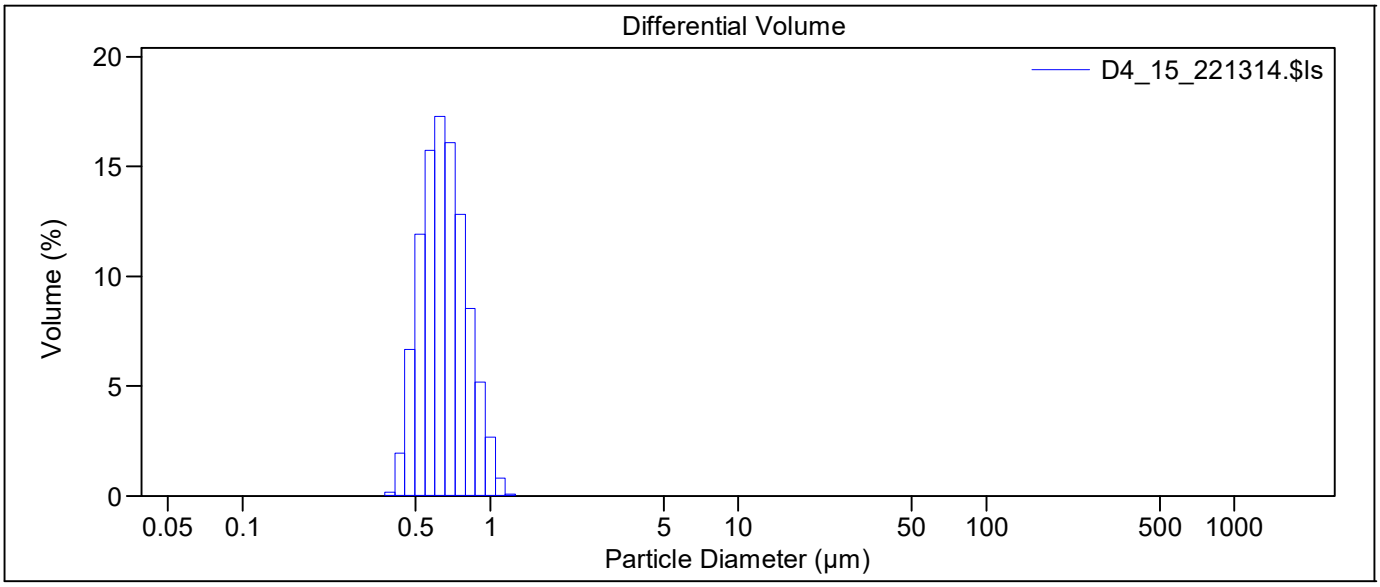
<10%	<25%	<50%	<75%	<90%
0.501 µm	0.559 µm	0.644 µm	0.749 µm	0.858 µm

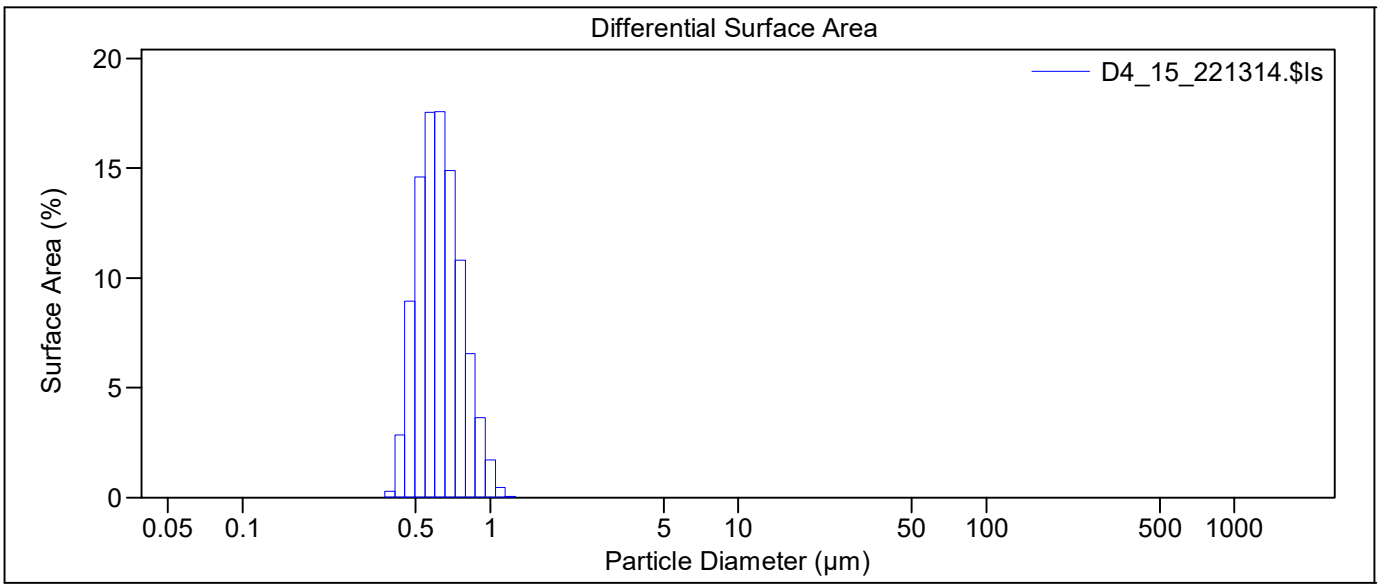
Number Statistics (Arithmetic) D4_15_221314.$ls

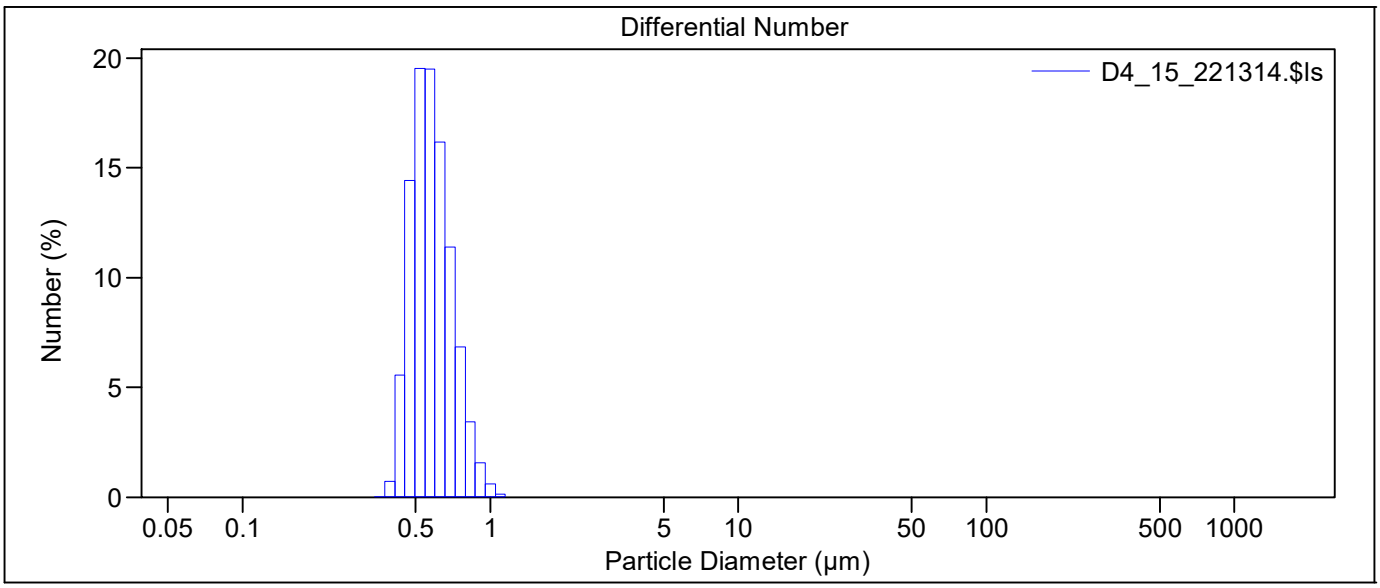
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.591 µm	S.D.:	0.114 µm
Median:	0.571 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.034	C.V.:	19.2%
Mode:	0.520 µm	Skewness:	0.995 Right skewed
		Kurtosis:	1.210 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.463 µm	0.507 µm	0.571 µm	0.653 µm	0.748 µm


Differential Volume
D4_15_221314.$ls
Volume (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
D4_15_221314.$ls
Surface Area (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
D4_15_221314.$ls
Number (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0	0	0
24	0.342	0.358	0.0035	0.0062	0.018
25	0.375	0.393	0.19	0.31	0.72
26	0.412	0.431	1.94	2.87	5.57
27	0.452	0.474	6.66	8.96	14.4
28	0.496	0.520	11.9	14.6	19.5
29	0.545	0.571	15.7	17.6	19.5
30	0.598	0.627	17.3	17.6	16.2
31	0.656	0.688	16.1	14.9	11.4
32	0.721	0.755	12.8	10.8	6.86
33	0.791	0.829	8.53	6.55	3.45
34	0.868	0.910	5.19	3.63	1.59
35	0.953	0.999	2.70	1.72	0.62
36	1.047	1.097	0.82	0.48	0.14
37	1.149	1.204	0.086	0.045	0.011
38	1.261	1.321	0.0017	0.00083	0.00017
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

D4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1.$av M1.$av
File ID:	M1
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_01_155016.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_02_155204.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_03_155351.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_04_160304.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_05_160451.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_06_160639.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_07_161603.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_08_161751.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_09_161938.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_10_162918.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_11_163106.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_12_163253.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_13_164714.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_14_164900.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_15_165049.$ls

Volume Statistics (Arithmetic) M1.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.603 µm	S.D.:	0.160 µm
Median:	0.588 µm	Variance:	0.026 µm^2
Mean/Median ratio:	1.025	C.V.:	26.5%
Mode:	0.571 µm	Skewness:	0.879 Right skewed
		Kurtosis:	3.241 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.429 µm	0.499 µm	0.588 µm	0.692 µm	0.791 µm

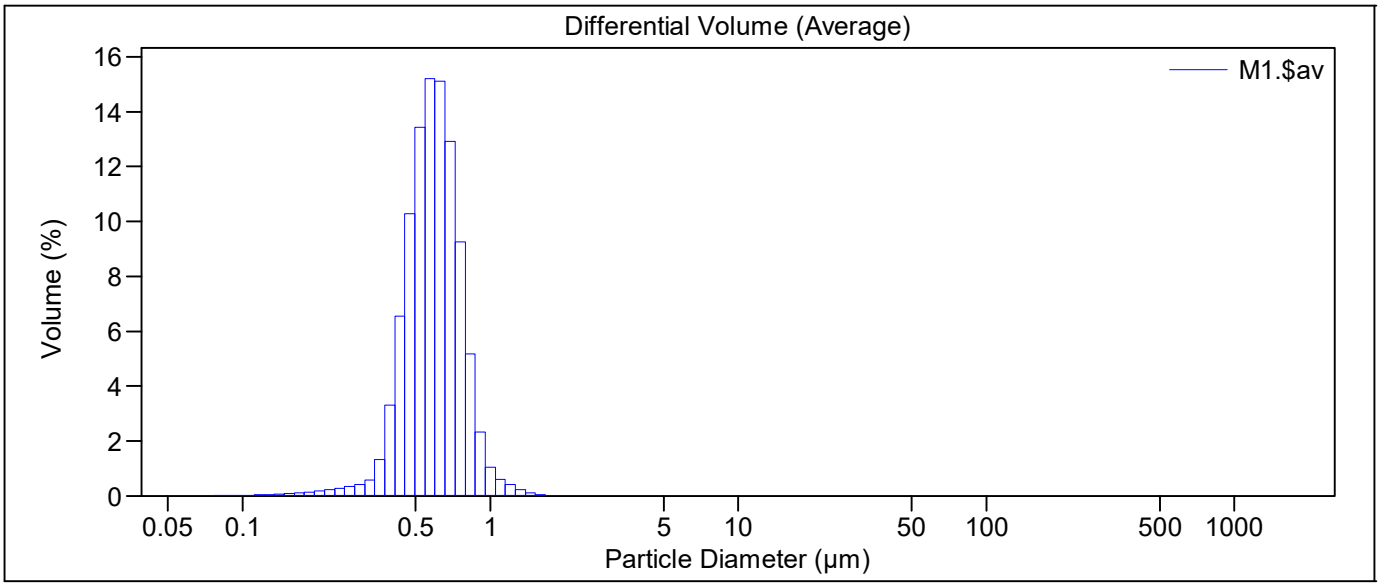
Number Statistics (Arithmetic) M1.$av

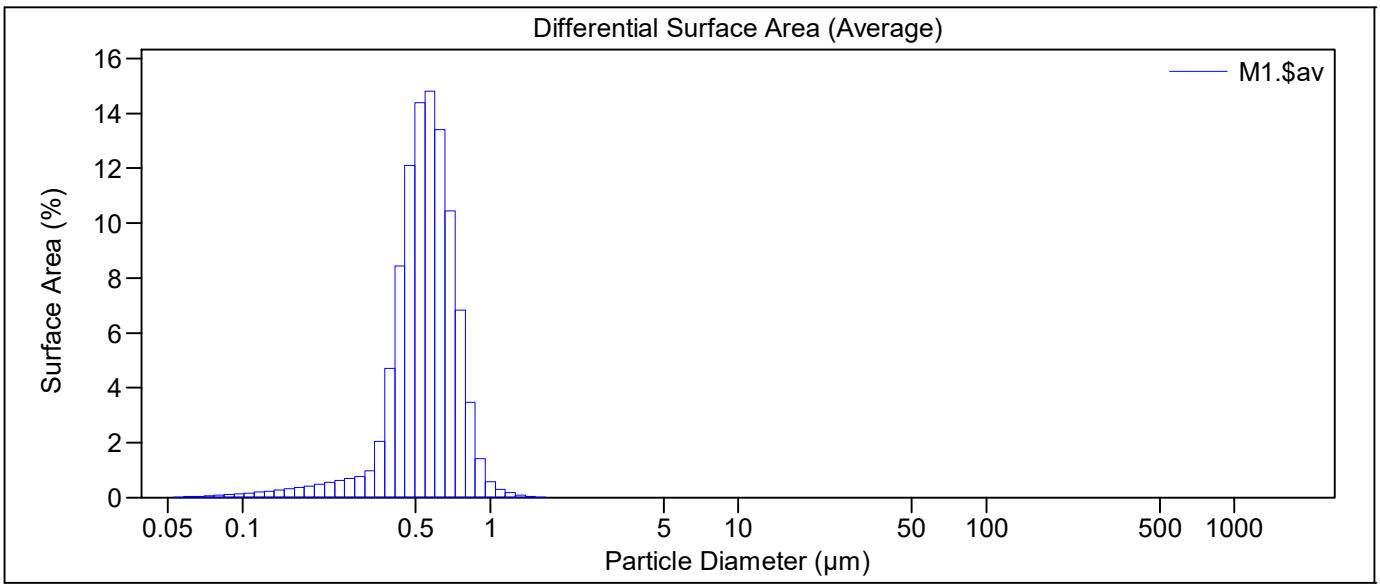
Calculations from 0.040 µm to 2000 µm

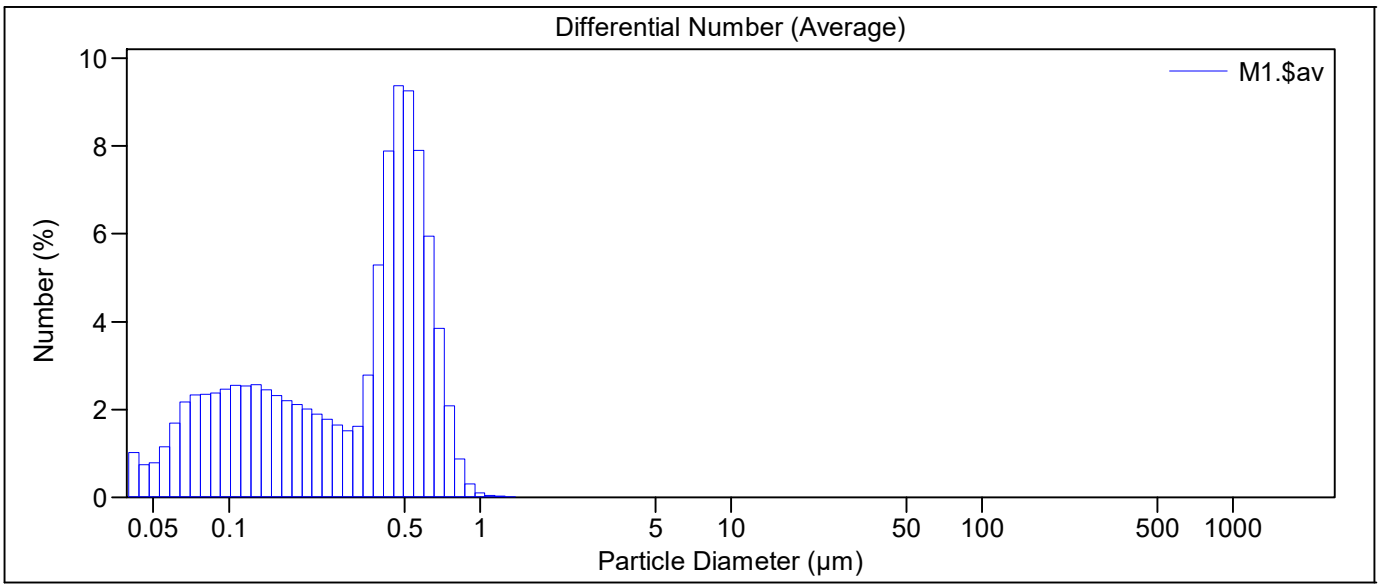
Number:	100%		
Mean:	0.357 µm	S.D.:	0.216 µm
Median:	0.395 µm	Variance:	0.046 µm^2
Mean/Median ratio:	0.902	C.V.:	60.4%
Mode:	0.474 µm	Skewness:	0.154 Right skewed
		Kurtosis:	-0.962 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.077 µm	0.136 µm	0.395 µm	0.524 µm	0.630 µm

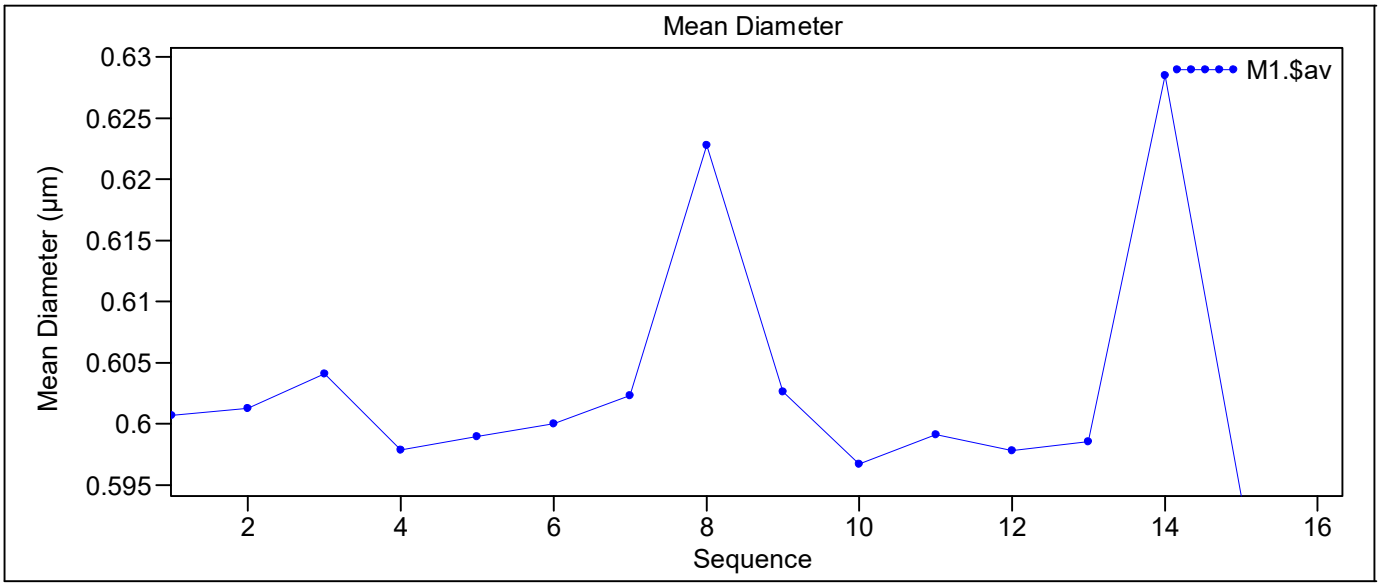
Beckman Coulter LS13320







Beckman Coulter LS13320



M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.00077	0.010	1.01
2	0.044	0.046	0.00075	0.0091	0.75
3	0.048	0.050	0.0010	0.011	0.78
4	0.053	0.055	0.0020	0.020	1.14
5	0.058	0.061	0.0040	0.036	1.70
6	0.064	0.067	0.0067	0.056	2.18
7	0.070	0.073	0.0095	0.072	2.34
8	0.077	0.080	0.013	0.087	2.34
9	0.084	0.088	0.017	0.11	2.37
10	0.093	0.097	0.023	0.13	2.47
11	0.102	0.106	0.032	0.17	2.55
12	0.112	0.117	0.042	0.20	2.54
13	0.122	0.128	0.056	0.24	2.56
14	0.134	0.141	0.071	0.28	2.44
15	0.148	0.155	0.088	0.32	2.31
16	0.162	0.170	0.11	0.37	2.20
17	0.178	0.186	0.14	0.42	2.12
18	0.195	0.205	0.18	0.49	2.01
19	0.214	0.225	0.22	0.55	1.90
20	0.235	0.247	0.28	0.62	1.78
21	0.258	0.271	0.34	0.70	1.65
22	0.284	0.297	0.41	0.77	1.51
23	0.311	0.326	0.58	0.99	1.61
24	0.342	0.358	1.32	2.05	2.78
25	0.375	0.393	3.32	4.71	5.30
26	0.412	0.431	6.55	8.45	7.89
27	0.452	0.474	10.3	12.1	9.37
28	0.496	0.520	13.4	14.4	9.25
29	0.545	0.571	15.2	14.8	7.91
30	0.598	0.627	15.1	13.4	5.94
31	0.656	0.688	12.9	10.5	3.84
32	0.721	0.755	9.27	6.83	2.08
33	0.791	0.829	5.17	3.47	0.88
34	0.868	0.910	2.33	1.42	0.30
35	0.953	0.999	1.04	0.58	0.10
36	1.047	1.097	0.61	0.31	0.045
37	1.149	1.204	0.41	0.19	0.023
38	1.261	1.321	0.24	0.100	0.0099
39	1.385	1.451	0.11	0.042	0.0034
40	1.520	1.592	0.038	0.013	0.00090
41	1.668	1.748	0.010	0.0033	0.00019

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.0020	0.00058	0.000027
43	2.011	2.107	0.00026	0.000070	0.000003
44	2.207	2.313	0.000015	0.000004	1.21E-7
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_01_155016.$ls M1_01_155016.$ls		
File ID:	M1		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.90%		
LS 13 320	Universal Liquid Module		
Start time:	15:48 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_01_155016.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.601 µm	S.D.:	0.123 µm
Median:	0.590 µm	Variance:	0.015 μm^2
Mean/Median ratio:	1.019	C.V.:	20.5%
Mode:	0.571 µm	Skewness:	0.464 Right skewed
		Kurtosis:	-0.055 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.450 µm	0.508 µm	0.590 µm	0.683 µm	0.771 µm

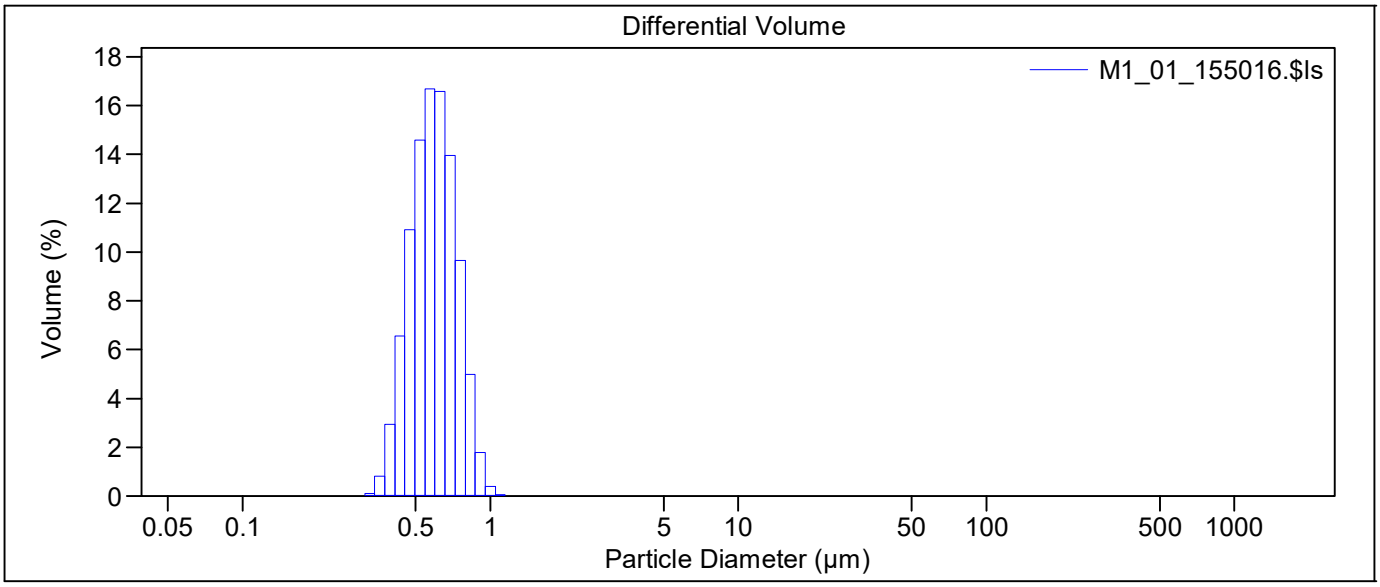
Number Statistics (Arithmetic) M1_01_155016.$ls

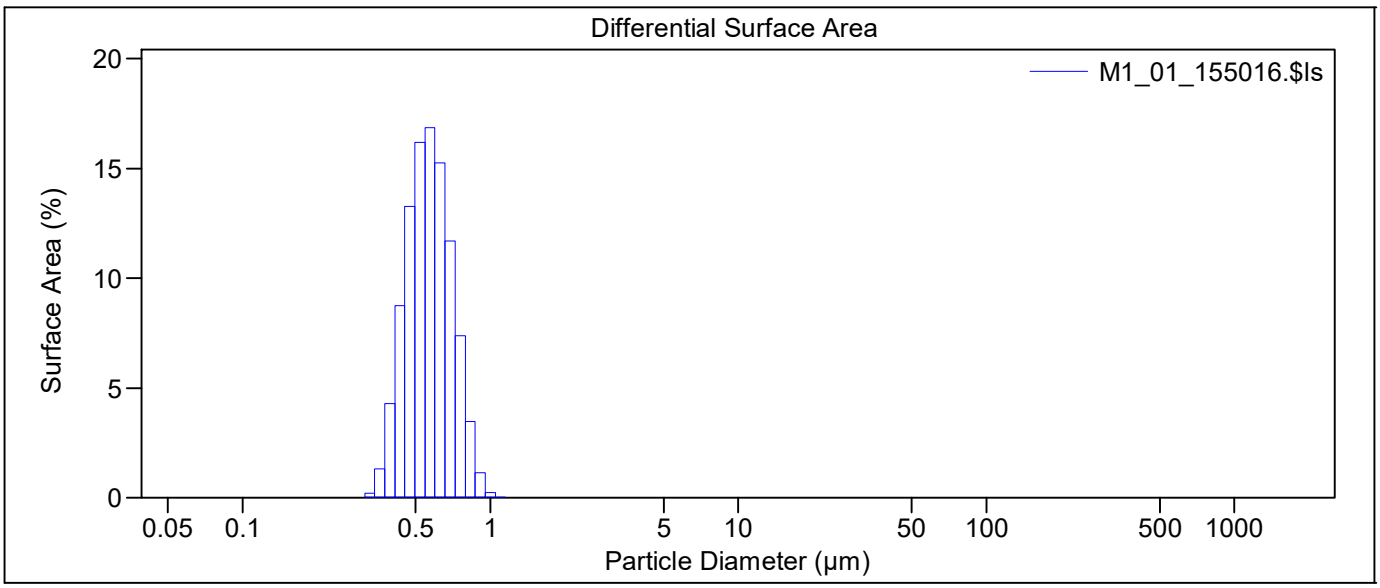
Calculations from 0.040 µm to 2000 µm

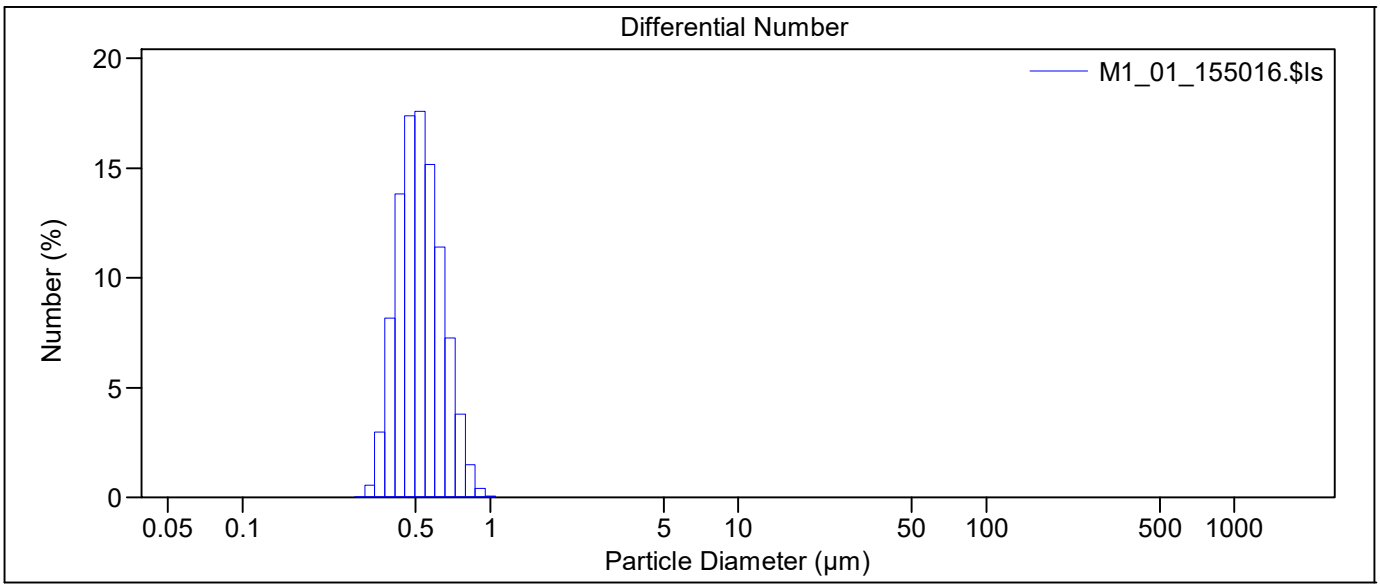
Number:	100%		
Mean:	0.531 µm	S.D.:	0.108 µm
Median:	0.516 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.029	C.V.:	20.4%
Mode:	0.520 µm	Skewness:	0.732 Right skewed
		Kurtosis:	0.452 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.404 µm	0.451 µm	0.516 µm	0.596 µm	0.683 µm

Beckman Coulter LS13320







M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0046	0.0089	0.030
23	0.311	0.326	0.11	0.20	0.54
24	0.342	0.358	0.81	1.30	2.97
25	0.375	0.393	2.93	4.29	8.15
26	0.412	0.431	6.56	8.76	13.8
27	0.452	0.474	10.9	13.3	17.4
28	0.496	0.520	14.6	16.2	17.6
29	0.545	0.571	16.7	16.8	15.2
30	0.598	0.627	16.6	15.2	11.4
31	0.656	0.688	14.0	11.7	7.26
32	0.721	0.755	9.65	7.36	3.79
33	0.791	0.829	4.97	3.46	1.48
34	0.868	0.910	1.79	1.13	0.40
35	0.953	0.999	0.40	0.23	0.068
36	1.047	1.097	0.047	0.024	0.0060
37	1.149	1.204	0.0022	0.0010	0.00021
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_02_155204.$ls M1_02_155204.$ls		
File ID:	M1		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.88%		
LS 13 320	Universal Liquid Module		
Start time:	15:50 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_02_155204.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.601 µm	S.D.:	0.124 µm
Median:	0.590 µm	Variance:	0.015 μm^2
Mean/Median ratio:	1.019	C.V.:	20.6%
Mode:	0.571 µm	Skewness:	0.477 Right skewed
		Kurtosis:	-0.023 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.449 µm	0.508 µm	0.590 µm	0.684 µm	0.772 µm

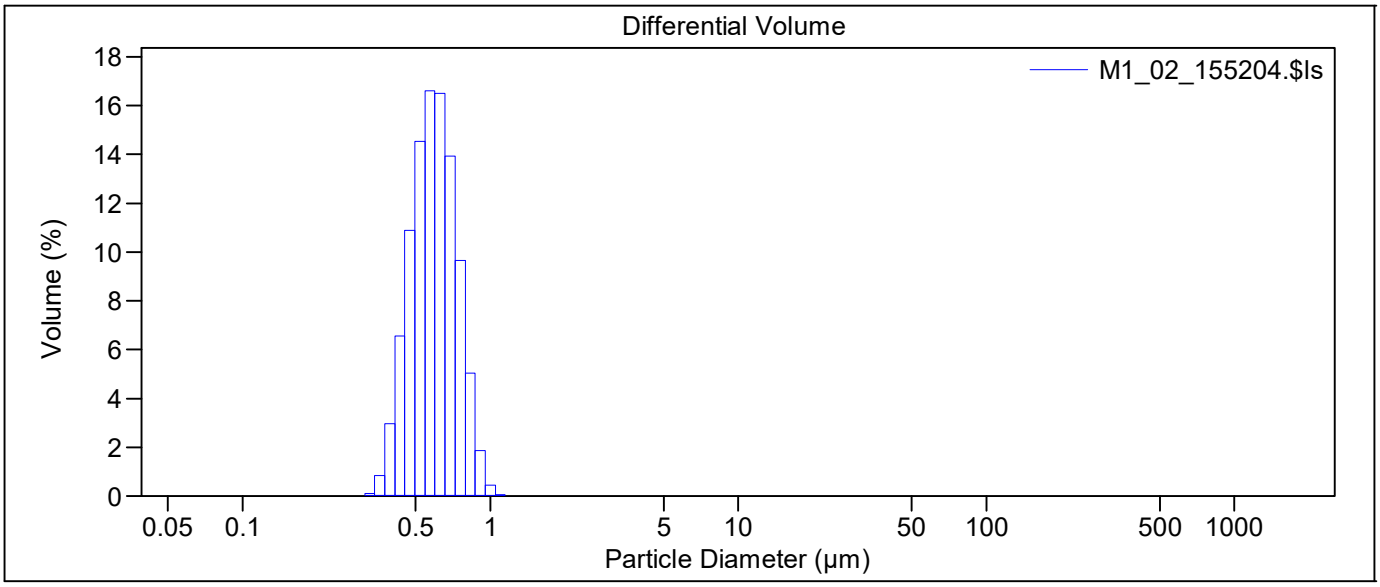
Number Statistics (Arithmetic) M1_02_155204.$ls

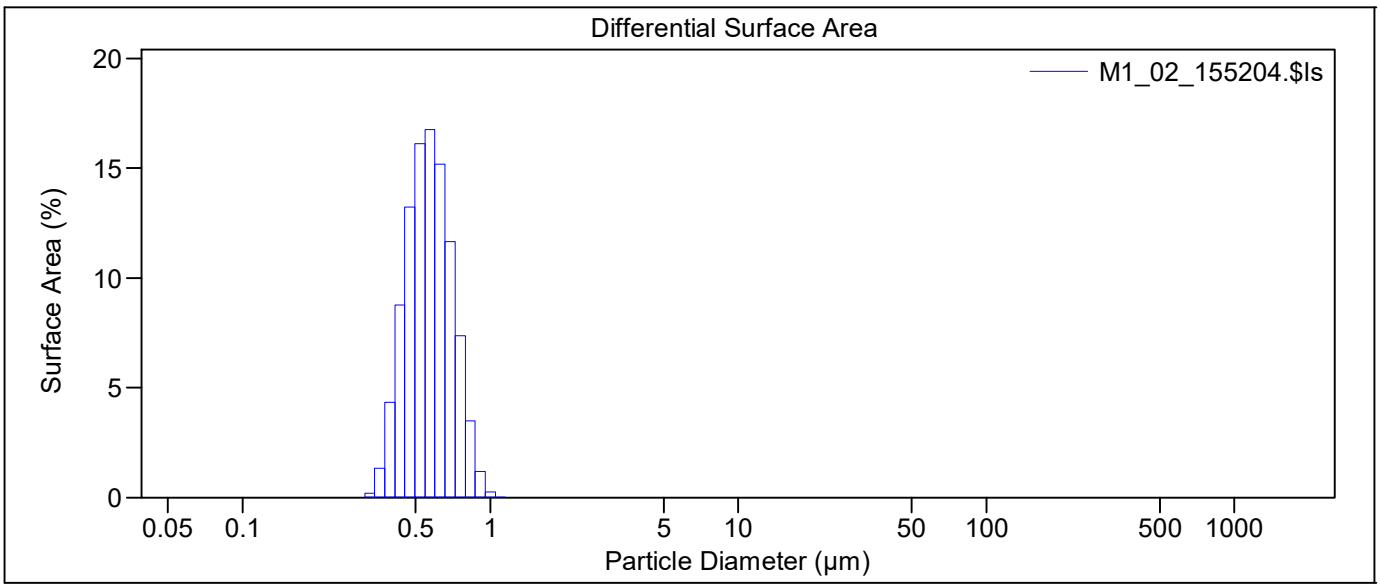
Calculations from 0.040 µm to 2000 µm

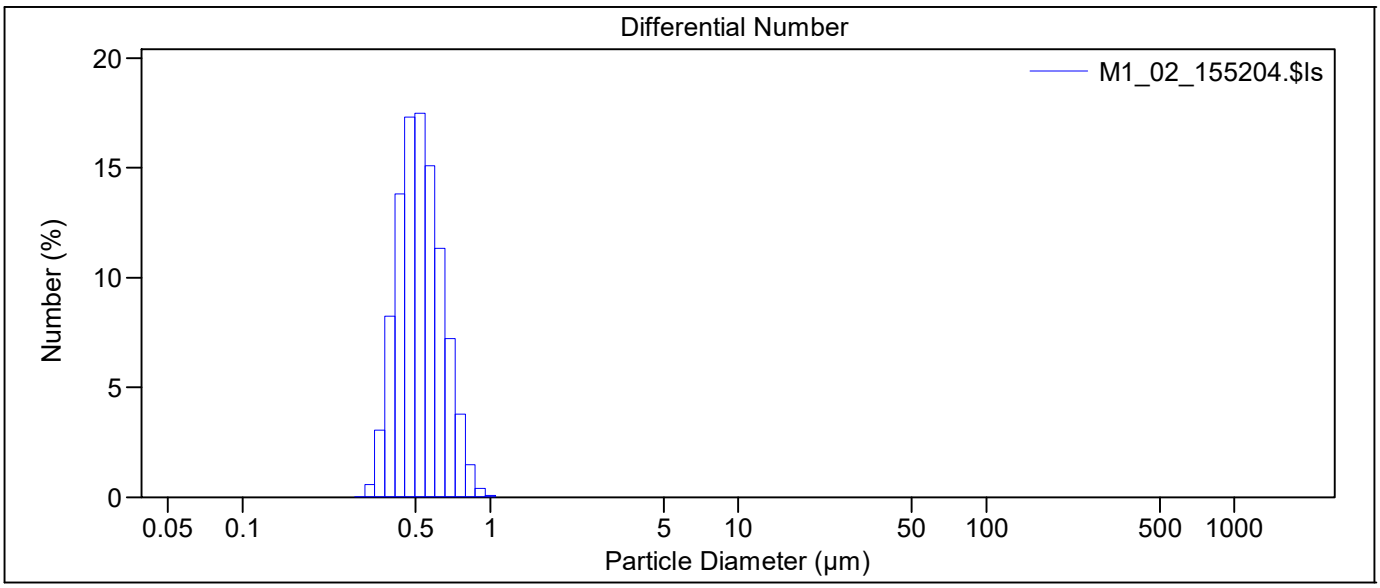
Number:	100%		
Mean:	0.531 µm	S.D.:	0.109 µm
Median:	0.516 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.029	C.V.:	20.5%
Mode:	0.520 µm	Skewness:	0.741 Right skewed
		Kurtosis:	0.483 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.403 µm	0.450 µm	0.516 µm	0.596 µm	0.683 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0050	0.0098	0.032
23	0.311	0.326	0.12	0.21	0.57
24	0.342	0.358	0.83	1.33	3.05
25	0.375	0.393	2.96	4.34	8.24
26	0.412	0.431	6.57	8.77	13.8
27	0.452	0.474	10.9	13.2	17.3
28	0.496	0.520	14.5	16.1	17.5
29	0.545	0.571	16.6	16.8	15.1
30	0.598	0.627	16.5	15.2	11.4
31	0.656	0.688	13.9	11.7	7.24
32	0.721	0.755	9.65	7.37	3.79
33	0.791	0.829	5.04	3.50	1.50
34	0.868	0.910	1.87	1.19	0.42
35	0.953	0.999	0.45	0.26	0.077
36	1.047	1.097	0.057	0.030	0.0074
37	1.149	1.204	0.0031	0.0015	0.00030
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_03_155351.$ls M1_03_155351.$ls		
File ID:	M1		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.81%		
LS 13 320	Universal Liquid Module		
Start time:	15:52 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_03_155351.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.604 µm	S.D.:	0.130 µm
Median:	0.591 µm	Variance:	0.017 μm^2
Mean/Median ratio:	1.022	C.V.:	21.5%
Mode:	0.571 µm	Skewness:	0.510 Right skewed
		Kurtosis:	-0.0012 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.444 µm	0.506 µm	0.591 µm	0.690 µm	0.782 µm

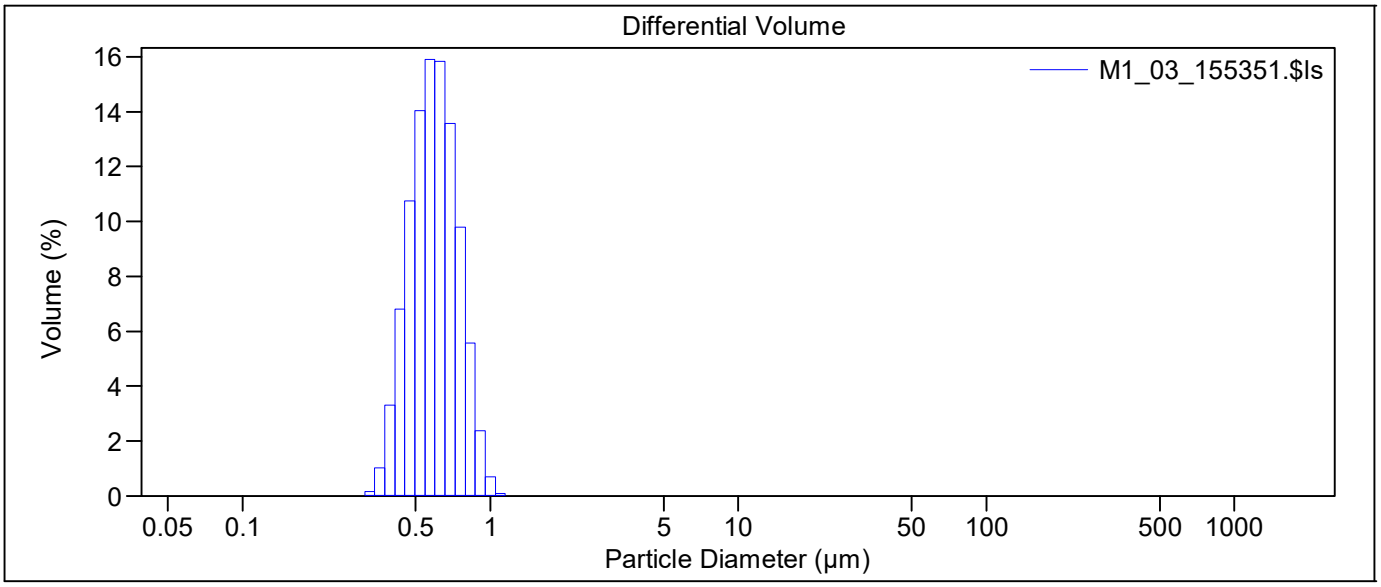
Number Statistics (Arithmetic) M1_03_155351.$ls

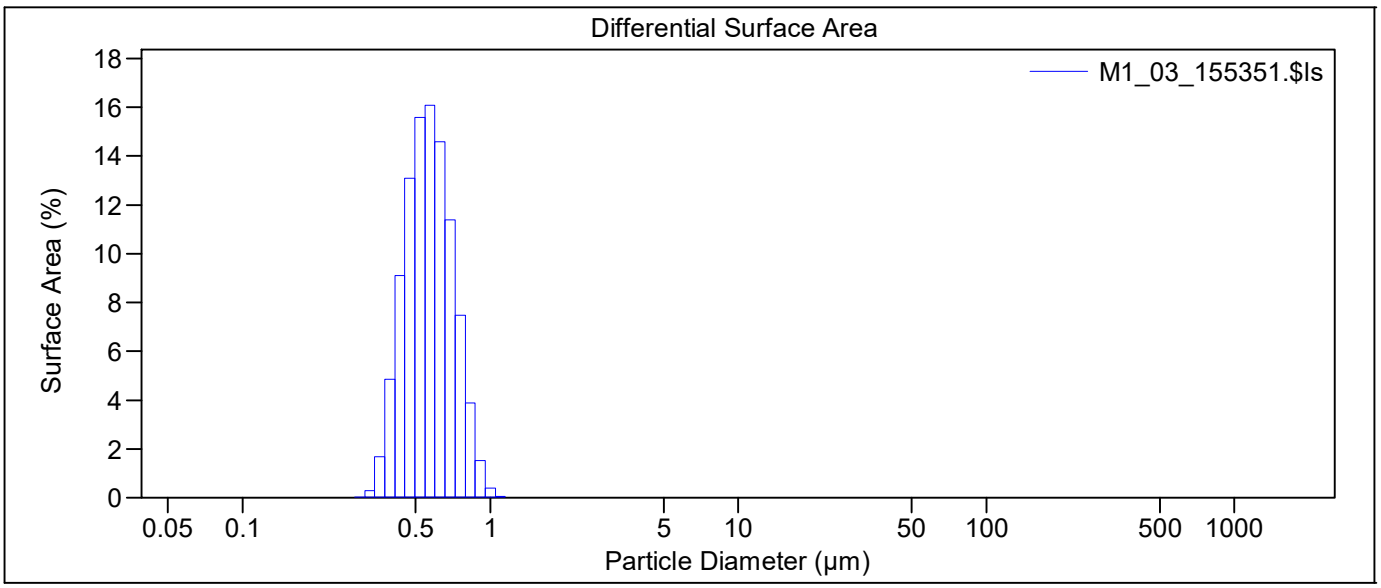
Calculations from 0.040 µm to 2000 µm

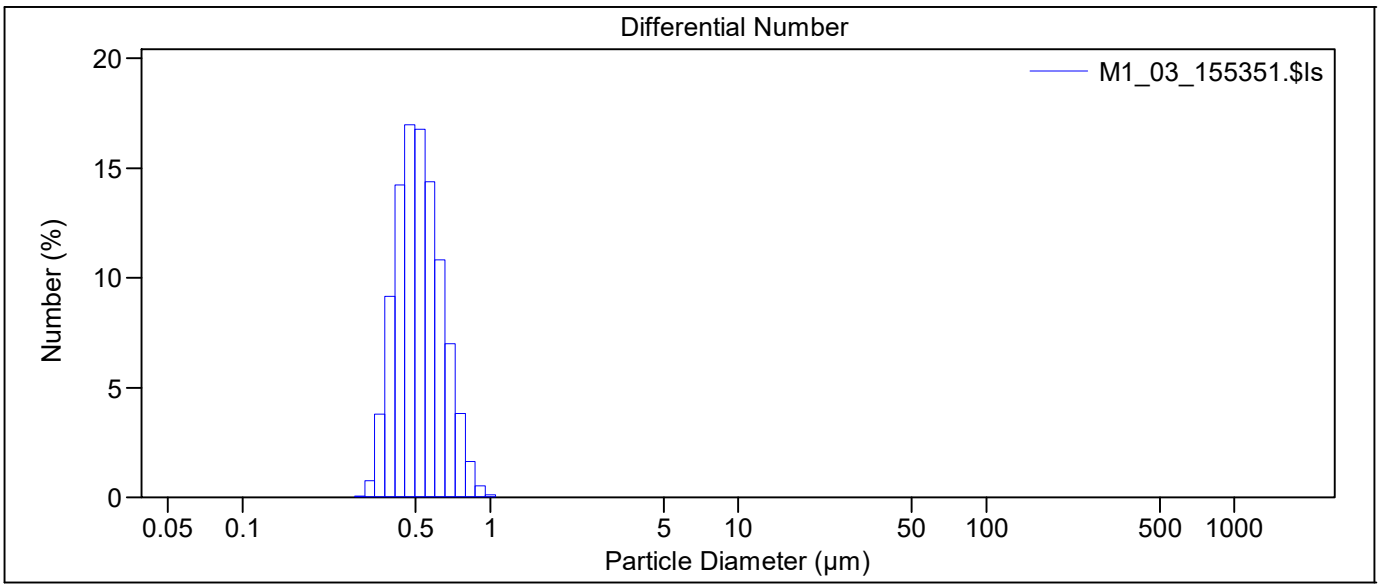
Number:	100%		
Mean:	0.528 µm	S.D.:	0.112 µm
Median:	0.511 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.033	C.V.:	21.3%
Mode:	0.474 µm	Skewness:	0.797 Right skewed
		Kurtosis:	0.609 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.397 µm	0.444 µm	0.511 µm	0.594 µm	0.685 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0080	0.016	0.051
23	0.311	0.326	0.16	0.28	0.76
24	0.342	0.358	1.04	1.67	3.79
25	0.375	0.393	3.31	4.86	9.15
26	0.412	0.431	6.81	9.10	14.2
27	0.452	0.474	10.7	13.1	17.0
28	0.496	0.520	14.0	15.6	16.8
29	0.545	0.571	15.9	16.1	14.4
30	0.598	0.627	15.8	14.6	10.8
31	0.656	0.688	13.6	11.4	6.99
32	0.721	0.755	9.80	7.49	3.82
33	0.791	0.829	5.57	3.88	1.64
34	0.868	0.910	2.39	1.51	0.53
35	0.953	0.999	0.70	0.40	0.12
36	1.047	1.097	0.10	0.055	0.013
37	1.149	1.204	0.0062	0.0030	0.00059
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_04_160304.$ls M1_04_160304.$ls		
File ID:	M1		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.95%		
LS 13 320	Universal Liquid Module		
Start time:	16:01 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_04_160304.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.598 µm	S.D.:	0.121 µm
Median:	0.588 µm	Variance:	0.015 μm^2
Mean/Median ratio:	1.017	C.V.:	20.2%
Mode:	0.571 µm	Skewness:	0.410 Right skewed
		Kurtosis:	-0.208 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.448 µm	0.507 µm	0.588 µm	0.681 µm	0.766 µm

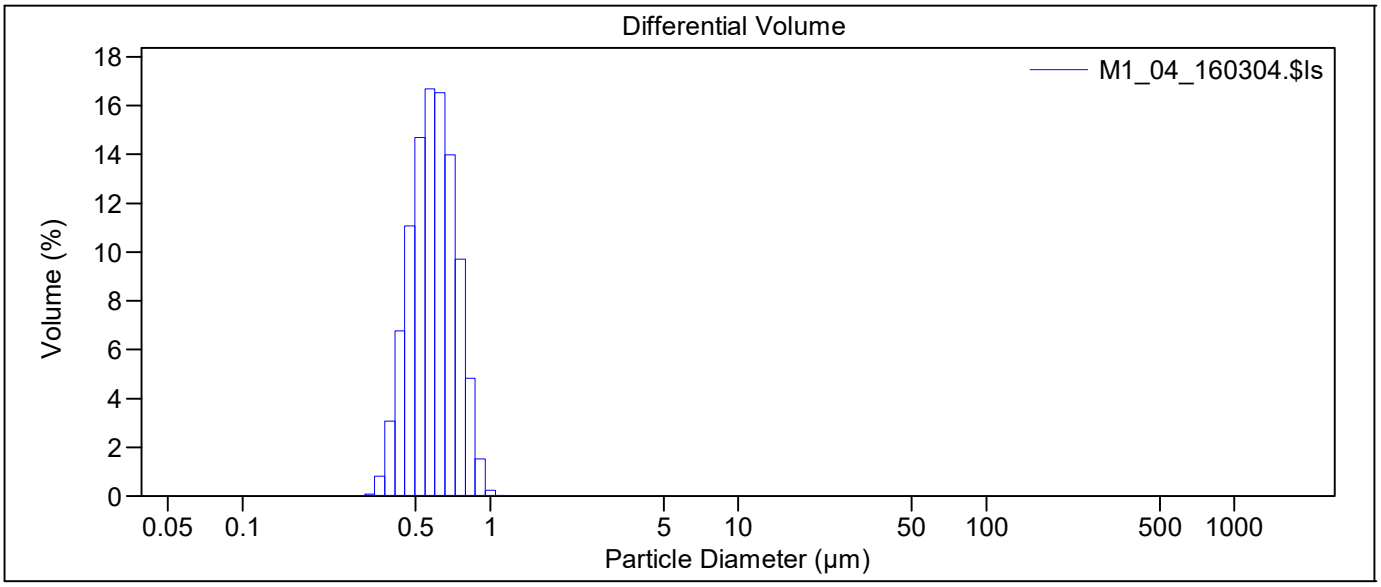
Number Statistics (Arithmetic) M1_04_160304.$ls

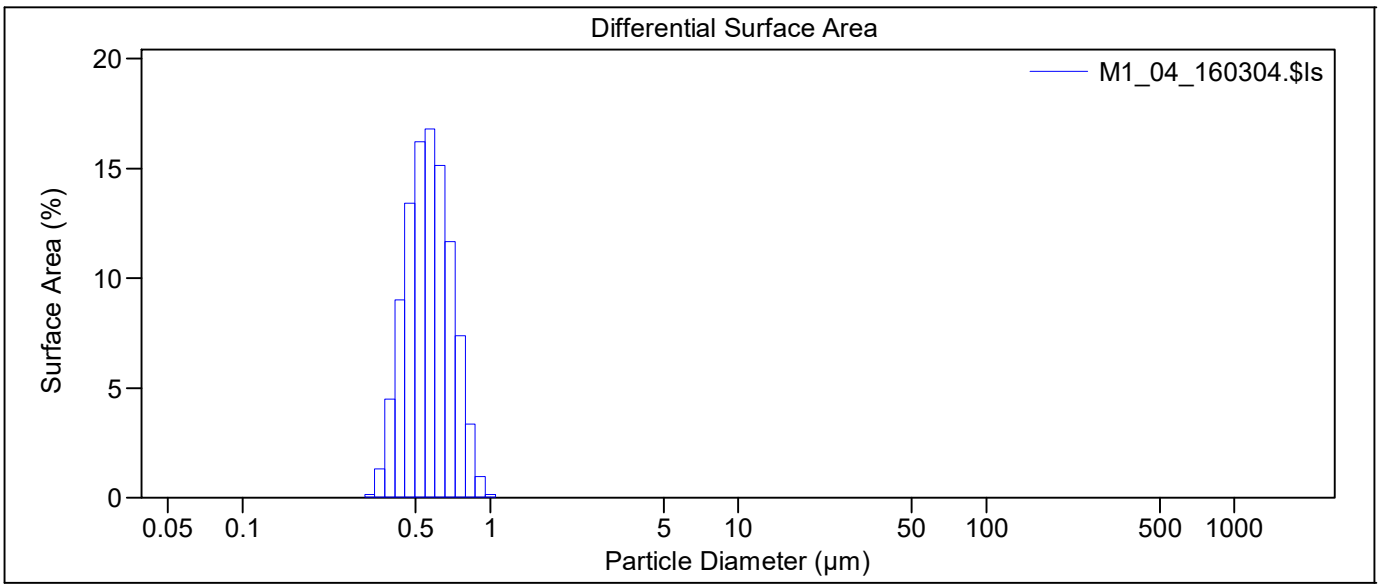
Calculations from 0.040 µm to 2000 µm

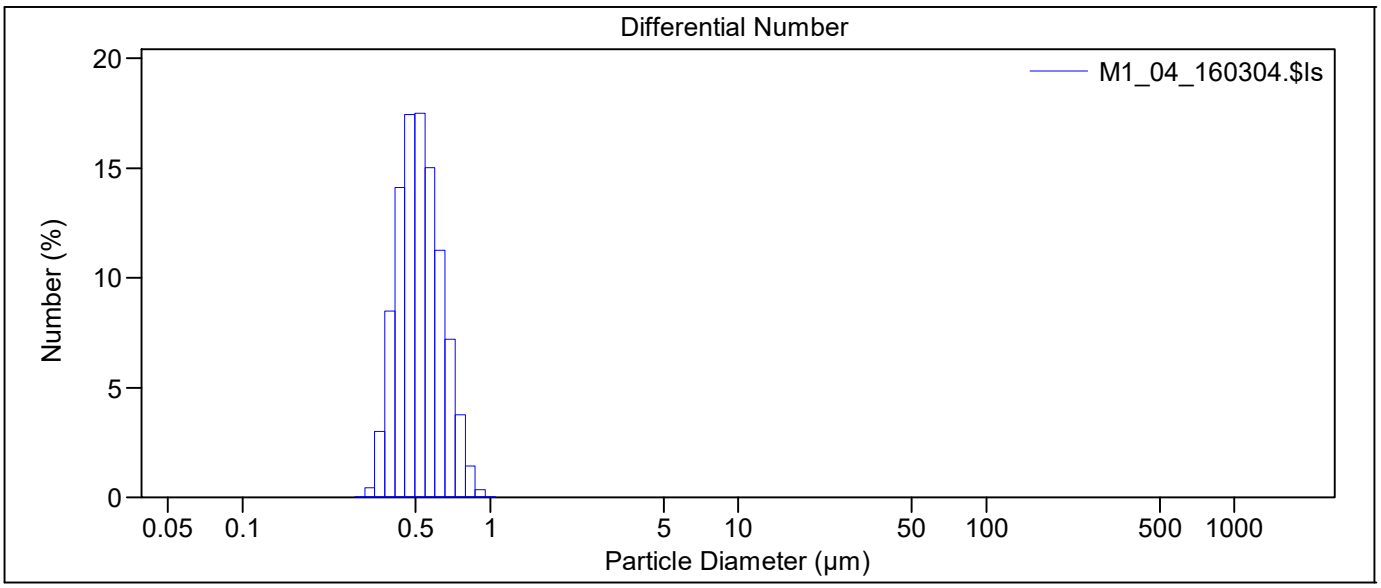
Number:	100%		
Mean:	0.529 µm	S.D.:	0.107 µm
Median:	0.514 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.029	C.V.:	20.2%
Mode:	0.520 µm	Skewness:	0.717 Right skewed
		Kurtosis:	0.337 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.403 µm	0.449 µm	0.514 µm	0.594 µm	0.681 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0024	0.0047	0.016
23	0.311	0.326	0.089	0.16	0.43
24	0.342	0.358	0.83	1.32	3.01
25	0.375	0.393	3.08	4.50	8.50
26	0.412	0.431	6.76	9.00	14.1
27	0.452	0.474	11.1	13.4	17.4
28	0.496	0.520	14.7	16.2	17.5
29	0.545	0.571	16.7	16.8	15.0
30	0.598	0.627	16.5	15.1	11.2
31	0.656	0.688	14.0	11.7	7.19
32	0.721	0.755	9.70	7.37	3.77
33	0.791	0.829	4.82	3.34	1.42
34	0.868	0.910	1.51	0.95	0.34
35	0.953	0.999	0.24	0.14	0.041
36	1.047	1.097	0.016	0.0084	0.0020
37	1.149	1.204	0.00024	0.00011	0.000023
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_05_160451.$ls M1_05_160451.$ls		
File ID:	M1		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.93%		
LS 13 320	Universal Liquid Module		
Start time:	16:03 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_05_160451.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.599 µm	S.D.:	0.123 µm
Median:	0.588 µm	Variance:	0.015 μm^2
Mean/Median ratio:	1.018	C.V.:	20.5%
Mode:	0.571 µm	Skewness:	0.439 Right skewed
		Kurtosis:	-0.143 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.446 µm	0.506 µm	0.588 µm	0.683 µm	0.770 µm

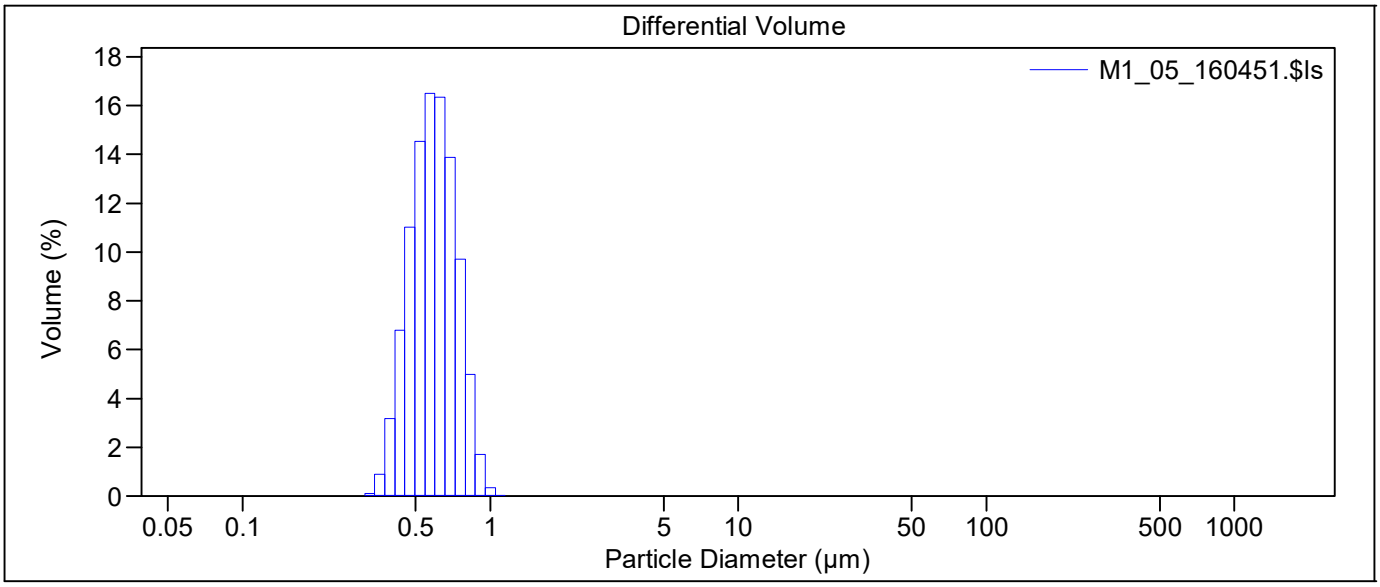
Number Statistics (Arithmetic) M1_05_160451.$ls

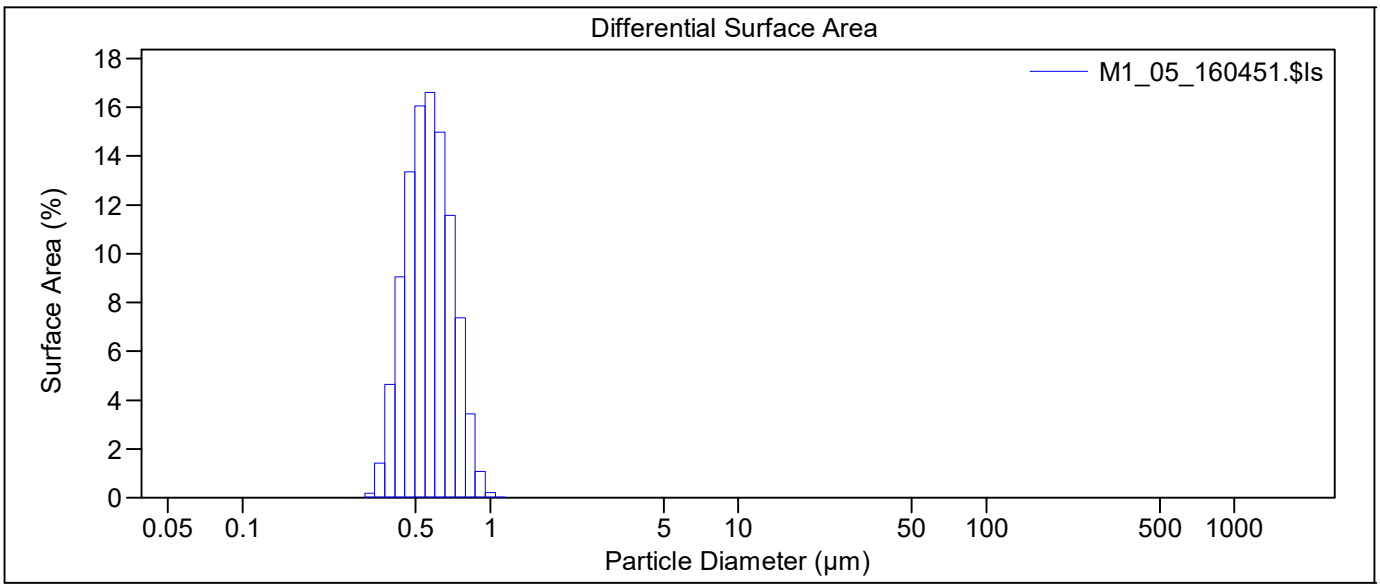
Calculations from 0.040 µm to 2000 µm

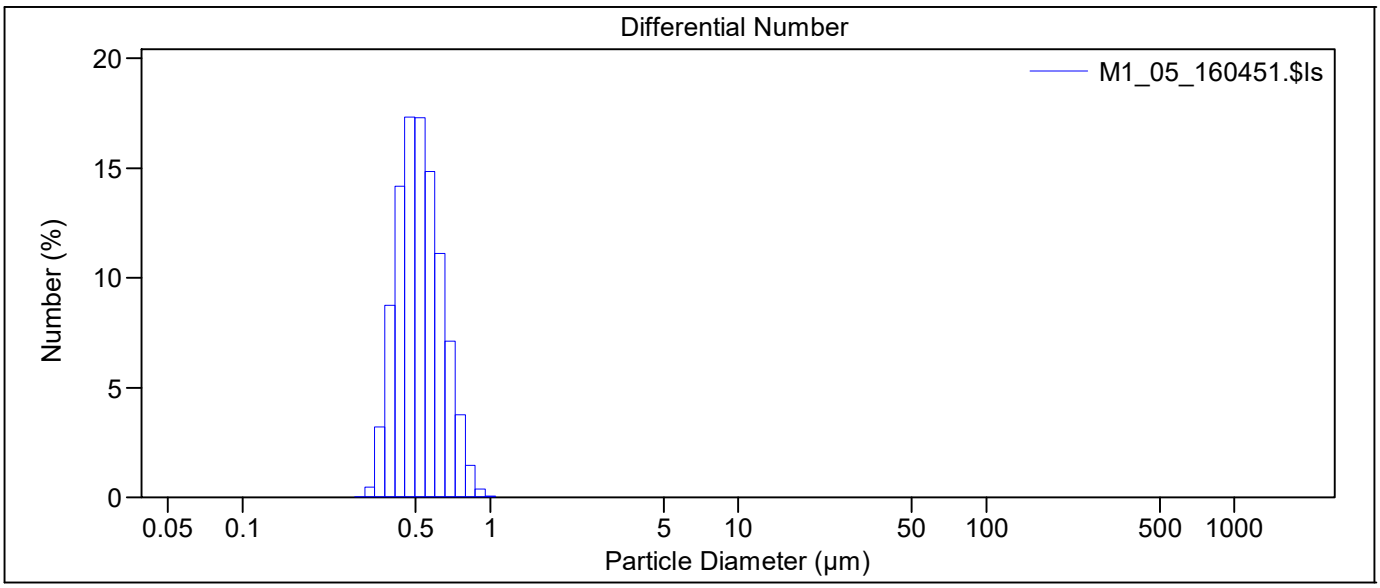
Number:	100%		
Mean:	0.529 µm	S.D.:	0.108 µm
Median:	0.513 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.030	C.V.:	20.5%
Mode:	0.474 µm	Skewness:	0.740 Right skewed
		Kurtosis:	0.409 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.401 µm	0.447 µm	0.513 µm	0.594 µm	0.682 µm

Beckman Coulter LS13320







M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0028	0.0055	0.018
23	0.311	0.326	0.099	0.17	0.48
24	0.342	0.358	0.88	1.42	3.22
25	0.375	0.393	3.17	4.64	8.74
26	0.412	0.431	6.81	9.06	14.2
27	0.452	0.474	11.0	13.4	17.3
28	0.496	0.520	14.5	16.1	17.3
29	0.545	0.571	16.5	16.6	14.8
30	0.598	0.627	16.3	15.0	11.1
31	0.656	0.688	13.9	11.6	7.13
32	0.721	0.755	9.71	7.38	3.77
33	0.791	0.829	4.98	3.45	1.46
34	0.868	0.910	1.71	1.08	0.38
35	0.953	0.999	0.35	0.20	0.058
36	1.047	1.097	0.031	0.016	0.0039
37	1.149	1.204	0.00074	0.00035	0.000071
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_06_160639.$ls M1_06_160639.$ls		
File ID:	M1		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.91%		
LS 13 320	Universal Liquid Module		
Start time:	16:04 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_06_160639.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.600 µm	S.D.:	0.125 µm
Median:	0.589 µm	Variance:	0.016 μm^2
Mean/Median ratio:	1.019	C.V.:	20.8%
Mode:	0.571 µm	Skewness:	0.461 Right skewed
		Kurtosis:	-0.102 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.445 µm	0.506 µm	0.589 µm	0.684 µm	0.773 µm

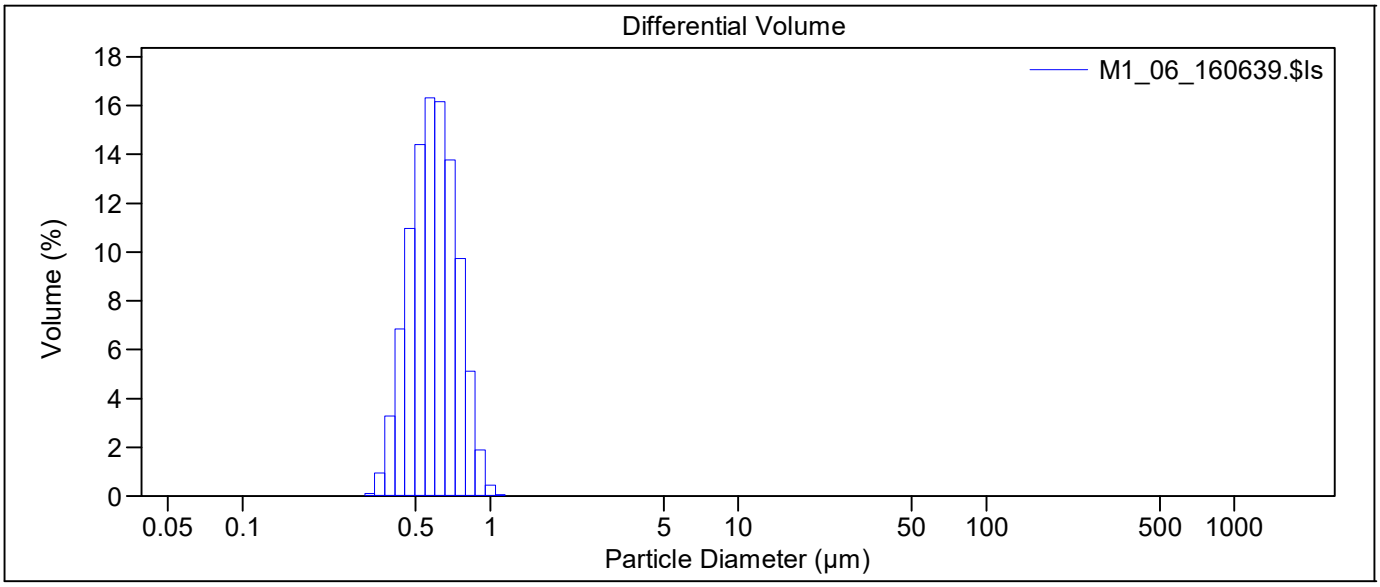
Number Statistics (Arithmetic) M1_06_160639.$ls

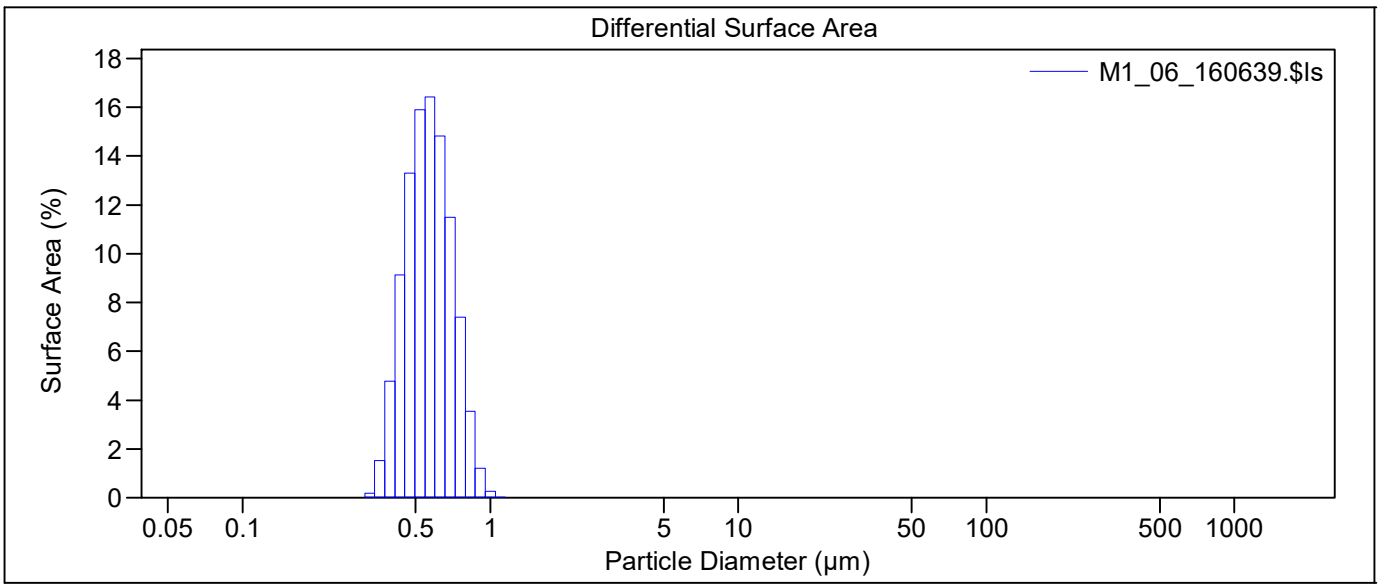
Calculations from 0.040 µm to 2000 µm

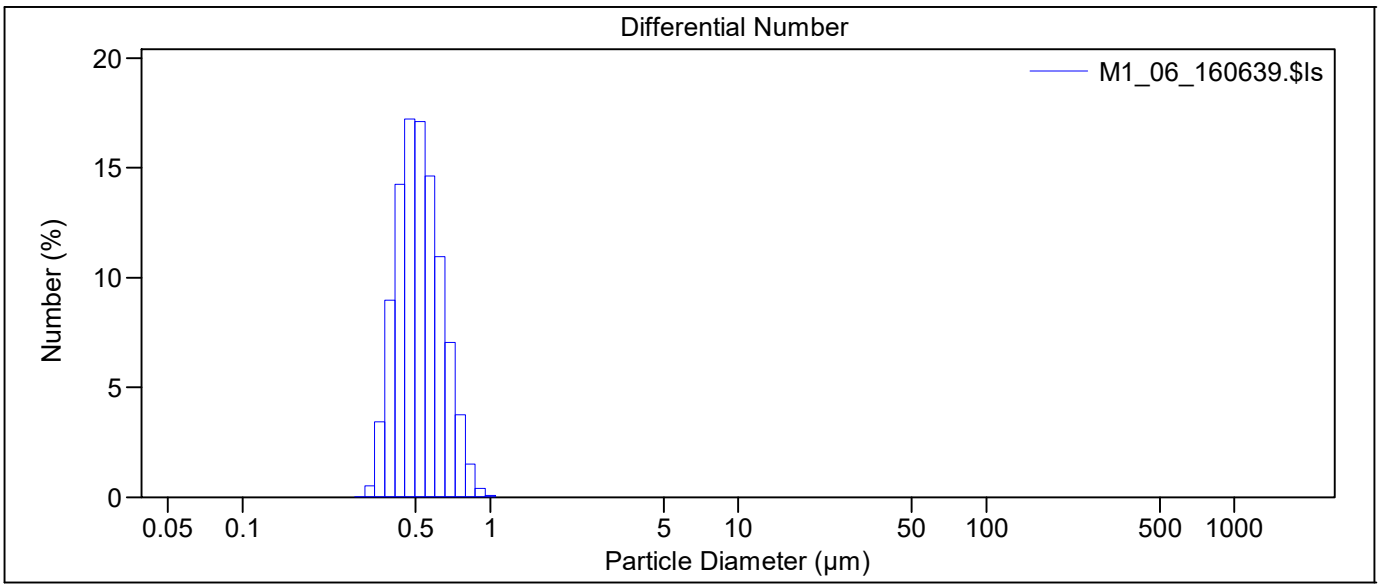
Number:	100%		
Mean:	0.528 µm	S.D.:	0.109 µm
Median:	0.512 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.031	C.V.:	20.7%
Mode:	0.474 µm	Skewness:	0.760 Right skewed
		Kurtosis:	0.467 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.400 µm	0.446 µm	0.512 µm	0.594 µm	0.682 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0032	0.0063	0.021
23	0.311	0.326	0.11	0.19	0.52
24	0.342	0.358	0.94	1.51	3.43
25	0.375	0.393	3.27	4.78	8.99
26	0.412	0.431	6.85	9.13	14.2
27	0.452	0.474	11.0	13.3	17.2
28	0.496	0.520	14.4	15.9	17.1
29	0.545	0.571	16.3	16.4	14.6
30	0.598	0.627	16.2	14.8	11.0
31	0.656	0.688	13.8	11.5	7.06
32	0.721	0.755	9.72	7.40	3.77
33	0.791	0.829	5.12	3.55	1.50
34	0.868	0.910	1.90	1.20	0.42
35	0.953	0.999	0.44	0.25	0.073
36	1.047	1.097	0.044	0.023	0.0056
37	1.149	1.204	0.0013	0.00060	0.00012
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_07_161603.$ls M1_07_161603.$ls		
File ID:	M1		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.83%		
LS 13 320	Universal Liquid Module		
Start time:	16:14 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_07_161603.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.602 µm	S.D.:	0.129 µm
Median:	0.590 µm	Variance:	0.017 μm^2
Mean/Median ratio:	1.021	C.V.:	21.4%
Mode:	0.571 µm	Skewness:	0.495 Right skewed
		Kurtosis:	-0.033 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.444 µm	0.506 µm	0.590 µm	0.688 µm	0.779 µm

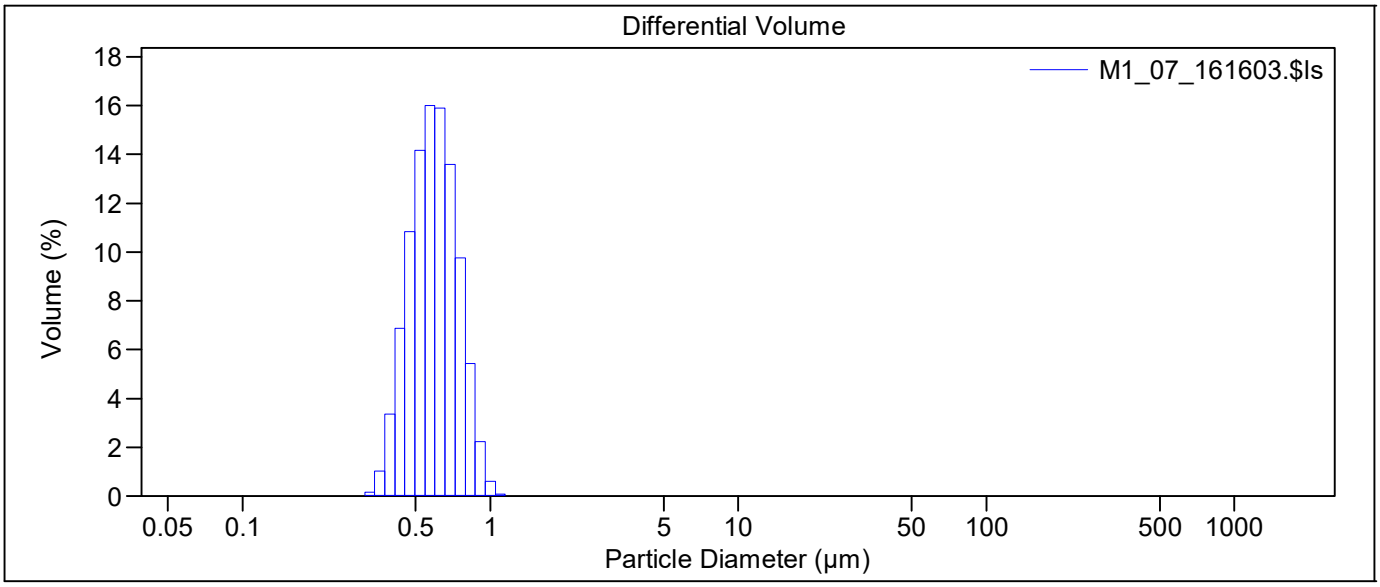
Number Statistics (Arithmetic) M1_07_161603.$ls

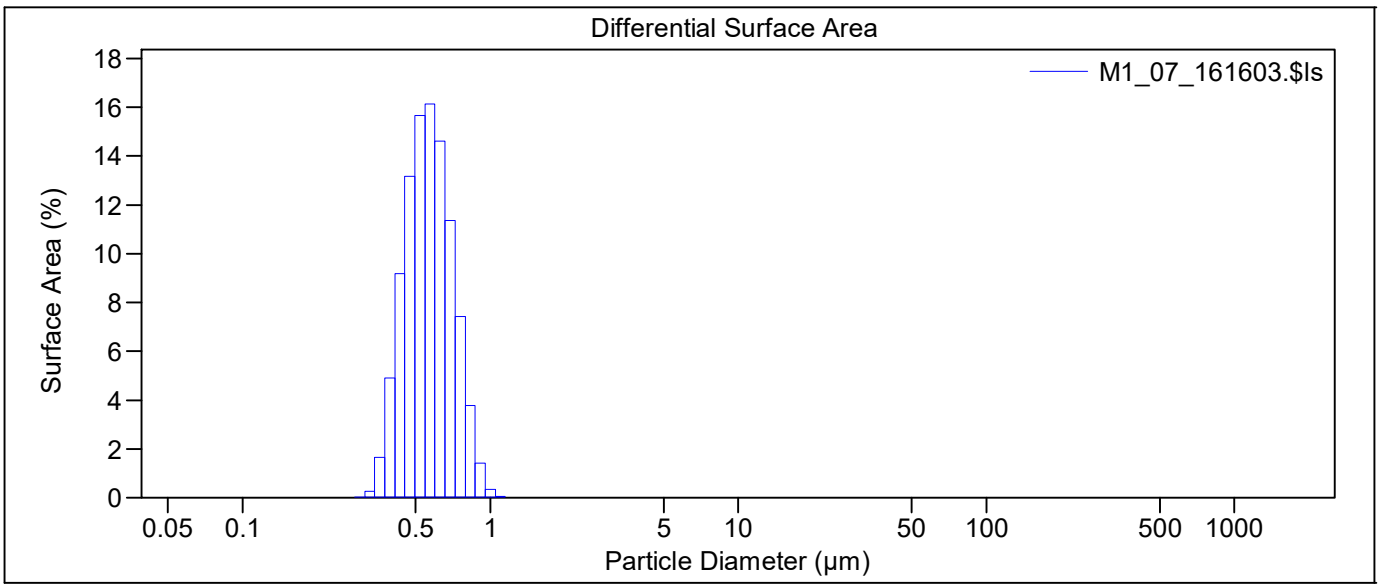
Calculations from 0.040 µm to 2000 µm

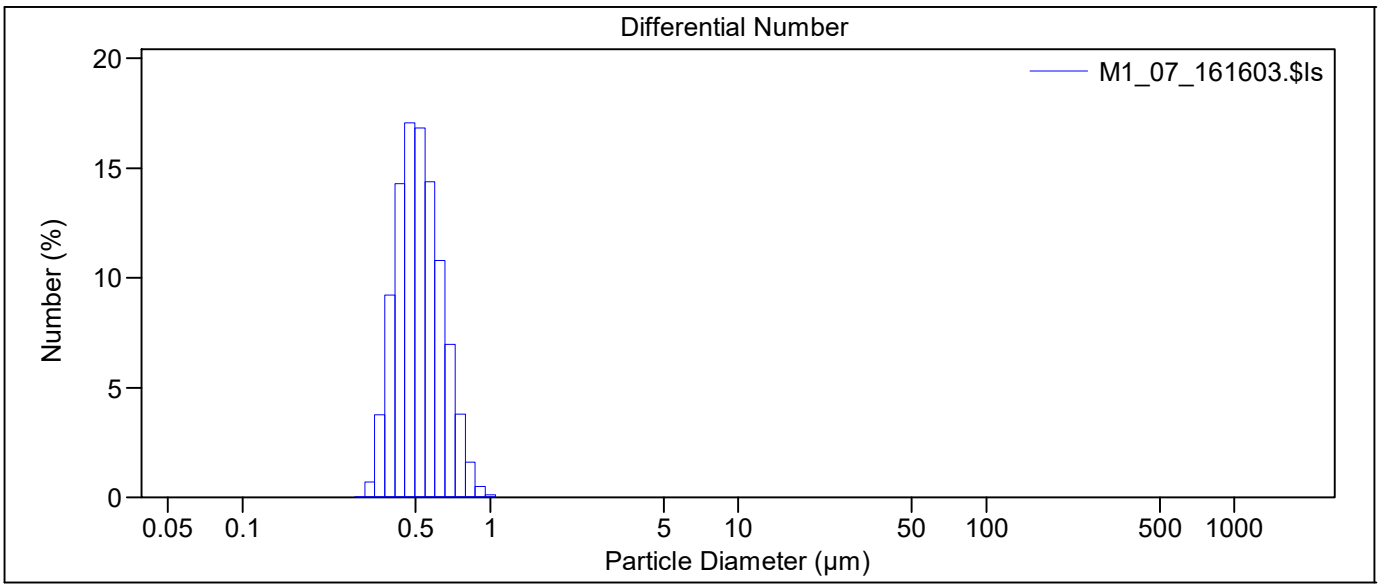
Number:	100%		
Mean:	0.527 µm	S.D.:	0.111 µm
Median:	0.510 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.032	C.V.:	21.1%
Mode:	0.474 µm	Skewness:	0.787 Right skewed
		Kurtosis:	0.568 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.397 µm	0.444 µm	0.510 µm	0.593 µm	0.684 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0068	0.013	0.043
23	0.311	0.326	0.15	0.26	0.71
24	0.342	0.358	1.04	1.66	3.77
25	0.375	0.393	3.35	4.90	9.21
26	0.412	0.431	6.87	9.17	14.3
27	0.452	0.474	10.8	13.2	17.0
28	0.496	0.520	14.2	15.7	16.8
29	0.545	0.571	16.0	16.1	14.4
30	0.598	0.627	15.9	14.6	10.8
31	0.656	0.688	13.6	11.4	6.97
32	0.721	0.755	9.75	7.43	3.78
33	0.791	0.829	5.42	3.77	1.59
34	0.868	0.910	2.23	1.41	0.49
35	0.953	0.999	0.61	0.35	0.10
36	1.047	1.097	0.081	0.043	0.010
37	1.149	1.204	0.0040	0.0019	0.00038
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_08_161751.$ls M1_08_161751.$ls		
File ID:	M1		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.71%		
LS 13 320	Universal Liquid Module		
Start time:	16:16 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_08_161751.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.623 µm	S.D.:	0.323 µm
Median:	0.577 µm	Variance:	0.104 µm^2
Mean/Median ratio:	1.079	C.V.:	51.8%
Mode:	0.688 µm	Skewness:	0.614 Right skewed
		Kurtosis:	-0.082 Platykurtic

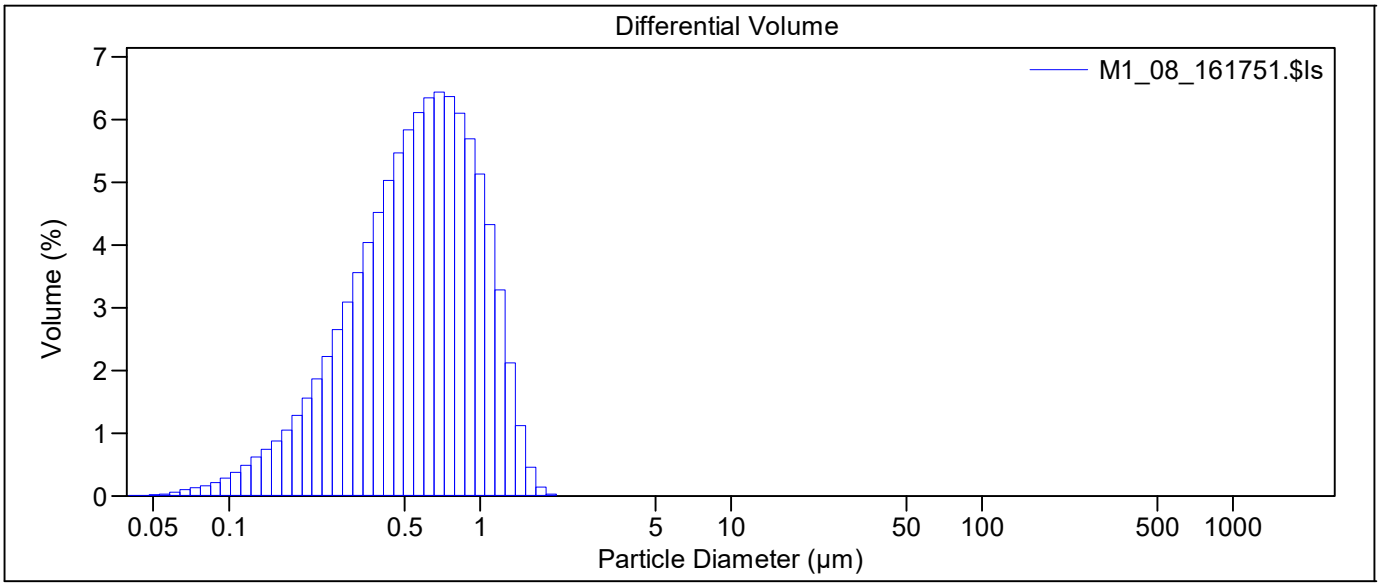
<10%	<25%	<50%	<75%	<90%
0.236 µm	0.371 µm	0.577 µm	0.835 µm	1.082 µm

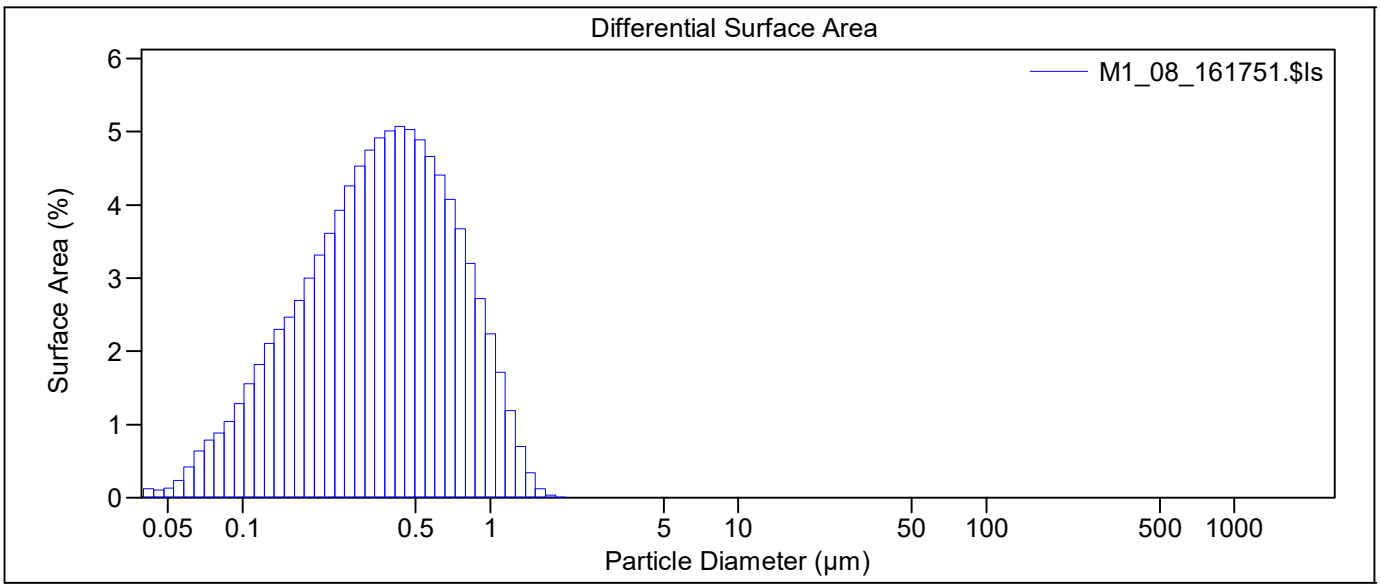
Number Statistics (Arithmetic) M1_08_161751.$ls

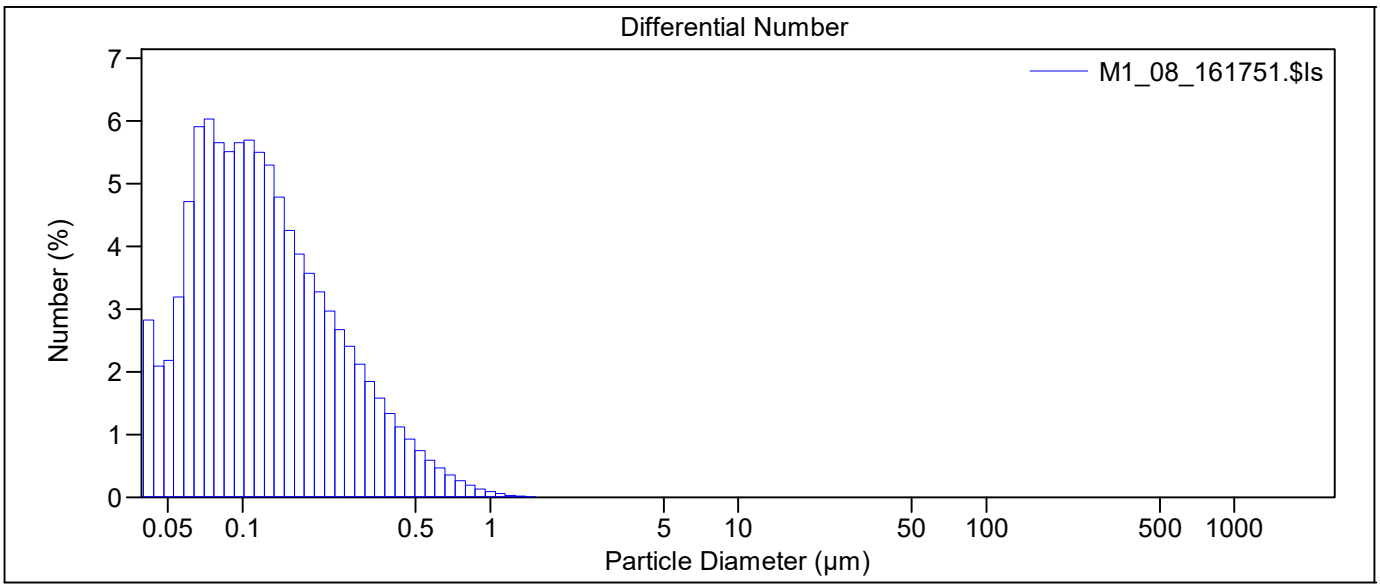
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.156 µm	S.D.:	0.131 µm
Median:	0.113 µm	Variance:	0.017 µm^2
Mean/Median ratio:	1.384	C.V.:	83.9%
Mode:	0.073 µm	Skewness:	2.794 Right skewed
		Kurtosis:	11.56 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.058 µm	0.075 µm	0.113 µm	0.187 µm	0.309 µm


Differential Volume
M1_08_161751.$ls
Volume (%)
0
1
2
3
4
5
6
7
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M1_08_161751.$ls
Surface Area (%)
0
1
2
3
4
5
6
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M1_08_161751.$ls
Number (%)
0
1
2
3
4
5
6
7
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.012	0.12	2.83
2	0.044	0.046	0.011	0.11	2.09
3	0.048	0.050	0.016	0.13	2.18
4	0.053	0.055	0.030	0.24	3.20
5	0.058	0.061	0.059	0.42	4.71
6	0.064	0.067	0.098	0.64	5.91
7	0.070	0.073	0.13	0.78	6.03
8	0.077	0.080	0.16	0.89	5.65
9	0.084	0.088	0.21	1.04	5.51
10	0.093	0.097	0.29	1.29	5.66
11	0.102	0.106	0.38	1.56	5.69
12	0.112	0.117	0.49	1.82	5.50
13	0.122	0.128	0.62	2.11	5.30
14	0.134	0.141	0.74	2.30	4.79
15	0.148	0.155	0.87	2.46	4.26
16	0.162	0.170	1.05	2.70	3.87
17	0.178	0.186	1.28	3.00	3.57
18	0.195	0.205	1.56	3.32	3.28
19	0.214	0.225	1.87	3.62	2.97
20	0.235	0.247	2.22	3.93	2.67
21	0.258	0.271	2.65	4.26	2.41
22	0.284	0.297	3.09	4.53	2.13
23	0.311	0.326	3.56	4.75	1.85
24	0.342	0.358	4.04	4.91	1.59
25	0.375	0.393	4.52	5.01	1.34
26	0.412	0.431	5.03	5.07	1.13
27	0.452	0.474	5.47	5.02	0.93
28	0.496	0.520	5.84	4.89	0.75
29	0.545	0.571	6.11	4.66	0.59
30	0.598	0.627	6.34	4.41	0.46
31	0.656	0.688	6.44	4.08	0.36
32	0.721	0.755	6.37	3.67	0.27
33	0.791	0.829	6.10	3.20	0.19
34	0.868	0.910	5.69	2.72	0.14
35	0.953	0.999	5.13	2.24	0.093
36	1.047	1.097	4.33	1.72	0.059
37	1.149	1.204	3.29	1.19	0.034
38	1.261	1.321	2.13	0.70	0.017
39	1.385	1.451	1.12	0.34	0.0066
40	1.520	1.592	0.46	0.13	0.0021
41	1.668	1.748	0.15	0.036	0.00049
42	1.832	1.919	0.030	0.0067	0.000075
43	2.011	2.107	0.0039	0.00082	0.000008
44	2.207	2.313	0.00023	0.000044	3.38E-7
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M1.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_09_161938.$ls M1_09_161938.$ls		
File ID:	M1		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.82%		
LS 13 320	Universal Liquid Module		
Start time:	16:17 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_09_161938.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.603 µm	S.D.:	0.129 µm
Median:	0.590 µm	Variance:	0.017 μm^2
Mean/Median ratio:	1.021	C.V.:	21.5%
Mode:	0.571 µm	Skewness:	0.500 Right skewed
		Kurtosis:	-0.028 Platykurtic

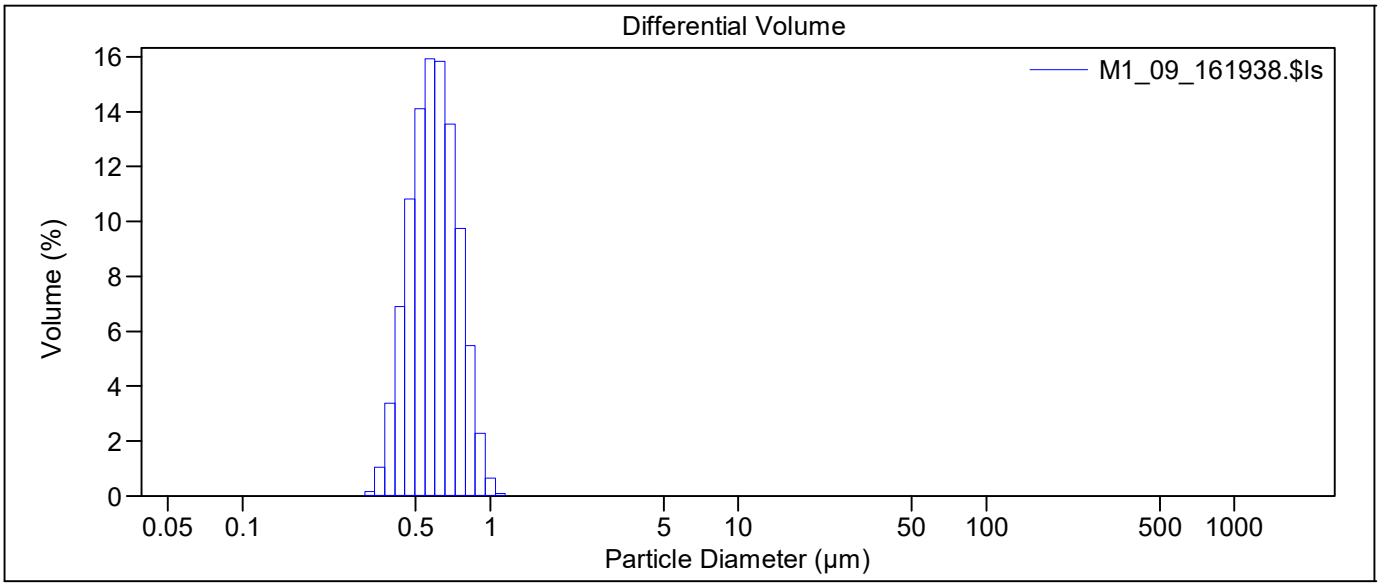
<10%	<25%	<50%	<75%	<90%
0.443 µm	0.505 µm	0.590 µm	0.689 µm	0.780 µm

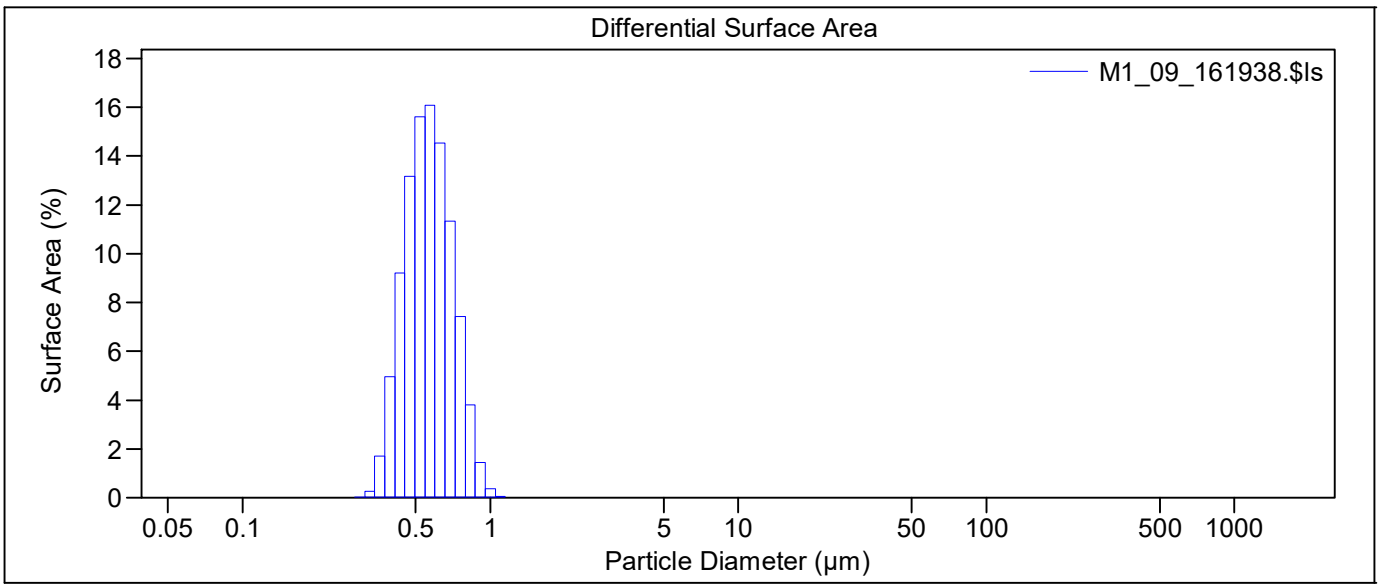
Number Statistics (Arithmetic) M1_09_161938.$ls

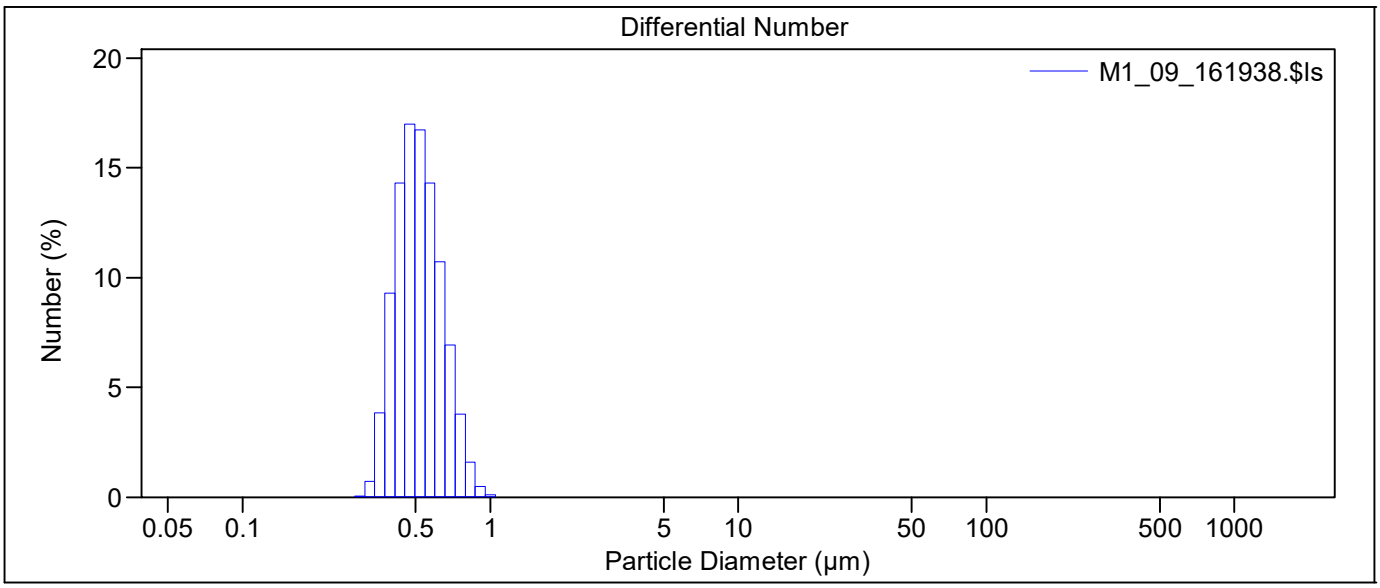
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.527 µm	S.D.:	0.112 µm
Median:	0.510 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.033	C.V.:	21.2%
Mode:	0.474 µm	Skewness:	0.794 Right skewed
		Kurtosis:	0.584 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.396 µm	0.443 µm	0.510 µm	0.593 µm	0.684 µm


Differential Volume
M1_09_161938.$ls
Volume (%)
0
2
4
6
8
10
12
14
16
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M1_09_161938.$ls
Surface Area (%)
0
2
4
6
8
10
12
14
16
18
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M1_09_161938.$ls
Number (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0071	0.014	0.045
23	0.311	0.326	0.15	0.27	0.73
24	0.342	0.358	1.06	1.70	3.85
25	0.375	0.393	3.38	4.96	9.30
26	0.412	0.431	6.90	9.20	14.3
27	0.452	0.474	10.8	13.2	17.0
28	0.496	0.520	14.1	15.6	16.7
29	0.545	0.571	15.9	16.1	14.3
30	0.598	0.627	15.8	14.5	10.7
31	0.656	0.688	13.5	11.3	6.94
32	0.721	0.755	9.75	7.44	3.78
33	0.791	0.829	5.47	3.80	1.60
34	0.868	0.910	2.29	1.45	0.51
35	0.953	0.999	0.64	0.37	0.11
36	1.047	1.097	0.087	0.046	0.011
37	1.149	1.204	0.0044	0.0021	0.00042
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_10_162918.$ls M1_10_162918.$ls		
File ID:	M1		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.96%		
LS 13 320	Universal Liquid Module		
Start time:	16:27 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_10_162918.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.597 µm	S.D.:	0.118 µm
Median:	0.587 µm	Variance:	0.014 μm^2
Mean/Median ratio:	1.016	C.V.:	19.8%
Mode:	0.571 µm	Skewness:	0.399 Right skewed
		Kurtosis:	-0.210 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.450 µm	0.508 µm	0.587 µm	0.678 µm	0.762 µm

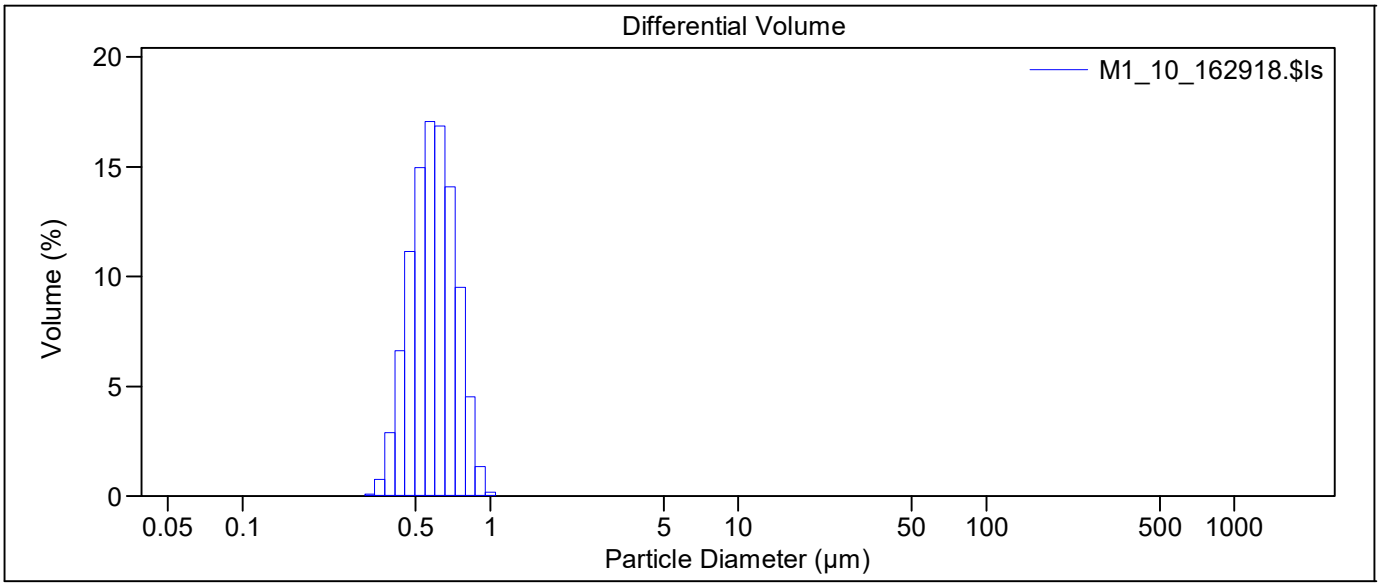
Number Statistics (Arithmetic) M1_10_162918.$ls

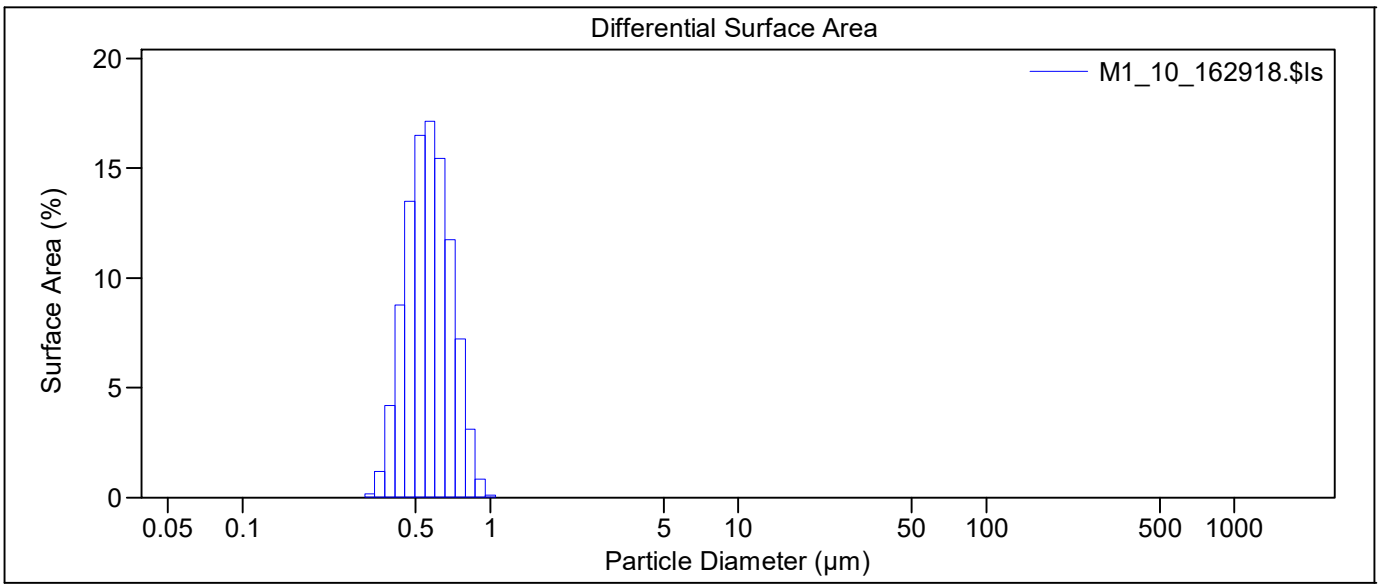
Calculations from 0.040 µm to 2000 µm

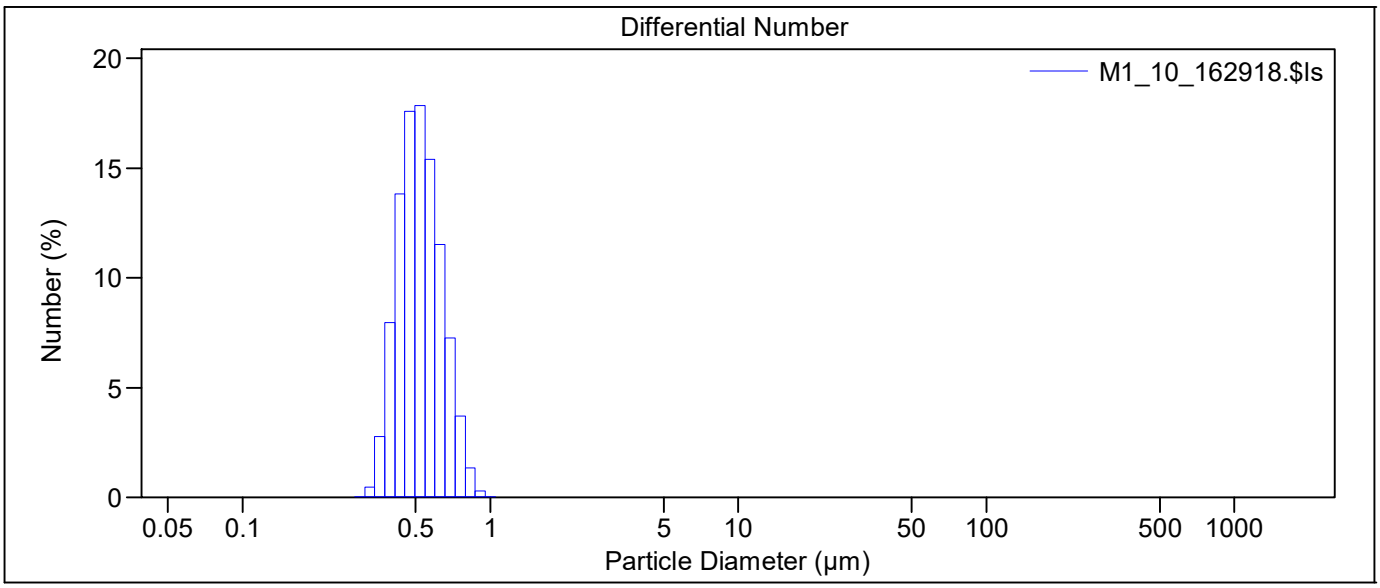
Number:	100%		
Mean:	0.531 µm	S.D.:	0.106 µm
Median:	0.516 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.027	C.V.:	19.9%
Mode:	0.520 µm	Skewness:	0.688 Right skewed
		Kurtosis:	0.299 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.406 µm	0.452 µm	0.516 µm	0.595 µm	0.680 µm

Beckman Coulter LS13320







M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0035	0.0067	0.022
23	0.311	0.326	0.098	0.17	0.47
24	0.342	0.358	0.75	1.21	2.76
25	0.375	0.393	2.88	4.20	7.95
26	0.412	0.431	6.61	8.79	13.8
27	0.452	0.474	11.1	13.5	17.6
28	0.496	0.520	14.9	16.5	17.8
29	0.545	0.571	17.0	17.1	15.4
30	0.598	0.627	16.9	15.4	11.5
31	0.656	0.688	14.1	11.8	7.27
32	0.721	0.755	9.52	7.23	3.71
33	0.791	0.829	4.52	3.13	1.33
34	0.868	0.910	1.35	0.85	0.30
35	0.953	0.999	0.19	0.11	0.032
36	1.047	1.097	0.0091	0.0048	0.0012
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_11_163106.$ls M1_11_163106.$ls		
File ID:	M1		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.98%		
LS 13 320	Universal Liquid Module		
Start time:	16:29 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_11_163106.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.599 µm	S.D.:	0.124 µm
Median:	0.588 µm	Variance:	0.015 μm^2
Mean/Median ratio:	1.019	C.V.:	20.7%
Mode:	0.571 µm	Skewness:	0.451 Right skewed
		Kurtosis:	-0.103 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.446 µm	0.506 µm	0.588 µm	0.683 µm	0.771 µm

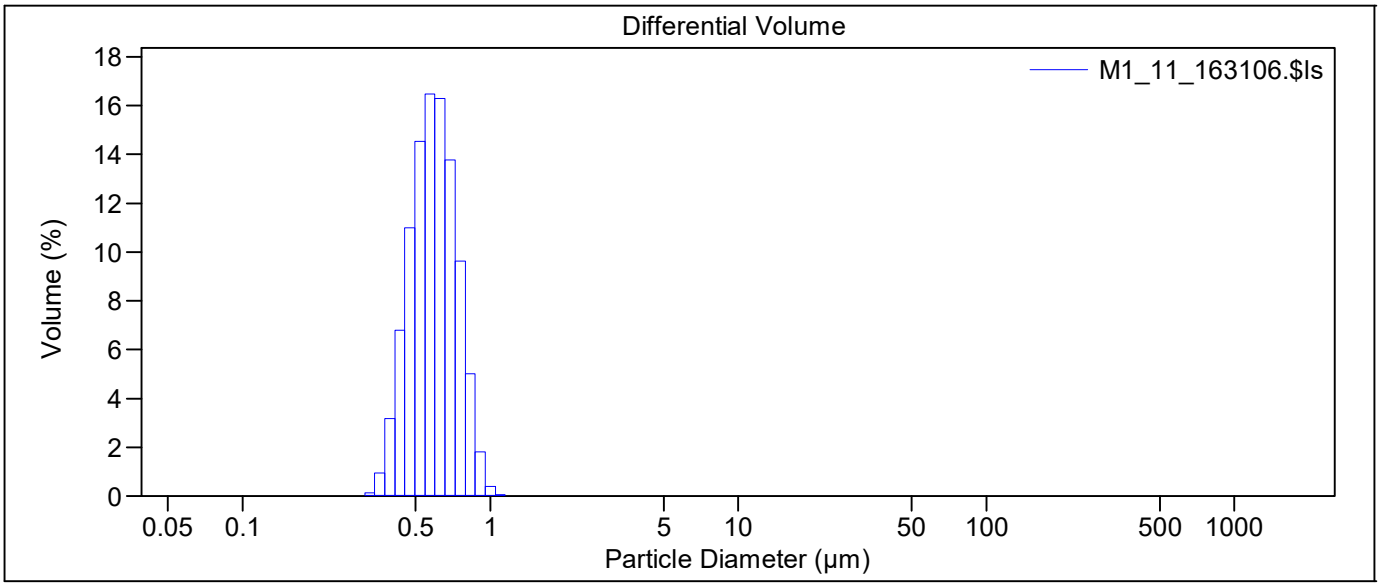
Number Statistics (Arithmetic) M1_11_163106.$ls

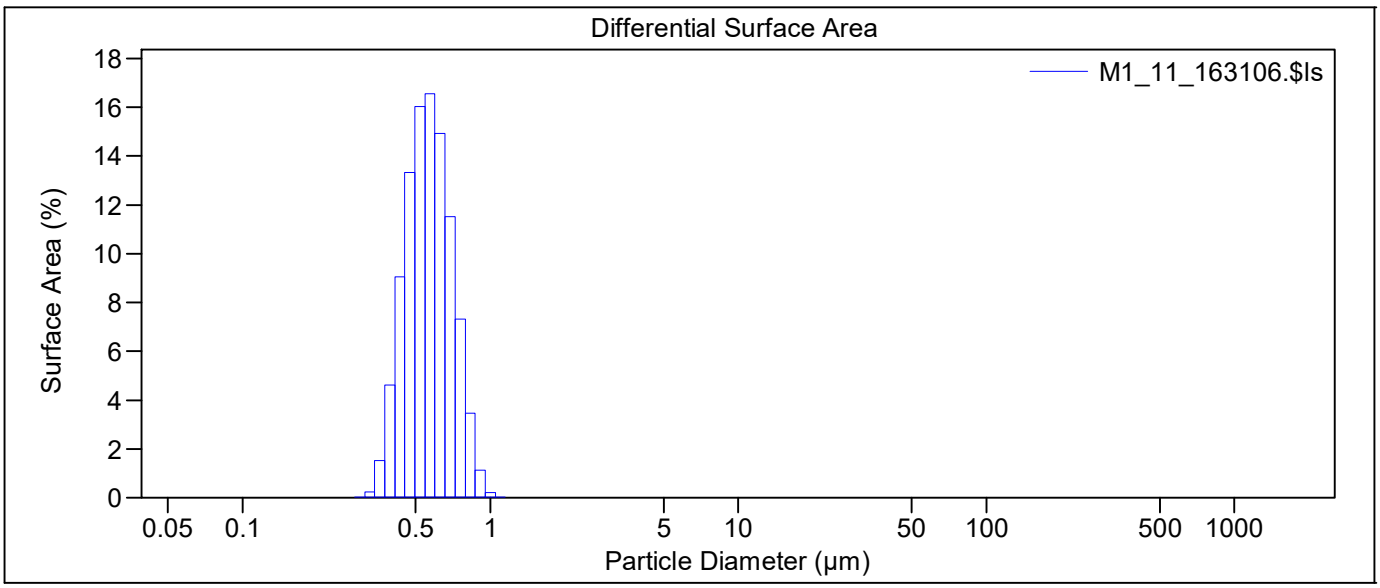
Calculations from 0.040 µm to 2000 µm

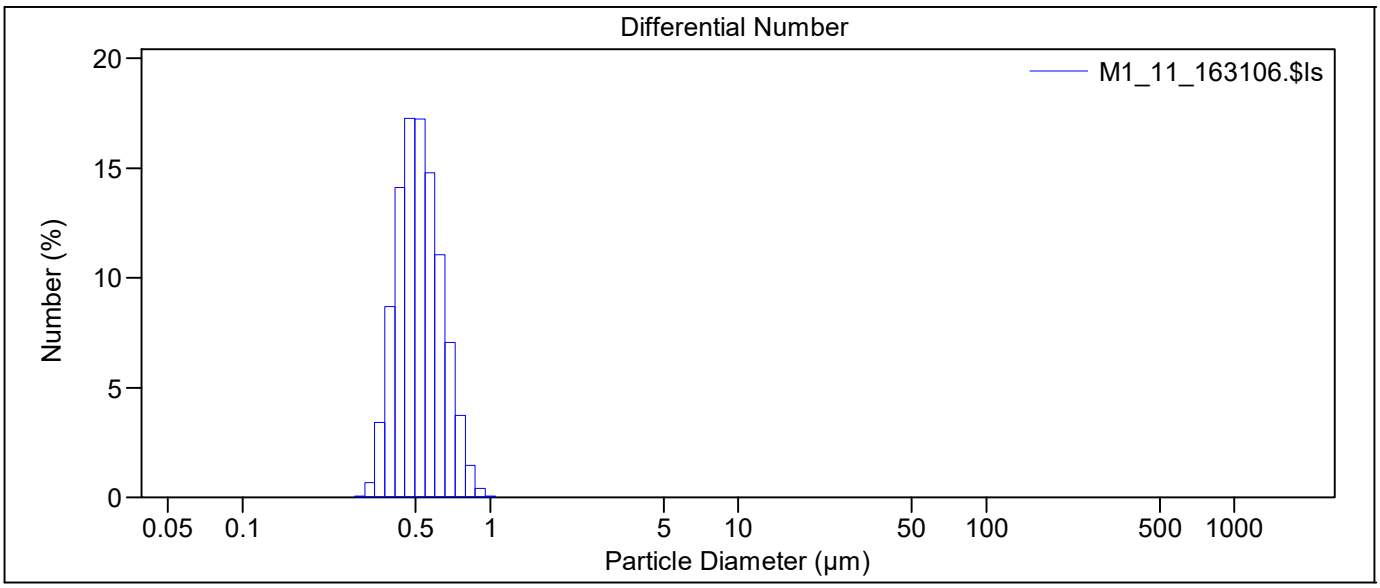
Number:	100%		
Mean:	0.528 µm	S.D.:	0.109 µm
Median:	0.513 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.030	C.V.:	20.6%
Mode:	0.474 µm	Skewness:	0.736 Right skewed
		Kurtosis:	0.438 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.400 µm	0.446 µm	0.513 µm	0.594 µm	0.681 µm

Beckman Coulter LS13320







M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0070	0.014	0.045
23	0.311	0.326	0.14	0.25	0.68
24	0.342	0.358	0.94	1.51	3.42
25	0.375	0.393	3.16	4.62	8.69
26	0.412	0.431	6.80	9.05	14.1
27	0.452	0.474	11.0	13.3	17.3
28	0.496	0.520	14.5	16.0	17.2
29	0.545	0.571	16.5	16.6	14.8
30	0.598	0.627	16.3	14.9	11.1
31	0.656	0.688	13.8	11.5	7.06
32	0.721	0.755	9.62	7.32	3.73
33	0.791	0.829	5.02	3.48	1.47
34	0.868	0.910	1.80	1.13	0.40
35	0.953	0.999	0.38	0.22	0.064
36	1.047	1.097	0.040	0.021	0.0051
37	1.149	1.204	0.0014	0.00065	0.00013
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_12_163253.$ls M1_12_163253.$ls		
File ID:	M1		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.96%		
LS 13 320	Universal Liquid Module		
Start time:	16:31 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_12_163253.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.598 µm	S.D.:	0.122 µm
Median:	0.588 µm	Variance:	0.015 μm^2
Mean/Median ratio:	1.018	C.V.:	20.4%
Mode:	0.571 µm	Skewness:	0.423 Right skewed
		Kurtosis:	-0.166 Platykurtic

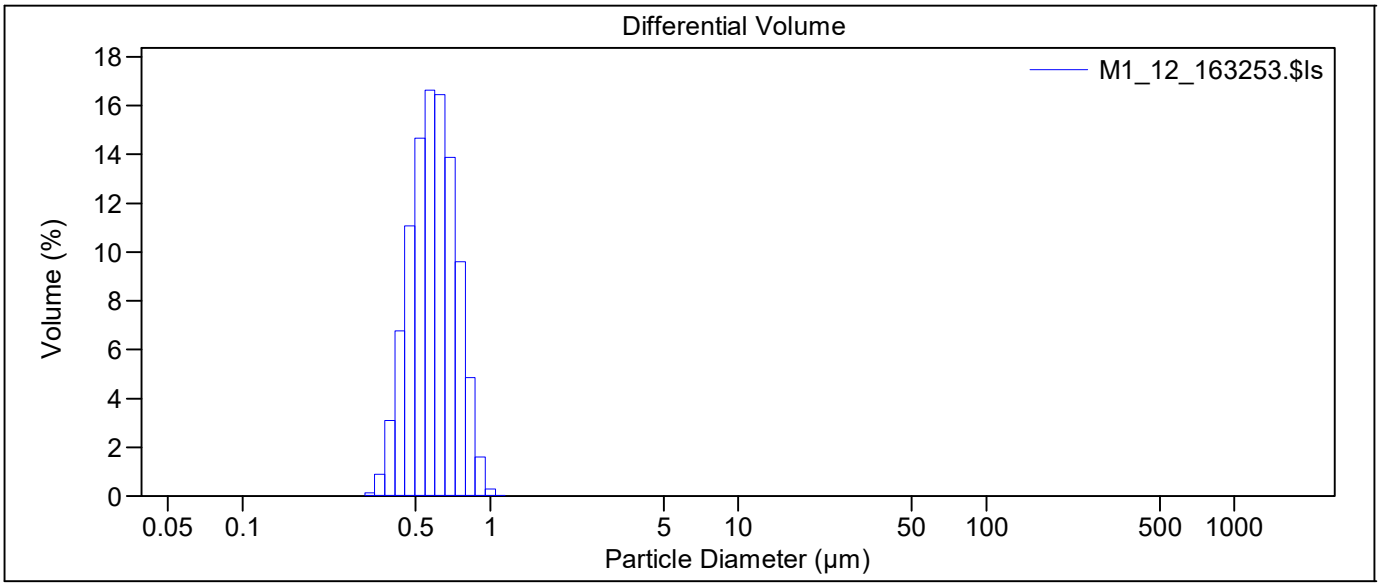
<10%	<25%	<50%	<75%	<90%
0.447 µm	0.506 µm	0.588 µm	0.681 µm	0.767 µm

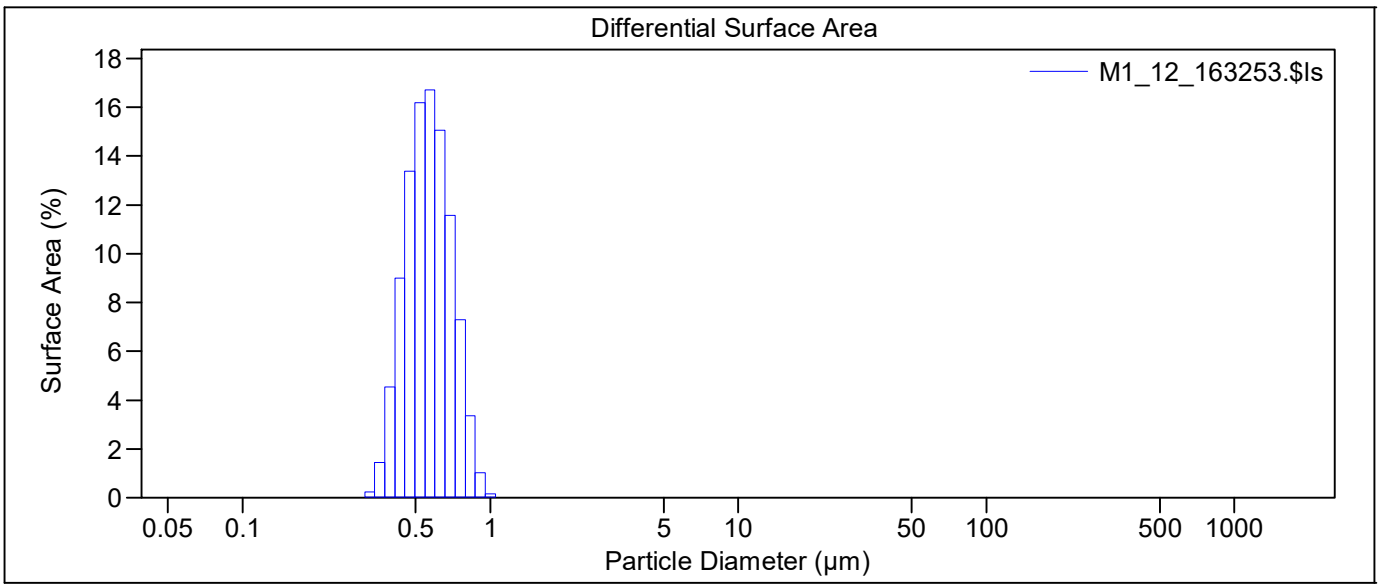
Number Statistics (Arithmetic) M1_12_163253.$ls

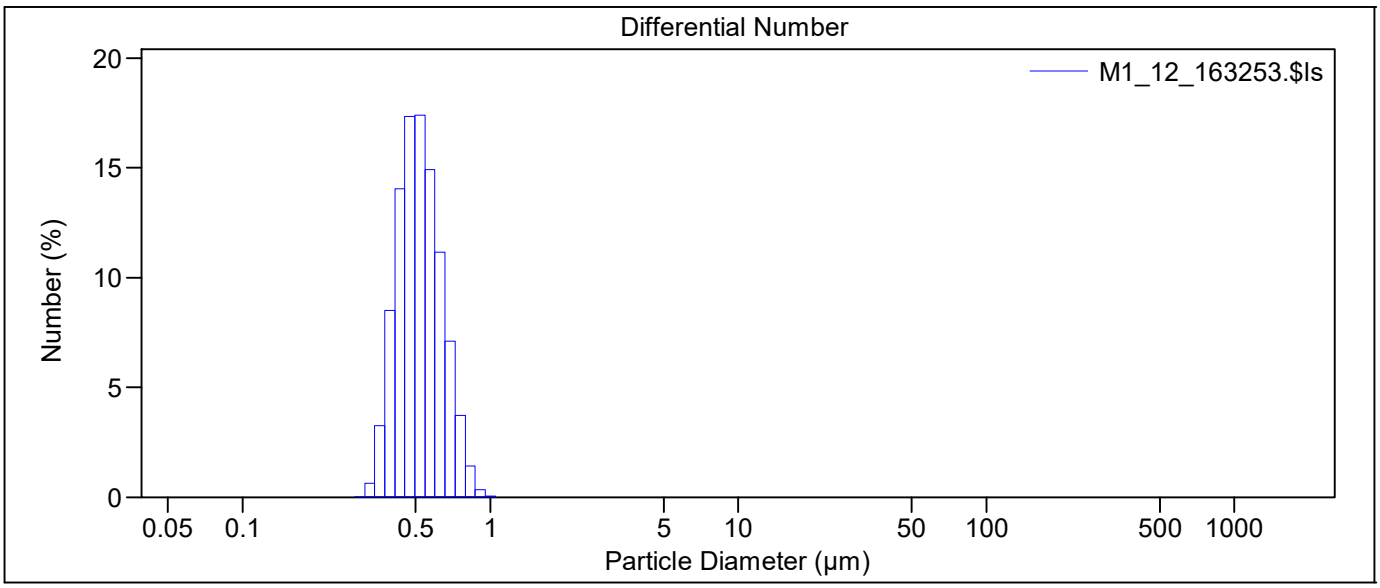
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.528 µm	S.D.:	0.108 µm
Median:	0.513 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.029	C.V.:	20.4%
Mode:	0.520 µm	Skewness:	0.715 Right skewed
		Kurtosis:	0.370 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.401 µm	0.448 µm	0.513 µm	0.594 µm	0.680 µm


Differential Volume
M1_12_163253.$ls
Volume (%)
0
2
4
6
8
10
12
14
16
18
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M1_12_163253.$ls
Surface Area (%)
0
2
4
6
8
10
12
14
16
18
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M1_12_163253.$ls
Number (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0062	0.012	0.039
23	0.311	0.326	0.13	0.23	0.63
24	0.342	0.358	0.90	1.44	3.27
25	0.375	0.393	3.10	4.53	8.52
26	0.412	0.431	6.78	9.01	14.1
27	0.452	0.474	11.1	13.4	17.4
28	0.496	0.520	14.7	16.2	17.4
29	0.545	0.571	16.6	16.7	14.9
30	0.598	0.627	16.5	15.1	11.2
31	0.656	0.688	13.9	11.6	7.11
32	0.721	0.755	9.60	7.29	3.72
33	0.791	0.829	4.85	3.35	1.42
34	0.868	0.910	1.61	1.02	0.36
35	0.953	0.999	0.29	0.16	0.048
36	1.047	1.097	0.022	0.012	0.0028
37	1.149	1.204	0.00028	0.00013	0.000027
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_13_164714.$ls M1_13_164714.$ls		
File ID:	M1		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.83%		
LS 13 320	Universal Liquid Module		
Start time:	16:45 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_13_164714.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.599 µm	S.D.:	0.119 µm
Median:	0.589 µm	Variance:	0.014 μm^2
Mean/Median ratio:	1.017	C.V.:	20.0%
Mode:	0.571 µm	Skewness:	0.420 Right skewed
		Kurtosis:	-0.159 Platykurtic

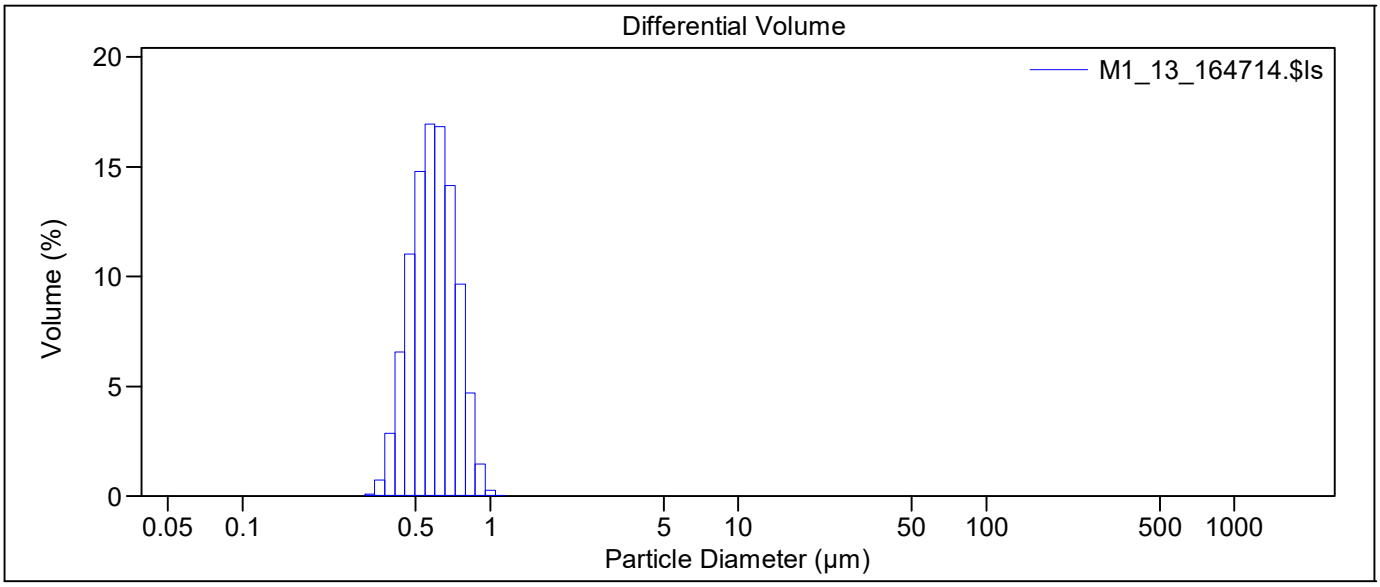
<10%	<25%	<50%	<75%	<90%
0.451 µm	0.509 µm	0.589 µm	0.680 µm	0.765 µm

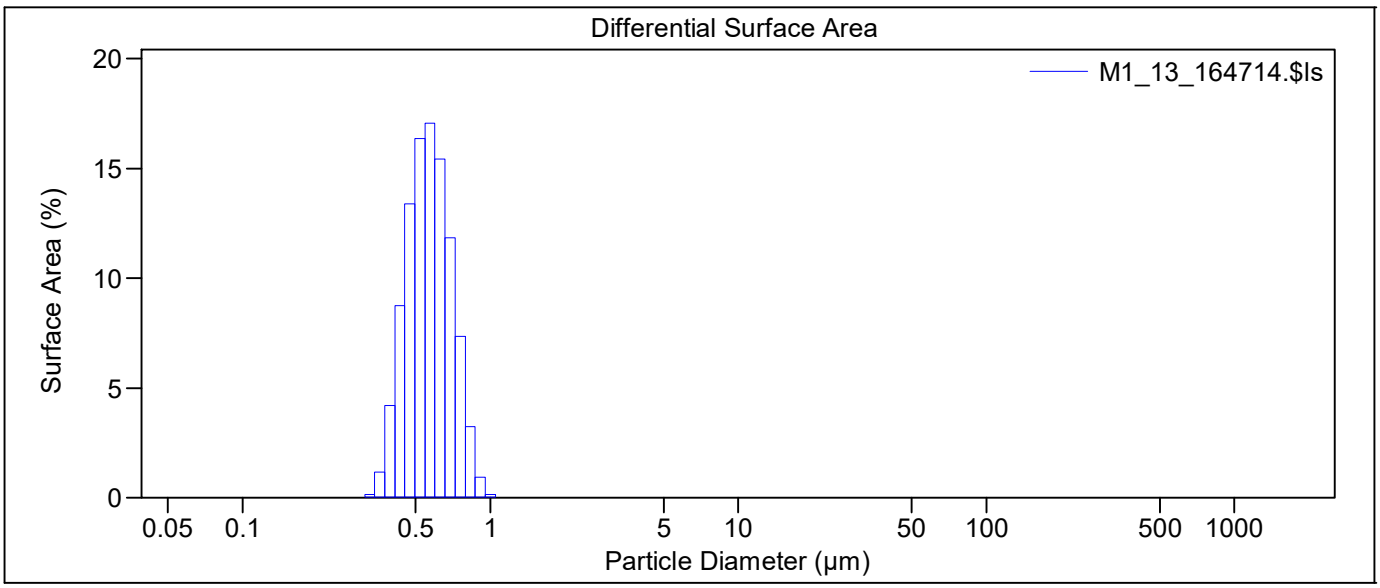
Number Statistics (Arithmetic) M1_13_164714.$ls

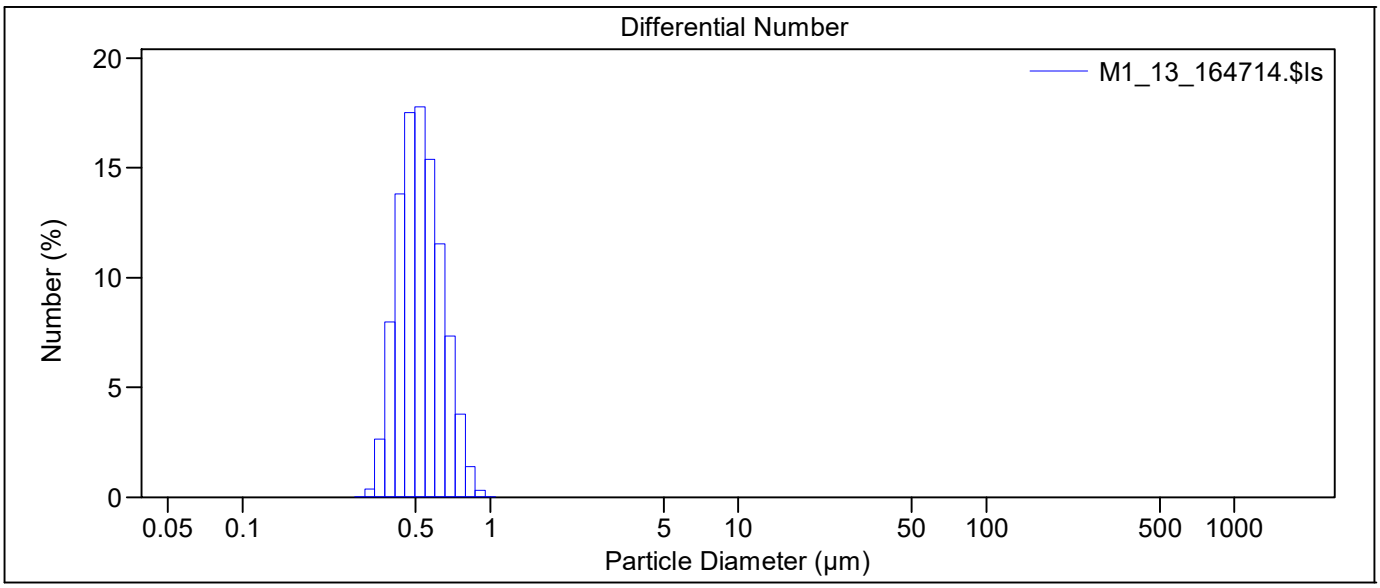
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.532 µm	S.D.:	0.106 µm
Median:	0.517 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.028	C.V.:	20.0%
Mode:	0.520 µm	Skewness:	0.706 Right skewed
		Kurtosis:	0.341 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.407 µm	0.452 µm	0.517 µm	0.596 µm	0.682 µm


Differential Volume
M1_13_164714.$ls
Volume (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M1_13_164714.$ls
Surface Area (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M1_13_164714.$ls
Number (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0024	0.0046	0.015
23	0.311	0.326	0.080	0.14	0.39
24	0.342	0.358	0.72	1.16	2.67
25	0.375	0.393	2.86	4.19	7.97
26	0.412	0.431	6.57	8.75	13.8
27	0.452	0.474	11.0	13.4	17.5
28	0.496	0.520	14.8	16.4	17.8
29	0.545	0.571	16.9	17.1	15.4
30	0.598	0.627	16.8	15.4	11.6
31	0.656	0.688	14.1	11.8	7.35
32	0.721	0.755	9.65	7.35	3.79
33	0.791	0.829	4.68	3.25	1.39
34	0.868	0.910	1.46	0.93	0.33
35	0.953	0.999	0.26	0.15	0.043
36	1.047	1.097	0.020	0.011	0.0026
37	1.149	1.204	0.00048	0.00023	0.000046
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_14_164900.$ls M1_14_164900.$ls		
File ID:	M1		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.84%		
LS 13 320	Universal Liquid Module		
Start time:	16:47 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_14_164900.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.628 µm	S.D.:	0.283 µm
Median:	0.592 µm	Variance:	0.080 μm^2
Mean/Median ratio:	1.062	C.V.:	45.0%
Mode:	0.688 µm	Skewness:	0.523 Right skewed
		Kurtosis:	-0.276 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.286 µm	0.408 µm	0.592 µm	0.820 µm	1.031 µm

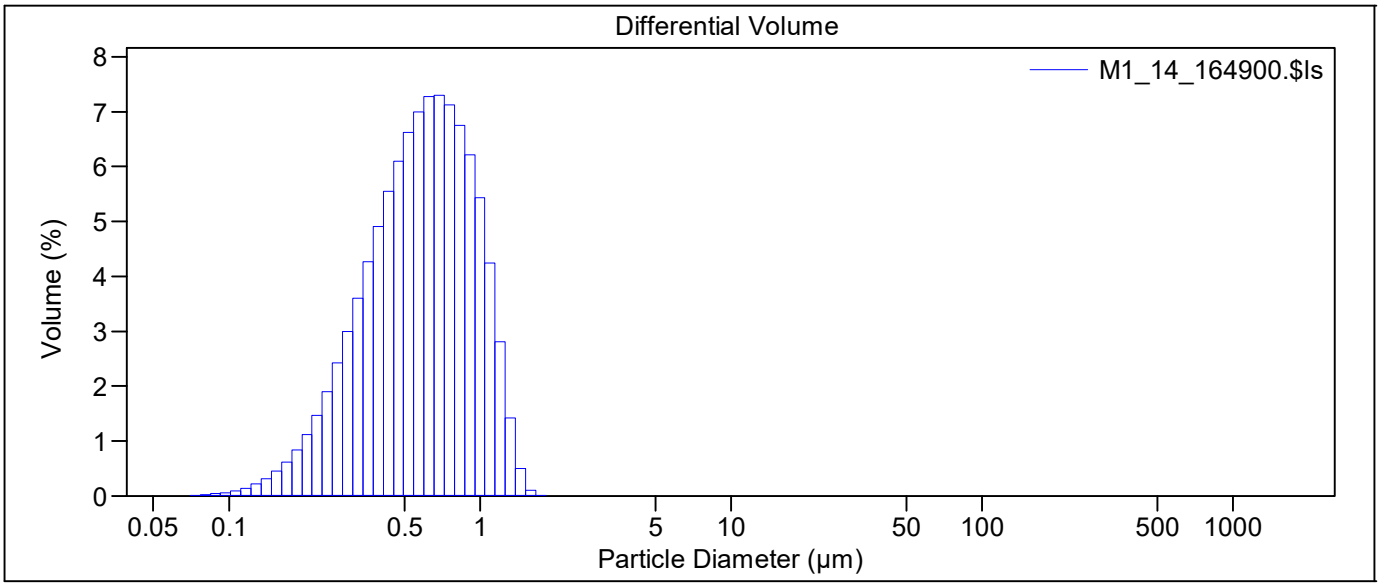
Number Statistics (Arithmetic) M1_14_164900.$ls

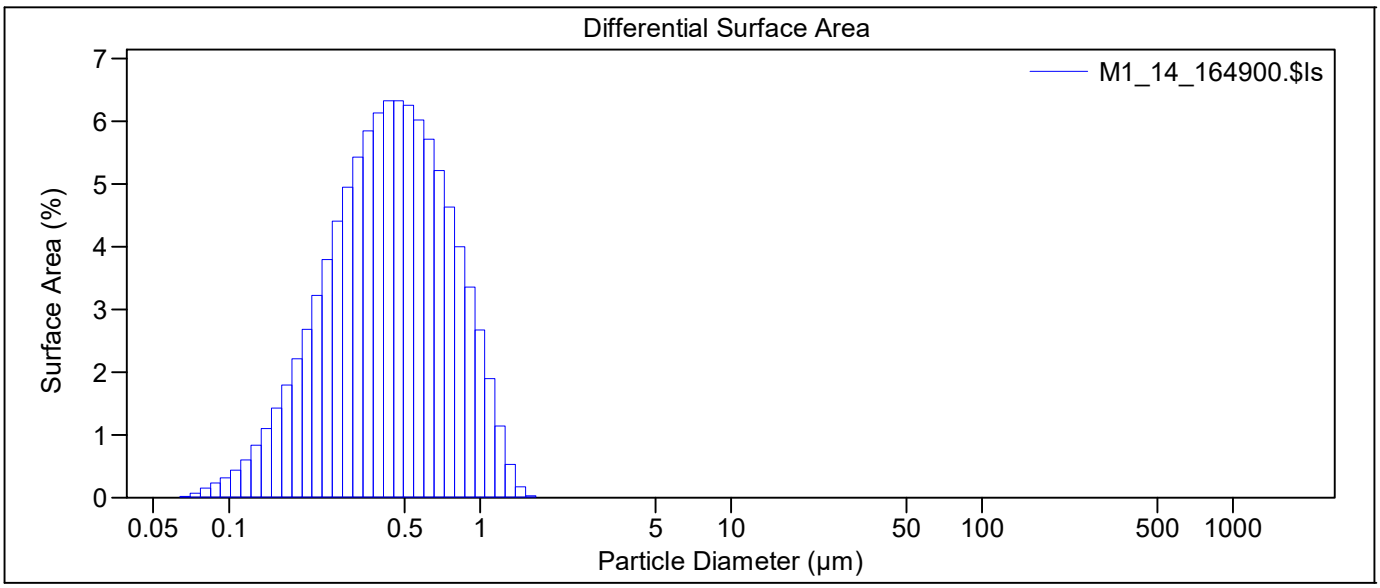
Calculations from 0.040 µm to 2000 µm

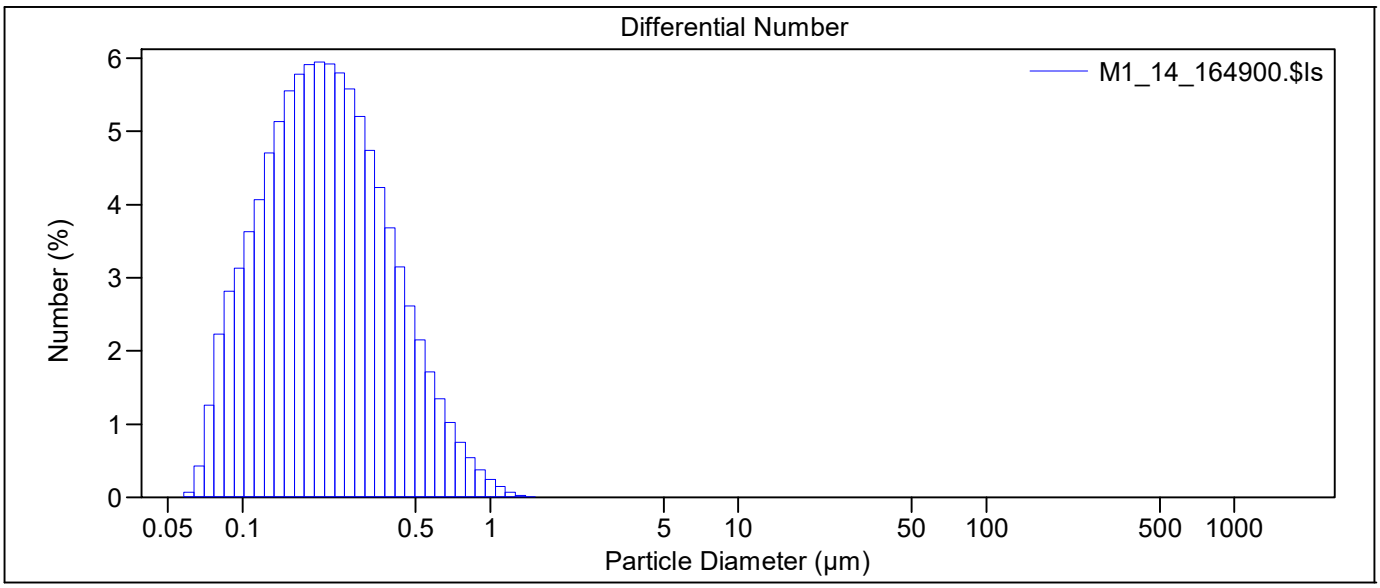
Number:	100%		
Mean:	0.257 µm	S.D.:	0.164 µm
Median:	0.212 µm	Variance:	0.027 μm^2
Mean/Median ratio:	1.210	C.V.:	63.8%
Mode:	0.205 µm	Skewness:	1.814 Right skewed
		Kurtosis:	4.627 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.102 µm	0.141 µm	0.212 µm	0.323 µm	0.469 µm

Beckman Coulter LS13320







M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0.000010	0.000090	0.0027
5	0.058	0.061	0.00035	0.0028	0.071
6	0.064	0.067	0.0028	0.020	0.43
7	0.070	0.073	0.011	0.073	1.26
8	0.077	0.080	0.026	0.16	2.23
9	0.084	0.088	0.043	0.24	2.81
10	0.093	0.097	0.063	0.32	3.13
11	0.102	0.106	0.096	0.44	3.63
12	0.112	0.117	0.14	0.60	4.06
13	0.122	0.128	0.22	0.84	4.71
14	0.134	0.141	0.32	1.10	5.14
15	0.148	0.155	0.45	1.43	5.56
16	0.162	0.170	0.62	1.80	5.78
17	0.178	0.186	0.84	2.21	5.92
18	0.195	0.205	1.12	2.68	5.94
19	0.214	0.225	1.47	3.22	5.92
20	0.235	0.247	1.91	3.80	5.80
21	0.258	0.271	2.43	4.41	5.58
22	0.284	0.297	2.99	4.95	5.20
23	0.311	0.326	3.61	5.43	4.74
24	0.342	0.358	4.26	5.85	4.23
25	0.375	0.393	4.91	6.14	3.69
26	0.412	0.431	5.56	6.33	3.15
27	0.452	0.474	6.10	6.32	2.62
28	0.496	0.520	6.62	6.26	2.15
29	0.545	0.571	7.00	6.02	1.72
30	0.598	0.627	7.28	5.71	1.35
31	0.656	0.688	7.30	5.22	1.02
32	0.721	0.755	7.13	4.64	0.75
33	0.791	0.829	6.75	4.00	0.54
34	0.868	0.910	6.21	3.36	0.38
35	0.953	0.999	5.43	2.67	0.25
36	1.047	1.097	4.24	1.90	0.15
37	1.149	1.204	2.81	1.15	0.073
38	1.261	1.321	1.42	0.53	0.028
39	1.385	1.451	0.50	0.17	0.0075
40	1.520	1.592	0.10	0.032	0.0012
41	1.668	1.748	0.012	0.0032	0.000098
42	1.832	1.919	0.00034	0.000086	0.000002
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M1.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M1\M1_15_165049.$ls M1_15_165049.$ls		
File ID:	M1		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.92%		
LS 13 320	Universal Liquid Module		
Start time:	16:49 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M1_15_165049.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.594 µm	S.D.:	0.116 µm
Median:	0.585 µm	Variance:	0.014 μm^2
Mean/Median ratio:	1.016	C.V.:	19.6%
Mode:	0.571 µm	Skewness:	0.378 Right skewed
		Kurtosis:	-0.273 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.449 µm	0.506 µm	0.585 µm	0.675 µm	0.758 µm

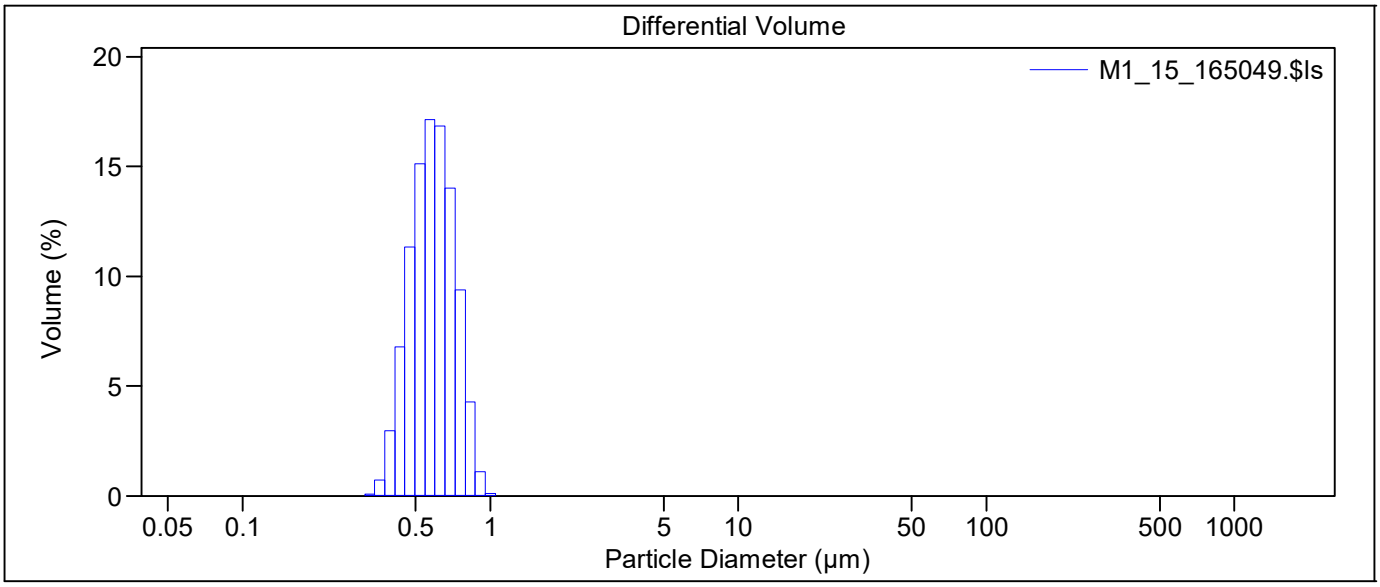
Number Statistics (Arithmetic) M1_15_165049.$ls

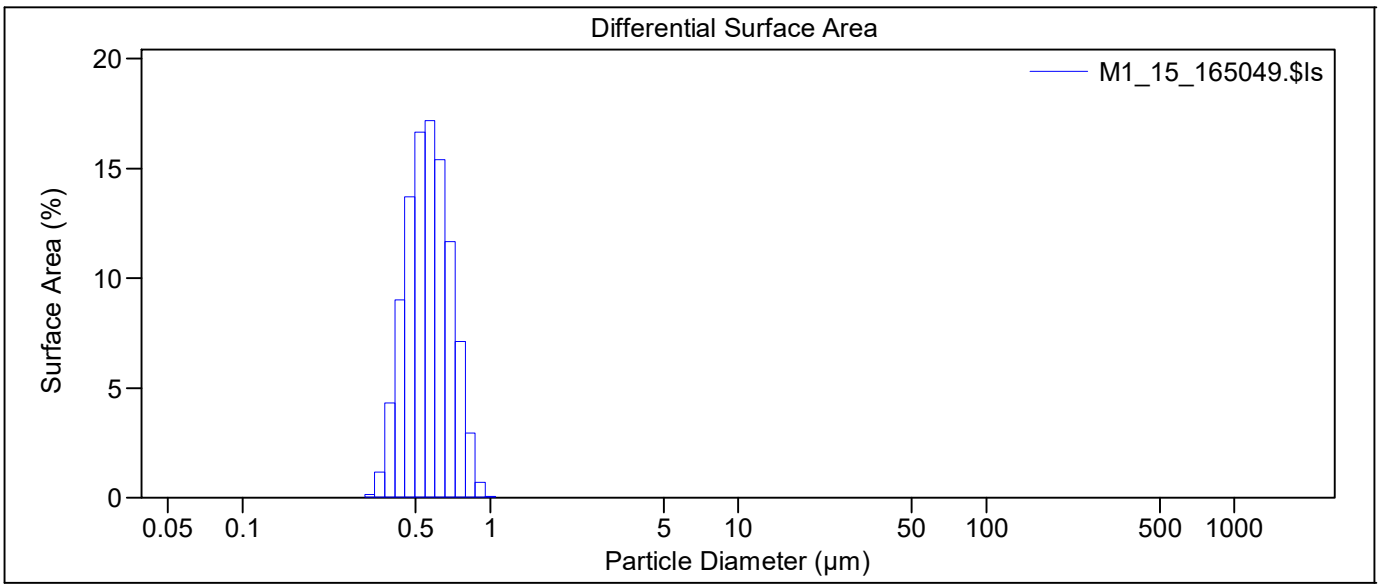
Calculations from 0.040 µm to 2000 µm

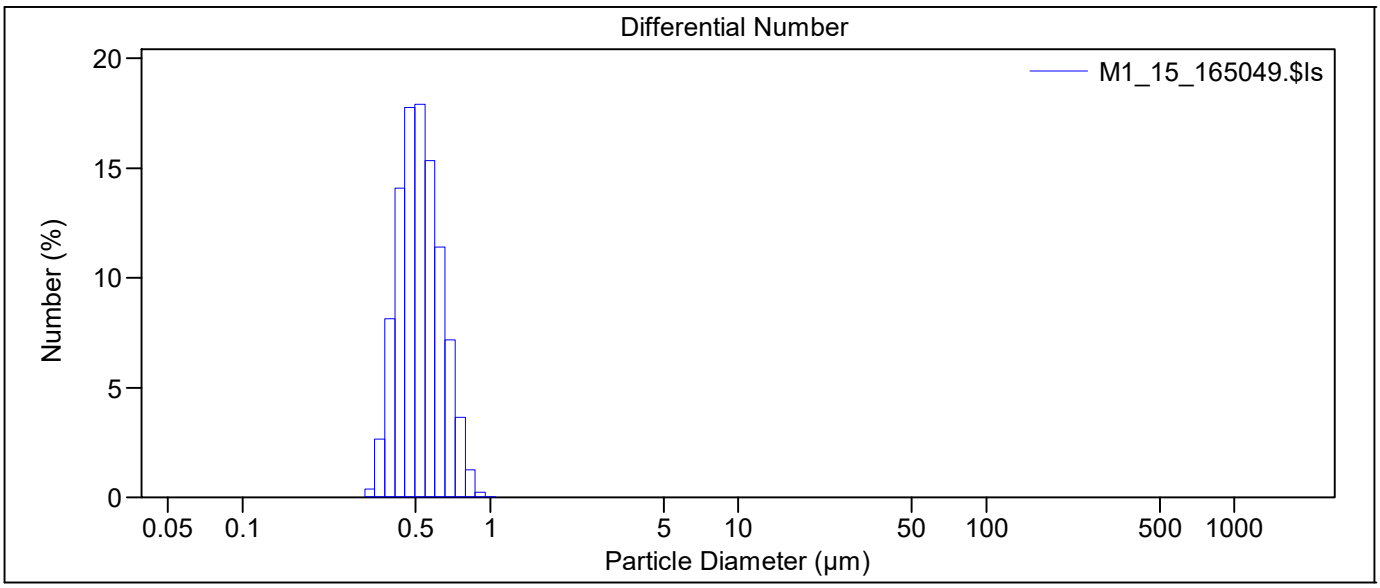
Number:	100%		
Mean:	0.529 µm	S.D.:	0.104 µm
Median:	0.515 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.028	C.V.:	19.7%
Mode:	0.520 µm	Skewness:	0.684 Right skewed
		Kurtosis:	0.250 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.407 µm	0.451 µm	0.515 µm	0.594 µm	0.677 µm

Beckman Coulter LS13320







M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0021	0.0041	0.014
23	0.311	0.326	0.078	0.14	0.37
24	0.342	0.358	0.73	1.17	2.65
25	0.375	0.393	2.96	4.31	8.12
26	0.412	0.431	6.80	9.01	14.1
27	0.452	0.474	11.3	13.7	17.8
28	0.496	0.520	15.1	16.6	17.9
29	0.545	0.571	17.1	17.2	15.3
30	0.598	0.627	16.9	15.4	11.4
31	0.656	0.688	14.0	11.7	7.17
32	0.721	0.755	9.40	7.12	3.63
33	0.791	0.829	4.28	2.95	1.25
34	0.868	0.910	1.11	0.70	0.25
35	0.953	0.999	0.12	0.069	0.020
36	1.047	1.097	0.0038	0.0020	0.00048
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M1.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2.$av M2.$av
File ID:	M2
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_01_121920.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_02_122107.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_03_122255.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_04_123532.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_05_123720.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_06_123908.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_07_124927.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_08_125114.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_09_125301.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_10_130117.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_11_130304.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_12_130452.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_13_131345.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_14_131531.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_15_131719.$ls

Volume Statistics (Arithmetic) M2.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.600 µm	S.D.:	0.272 µm
Median:	0.559 µm	Variance:	0.074 µm^2
Mean/Median ratio:	1.074	C.V.:	45.4%
Mode:	0.520 µm	Skewness:	6.199 Right skewed
		Kurtosis:	67.58 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.407 µm	0.474 µm	0.559 µm	0.668 µm	0.812 µm

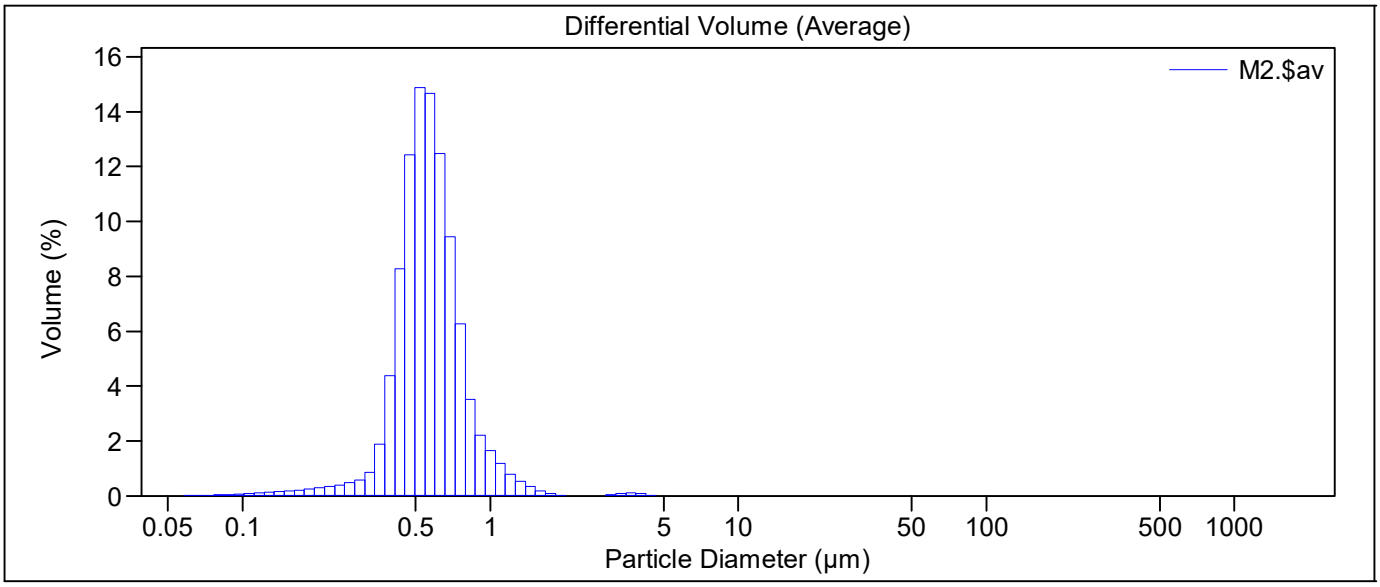
Number Statistics (Arithmetic) M2.$av

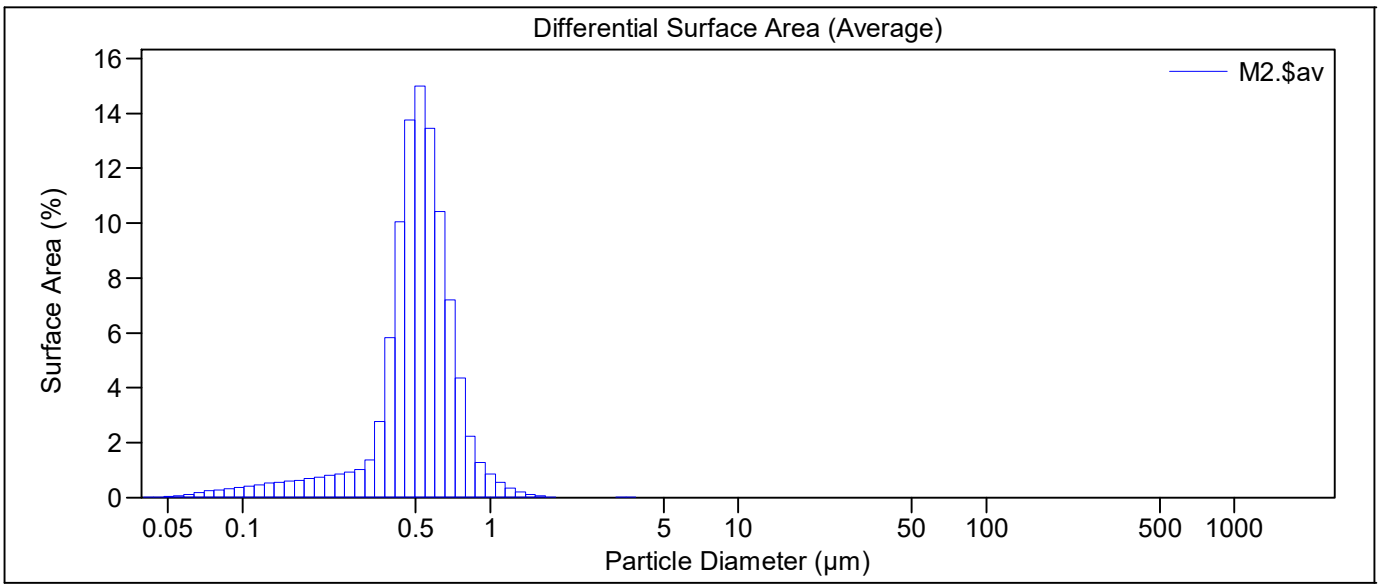
Calculations from 0.040 µm to 2000 µm

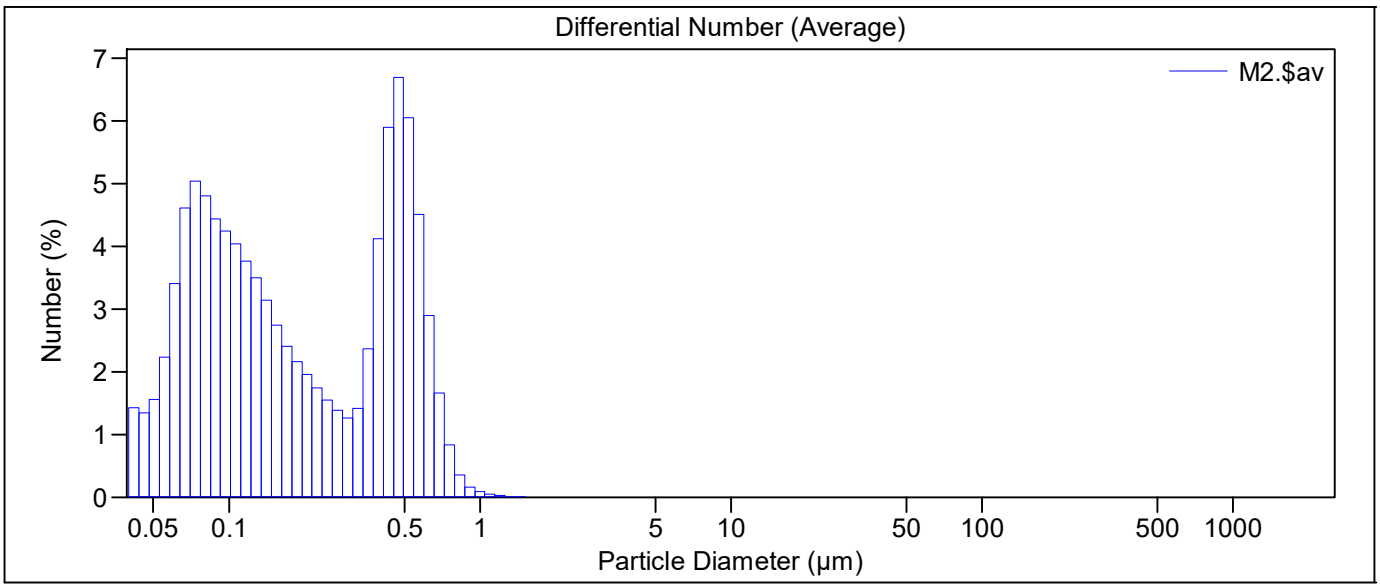
Number:	100%		
Mean:	0.260 µm	S.D.:	0.204 µm
Median:	0.160 µm	Variance:	0.042 µm^2
Mean/Median ratio:	1.619	C.V.:	78.8%
Mode:	0.474 µm	Skewness:	0.840 Right skewed
		Kurtosis:	0.112 Leptokurtic

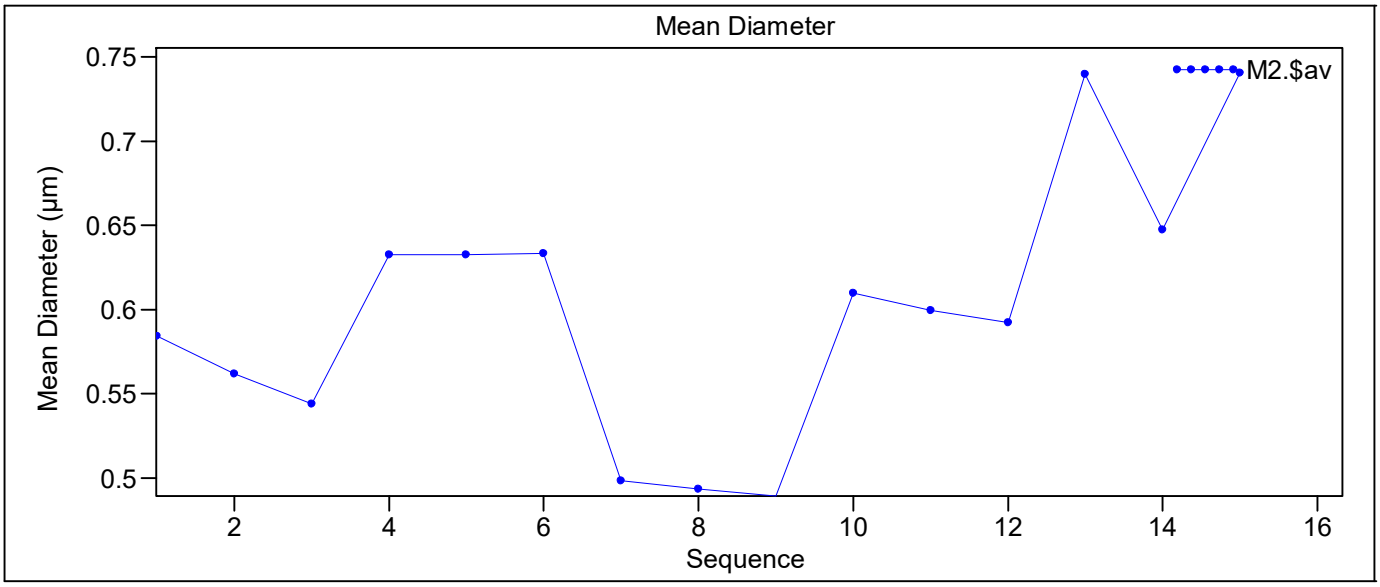
<10%	<25%	<50%	<75%	<90%
0.064 µm	0.085 µm	0.160 µm	0.441 µm	0.552 µm

Beckman Coulter LS13320









M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0018	0.023	1.43
2	0.044	0.046	0.0023	0.026	1.35
3	0.048	0.050	0.0035	0.037	1.56
4	0.053	0.055	0.0066	0.063	2.23
5	0.058	0.061	0.013	0.12	3.41
6	0.064	0.067	0.024	0.19	4.61
7	0.070	0.073	0.035	0.25	5.04
8	0.077	0.080	0.044	0.29	4.81
9	0.084	0.088	0.054	0.32	4.44
10	0.093	0.097	0.068	0.37	4.25
11	0.102	0.106	0.085	0.42	4.04
12	0.112	0.117	0.11	0.47	3.77
13	0.122	0.128	0.13	0.53	3.50
14	0.134	0.141	0.15	0.57	3.14
15	0.148	0.155	0.18	0.60	2.74
16	0.162	0.170	0.21	0.64	2.41
17	0.178	0.186	0.25	0.69	2.17
18	0.195	0.205	0.29	0.75	1.95
19	0.214	0.225	0.35	0.81	1.75
20	0.235	0.247	0.41	0.87	1.56
21	0.258	0.271	0.48	0.93	1.39
22	0.284	0.297	0.58	1.02	1.26
23	0.311	0.326	0.86	1.38	1.42
24	0.342	0.358	1.90	2.78	2.37
25	0.375	0.393	4.37	5.83	4.12
26	0.412	0.431	8.28	10.1	5.90
27	0.452	0.474	12.4	13.8	6.69
28	0.496	0.520	14.9	15.0	6.05
29	0.545	0.571	14.7	13.5	4.51
30	0.598	0.627	12.5	10.4	2.90
31	0.656	0.688	9.45	7.20	1.66
32	0.721	0.755	6.27	4.35	0.83
33	0.791	0.829	3.53	2.23	0.35
34	0.868	0.910	2.21	1.27	0.17
35	0.953	0.999	1.66	0.87	0.096
36	1.047	1.097	1.20	0.57	0.052
37	1.149	1.204	0.79	0.34	0.026
38	1.261	1.321	0.54	0.22	0.013
39	1.385	1.451	0.35	0.12	0.0065
40	1.520	1.592	0.19	0.063	0.0027
41	1.668	1.748	0.090	0.027	0.00096

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.033	0.0091	0.00027
43	2.011	2.107	0.0090	0.0022	0.000055
44	2.207	2.313	0.0020	0.00044	0.000009
45	2.423	2.539	0.0018	0.00037	0.000006
46	2.660	2.787	0.0084	0.0016	0.000022
47	2.920	3.059	0.037	0.0063	0.000073
48	3.205	3.358	0.085	0.013	0.00013
49	3.519	3.687	0.11	0.016	0.00013
50	3.863	4.047	0.087	0.011	0.000075
51	4.240	4.443	0.030	0.0036	0.000020
52	4.655	4.877	0.0060	0.00065	0.000003
53	5.110	5.354	0.00029	0.000029	1.09E-7
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_01_121920.$ls M2_01_121920.$ls		
File ID:	M2		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.75%		
LS 13 320	Universal Liquid Module		
Start time:	12:17 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_01_121920.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.584 µm	S.D.:	0.100 µm
Median:	0.578 µm	Variance:	0.0100 µm^2
Mean/Median ratio:	1.012	C.V.:	17.1%
Mode:	0.571 µm	Skewness:	0.324 Right skewed
		Kurtosis:	-0.341 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.458 µm	0.509 µm	0.578 µm	0.653 µm	0.720 µm

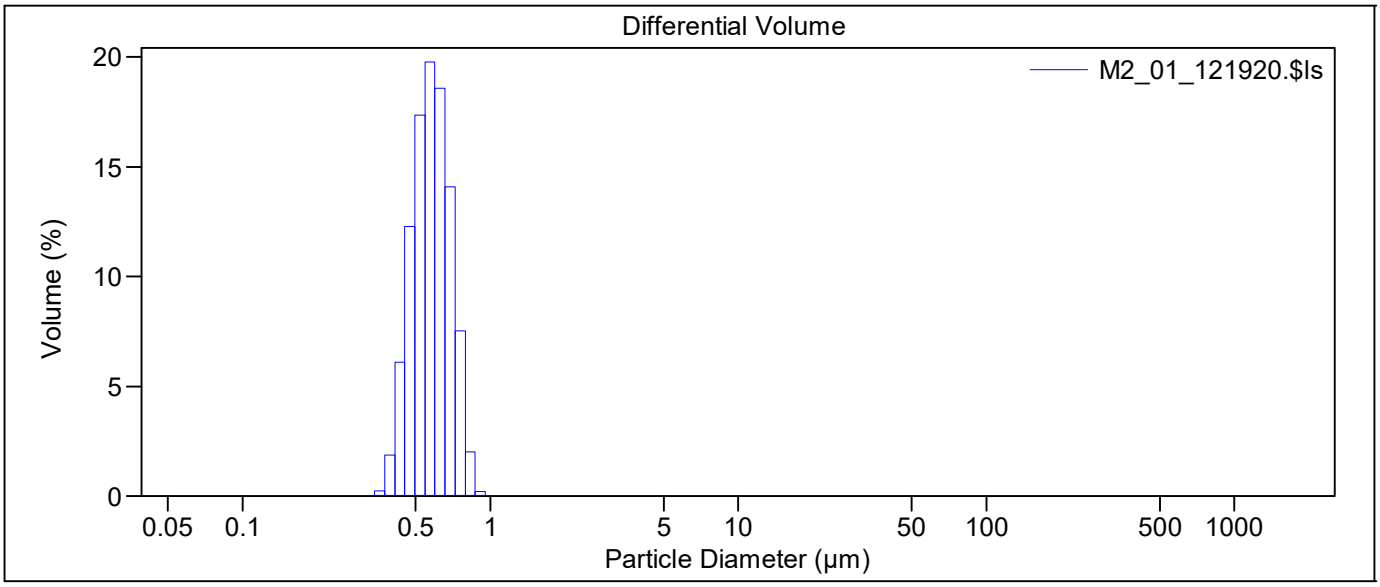
Number Statistics (Arithmetic) M2_01_121920.$ls

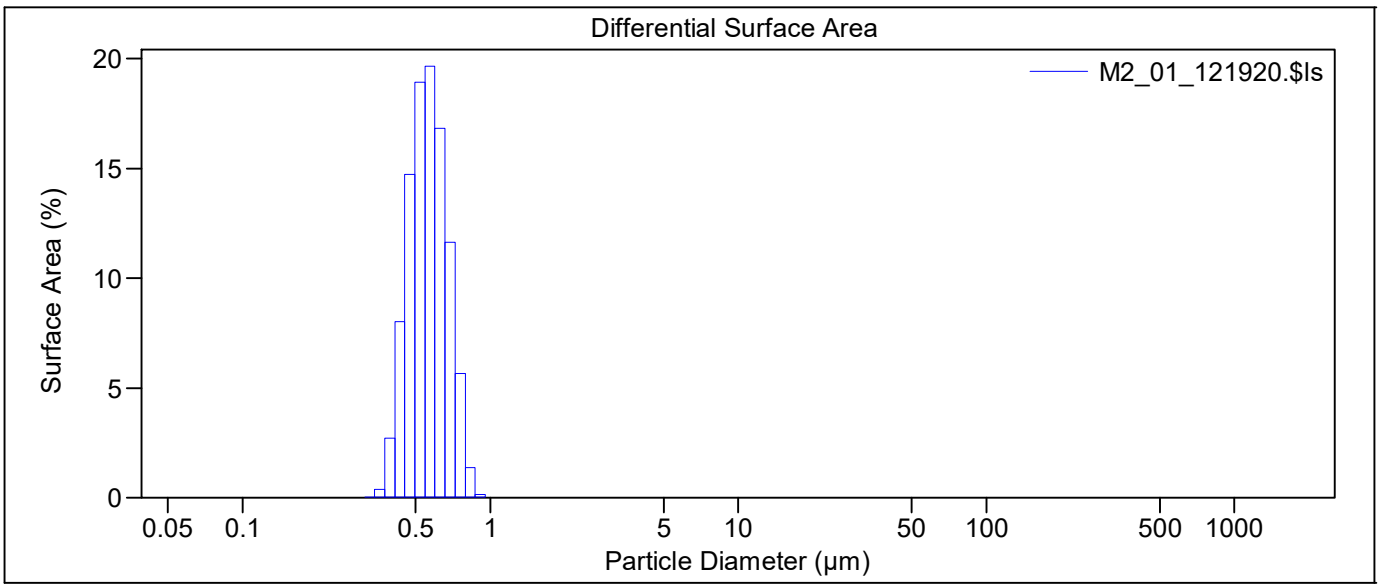
Calculations from 0.040 µm to 2000 µm

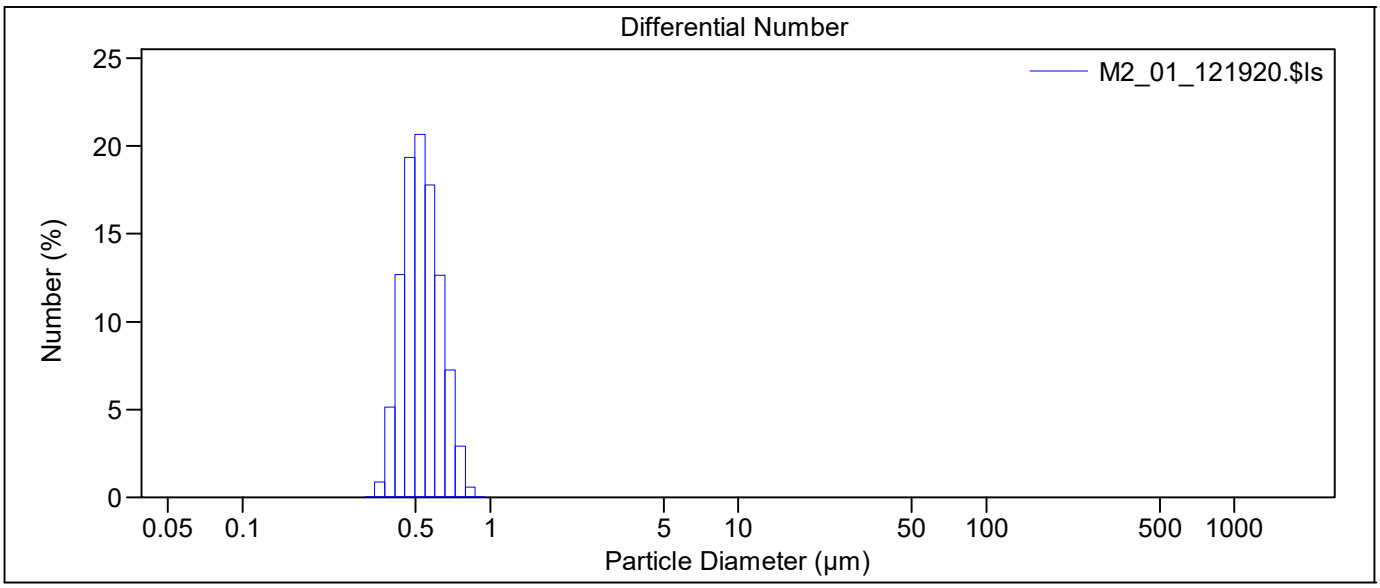
Number:	100%		
Mean:	0.535 µm	S.D.:	0.092 µm
Median:	0.524 µm	Variance:	0.0084 µm^2
Mean/Median ratio:	1.021	C.V.:	17.2%
Mode:	0.520 µm	Skewness:	0.589 Right skewed
		Kurtosis:	0.060 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.424 µm	0.466 µm	0.524 µm	0.593 µm	0.664 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.010	0.017	0.048
24	0.342	0.358	0.24	0.38	0.88
25	0.375	0.393	1.87	2.70	5.15
26	0.412	0.431	6.09	8.01	12.7
27	0.452	0.474	12.3	14.7	19.3
28	0.496	0.520	17.3	18.9	20.6
29	0.545	0.571	19.8	19.6	17.8
30	0.598	0.627	18.6	16.8	12.6
31	0.656	0.688	14.1	11.6	7.25
32	0.721	0.755	7.53	5.66	2.93
33	0.791	0.829	2.00	1.37	0.59
34	0.868	0.910	0.21	0.13	0.047
35	0.953	0.999	0.0045	0.0026	0.00076
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_02_122107.$ls M2_02_122107.$ls		
File ID:	M2		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	3.45%		
LS 13 320	Universal Liquid Module		
Start time:	12:19 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_02_122107.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.562 µm	S.D.:	0.097 µm
Median:	0.555 µm	Variance:	0.0093 µm^2
Mean/Median ratio:	1.013	C.V.:	17.2%
Mode:	0.571 µm	Skewness:	0.341 Right skewed
		Kurtosis:	-0.360 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.440 µm	0.489 µm	0.555 µm	0.630 µm	0.699 µm

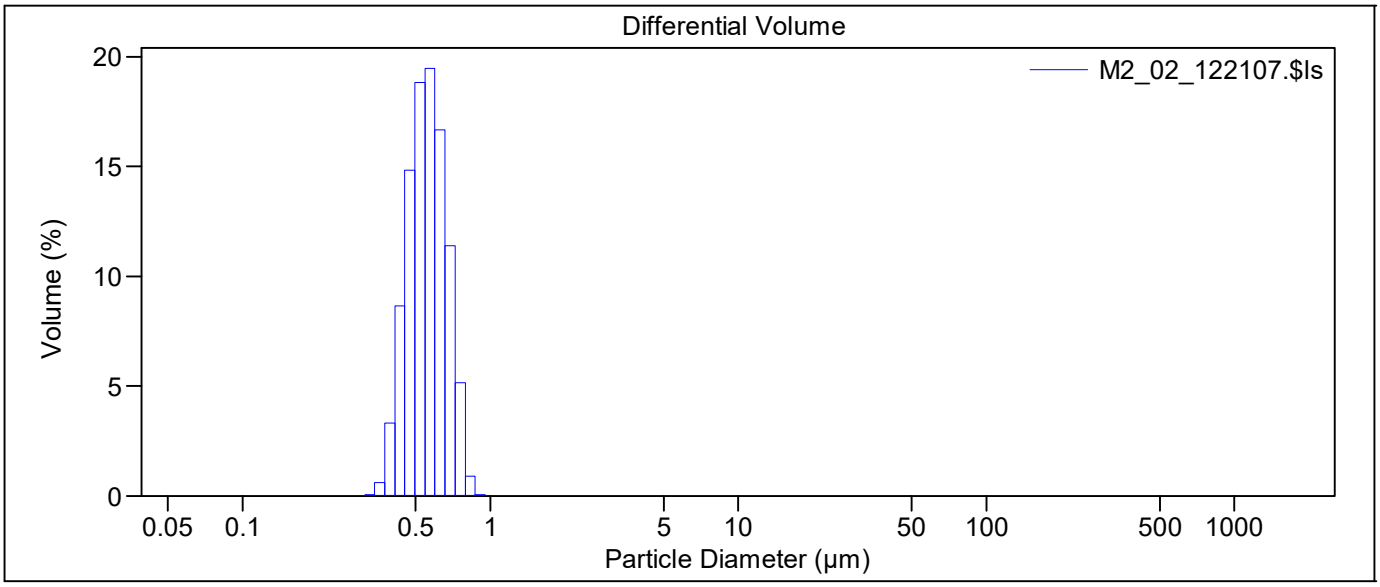
Number Statistics (Arithmetic) M2_02_122107.$ls

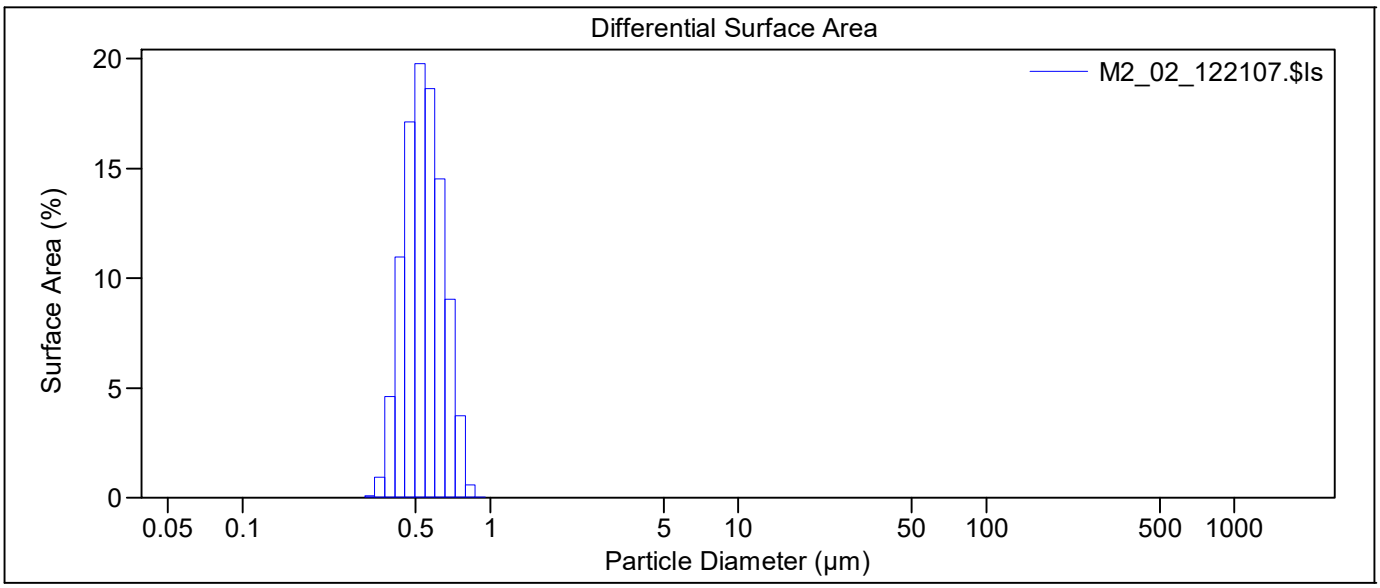
Calculations from 0.040 µm to 2000 µm

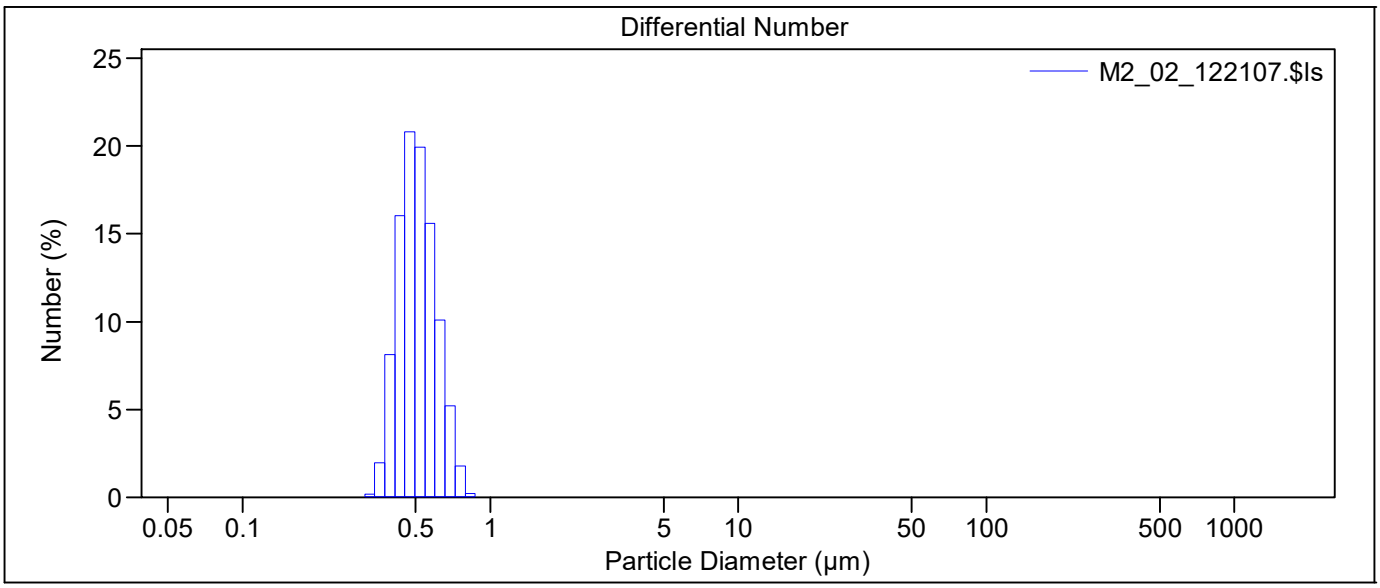
Number:	100%		
Mean:	0.515 µm	S.D.:	0.088 µm
Median:	0.503 µm	Variance:	0.0078 µm^2
Mean/Median ratio:	1.023	C.V.:	17.2%
Mode:	0.474 µm	Skewness:	0.616 Right skewed
		Kurtosis:	0.104 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.411 µm	0.449 µm	0.503 µm	0.572 µm	0.640 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.00047	0.00087	0.0027
23	0.311	0.326	0.044	0.074	0.19
24	0.342	0.358	0.61	0.93	1.98
25	0.375	0.393	3.31	4.60	8.11
26	0.412	0.431	8.66	11.0	16.1
27	0.452	0.474	14.8	17.1	20.8
28	0.496	0.520	18.8	19.8	19.9
29	0.545	0.571	19.5	18.6	15.6
30	0.598	0.627	16.7	14.5	10.1
31	0.656	0.688	11.4	9.04	5.21
32	0.721	0.755	5.16	3.73	1.78
33	0.791	0.829	0.90	0.60	0.24
34	0.868	0.910	0.050	0.030	0.0100
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_03_122255.$ls M2_03_122255.$ls		
File ID:	M2		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.23%		
LS 13 320	Universal Liquid Module		
Start time:	12:21 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	4%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_03_122255.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.544 µm	S.D.:	0.097 µm
Median:	0.535 µm	Variance:	0.0093 µm^2
Mean/Median ratio:	1.016	C.V.:	17.7%
Mode:	0.520 µm	Skewness:	0.413 Right skewed
		Kurtosis:	-0.204 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.424 µm	0.471 µm	0.535 µm	0.609 µm	0.681 µm

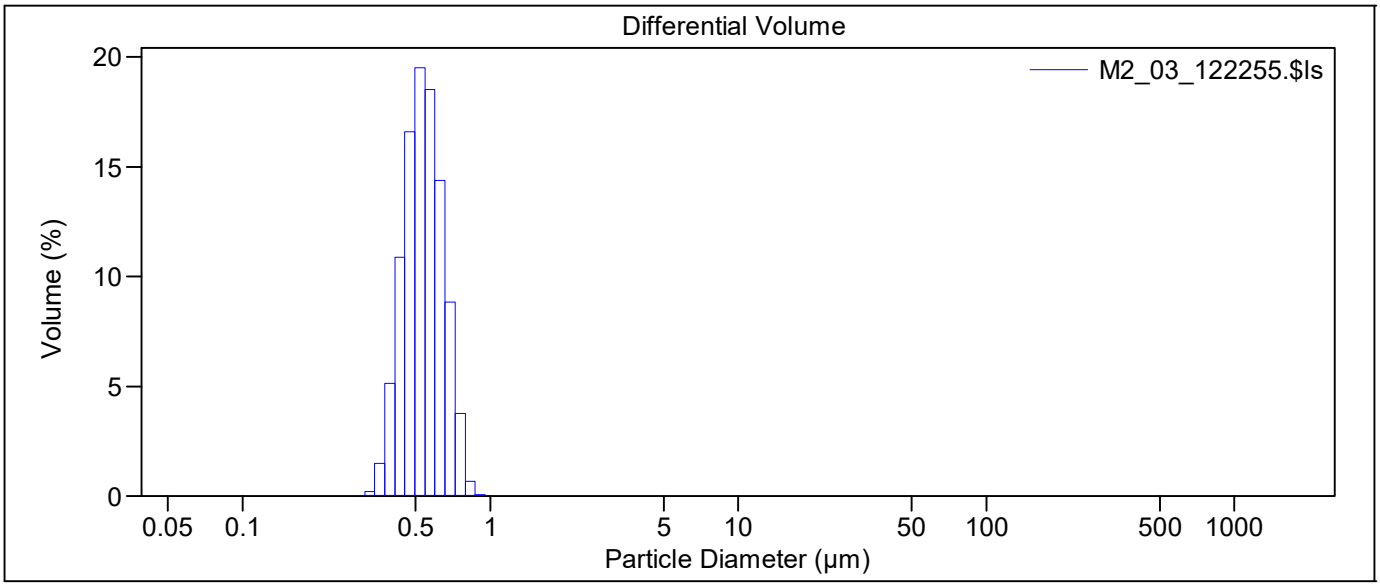
Number Statistics (Arithmetic) M2_03_122255.$ls

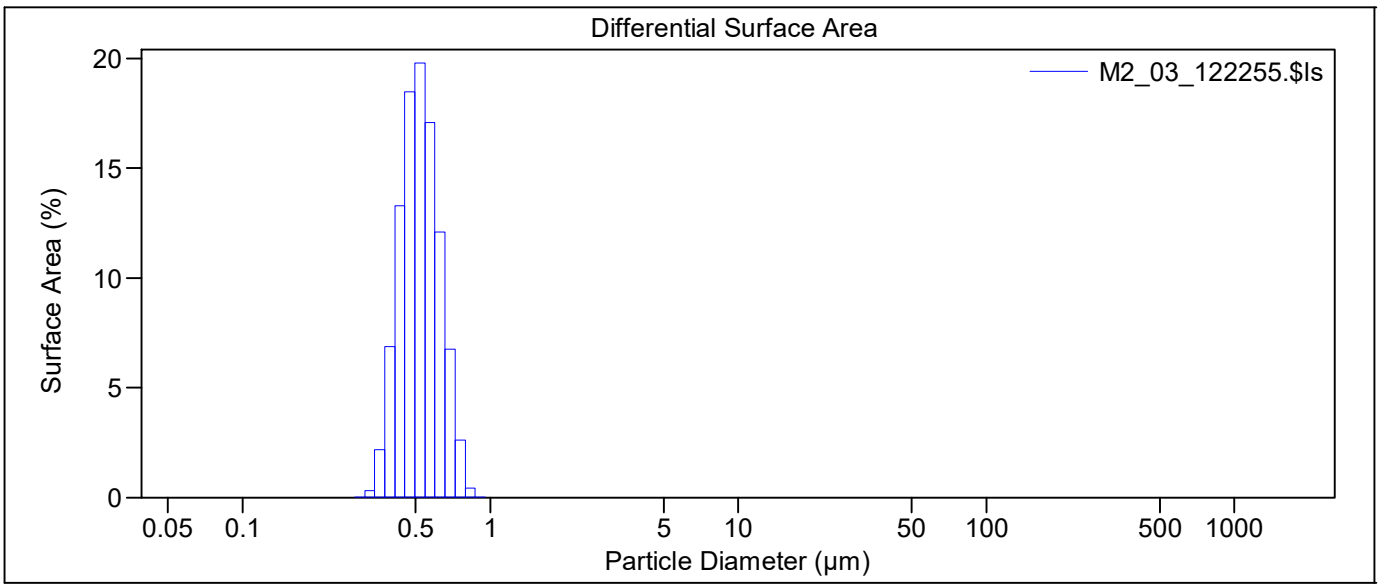
Calculations from 0.040 µm to 2000 µm

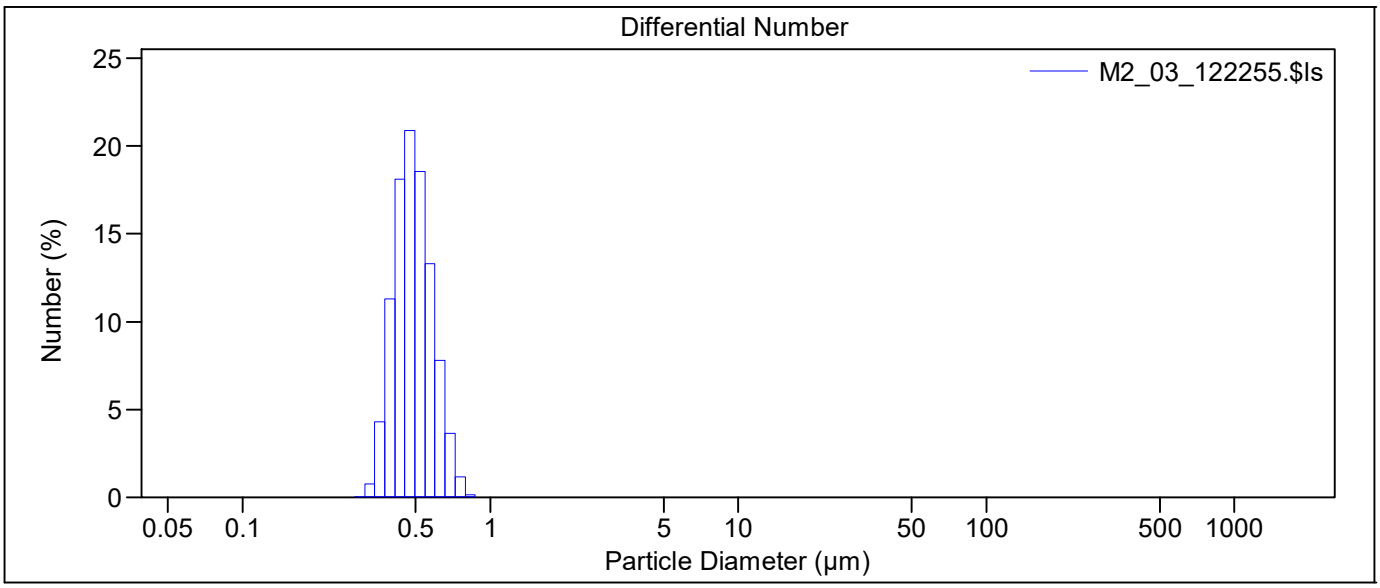
Number:	100%		
Mean:	0.496 µm	S.D.:	0.087 µm
Median:	0.485 µm	Variance:	0.0076 µm^2
Mean/Median ratio:	1.023	C.V.:	17.6%
Mode:	0.474 µm	Skewness:	0.651 Right skewed
		Kurtosis:	0.277 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.391 µm	0.431 µm	0.485 µm	0.549 µm	0.619 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.0083	0.015	0.042
23	0.311	0.326	0.20	0.32	0.75
24	0.342	0.358	1.48	2.18	4.32
25	0.375	0.393	5.14	6.89	11.3
26	0.412	0.431	10.9	13.3	18.1
27	0.452	0.474	16.6	18.5	20.9
28	0.496	0.520	19.5	19.8	18.5
29	0.545	0.571	18.5	17.1	13.3
30	0.598	0.627	14.4	12.1	7.81
31	0.656	0.688	8.83	6.77	3.63
32	0.721	0.755	3.75	2.62	1.17
33	0.791	0.829	0.68	0.43	0.16
34	0.868	0.910	0.046	0.026	0.0081
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_04_123532.$ls M2_04_123532.$ls		
File ID:	M2		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.65%		
LS 13 320	Universal Liquid Module		
Start time:	12:33 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_04_123532.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.633 µm	S.D.:	0.167 µm
Median:	0.609 µm	Variance:	0.028 μm^2
Mean/Median ratio:	1.039	C.V.:	26.4%
Mode:	0.627 µm	Skewness:	0.715 Right skewed
		Kurtosis:	0.244 Leptokurtic

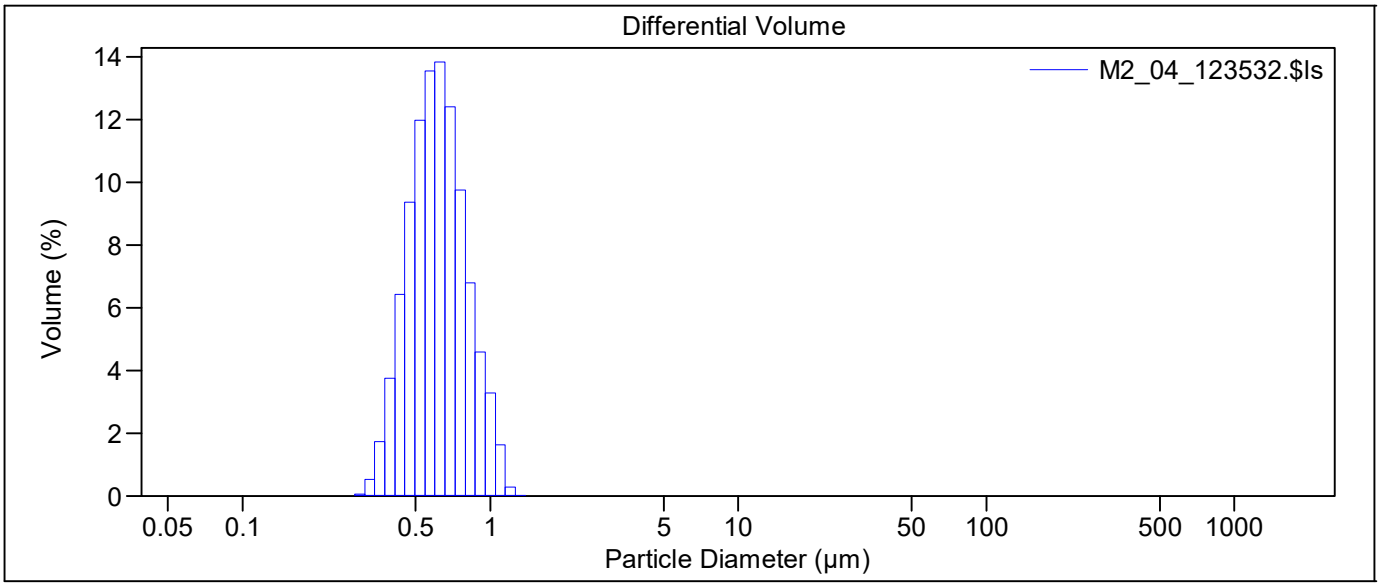
<10%	<25%	<50%	<75%	<90%
0.436 µm	0.509 µm	0.609 µm	0.730 µm	0.866 µm

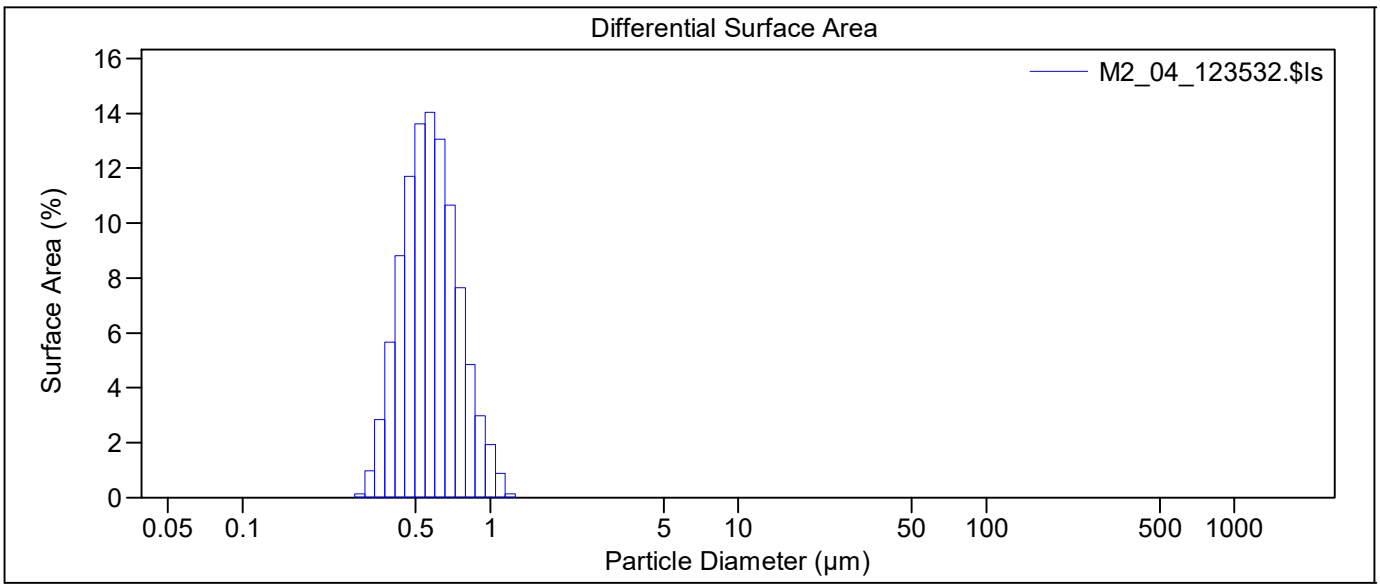
Number Statistics (Arithmetic) M2_04_123532.$ls

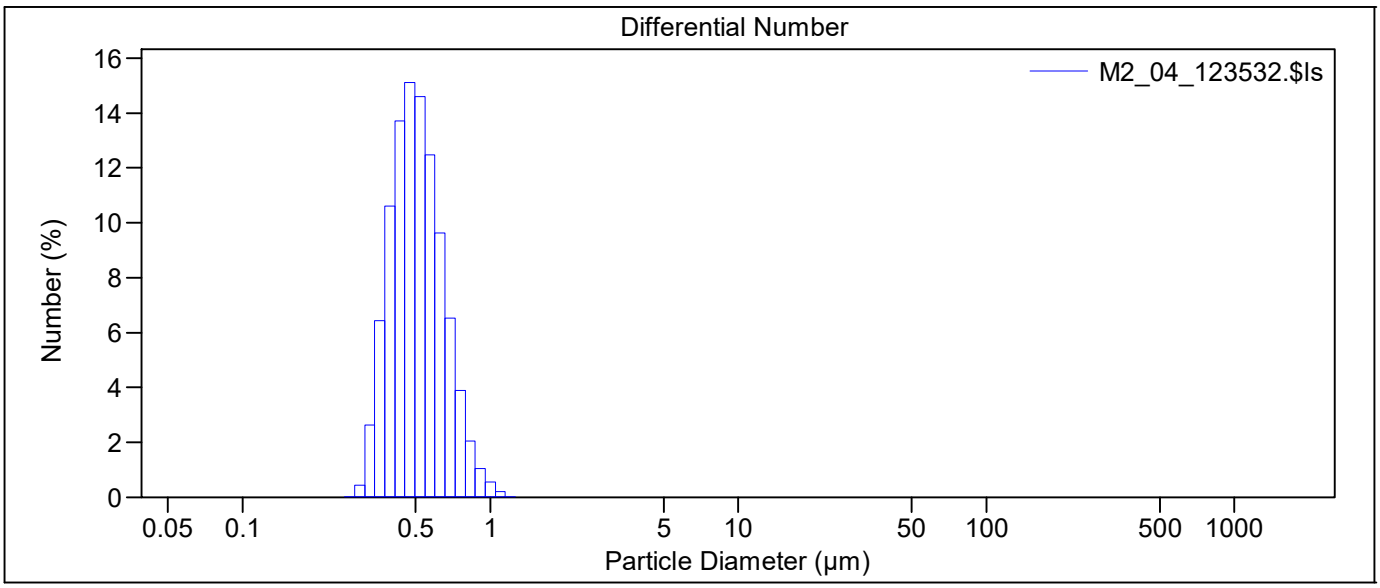
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.522 µm	S.D.:	0.131 µm
Median:	0.500 µm	Variance:	0.017 μm^2
Mean/Median ratio:	1.045	C.V.:	25.0%
Mode:	0.474 µm	Skewness:	1.046 Right skewed
		Kurtosis:	1.505 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.377 µm	0.426 µm	0.500 µm	0.594 µm	0.699 µm


Differential Volume
M2_04_123532.$ls
Volume (%)
0
2
4
6
8
10
12
14
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M2_04_123532.$ls
Surface Area (%)
0
2
4
6
8
10
12
14
16
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M2_04_123532.$ls
Number (%)
0
2
4
6
8
10
12
14
16
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.0024	0.0053	0.021
22	0.284	0.297	0.068	0.13	0.44
23	0.311	0.326	0.53	0.97	2.64
24	0.342	0.358	1.72	2.85	6.44
25	0.375	0.393	3.76	5.66	10.6
26	0.412	0.431	6.43	8.82	13.7
27	0.452	0.474	9.37	11.7	15.1
28	0.496	0.520	12.0	13.6	14.6
29	0.545	0.571	13.6	14.0	12.5
30	0.598	0.627	13.8	13.1	9.64
31	0.656	0.688	12.4	10.7	6.53
32	0.721	0.755	9.76	7.65	3.89
33	0.791	0.829	6.79	4.84	2.04
34	0.868	0.910	4.59	2.99	1.04
35	0.953	0.999	3.28	1.94	0.56
36	1.047	1.097	1.63	0.88	0.21
37	1.149	1.204	0.28	0.14	0.027
38	1.261	1.321	0.012	0.0052	0.00087
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_05_123720.$ls M2_05_123720.$ls		
File ID:	M2		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.67%		
LS 13 320	Universal Liquid Module		
Start time:	12:35 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_05_123720.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.633 µm	S.D.:	0.163 µm
Median:	0.610 µm	Variance:	0.027 μm^2
Mean/Median ratio:	1.037	C.V.:	25.8%
Mode:	0.627 µm	Skewness:	0.707 Right skewed
		Kurtosis:	0.255 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.441 µm	0.511 µm	0.610 µm	0.729 µm	0.860 µm

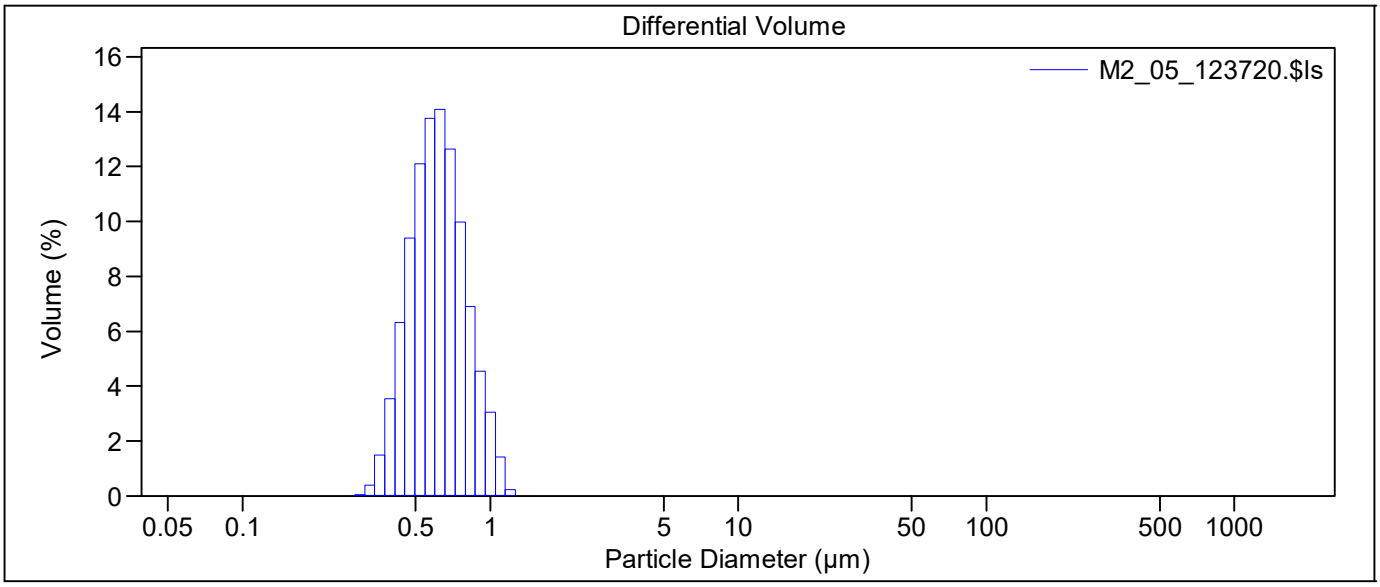
Number Statistics (Arithmetic) M2_05_123720.$ls

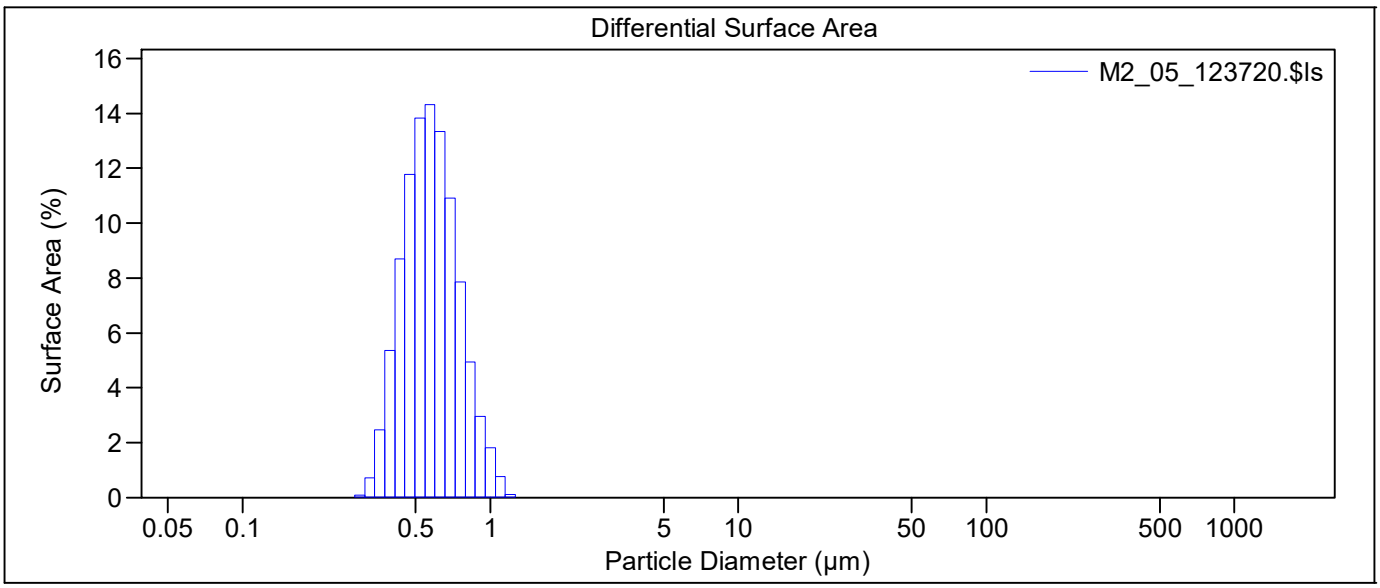
Calculations from 0.040 µm to 2000 µm

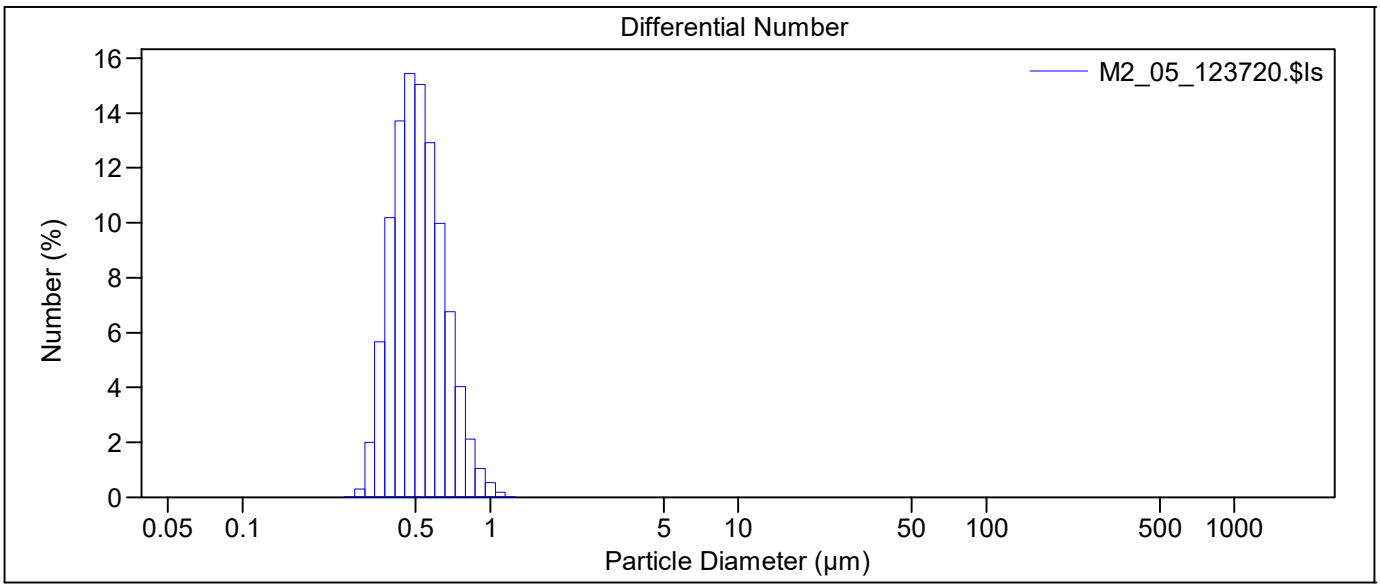
Number:	100%		
Mean:	0.527 µm	S.D.:	0.129 µm
Median:	0.505 µm	Variance:	0.017 μm^2
Mean/Median ratio:	1.043	C.V.:	24.5%
Mode:	0.474 µm	Skewness:	1.026 Right skewed
		Kurtosis:	1.429 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.382 µm	0.432 µm	0.505 µm	0.597 µm	0.701 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.0014	0.0030	0.012
22	0.284	0.297	0.044	0.088	0.29
23	0.311	0.326	0.40	0.72	2.00
24	0.342	0.358	1.49	2.47	5.67
25	0.375	0.393	3.55	5.36	10.2
26	0.412	0.431	6.32	8.69	13.7
27	0.452	0.474	9.40	11.8	15.4
28	0.496	0.520	12.1	13.8	15.0
29	0.545	0.571	13.8	14.3	12.9
30	0.598	0.627	14.1	13.3	9.98
31	0.656	0.688	12.6	10.9	6.77
32	0.721	0.755	9.99	7.85	4.05
33	0.791	0.829	6.91	4.95	2.12
34	0.868	0.910	4.56	2.97	1.06
35	0.953	0.999	3.05	1.81	0.53
36	1.047	1.097	1.43	0.77	0.19
37	1.149	1.204	0.24	0.12	0.024
38	1.261	1.321	0.0098	0.0044	0.00074
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_06_123908.$ls M2_06_123908.$ls		
File ID:	M2		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.78%		
LS 13 320	Universal Liquid Module		
Start time:	12:37 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_06_123908.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.633 µm	S.D.:	0.158 µm
Median:	0.613 µm	Variance:	0.025 μm^2
Mean/Median ratio:	1.033	C.V.:	25.0%
Mode:	0.627 µm	Skewness:	0.643 Right skewed
		Kurtosis:	0.123 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.445 µm	0.514 µm	0.613 µm	0.731 µm	0.855 µm

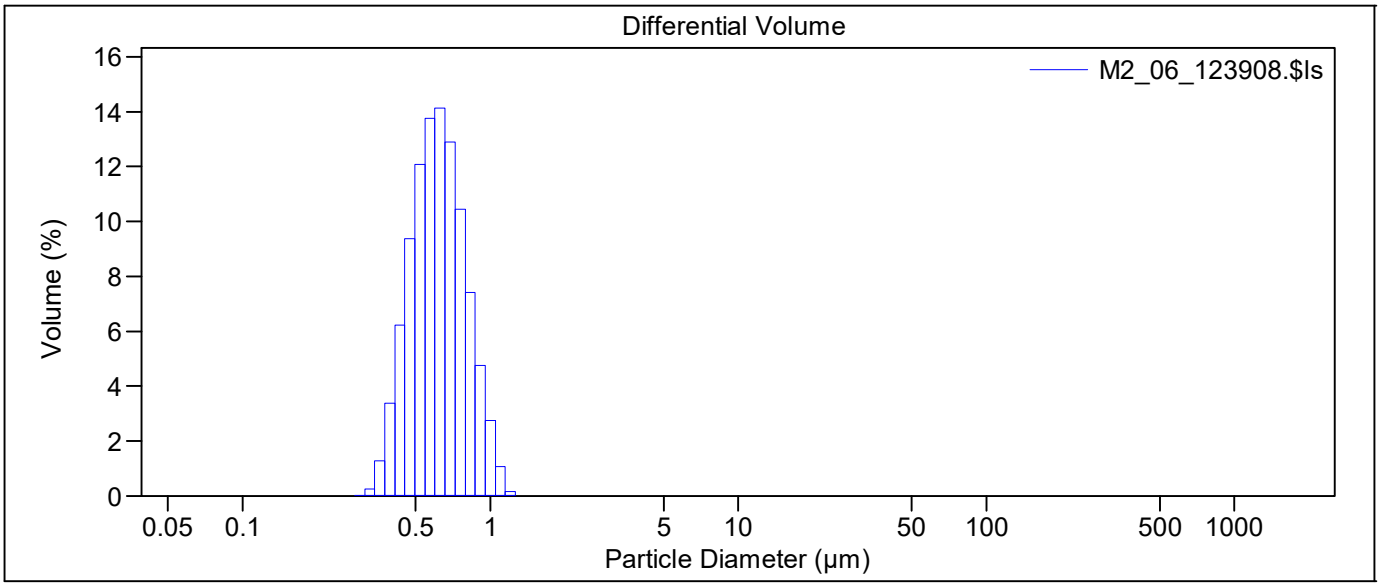
Number Statistics (Arithmetic) M2_06_123908.$ls

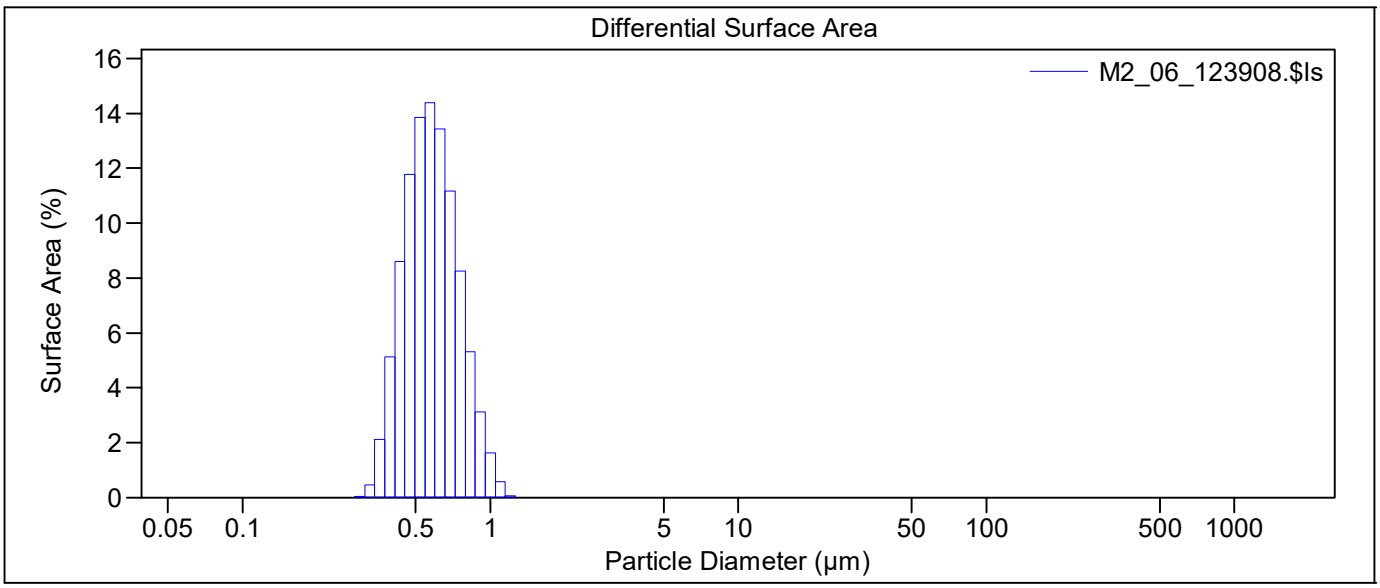
Calculations from 0.040 µm to 2000 µm

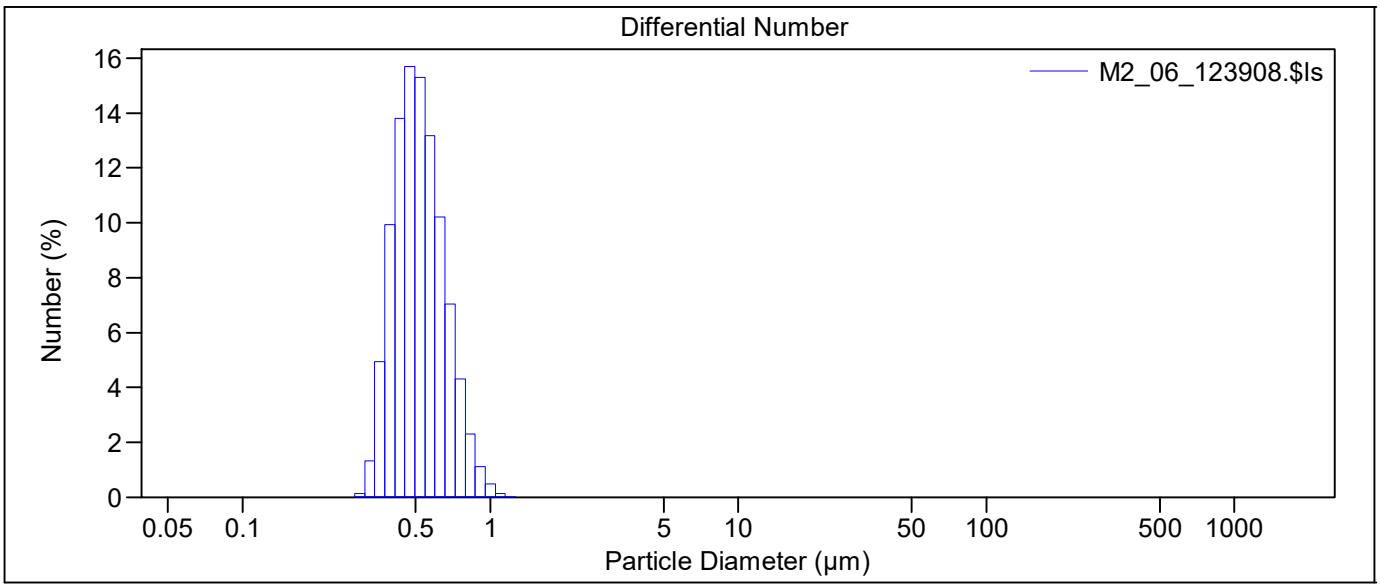
Number:	100%		
Mean:	0.531 µm	S.D.:	0.127 µm
Median:	0.509 µm	Variance:	0.016 μm^2
Mean/Median ratio:	1.043	C.V.:	24.0%
Mode:	0.474 µm	Skewness:	0.996 Right skewed
		Kurtosis:	1.218 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.388 µm	0.437 µm	0.509 µm	0.602 µm	0.706 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.00039	0.00086	0.0035
22	0.284	0.297	0.021	0.041	0.14
23	0.311	0.326	0.26	0.47	1.32
24	0.342	0.358	1.28	2.12	4.95
25	0.375	0.393	3.39	5.14	9.93
26	0.412	0.431	6.23	8.60	13.8
27	0.452	0.474	9.37	11.8	15.7
28	0.496	0.520	12.1	13.8	15.3
29	0.545	0.571	13.8	14.4	13.2
30	0.598	0.627	14.1	13.4	10.2
31	0.656	0.688	12.9	11.2	7.05
32	0.721	0.755	10.5	8.26	4.32
33	0.791	0.829	7.41	5.33	2.31
34	0.868	0.910	4.76	3.12	1.12
35	0.953	0.999	2.74	1.64	0.49
36	1.047	1.097	1.07	0.58	0.14
37	1.149	1.204	0.16	0.077	0.016
38	1.261	1.321	0.0059	0.0027	0.00046
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_07_124927.$ls M2_07_124927.$ls		
File ID:	M2		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	6.49%		
LS 13 320	Universal Liquid Module		
Start time:	12:47 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-1%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_07_124927.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.499 µm	S.D.:	0.077 µm
Median:	0.494 µm	Variance:	0.0059 µm^2
Mean/Median ratio:	1.010	C.V.:	15.4%
Mode:	0.520 µm	Skewness:	0.339 Right skewed
		Kurtosis:	-0.130 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.401 µm	0.442 µm	0.494 µm	0.550 µm	0.601 µm

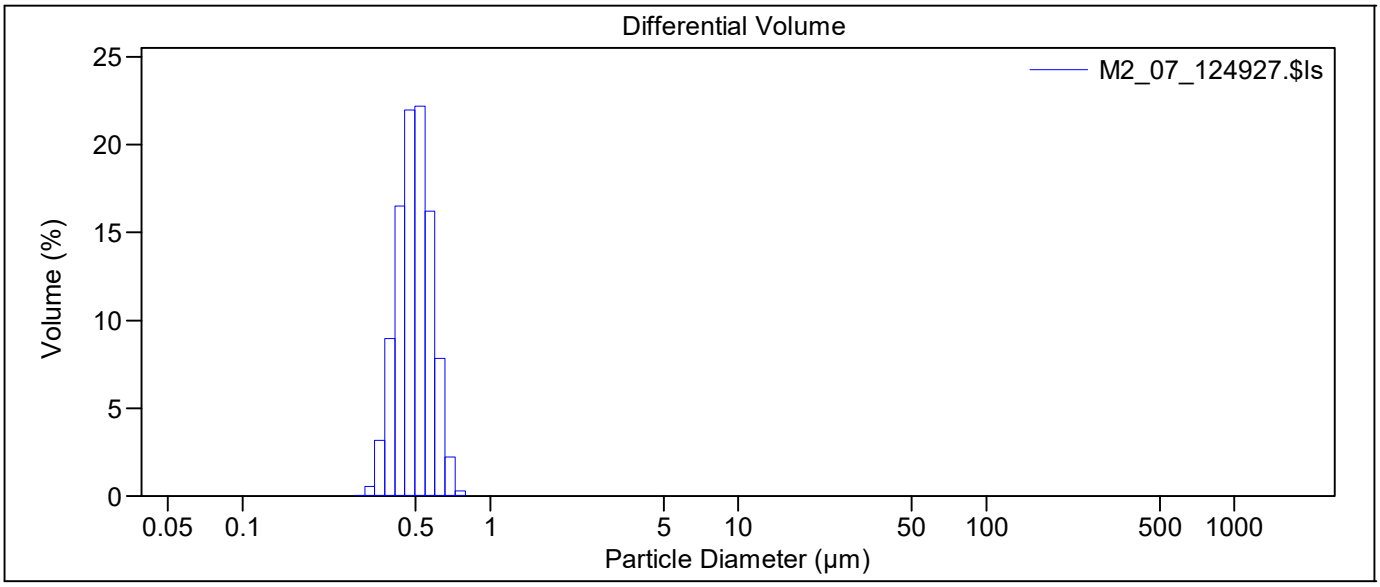
Number Statistics (Arithmetic) M2_07_124927.$ls

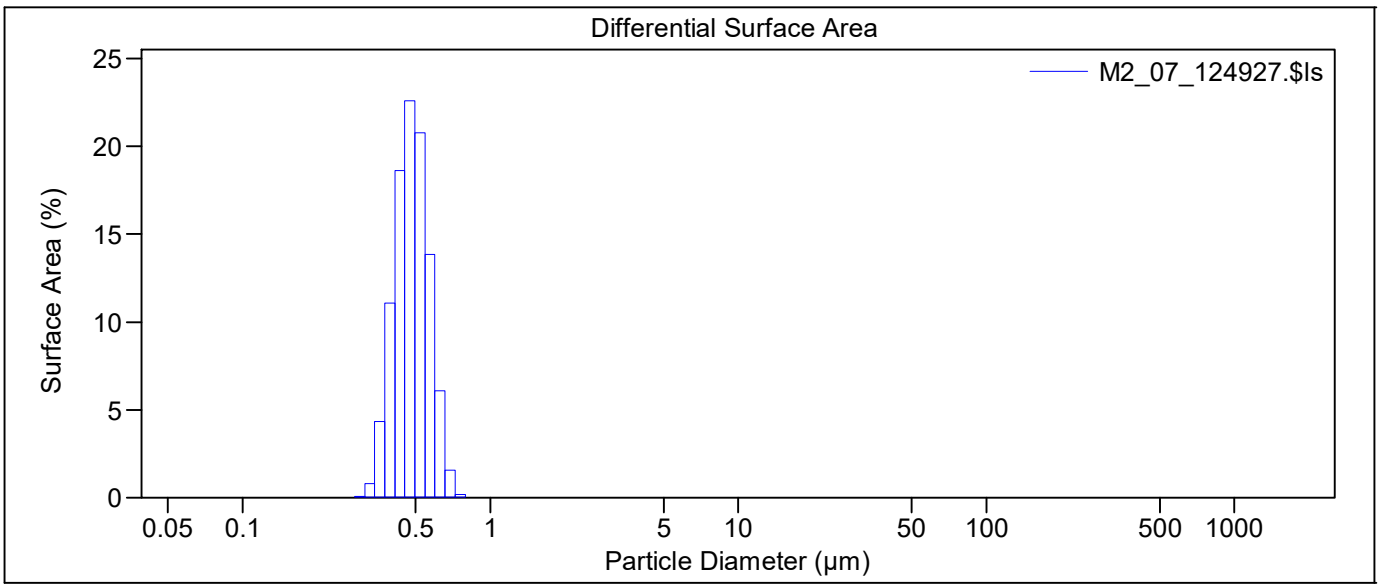
Calculations from 0.040 µm to 2000 µm

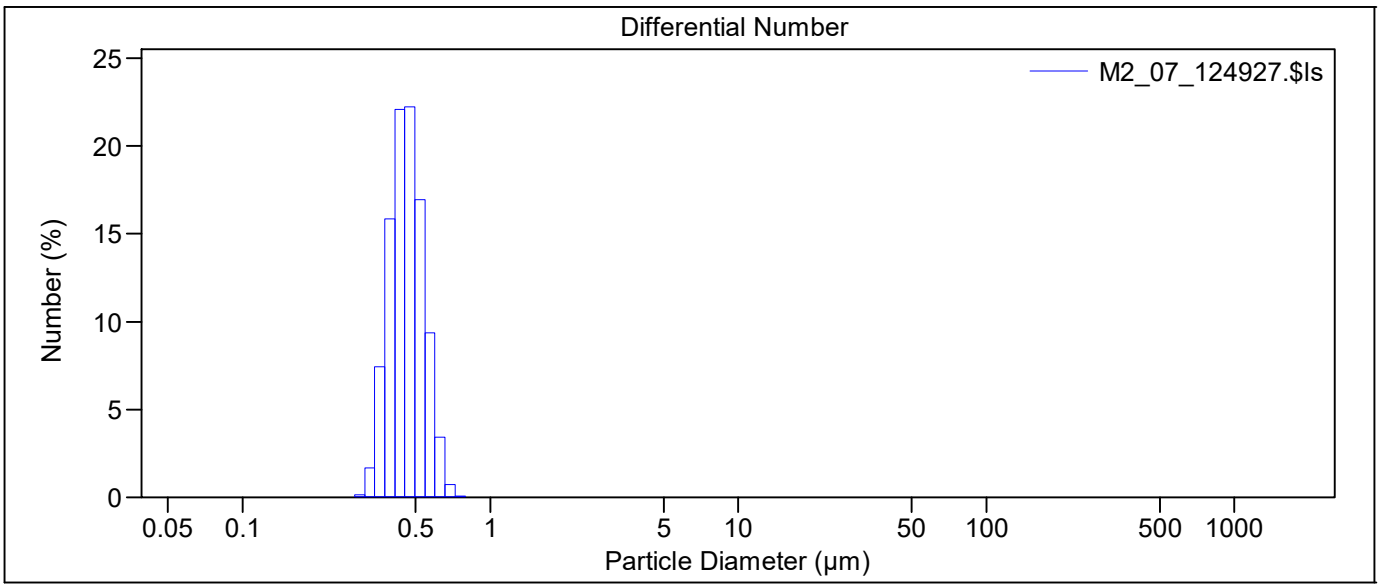
Number:	100%		
Mean:	0.464 µm	S.D.:	0.072 µm
Median:	0.458 µm	Variance:	0.0052 µm^2
Mean/Median ratio:	1.014	C.V.:	15.5%
Mode:	0.474 µm	Skewness:	0.498 Right skewed
		Kurtosis:	0.068 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.377 µm	0.411 µm	0.458 µm	0.512 µm	0.565 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.035	0.058	0.14
23	0.311	0.326	0.54	0.81	1.69
24	0.342	0.358	3.18	4.33	7.45
25	0.375	0.393	8.96	11.1	15.9
26	0.412	0.431	16.5	18.6	22.1
27	0.452	0.474	22.0	22.6	22.2
28	0.496	0.520	22.2	20.8	17.0
29	0.545	0.571	16.2	13.8	9.38
30	0.598	0.627	7.85	6.10	3.43
31	0.656	0.688	2.22	1.57	0.73
32	0.721	0.755	0.29	0.19	0.073
33	0.791	0.829	0.012	0.0073	0.0023
34	0.868	0.910	0	0	0
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_08_125114.$ls M2_08_125114.$ls		
File ID:	M2		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	6.70%		
LS 13 320	Universal Liquid Module		
Start time:	12:49 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	-2%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_08_125114.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.494 µm	S.D.:	0.074 µm
Median:	0.490 µm	Variance:	0.0055 µm^2
Mean/Median ratio:	1.008	C.V.:	15.0%
Mode:	0.474 µm	Skewness:	0.293 Right skewed
		Kurtosis:	-0.191 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.398 µm	0.439 µm	0.490 µm	0.543 µm	0.593 µm

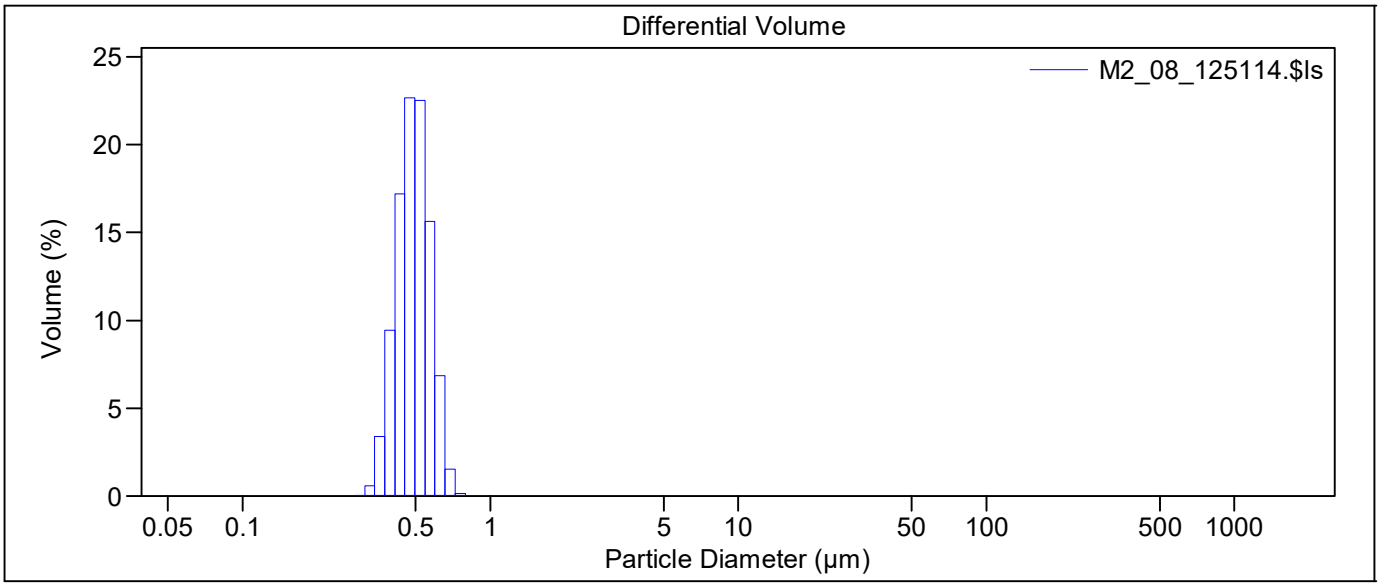
Number Statistics (Arithmetic) M2_08_125114.$ls

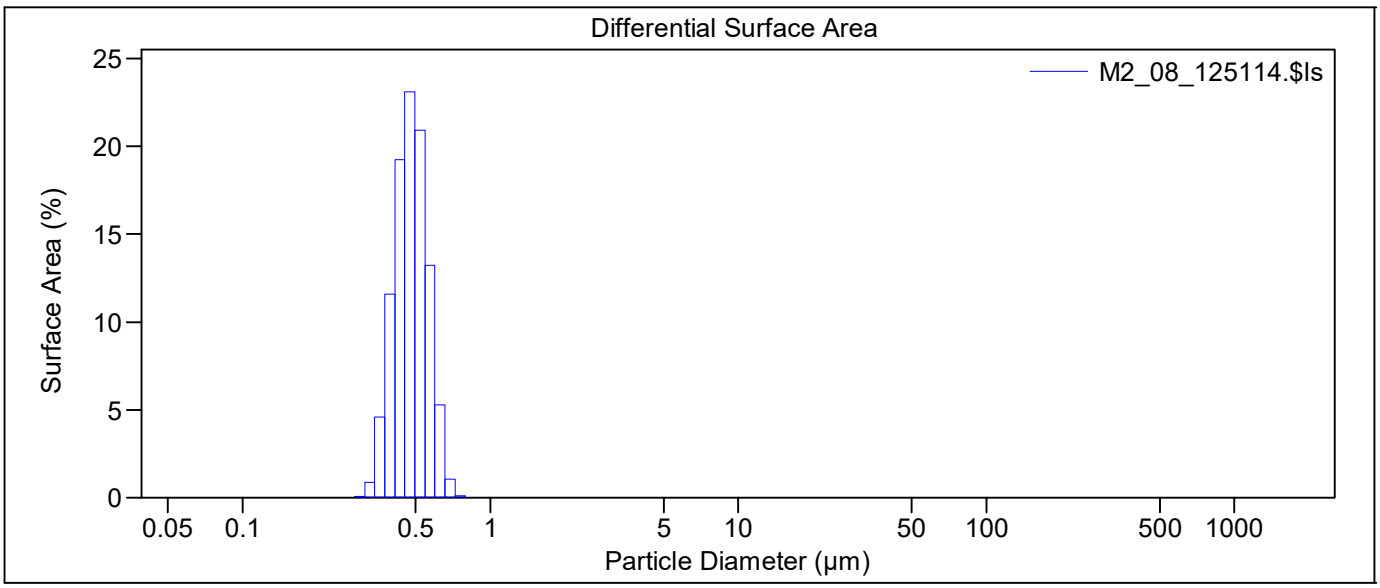
Calculations from 0.040 µm to 2000 µm

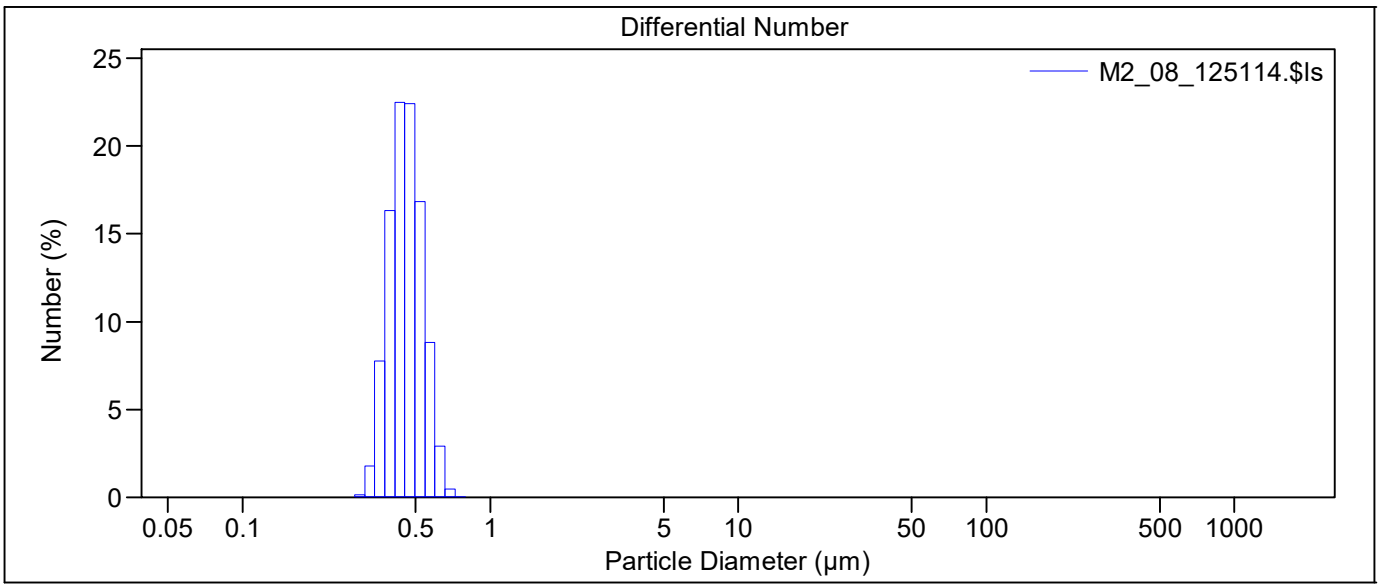
Number:	100%		
Mean:	0.461 µm	S.D.:	0.070 µm
Median:	0.455 µm	Variance:	0.0049 µm^2
Mean/Median ratio:	1.013	C.V.:	15.2%
Mode:	0.431 µm	Skewness:	0.455 Right skewed
		Kurtosis:	-0.019 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.376 µm	0.410 µm	0.455 µm	0.508 µm	0.558 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.039	0.063	0.15
23	0.311	0.326	0.59	0.87	1.78
24	0.342	0.358	3.39	4.57	7.76
25	0.375	0.393	9.44	11.6	16.3
26	0.412	0.431	17.2	19.2	22.5
27	0.452	0.474	22.7	23.1	22.4
28	0.496	0.520	22.5	20.9	16.8
29	0.545	0.571	15.6	13.2	8.83
30	0.598	0.627	6.84	5.27	2.92
31	0.656	0.688	1.52	1.06	0.49
32	0.721	0.755	0.14	0.091	0.035
33	0.791	0.829	0.0017	0.00098	0.00031
34	0.868	0.910	0	0	0
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_09_125301.$ls M2_09_125301.$ls		
File ID:	M2		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	6.95%		
LS 13 320	Universal Liquid Module		
Start time:	12:51 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	-2%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_09_125301.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.489 µm	S.D.:	0.072 µm
Median:	0.486 µm	Variance:	0.0052 µm^2
Mean/Median ratio:	1.007	C.V.:	14.8%
Mode:	0.474 µm	Skewness:	0.270 Right skewed
		Kurtosis:	-0.235 Platykurtic

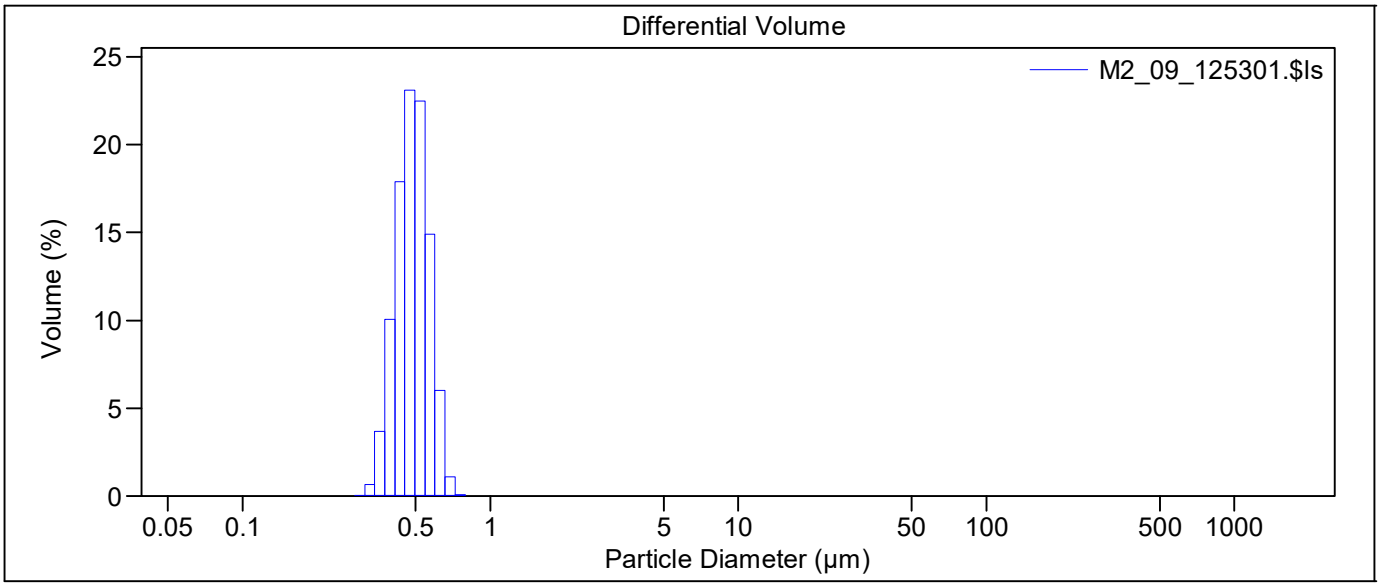
<10%	<25%	<50%	<75%	<90%
0.396 µm	0.436 µm	0.486 µm	0.538 µm	0.588 µm

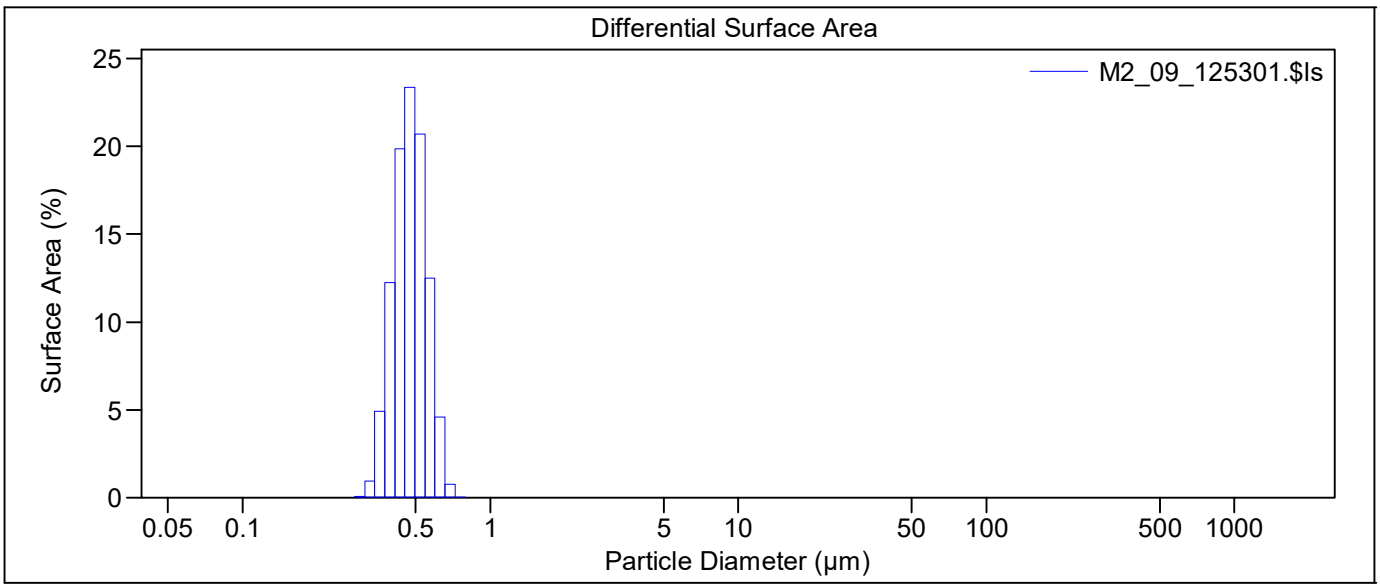
Number Statistics (Arithmetic) M2_09_125301.$ls

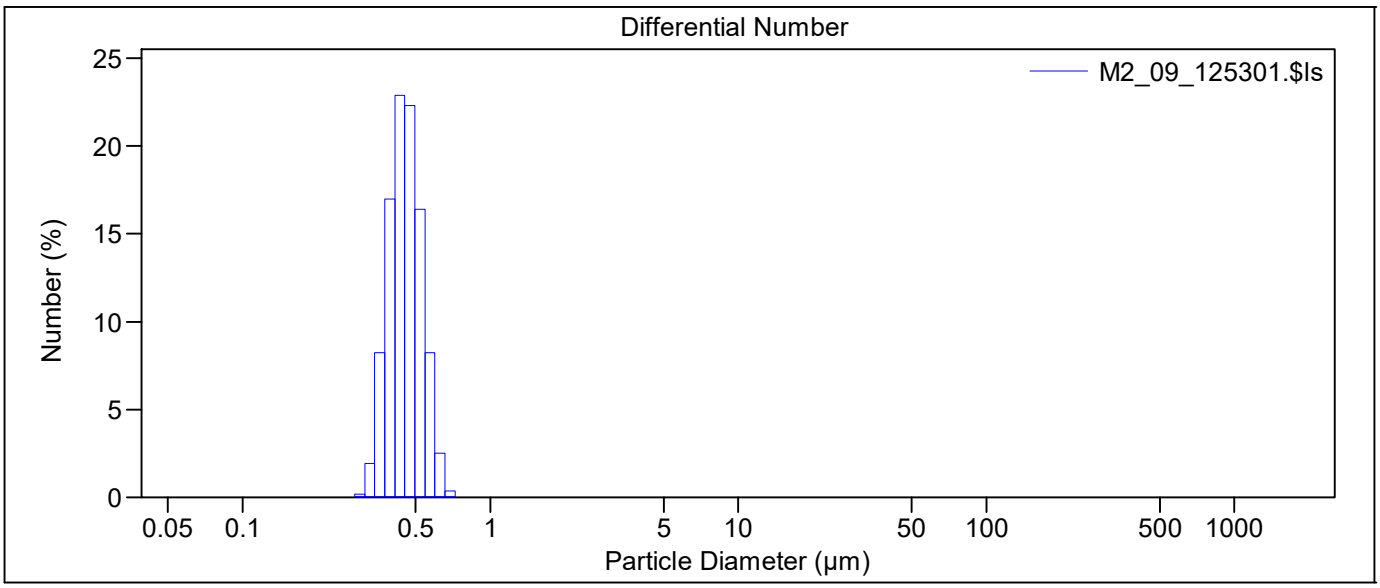
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.458 µm	S.D.:	0.069 µm
Median:	0.452 µm	Variance:	0.0047 µm^2
Mean/Median ratio:	1.014	C.V.:	15.0%
Mode:	0.431 µm	Skewness:	0.439 Right skewed
		Kurtosis:	-0.064 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.374 µm	0.407 µm	0.452 µm	0.504 µm	0.552 µm


Differential Volume
M2_09_125301.$ls
Volume (%)
25
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M2_09_125301.$ls
Surface Area (%)
25
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M2_09_125301.$ls
Number (%)
25
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

Beckman Coulter LS13320

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.043	0.070	0.17
23	0.311	0.326	0.65	0.95	1.92
24	0.342	0.358	3.69	4.93	8.25
25	0.375	0.393	10.0	12.2	17.0
26	0.412	0.431	17.9	19.9	22.9
27	0.452	0.474	23.1	23.4	22.3
28	0.496	0.520	22.5	20.7	16.4
29	0.545	0.571	14.9	12.5	8.22
30	0.598	0.627	6.02	4.60	2.51
31	0.656	0.688	1.10	0.77	0.35
32	0.721	0.755	0.073	0.046	0.017
33	0.791	0.829	0	0	0
34	0.868	0.910	0	0	0
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_10_130117.$ls M2_10_130117.$ls		
File ID:	M2		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.13%		
LS 13 320	Universal Liquid Module		
Start time:	12:59 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_10_130117.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.610 µm	S.D.:	0.111 µm
Median:	0.601 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.015	C.V.:	18.3%
Mode:	0.627 µm	Skewness:	0.391 Right skewed
		Kurtosis:	-0.236 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.469 µm	0.525 µm	0.601 µm	0.687 µm	0.766 µm

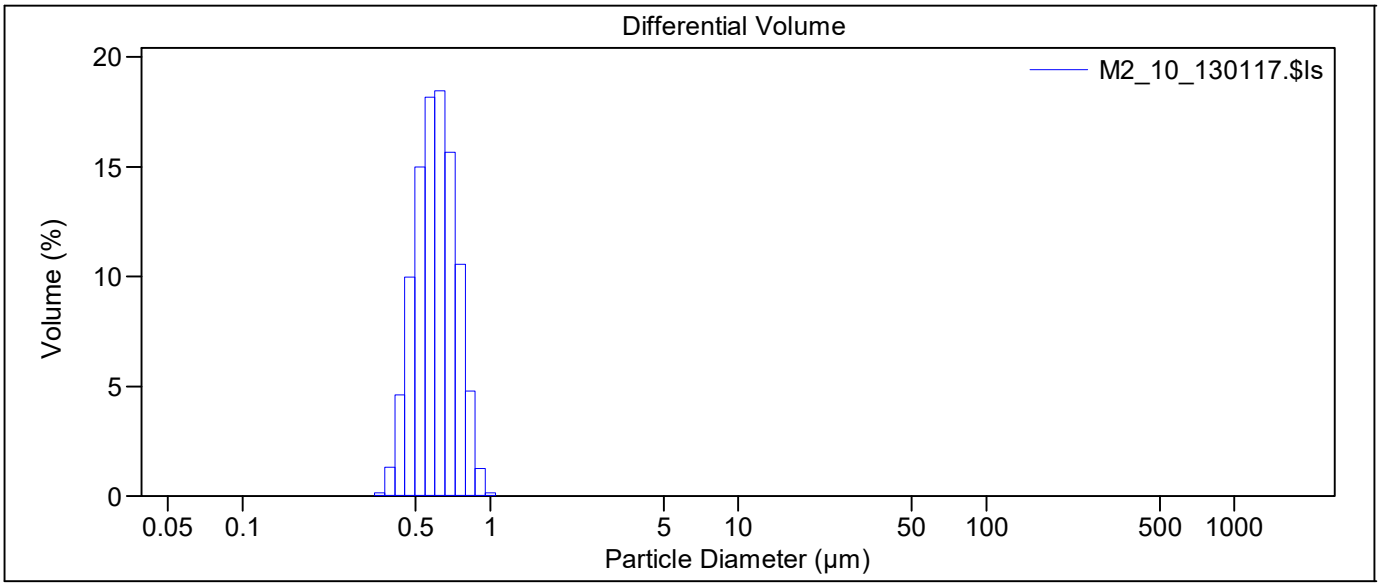
Number Statistics (Arithmetic) M2_10_130117.$ls

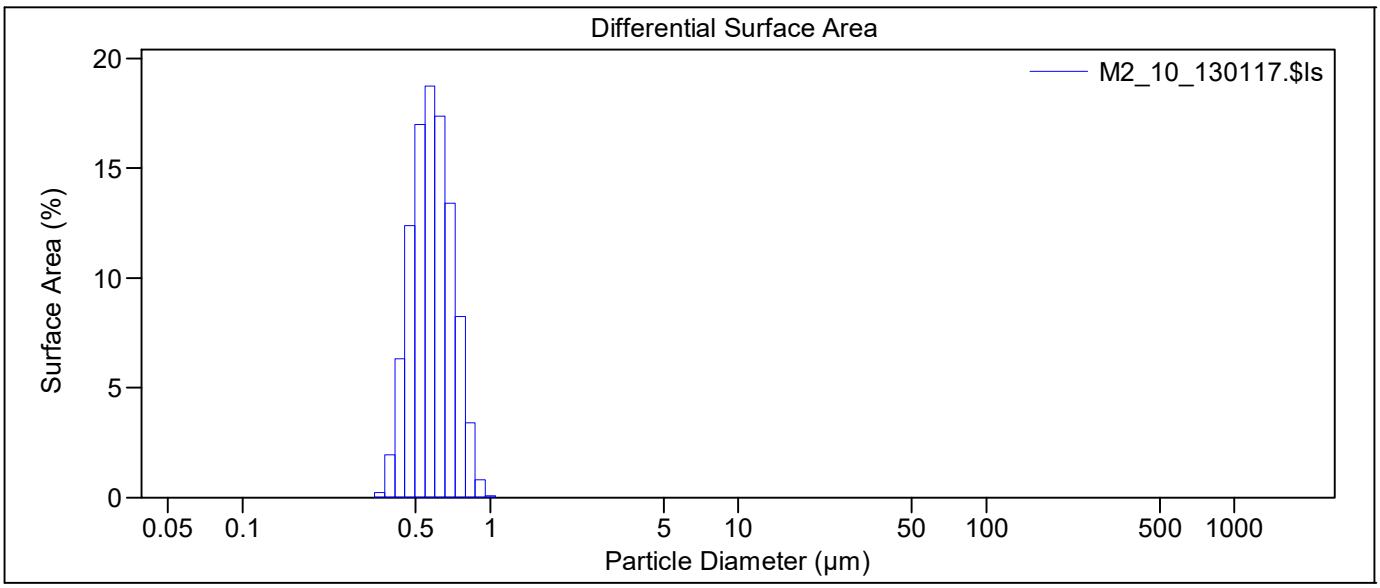
Calculations from 0.040 µm to 2000 µm

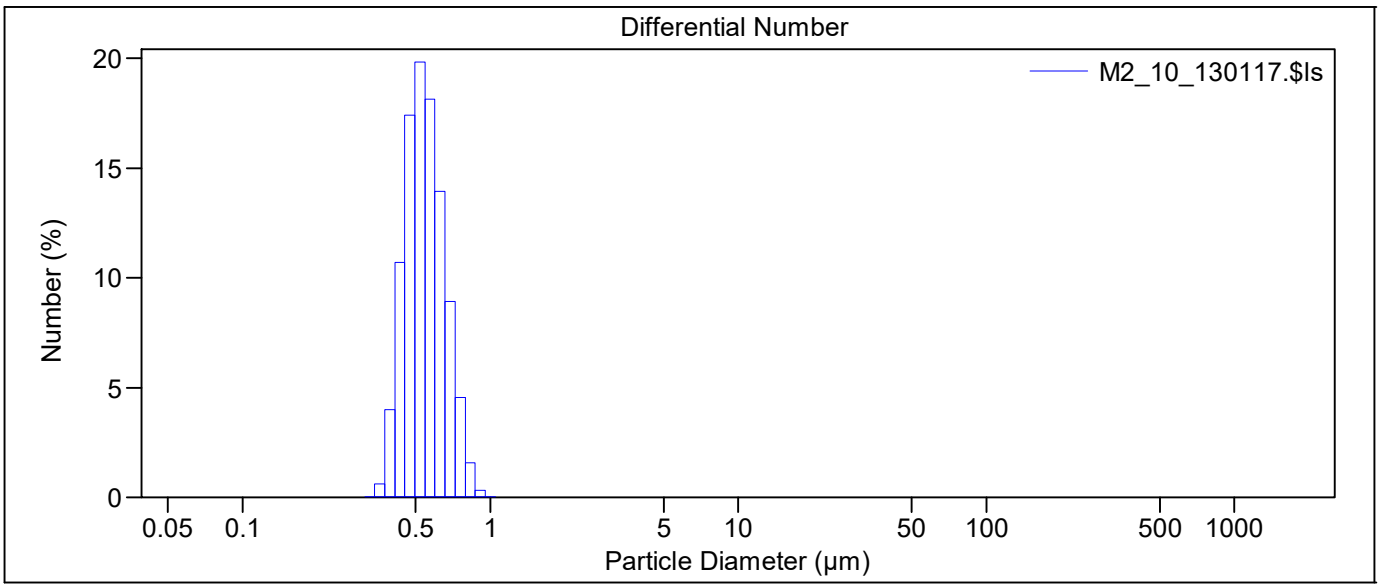
Number:	100%		
Mean:	0.552 µm	S.D.:	0.100 µm
Median:	0.539 µm	Variance:	0.010 µm^2
Mean/Median ratio:	1.026	C.V.:	18.2%
Mode:	0.520 µm	Skewness:	0.660 Right skewed
		Kurtosis:	0.230 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.432 µm	0.477 µm	0.539 µm	0.616 µm	0.695 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0047	0.0085	0.025
24	0.342	0.358	0.15	0.24	0.60
25	0.375	0.393	1.30	1.95	3.98
26	0.412	0.431	4.62	6.32	10.7
27	0.452	0.474	9.96	12.4	17.4
28	0.496	0.520	15.0	17.0	19.8
29	0.545	0.571	18.2	18.8	18.1
30	0.598	0.627	18.5	17.4	13.9
31	0.656	0.688	15.6	13.4	8.93
32	0.721	0.755	10.5	8.24	4.55
33	0.791	0.829	4.80	3.41	1.56
34	0.868	0.910	1.26	0.81	0.31
35	0.953	0.999	0.13	0.078	0.025
36	1.047	1.097	0.0038	0.0020	0.00053
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_11_130304.$ls M2_11_130304.$ls		
File ID:	M2		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.24%		
LS 13 320	Universal Liquid Module		
Start time:	13:01 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_11_130304.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.599 µm	S.D.:	0.103 µm
Median:	0.592 µm	Variance:	0.011 µm^2
Mean/Median ratio:	1.012	C.V.:	17.1%
Mode:	0.571 µm	Skewness:	0.305 Right skewed
		Kurtosis:	-0.375 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.468 µm	0.521 µm	0.592 µm	0.672 µm	0.744 µm

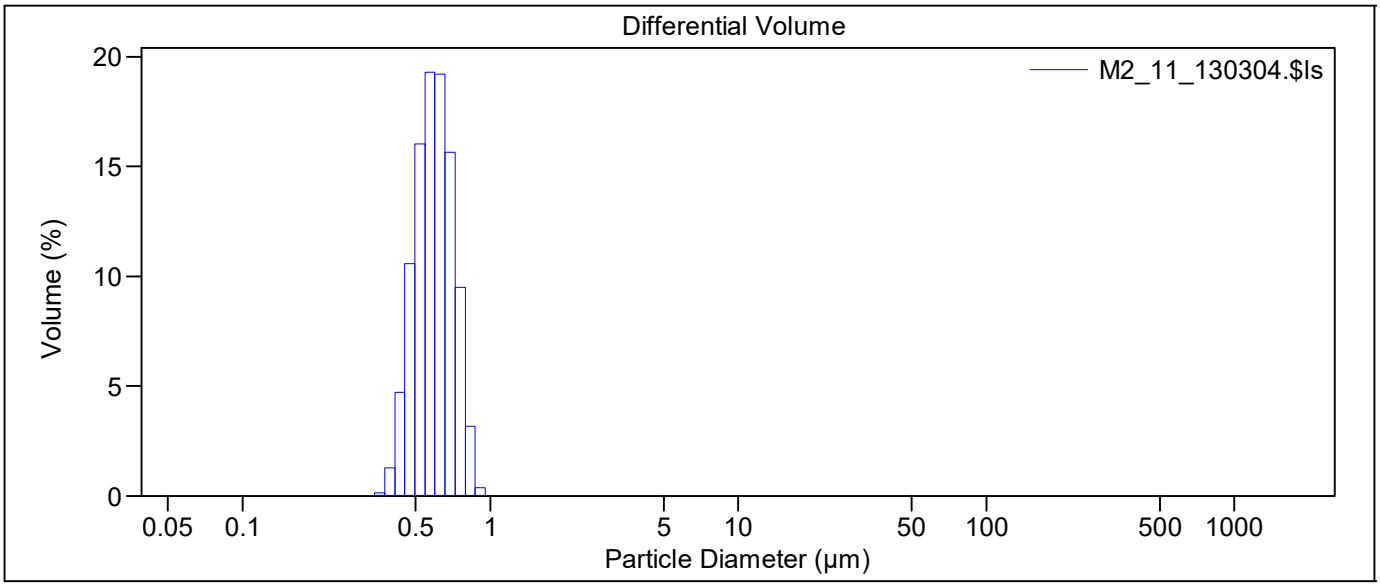
Number Statistics (Arithmetic) M2_11_130304.$ls

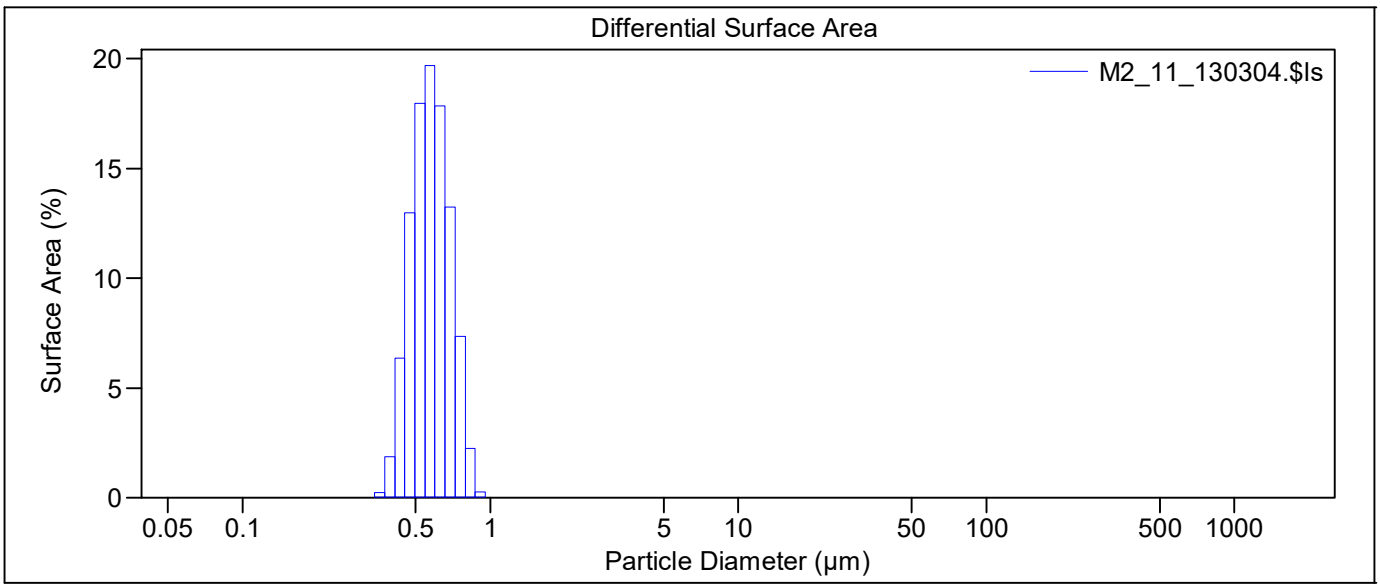
Calculations from 0.040 µm to 2000 µm

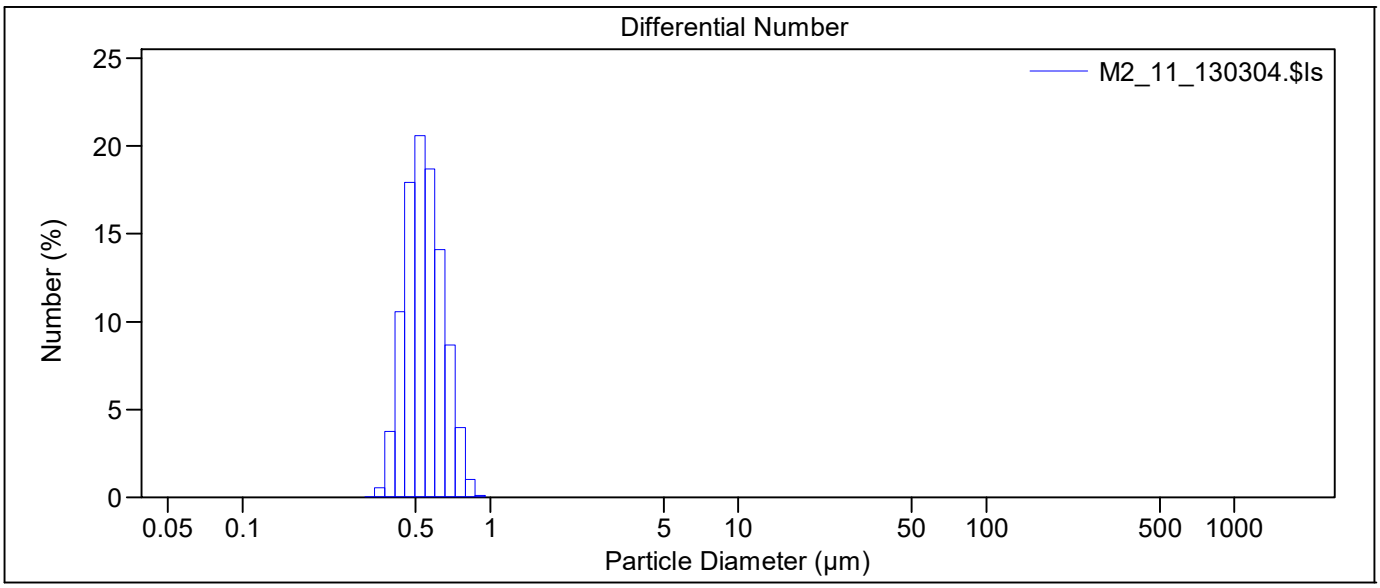
Number:	100%		
Mean:	0.549 µm	S.D.:	0.095 µm
Median:	0.537 µm	Variance:	0.0090 µm^2
Mean/Median ratio:	1.022	C.V.:	17.3%
Mode:	0.520 µm	Skewness:	0.575 Right skewed
		Kurtosis:	0.026 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.433 µm	0.477 µm	0.537 µm	0.610 µm	0.684 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0044	0.0078	0.023
24	0.342	0.358	0.14	0.23	0.55
25	0.375	0.393	1.27	1.88	3.77
26	0.412	0.431	4.71	6.36	10.6
27	0.452	0.474	10.6	13.0	17.9
28	0.496	0.520	16.0	18.0	20.6
29	0.545	0.571	19.3	19.7	18.7
30	0.598	0.627	19.2	17.9	14.1
31	0.656	0.688	15.7	13.2	8.68
32	0.721	0.755	9.52	7.33	3.99
33	0.791	0.829	3.18	2.23	1.01
34	0.868	0.910	0.39	0.25	0.094
35	0.953	0.999	0.012	0.0069	0.0021
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_12_130452.$ls M2_12_130452.$ls		
File ID:	M2		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.33%		
LS 13 320	Universal Liquid Module		
Start time:	13:03 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_12_130452.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.592 µm	S.D.:	0.099 µm
Median:	0.586 µm	Variance:	0.0099 µm^2
Mean/Median ratio:	1.011	C.V.:	16.8%
Mode:	0.571 µm	Skewness:	0.310 Right skewed
		Kurtosis:	-0.366 Platykurtic

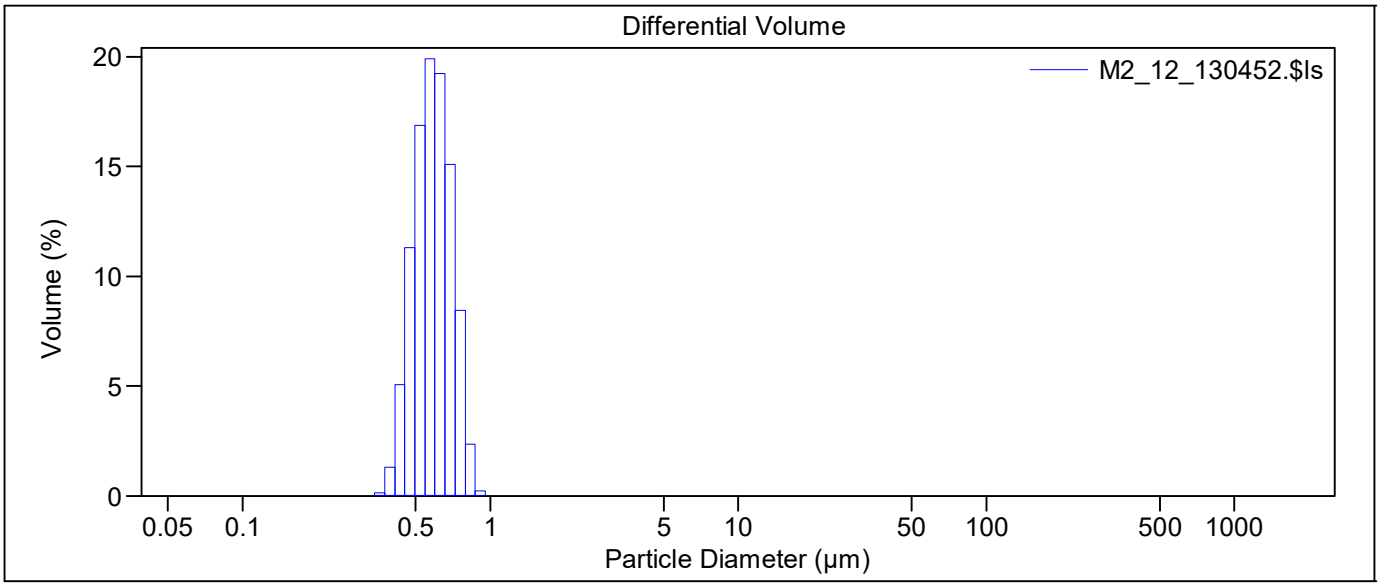
<10%	<25%	<50%	<75%	<90%
0.466 µm	0.517 µm	0.586 µm	0.661 µm	0.729 µm

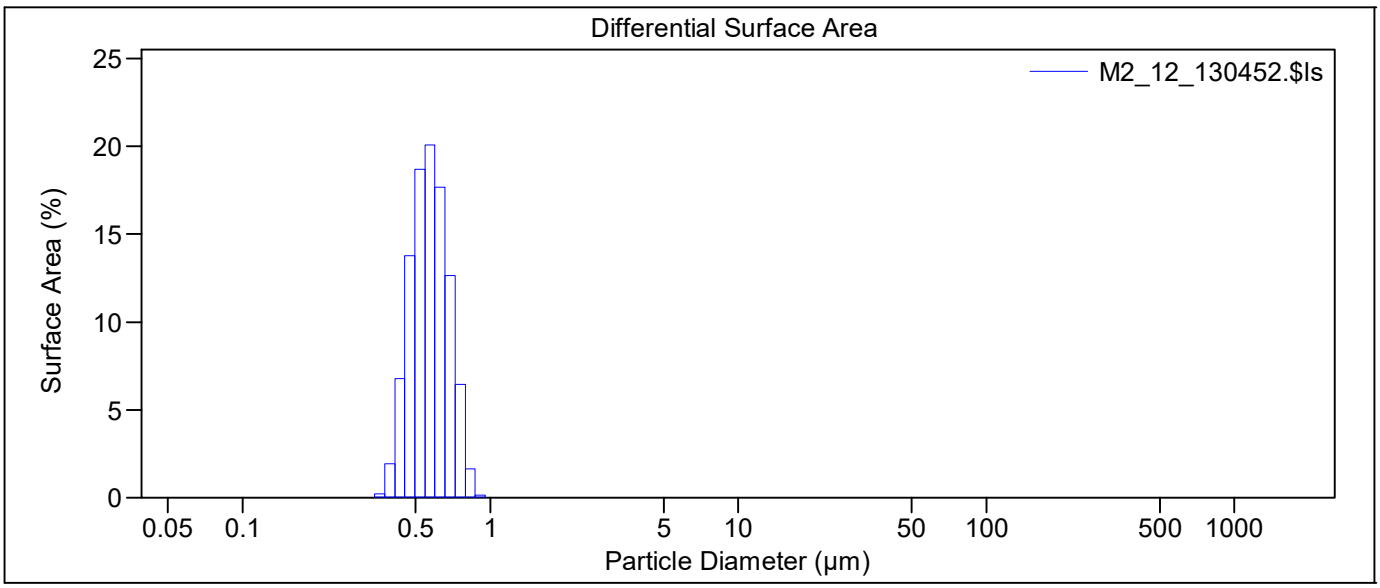
Number Statistics (Arithmetic) M2_12_130452.$ls

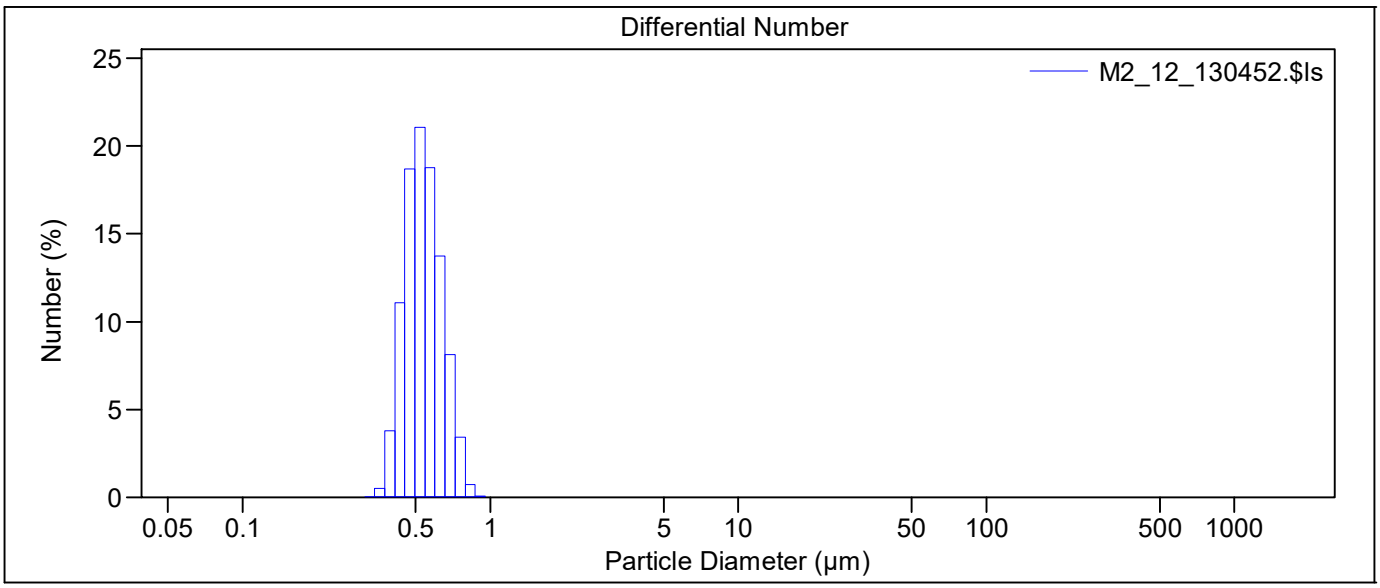
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.544 µm	S.D.:	0.092 µm
Median:	0.533 µm	Variance:	0.0085 µm^2
Mean/Median ratio:	1.021	C.V.:	16.9%
Mode:	0.520 µm	Skewness:	0.573 Right skewed
		Kurtosis:	0.024 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.432 µm	0.475 µm	0.533 µm	0.603 µm	0.675 µm


Differential Volume
M2_12_130452.$ls
Volume (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M2_12_130452.$ls
Surface Area (%)
0
5
10
15
20
25
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M2_12_130452.$ls
Number (%)
0
5
10
15
20
25
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0	0	0
23	0.311	0.326	0.0039	0.0070	0.020
24	0.342	0.358	0.14	0.22	0.52
25	0.375	0.393	1.31	1.92	3.79
26	0.412	0.431	5.07	6.76	11.1
27	0.452	0.474	11.3	13.8	18.7
28	0.496	0.520	16.9	18.7	21.1
29	0.545	0.571	19.9	20.1	18.8
30	0.598	0.627	19.2	17.7	13.7
31	0.656	0.688	15.1	12.6	8.14
32	0.721	0.755	8.45	6.44	3.44
33	0.791	0.829	2.35	1.63	0.72
34	0.868	0.910	0.24	0.15	0.056
35	0.953	0.999	0.0054	0.0031	0.00094
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_13_131345.$ls M2_13_131345.$ls		
File ID:	M2		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.52%		
LS 13 320	Universal Liquid Module		
Start time:	13:12 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	10%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_13_131345.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.740 µm	S.D.:	0.608 µm
Median:	0.615 µm	Variance:	0.369 μm^2
Mean/Median ratio:	1.204	C.V.:	82.2%
Mode:	0.755 µm	Skewness:	3.206 Right skewed
		Kurtosis:	13.93 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.233 µm	0.380 µm	0.615 µm	0.925 µm	1.255 µm

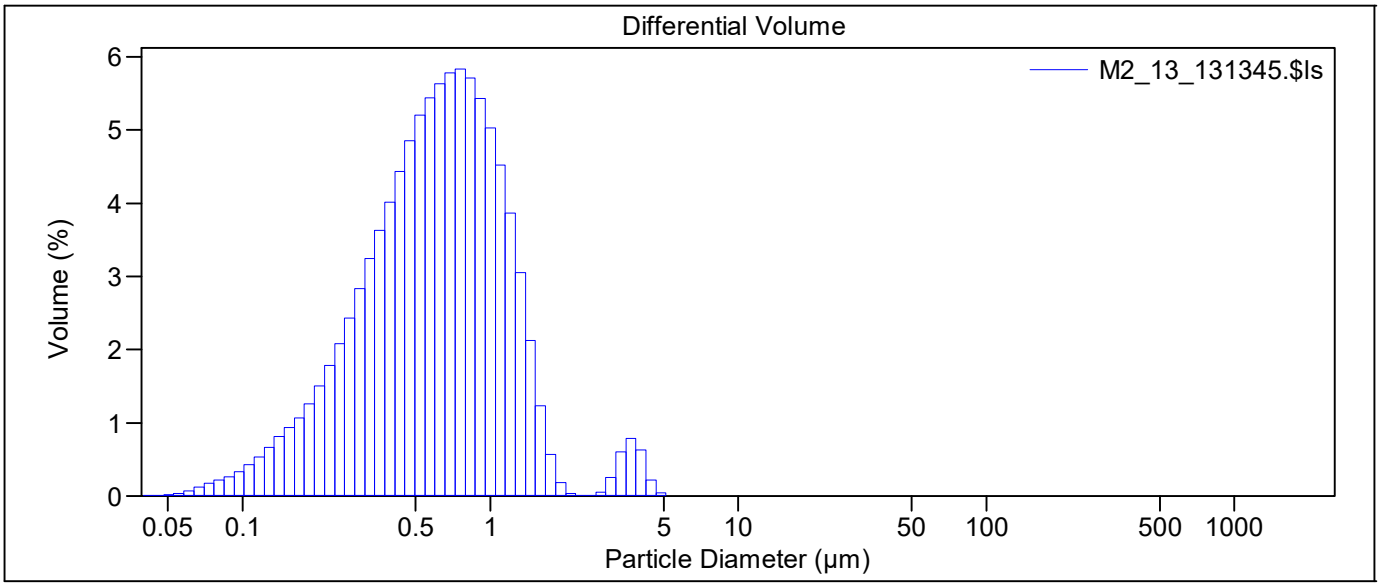
Number Statistics (Arithmetic) M2_13_131345.$ls

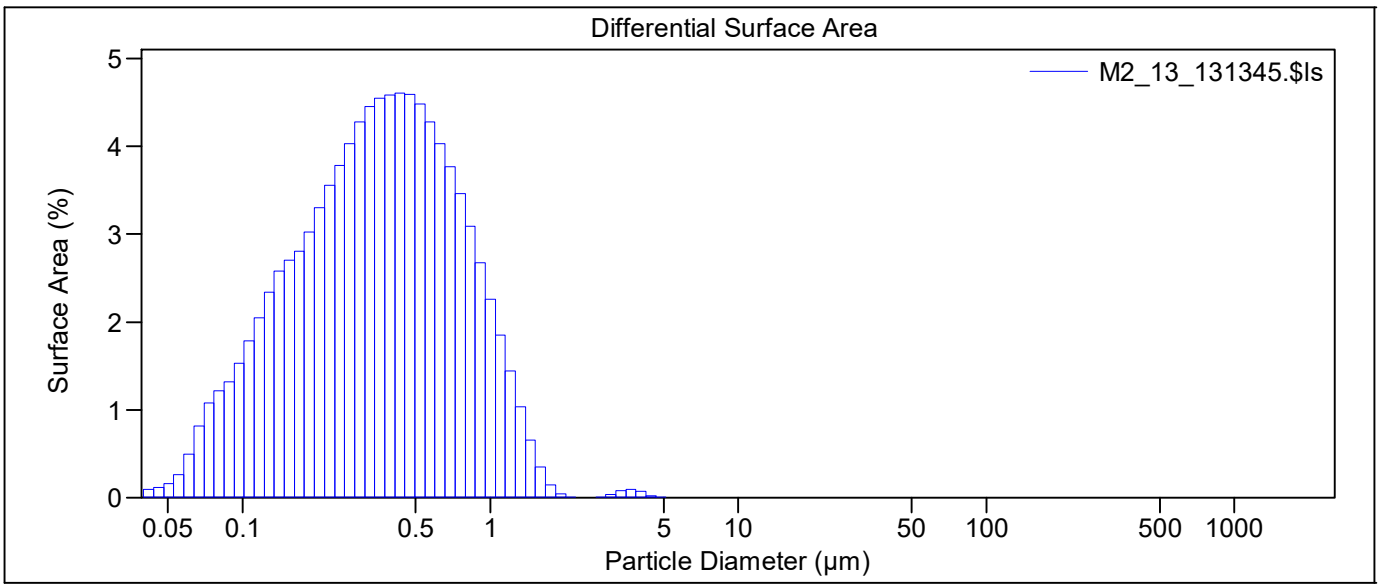
Calculations from 0.040 µm to 2000 µm

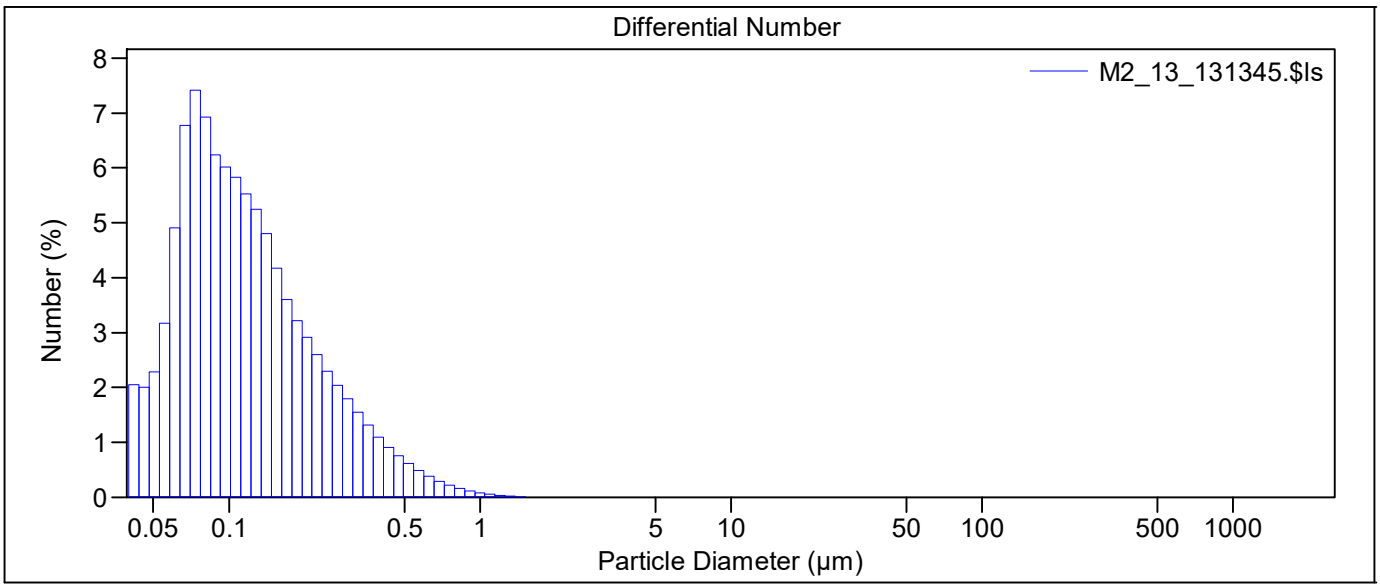
Number:	100%		
Mean:	0.146 µm	S.D.:	0.125 µm
Median:	0.105 µm	Variance:	0.016 μm^2
Mean/Median ratio:	1.388	C.V.:	85.3%
Mode:	0.073 µm	Skewness:	3.402 Right skewed
		Kurtosis:	21.48 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.059 µm	0.073 µm	0.105 µm	0.169 µm	0.283 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0091	0.098	2.05
2	0.044	0.046	0.012	0.11	2.00
3	0.048	0.050	0.018	0.16	2.28
4	0.053	0.055	0.033	0.26	3.17
5	0.058	0.061	0.067	0.49	4.91
6	0.064	0.067	0.12	0.82	6.78
7	0.070	0.073	0.18	1.08	7.42
8	0.077	0.080	0.22	1.21	6.93
9	0.084	0.088	0.26	1.32	6.24
10	0.093	0.097	0.33	1.53	6.02
11	0.102	0.106	0.42	1.79	5.83
12	0.112	0.117	0.53	2.05	5.53
13	0.122	0.128	0.67	2.34	5.25
14	0.134	0.141	0.81	2.58	4.80
15	0.148	0.155	0.93	2.70	4.17
16	0.162	0.170	1.06	2.81	3.60
17	0.178	0.186	1.26	3.02	3.22
18	0.195	0.205	1.51	3.30	2.92
19	0.214	0.225	1.78	3.55	2.61
20	0.235	0.247	2.08	3.78	2.30
21	0.258	0.271	2.43	4.03	2.04
22	0.284	0.297	2.84	4.28	1.79
23	0.311	0.326	3.24	4.46	1.55
24	0.342	0.358	3.63	4.55	1.31
25	0.375	0.393	4.02	4.58	1.10
26	0.412	0.431	4.43	4.61	0.91
27	0.452	0.474	4.85	4.59	0.76
28	0.496	0.520	5.20	4.49	0.61
29	0.545	0.571	5.44	4.28	0.49
30	0.598	0.627	5.63	4.03	0.38
31	0.656	0.688	5.78	3.77	0.29
32	0.721	0.755	5.83	3.46	0.22
33	0.791	0.829	5.71	3.09	0.17
34	0.868	0.910	5.43	2.68	0.12
35	0.953	0.999	5.03	2.26	0.084
36	1.047	1.097	4.52	1.85	0.057
37	1.149	1.204	3.87	1.44	0.037
38	1.261	1.321	3.05	1.04	0.022
39	1.385	1.451	2.12	0.66	0.012
40	1.520	1.592	1.23	0.35	0.0050
41	1.668	1.748	0.57	0.15	0.0018
42	1.832	1.919	0.18	0.042	0.00042
43	2.011	2.107	0.035	0.0075	0.000062
44	2.207	2.313	0.0053	0.0010	0.000007
45	2.423	2.539	0.0077	0.0014	0.000008

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0.055	0.0088	0.000042
47	2.920	3.059	0.25	0.037	0.00015
48	3.205	3.358	0.60	0.080	0.00026
49	3.519	3.687	0.79	0.096	0.00026
50	3.863	4.047	0.63	0.069	0.00016
51	4.240	4.443	0.22	0.022	0.000042
52	4.655	4.877	0.044	0.0040	0.000006
53	5.110	5.354	0.0021	0.00018	2.3E-7
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_14_131531.$ls M2_14_131531.$ls		
File ID:	M2		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.82%		
LS 13 320	Universal Liquid Module		
Start time:	13:13 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	10%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_14_131531.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.647 µm	S.D.:	0.307 µm
Median:	0.613 µm	Variance:	0.094 μm^2
Mean/Median ratio:	1.055	C.V.:	47.4%
Mode:	0.688 µm	Skewness:	0.458 Right skewed
		Kurtosis:	-0.360 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.269 µm	0.408 µm	0.613 µm	0.859 µm	1.082 µm

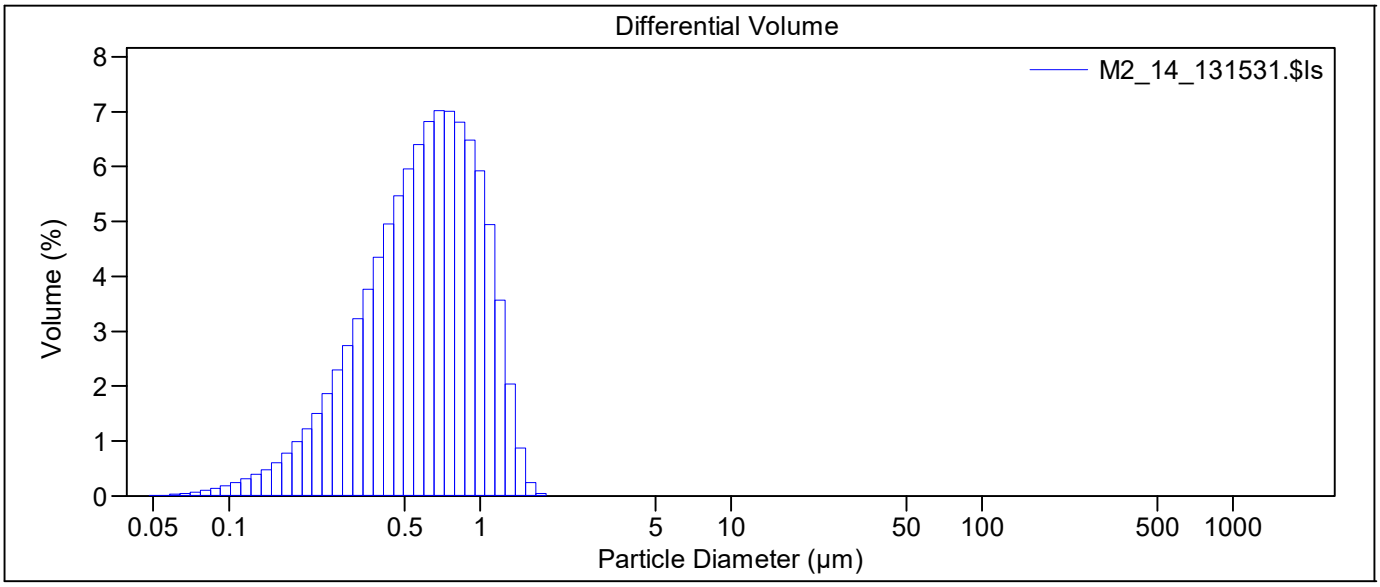
Number Statistics (Arithmetic) M2_14_131531.$ls

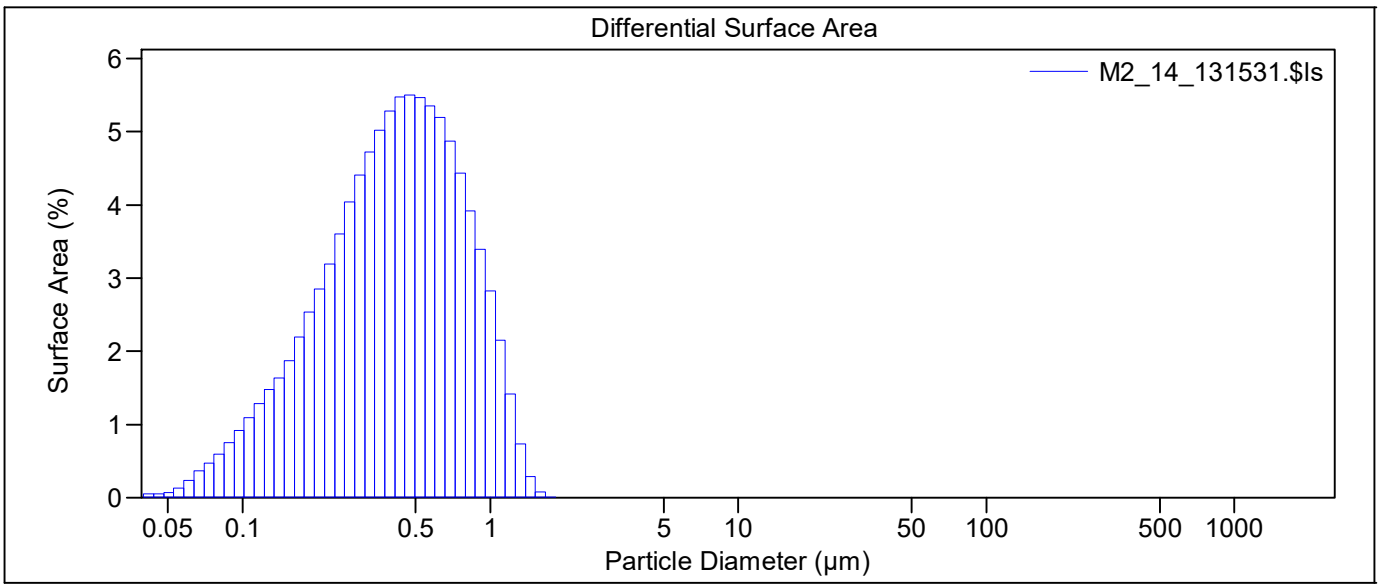
Calculations from 0.040 µm to 2000 µm

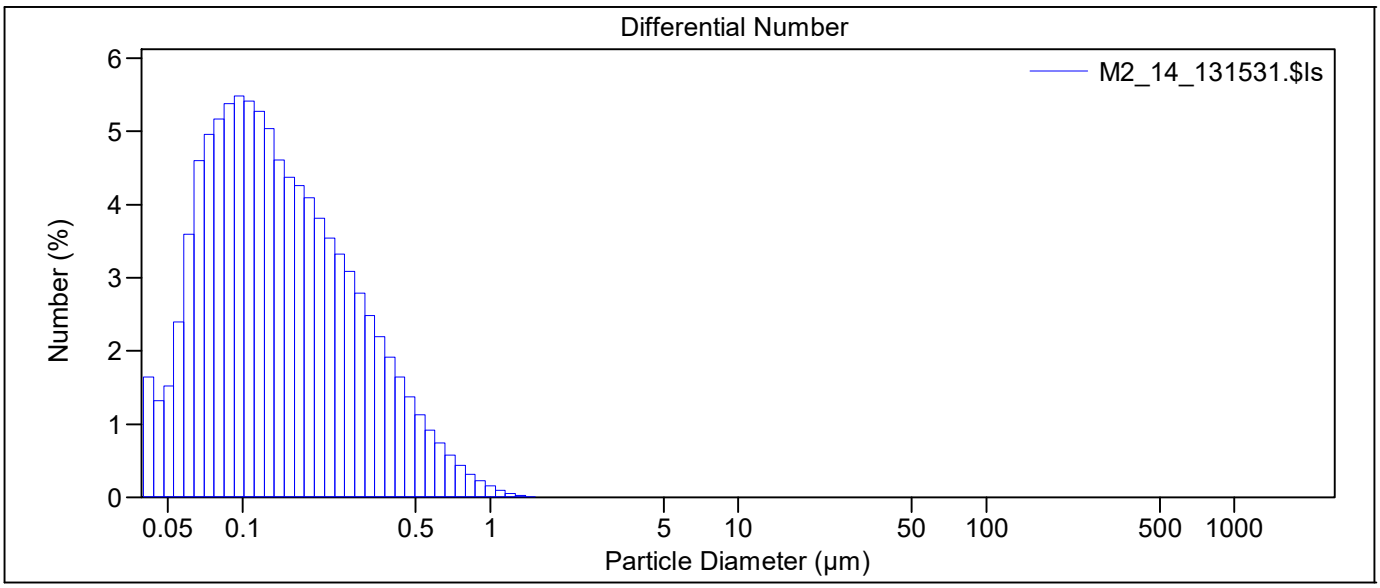
Number:	100%		
Mean:	0.182 µm	S.D.:	0.151 µm
Median:	0.130 µm	Variance:	0.023 μm^2
Mean/Median ratio:	1.400	C.V.:	82.7%
Mode:	0.097 µm	Skewness:	2.391 Right skewed
		Kurtosis:	7.953 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.063 µm	0.084 µm	0.130 µm	0.227 µm	0.370 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0045	0.051	1.64
2	0.044	0.046	0.0048	0.050	1.32
3	0.048	0.050	0.0073	0.069	1.52
4	0.053	0.055	0.015	0.13	2.40
5	0.058	0.061	0.030	0.24	3.59
6	0.064	0.067	0.051	0.37	4.60
7	0.070	0.073	0.073	0.48	4.96
8	0.077	0.080	0.10	0.60	5.17
9	0.084	0.088	0.14	0.75	5.38
10	0.093	0.097	0.19	0.92	5.48
11	0.102	0.106	0.24	1.10	5.42
12	0.112	0.117	0.32	1.29	5.27
13	0.122	0.128	0.40	1.48	5.04
14	0.134	0.141	0.48	1.63	4.61
15	0.148	0.155	0.61	1.87	4.38
16	0.162	0.170	0.78	2.19	4.26
17	0.178	0.186	0.99	2.54	4.09
18	0.195	0.205	1.22	2.85	3.81
19	0.214	0.225	1.50	3.19	3.54
20	0.235	0.247	1.86	3.61	3.32
21	0.258	0.271	2.29	4.04	3.09
22	0.284	0.297	2.74	4.41	2.79
23	0.311	0.326	3.23	4.73	2.49
24	0.342	0.358	3.77	5.02	2.19
25	0.375	0.393	4.35	5.28	1.91
26	0.412	0.431	4.95	5.47	1.65
27	0.452	0.474	5.46	5.50	1.37
28	0.496	0.520	5.96	5.47	1.13
29	0.545	0.571	6.41	5.36	0.92
30	0.598	0.627	6.82	5.20	0.74
31	0.656	0.688	7.03	4.87	0.58
32	0.721	0.755	7.01	4.43	0.43
33	0.791	0.829	6.81	3.92	0.32
34	0.868	0.910	6.48	3.40	0.23
35	0.953	0.999	5.92	2.83	0.16
36	1.047	1.097	4.94	2.15	0.10
37	1.149	1.204	3.56	1.41	0.055
38	1.261	1.321	2.05	0.74	0.024
39	1.385	1.451	0.88	0.29	0.0077
40	1.520	1.592	0.25	0.075	0.0016
41	1.668	1.748	0.042	0.012	0.00021
42	1.832	1.919	0.0034	0.00085	0.000013
43	2.011	2.107	0.000065	0.000015	1.85E-7
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M2\M2_15_131719.$ls M2_15_131719.$ls		
File ID:	M2		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.46%		
LS 13 320	Universal Liquid Module		
Start time:	13:15 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	12%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M2_15_131719.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.741 µm	S.D.:	0.638 µm
Median:	0.602 µm	Variance:	0.407 µm^2
Mean/Median ratio:	1.231	C.V.:	86.2%
Mode:	0.755 µm	Skewness:	3.046 Right skewed
		Kurtosis:	12.27 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.208 µm	0.359 µm	0.602 µm	0.929 µm	1.288 µm

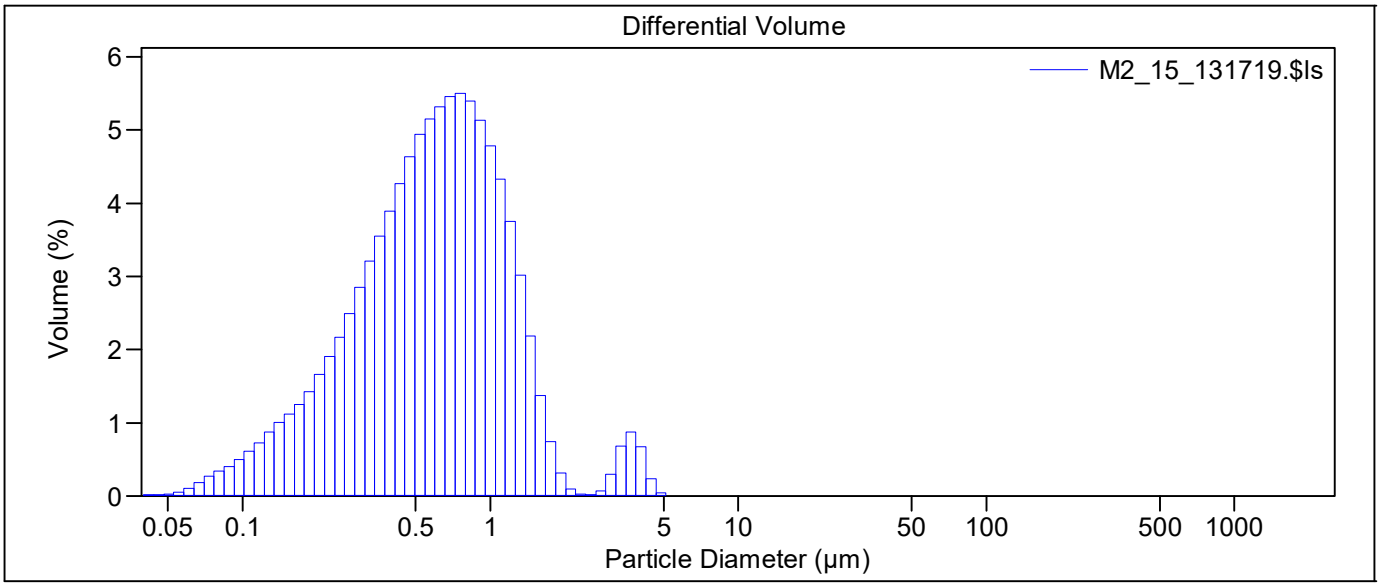
Number Statistics (Arithmetic) M2_15_131719.$ls

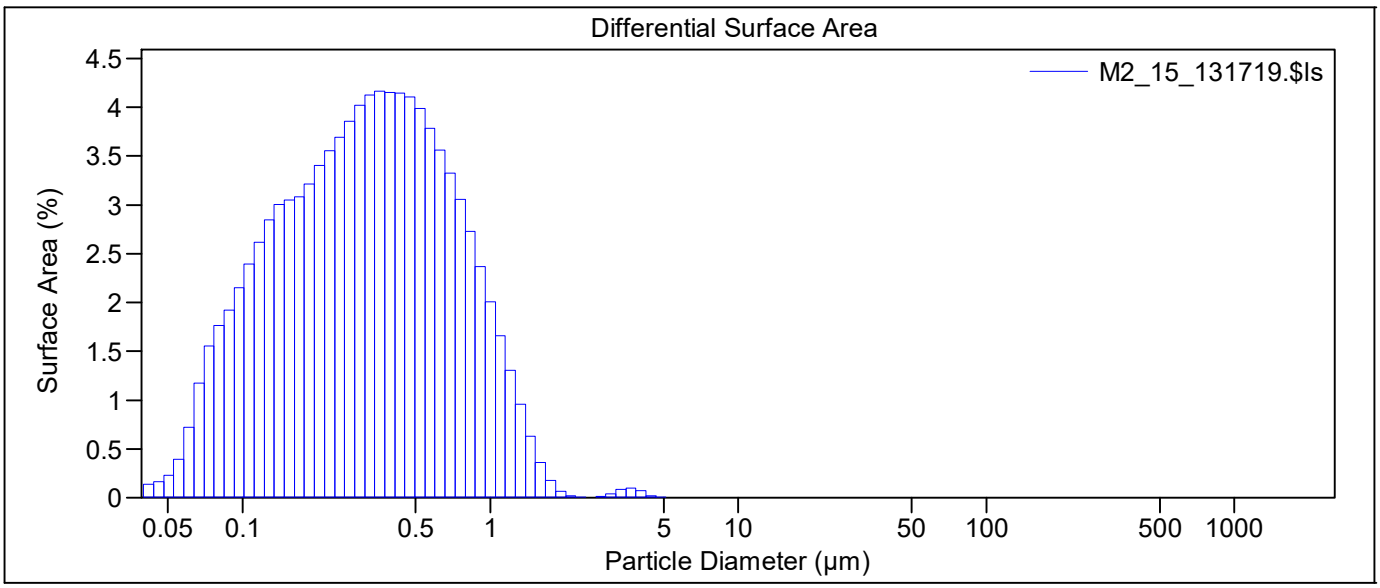
Calculations from 0.040 µm to 2000 µm

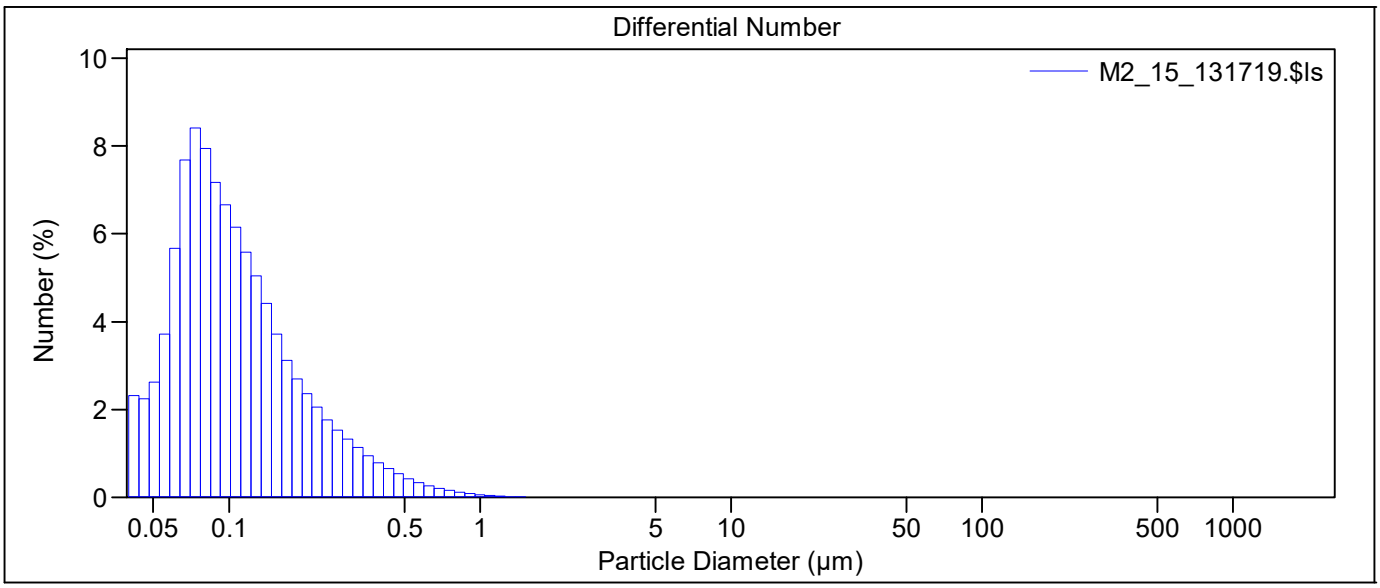
Number:	100%		
Mean:	0.131 µm	S.D.:	0.110 µm
Median:	0.096 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.365	C.V.:	84.3%
Mode:	0.073 µm	Skewness:	3.947 Right skewed
		Kurtosis:	29.59 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.057 µm	0.071 µm	0.096 µm	0.146 µm	0.241 µm

Beckman Coulter LS13320







M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.014	0.14	2.31
2	0.044	0.046	0.018	0.16	2.25
3	0.048	0.050	0.028	0.23	2.63
4	0.053	0.055	0.052	0.39	3.71
5	0.058	0.061	0.10	0.72	5.67
6	0.064	0.067	0.19	1.18	7.68
7	0.070	0.073	0.27	1.55	8.41
8	0.077	0.080	0.34	1.76	7.94
9	0.084	0.088	0.40	1.92	7.17
10	0.093	0.097	0.50	2.15	6.66
11	0.102	0.106	0.61	2.40	6.16
12	0.112	0.117	0.73	2.62	5.58
13	0.122	0.128	0.87	2.85	5.04
14	0.134	0.141	1.01	3.01	4.41
15	0.148	0.155	1.12	3.05	3.71
16	0.162	0.170	1.25	3.08	3.12
17	0.178	0.186	1.43	3.22	2.70
18	0.195	0.205	1.66	3.40	2.37
19	0.214	0.225	1.90	3.56	2.05
20	0.235	0.247	2.17	3.69	1.77
21	0.258	0.271	2.49	3.86	1.54
22	0.284	0.297	2.85	4.02	1.33
23	0.311	0.326	3.21	4.13	1.13
24	0.342	0.358	3.55	4.16	0.95
25	0.375	0.393	3.89	4.16	0.78
26	0.412	0.431	4.27	4.15	0.65
27	0.452	0.474	4.64	4.11	0.53
28	0.496	0.520	4.94	3.99	0.43
29	0.545	0.571	5.15	3.79	0.34
30	0.598	0.627	5.32	3.56	0.26
31	0.656	0.688	5.46	3.33	0.21
32	0.721	0.755	5.50	3.06	0.16
33	0.791	0.829	5.39	2.73	0.12
34	0.868	0.910	5.14	2.37	0.083
35	0.953	0.999	4.78	2.01	0.059
36	1.047	1.097	4.33	1.66	0.040
37	1.149	1.204	3.76	1.31	0.026
38	1.261	1.321	3.02	0.96	0.016
39	1.385	1.451	2.18	0.63	0.0087
40	1.520	1.592	1.38	0.36	0.0042
41	1.668	1.748	0.74	0.18	0.0017
42	1.832	1.919	0.31	0.069	0.00054
43	2.011	2.107	0.10	0.020	0.00013
44	2.207	2.313	0.024	0.0044	0.000024
45	2.423	2.539	0.019	0.0031	0.000014

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0.072	0.011	0.000041
47	2.920	3.059	0.30	0.041	0.00013
48	3.205	3.358	0.68	0.085	0.00022
49	3.519	3.687	0.87	0.099	0.00021
50	3.863	4.047	0.68	0.070	0.00012
51	4.240	4.443	0.23	0.022	0.000033
52	4.655	4.877	0.046	0.0040	0.000005
53	5.110	5.354	0.0023	0.00018	1.79E-7
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M2.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3.$av M3.$av
File ID:	M3
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_01_170303.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_02_170450.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_03_170638.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_04_171550.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_05_171738.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_06_171926.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_07_173049.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_08_173237.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_09_173424.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_10_174319.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_11_174507.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_12_174654.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_13_175547.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_14_175734.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_15_175920.$ls

Volume Statistics (Arithmetic) M3.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.541 µm	S.D.:	0.162 µm
Median:	0.540 µm	Variance:	0.026 µm^2
Mean/Median ratio:	1.002	C.V.:	29.9%
Mode:	0.571 µm	Skewness:	-0.180 Left skewed
		Kurtosis:	1.630 Leptokurtic

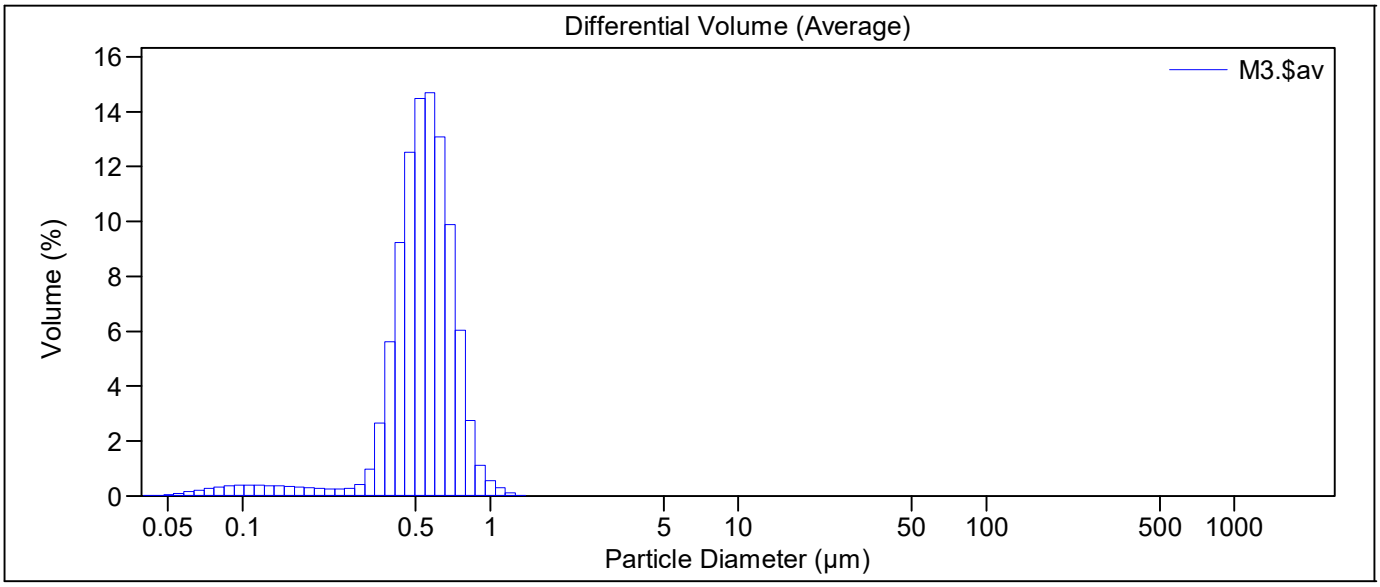
<10%	<25%	<50%	<75%	<90%
0.378 µm	0.454 µm	0.540 µm	0.638 µm	0.731 µm

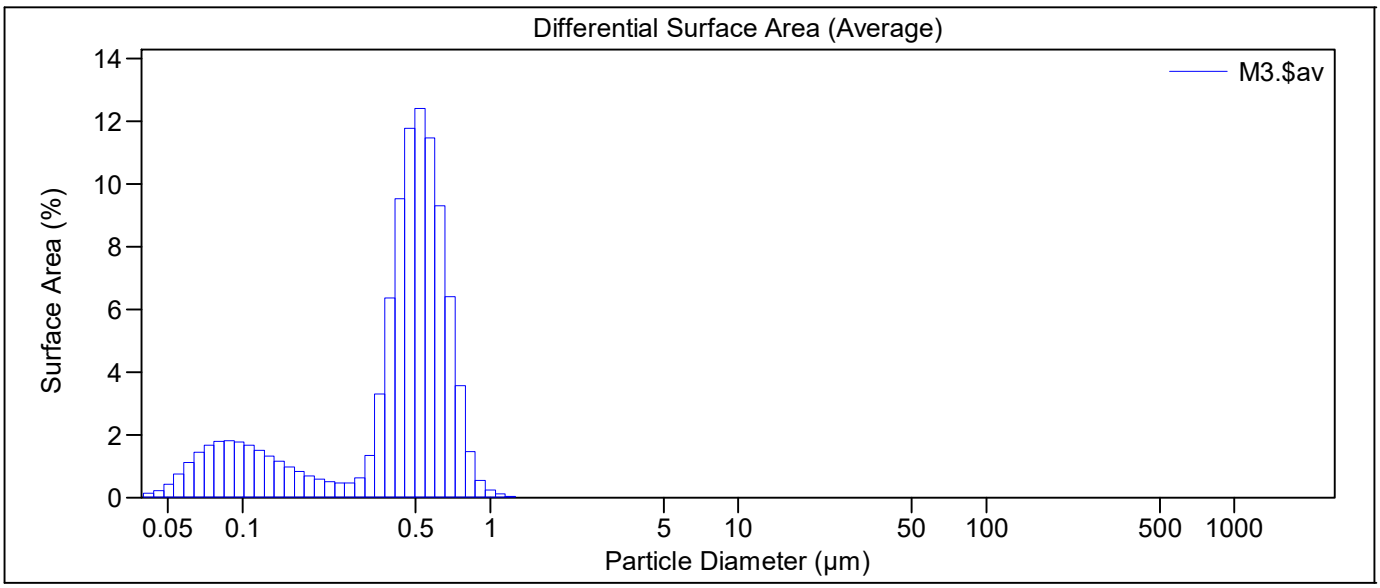
Number Statistics (Arithmetic) M3.$av

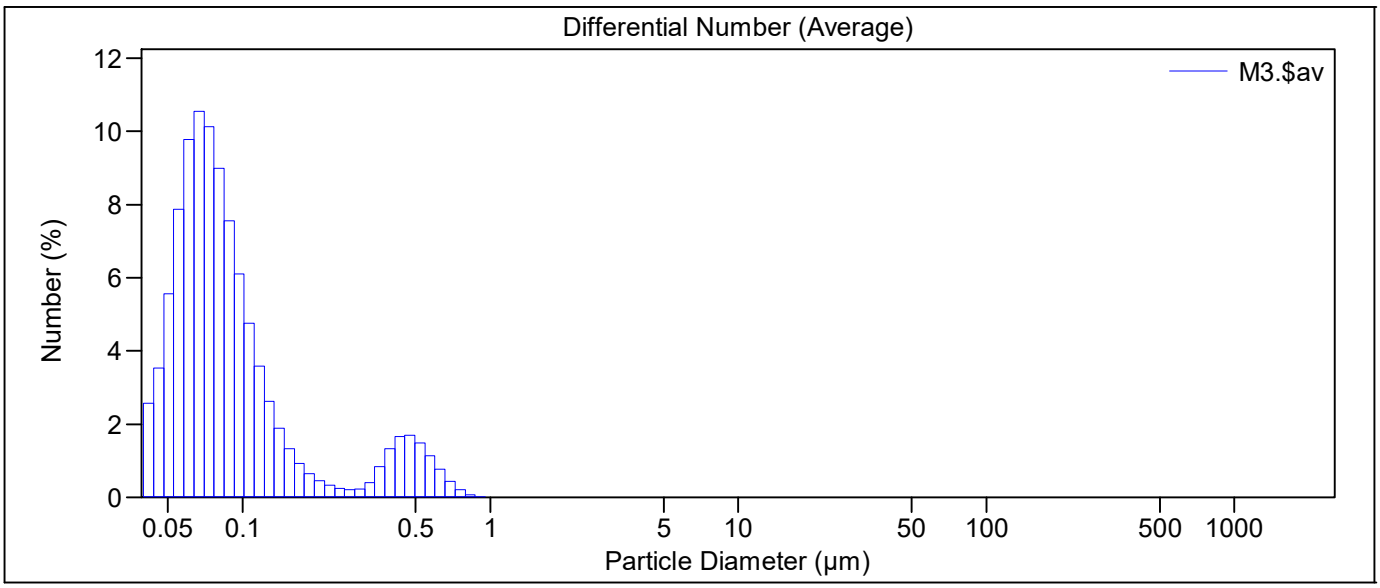
Calculations from 0.040 µm to 2000 µm

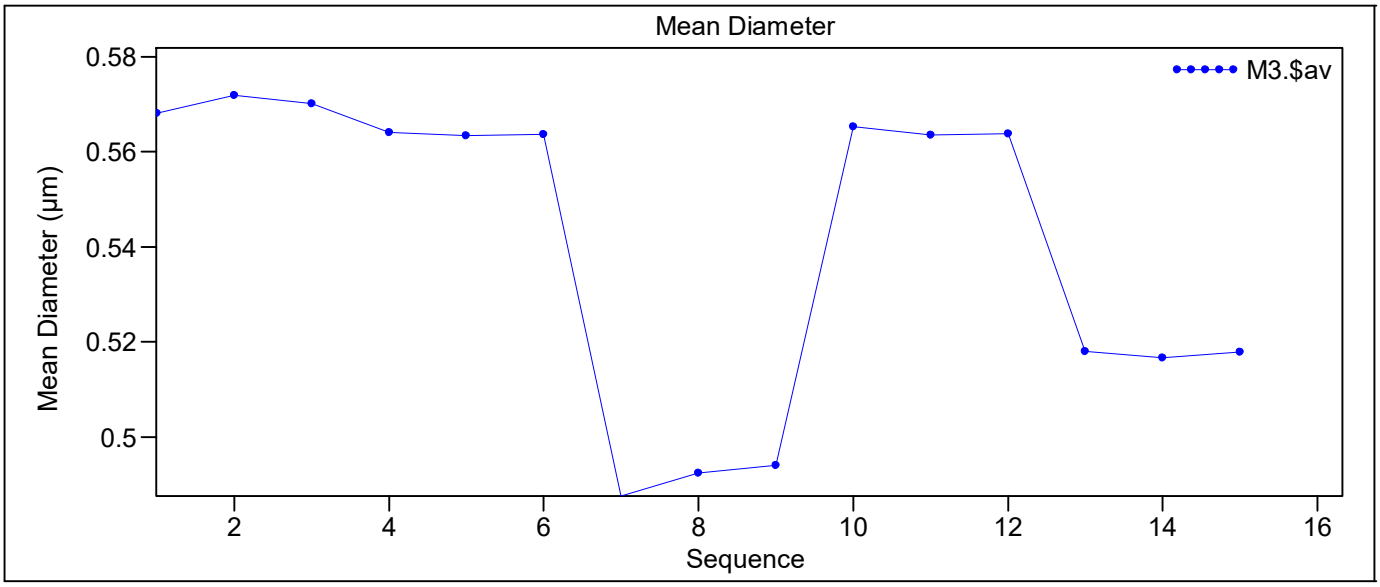
Number:	100%		
Mean:	0.123 µm	S.D.:	0.131 µm
Median:	0.077 µm	Variance:	0.017 µm^2
Mean/Median ratio:	1.603	C.V.:	107%
Mode:	0.067 µm	Skewness:	2.739 Right skewed
		Kurtosis:	6.970 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.061 µm	0.077 µm	0.107 µm	0.317 µm


Differential Volume (Average)
M3.$av
Volume (%)
0
2
4
6
8
10
12
14
16
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area (Average)
M3.$av
Surface Area (%)
0
2
4
6
8
10
12
14
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number (Average)
M3.$av
Number (%)
0
2
4
6
8
10
12
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)



M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.013	0.14	2.57
2	0.044	0.046	0.024	0.23	3.53
3	0.048	0.050	0.050	0.44	5.56
4	0.053	0.055	0.093	0.75	7.88
5	0.058	0.061	0.15	1.12	9.79
6	0.064	0.067	0.22	1.45	10.6
7	0.070	0.073	0.28	1.68	10.1
8	0.077	0.080	0.32	1.80	8.99
9	0.084	0.088	0.36	1.82	7.57
10	0.093	0.097	0.39	1.77	6.11
11	0.102	0.106	0.40	1.67	4.76
12	0.112	0.117	0.40	1.51	3.58
13	0.122	0.128	0.38	1.34	2.63
14	0.134	0.141	0.37	1.15	1.88
15	0.148	0.155	0.34	0.99	1.34
16	0.162	0.170	0.32	0.83	0.94
17	0.178	0.186	0.29	0.70	0.65
18	0.195	0.205	0.27	0.59	0.46
19	0.214	0.225	0.26	0.51	0.33
20	0.235	0.247	0.26	0.47	0.25
21	0.258	0.271	0.29	0.48	0.21
22	0.284	0.297	0.42	0.64	0.23
23	0.311	0.326	0.98	1.35	0.41
24	0.342	0.358	2.65	3.30	0.83
25	0.375	0.393	5.62	6.37	1.34
26	0.412	0.431	9.23	9.53	1.66
27	0.452	0.474	12.5	11.8	1.70
28	0.496	0.520	14.5	12.4	1.49
29	0.545	0.571	14.7	11.5	1.14
30	0.598	0.627	13.1	9.31	0.77
31	0.656	0.688	9.90	6.41	0.44
32	0.721	0.755	6.05	3.57	0.20
33	0.791	0.829	2.75	1.48	0.070
34	0.868	0.910	1.12	0.55	0.021
35	0.953	0.999	0.57	0.25	0.0082
36	1.047	1.097	0.30	0.12	0.0033
37	1.149	1.204	0.11	0.041	0.00093
38	1.261	1.321	0.027	0.0092	0.00017
39	1.385	1.451	0.0034	0.0011	0.000016
40	1.520	1.592	0.00011	0.000030	3.78E-7
41	1.668	1.748	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_01_170303.$ls M3_01_170303.$ls		
File ID:	M3		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.89%		
LS 13 320	Universal Liquid Module		
Start time:	17:01 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_01_170303.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.568 µm	S.D.:	0.114 µm
Median:	0.561 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.014	C.V.:	20.0%
Mode:	0.571 µm	Skewness:	0.336 Right skewed
		Kurtosis:	-0.337 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.424 µm	0.482 µm	0.561 µm	0.647 µm	0.722 µm

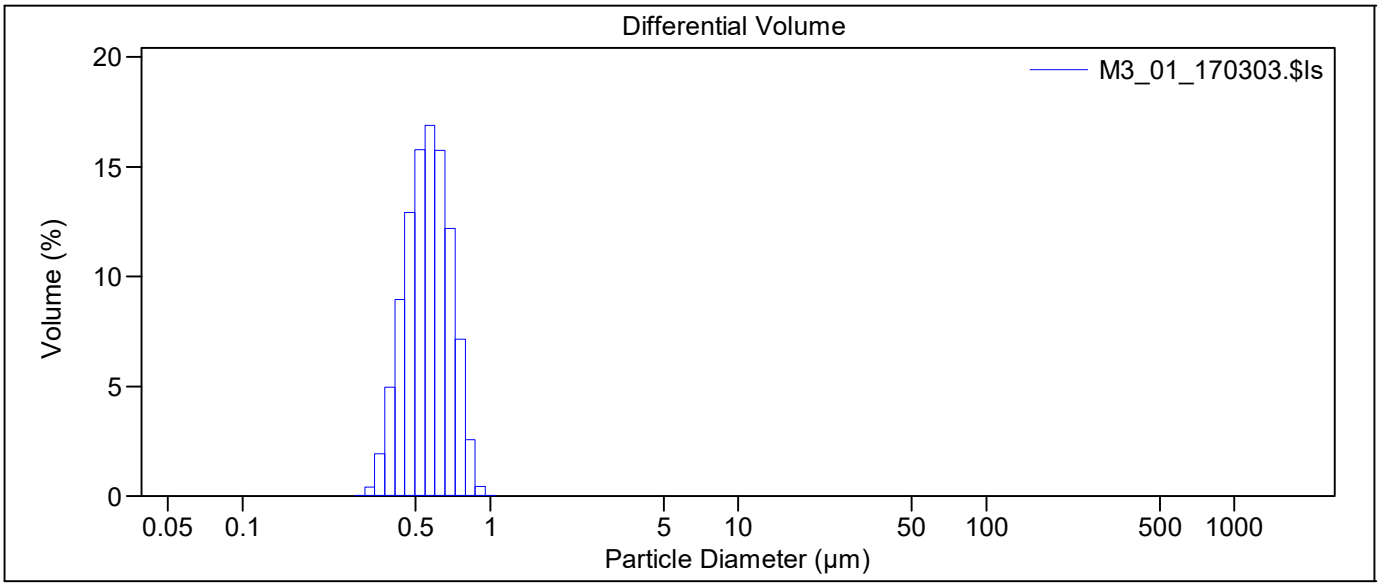
Number Statistics (Arithmetic) M3_01_170303.$ls

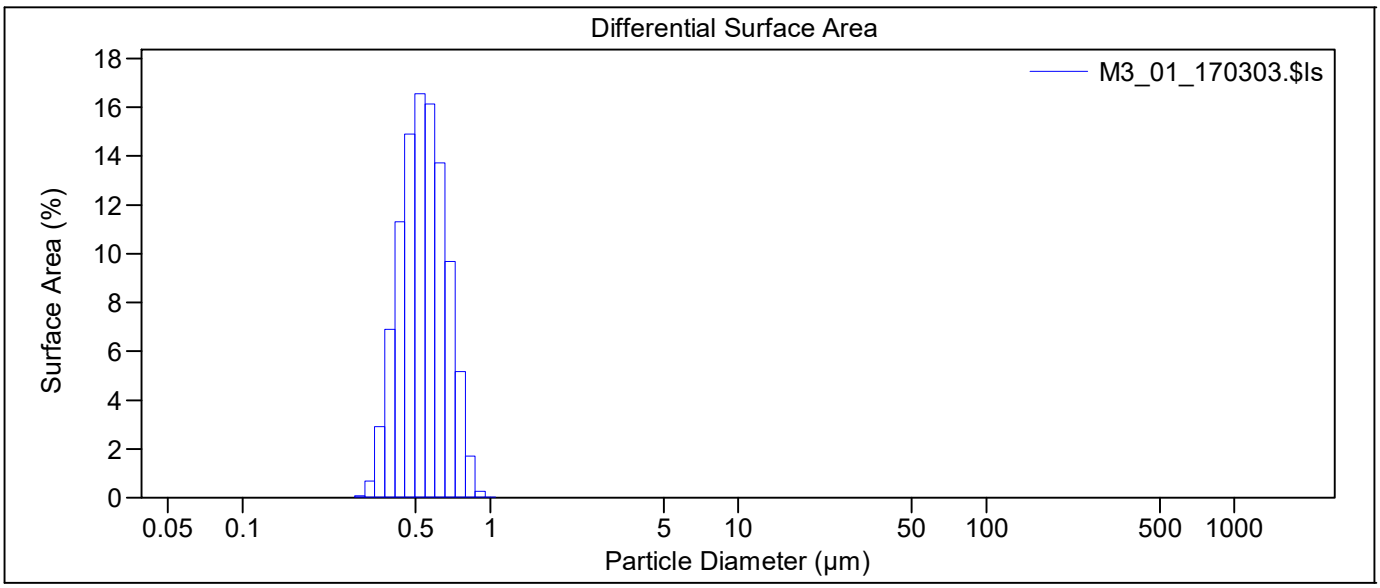
Calculations from 0.040 µm to 2000 µm

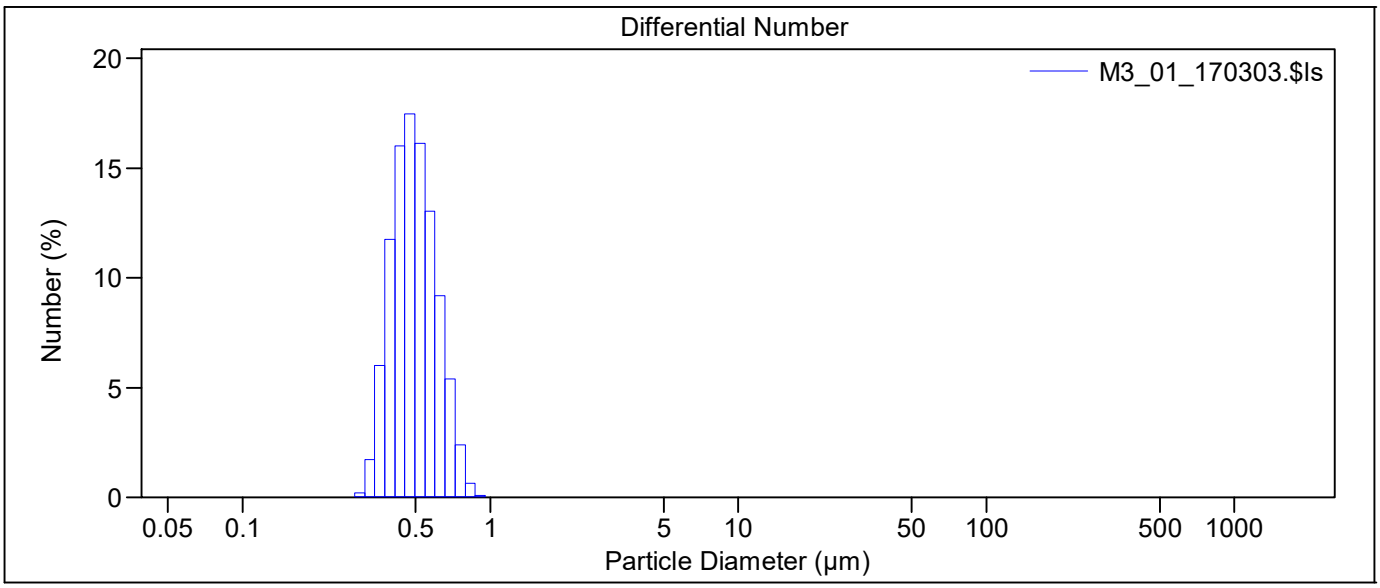
Number:	100%		
Mean:	0.503 µm	S.D.:	0.103 µm
Median:	0.488 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.029	C.V.:	20.4%
Mode:	0.474 µm	Skewness:	0.664 Right skewed
		Kurtosis:	0.177 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.382 µm	0.425 µm	0.488 µm	0.568 µm	0.647 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.00051	0.0010	0.0037
22	0.284	0.297	0.039	0.071	0.21
23	0.311	0.326	0.41	0.69	1.71
24	0.342	0.358	1.91	2.92	5.99
25	0.375	0.393	4.97	6.90	11.8
26	0.412	0.431	8.94	11.3	16.0
27	0.452	0.474	12.9	14.9	17.5
28	0.496	0.520	15.8	16.6	16.1
29	0.545	0.571	16.9	16.1	13.0
30	0.598	0.627	15.8	13.7	9.20
31	0.656	0.688	12.2	9.68	5.38
32	0.721	0.755	7.14	5.16	2.38
33	0.791	0.829	2.57	1.69	0.65
34	0.868	0.910	0.45	0.27	0.086
35	0.953	0.999	0.025	0.014	0.0036
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_02_170450.$ls M3_02_170450.$ls		
File ID:	M3		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.84%		
LS 13 320	Universal Liquid Module		
Start time:	17:03 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_02_170450.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.572 µm	S.D.:	0.118 µm
Median:	0.564 µm	Variance:	0.014 μm^2
Mean/Median ratio:	1.014	C.V.:	20.6%
Mode:	0.571 µm	Skewness:	0.336 Right skewed
		Kurtosis:	-0.310 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.423 µm	0.483 µm	0.564 µm	0.652 µm	0.734 µm

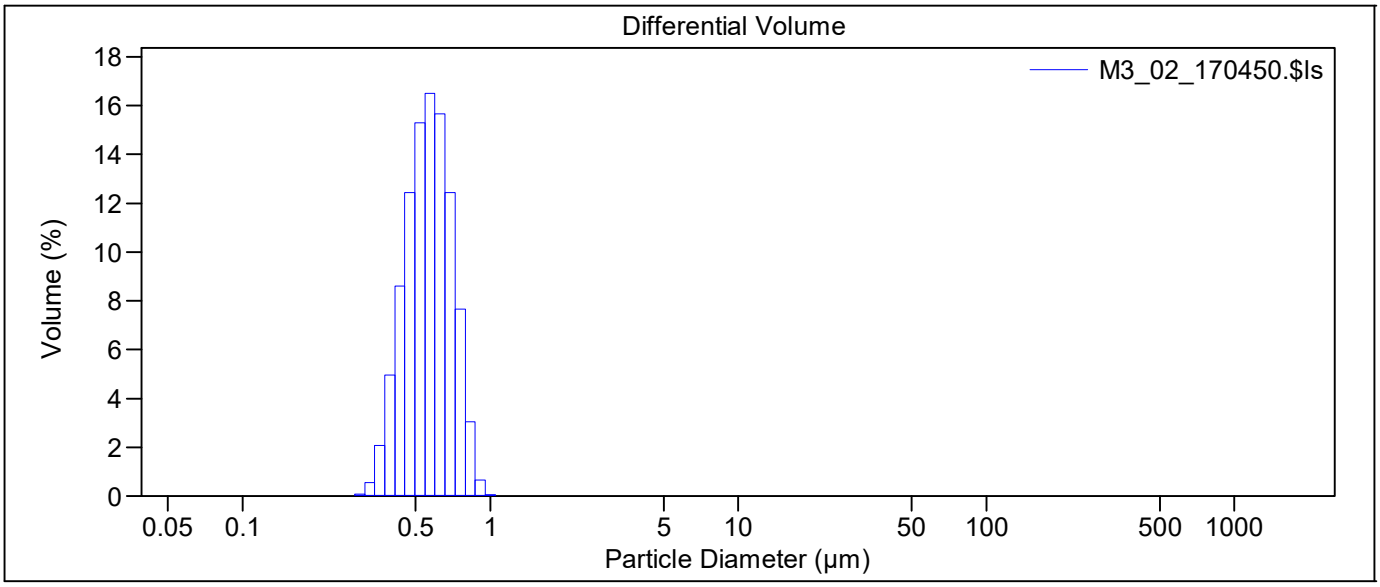
Number Statistics (Arithmetic) M3_02_170450.$ls

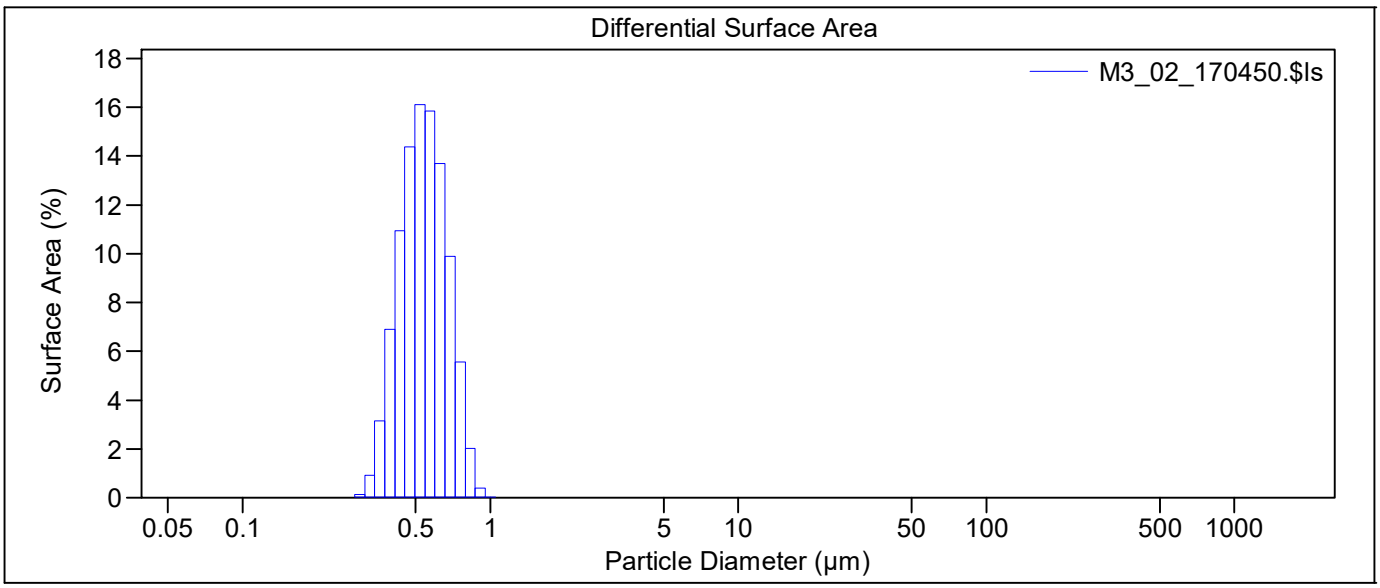
Calculations from 0.040 µm to 2000 µm

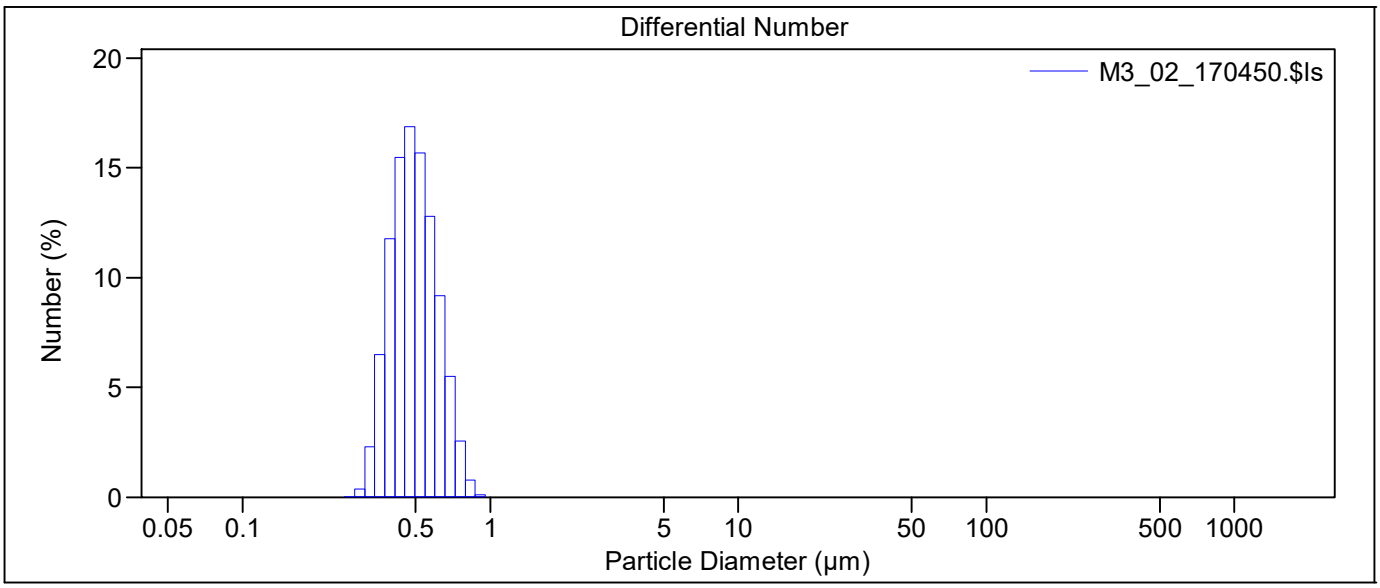
Number:	100%		
Mean:	0.502 µm	S.D.:	0.106 µm
Median:	0.488 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.030	C.V.:	21.1%
Mode:	0.474 µm	Skewness:	0.662 Right skewed
		Kurtosis:	0.192 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.378 µm	0.422 µm	0.488 µm	0.570 µm	0.650 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.0030	0.0060	0.022
22	0.284	0.297	0.070	0.13	0.39
23	0.311	0.326	0.55	0.93	2.30
24	0.342	0.358	2.07	3.16	6.49
25	0.375	0.393	4.95	6.91	11.8
26	0.412	0.431	8.62	10.9	15.5
27	0.452	0.474	12.4	14.4	16.9
28	0.496	0.520	15.3	16.1	15.7
29	0.545	0.571	16.5	15.8	12.8
30	0.598	0.627	15.7	13.7	9.19
31	0.656	0.688	12.4	9.90	5.51
32	0.721	0.755	7.65	5.55	2.56
33	0.791	0.829	3.06	2.02	0.77
34	0.868	0.910	0.66	0.40	0.13
35	0.953	0.999	0.057	0.031	0.0083
36	1.047	1.097	0.00074	0.00037	0.000080
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_03_170638.$ls M3_03_170638.$ls		
File ID:	M3		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.80%		
LS 13 320	Universal Liquid Module		
Start time:	17:04 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_03_170638.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.570 µm	S.D.:	0.135 µm
Median:	0.566 µm	Variance:	0.018 μm^2
Mean/Median ratio:	1.008	C.V.:	23.7%
Mode:	0.571 µm	Skewness:	-0.201 Left skewed
		Kurtosis:	1.152 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.415 µm	0.479 µm	0.566 µm	0.659 µm	0.748 µm

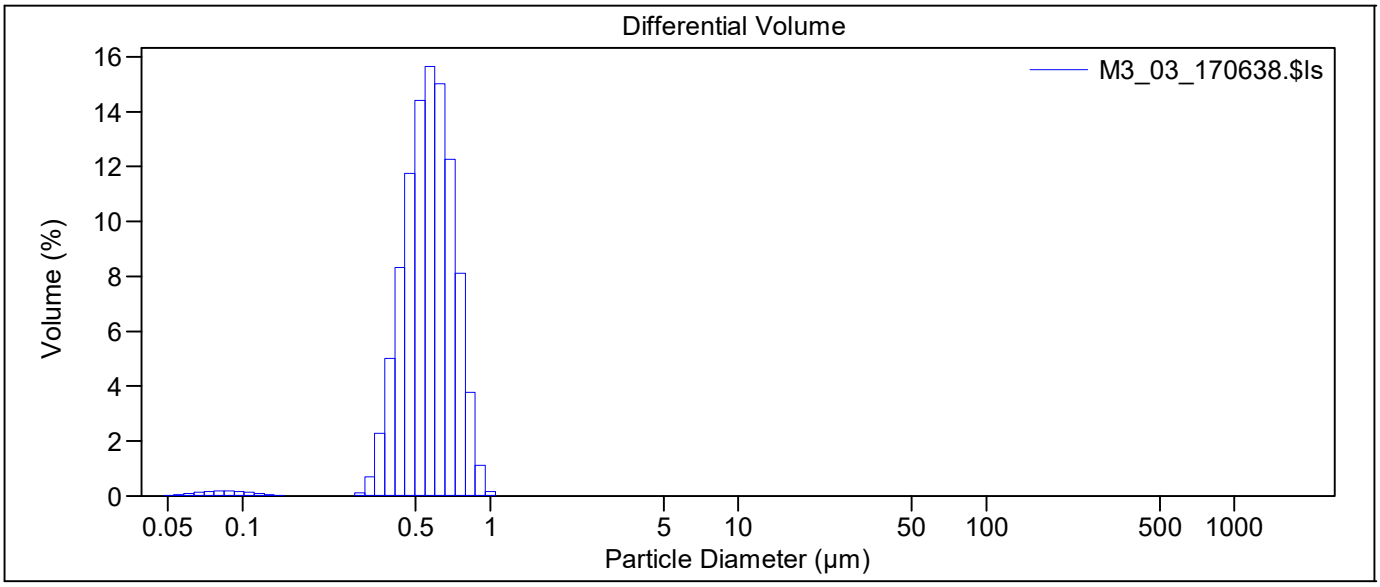
Number Statistics (Arithmetic) M3_03_170638.$ls

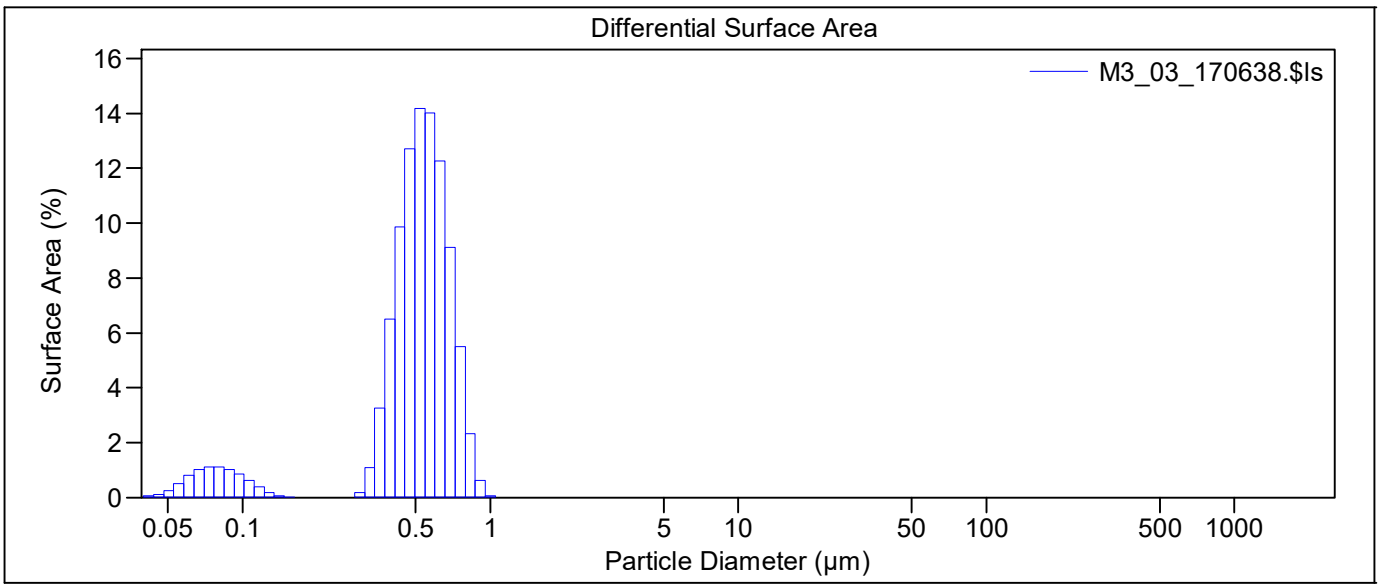
Calculations from 0.040 µm to 2000 µm

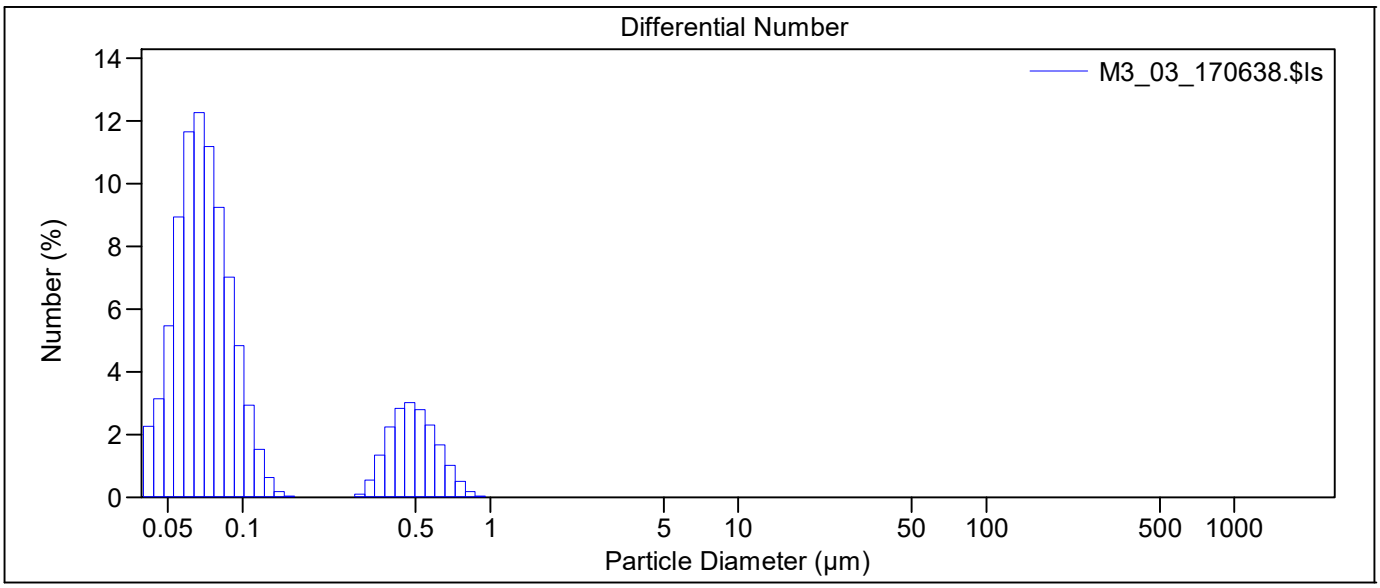
Number:	100%		
Mean:	0.151 µm	S.D.:	0.174 µm
Median:	0.074 µm	Variance:	0.030 μm^2
Mean/Median ratio:	2.049	C.V.:	115%
Mode:	0.067 µm	Skewness:	1.882 Right skewed
		Kurtosis:	2.178 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.052 µm	0.061 µm	0.074 µm	0.100 µm	0.475 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0061	0.075	2.27
2	0.044	0.046	0.011	0.12	3.14
3	0.048	0.050	0.026	0.26	5.46
4	0.053	0.055	0.056	0.51	8.94
5	0.058	0.061	0.096	0.81	11.7
6	0.064	0.067	0.13	1.03	12.3
7	0.070	0.073	0.16	1.13	11.2
8	0.077	0.080	0.18	1.12	9.24
9	0.084	0.088	0.18	1.03	7.02
10	0.093	0.097	0.16	0.85	4.85
11	0.102	0.106	0.13	0.63	2.95
12	0.112	0.117	0.089	0.39	1.52
13	0.122	0.128	0.049	0.19	0.63
14	0.134	0.141	0.020	0.072	0.19
15	0.148	0.155	0.0058	0.019	0.043
16	0.162	0.170	0.00087	0.0026	0.0048
17	0.178	0.186	0.000066	0.00018	0.00028
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.0061	0.011	0.0083
22	0.284	0.297	0.11	0.18	0.11
23	0.311	0.326	0.70	1.10	0.55
24	0.342	0.358	2.28	3.26	1.36
25	0.375	0.393	5.01	6.52	2.25
26	0.412	0.431	8.32	9.87	2.83
27	0.452	0.474	11.8	12.7	3.02
28	0.496	0.520	14.4	14.2	2.80
29	0.545	0.571	15.7	14.0	2.30
30	0.598	0.627	15.0	12.3	1.67
31	0.656	0.688	12.3	9.12	1.03
32	0.721	0.755	8.11	5.50	0.51
33	0.791	0.829	3.77	2.33	0.18
34	0.868	0.910	1.11	0.62	0.040
35	0.953	0.999	0.15	0.078	0.0042
36	1.047	1.097	0.0077	0.0036	0.00016
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M3.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_04_171550.$ls M3_04_171550.$ls		
File ID:	M3		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.99%		
LS 13 320	Universal Liquid Module		
Start time:	17:14 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_04_171550.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.564 µm	S.D.:	0.111 µm
Median:	0.556 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.014	C.V.:	19.7%
Mode:	0.571 µm	Skewness:	0.345 Right skewed
		Kurtosis:	-0.359 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.423 µm	0.479 µm	0.556 µm	0.641 µm	0.716 µm

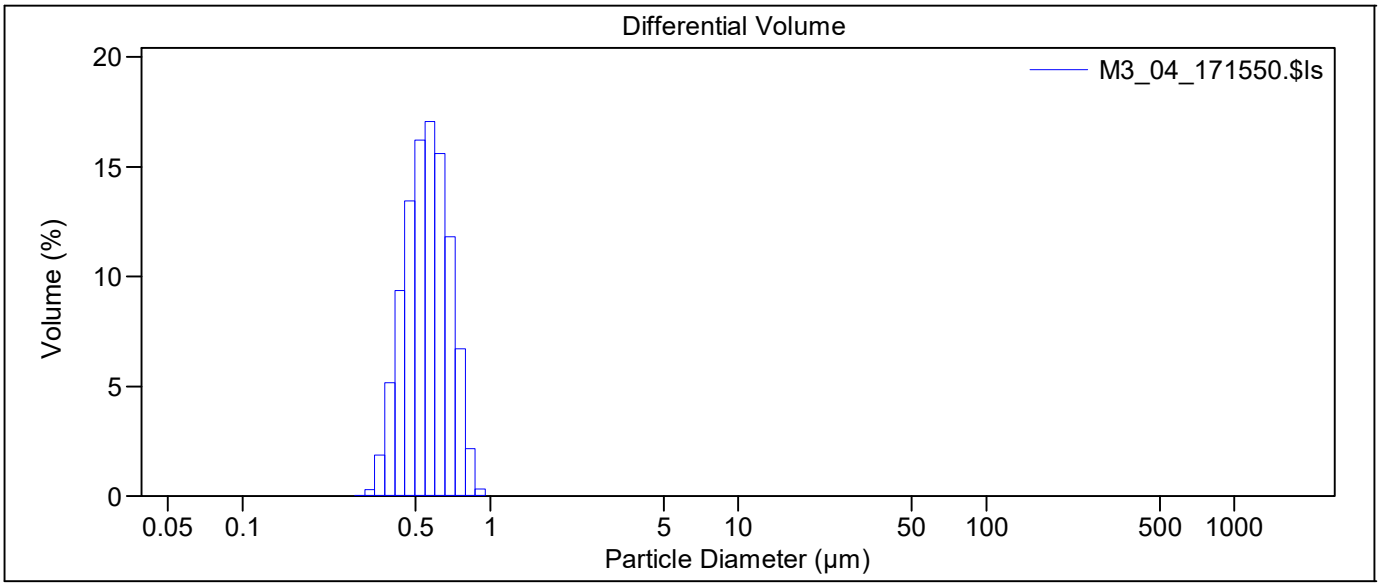
Number Statistics (Arithmetic) M3_04_171550.$ls

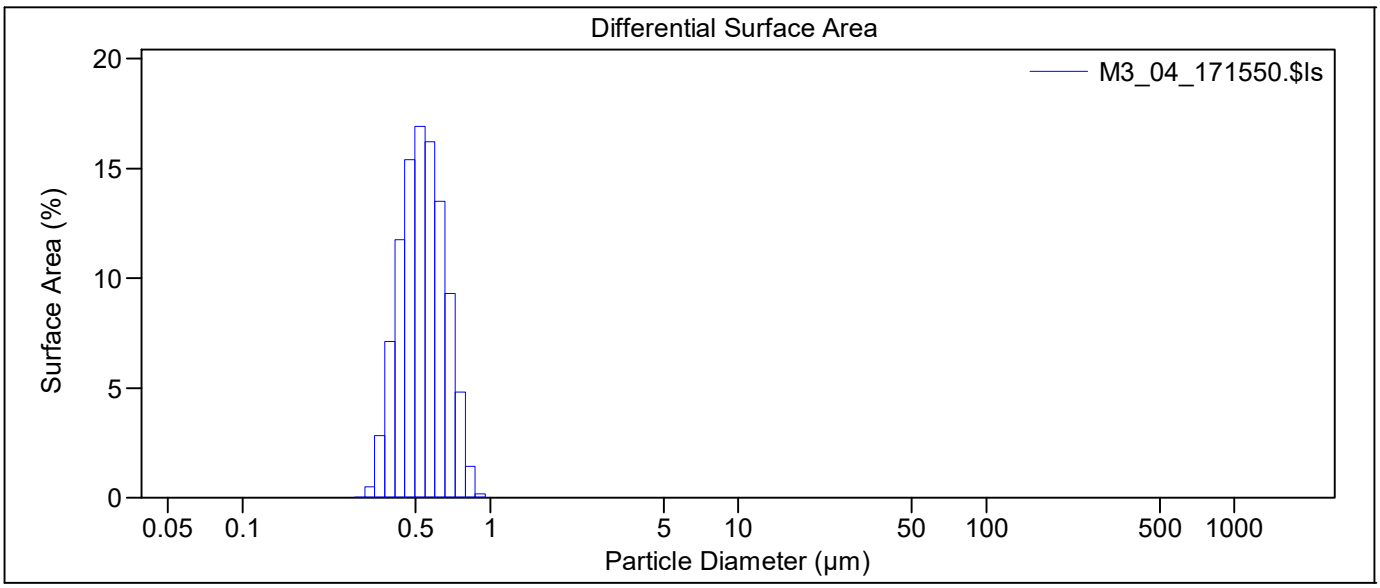
Calculations from 0.040 µm to 2000 µm

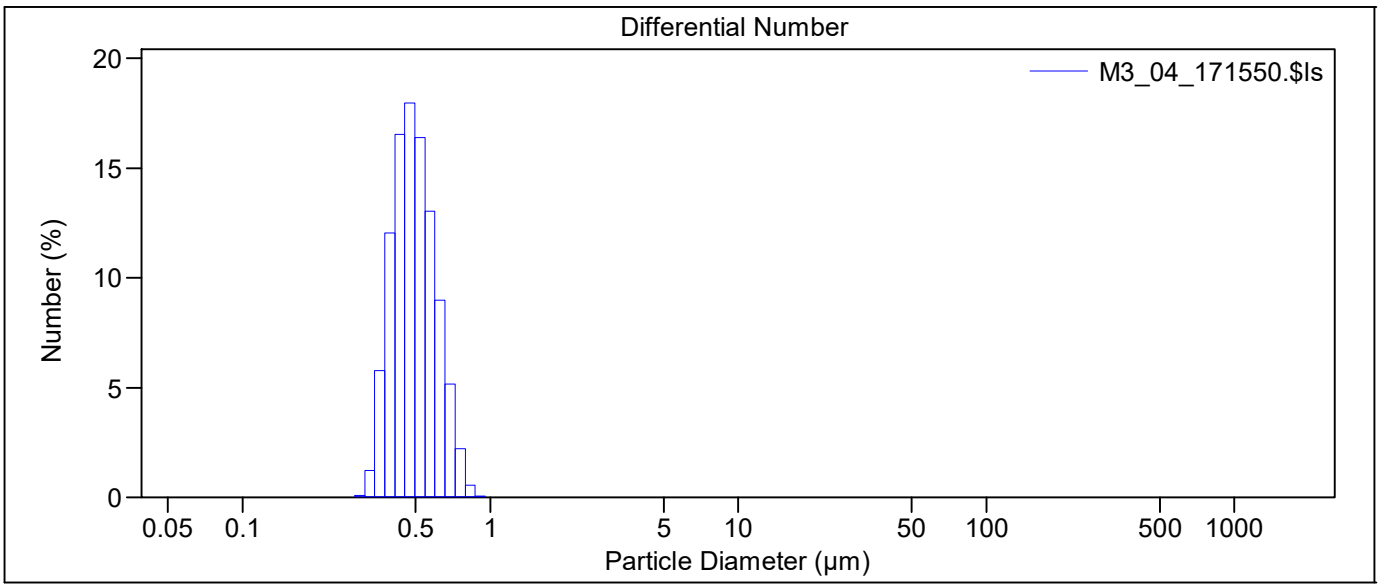
Number:	100%		
Mean:	0.502 µm	S.D.:	0.100 µm
Median:	0.487 µm	Variance:	0.0100 µm^2
Mean/Median ratio:	1.030	C.V.:	19.9%
Mode:	0.474 µm	Skewness:	0.684 Right skewed
		Kurtosis:	0.188 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.384 µm	0.426 µm	0.487 µm	0.565 µm	0.643 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.017	0.031	0.091
23	0.311	0.326	0.30	0.50	1.24
24	0.342	0.358	1.86	2.82	5.77
25	0.375	0.393	5.15	7.11	12.0
26	0.412	0.431	9.35	11.8	16.5
27	0.452	0.474	13.4	15.4	18.0
28	0.496	0.520	16.2	16.9	16.4
29	0.545	0.571	17.1	16.2	13.0
30	0.598	0.627	15.6	13.5	8.99
31	0.656	0.688	11.8	9.31	5.15
32	0.721	0.755	6.70	4.81	2.21
33	0.791	0.829	2.17	1.42	0.54
34	0.868	0.910	0.31	0.18	0.058
35	0.953	0.999	0.012	0.0065	0.0017
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_05_171738.$ls M3_05_171738.$ls		
File ID:	M3		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.97%		
LS 13 320	Universal Liquid Module		
Start time:	17:15 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_05_171738.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.563 µm	S.D.:	0.110 µm
Median:	0.556 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.014	C.V.:	19.6%
Mode:	0.571 µm	Skewness:	0.344 Right skewed
		Kurtosis:	-0.357 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.423 µm	0.479 µm	0.556 µm	0.641 µm	0.715 µm

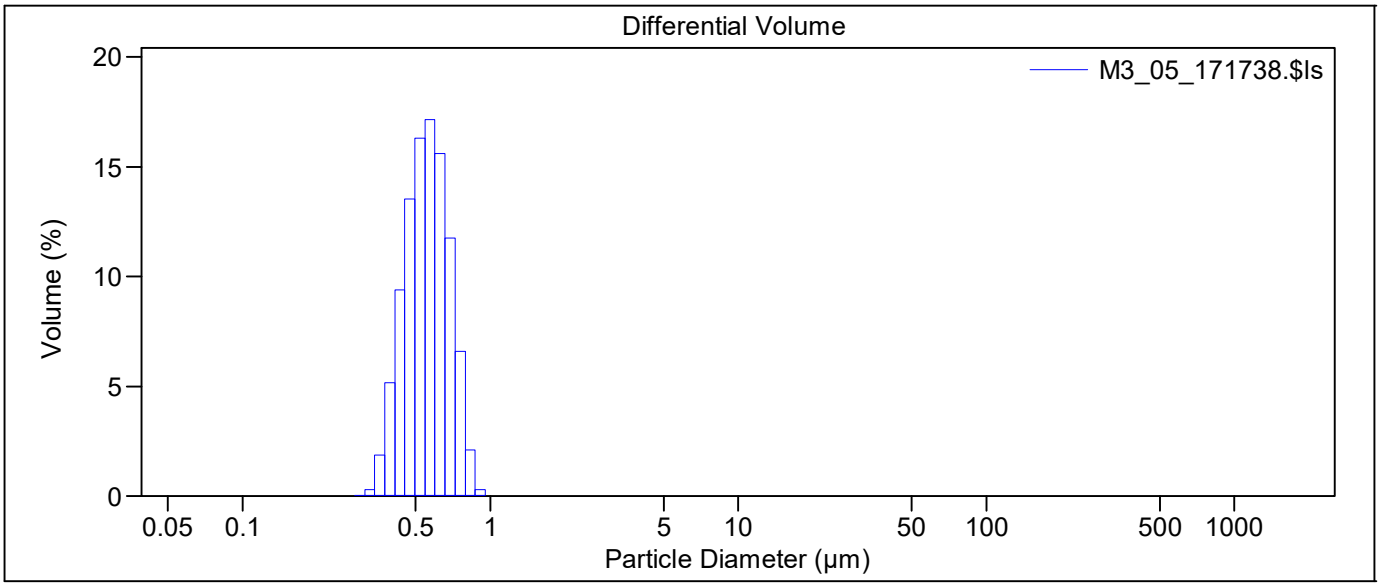
Number Statistics (Arithmetic) M3_05_171738.$ls

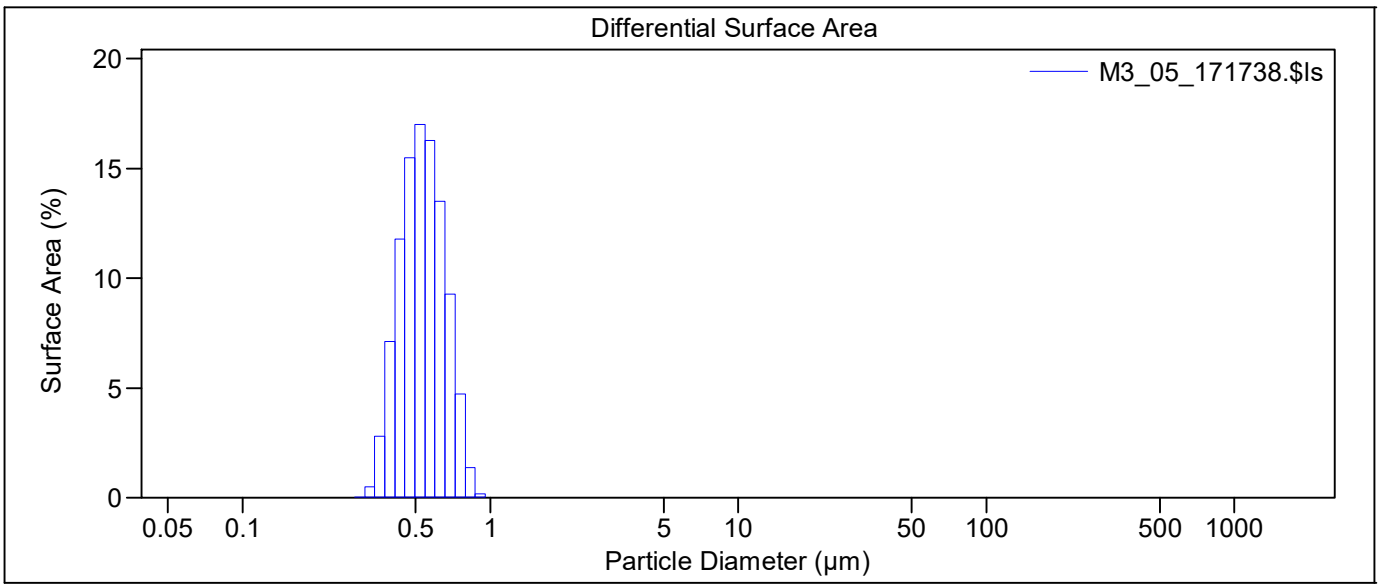
Calculations from 0.040 µm to 2000 µm

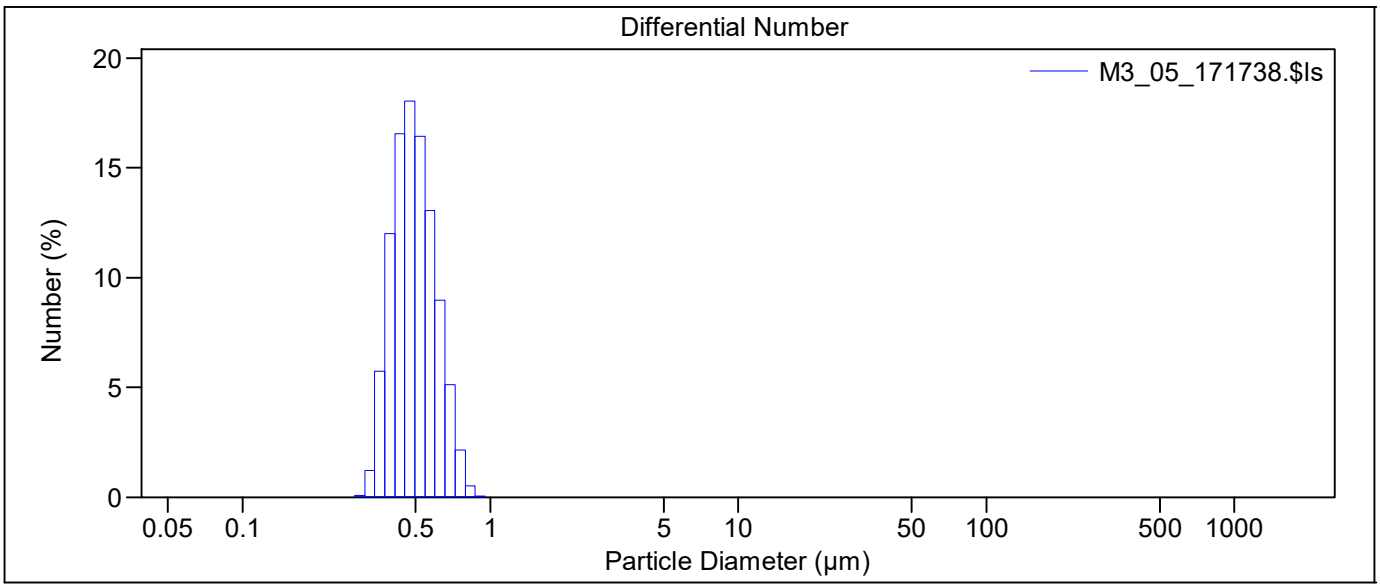
Number:	100%		
Mean:	0.502 µm	S.D.:	0.099 µm
Median:	0.487 µm	Variance:	0.0099 µm^2
Mean/Median ratio:	1.029	C.V.:	19.8%
Mode:	0.474 µm	Skewness:	0.680 Right skewed
		Kurtosis:	0.182 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.384 µm	0.426 µm	0.487 µm	0.565 µm	0.643 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.017	0.030	0.090
23	0.311	0.326	0.30	0.50	1.23
24	0.342	0.358	1.86	2.81	5.74
25	0.375	0.393	5.15	7.10	12.0
26	0.412	0.431	9.38	11.8	16.5
27	0.452	0.474	13.5	15.5	18.0
28	0.496	0.520	16.3	17.0	16.4
29	0.545	0.571	17.1	16.3	13.1
30	0.598	0.627	15.6	13.5	8.99
31	0.656	0.688	11.8	9.26	5.12
32	0.721	0.755	6.60	4.73	2.17
33	0.791	0.829	2.09	1.37	0.52
34	0.868	0.910	0.29	0.17	0.055
35	0.953	0.999	0.011	0.0058	0.0015
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_06_171926.$ls M3_06_171926.$ls		
File ID:	M3		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.97%		
LS 13 320	Universal Liquid Module		
Start time:	17:17 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_06_171926.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.564 µm	S.D.:	0.111 µm
Median:	0.556 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.014	C.V.:	19.6%
Mode:	0.571 µm	Skewness:	0.344 Right skewed
		Kurtosis:	-0.358 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.423 µm	0.479 µm	0.556 µm	0.641 µm	0.715 µm

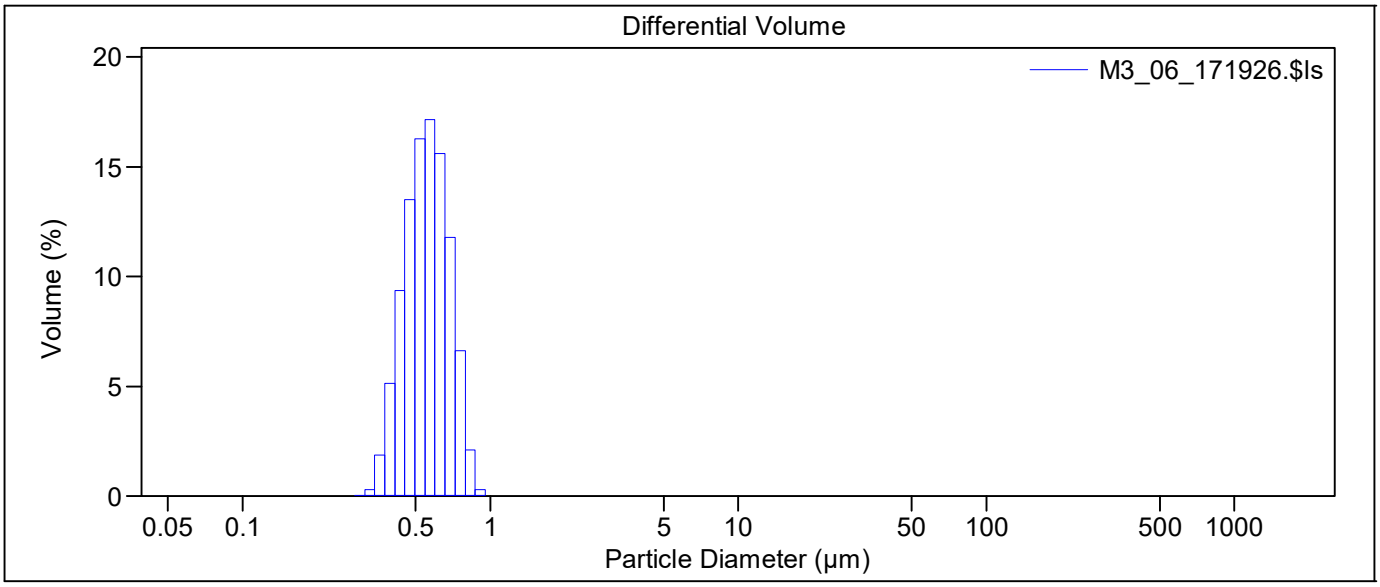
Number Statistics (Arithmetic) M3_06_171926.$ls

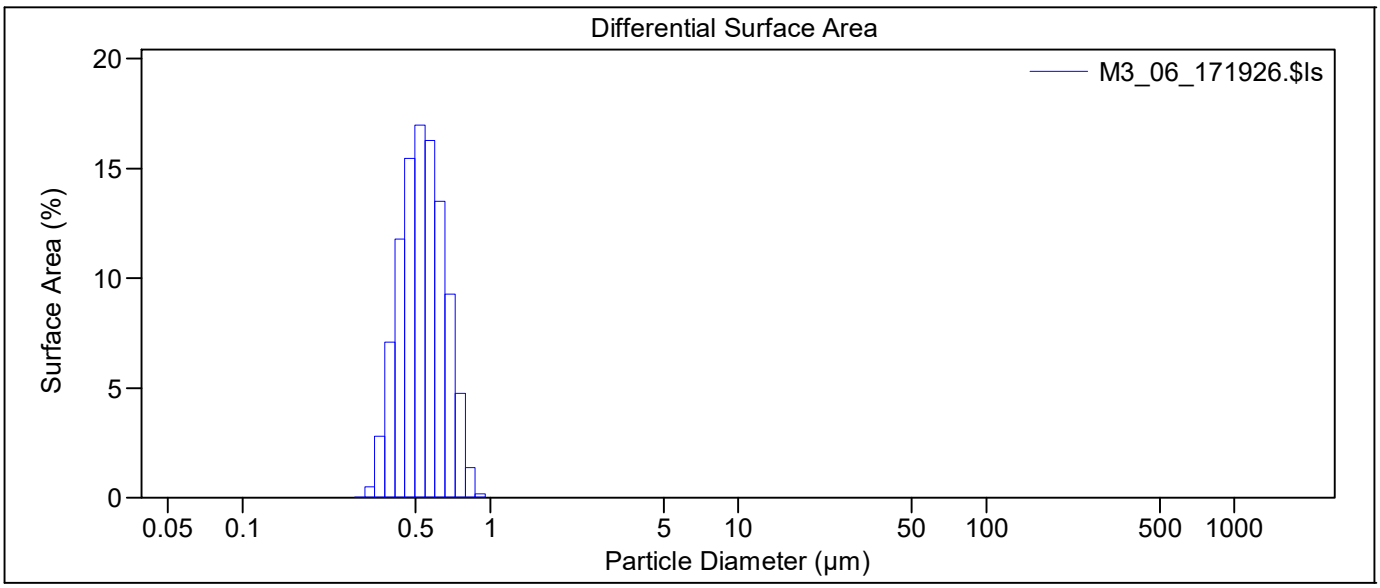
Calculations from 0.040 µm to 2000 µm

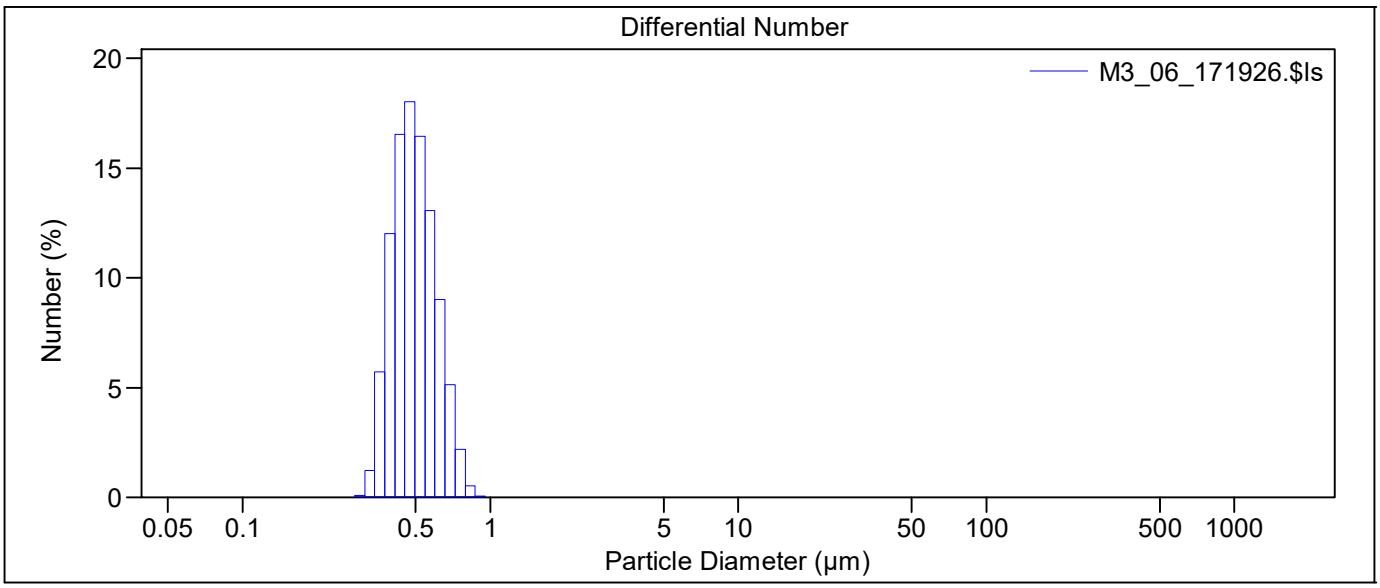
Number:	100%		
Mean:	0.502 µm	S.D.:	0.099 µm
Median:	0.487 µm	Variance:	0.0099 µm^2
Mean/Median ratio:	1.029	C.V.:	19.8%
Mode:	0.474 µm	Skewness:	0.680 Right skewed
		Kurtosis:	0.182 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.384 µm	0.426 µm	0.487 µm	0.565 µm	0.643 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0	0	0
22	0.284	0.297	0.017	0.030	0.090
23	0.311	0.326	0.30	0.50	1.23
24	0.342	0.358	1.85	2.81	5.73
25	0.375	0.393	5.14	7.09	12.0
26	0.412	0.431	9.36	11.8	16.5
27	0.452	0.474	13.5	15.5	18.0
28	0.496	0.520	16.3	17.0	16.4
29	0.545	0.571	17.1	16.3	13.1
30	0.598	0.627	15.6	13.5	9.00
31	0.656	0.688	11.8	9.28	5.13
32	0.721	0.755	6.62	4.76	2.18
33	0.791	0.829	2.11	1.38	0.52
34	0.868	0.910	0.29	0.18	0.055
35	0.953	0.999	0.011	0.0060	0.0016
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_07_173049.$ls M3_07_173049.$ls		
File ID:	M3		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.66%		
LS 13 320	Universal Liquid Module		
Start time:	17:29 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_07_173049.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.488 µm	S.D.:	0.280 µm
Median:	0.499 µm	Variance:	0.079 μm^2
Mean/Median ratio:	0.977	C.V.:	57.5%
Mode:	0.627 µm	Skewness:	0.219 Right skewed
		Kurtosis:	-0.690 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.104 µm	0.228 µm	0.499 µm	0.685 µm	0.858 µm

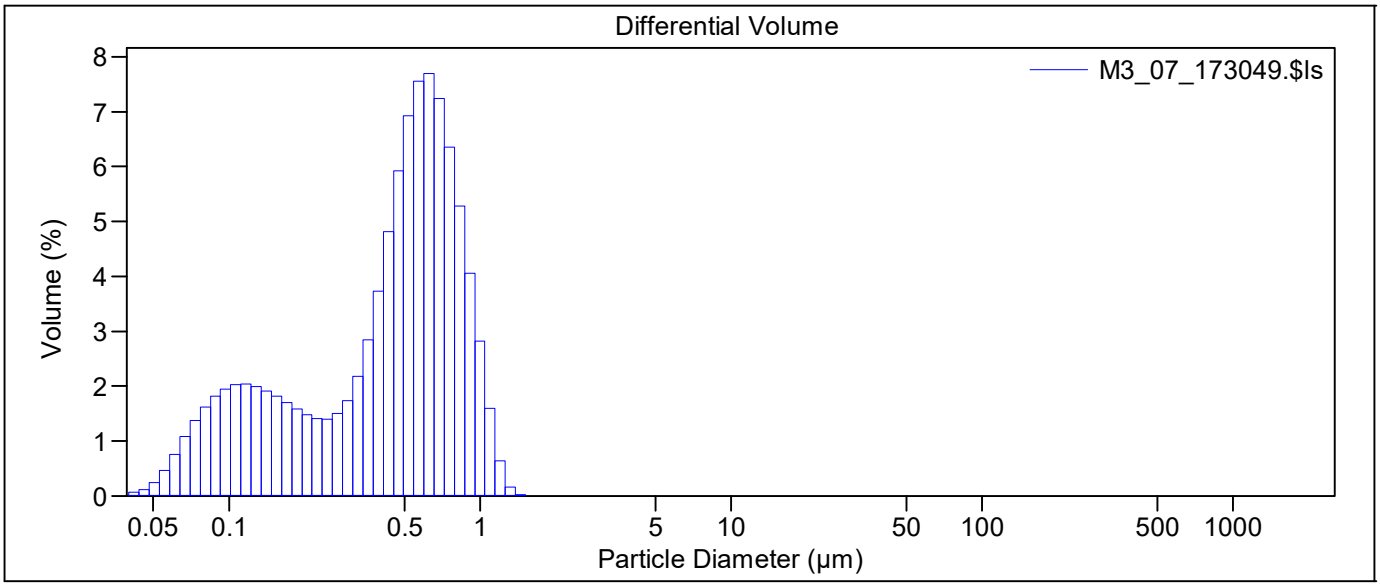
Number Statistics (Arithmetic) M3_07_173049.$ls

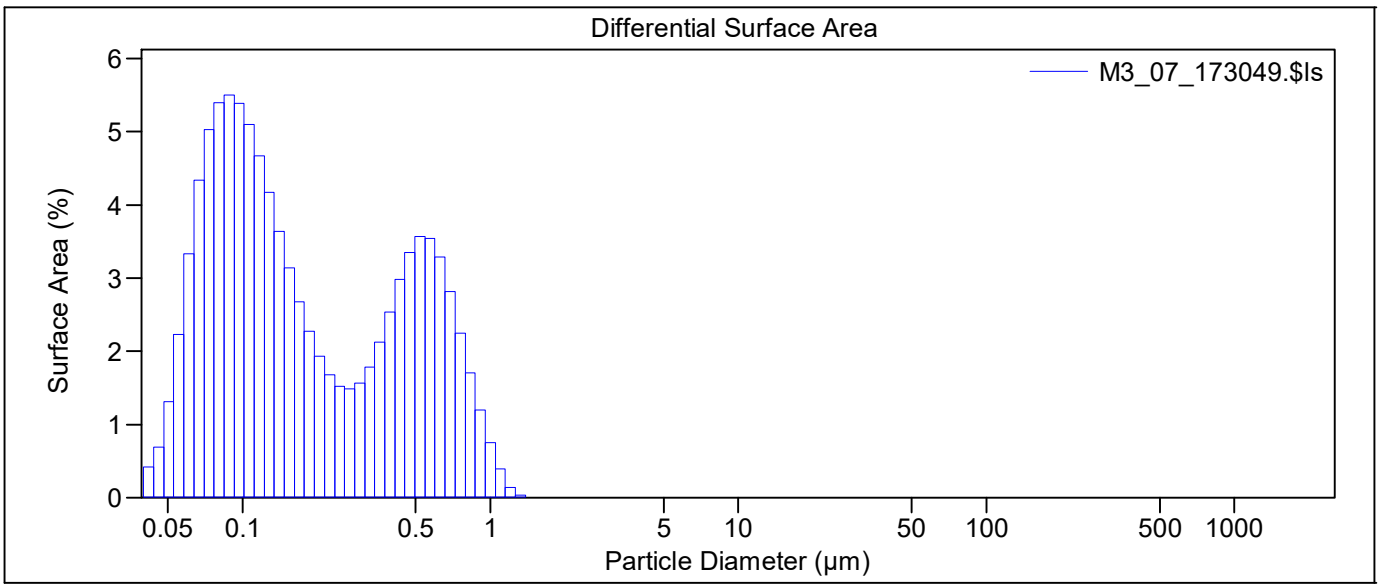
Calculations from 0.040 µm to 2000 µm

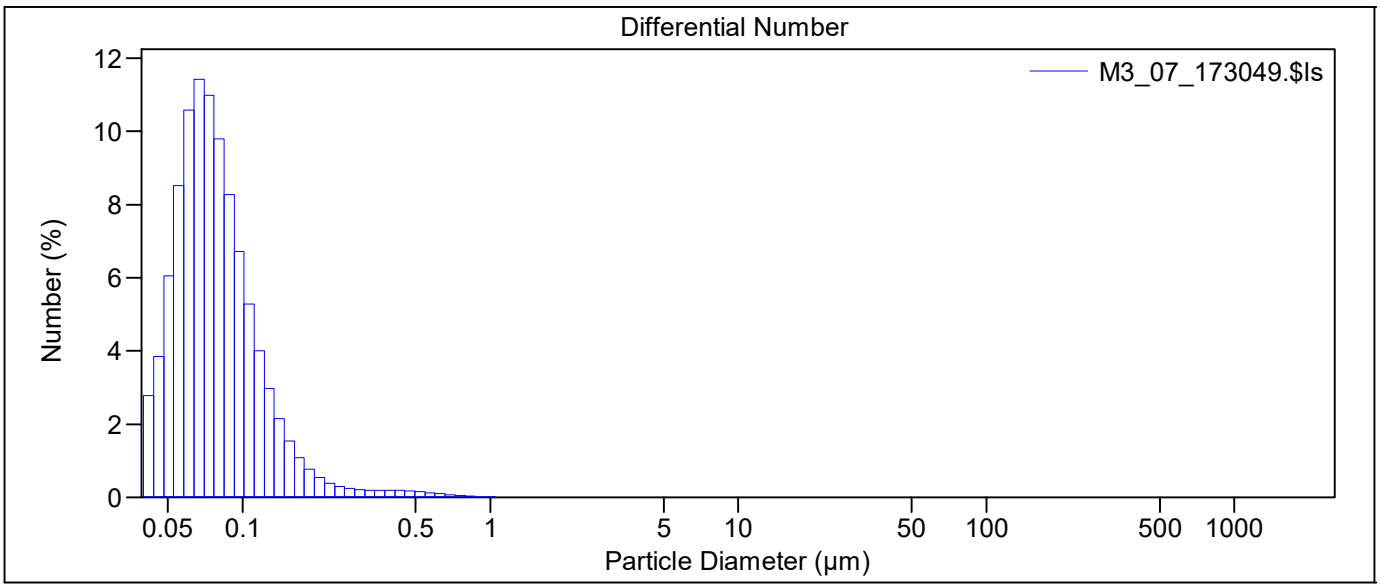
Number:	100%		
Mean:	0.089 µm	S.D.:	0.062 µm
Median:	0.074 µm	Variance:	0.0039 μm^2
Mean/Median ratio:	1.195	C.V.:	70.3%
Mode:	0.067 µm	Skewness:	5.833 Right skewed
		Kurtosis:	49.08 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.129 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.065	0.42	2.79
2	0.044	0.046	0.12	0.69	3.85
3	0.048	0.050	0.25	1.31	6.05
4	0.053	0.055	0.46	2.23	8.52
5	0.058	0.061	0.76	3.33	10.6
6	0.064	0.067	1.08	4.34	11.4
7	0.070	0.073	1.38	5.03	11.0
8	0.077	0.080	1.62	5.40	9.79
9	0.084	0.088	1.82	5.50	8.28
10	0.093	0.097	1.95	5.39	6.73
11	0.102	0.106	2.03	5.10	5.28
12	0.112	0.117	2.04	4.67	4.01
13	0.122	0.128	2.00	4.17	2.97
14	0.134	0.141	1.92	3.64	2.16
15	0.148	0.155	1.81	3.14	1.54
16	0.162	0.170	1.70	2.68	1.09
17	0.178	0.186	1.58	2.27	0.77
18	0.195	0.205	1.48	1.94	0.54
19	0.214	0.225	1.41	1.68	0.39
20	0.235	0.247	1.40	1.52	0.29
21	0.258	0.271	1.50	1.49	0.24
22	0.284	0.297	1.74	1.57	0.21
23	0.311	0.326	2.18	1.79	0.20
24	0.342	0.358	2.84	2.12	0.19
25	0.375	0.393	3.73	2.54	0.19
26	0.412	0.431	4.81	2.98	0.19
27	0.452	0.474	5.93	3.35	0.18
28	0.496	0.520	6.93	3.57	0.15
29	0.545	0.571	7.55	3.54	0.13
30	0.598	0.627	7.70	3.29	0.098
31	0.656	0.688	7.24	2.82	0.070
32	0.721	0.755	6.35	2.25	0.046
33	0.791	0.829	5.29	1.71	0.029
34	0.868	0.910	4.06	1.19	0.017
35	0.953	0.999	2.82	0.76	0.0089
36	1.047	1.097	1.60	0.39	0.0038
37	1.149	1.204	0.64	0.14	0.0012
38	1.261	1.321	0.16	0.033	0.00022
39	1.385	1.451	0.023	0.0042	0.000023
40	1.520	1.592	0.00087	0.00015	0.000001
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_08_173237.$ls M3_08_173237.$ls		
File ID:	M3		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.67%		
LS 13 320	Universal Liquid Module		
Start time:	17:30 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	42%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_08_173237.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.492 µm	S.D.:	0.274 µm
Median:	0.506 µm	Variance:	0.075 μm^2
Mean/Median ratio:	0.973	C.V.:	55.6%
Mode:	0.627 µm	Skewness:	0.164 Right skewed
		Kurtosis:	-0.660 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.106 µm	0.256 µm	0.506 µm	0.683 µm	0.851 µm

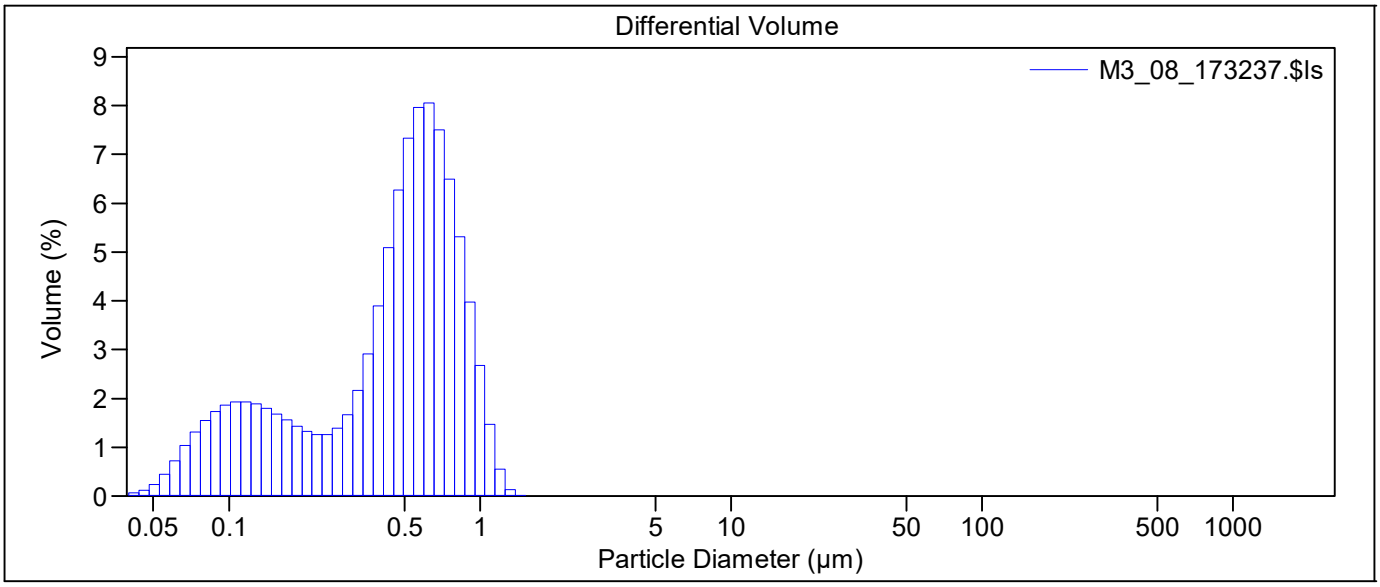
Number Statistics (Arithmetic) M3_08_173237.$ls

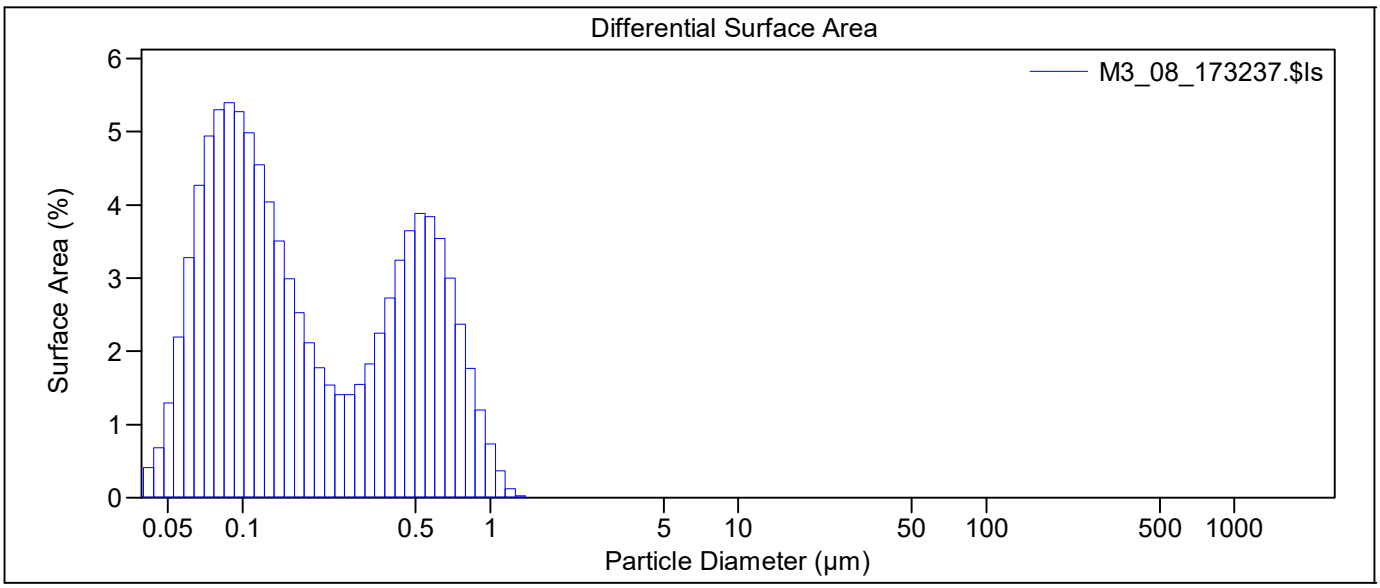
Calculations from 0.040 µm to 2000 µm

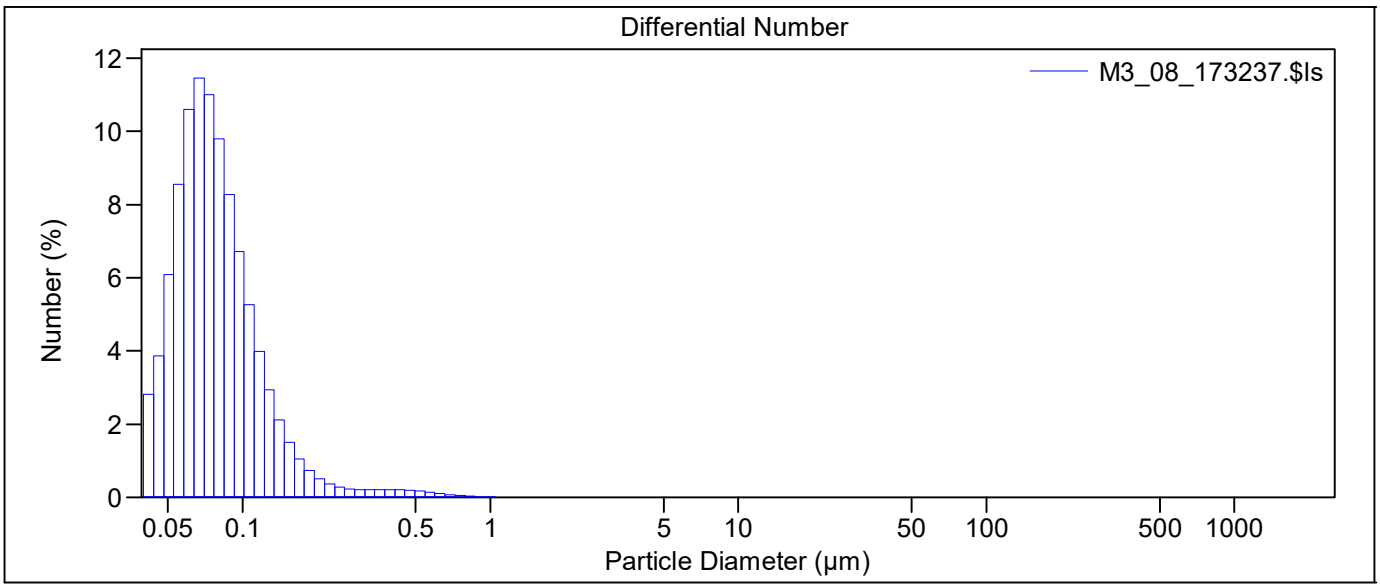
Number:	100%		
Mean:	0.089 µm	S.D.:	0.064 µm
Median:	0.074 µm	Variance:	0.0041 μm^2
Mean/Median ratio:	1.199	C.V.:	71.9%
Mode:	0.067 µm	Skewness:	5.776 Right skewed
		Kurtosis:	46.90 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.129 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.063	0.41	2.82
2	0.044	0.046	0.11	0.68	3.87
3	0.048	0.050	0.24	1.29	6.08
4	0.053	0.055	0.44	2.19	8.55
5	0.058	0.061	0.72	3.28	10.6
6	0.064	0.067	1.03	4.26	11.5
7	0.070	0.073	1.32	4.94	11.0
8	0.077	0.080	1.55	5.30	9.80
9	0.084	0.088	1.73	5.40	8.28
10	0.093	0.097	1.86	5.28	6.72
11	0.102	0.106	1.93	4.98	5.26
12	0.112	0.117	1.93	4.55	3.99
13	0.122	0.128	1.89	4.04	2.94
14	0.134	0.141	1.79	3.51	2.12
15	0.148	0.155	1.68	3.00	1.50
16	0.162	0.170	1.56	2.52	1.05
17	0.178	0.186	1.43	2.12	0.73
18	0.195	0.205	1.32	1.78	0.51
19	0.214	0.225	1.26	1.54	0.37
20	0.235	0.247	1.26	1.41	0.28
21	0.258	0.271	1.39	1.41	0.23
22	0.284	0.297	1.67	1.55	0.21
23	0.311	0.326	2.17	1.83	0.21
24	0.342	0.358	2.92	2.24	0.21
25	0.375	0.393	3.90	2.73	0.21
26	0.412	0.431	5.08	3.24	0.21
27	0.452	0.474	6.28	3.65	0.19
28	0.496	0.520	7.33	3.88	0.17
29	0.545	0.571	7.96	3.84	0.14
30	0.598	0.627	8.06	3.54	0.11
31	0.656	0.688	7.50	3.00	0.076
32	0.721	0.755	6.49	2.37	0.050
33	0.791	0.829	5.31	1.76	0.031
34	0.868	0.910	3.97	1.20	0.017
35	0.953	0.999	2.68	0.74	0.0089
36	1.047	1.097	1.46	0.37	0.0037
37	1.149	1.204	0.55	0.13	0.0010
38	1.261	1.321	0.13	0.028	0.00019
39	1.385	1.451	0.016	0.0031	0.000018
40	1.520	1.592	0.00046	0.000079	3.73E-7
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_09_173424.$ls M3_09_173424.$ls		
File ID:	M3		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.70%		
LS 13 320	Universal Liquid Module		
Start time:	17:32 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	42%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_09_173424.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.494 µm	S.D.:	0.270 µm
Median:	0.509 µm	Variance:	0.073 μm^2
Mean/Median ratio:	0.971	C.V.:	54.7%
Mode:	0.627 µm	Skewness:	0.136 Right skewed
		Kurtosis:	-0.652 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.107 µm	0.270 µm	0.509 µm	0.682 µm	0.847 µm

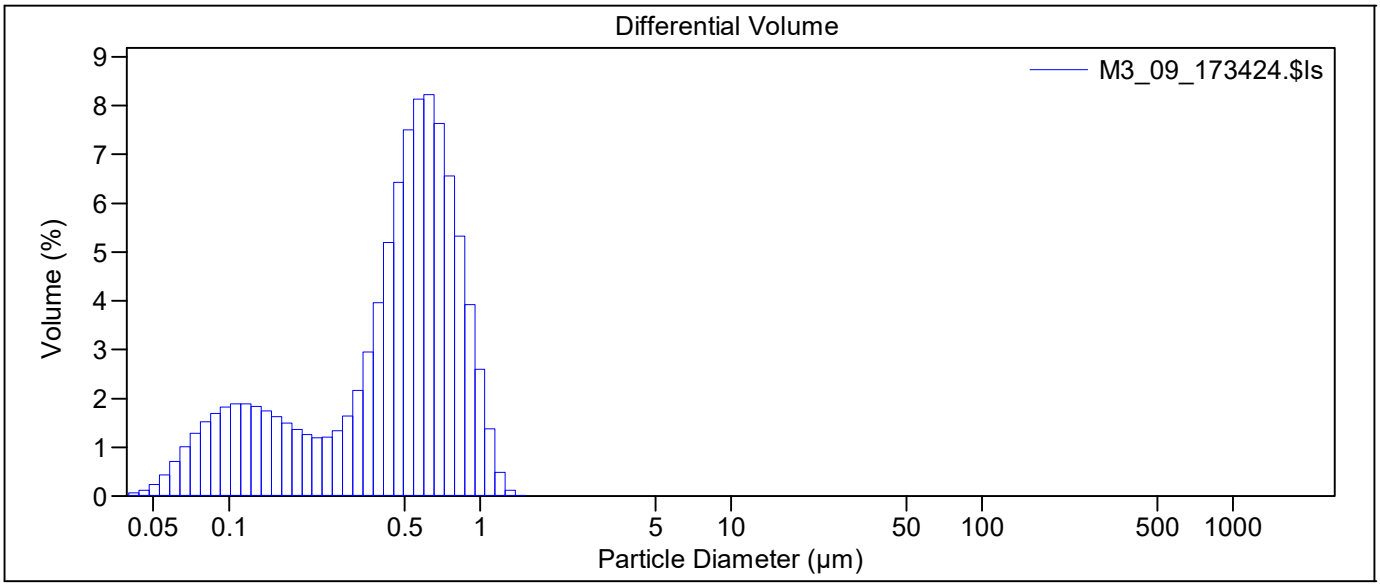
Number Statistics (Arithmetic) M3_09_173424.$ls

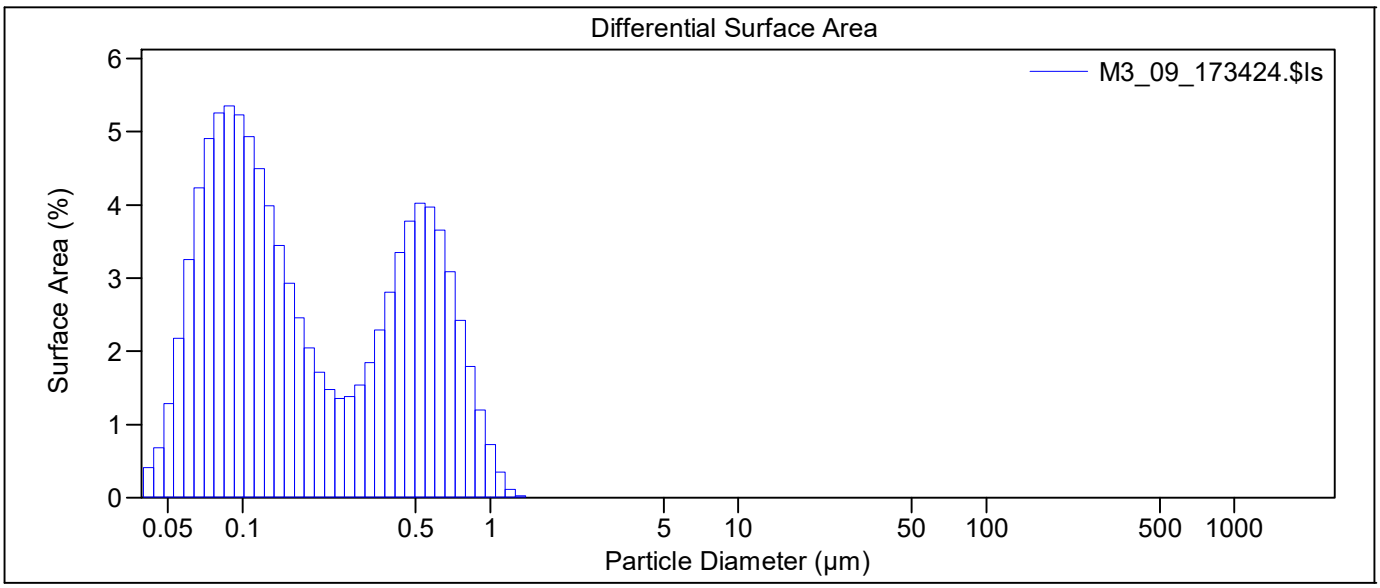
Calculations from 0.040 µm to 2000 µm

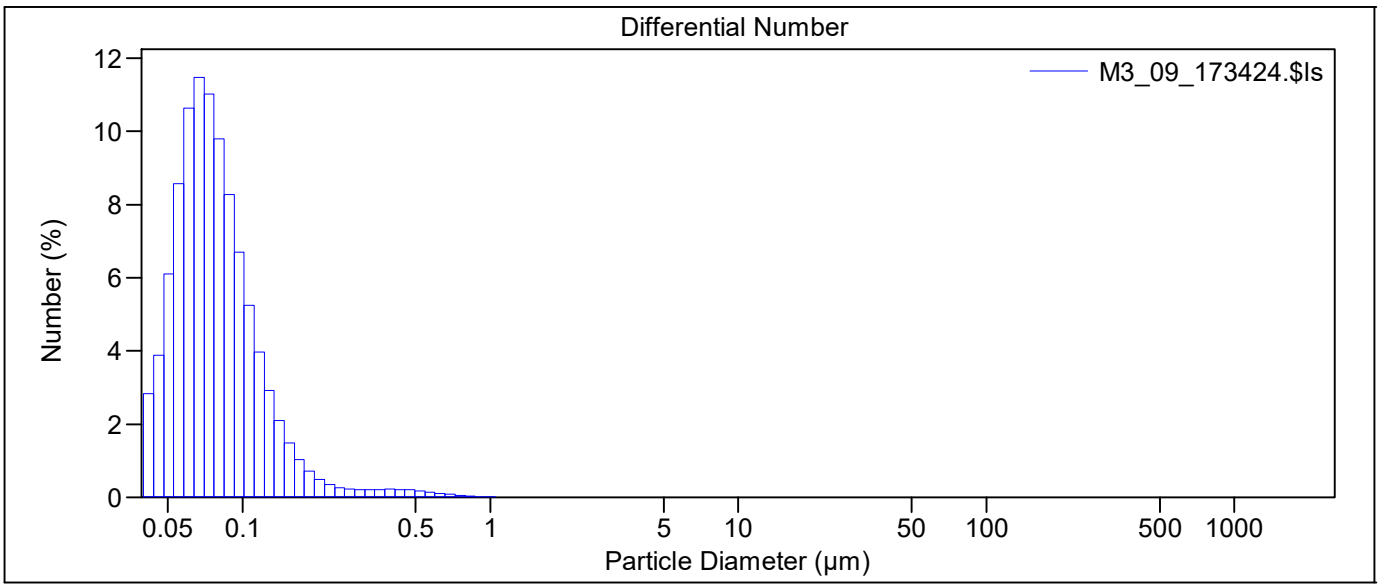
Number:	100%		
Mean:	0.089 µm	S.D.:	0.065 µm
Median:	0.074 µm	Variance:	0.0042 μm^2
Mean/Median ratio:	1.201	C.V.:	72.6%
Mode:	0.067 µm	Skewness:	5.748 Right skewed
		Kurtosis:	45.94 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.129 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.062	0.41	2.83
2	0.044	0.046	0.11	0.68	3.89
3	0.048	0.050	0.23	1.29	6.10
4	0.053	0.055	0.43	2.18	8.58
5	0.058	0.061	0.71	3.26	10.6
6	0.064	0.067	1.02	4.24	11.5
7	0.070	0.073	1.29	4.90	11.0
8	0.077	0.080	1.52	5.26	9.80
9	0.084	0.088	1.70	5.35	8.27
10	0.093	0.097	1.82	5.23	6.71
11	0.102	0.106	1.89	4.93	5.25
12	0.112	0.117	1.89	4.49	3.97
13	0.122	0.128	1.84	3.99	2.92
14	0.134	0.141	1.74	3.45	2.10
15	0.148	0.155	1.63	2.93	1.48
16	0.162	0.170	1.50	2.46	1.03
17	0.178	0.186	1.37	2.05	0.71
18	0.195	0.205	1.26	1.71	0.49
19	0.214	0.225	1.19	1.48	0.35
20	0.235	0.247	1.20	1.36	0.27
21	0.258	0.271	1.34	1.38	0.23
22	0.284	0.297	1.64	1.54	0.21
23	0.311	0.326	2.17	1.85	0.21
24	0.342	0.358	2.95	2.29	0.22
25	0.375	0.393	3.97	2.81	0.22
26	0.412	0.431	5.20	3.35	0.22
27	0.452	0.474	6.42	3.78	0.20
28	0.496	0.520	7.51	4.02	0.18
29	0.545	0.571	8.14	3.97	0.15
30	0.598	0.627	8.22	3.66	0.11
31	0.656	0.688	7.63	3.09	0.079
32	0.721	0.755	6.56	2.42	0.051
33	0.791	0.829	5.33	1.79	0.031
34	0.868	0.910	3.93	1.20	0.018
35	0.953	0.999	2.60	0.72	0.0088
36	1.047	1.097	1.38	0.35	0.0035
37	1.149	1.204	0.49	0.11	0.00095
38	1.261	1.321	0.11	0.024	0.00017
39	1.385	1.451	0.013	0.0024	0.000014
40	1.520	1.592	0.00026	0.000045	2.13E-7
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_10_174319.$ls M3_10_174319.$ls		
File ID:	M3		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.03%		
LS 13 320	Universal Liquid Module		
Start time:	17:41 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_10_174319.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.565 µm	S.D.:	0.114 µm
Median:	0.557 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.014	C.V.:	20.1%
Mode:	0.571 µm	Skewness:	0.350 Right skewed
		Kurtosis:	-0.312 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.421 µm	0.479 µm	0.557 µm	0.644 µm	0.719 µm

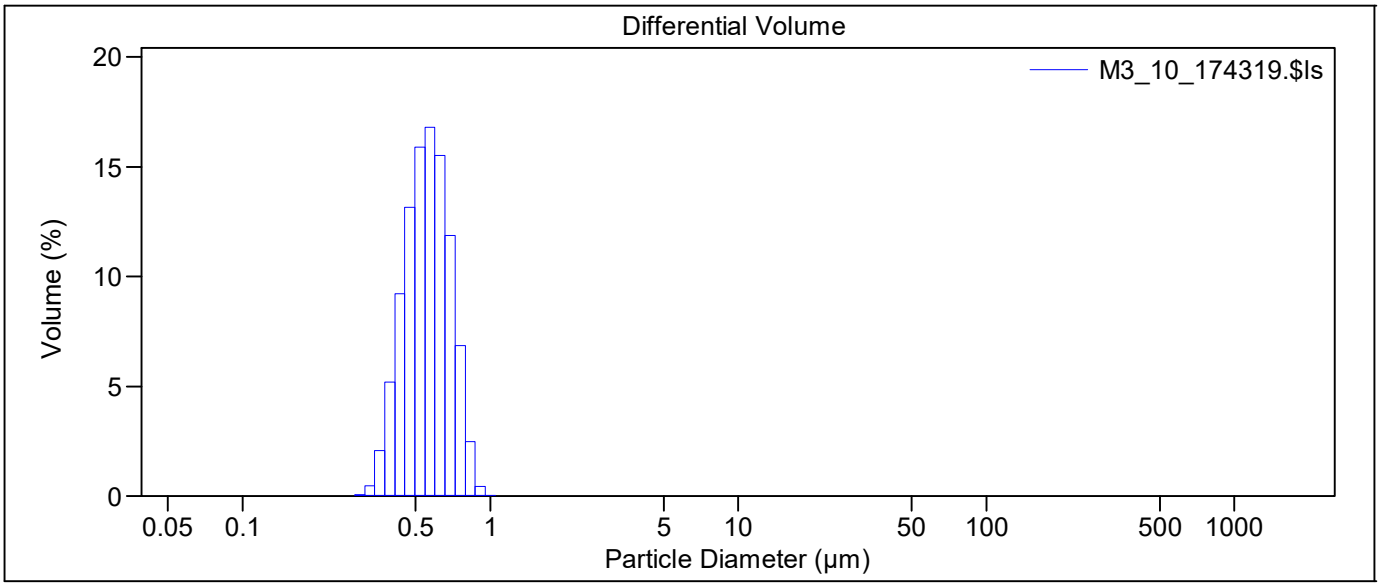
Number Statistics (Arithmetic) M3_10_174319.$ls

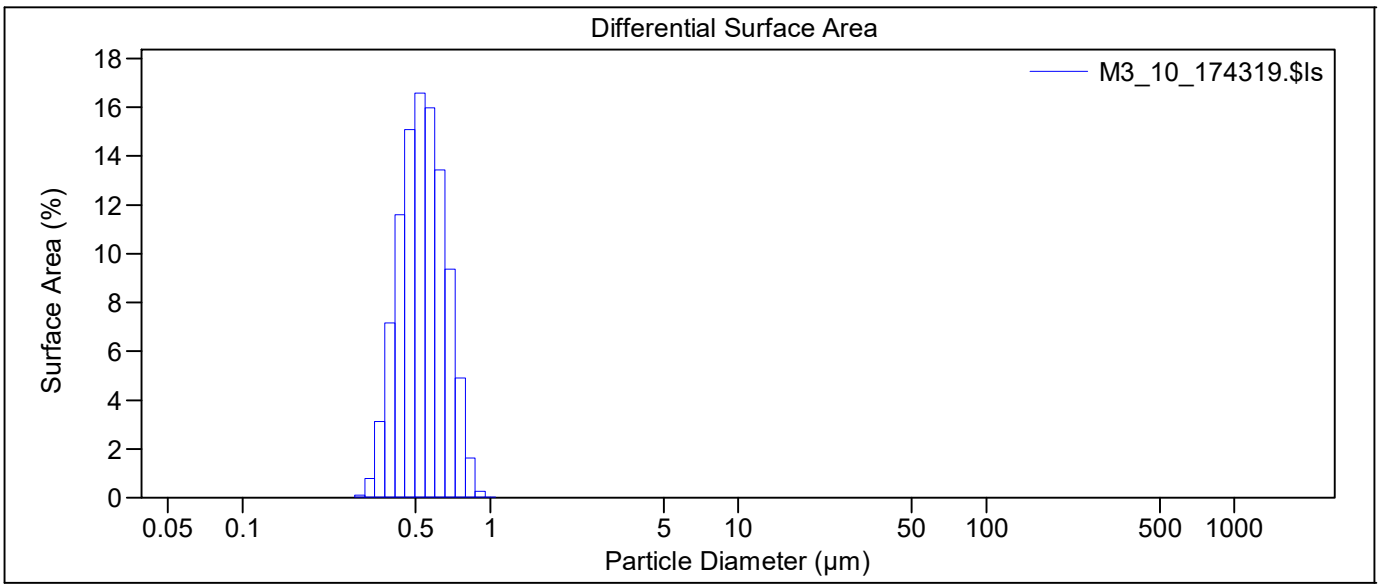
Calculations from 0.040 µm to 2000 µm

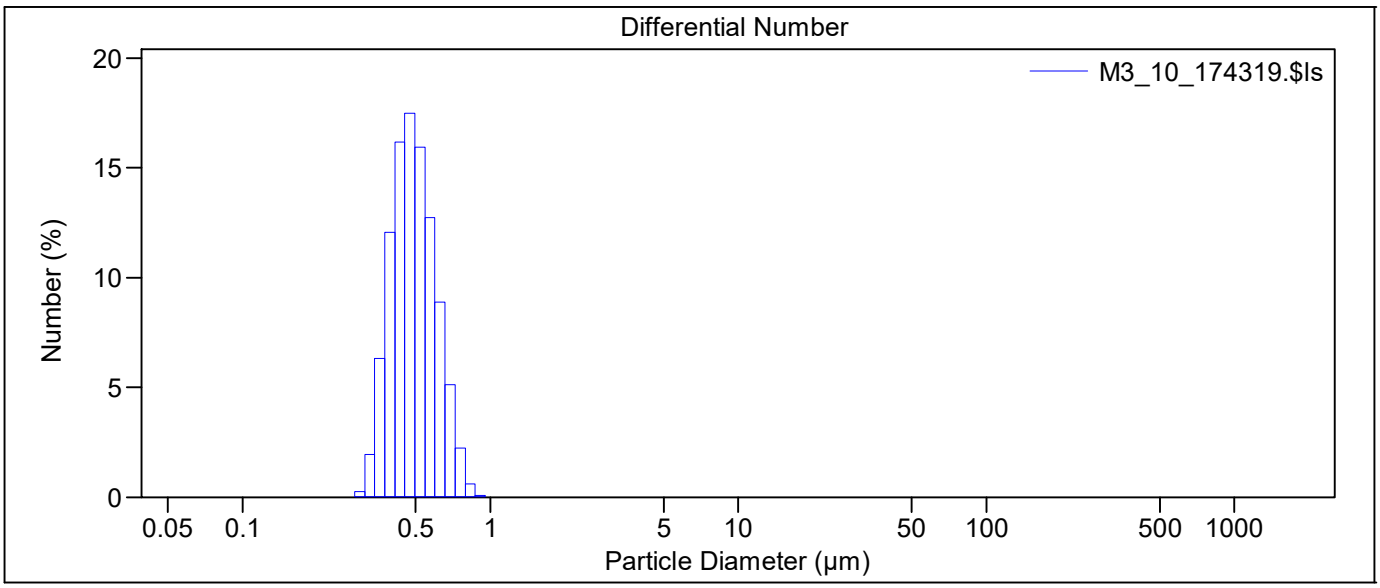
Number:	100%		
Mean:	0.500 µm	S.D.:	0.102 µm
Median:	0.485 µm	Variance:	0.010 μm^2
Mean/Median ratio:	1.029	C.V.:	20.5%
Mode:	0.474 µm	Skewness:	0.673 Right skewed
		Kurtosis:	0.211 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.380 µm	0.423 µm	0.485 µm	0.565 µm	0.644 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.00089	0.0018	0.0064
22	0.284	0.297	0.050	0.092	0.27
23	0.311	0.326	0.48	0.80	1.95
24	0.342	0.358	2.06	3.12	6.33
25	0.375	0.393	5.19	7.17	12.1
26	0.412	0.431	9.21	11.6	16.2
27	0.452	0.474	13.2	15.1	17.5
28	0.496	0.520	15.9	16.6	16.0
29	0.545	0.571	16.8	16.0	12.8
30	0.598	0.627	15.5	13.4	8.90
31	0.656	0.688	11.9	9.36	5.15
32	0.721	0.755	6.84	4.92	2.24
33	0.791	0.829	2.47	1.61	0.61
34	0.868	0.910	0.45	0.27	0.084
35	0.953	0.999	0.026	0.014	0.0036
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_11_174507.$ls M3_11_174507.$ls		
File ID:	M3		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.09%		
LS 13 320	Universal Liquid Module		
Start time:	17:43 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_11_174507.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.564 µm	S.D.:	0.115 µm
Median:	0.556 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.014	C.V.:	20.3%
Mode:	0.571 µm	Skewness:	0.342 Right skewed
		Kurtosis:	-0.306 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.419 µm	0.477 µm	0.556 µm	0.643 µm	0.719 µm

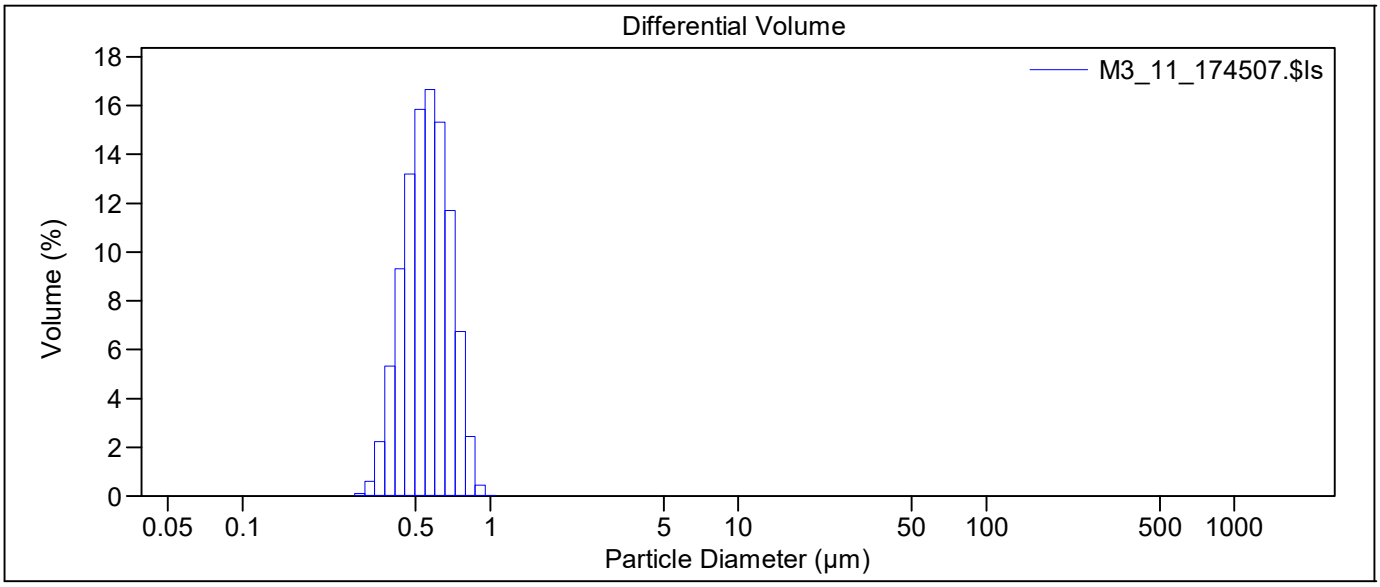
Number Statistics (Arithmetic) M3_11_174507.$ls

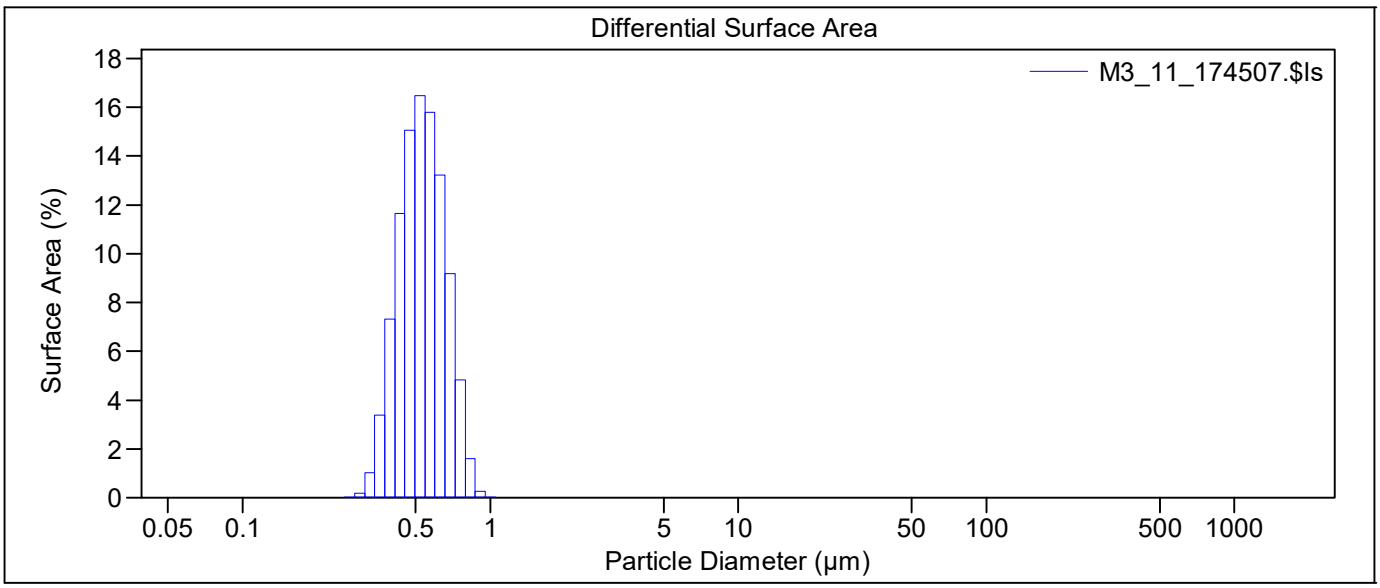
Calculations from 0.040 µm to 2000 µm

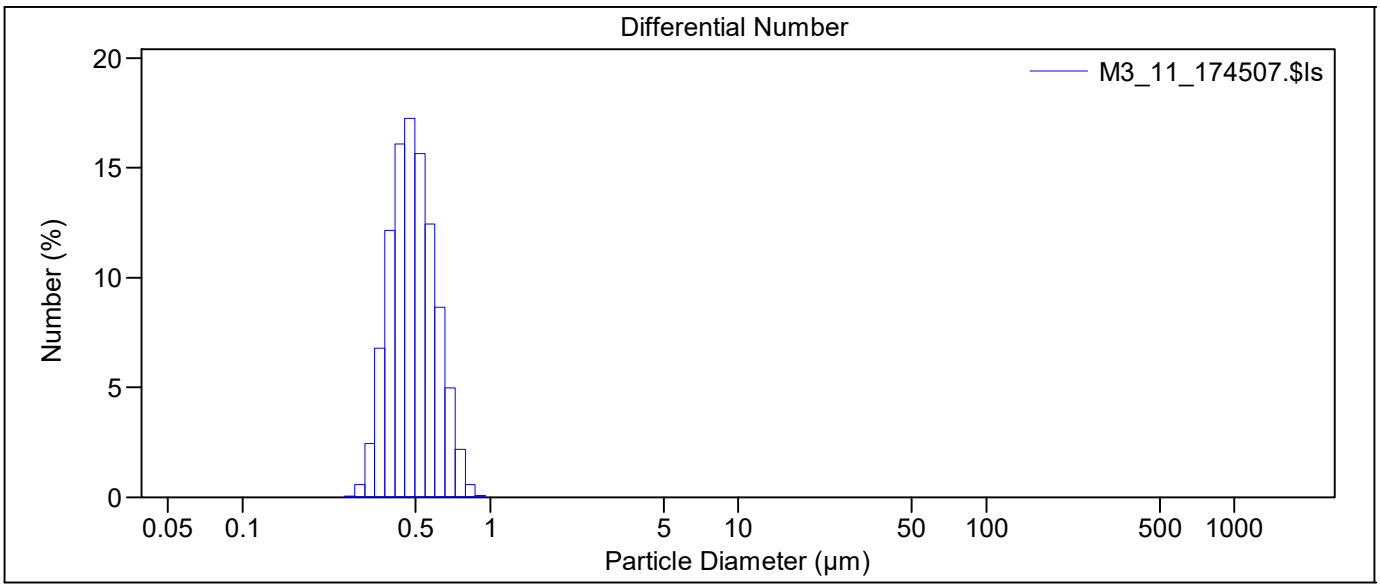
Number:	100%		
Mean:	0.496 µm	S.D.:	0.103 µm
Median:	0.482 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.029	C.V.:	20.8%
Mode:	0.474 µm	Skewness:	0.653 Right skewed
		Kurtosis:	0.207 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.376 µm	0.419 µm	0.482 µm	0.562 µm	0.642 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.00078	0.0017	0.0072
21	0.258	0.271	0.0088	0.018	0.062
22	0.284	0.297	0.11	0.20	0.57
23	0.311	0.326	0.61	1.01	2.45
24	0.342	0.358	2.24	3.38	6.78
25	0.375	0.393	5.32	7.31	12.2
26	0.412	0.431	9.30	11.7	16.1
27	0.452	0.474	13.2	15.1	17.2
28	0.496	0.520	15.8	16.5	15.7
29	0.545	0.571	16.7	15.8	12.5
30	0.598	0.627	15.3	13.2	8.66
31	0.656	0.688	11.7	9.19	4.99
32	0.721	0.755	6.75	4.83	2.18
33	0.791	0.829	2.44	1.59	0.59
34	0.868	0.910	0.44	0.26	0.082
35	0.953	0.999	0.026	0.014	0.0036
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_12_174654.$ls M3_12_174654.$ls		
File ID:	M3		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.08%		
LS 13 320	Universal Liquid Module		
Start time:	17:45 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_12_174654.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.564 µm	S.D.:	0.114 µm
Median:	0.556 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.015	C.V.:	20.2%
Mode:	0.571 µm	Skewness:	0.355 Right skewed
		Kurtosis:	-0.308 Platykurtic

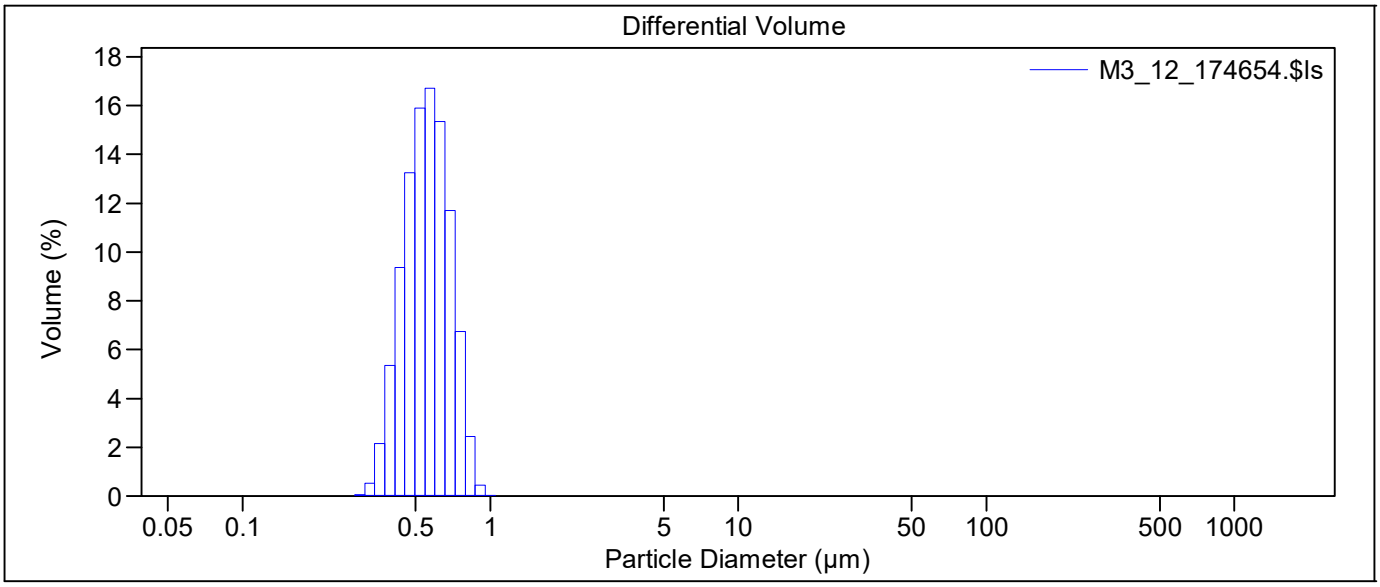
<10%	<25%	<50%	<75%	<90%
0.420 µm	0.477 µm	0.556 µm	0.643 µm	0.719 µm

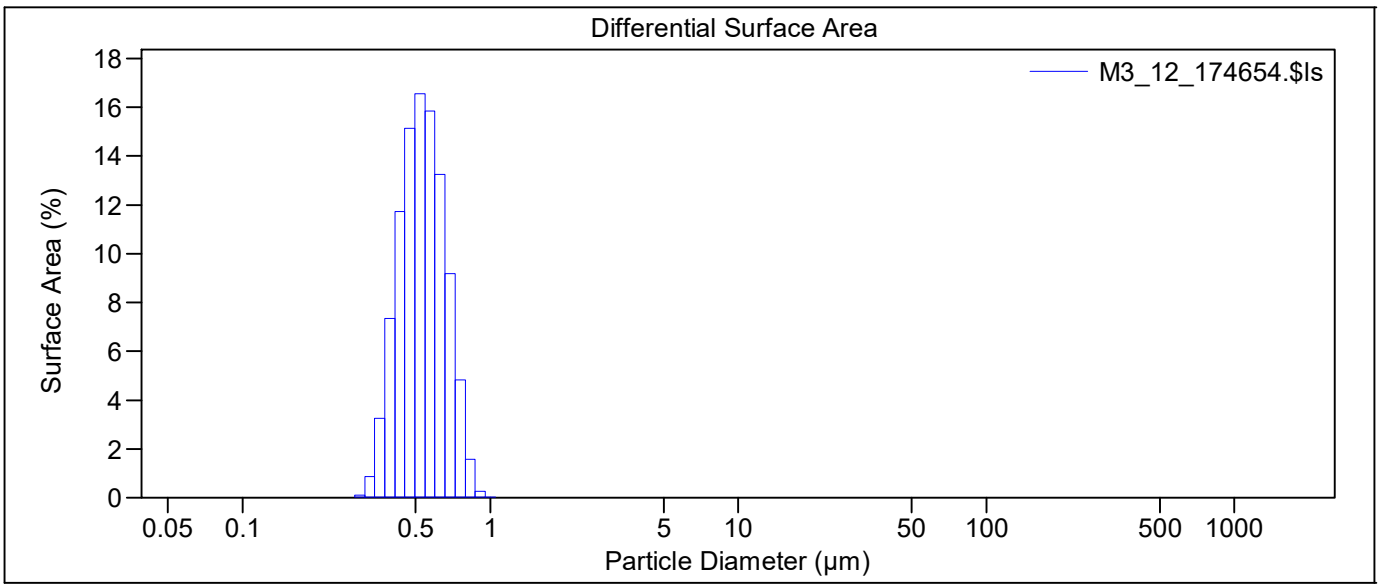
Number Statistics (Arithmetic) M3_12_174654.$ls

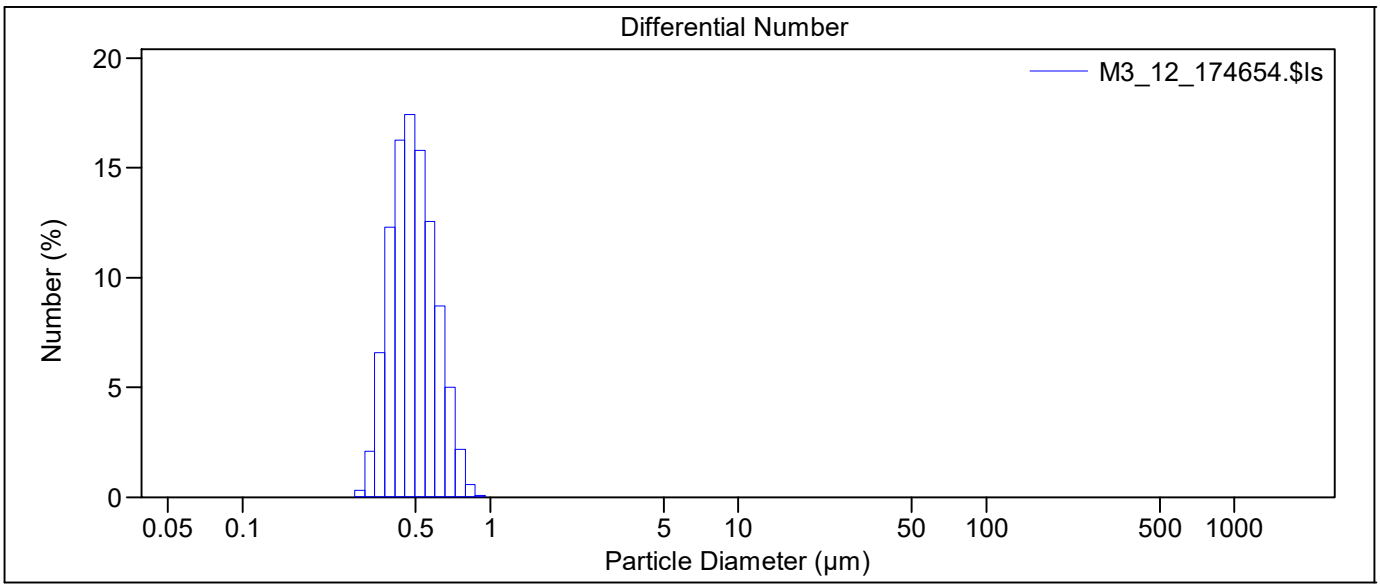
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.498 µm	S.D.:	0.102 µm
Median:	0.484 µm	Variance:	0.010 μm^2
Mean/Median ratio:	1.030	C.V.:	20.5%
Mode:	0.474 µm	Skewness:	0.679 Right skewed
		Kurtosis:	0.227 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.378 µm	0.421 µm	0.484 µm	0.562 µm	0.642 µm


Differential Volume
M3_12_174654.$ls
Volume (%)
0
2
4
6
8
10
12
14
16
18
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M3_12_174654.$ls
Surface Area (%)
0
2
4
6
8
10
12
14
16
18
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M3_12_174654.$ls
Number (%)
0
5
10
15
20
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.0014	0.0028	0.0097
22	0.284	0.297	0.059	0.11	0.31
23	0.311	0.326	0.52	0.87	2.11
24	0.342	0.358	2.16	3.27	6.58
25	0.375	0.393	5.34	7.35	12.3
26	0.412	0.431	9.36	11.7	16.3
27	0.452	0.474	13.3	15.1	17.4
28	0.496	0.520	15.9	16.6	15.8
29	0.545	0.571	16.7	15.8	12.6
30	0.598	0.627	15.3	13.3	8.72
31	0.656	0.688	11.7	9.20	5.02
32	0.721	0.755	6.74	4.83	2.19
33	0.791	0.829	2.43	1.59	0.60
34	0.868	0.910	0.44	0.26	0.082
35	0.953	0.999	0.025	0.014	0.0036
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M3.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_13_175547.$ls M3_13_175547.$ls		
File ID:	M3		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.87%		
LS 13 320	Universal Liquid Module		
Start time:	17:54 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-0%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_13_175547.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.518 µm	S.D.:	0.102 µm
Median:	0.508 µm	Variance:	0.010 µm^2
Mean/Median ratio:	1.020	C.V.:	19.8%
Mode:	0.520 µm	Skewness:	0.535 Right skewed
		Kurtosis:	0.122 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.392 µm	0.442 µm	0.508 µm	0.584 µm	0.656 µm

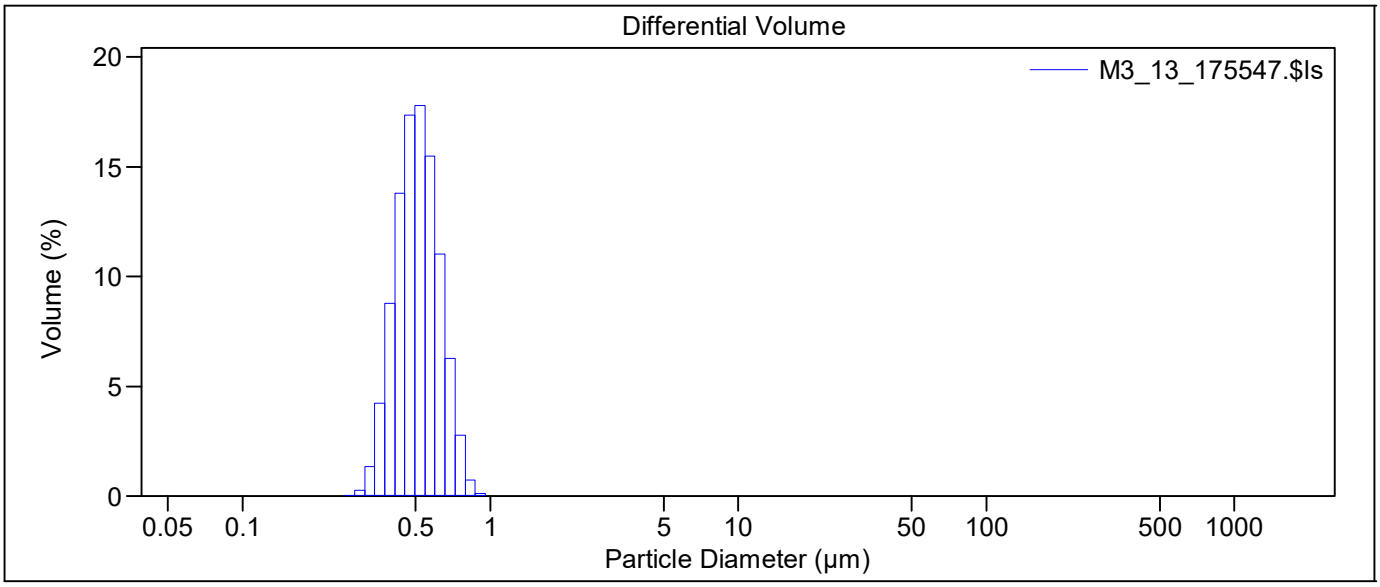
Number Statistics (Arithmetic) M3_13_175547.$ls

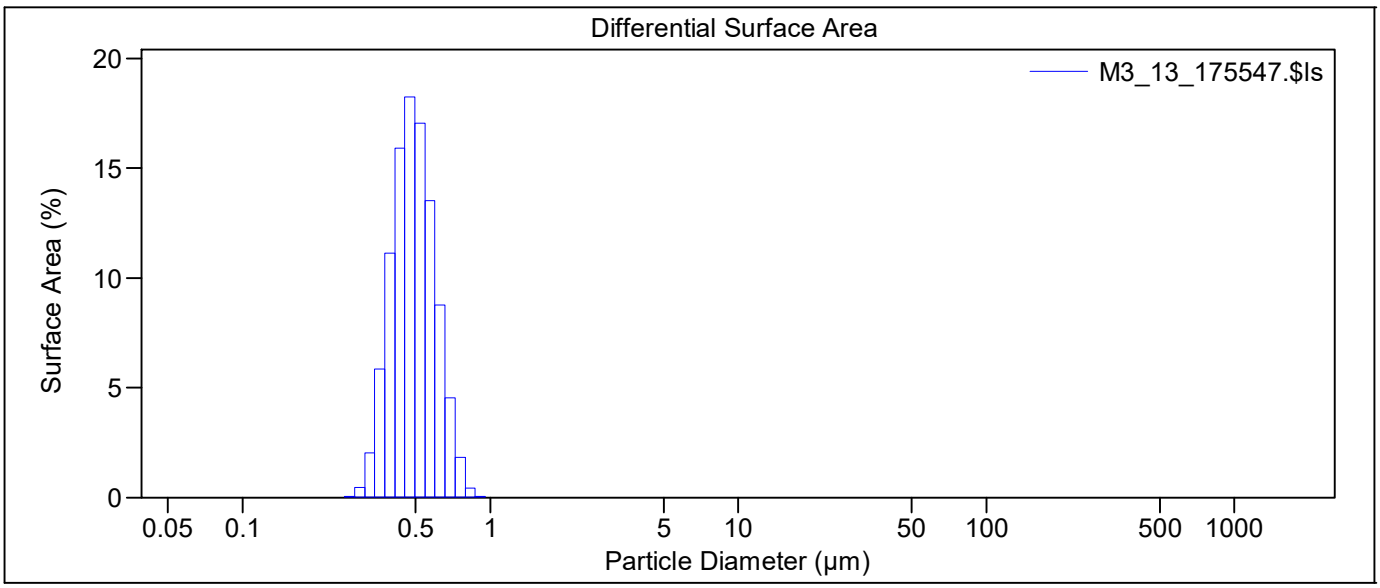
Calculations from 0.040 µm to 2000 µm

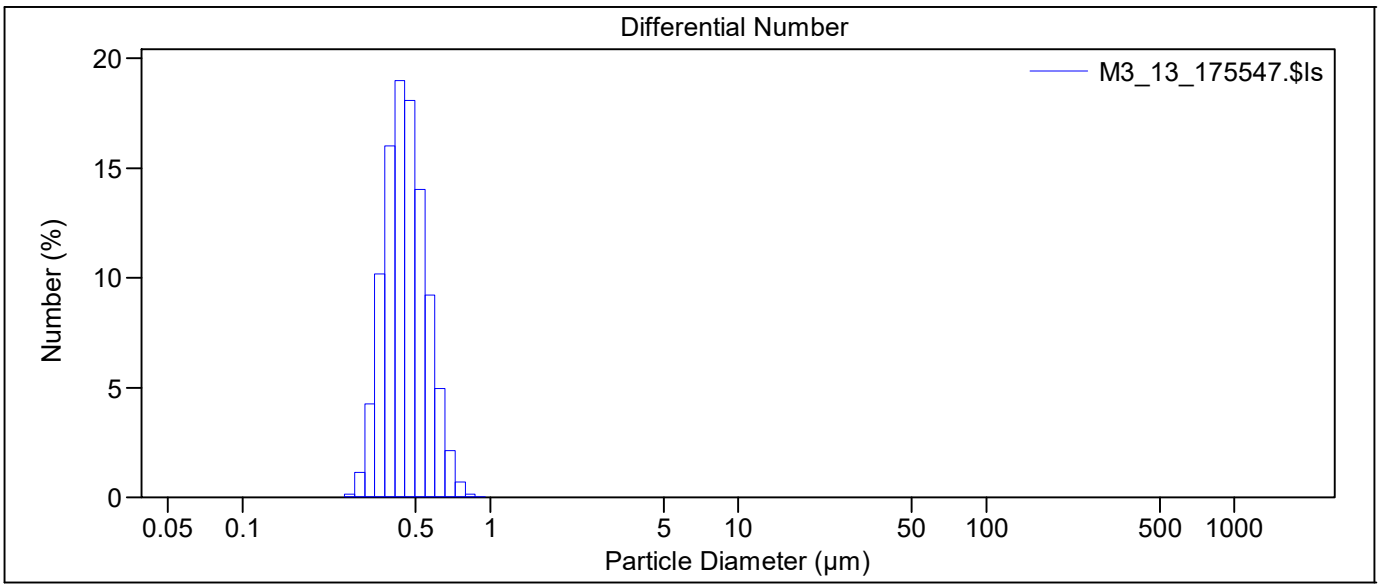
Number:	100%		
Mean:	0.463 µm	S.D.:	0.090 µm
Median:	0.451 µm	Variance:	0.0081 µm^2
Mean/Median ratio:	1.027	C.V.:	19.4%
Mode:	0.431 µm	Skewness:	0.730 Right skewed
		Kurtosis:	0.592 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.356 µm	0.396 µm	0.451 µm	0.518 µm	0.586 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.00046	0.00093	0.0034
21	0.258	0.271	0.026	0.048	0.15
22	0.284	0.297	0.27	0.45	1.14
23	0.311	0.326	1.34	2.04	4.26
24	0.342	0.358	4.22	5.87	10.2
25	0.375	0.393	8.78	11.1	16.0
26	0.412	0.431	13.8	15.9	19.0
27	0.452	0.474	17.4	18.3	18.1
28	0.496	0.520	17.8	17.1	14.0
29	0.545	0.571	15.5	13.5	9.22
30	0.598	0.627	11.0	8.78	4.96
31	0.656	0.688	6.26	4.54	2.13
32	0.721	0.755	2.77	1.83	0.71
33	0.791	0.829	0.74	0.45	0.14
34	0.868	0.910	0.13	0.072	0.019
35	0.953	0.999	0.0090	0.0045	0.00100
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_14_175734.$ls M3_14_175734.$ls		
File ID:	M3		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.93%		
LS 13 320	Universal Liquid Module		
Start time:	17:55 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	-0%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_14_175734.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.517 µm	S.D.:	0.102 µm
Median:	0.506 µm	Variance:	0.010 μm^2
Mean/Median ratio:	1.020	C.V.:	19.8%
Mode:	0.520 µm	Skewness:	0.538 Right skewed
		Kurtosis:	0.133 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.392 µm	0.441 µm	0.506 µm	0.583 µm	0.655 µm

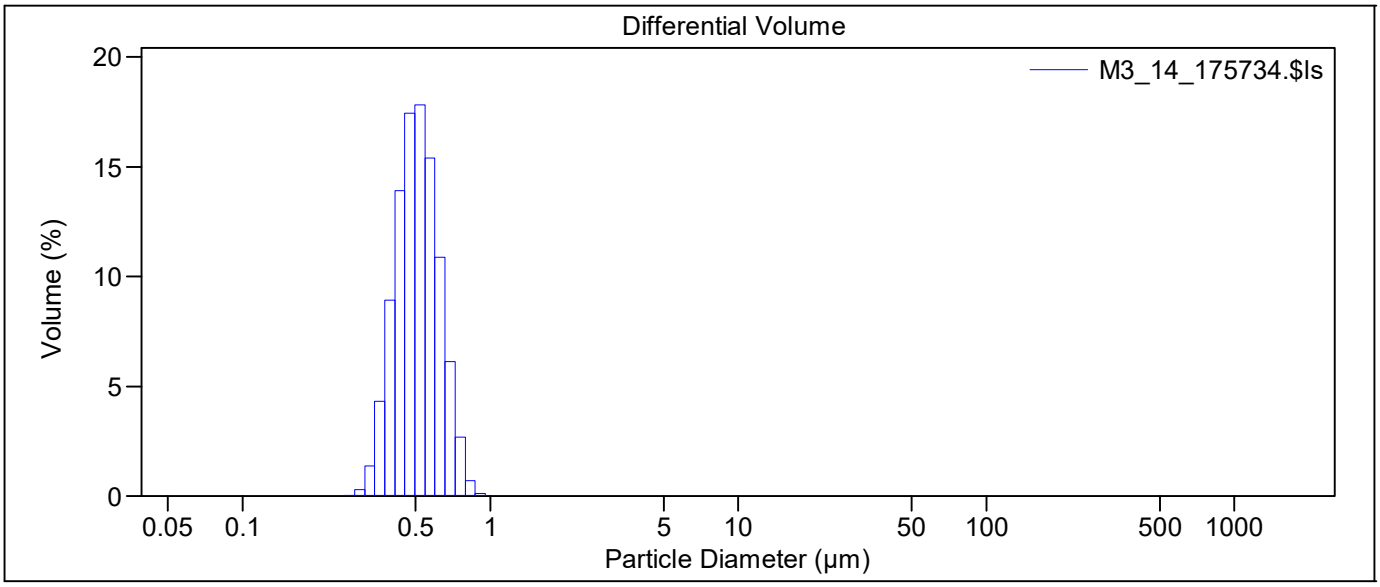
Number Statistics (Arithmetic) M3_14_175734.$ls

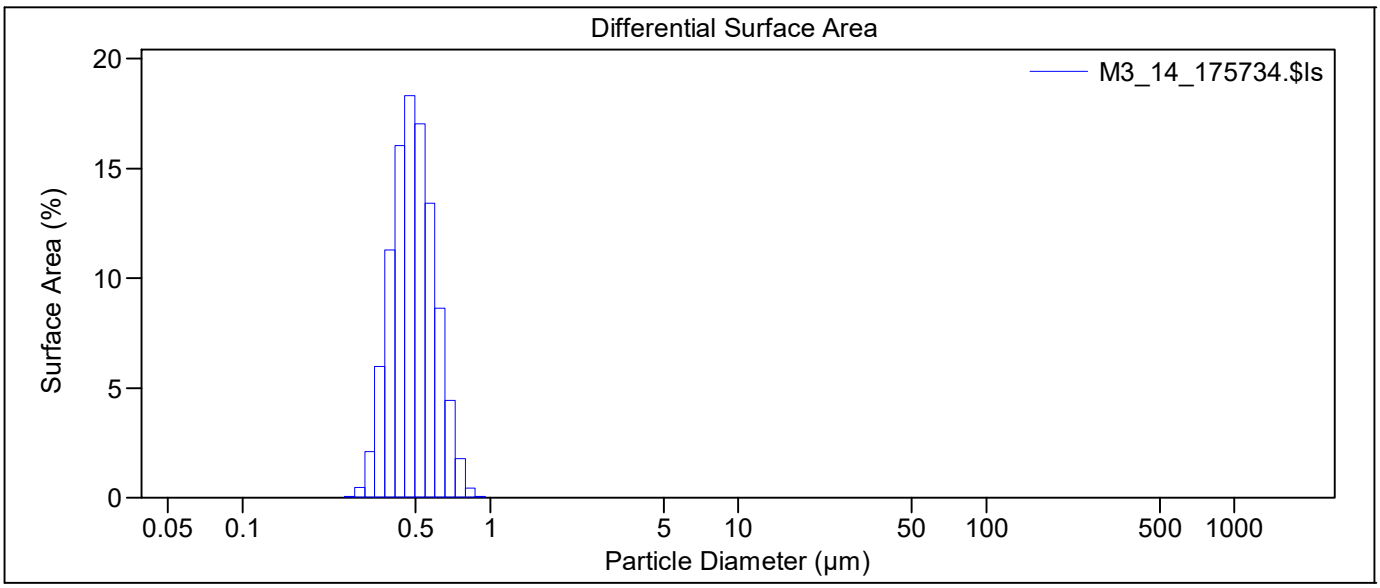
Calculations from 0.040 µm to 2000 µm

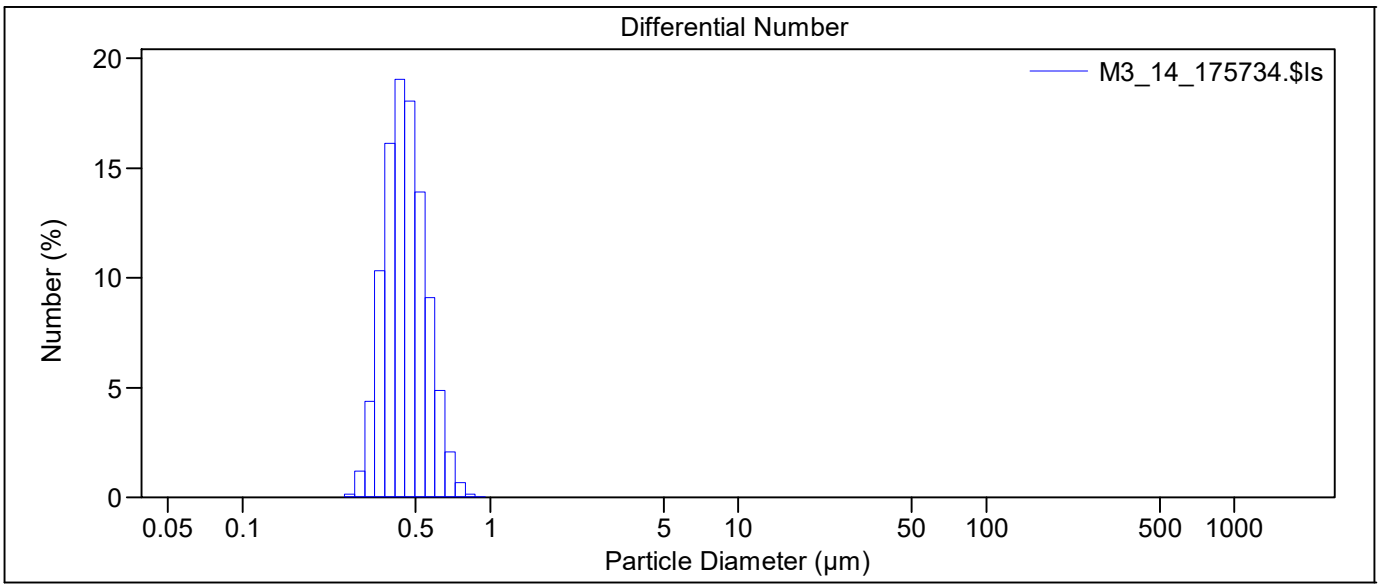
Number:	100%		
Mean:	0.461 µm	S.D.:	0.089 µm
Median:	0.450 µm	Variance:	0.0080 μm^2
Mean/Median ratio:	1.026	C.V.:	19.4%
Mode:	0.431 µm	Skewness:	0.730 Right skewed
		Kurtosis:	0.597 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.356 µm	0.396 µm	0.450 µm	0.516 µm	0.585 µm

Beckman Coulter LS13320







M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.00055	0.0011	0.0040
21	0.258	0.271	0.028	0.051	0.16
22	0.284	0.297	0.28	0.47	1.18
23	0.311	0.326	1.38	2.11	4.38
24	0.342	0.358	4.31	5.98	10.3
25	0.375	0.393	8.91	11.3	16.1
26	0.412	0.431	13.9	16.0	19.0
27	0.452	0.474	17.4	18.3	18.0
28	0.496	0.520	17.8	17.0	13.9
29	0.545	0.571	15.4	13.4	9.09
30	0.598	0.627	10.9	8.63	4.86
31	0.656	0.688	6.12	4.42	2.07
32	0.721	0.755	2.68	1.76	0.68
33	0.791	0.829	0.71	0.43	0.14
34	0.868	0.910	0.13	0.068	0.018
35	0.953	0.999	0.0086	0.0043	0.00094
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M3.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M3\M3_15_175920.$ls M3_15_175920.$ls		
File ID:	M3		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.86%		
LS 13 320	Universal Liquid Module		
Start time:	17:57 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	-0%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M3_15_175920.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.518 µm	S.D.:	0.103 µm
Median:	0.508 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.020	C.V.:	19.8%
Mode:	0.520 µm	Skewness:	0.534 Right skewed
		Kurtosis:	0.120 Leptokurtic

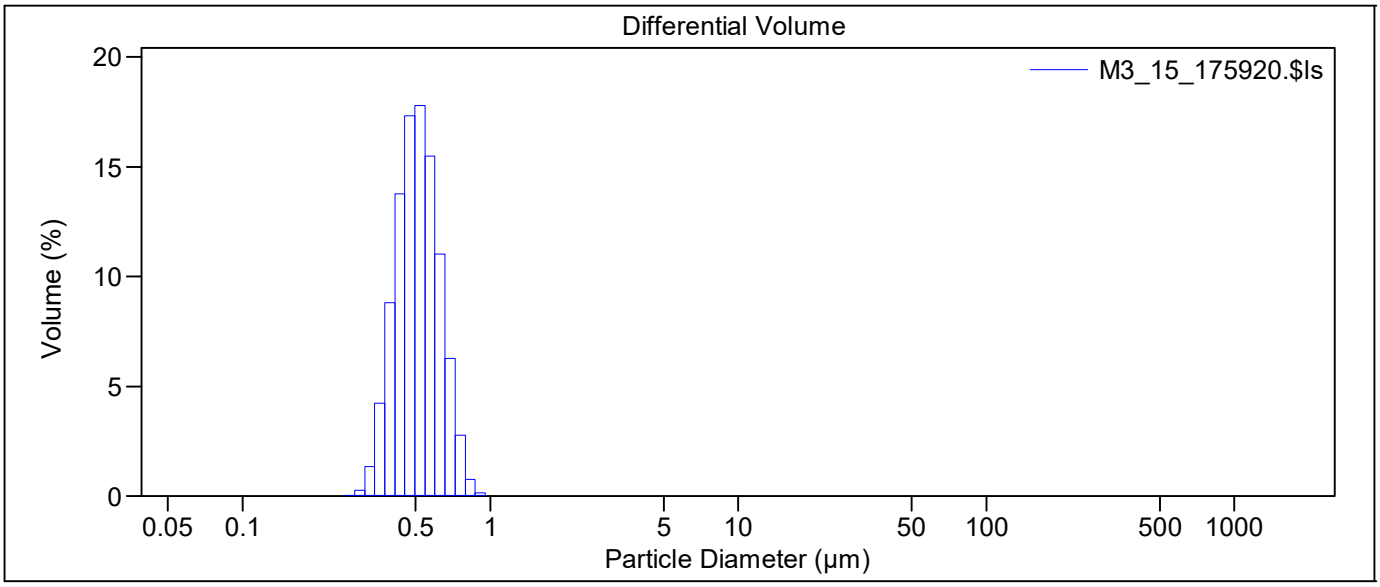
<10%	<25%	<50%	<75%	<90%
0.392 µm	0.442 µm	0.508 µm	0.584 µm	0.656 µm

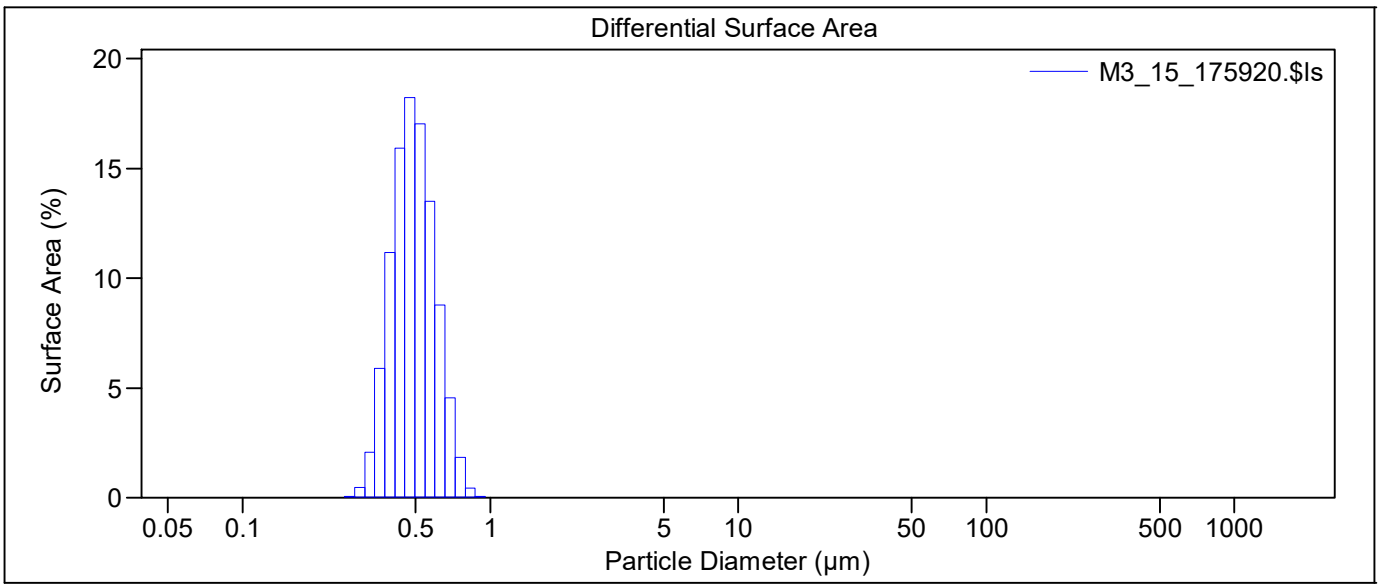
Number Statistics (Arithmetic) M3_15_175920.$ls

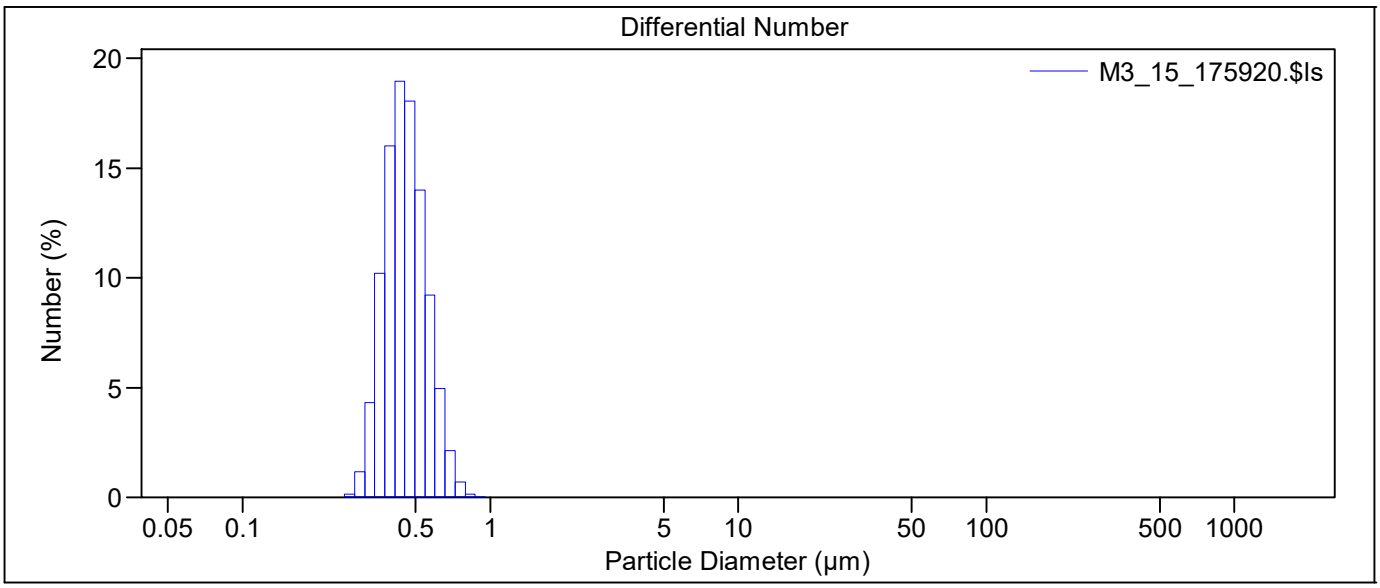
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.462 µm	S.D.:	0.090 µm
Median:	0.450 µm	Variance:	0.0081 μm^2
Mean/Median ratio:	1.027	C.V.:	19.4%
Mode:	0.431 µm	Skewness:	0.730 Right skewed
		Kurtosis:	0.590 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.356 µm	0.396 µm	0.450 µm	0.518 µm	0.586 µm


Differential Volume
M3_15_175920.$ls
Volume (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M3_15_175920.$ls
Surface Area (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M3_15_175920.$ls
Number (%)
20
15
10
5
0
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.00051	0.0010	0.0038
21	0.258	0.271	0.027	0.050	0.15
22	0.284	0.297	0.28	0.46	1.16
23	0.311	0.326	1.35	2.07	4.31
24	0.342	0.358	4.24	5.90	10.2
25	0.375	0.393	8.80	11.2	16.0
26	0.412	0.431	13.8	15.9	19.0
27	0.452	0.474	17.3	18.2	18.0
28	0.496	0.520	17.8	17.0	14.0
29	0.545	0.571	15.5	13.5	9.20
30	0.598	0.627	11.0	8.77	4.96
31	0.656	0.688	6.27	4.54	2.13
32	0.721	0.755	2.77	1.83	0.71
33	0.791	0.829	0.74	0.45	0.14
34	0.868	0.910	0.13	0.072	0.019
35	0.953	0.999	0.0090	0.0045	0.00100
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M3.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4.$av M4.$av
File ID:	M4
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_01_182622.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_02_182809.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_03_182955.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_04_183951.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_05_184138.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_06_184326.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_07_185322.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_08_185510.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_09_185658.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_10_190611.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_11_190759.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_12_190947.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_13_191925.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_14_192113.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_15_192259.$ls

Volume Statistics (Arithmetic) M4.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.501 µm	S.D.:	0.304 µm
Median:	0.467 µm	Variance:	0.092 µm^2
Mean/Median ratio:	1.073	C.V.:	60.6%
Mode:	0.571 µm	Skewness:	0.817 Right skewed
		Kurtosis:	0.783 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.131 µm	0.260 µm	0.467 µm	0.686 µm	0.909 µm

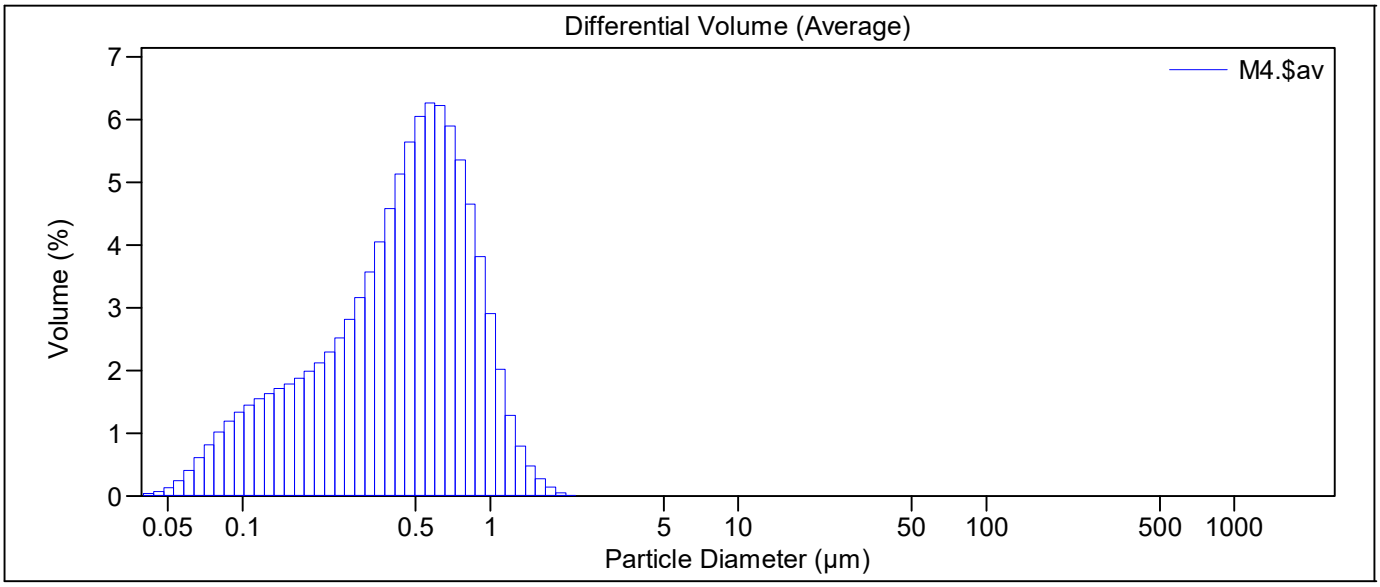
Number Statistics (Arithmetic) M4.$av

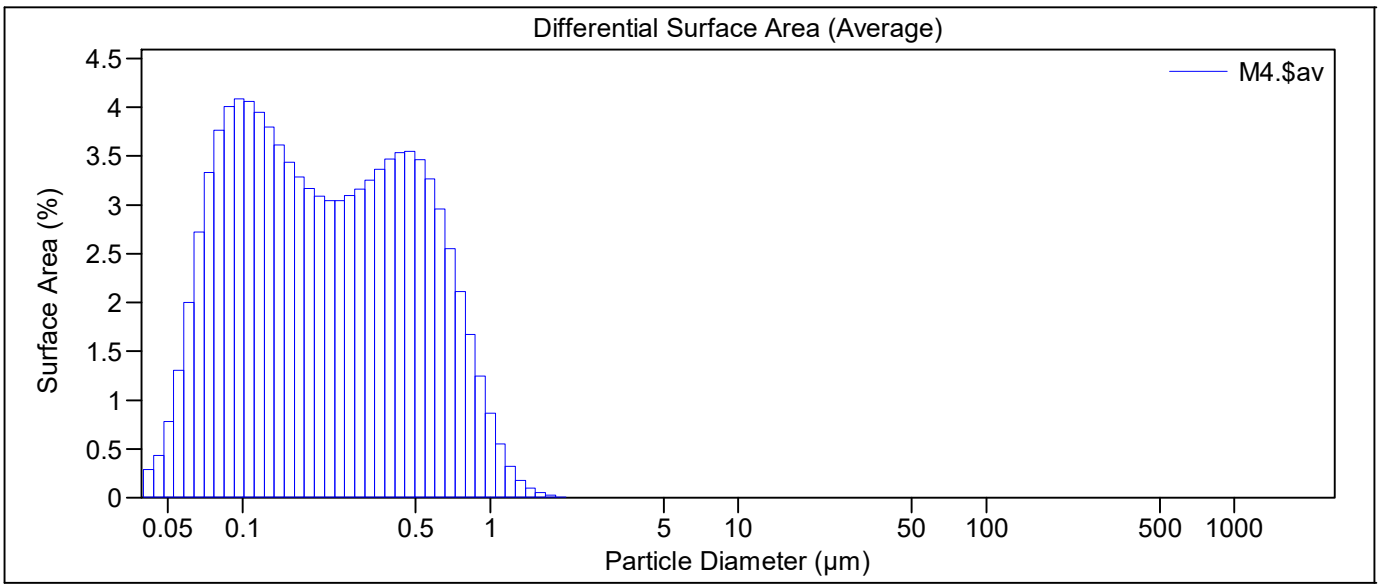
Calculations from 0.040 µm to 2000 µm

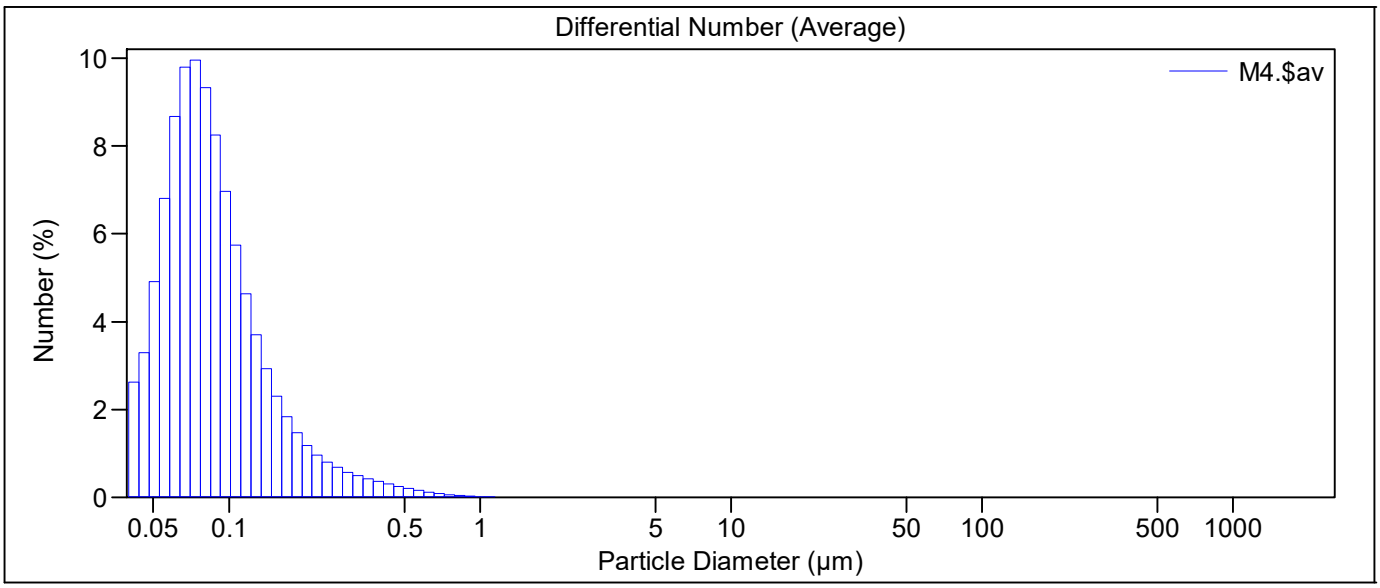
Number:	100%		
Mean:	0.101 µm	S.D.:	0.076 µm
Median:	0.080 µm	Variance:	0.0058 µm^2
Mean/Median ratio:	1.265	C.V.:	75.4%
Mode:	0.073 µm	Skewness:	4.451 Right skewed
		Kurtosis:	30.42 Leptokurtic

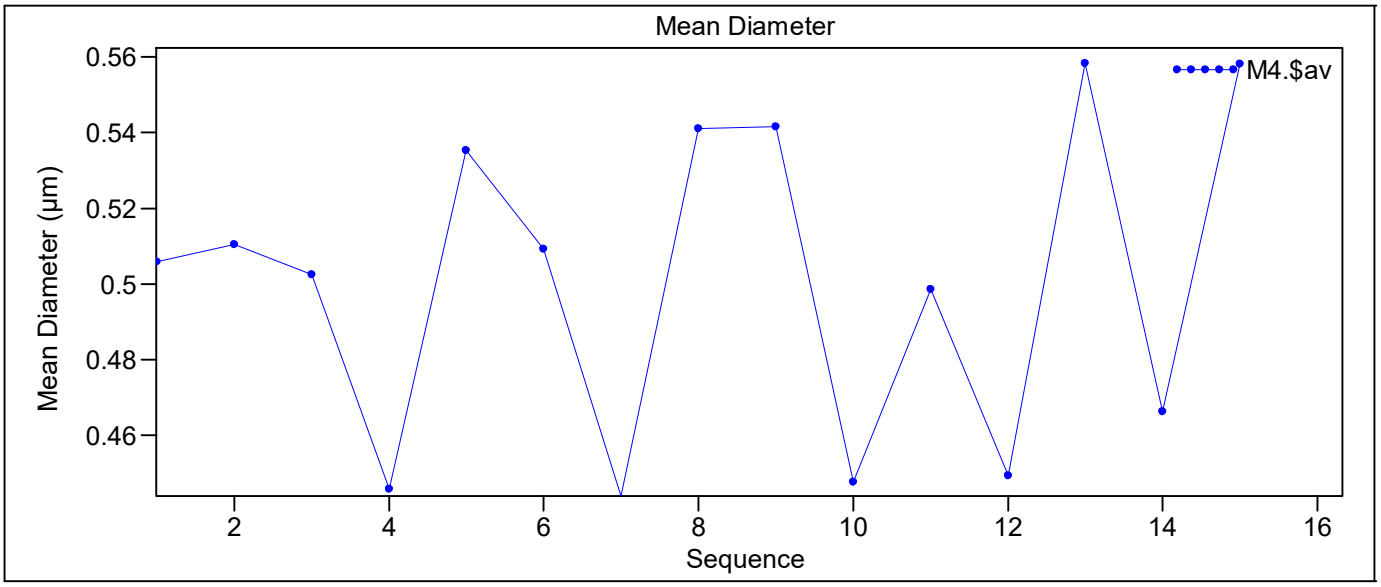
<10%	<25%	<50%	<75%	<90%
0.052 µm	0.063 µm	0.080 µm	0.109 µm	0.163 µm

Beckman Coulter LS13320









M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.040	0.29	2.62
2	0.044	0.046	0.067	0.43	3.30
3	0.048	0.050	0.13	0.78	4.92
4	0.053	0.055	0.24	1.30	6.81
5	0.058	0.061	0.41	2.00	8.67
6	0.064	0.067	0.61	2.72	9.80
7	0.070	0.073	0.82	3.33	9.95
8	0.077	0.080	1.02	3.76	9.33
9	0.084	0.088	1.19	4.01	8.25
10	0.093	0.097	1.33	4.09	6.97
11	0.102	0.106	1.45	4.06	5.75
12	0.112	0.117	1.55	3.95	4.64
13	0.122	0.128	1.64	3.80	3.70
14	0.134	0.141	1.71	3.62	2.93
15	0.148	0.155	1.79	3.44	2.31
16	0.162	0.170	1.88	3.29	1.83
17	0.178	0.186	1.98	3.17	1.47
18	0.195	0.205	2.12	3.09	1.18
19	0.214	0.225	2.30	3.04	0.97
20	0.235	0.247	2.52	3.05	0.80
21	0.258	0.271	2.81	3.09	0.68
22	0.284	0.297	3.16	3.16	0.58
23	0.311	0.326	3.57	3.26	0.49
24	0.342	0.358	4.05	3.36	0.42
25	0.375	0.393	4.58	3.47	0.36
26	0.412	0.431	5.13	3.54	0.31
27	0.452	0.474	5.65	3.55	0.25
28	0.496	0.520	6.06	3.47	0.21
29	0.545	0.571	6.26	3.27	0.16
30	0.598	0.627	6.22	2.96	0.12
31	0.656	0.688	5.90	2.55	0.087
32	0.721	0.755	5.35	2.11	0.059
33	0.791	0.829	4.65	1.67	0.039
34	0.868	0.910	3.81	1.25	0.024
35	0.953	0.999	2.91	0.87	0.014
36	1.047	1.097	2.02	0.55	0.0073
37	1.149	1.204	1.29	0.32	0.0035
38	1.261	1.321	0.80	0.18	0.0017
39	1.385	1.451	0.48	0.099	0.00076
40	1.520	1.592	0.28	0.052	0.00033
41	1.668	1.748	0.14	0.023	0.00012

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.053	0.0082	0.000036
43	2.011	2.107	0.015	0.0021	0.000008
44	2.207	2.313	0.0027	0.00035	0.000001
45	2.423	2.539	0.00019	0.000023	5.61E-8
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_01_182622.$ls M4_01_182622.$ls		
File ID:	M4		
Operator:	KW		
Run number:	16		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.98%		
LS 13 320	Universal Liquid Module		
Start time:	18:24 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_01_182622.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.506 µm	S.D.:	0.361 µm
Median:	0.413 µm	Variance:	0.130 μm^2
Mean/Median ratio:	1.226	C.V.:	71.4%
Mode:	0.571 µm	Skewness:	1.045 Right skewed
		Kurtosis:	0.658 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.126 µm	0.216 µm	0.413 µm	0.714 µm	1.036 µm

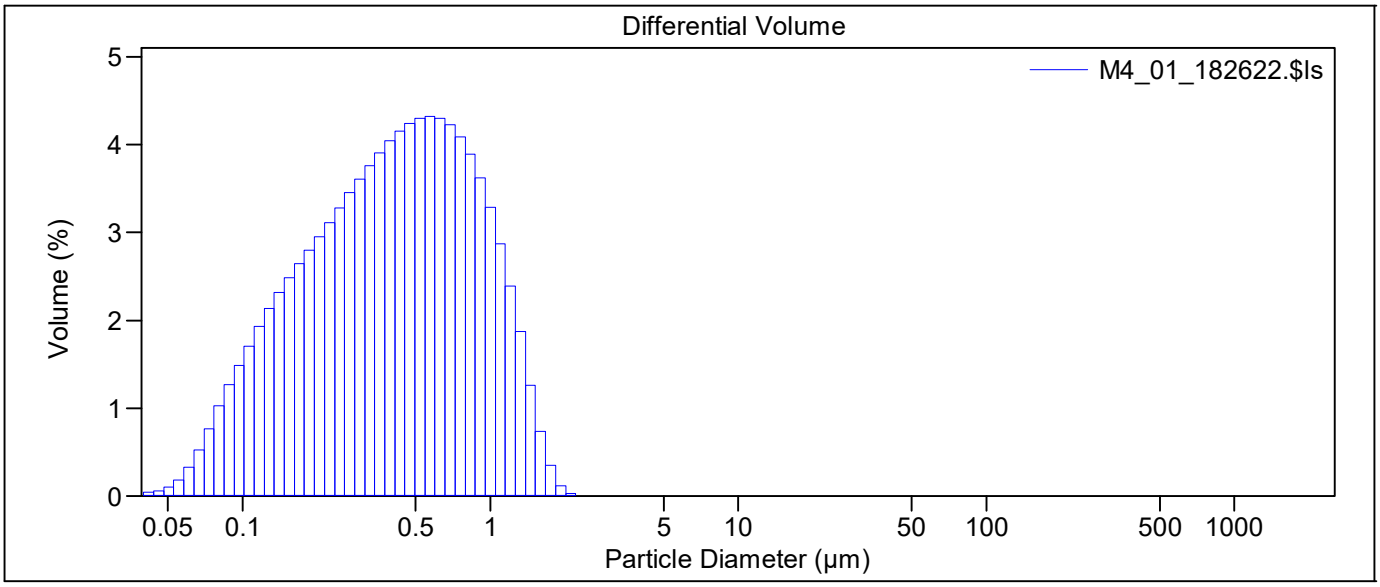
Number Statistics (Arithmetic) M4_01_182622.$ls

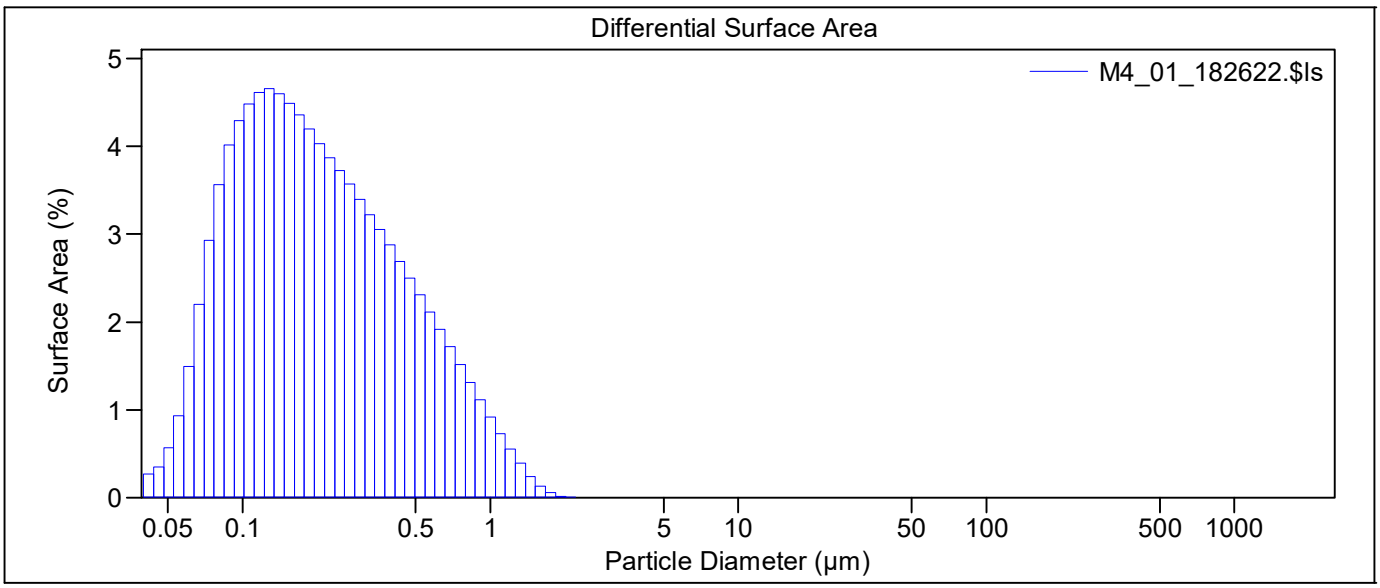
Calculations from 0.040 µm to 2000 µm

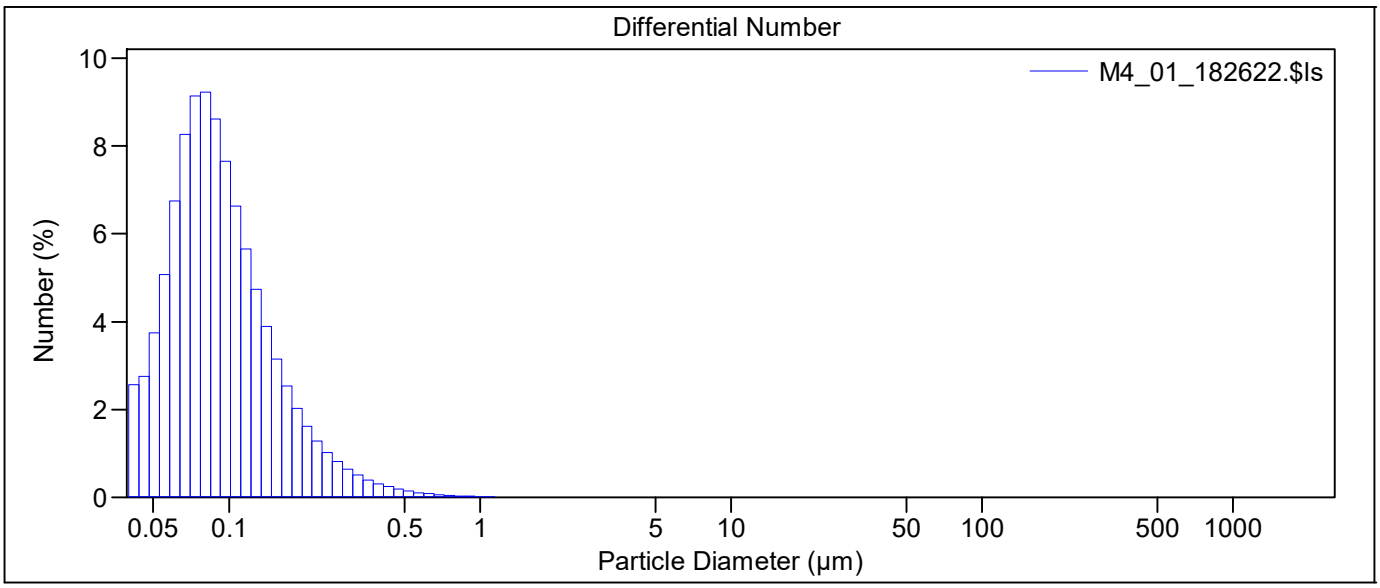
Number:	100%		
Mean:	0.107 µm	S.D.:	0.073 µm
Median:	0.087 µm	Variance:	0.0054 μm^2
Mean/Median ratio:	1.230	C.V.:	68.8%
Mode:	0.080 µm	Skewness:	4.424 Right skewed
		Kurtosis:	35.84 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.087 µm	0.120 µm	0.175 µm

Beckman Coulter LS13320







M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.040	0.27	2.56
2	0.044	0.046	0.057	0.35	2.76
3	0.048	0.050	0.10	0.57	3.75
4	0.053	0.055	0.18	0.93	5.07
5	0.058	0.061	0.32	1.49	6.76
6	0.064	0.067	0.53	2.20	8.27
7	0.070	0.073	0.77	2.93	9.14
8	0.077	0.080	1.03	3.56	9.22
9	0.084	0.088	1.27	4.01	8.62
10	0.093	0.097	1.49	4.29	7.65
11	0.102	0.106	1.71	4.48	6.63
12	0.112	0.117	1.93	4.61	5.66
13	0.122	0.128	2.14	4.66	4.74
14	0.134	0.141	2.32	4.60	3.89
15	0.148	0.155	2.48	4.49	3.15
16	0.162	0.170	2.65	4.36	2.54
17	0.178	0.186	2.80	4.20	2.03
18	0.195	0.205	2.95	4.03	1.61
19	0.214	0.225	3.11	3.87	1.29
20	0.235	0.247	3.28	3.72	1.03
21	0.258	0.271	3.46	3.57	0.82
22	0.284	0.297	3.61	3.40	0.65
23	0.311	0.326	3.76	3.22	0.51
24	0.342	0.358	3.91	3.05	0.40
25	0.375	0.393	4.04	2.88	0.31
26	0.412	0.431	4.15	2.69	0.24
27	0.452	0.474	4.24	2.50	0.19
28	0.496	0.520	4.30	2.31	0.14
29	0.545	0.571	4.32	2.12	0.11
30	0.598	0.627	4.30	1.92	0.082
31	0.656	0.688	4.23	1.72	0.061
32	0.721	0.755	4.09	1.51	0.045
33	0.791	0.829	3.89	1.31	0.032
34	0.868	0.910	3.62	1.11	0.023
35	0.953	0.999	3.29	0.92	0.015
36	1.047	1.097	2.87	0.73	0.010
37	1.149	1.204	2.39	0.56	0.0064
38	1.261	1.321	1.88	0.40	0.0038
39	1.385	1.451	1.26	0.24	0.0019
40	1.520	1.592	0.74	0.13	0.00085
41	1.668	1.748	0.35	0.056	0.00031
42	1.832	1.919	0.12	0.017	0.000078
43	2.011	2.107	0.028	0.0038	0.000014
44	2.207	2.313	0.0035	0.00042	0.000001
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_02_182809.$ls M4_02_182809.$ls		
File ID:	M4		
Operator:	KW		
Run number:	17		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.83%		
LS 13 320	Universal Liquid Module		
Start time:	18:26 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_02_182809.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.510 µm	S.D.:	0.373 µm
Median:	0.410 µm	Variance:	0.139 μm^2
Mean/Median ratio:	1.245	C.V.:	73.1%
Mode:	0.571 µm	Skewness:	1.129 Right skewed
		Kurtosis:	0.940 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.125 µm	0.215 µm	0.410 µm	0.716 µm	1.056 µm

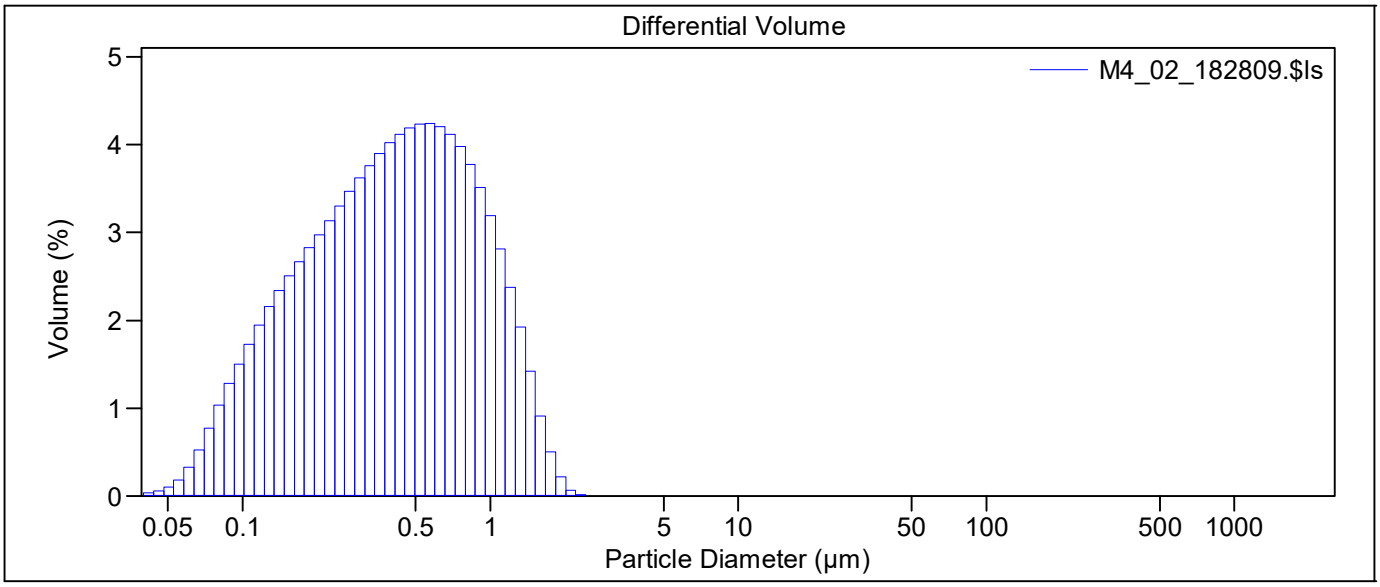
Number Statistics (Arithmetic) M4_02_182809.$ls

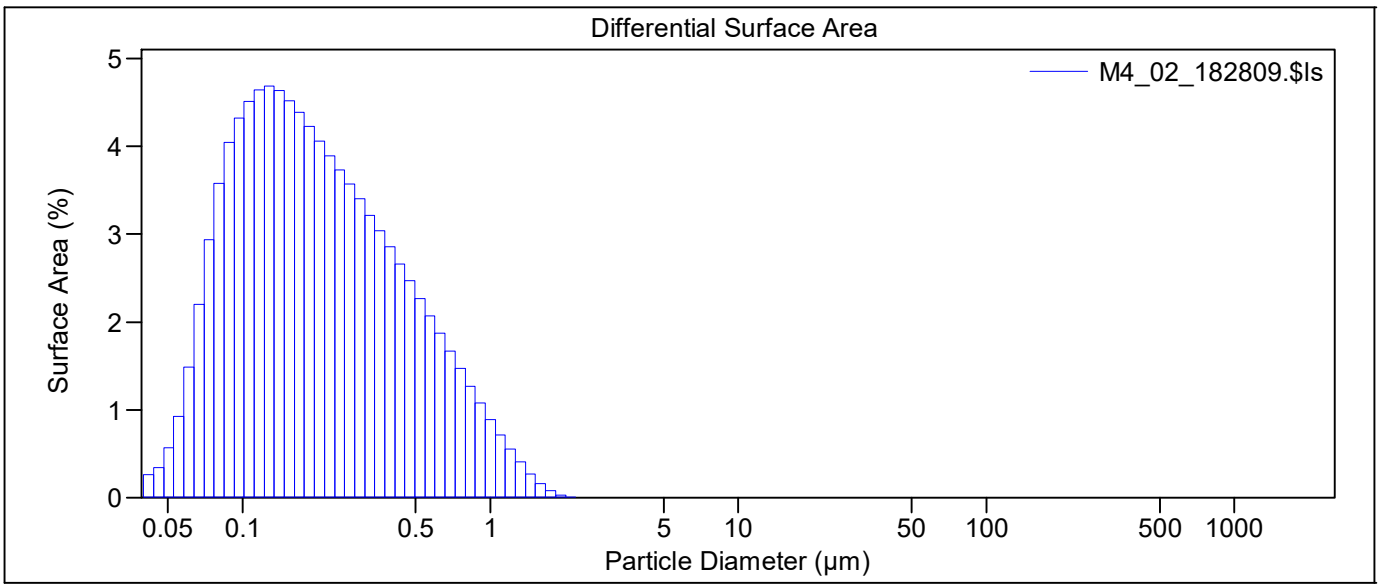
Calculations from 0.040 µm to 2000 µm

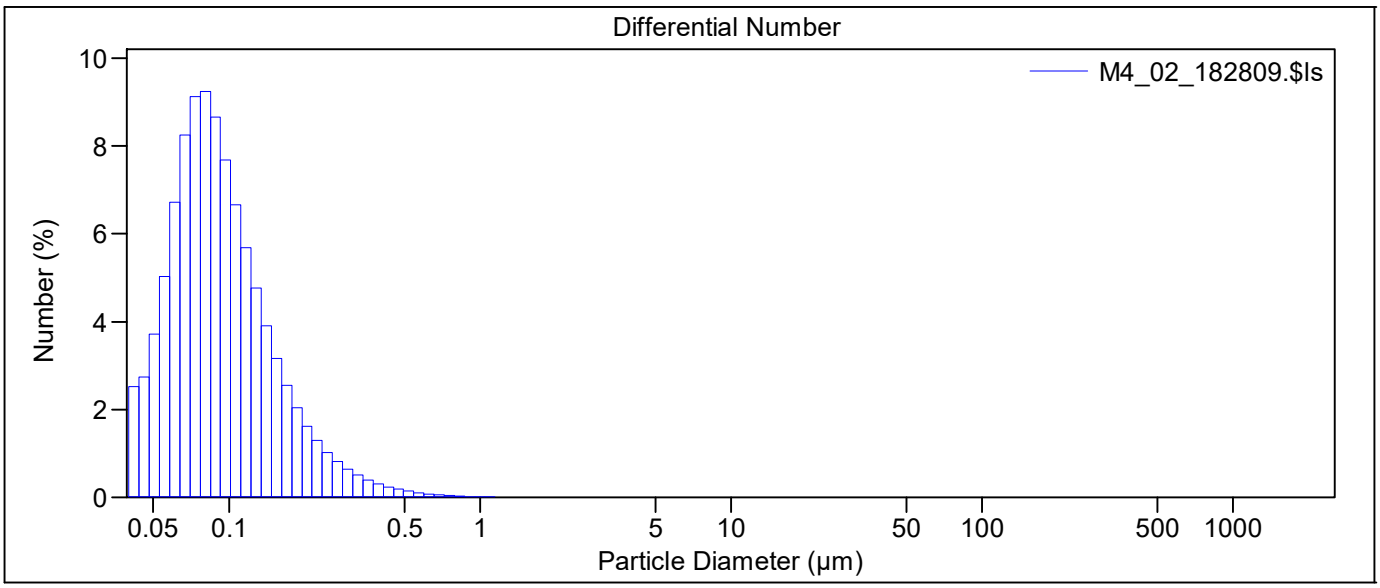
Number:	100%		
Mean:	0.107 µm	S.D.:	0.073 µm
Median:	0.087 µm	Variance:	0.0053 μm^2
Mean/Median ratio:	1.228	C.V.:	68.5%
Mode:	0.080 µm	Skewness:	4.457 Right skewed
		Kurtosis:	37.11 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.087 µm	0.120 µm	0.175 µm

Beckman Coulter LS13320







M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.040	0.26	2.52
2	0.044	0.046	0.057	0.35	2.73
3	0.048	0.050	0.10	0.57	3.72
4	0.053	0.055	0.18	0.93	5.04
5	0.058	0.061	0.32	1.49	6.73
6	0.064	0.067	0.53	2.20	8.25
7	0.070	0.073	0.77	2.93	9.13
8	0.077	0.080	1.03	3.58	9.24
9	0.084	0.088	1.28	4.04	8.66
10	0.093	0.097	1.50	4.32	7.68
11	0.102	0.106	1.72	4.51	6.66
12	0.112	0.117	1.94	4.64	5.68
13	0.122	0.128	2.16	4.69	4.76
14	0.134	0.141	2.34	4.63	3.91
15	0.148	0.155	2.51	4.52	3.16
16	0.162	0.170	2.67	4.39	2.55
17	0.178	0.186	2.83	4.23	2.04
18	0.195	0.205	2.98	4.06	1.62
19	0.214	0.225	3.13	3.89	1.29
20	0.235	0.247	3.30	3.73	1.03
21	0.258	0.271	3.47	3.57	0.82
22	0.284	0.297	3.62	3.40	0.64
23	0.311	0.326	3.76	3.22	0.51
24	0.342	0.358	3.90	3.04	0.40
25	0.375	0.393	4.02	2.86	0.31
26	0.412	0.431	4.12	2.66	0.24
27	0.452	0.474	4.19	2.47	0.18
28	0.496	0.520	4.23	2.27	0.14
29	0.545	0.571	4.24	2.07	0.11
30	0.598	0.627	4.20	1.87	0.080
31	0.656	0.688	4.12	1.67	0.059
32	0.721	0.755	3.98	1.47	0.043
33	0.791	0.829	3.78	1.27	0.031
34	0.868	0.910	3.51	1.08	0.022
35	0.953	0.999	3.19	0.89	0.015
36	1.047	1.097	2.81	0.72	0.0099
37	1.149	1.204	2.38	0.55	0.0064
38	1.261	1.321	1.92	0.41	0.0039
39	1.385	1.451	1.42	0.27	0.0022
40	1.520	1.592	0.91	0.16	0.0010
41	1.668	1.748	0.50	0.080	0.00044
42	1.832	1.919	0.22	0.032	0.00014
43	2.011	2.107	0.068	0.0090	0.000034
44	2.207	2.313	0.015	0.0018	0.000006
45	2.423	2.539	0.0013	0.00014	3.57E-7

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_03_182955.$ls M4_03_182955.$ls		
File ID:	M4		
Operator:	KW		
Run number:	18		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.05%		
LS 13 320	Universal Liquid Module		
Start time:	18:28 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	41%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_03_182955.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.502 µm	S.D.:	0.357 µm
Median:	0.410 µm	Variance:	0.128 μm^2
Mean/Median ratio:	1.224	C.V.:	71.1%
Mode:	0.571 µm	Skewness:	1.041 Right skewed
		Kurtosis:	0.651 Leptokurtic

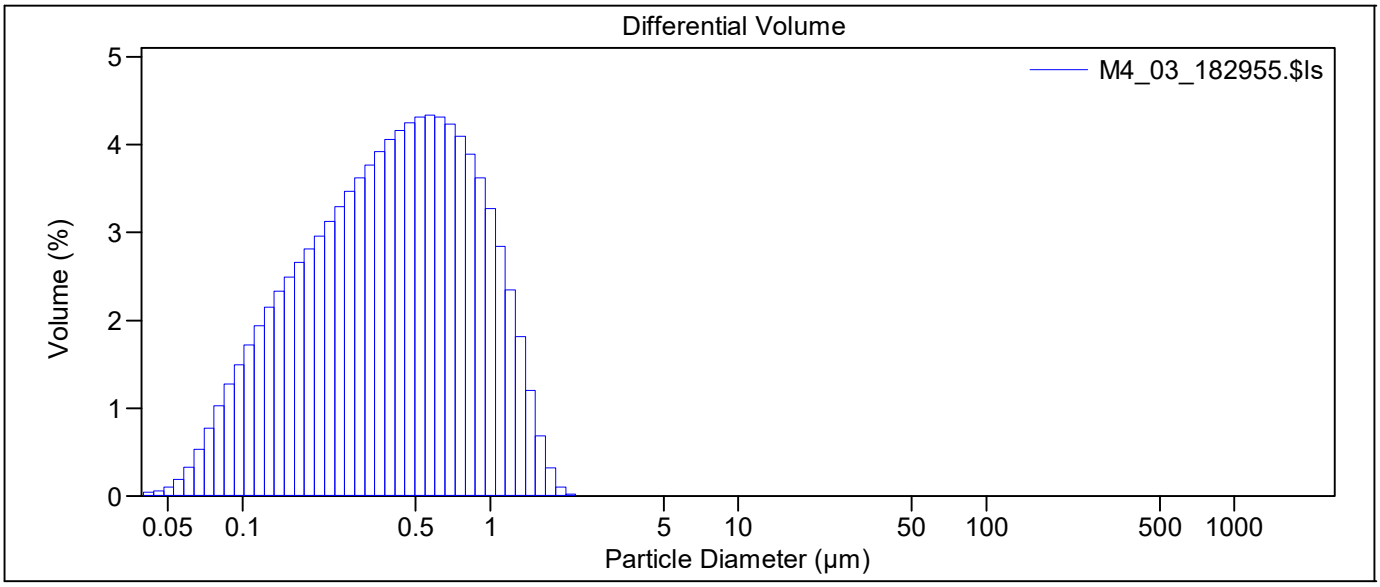
<10%	<25%	<50%	<75%	<90%
0.125 µm	0.215 µm	0.410 µm	0.709 µm	1.028 µm

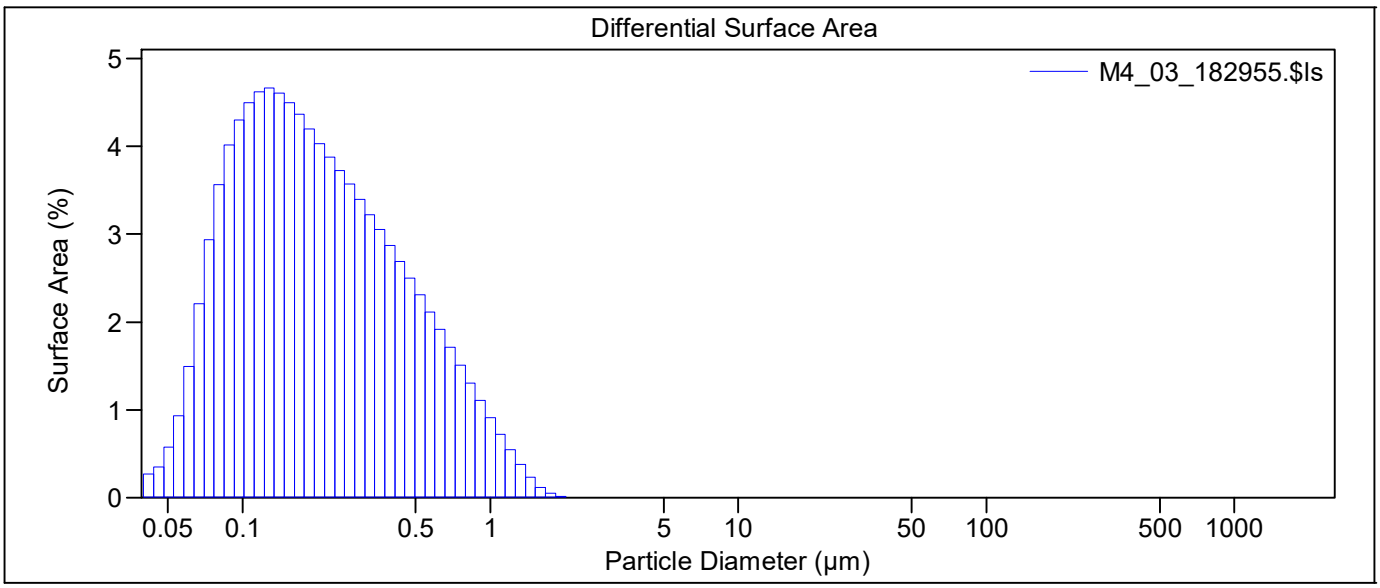
Number Statistics (Arithmetic) M4_03_182955.$ls

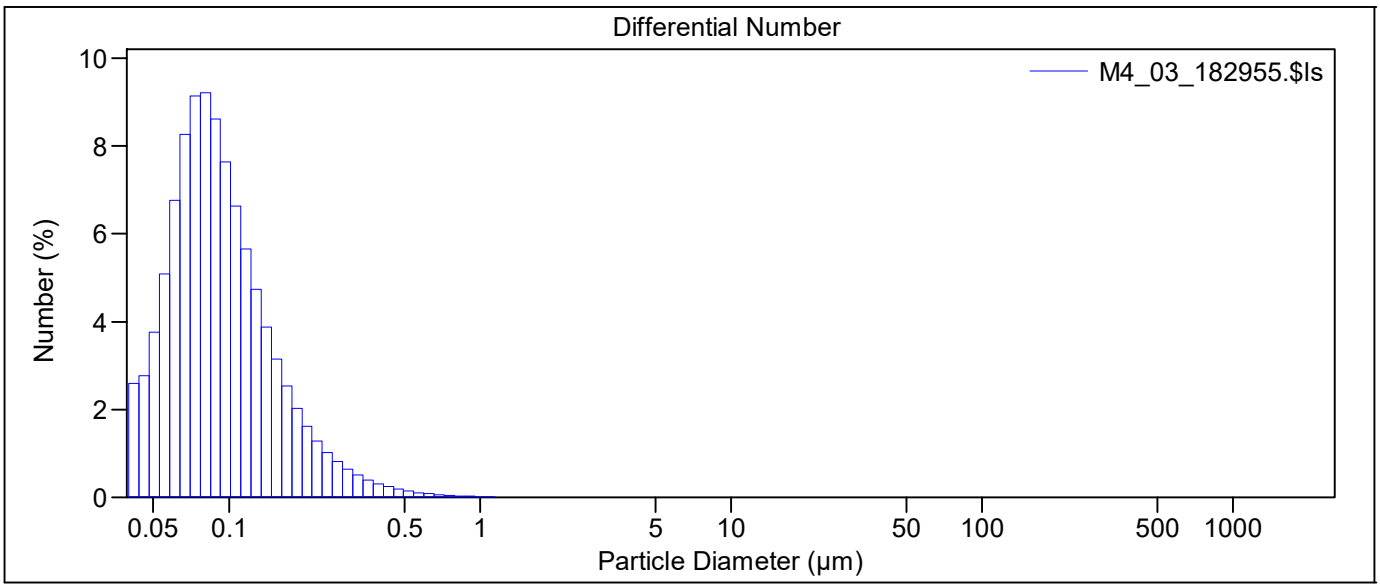
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.107 µm	S.D.:	0.073 µm
Median:	0.087 µm	Variance:	0.0054 μm^2
Mean/Median ratio:	1.230	C.V.:	68.7%
Mode:	0.080 µm	Skewness:	4.405 Right skewed
		Kurtosis:	35.45 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.087 µm	0.120 µm	0.175 µm


Differential Volume
M4_03_182955.$ls
Volume (%)
0
1
2
3
4
5
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M4_03_182955.$ls
Surface Area (%)
0
1
2
3
4
5
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M4_03_182955.$ls
Number (%)
0
2
4
6
8
10
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.041	0.27	2.59
2	0.044	0.046	0.058	0.35	2.77
3	0.048	0.050	0.10	0.57	3.76
4	0.053	0.055	0.19	0.93	5.09
5	0.058	0.061	0.33	1.50	6.76
6	0.064	0.067	0.53	2.21	8.27
7	0.070	0.073	0.77	2.94	9.13
8	0.077	0.080	1.03	3.57	9.21
9	0.084	0.088	1.28	4.02	8.61
10	0.093	0.097	1.50	4.30	7.64
11	0.102	0.106	1.72	4.50	6.63
12	0.112	0.117	1.94	4.62	5.66
13	0.122	0.128	2.15	4.67	4.74
14	0.134	0.141	2.33	4.61	3.88
15	0.148	0.155	2.50	4.49	3.14
16	0.162	0.170	2.66	4.36	2.53
17	0.178	0.186	2.81	4.20	2.02
18	0.195	0.205	2.96	4.03	1.61
19	0.214	0.225	3.12	3.87	1.28
20	0.235	0.247	3.30	3.72	1.02
21	0.258	0.271	3.47	3.57	0.81
22	0.284	0.297	3.62	3.39	0.64
23	0.311	0.326	3.77	3.22	0.51
24	0.342	0.358	3.92	3.05	0.40
25	0.375	0.393	4.06	2.88	0.31
26	0.412	0.431	4.17	2.69	0.24
27	0.452	0.474	4.25	2.50	0.19
28	0.496	0.520	4.31	2.31	0.14
29	0.545	0.571	4.34	2.12	0.11
30	0.598	0.627	4.31	1.92	0.082
31	0.656	0.688	4.24	1.72	0.061
32	0.721	0.755	4.10	1.51	0.044
33	0.791	0.829	3.89	1.31	0.032
34	0.868	0.910	3.62	1.11	0.022
35	0.953	0.999	3.28	0.91	0.015
36	1.047	1.097	2.84	0.72	0.010
37	1.149	1.204	2.35	0.54	0.0063
38	1.261	1.321	1.81	0.38	0.0037
39	1.385	1.451	1.20	0.23	0.0018
40	1.520	1.592	0.69	0.12	0.00079
41	1.668	1.748	0.32	0.051	0.00028
42	1.832	1.919	0.11	0.015	0.000069
43	2.011	2.107	0.025	0.0033	0.000012
44	2.207	2.313	0.0029	0.00035	0.000001
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_04_183951.$ls M4_04_183951.$ls		
File ID:	M4		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.61%		
LS 13 320	Universal Liquid Module		
Start time:	18:38 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_04_183951.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.446 µm	S.D.:	0.282 µm
Median:	0.437 µm	Variance:	0.080 μm^2
Mean/Median ratio:	1.019	C.V.:	63.3%
Mode:	0.627 µm	Skewness:	0.423 Right skewed
		Kurtosis:	-0.663 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.097 µm	0.175 µm	0.437 µm	0.650 µm	0.835 µm

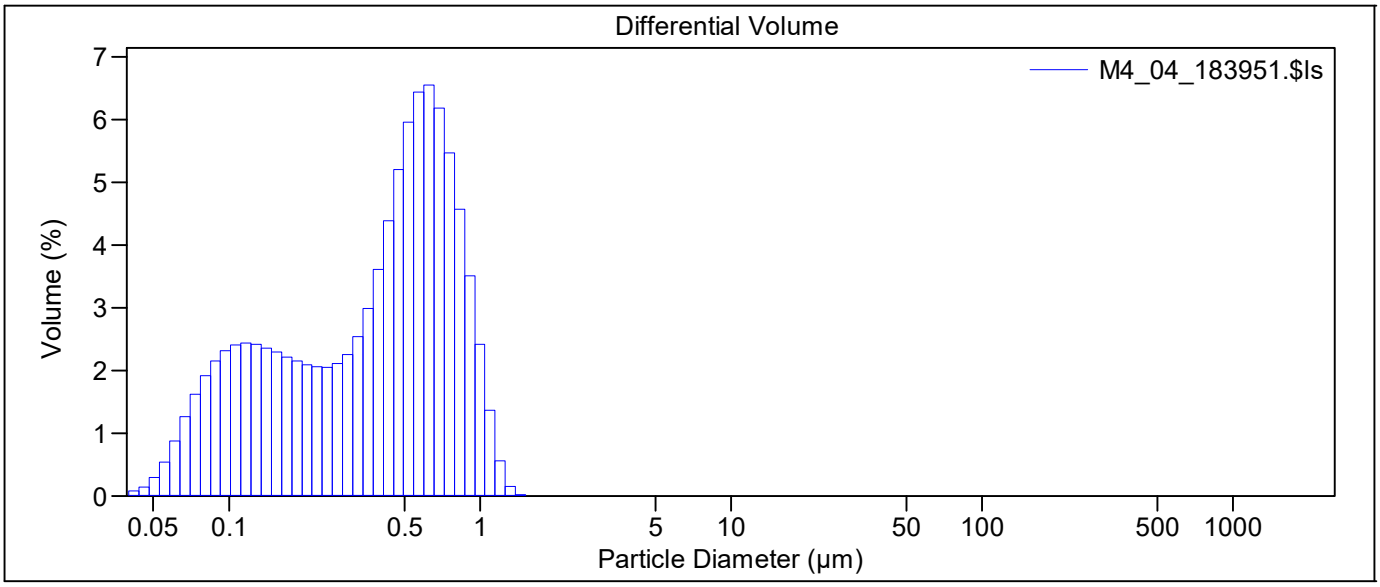
Number Statistics (Arithmetic) M4_04_183951.$ls

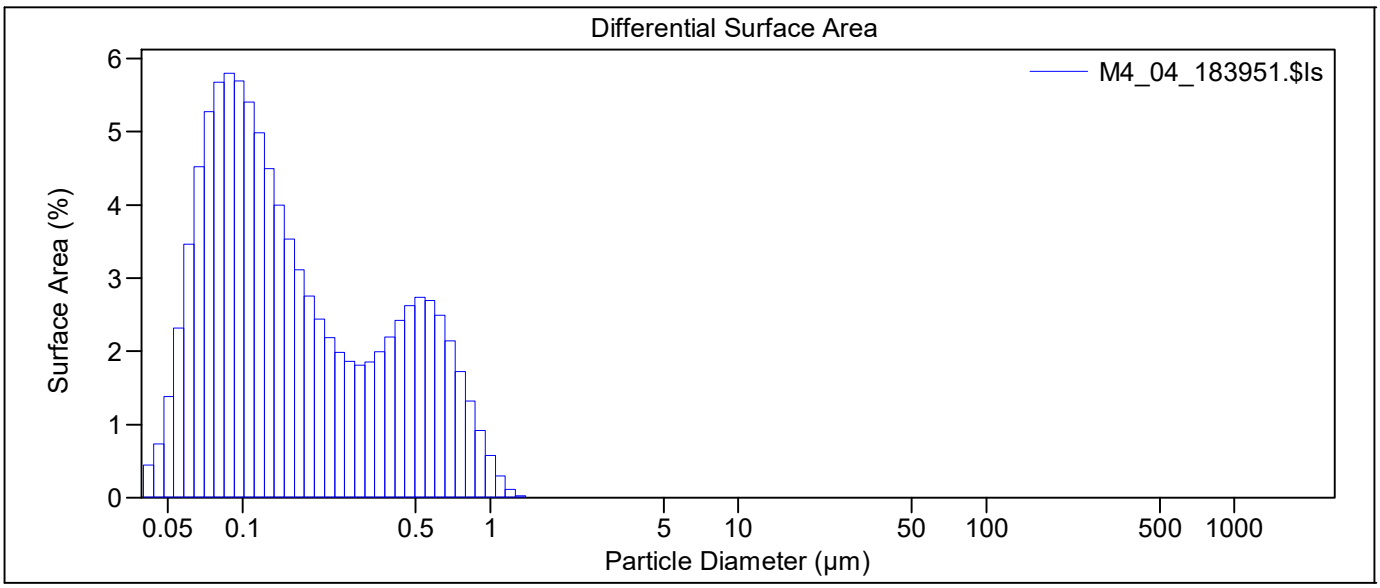
Calculations from 0.040 µm to 2000 µm

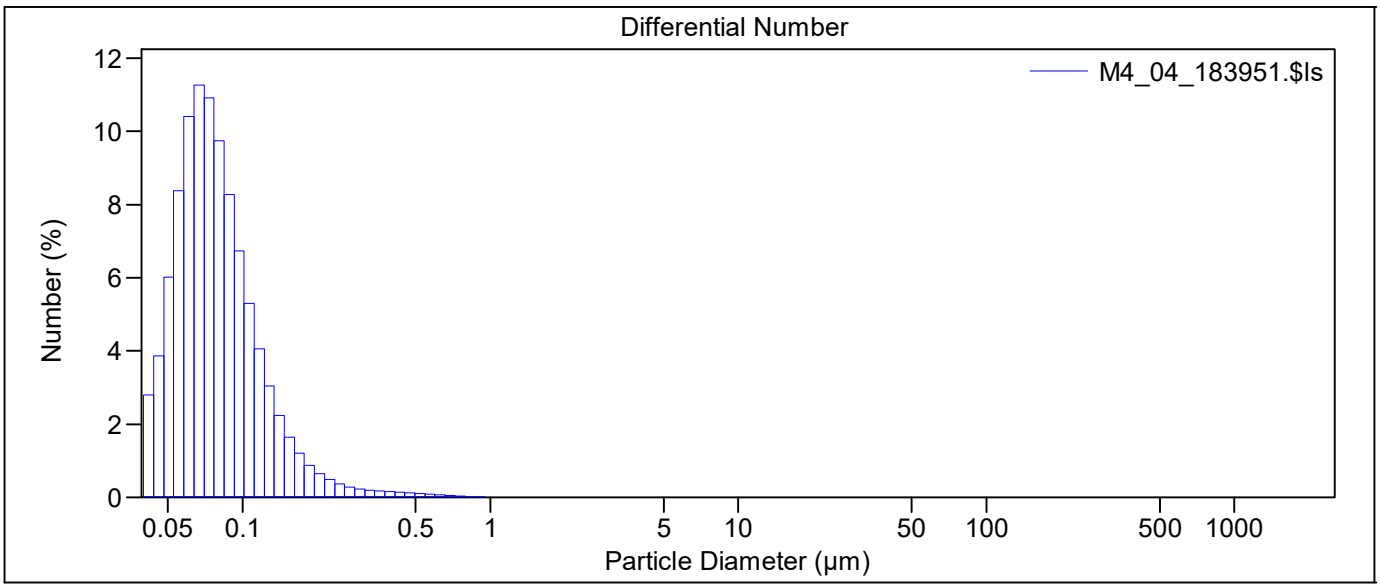
Number:	100%		
Mean:	0.088 µm	S.D.:	0.058 µm
Median:	0.075 µm	Variance:	0.0033 μm^2
Mean/Median ratio:	1.185	C.V.:	65.4%
Mode:	0.067 µm	Skewness:	5.627 Right skewed
		Kurtosis:	49.54 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.075 µm	0.097 µm	0.131 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.078	0.44	2.81
2	0.044	0.046	0.14	0.73	3.86
3	0.048	0.050	0.29	1.38	6.02
4	0.053	0.055	0.54	2.31	8.38
5	0.058	0.061	0.88	3.46	10.4
6	0.064	0.067	1.27	4.52	11.3
7	0.070	0.073	1.62	5.27	10.9
8	0.077	0.080	1.91	5.67	9.75
9	0.084	0.088	2.15	5.80	8.27
10	0.093	0.097	2.32	5.69	6.73
11	0.102	0.106	2.41	5.41	5.31
12	0.112	0.117	2.44	4.98	4.06
13	0.122	0.128	2.42	4.50	3.04
14	0.134	0.141	2.36	4.00	2.24
15	0.148	0.155	2.29	3.53	1.64
16	0.162	0.170	2.22	3.12	1.20
17	0.178	0.186	2.15	2.75	0.88
18	0.195	0.205	2.10	2.44	0.65
19	0.214	0.225	2.06	2.19	0.48
20	0.235	0.247	2.05	1.98	0.36
21	0.258	0.271	2.11	1.86	0.28
22	0.284	0.297	2.26	1.81	0.23
23	0.311	0.326	2.54	1.86	0.19
24	0.342	0.358	2.99	1.99	0.17
25	0.375	0.393	3.61	2.19	0.16
26	0.412	0.431	4.39	2.43	0.15
27	0.452	0.474	5.21	2.62	0.13
28	0.496	0.520	5.96	2.74	0.11
29	0.545	0.571	6.44	2.69	0.092
30	0.598	0.627	6.55	2.49	0.071
31	0.656	0.688	6.18	2.14	0.050
32	0.721	0.755	5.47	1.73	0.034
33	0.791	0.829	4.57	1.32	0.021
34	0.868	0.910	3.51	0.92	0.012
35	0.953	0.999	2.42	0.58	0.0064
36	1.047	1.097	1.37	0.30	0.0028
37	1.149	1.204	0.56	0.11	0.00085
38	1.261	1.321	0.15	0.027	0.00017
39	1.385	1.451	0.023	0.0037	0.000020
40	1.520	1.592	0.0010	0.00015	0.000001
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_05_184138.$ls M4_05_184138.$ls		
File ID:	M4		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.49%		
LS 13 320	Universal Liquid Module		
Start time:	18:39 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_05_184138.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.535 µm	S.D.:	0.269 µm
Median:	0.500 µm	Variance:	0.073 μm^2
Mean/Median ratio:	1.070	C.V.:	50.3%
Mode:	0.571 µm	Skewness:	0.576 Right skewed
		Kurtosis:	-0.105 Platykurtic

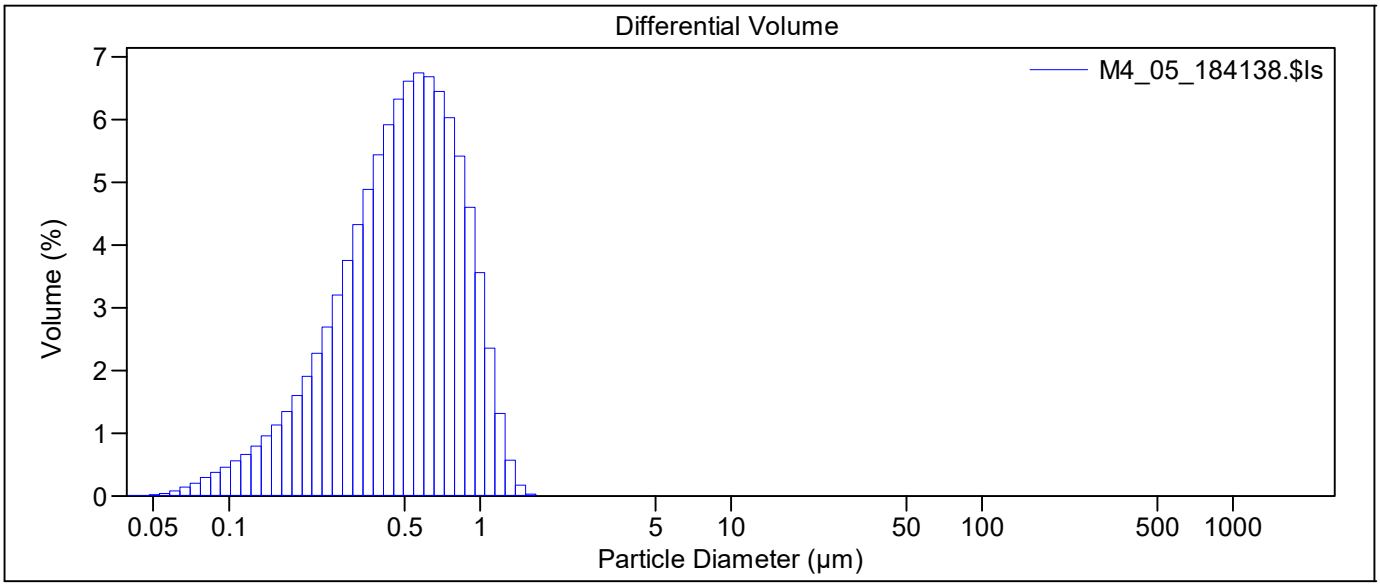
<10%	<25%	<50%	<75%	<90%
0.208 µm	0.329 µm	0.500 µm	0.711 µm	0.917 µm

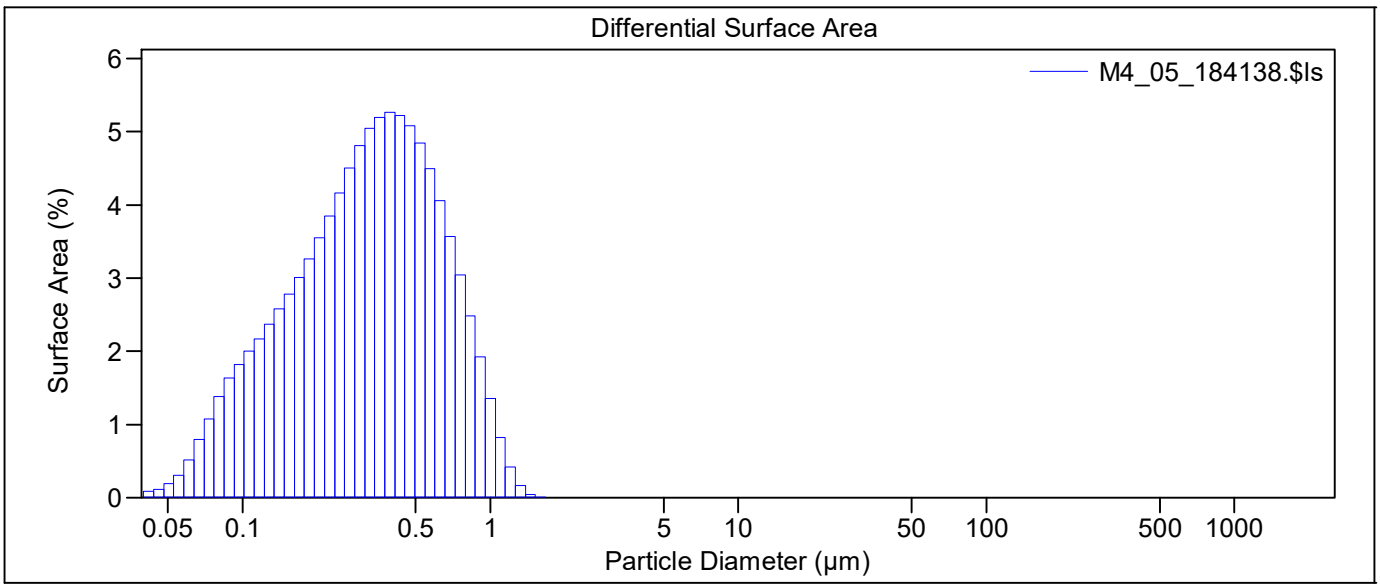
Number Statistics (Arithmetic) M4_05_184138.$ls

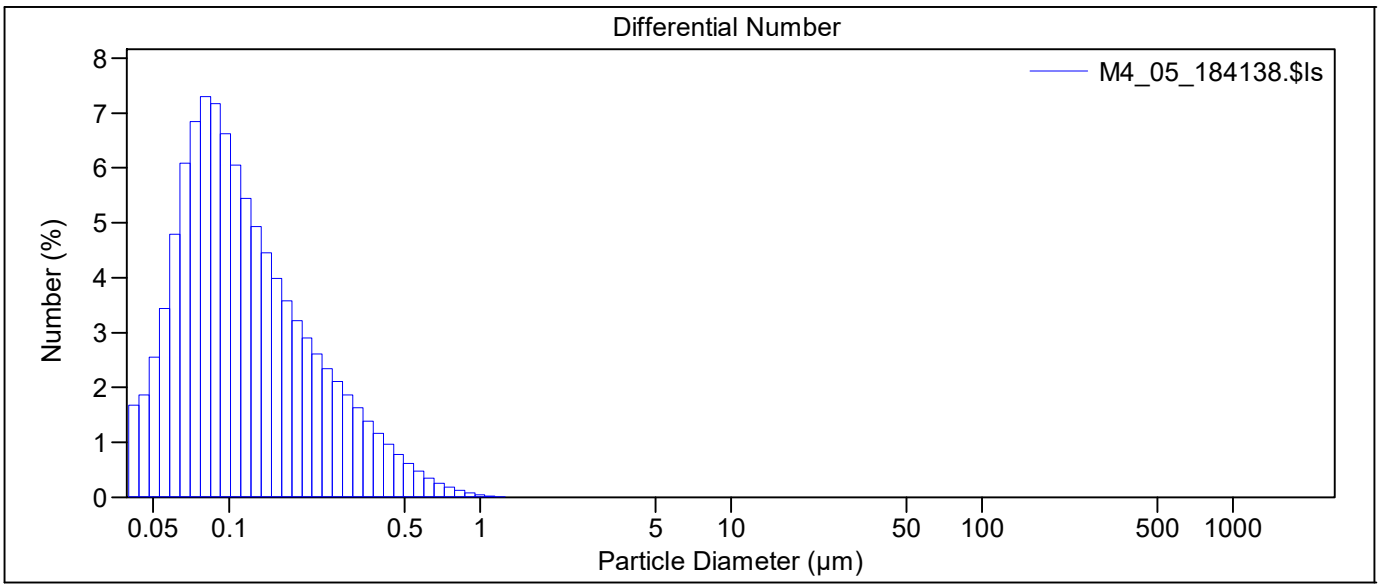
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.145 µm	S.D.:	0.116 µm
Median:	0.104 µm	Variance:	0.013 μm^2
Mean/Median ratio:	1.386	C.V.:	80.0%
Mode:	0.080 µm	Skewness:	2.724 Right skewed
		Kurtosis:	10.55 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.059 µm	0.075 µm	0.104 µm	0.170 µm	0.283 µm


Differential Volume
M4_05_184138.$ls
Volume (%)
0
1
2
3
4
5
6
7
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M4_05_184138.$ls
Surface Area (%)
0
1
2
3
4
5
6
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M4_05_184138.$ls
Number (%)
0
1
2
3
4
5
6
7
8
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0094	0.086	1.67
2	0.044	0.046	0.014	0.12	1.87
3	0.048	0.050	0.025	0.19	2.55
4	0.053	0.055	0.045	0.31	3.44
5	0.058	0.061	0.083	0.52	4.79
6	0.064	0.067	0.14	0.79	6.09
7	0.070	0.073	0.21	1.07	6.85
8	0.077	0.080	0.29	1.38	7.30
9	0.084	0.088	0.38	1.63	7.17
10	0.093	0.097	0.46	1.82	6.62
11	0.102	0.106	0.56	2.00	6.05
12	0.112	0.117	0.67	2.17	5.45
13	0.122	0.128	0.80	2.37	4.93
14	0.134	0.141	0.96	2.58	4.46
15	0.148	0.155	1.13	2.78	3.99
16	0.162	0.170	1.34	3.01	3.58
17	0.178	0.186	1.60	3.26	3.22
18	0.195	0.205	1.91	3.55	2.91
19	0.214	0.225	2.27	3.85	2.62
20	0.235	0.247	2.70	4.16	2.35
21	0.258	0.271	3.21	4.51	2.11
22	0.284	0.297	3.76	4.81	1.87
23	0.311	0.326	4.33	5.05	1.63
24	0.342	0.358	4.89	5.20	1.39
25	0.375	0.393	5.44	5.27	1.17
26	0.412	0.431	5.92	5.22	0.96
27	0.452	0.474	6.33	5.09	0.78
28	0.496	0.520	6.62	4.84	0.61
29	0.545	0.571	6.74	4.50	0.47
30	0.598	0.627	6.68	4.06	0.35
31	0.656	0.688	6.45	3.57	0.26
32	0.721	0.755	6.03	3.04	0.18
33	0.791	0.829	5.42	2.49	0.12
34	0.868	0.910	4.60	1.92	0.080
35	0.953	0.999	3.56	1.36	0.047
36	1.047	1.097	2.36	0.82	0.023
37	1.149	1.204	1.31	0.42	0.0098
38	1.261	1.321	0.57	0.16	0.0032
39	1.385	1.451	0.17	0.045	0.00073
40	1.520	1.592	0.034	0.0081	0.00011
41	1.668	1.748	0.0026	0.00057	0.000006
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_06_184326.$ls M4_06_184326.$ls		
File ID:	M4		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.48%		
LS 13 320	Universal Liquid Module		
Start time:	18:41 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_06_184326.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.509 µm	S.D.:	0.379 µm
Median:	0.406 µm	Variance:	0.144 μm^2
Mean/Median ratio:	1.255	C.V.:	74.5%
Mode:	0.571 µm	Skewness:	1.145 Right skewed
		Kurtosis:	0.964 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.121 µm	0.208 µm	0.406 µm	0.716 µm	1.065 µm

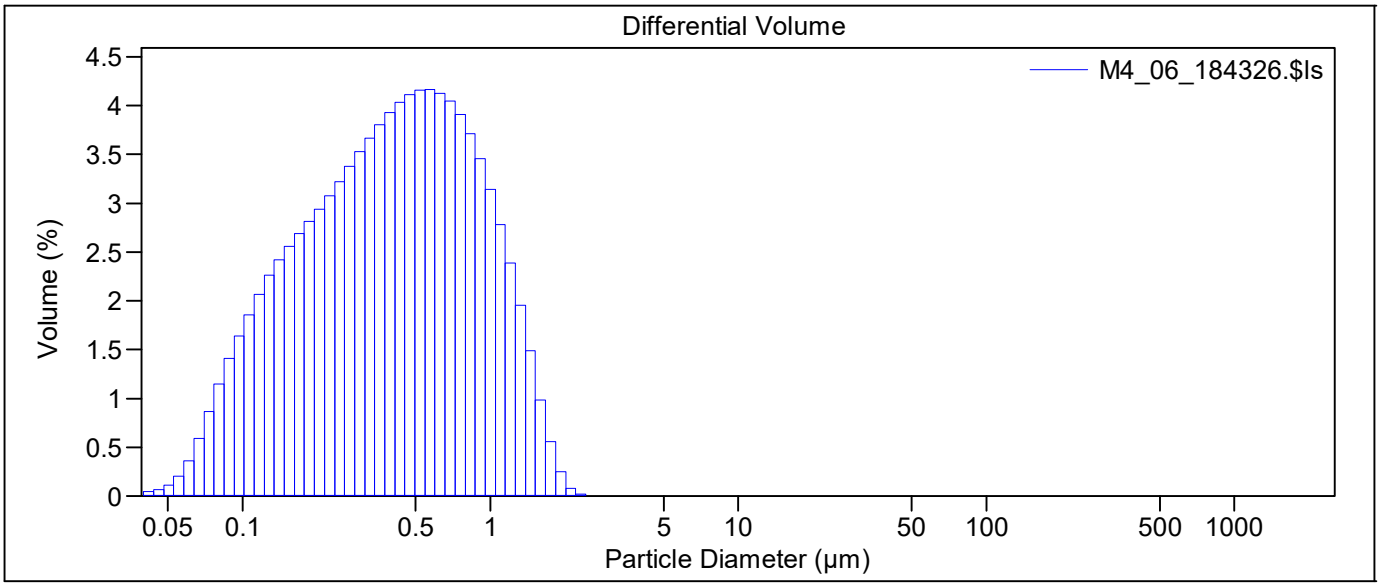
Number Statistics (Arithmetic) M4_06_184326.$ls

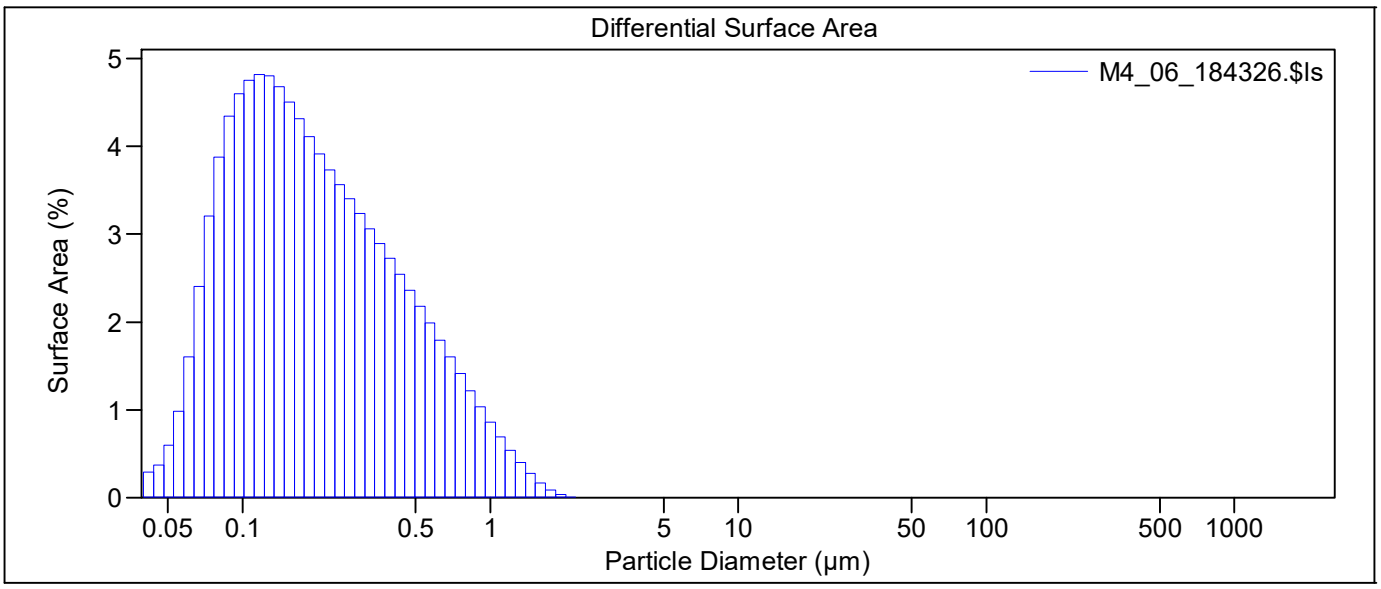
Calculations from 0.040 µm to 2000 µm

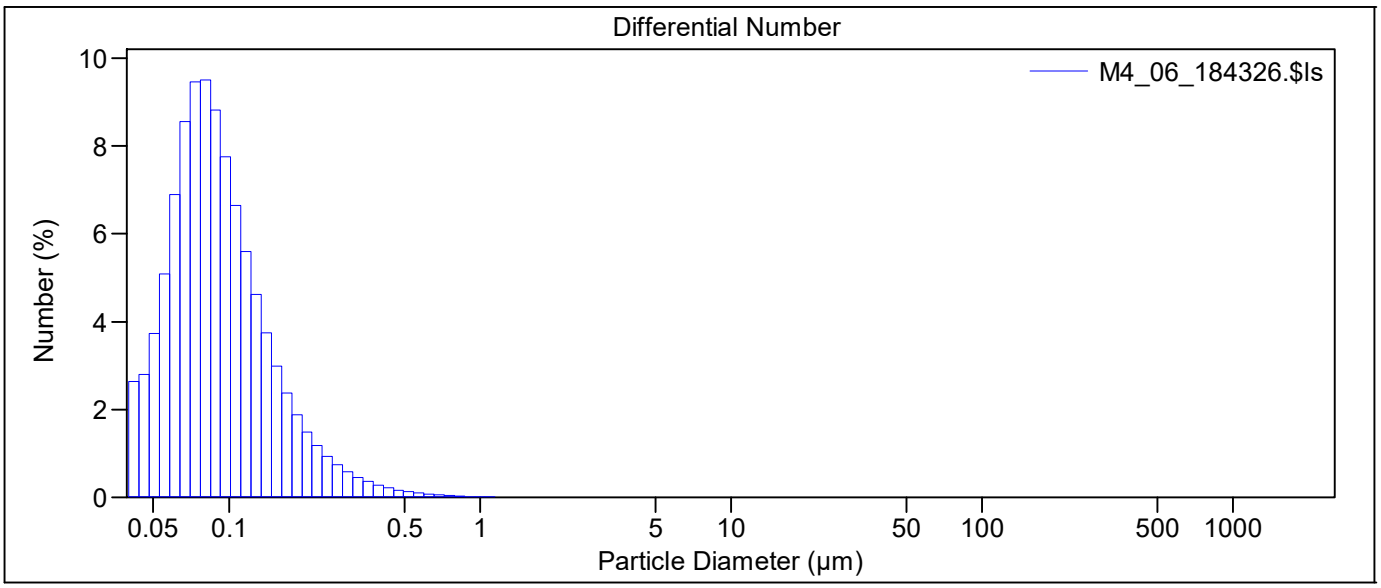
Number:	100%		
Mean:	0.104 µm	S.D.:	0.071 µm
Median:	0.086 µm	Variance:	0.0050 μm^2
Mean/Median ratio:	1.220	C.V.:	67.6%
Mode:	0.080 µm	Skewness:	4.634 Right skewed
		Kurtosis:	40.51 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.086 µm	0.118 µm	0.169 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.045	0.29	2.64
2	0.044	0.046	0.063	0.37	2.80
3	0.048	0.050	0.11	0.60	3.73
4	0.053	0.055	0.20	0.99	5.09
5	0.058	0.061	0.36	1.61	6.89
6	0.064	0.067	0.59	2.40	8.55
7	0.070	0.073	0.86	3.21	9.47
8	0.077	0.080	1.15	3.88	9.51
9	0.084	0.088	1.41	4.34	8.83
10	0.093	0.097	1.64	4.60	7.76
11	0.102	0.106	1.86	4.75	6.65
12	0.112	0.117	2.07	4.82	5.60
13	0.122	0.128	2.26	4.80	4.63
14	0.134	0.141	2.42	4.68	3.75
15	0.148	0.155	2.56	4.50	2.99
16	0.162	0.170	2.69	4.32	2.38
17	0.178	0.186	2.81	4.11	1.88
18	0.195	0.205	2.94	3.91	1.48
19	0.214	0.225	3.08	3.73	1.17
20	0.235	0.247	3.22	3.56	0.93
21	0.258	0.271	3.38	3.40	0.74
22	0.284	0.297	3.53	3.23	0.58
23	0.311	0.326	3.67	3.06	0.46
24	0.342	0.358	3.80	2.89	0.36
25	0.375	0.393	3.93	2.72	0.28
26	0.412	0.431	4.03	2.55	0.22
27	0.452	0.474	4.11	2.36	0.17
28	0.496	0.520	4.16	2.18	0.13
29	0.545	0.571	4.16	1.99	0.097
30	0.598	0.627	4.13	1.79	0.073
31	0.656	0.688	4.05	1.60	0.054
32	0.721	0.755	3.91	1.41	0.039
33	0.791	0.829	3.71	1.22	0.028
34	0.868	0.910	3.46	1.03	0.020
35	0.953	0.999	3.14	0.86	0.014
36	1.047	1.097	2.78	0.69	0.0091
37	1.149	1.204	2.39	0.54	0.0059
38	1.261	1.321	1.96	0.40	0.0037
39	1.385	1.451	1.49	0.28	0.0021
40	1.520	1.592	0.98	0.17	0.0011
41	1.668	1.748	0.56	0.086	0.00045
42	1.832	1.919	0.25	0.035	0.00015
43	2.011	2.107	0.078	0.010	0.000036
44	2.207	2.313	0.017	0.0020	0.000006
45	2.423	2.539	0.0016	0.00017	4.3E-7

Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_07_185322.$ls M4_07_185322.$ls		
File ID:	M4		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.65%		
LS 13 320	Universal Liquid Module		
Start time:	18:51 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_07_185322.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.444 µm	S.D.:	0.282 µm
Median:	0.436 µm	Variance:	0.080 μm^2
Mean/Median ratio:	1.019	C.V.:	63.6%
Mode:	0.627 µm	Skewness:	0.422 Right skewed
		Kurtosis:	-0.682 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.096 µm	0.173 µm	0.436 µm	0.650 µm	0.834 µm

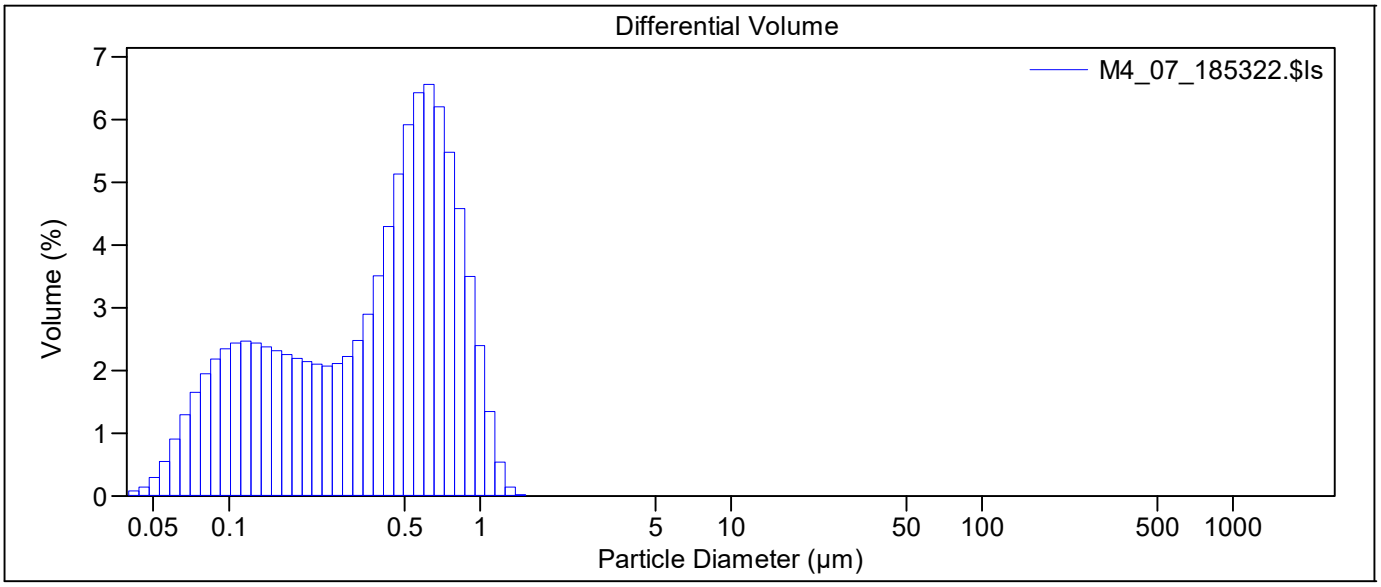
Number Statistics (Arithmetic) M4_07_185322.$ls

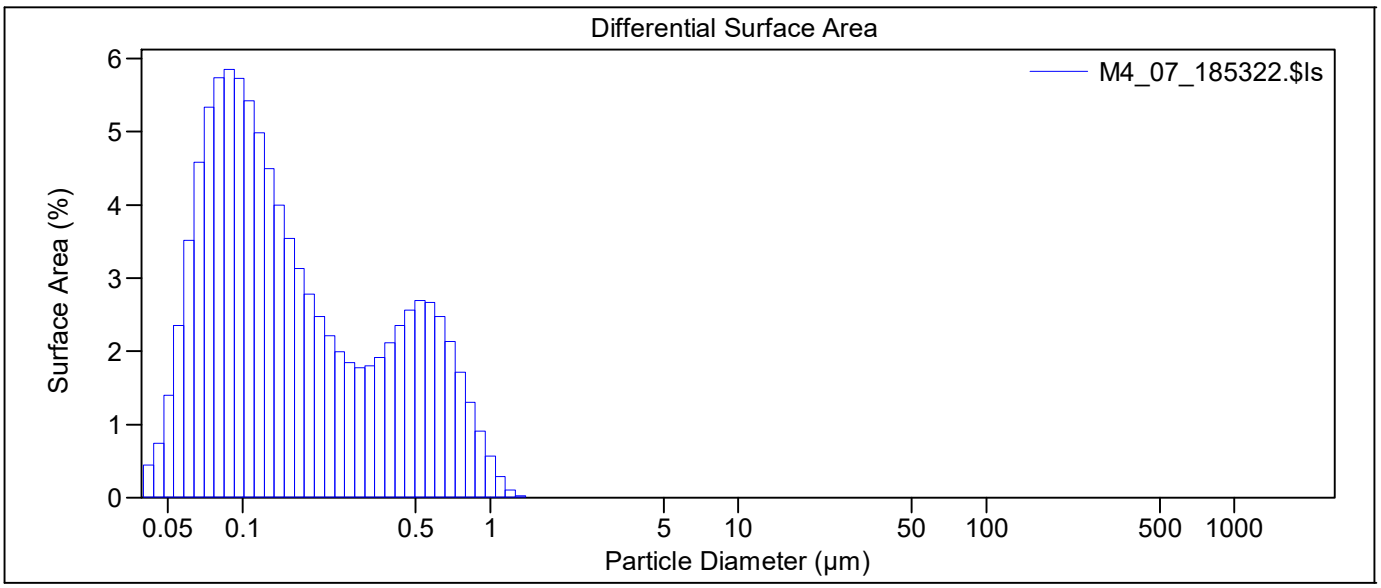
Calculations from 0.040 µm to 2000 µm

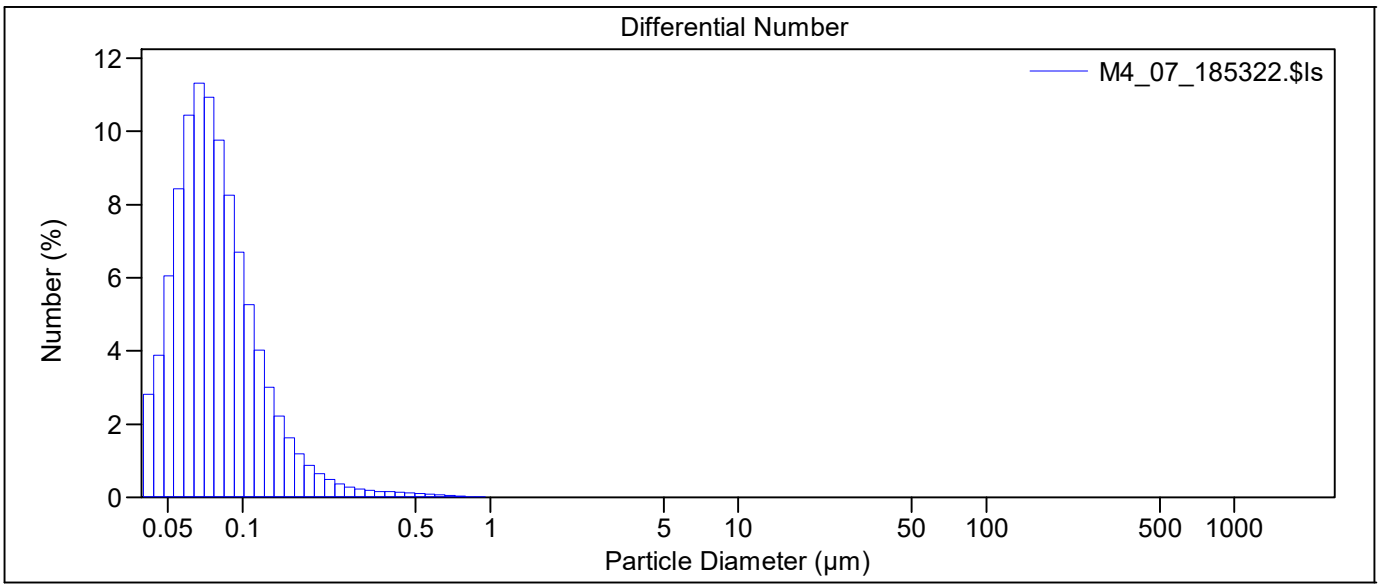
Number:	100%		
Mean:	0.088 µm	S.D.:	0.057 µm
Median:	0.074 µm	Variance:	0.0033 μm^2
Mean/Median ratio:	1.183	C.V.:	65.0%
Mode:	0.067 µm	Skewness:	5.661 Right skewed
		Kurtosis:	50.36 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.097 µm	0.131 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.080	0.45	2.82
2	0.044	0.046	0.15	0.75	3.89
3	0.048	0.050	0.30	1.40	6.06
4	0.053	0.055	0.55	2.35	8.43
5	0.058	0.061	0.90	3.51	10.5
6	0.064	0.067	1.29	4.58	11.3
7	0.070	0.073	1.66	5.34	10.9
8	0.077	0.080	1.95	5.74	9.75
9	0.084	0.088	2.19	5.85	8.26
10	0.093	0.097	2.35	5.73	6.71
11	0.102	0.106	2.44	5.42	5.27
12	0.112	0.117	2.47	4.99	4.02
13	0.122	0.128	2.44	4.50	3.01
14	0.134	0.141	2.38	4.00	2.22
15	0.148	0.155	2.31	3.54	1.63
16	0.162	0.170	2.25	3.14	1.20
17	0.178	0.186	2.19	2.78	0.88
18	0.195	0.205	2.14	2.47	0.65
19	0.214	0.225	2.10	2.21	0.48
20	0.235	0.247	2.07	1.99	0.36
21	0.258	0.271	2.11	1.84	0.28
22	0.284	0.297	2.22	1.77	0.22
23	0.311	0.326	2.48	1.80	0.19
24	0.342	0.358	2.90	1.92	0.16
25	0.375	0.393	3.51	2.11	0.15
26	0.412	0.431	4.29	2.35	0.14
27	0.452	0.474	5.13	2.56	0.13
28	0.496	0.520	5.92	2.69	0.11
29	0.545	0.571	6.43	2.66	0.090
30	0.598	0.627	6.56	2.48	0.070
31	0.656	0.688	6.20	2.13	0.050
32	0.721	0.755	5.48	1.72	0.033
33	0.791	0.829	4.58	1.31	0.021
34	0.868	0.910	3.50	0.91	0.012
35	0.953	0.999	2.40	0.57	0.0063
36	1.047	1.097	1.35	0.29	0.0027
37	1.149	1.204	0.54	0.11	0.00081
38	1.261	1.321	0.14	0.026	0.00016
39	1.385	1.451	0.021	0.0034	0.000018
40	1.520	1.592	0.00088	0.00013	0.000001
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_08_185510.$ls M4_08_185510.$ls		
File ID:	M4		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.60%		
LS 13 320	Universal Liquid Module		
Start time:	18:53 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_08_185510.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.541 µm	S.D.:	0.262 µm
Median:	0.508 µm	Variance:	0.068 μm^2
Mean/Median ratio:	1.066	C.V.:	48.3%
Mode:	0.571 µm	Skewness:	0.567 Right skewed
		Kurtosis:	-0.088 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.225 µm	0.342 µm	0.508 µm	0.712 µm	0.910 µm

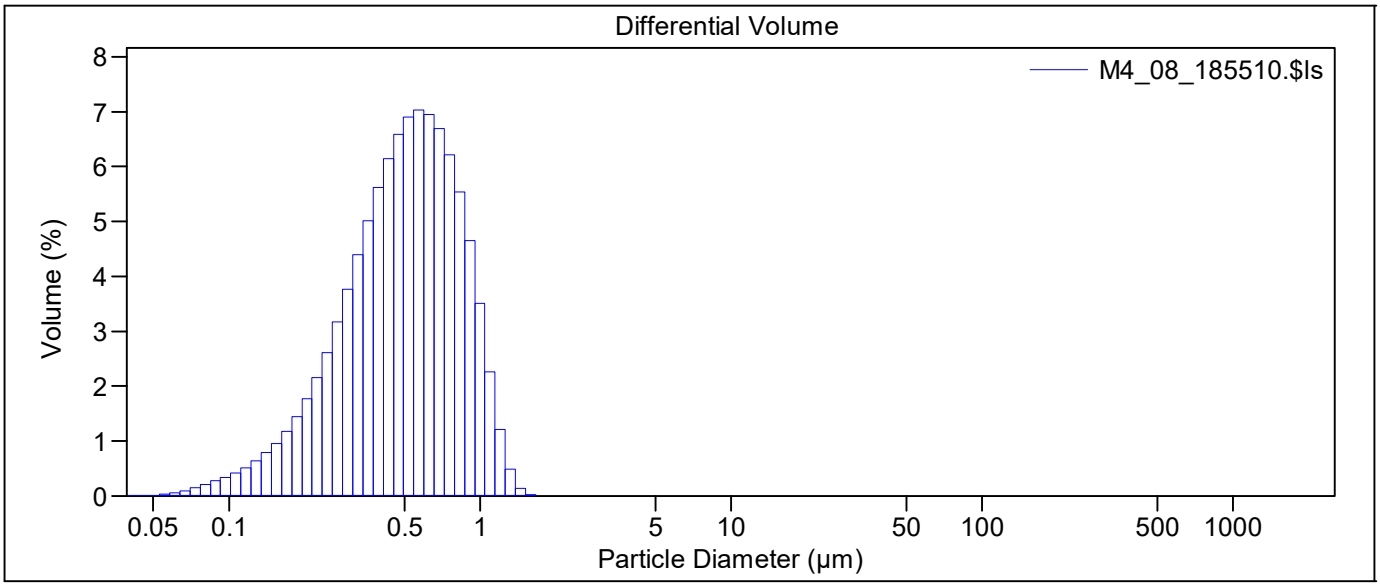
Number Statistics (Arithmetic) M4_08_185510.$ls

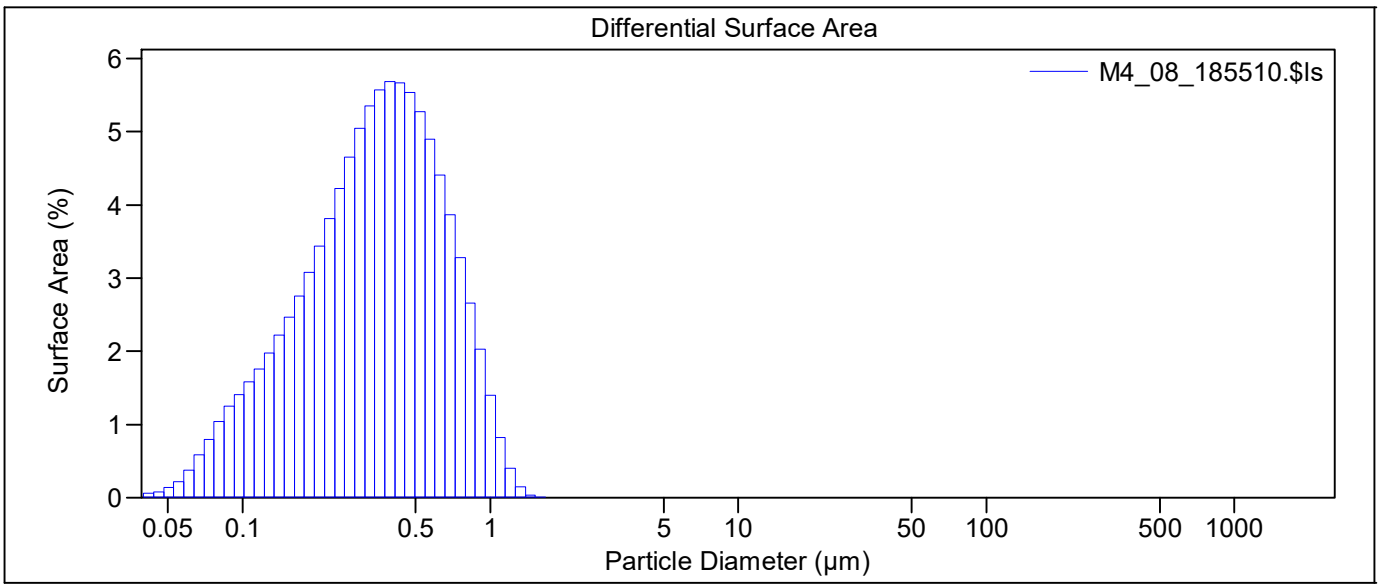
Calculations from 0.040 µm to 2000 µm

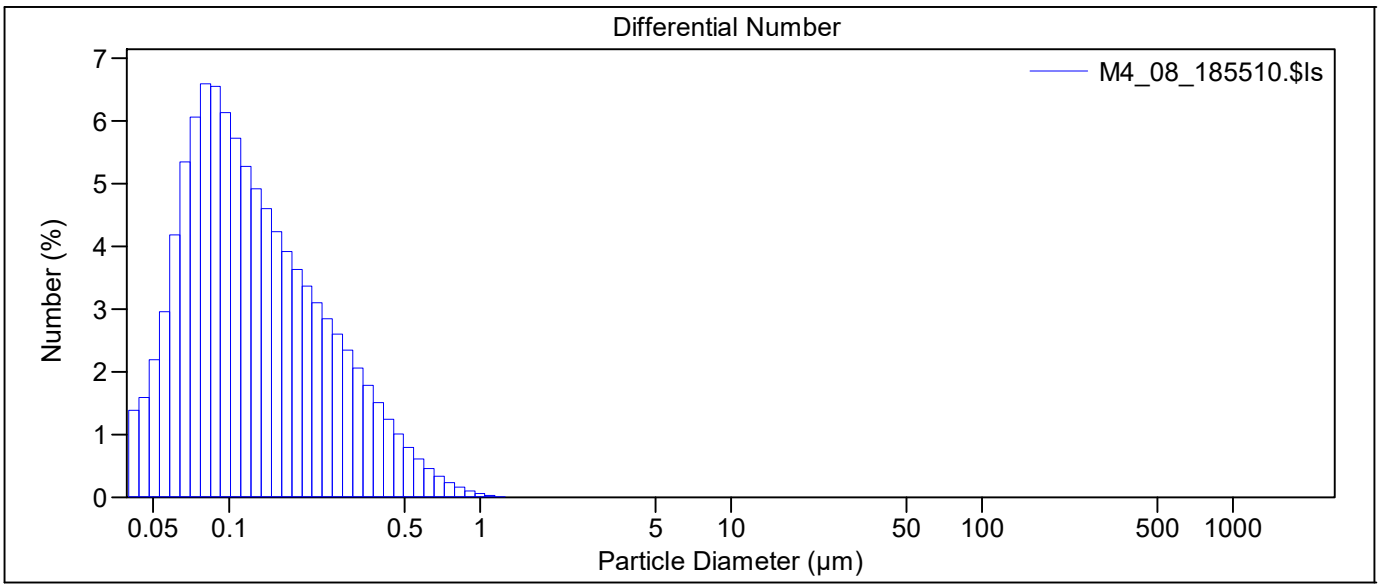
Number:	100%		
Mean:	0.159 µm	S.D.:	0.126 µm
Median:	0.114 µm	Variance:	0.016 μm^2
Mean/Median ratio:	1.390	C.V.:	79.2%
Mode:	0.080 µm	Skewness:	2.406 Right skewed
		Kurtosis:	8.068 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.061 µm	0.078 µm	0.114 µm	0.194 µm	0.318 µm

Beckman Coulter LS13320







M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0063	0.059	1.39
2	0.044	0.046	0.0095	0.082	1.60
3	0.048	0.050	0.017	0.14	2.20
4	0.053	0.055	0.031	0.22	2.96
5	0.058	0.061	0.058	0.38	4.18
6	0.064	0.067	0.098	0.58	5.35
7	0.070	0.073	0.15	0.79	6.06
8	0.077	0.080	0.21	1.04	6.59
9	0.084	0.088	0.28	1.25	6.55
10	0.093	0.097	0.34	1.41	6.13
11	0.102	0.106	0.42	1.58	5.72
12	0.112	0.117	0.52	1.76	5.28
13	0.122	0.128	0.64	1.97	4.92
14	0.134	0.141	0.79	2.23	4.60
15	0.148	0.155	0.96	2.47	4.23
16	0.162	0.170	1.18	2.76	3.92
17	0.178	0.186	1.44	3.08	3.63
18	0.195	0.205	1.77	3.44	3.37
19	0.214	0.225	2.15	3.81	3.10
20	0.235	0.247	2.62	4.22	2.85
21	0.258	0.271	3.17	4.66	2.61
22	0.284	0.297	3.77	5.04	2.34
23	0.311	0.326	4.39	5.36	2.06
24	0.342	0.358	5.01	5.57	1.78
25	0.375	0.393	5.62	5.68	1.51
26	0.412	0.431	6.15	5.67	1.25
27	0.452	0.474	6.59	5.53	1.01
28	0.496	0.520	6.90	5.28	0.80
29	0.545	0.571	7.03	4.90	0.62
30	0.598	0.627	6.95	4.41	0.46
31	0.656	0.688	6.69	3.87	0.34
32	0.721	0.755	6.22	3.28	0.24
33	0.791	0.829	5.54	2.66	0.16
34	0.868	0.910	4.65	2.03	0.10
35	0.953	0.999	3.51	1.40	0.057
36	1.047	1.097	2.26	0.82	0.028
37	1.149	1.204	1.22	0.40	0.011
38	1.261	1.321	0.49	0.15	0.0035
39	1.385	1.451	0.14	0.039	0.00075
40	1.520	1.592	0.026	0.0064	0.00010
41	1.668	1.748	0.0015	0.00034	0.000005
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_09_185658.$ls M4_09_185658.$ls		
File ID:	M4		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.60%		
LS 13 320	Universal Liquid Module		
Start time:	18:55 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_09_185658.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.542 µm	S.D.:	0.260 µm
Median:	0.508 µm	Variance:	0.068 µm^2
Mean/Median ratio:	1.065	C.V.:	48.0%
Mode:	0.571 µm	Skewness:	0.566 Right skewed
		Kurtosis:	-0.087 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.227 µm	0.343 µm	0.508 µm	0.711 µm	0.909 µm

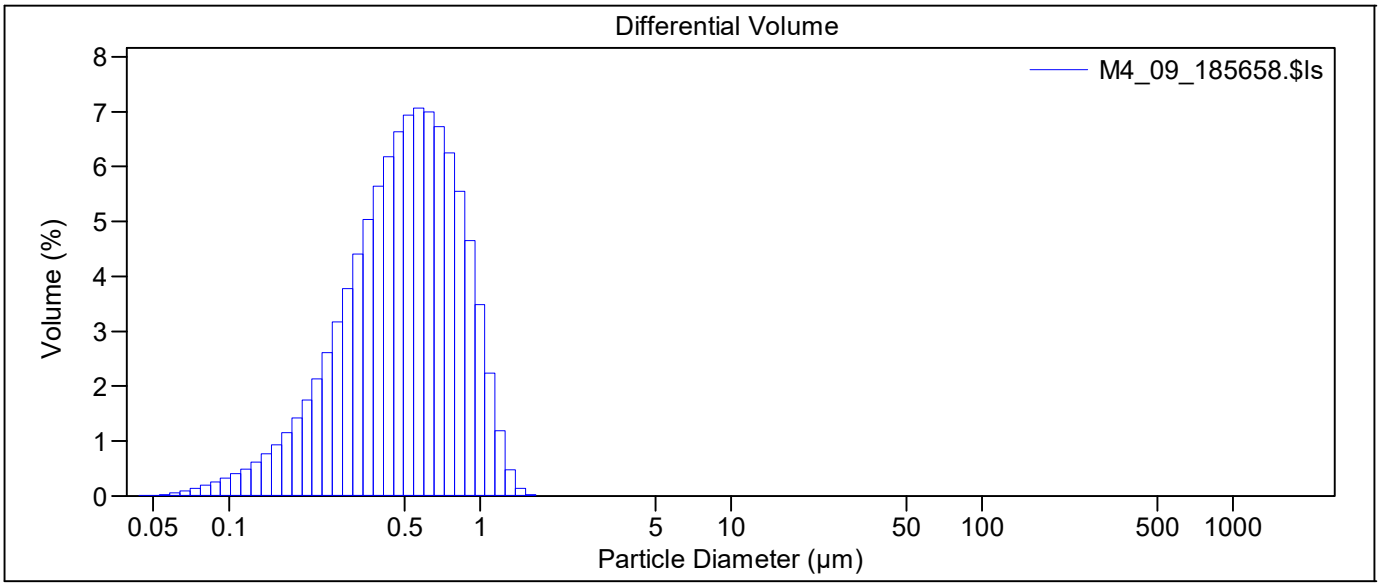
Number Statistics (Arithmetic) M4_09_185658.$ls

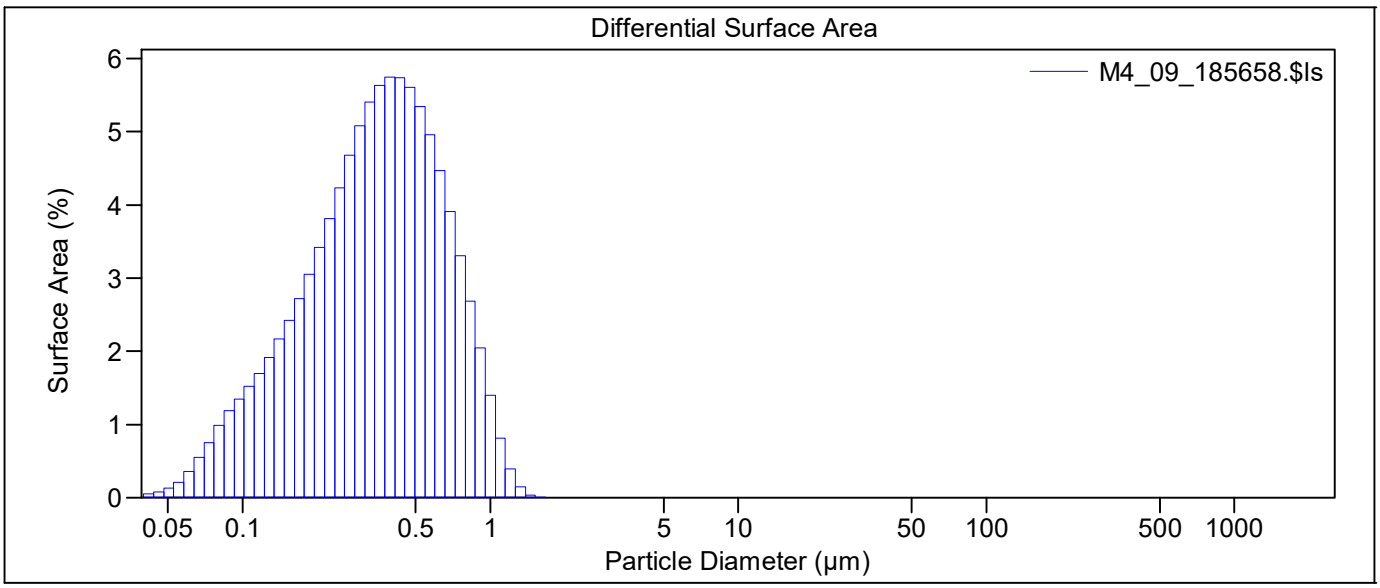
Calculations from 0.040 µm to 2000 µm

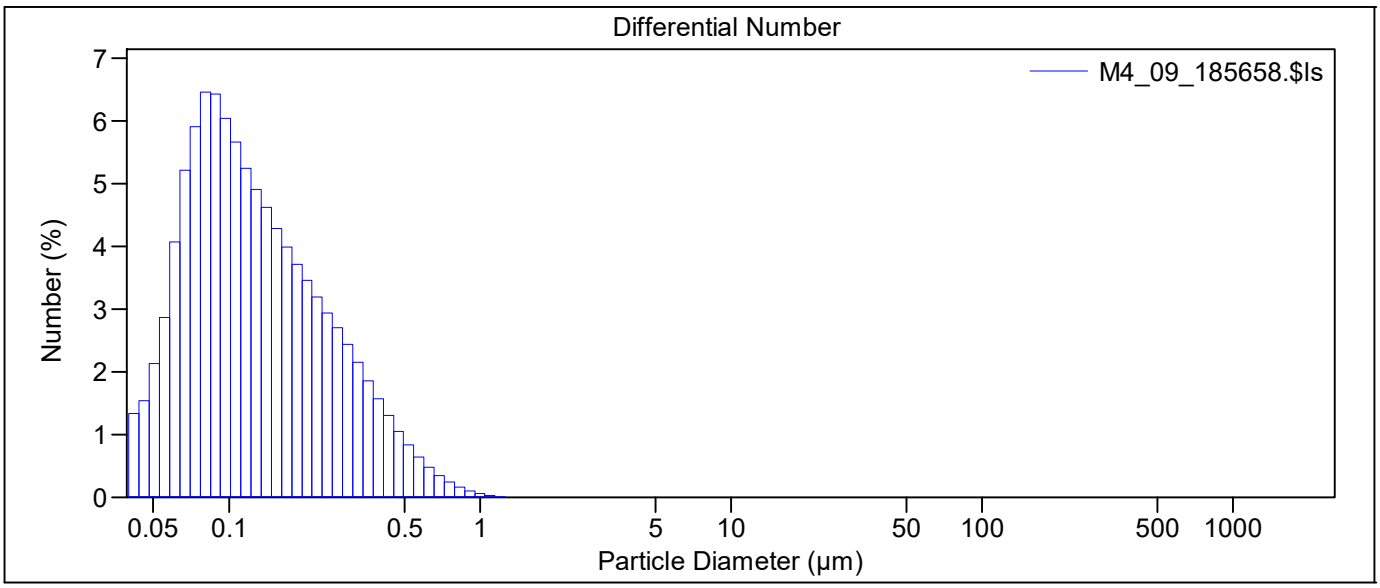
Number:	100%		
Mean:	0.161 µm	S.D.:	0.127 µm
Median:	0.116 µm	Variance:	0.016 µm^2
Mean/Median ratio:	1.386	C.V.:	78.9%
Mode:	0.080 µm	Skewness:	2.354 Right skewed
		Kurtosis:	7.702 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.061 µm	0.079 µm	0.116 µm	0.199 µm	0.324 µm

Beckman Coulter LS13320







M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0058	0.055	1.34
2	0.044	0.046	0.0089	0.077	1.54
3	0.048	0.050	0.016	0.13	2.13
4	0.053	0.055	0.029	0.21	2.87
5	0.058	0.061	0.054	0.36	4.07
6	0.064	0.067	0.092	0.55	5.21
7	0.070	0.073	0.14	0.75	5.91
8	0.077	0.080	0.20	0.99	6.46
9	0.084	0.088	0.26	1.19	6.43
10	0.093	0.097	0.33	1.34	6.04
11	0.102	0.106	0.40	1.52	5.66
12	0.112	0.117	0.50	1.69	5.24
13	0.122	0.128	0.61	1.91	4.91
14	0.134	0.141	0.76	2.17	4.62
15	0.148	0.155	0.94	2.42	4.28
16	0.162	0.170	1.15	2.72	3.99
17	0.178	0.186	1.42	3.05	3.71
18	0.195	0.205	1.75	3.42	3.46
19	0.214	0.225	2.14	3.81	3.19
20	0.235	0.247	2.61	4.23	2.94
21	0.258	0.271	3.17	4.68	2.70
22	0.284	0.297	3.77	5.08	2.43
23	0.311	0.326	4.41	5.41	2.15
24	0.342	0.358	5.04	5.63	1.86
25	0.375	0.393	5.65	5.75	1.57
26	0.412	0.431	6.18	5.73	1.30
27	0.452	0.474	6.63	5.60	1.06
28	0.496	0.520	6.94	5.34	0.84
29	0.545	0.571	7.07	4.96	0.64
30	0.598	0.627	6.99	4.47	0.48
31	0.656	0.688	6.72	3.91	0.35
32	0.721	0.755	6.25	3.31	0.25
33	0.791	0.829	5.56	2.68	0.17
34	0.868	0.910	4.65	2.05	0.10
35	0.953	0.999	3.49	1.40	0.059
36	1.047	1.097	2.24	0.82	0.029
37	1.149	1.204	1.19	0.40	0.012
38	1.261	1.321	0.48	0.15	0.0035
39	1.385	1.451	0.14	0.037	0.00075
40	1.520	1.592	0.024	0.0060	0.00010
41	1.668	1.748	0.0013	0.00030	0.000004
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_10_190611.$ls M4_10_190611.$ls		
File ID:	M4		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.74%		
LS 13 320	Universal Liquid Module		
Start time:	19:04 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_10_190611.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.448 µm	S.D.:	0.279 µm
Median:	0.444 µm	Variance:	0.078 μm^2
Mean/Median ratio:	1.008	C.V.:	62.3%
Mode:	0.627 µm	Skewness:	0.388 Right skewed
		Kurtosis:	-0.686 Platykurtic

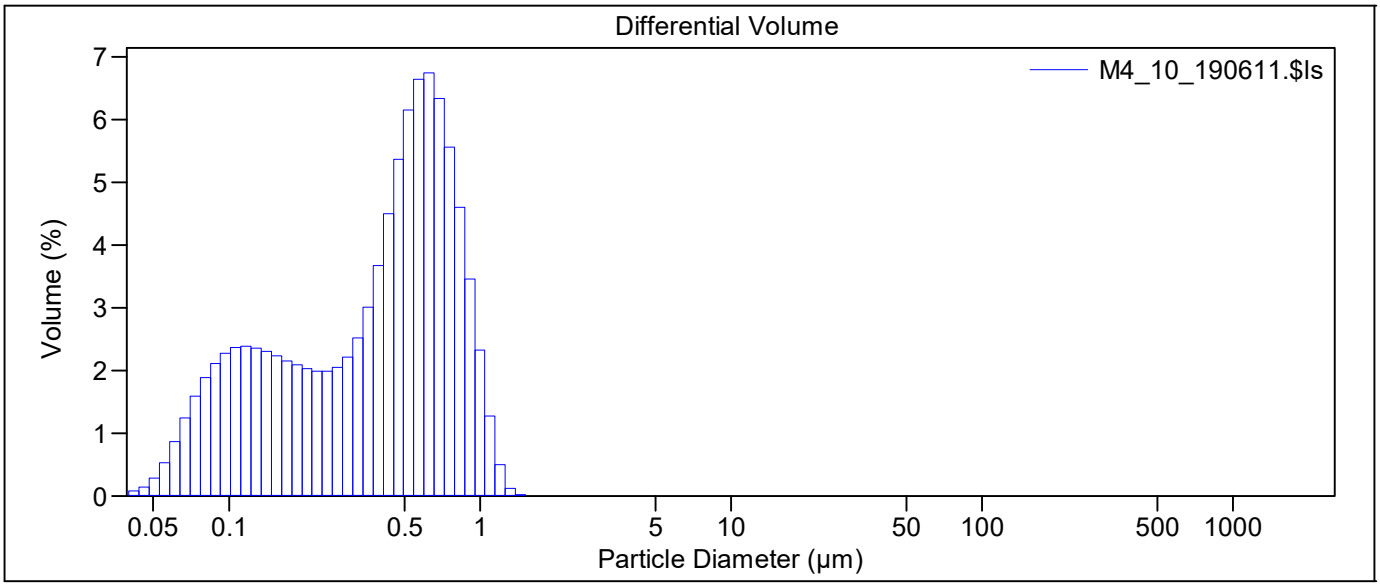
<10%	<25%	<50%	<75%	<90%
0.098 µm	0.179 µm	0.444 µm	0.650 µm	0.830 µm

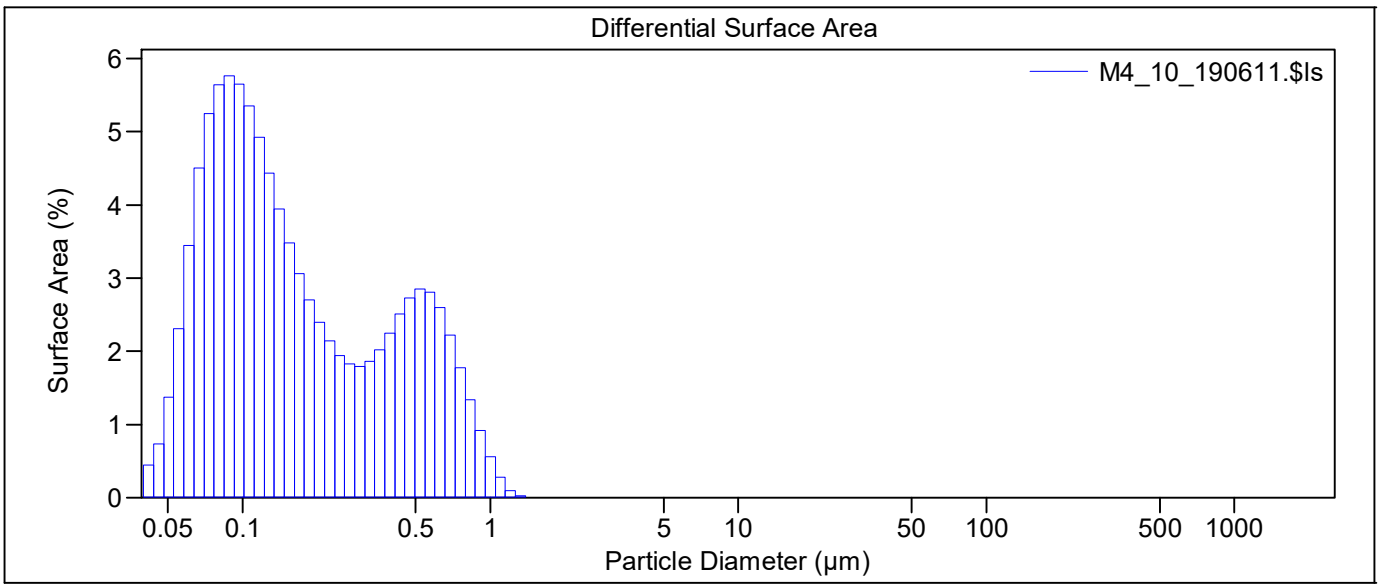
Number Statistics (Arithmetic) M4_10_190611.$ls

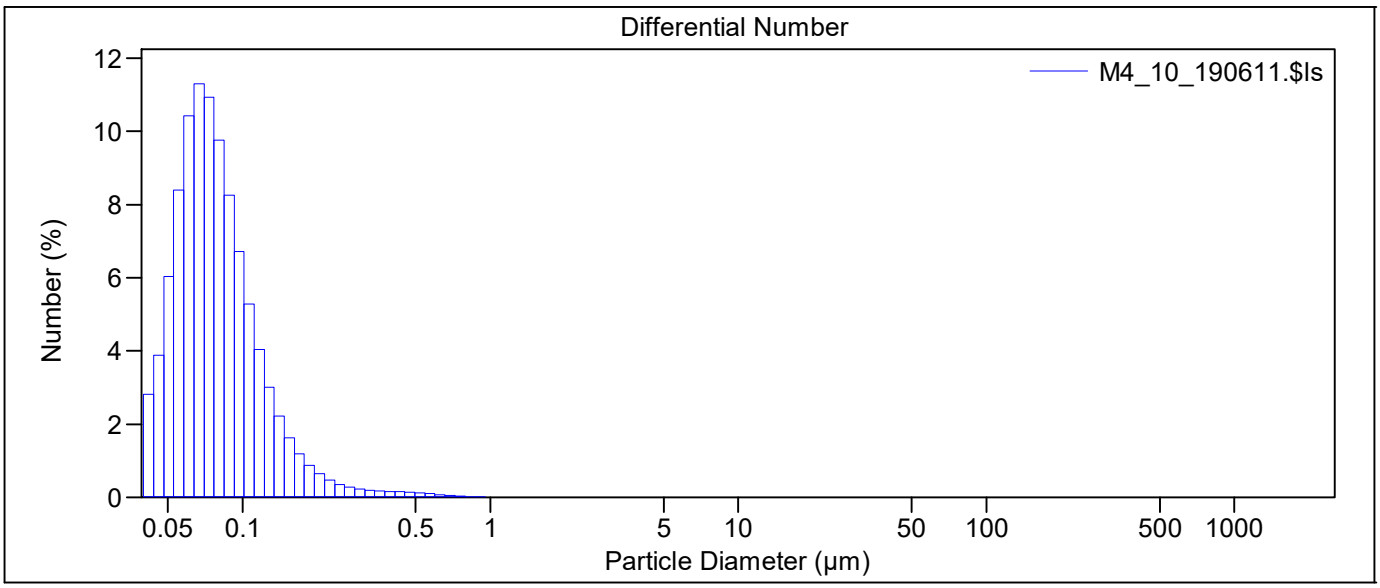
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.088 µm	S.D.:	0.058 µm
Median:	0.074 µm	Variance:	0.0034 μm^2
Mean/Median ratio:	1.186	C.V.:	66.0%
Mode:	0.067 µm	Skewness:	5.620 Right skewed
		Kurtosis:	48.74 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.097 µm	0.131 µm


Differential Volume
M4_10_190611.$ls
Volume (%)
0
1
2
3
4
5
6
7
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M4_10_190611.$ls
Surface Area (%)
0
1
2
3
4
5
6
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M4_10_190611.$ls
Number (%)
0
2
4
6
8
10
12
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.077	0.44	2.82
2	0.044	0.046	0.14	0.73	3.88
3	0.048	0.050	0.29	1.38	6.04
4	0.053	0.055	0.53	2.31	8.40
5	0.058	0.061	0.87	3.45	10.4
6	0.064	0.067	1.25	4.50	11.3
7	0.070	0.073	1.60	5.25	10.9
8	0.077	0.080	1.88	5.65	9.75
9	0.084	0.088	2.11	5.76	8.26
10	0.093	0.097	2.27	5.65	6.72
11	0.102	0.106	2.36	5.36	5.29
12	0.112	0.117	2.39	4.93	4.04
13	0.122	0.128	2.36	4.44	3.02
14	0.134	0.141	2.30	3.94	2.22
15	0.148	0.155	2.23	3.48	1.63
16	0.162	0.170	2.16	3.06	1.19
17	0.178	0.186	2.09	2.70	0.87
18	0.195	0.205	2.03	2.40	0.64
19	0.214	0.225	1.99	2.14	0.48
20	0.235	0.247	1.99	1.95	0.36
21	0.258	0.271	2.05	1.83	0.28
22	0.284	0.297	2.21	1.80	0.23
23	0.311	0.326	2.52	1.87	0.20
24	0.342	0.358	3.01	2.02	0.18
25	0.375	0.393	3.67	2.25	0.16
26	0.412	0.431	4.50	2.51	0.15
27	0.452	0.474	5.37	2.73	0.14
28	0.496	0.520	6.16	2.86	0.12
29	0.545	0.571	6.64	2.81	0.096
30	0.598	0.627	6.74	2.60	0.074
31	0.656	0.688	6.34	2.22	0.053
32	0.721	0.755	5.56	1.78	0.035
33	0.791	0.829	4.60	1.34	0.022
34	0.868	0.910	3.46	0.92	0.012
35	0.953	0.999	2.33	0.56	0.0063
36	1.047	1.097	1.27	0.28	0.0026
37	1.149	1.204	0.50	0.099	0.00077
38	1.261	1.321	0.13	0.023	0.00015
39	1.385	1.451	0.018	0.0030	0.000016
40	1.520	1.592	0.00067	0.00010	4.47E-7
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_11_190759.$ls M4_11_190759.$ls		
File ID:	M4		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.70%		
LS 13 320	Universal Liquid Module		
Start time:	19:06 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_11_190759.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.499 µm	S.D.:	0.363 µm
Median:	0.402 µm	Variance:	0.132 µm^2
Mean/Median ratio:	1.240	C.V.:	72.9%
Mode:	0.571 µm	Skewness:	1.044 Right skewed
		Kurtosis:	0.602 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.119 µm	0.204 µm	0.402 µm	0.710 µm	1.036 µm

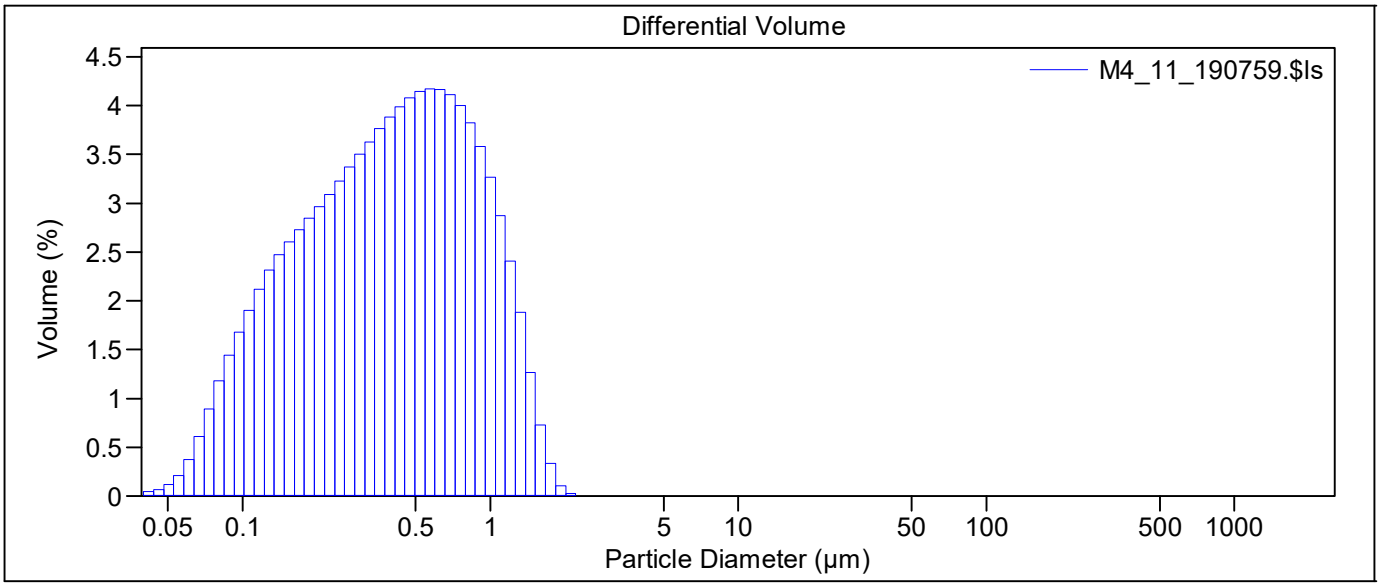
Number Statistics (Arithmetic) M4_11_190759.$ls

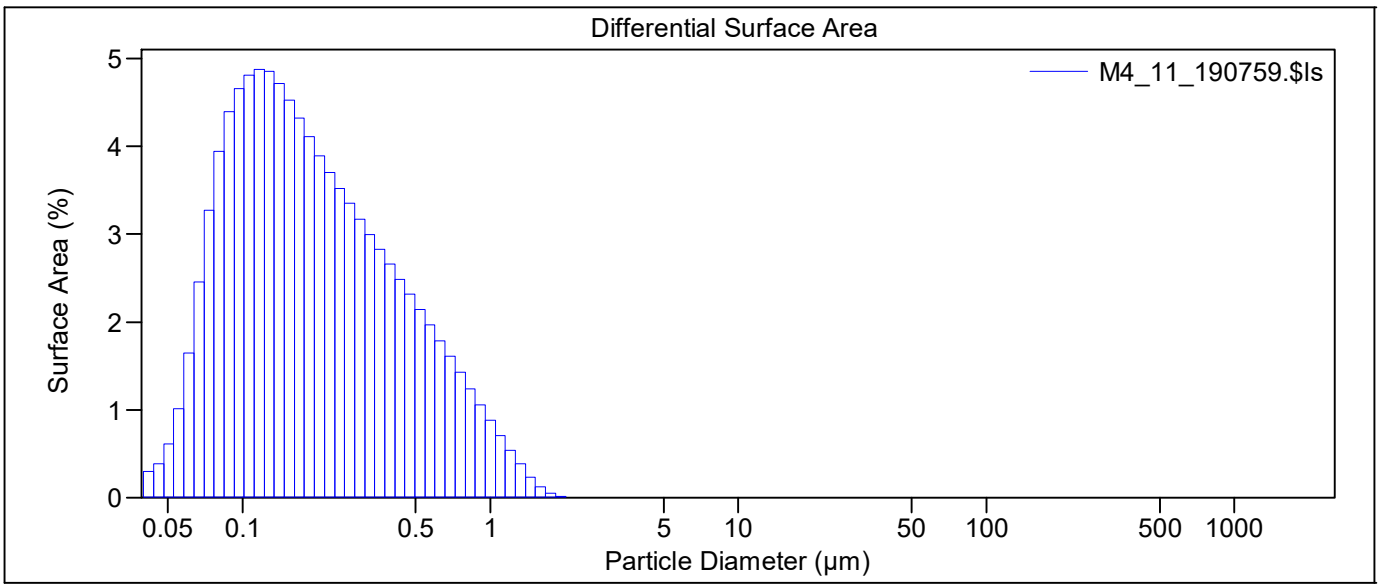
Calculations from 0.040 µm to 2000 µm

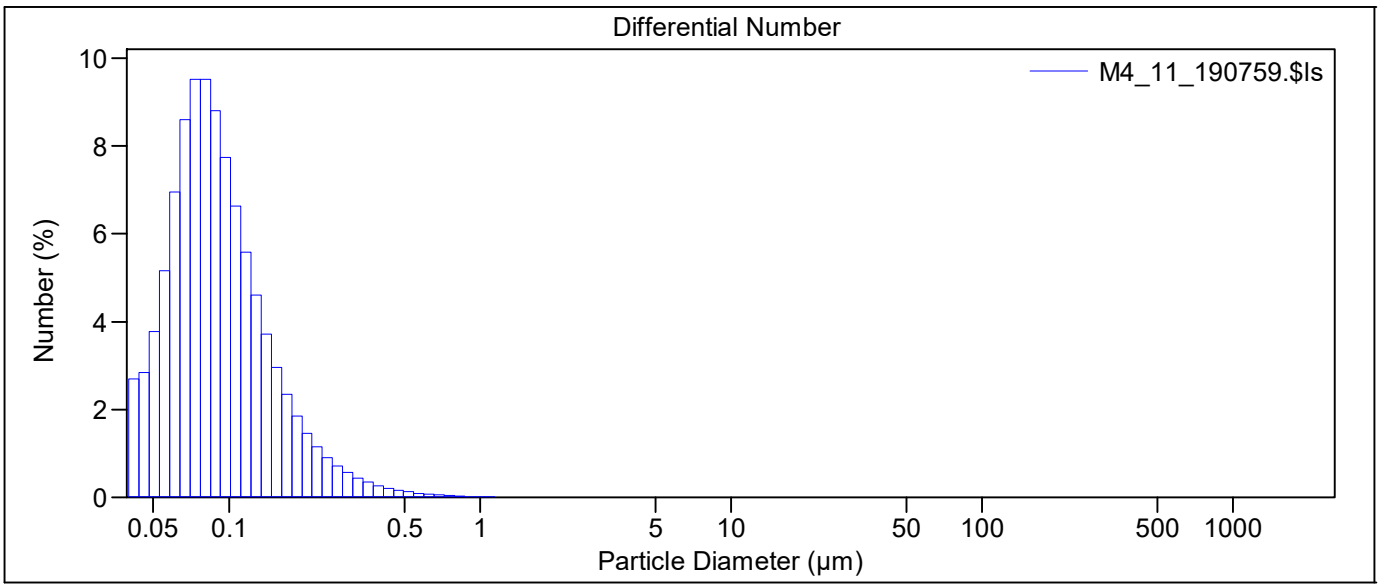
Number:	100%		
Mean:	0.104 µm	S.D.:	0.070 µm
Median:	0.085 µm	Variance:	0.0049 µm^2
Mean/Median ratio:	1.218	C.V.:	67.3%
Mode:	0.080 µm	Skewness:	4.625 Right skewed
		Kurtosis:	39.70 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.066 µm	0.085 µm	0.117 µm	0.168 µm

Beckman Coulter LS13320







M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.047	0.30	2.69
2	0.044	0.046	0.066	0.38	2.84
3	0.048	0.050	0.12	0.62	3.78
4	0.053	0.055	0.21	1.01	5.16
5	0.058	0.061	0.37	1.65	6.95
6	0.064	0.067	0.61	2.45	8.61
7	0.070	0.073	0.89	3.27	9.51
8	0.077	0.080	1.18	3.94	9.52
9	0.084	0.088	1.44	4.40	8.81
10	0.093	0.097	1.68	4.66	7.74
11	0.102	0.106	1.90	4.81	6.64
12	0.112	0.117	2.12	4.88	5.58
13	0.122	0.128	2.31	4.85	4.61
14	0.134	0.141	2.47	4.72	3.72
15	0.148	0.155	2.60	4.53	2.96
16	0.162	0.170	2.73	4.32	2.35
17	0.178	0.186	2.85	4.11	1.85
18	0.195	0.205	2.96	3.90	1.46
19	0.214	0.225	3.09	3.70	1.15
20	0.235	0.247	3.23	3.52	0.91
21	0.258	0.271	3.37	3.35	0.72
22	0.284	0.297	3.50	3.17	0.56
23	0.311	0.326	3.63	2.99	0.44
24	0.342	0.358	3.76	2.83	0.35
25	0.375	0.393	3.89	2.66	0.27
26	0.412	0.431	3.99	2.49	0.21
27	0.452	0.474	4.08	2.32	0.16
28	0.496	0.520	4.14	2.14	0.12
29	0.545	0.571	4.17	1.97	0.094
30	0.598	0.627	4.17	1.79	0.071
31	0.656	0.688	4.11	1.61	0.053
32	0.721	0.755	4.00	1.43	0.039
33	0.791	0.829	3.82	1.24	0.028
34	0.868	0.910	3.58	1.06	0.020
35	0.953	0.999	3.27	0.88	0.014
36	1.047	1.097	2.87	0.70	0.0092
37	1.149	1.204	2.41	0.54	0.0058
38	1.261	1.321	1.88	0.38	0.0034
39	1.385	1.451	1.26	0.23	0.0017
40	1.520	1.592	0.73	0.12	0.00076
41	1.668	1.748	0.34	0.052	0.00027
42	1.832	1.919	0.11	0.015	0.000064
43	2.011	2.107	0.024	0.0031	0.000011
44	2.207	2.313	0.0026	0.00031	0.000001
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_12_190947.$ls M4_12_190947.$ls		
File ID:	M4		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.73%		
LS 13 320	Universal Liquid Module		
Start time:	19:08 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_12_190947.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.449 µm	S.D.:	0.276 µm
Median:	0.449 µm	Variance:	0.076 µm^2
Mean/Median ratio:	1.002	C.V.:	61.5%
Mode:	0.627 µm	Skewness:	0.364 Right skewed
		Kurtosis:	-0.690 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.098 µm	0.184 µm	0.449 µm	0.649 µm	0.826 µm

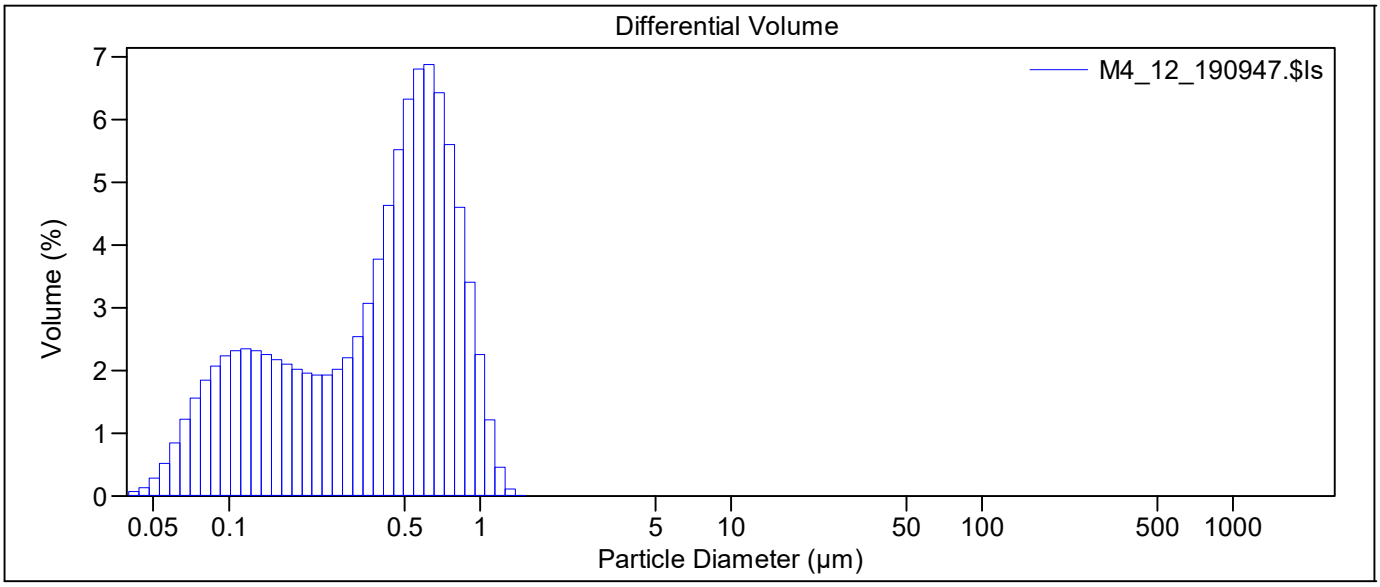
Number Statistics (Arithmetic) M4_12_190947.$ls

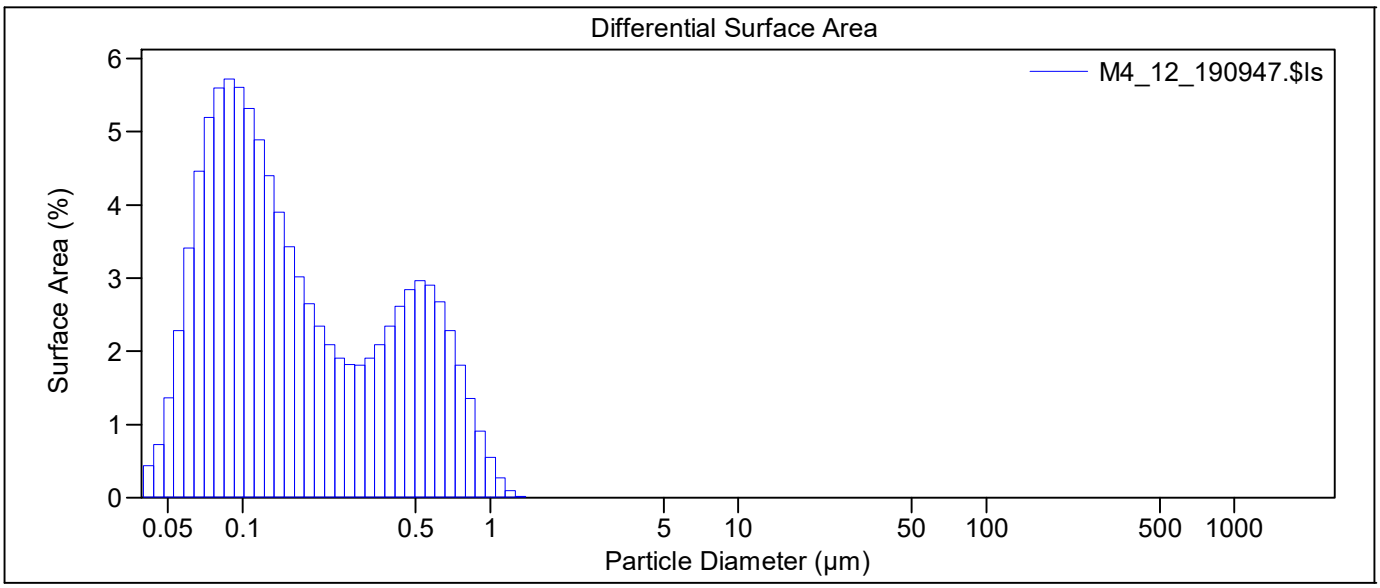
Calculations from 0.040 µm to 2000 µm

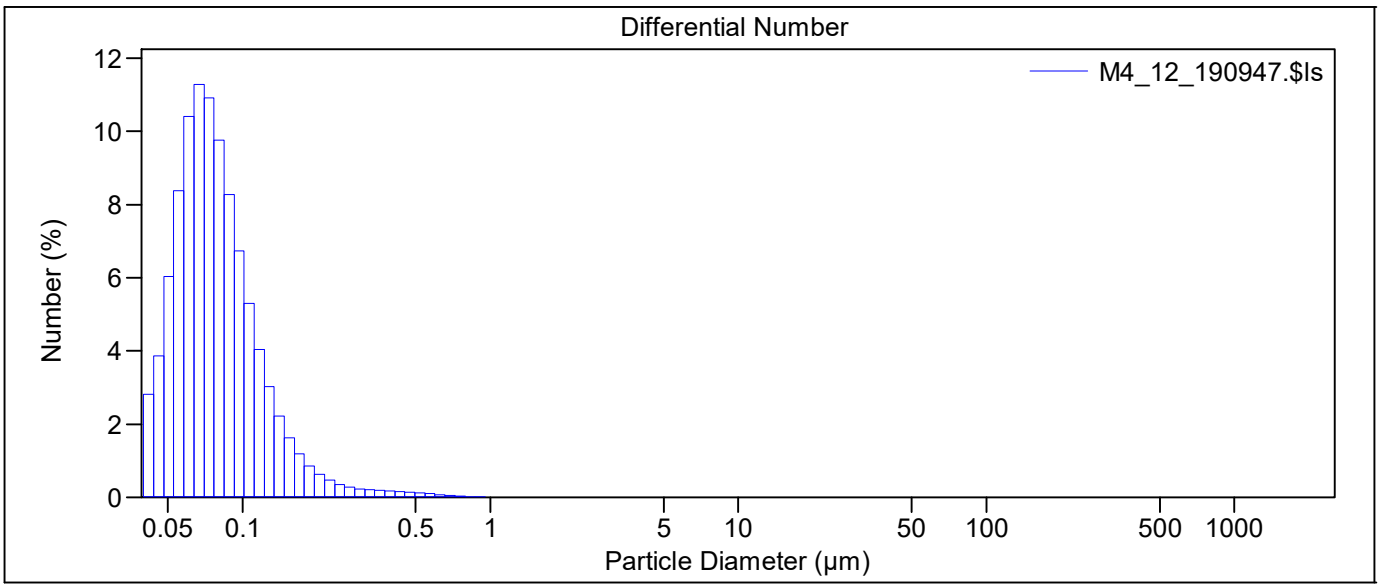
Number:	100%		
Mean:	0.088 µm	S.D.:	0.059 µm
Median:	0.074 µm	Variance:	0.0035 µm^2
Mean/Median ratio:	1.188	C.V.:	66.5%
Mode:	0.067 µm	Skewness:	5.593 Right skewed
		Kurtosis:	47.72 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.097 µm	0.131 µm

Beckman Coulter LS13320







M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.075	0.44	2.82
2	0.044	0.046	0.14	0.72	3.87
3	0.048	0.050	0.28	1.36	6.03
4	0.053	0.055	0.52	2.28	8.39
5	0.058	0.061	0.85	3.41	10.4
6	0.064	0.067	1.22	4.46	11.3
7	0.070	0.073	1.56	5.20	10.9
8	0.077	0.080	1.85	5.60	9.76
9	0.084	0.088	2.07	5.72	8.27
10	0.093	0.097	2.23	5.61	6.73
11	0.102	0.106	2.32	5.32	5.30
12	0.112	0.117	2.34	4.89	4.04
13	0.122	0.128	2.32	4.40	3.02
14	0.134	0.141	2.25	3.90	2.22
15	0.148	0.155	2.18	3.43	1.62
16	0.162	0.170	2.10	3.01	1.18
17	0.178	0.186	2.02	2.65	0.86
18	0.195	0.205	1.96	2.34	0.63
19	0.214	0.225	1.93	2.09	0.47
20	0.235	0.247	1.93	1.91	0.36
21	0.258	0.271	2.02	1.82	0.28
22	0.284	0.297	2.20	1.81	0.23
23	0.311	0.326	2.54	1.90	0.20
24	0.342	0.358	3.07	2.09	0.18
25	0.375	0.393	3.77	2.34	0.17
26	0.412	0.431	4.63	2.62	0.16
27	0.452	0.474	5.52	2.84	0.14
28	0.496	0.520	6.32	2.97	0.12
29	0.545	0.571	6.80	2.91	0.10
30	0.598	0.627	6.87	2.68	0.077
31	0.656	0.688	6.43	2.28	0.054
32	0.721	0.755	5.60	1.81	0.036
33	0.791	0.829	4.60	1.35	0.022
34	0.868	0.910	3.41	0.91	0.012
35	0.953	0.999	2.26	0.55	0.0062
36	1.047	1.097	1.21	0.27	0.0025
37	1.149	1.204	0.45	0.092	0.00072
38	1.261	1.321	0.11	0.021	0.00014
39	1.385	1.451	0.015	0.0025	0.000014
40	1.520	1.592	0.00047	0.000072	3.21E-7
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_13_191925.$ls M4_13_191925.$ls		
File ID:	M4		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.76%		
LS 13 320	Universal Liquid Module		
Start time:	19:17 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_13_191925.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.558 µm	S.D.:	0.225 µm
Median:	0.528 µm	Variance:	0.051 μm^2
Mean/Median ratio:	1.058	C.V.:	40.3%
Mode:	0.571 µm	Skewness:	0.617 Right skewed
		Kurtosis:	0.00054 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.289 µm	0.385 µm	0.528 µm	0.704 µm	0.874 µm

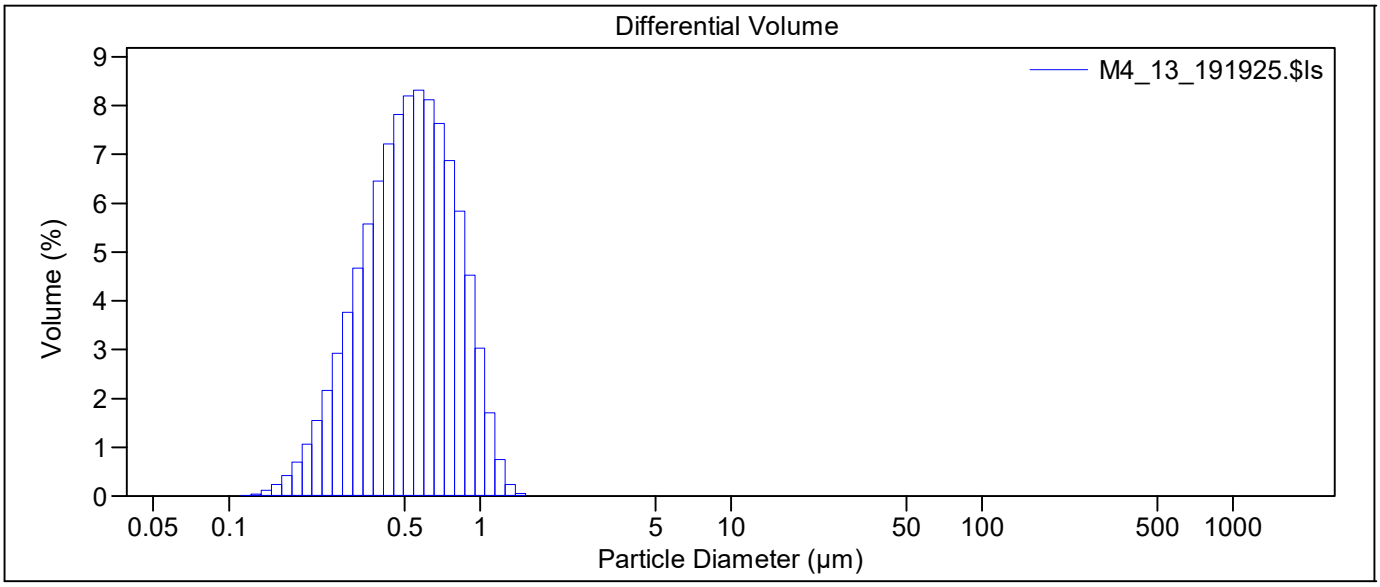
Number Statistics (Arithmetic) M4_13_191925.$ls

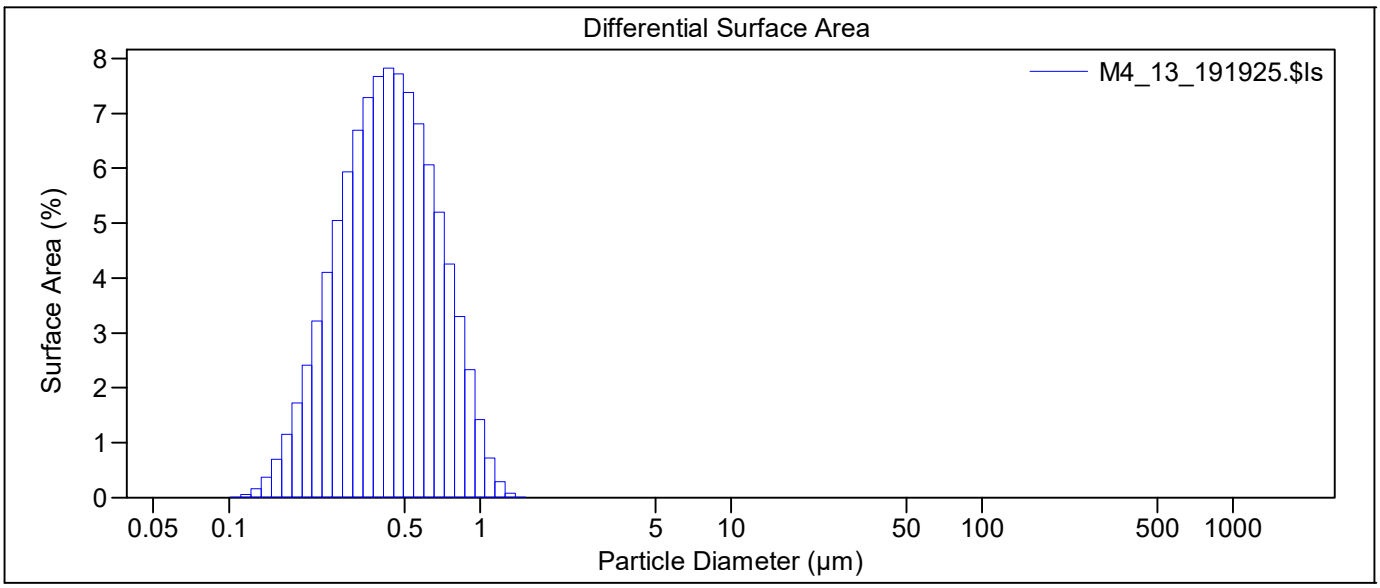
Calculations from 0.040 µm to 2000 µm

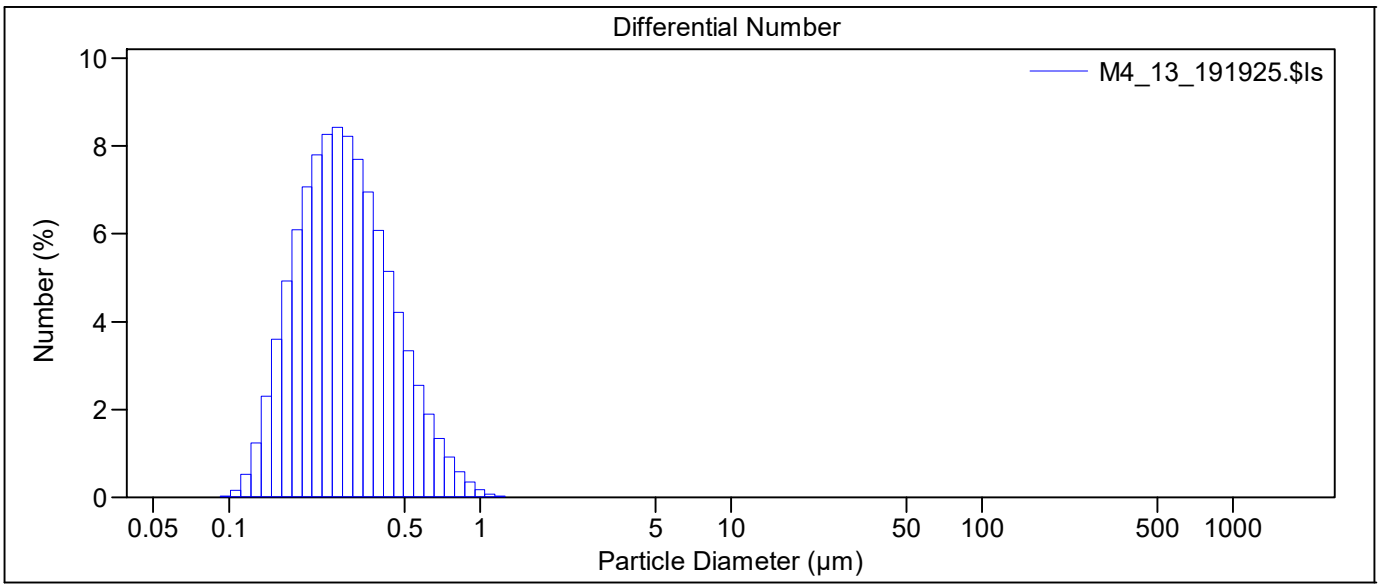
Number:	100%		
Mean:	0.317 µm	S.D.:	0.147 µm
Median:	0.282 µm	Variance:	0.022 μm^2
Mean/Median ratio:	1.125	C.V.:	46.3%
Mode:	0.271 µm	Skewness:	1.479 Right skewed
		Kurtosis:	3.003 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.169 µm	0.212 µm	0.282 µm	0.385 µm	0.515 µm

Beckman Coulter LS13320







M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0.000012	0.000068	0.0013
9	0.084	0.088	0.000074	0.00039	0.0062
10	0.093	0.097	0.00051	0.0025	0.032
11	0.102	0.106	0.0033	0.014	0.16
12	0.112	0.117	0.015	0.059	0.53
13	0.122	0.128	0.046	0.17	1.24
14	0.134	0.141	0.11	0.37	2.30
15	0.148	0.155	0.23	0.70	3.59
16	0.162	0.170	0.42	1.16	4.92
17	0.178	0.186	0.69	1.73	6.09
18	0.195	0.205	1.06	2.42	7.07
19	0.214	0.225	1.54	3.22	7.80
20	0.235	0.247	2.16	4.10	8.26
21	0.258	0.271	2.92	5.05	8.43
22	0.284	0.297	3.77	5.93	8.22
23	0.311	0.326	4.67	6.69	7.70
24	0.342	0.358	5.58	7.29	6.95
25	0.375	0.393	6.45	7.68	6.08
26	0.412	0.431	7.22	7.82	5.14
27	0.452	0.474	7.82	7.72	4.21
28	0.496	0.520	8.20	7.38	3.34
29	0.545	0.571	8.31	6.81	2.56
30	0.598	0.627	8.12	6.06	1.89
31	0.656	0.688	7.64	5.20	1.34
32	0.721	0.755	6.87	4.26	0.91
33	0.791	0.829	5.84	3.30	0.59
34	0.868	0.910	4.53	2.33	0.34
35	0.953	0.999	3.04	1.42	0.17
36	1.047	1.097	1.71	0.73	0.074
37	1.149	1.204	0.75	0.29	0.025
38	1.261	1.321	0.23	0.082	0.0057
39	1.385	1.451	0.047	0.015	0.00088
40	1.520	1.592	0.0039	0.0012	0.000056
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M4.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_14_192113.$ls M4_14_192113.$ls		
File ID:	M4		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.77%		
LS 13 320	Universal Liquid Module		
Start time:	19:19 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_14_192113.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.466 µm	S.D.:	0.249 µm
Median:	0.486 µm	Variance:	0.062 µm^2
Mean/Median ratio:	0.960	C.V.:	53.4%
Mode:	0.571 µm	Skewness:	0.098 Right skewed
		Kurtosis:	-0.619 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.106 µm	0.257 µm	0.486 µm	0.639 µm	0.782 µm

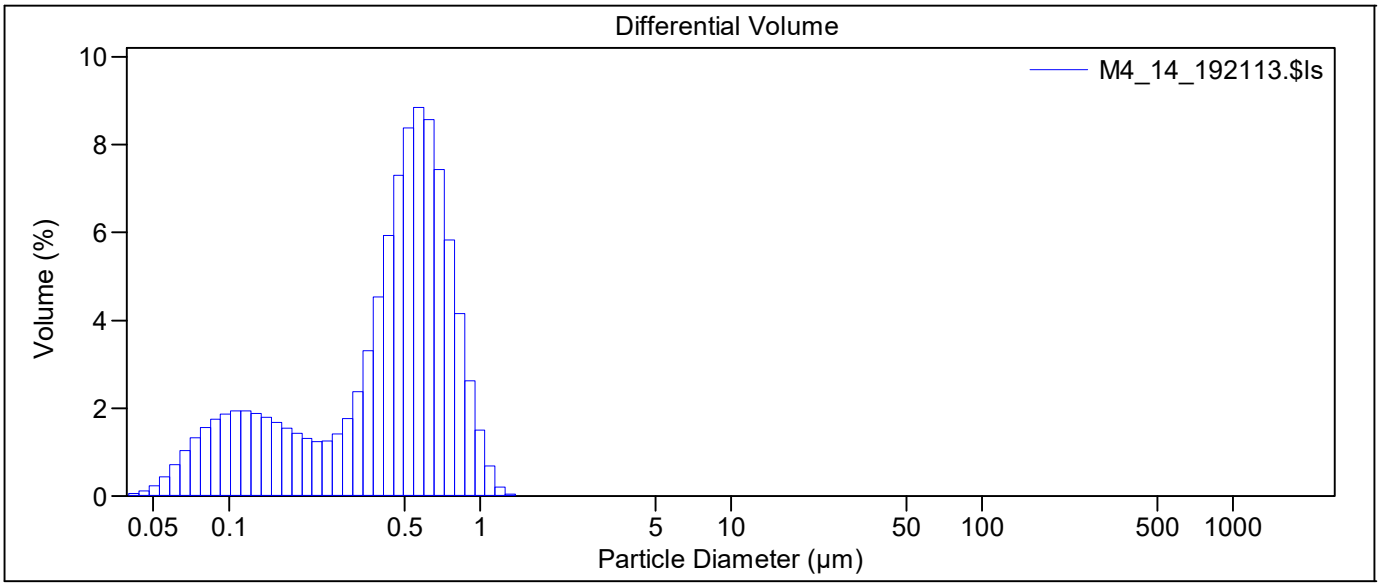
Number Statistics (Arithmetic) M4_14_192113.$ls

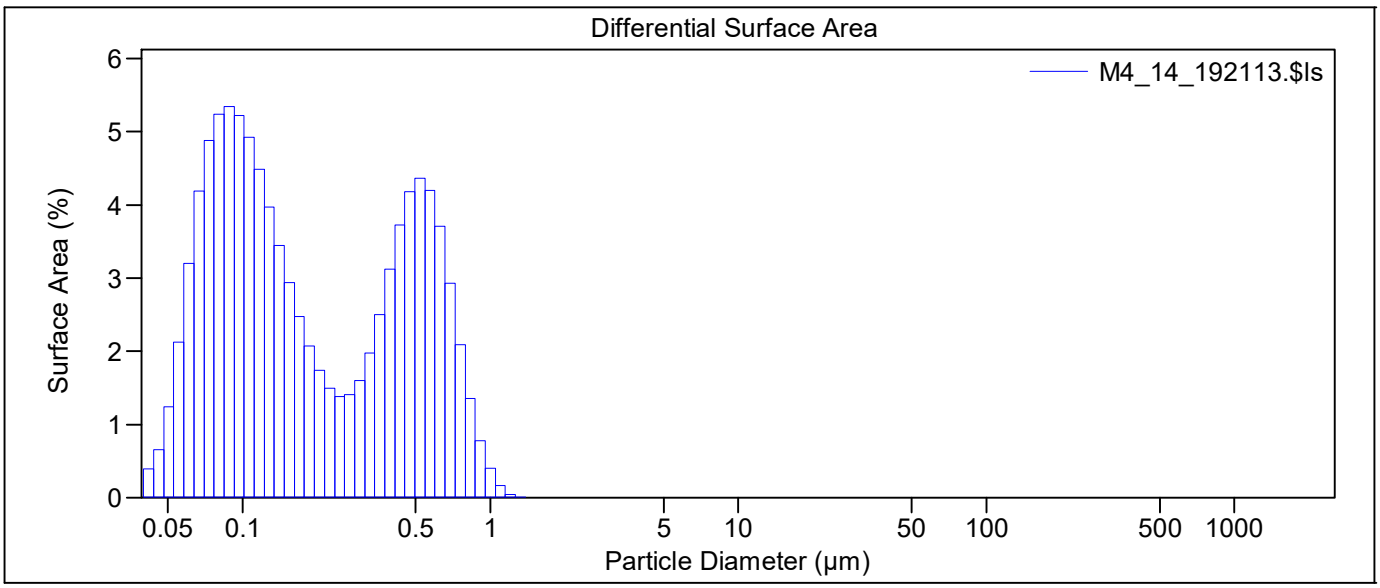
Calculations from 0.040 µm to 2000 µm

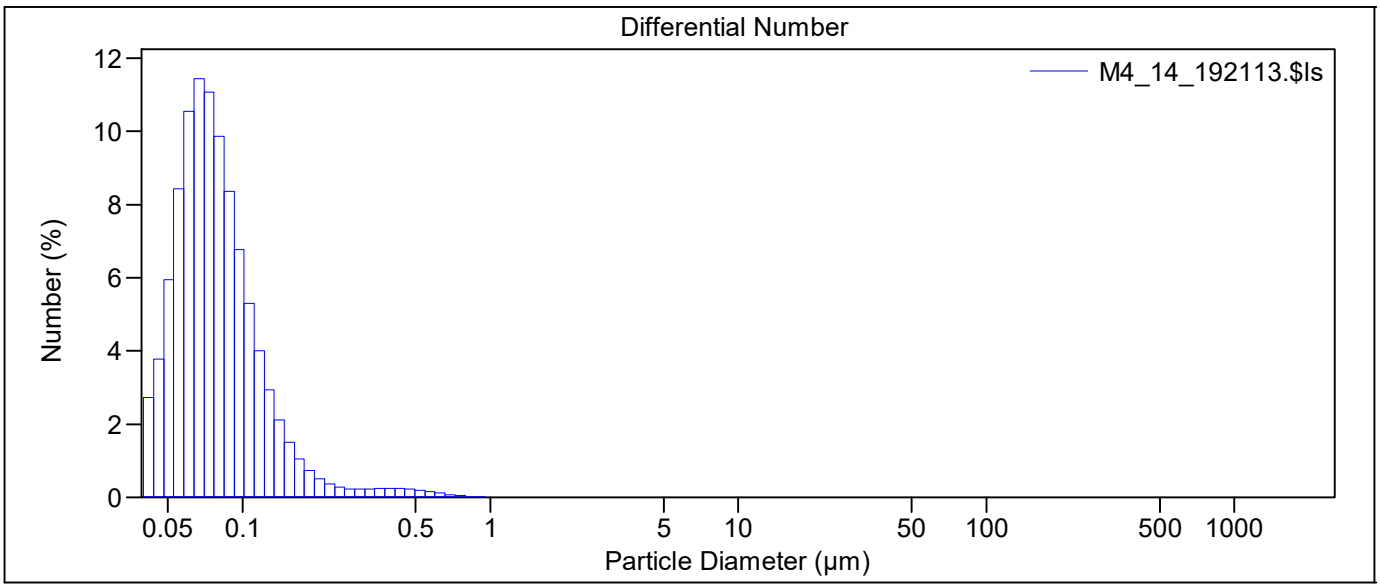
Number:	100%		
Mean:	0.090 µm	S.D.:	0.065 µm
Median:	0.074 µm	Variance:	0.0042 µm^2
Mean/Median ratio:	1.204	C.V.:	72.2%
Mode:	0.067 µm	Skewness:	5.420 Right skewed
		Kurtosis:	40.04 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.130 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.061	0.39	2.73
2	0.044	0.046	0.11	0.65	3.77
3	0.048	0.050	0.23	1.24	5.94
4	0.053	0.055	0.43	2.12	8.43
5	0.058	0.061	0.72	3.20	10.6
6	0.064	0.067	1.03	4.19	11.4
7	0.070	0.073	1.32	4.88	11.1
8	0.077	0.080	1.56	5.24	9.87
9	0.084	0.088	1.74	5.35	8.35
10	0.093	0.097	1.87	5.23	6.78
11	0.102	0.106	1.93	4.92	5.29
12	0.112	0.117	1.94	4.48	4.00
13	0.122	0.128	1.88	3.97	2.94
14	0.134	0.141	1.79	3.44	2.12
15	0.148	0.155	1.68	2.94	1.50
16	0.162	0.170	1.55	2.48	1.05
17	0.178	0.186	1.43	2.07	0.73
18	0.195	0.205	1.31	1.74	0.51
19	0.214	0.225	1.24	1.50	0.36
20	0.235	0.247	1.25	1.38	0.28
21	0.258	0.271	1.41	1.41	0.23
22	0.284	0.297	1.76	1.60	0.22
23	0.311	0.326	2.38	1.98	0.23
24	0.342	0.358	3.31	2.50	0.24
25	0.375	0.393	4.53	3.12	0.25
26	0.412	0.431	5.93	3.72	0.24
27	0.452	0.474	7.31	4.18	0.23
28	0.496	0.520	8.38	4.37	0.20
29	0.545	0.571	8.85	4.20	0.16
30	0.598	0.627	8.58	3.71	0.12
31	0.656	0.688	7.44	2.93	0.076
32	0.721	0.755	5.83	2.09	0.045
33	0.791	0.829	4.15	1.36	0.024
34	0.868	0.910	2.63	0.78	0.012
35	0.953	0.999	1.50	0.41	0.0050
36	1.047	1.097	0.68	0.17	0.0017
37	1.149	1.204	0.20	0.045	0.00038
38	1.261	1.321	0.039	0.0079	0.000055
39	1.385	1.451	0.0026	0.00049	0.000003
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M4\M4_15_192259.$ls M4_15_192259.$ls		
File ID:	M4		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.80%		
LS 13 320	Universal Liquid Module		
Start time:	19:21 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M4_15_192259.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.558 µm	S.D.:	0.223 µm
Median:	0.528 µm	Variance:	0.050 μm^2
Mean/Median ratio:	1.058	C.V.:	39.9%
Mode:	0.571 µm	Skewness:	0.621 Right skewed
		Kurtosis:	0.010 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.292 µm	0.387 µm	0.528 µm	0.702 µm	0.870 µm

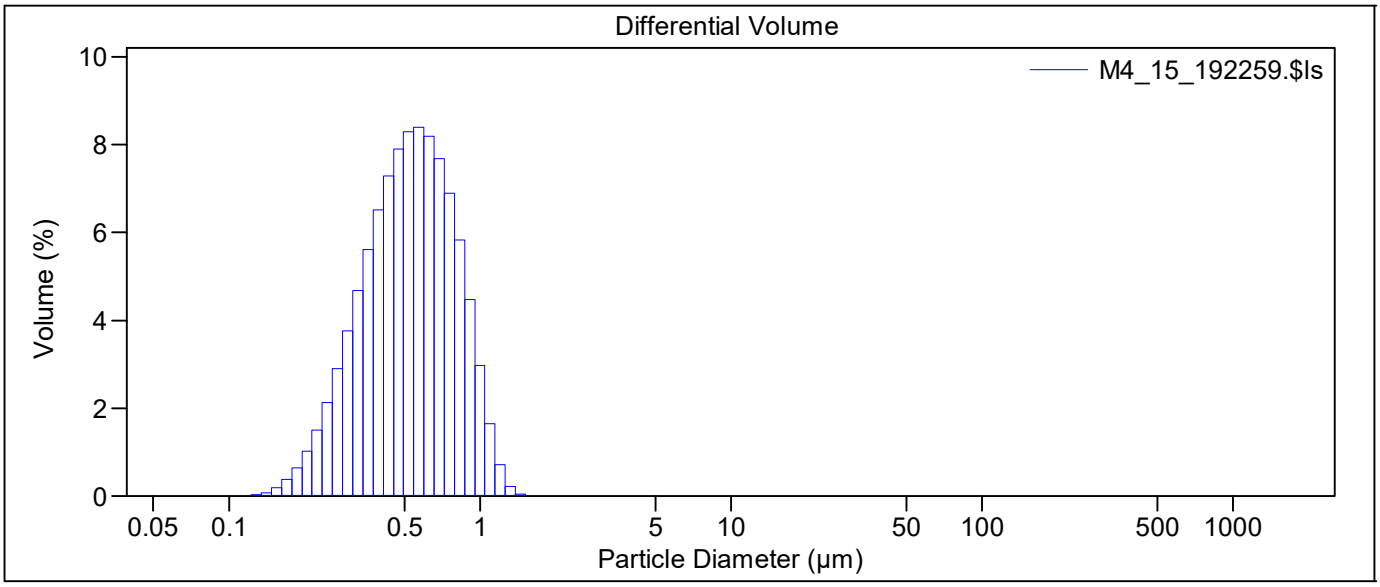
Number Statistics (Arithmetic) M4_15_192259.$ls

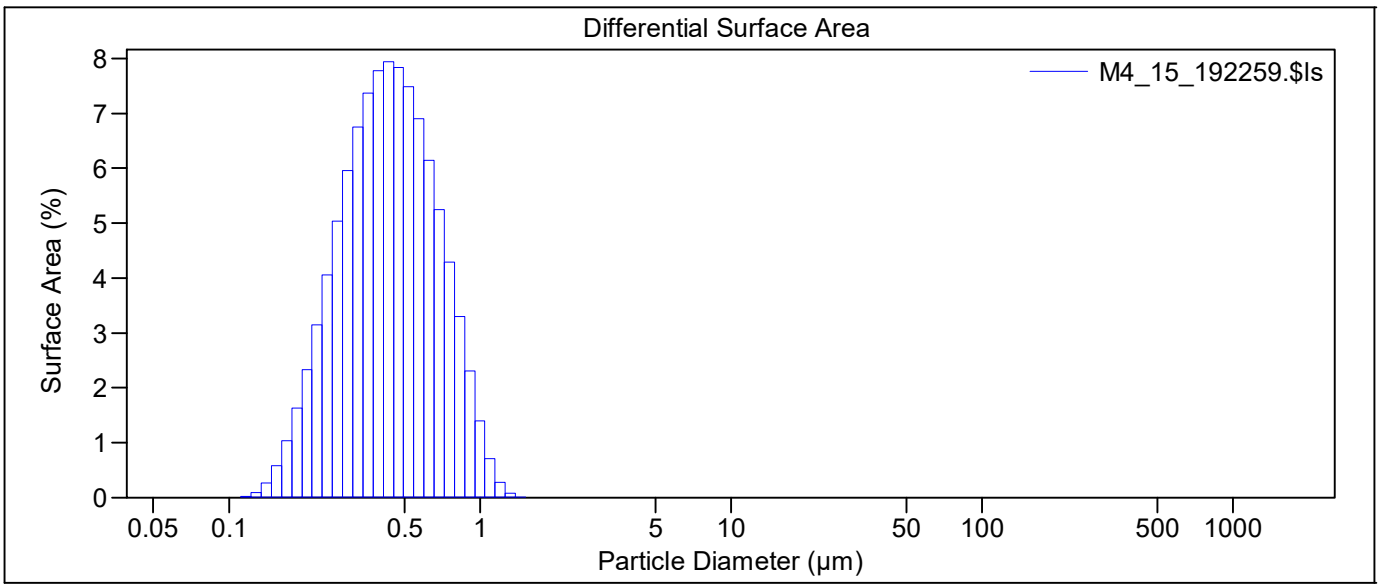
Calculations from 0.040 µm to 2000 µm

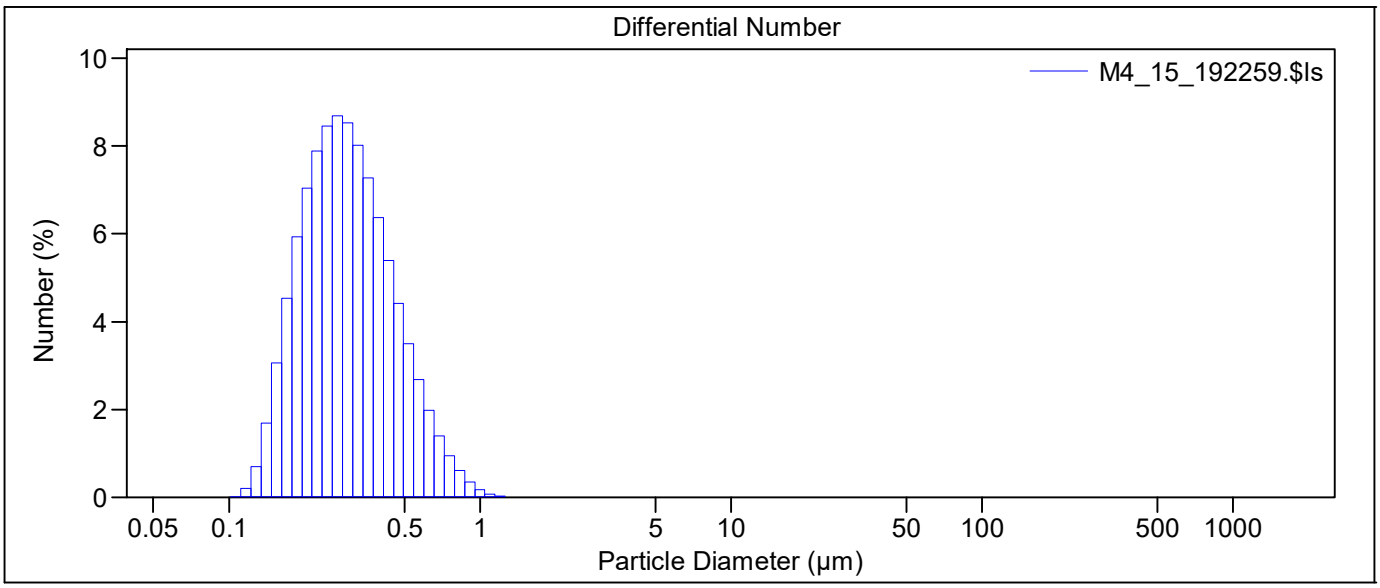
Number:	100%		
Mean:	0.324 µm	S.D.:	0.146 µm
Median:	0.289 µm	Variance:	0.021 μm^2
Mean/Median ratio:	1.121	C.V.:	45.0%
Mode:	0.271 µm	Skewness:	1.476 Right skewed
		Kurtosis:	2.970 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.177 µm	0.219 µm	0.289 µm	0.392 µm	0.521 µm

Beckman Coulter LS13320







M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0.00042	0.0019	0.021
12	0.112	0.117	0.0054	0.022	0.20
13	0.122	0.128	0.025	0.091	0.70
14	0.134	0.141	0.080	0.27	1.69
15	0.148	0.155	0.19	0.58	3.06
16	0.162	0.170	0.37	1.03	4.54
17	0.178	0.186	0.65	1.63	5.93
18	0.195	0.205	1.02	2.33	7.05
19	0.214	0.225	1.50	3.15	7.89
20	0.235	0.247	2.13	4.06	8.45
21	0.258	0.271	2.90	5.04	8.70
22	0.284	0.297	3.77	5.96	8.53
23	0.311	0.326	4.68	6.75	8.02
24	0.342	0.358	5.62	7.37	7.27
25	0.375	0.393	6.51	7.78	6.37
26	0.412	0.431	7.29	7.94	5.39
27	0.452	0.474	7.90	7.84	4.42
28	0.496	0.520	8.29	7.49	3.50
29	0.545	0.571	8.39	6.91	2.68
30	0.598	0.627	8.19	6.14	1.98
31	0.656	0.688	7.69	5.25	1.40
32	0.721	0.755	6.89	4.29	0.95
33	0.791	0.829	5.83	3.30	0.61
34	0.868	0.910	4.48	2.31	0.35
35	0.953	0.999	2.97	1.40	0.18
36	1.047	1.097	1.65	0.71	0.074
37	1.149	1.204	0.71	0.28	0.024
38	1.261	1.321	0.22	0.077	0.0056
39	1.385	1.451	0.043	0.014	0.00084
40	1.520	1.592	0.0034	0.00100	0.000050
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M4.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5.$av M5.$av
File ID:	M5
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_01_133113.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_02_133302.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_03_133449.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_04_134608.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_05_134755.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_06_134942.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_07_135936.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_08_140123.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_09_140311.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_10_141257.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_11_141445.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_12_141632.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_13_142605.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_14_142752.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_15_142939.$ls

Volume Statistics (Arithmetic) M5.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.509 µm	S.D.:	0.230 µm
Median:	0.511 µm	Variance:	0.053 µm^2
Mean/Median ratio:	0.997	C.V.:	45.2%
Mode:	0.571 µm	Skewness:	0.500 Right skewed
		Kurtosis:	1.690 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.170 µm	0.385 µm	0.511 µm	0.636 µm	0.771 µm

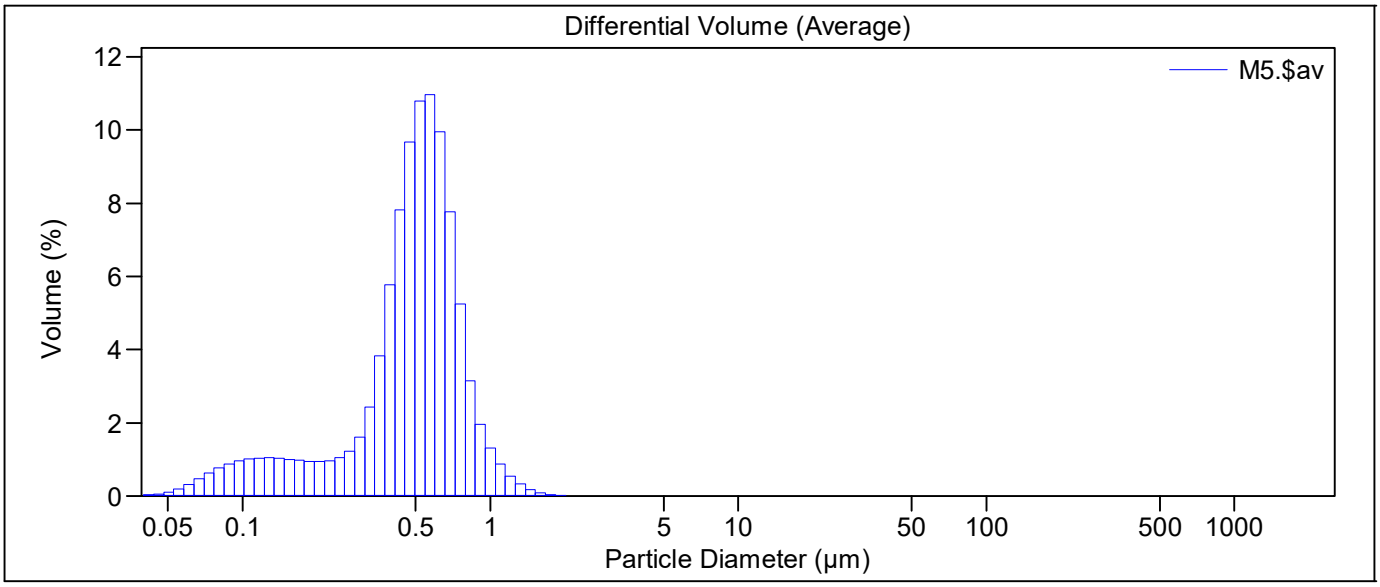
Number Statistics (Arithmetic) M5.$av

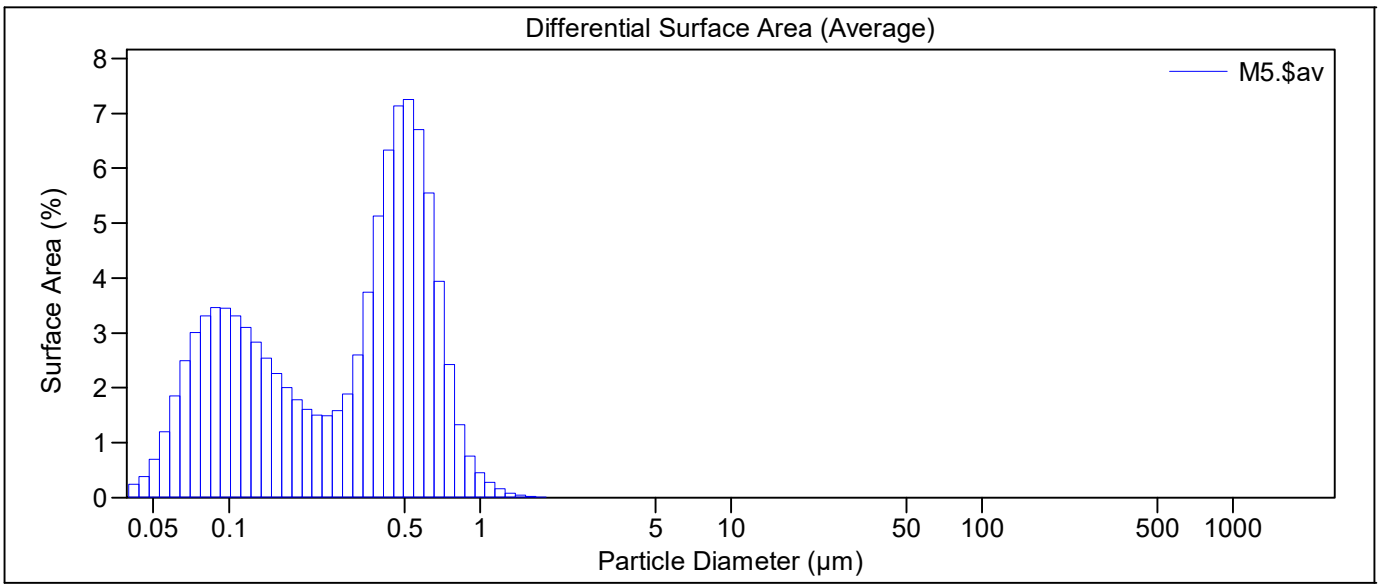
Calculations from 0.040 µm to 2000 µm

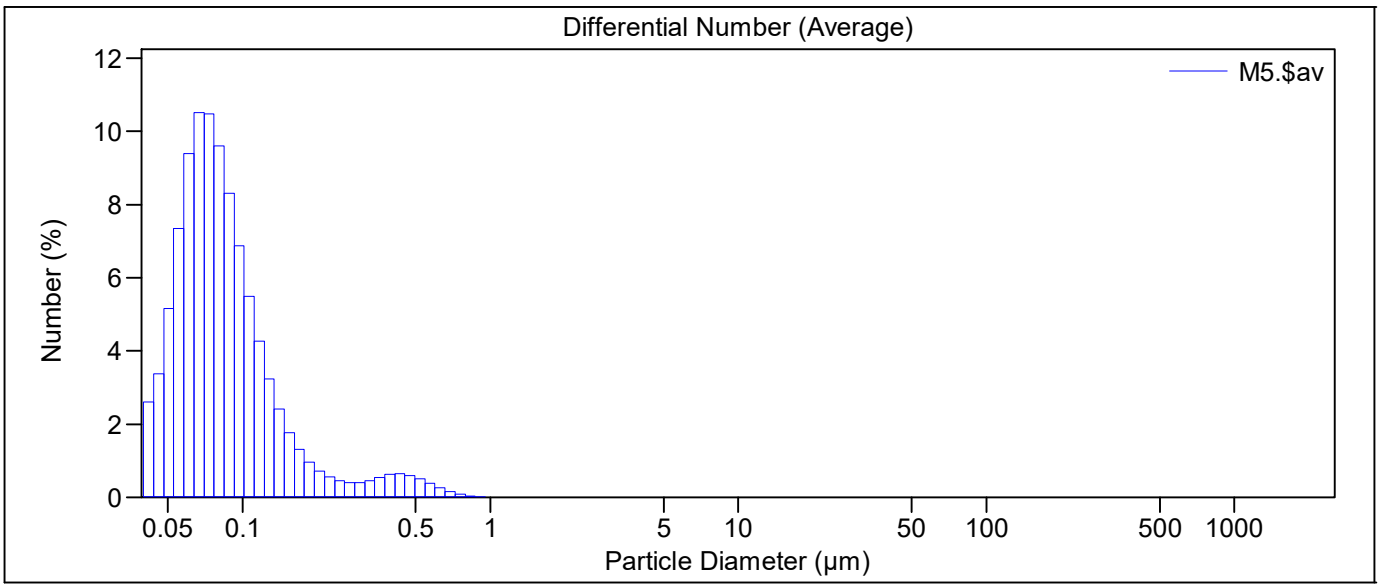
Number:	100%		
Mean:	0.103 µm	S.D.:	0.090 µm
Median:	0.078 µm	Variance:	0.0081 µm^2
Mean/Median ratio:	1.327	C.V.:	87.5%
Mode:	0.067 µm	Skewness:	4.004 Right skewed
		Kurtosis:	19.48 Leptokurtic

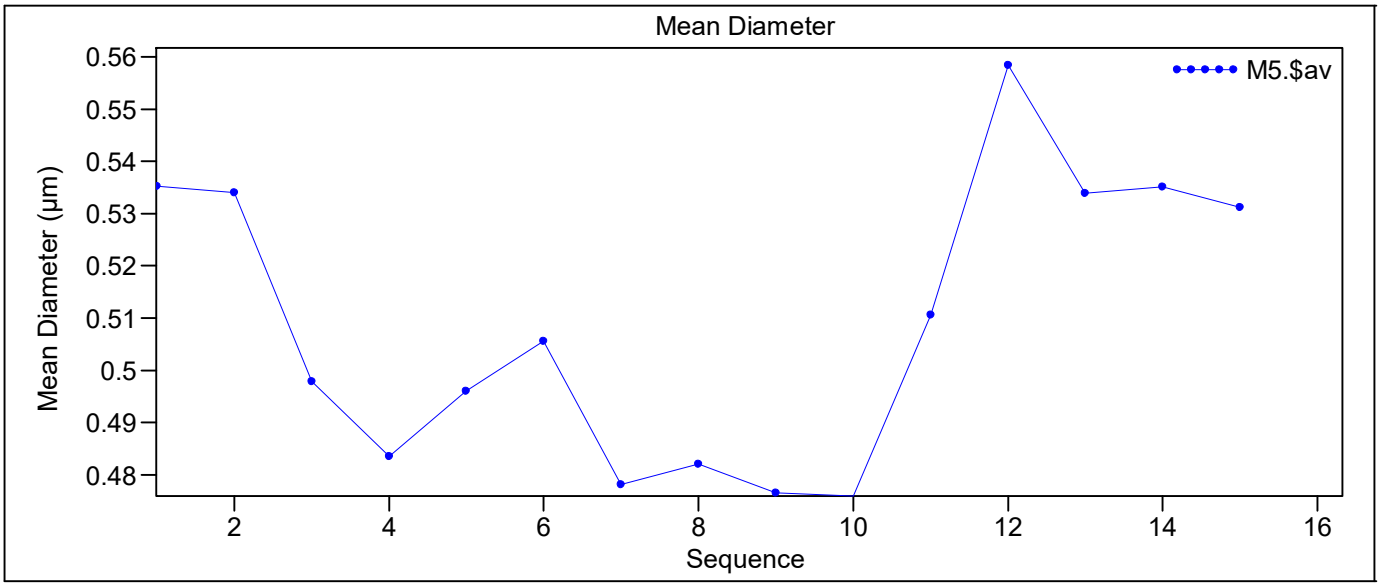
<10%	<25%	<50%	<75%	<90%
0.052 µm	0.062 µm	0.078 µm	0.104 µm	0.155 µm

Beckman Coulter LS13320









M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.029	0.24	2.60
2	0.044	0.046	0.050	0.38	3.37
3	0.048	0.050	0.10	0.70	5.16
4	0.053	0.055	0.19	1.20	7.35
5	0.058	0.061	0.32	1.85	9.40
6	0.064	0.067	0.48	2.50	10.5
7	0.070	0.073	0.63	3.00	10.5
8	0.077	0.080	0.76	3.32	9.61
9	0.084	0.088	0.87	3.46	8.31
10	0.093	0.097	0.96	3.45	6.88
11	0.102	0.106	1.01	3.32	5.49
12	0.112	0.117	1.04	3.11	4.27
13	0.122	0.128	1.04	2.84	3.23
14	0.134	0.141	1.03	2.54	2.41
15	0.148	0.155	1.00	2.26	1.77
16	0.162	0.170	0.97	2.00	1.30
17	0.178	0.186	0.95	1.78	0.96
18	0.195	0.205	0.94	1.61	0.72
19	0.214	0.225	0.97	1.51	0.56
20	0.235	0.247	1.05	1.49	0.46
21	0.258	0.271	1.22	1.58	0.41
22	0.284	0.297	1.60	1.89	0.40
23	0.311	0.326	2.42	2.60	0.46
24	0.342	0.358	3.84	3.74	0.55
25	0.375	0.393	5.78	5.14	0.62
26	0.412	0.431	7.83	6.34	0.64
27	0.452	0.474	9.68	7.14	0.60
28	0.496	0.520	10.8	7.25	0.50
29	0.545	0.571	11.0	6.71	0.39
30	0.598	0.627	9.96	5.55	0.27
31	0.656	0.688	7.77	3.94	0.16
32	0.721	0.755	5.25	2.43	0.080
33	0.791	0.829	3.15	1.33	0.036
34	0.868	0.910	1.97	0.75	0.017
35	0.953	0.999	1.31	0.46	0.0086
36	1.047	1.097	0.87	0.28	0.0043
37	1.149	1.204	0.55	0.16	0.0021
38	1.261	1.321	0.33	0.086	0.00093
39	1.385	1.451	0.18	0.043	0.00039
40	1.520	1.592	0.088	0.019	0.00014
41	1.668	1.748	0.038	0.0075	0.000046

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.013	0.0024	0.000012
43	2.011	2.107	0.0035	0.00058	0.000002
44	2.207	2.313	0.00065	0.000098	3.44E-7
45	2.423	2.539	0.000044	0.000006	1.76E-8
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_01_133113.$ls M5_01_133113.$ls		
File ID:	M5		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.98%		
LS 13 320	Universal Liquid Module		
Start time:	13:29 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	49%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_01_133113.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.535 µm	S.D.:	0.110 µm
Median:	0.528 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.014	C.V.:	20.6%
Mode:	0.520 µm	Skewness:	0.327 Right skewed
		Kurtosis:	-0.339 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.395 µm	0.453 µm	0.528 µm	0.612 µm	0.689 µm

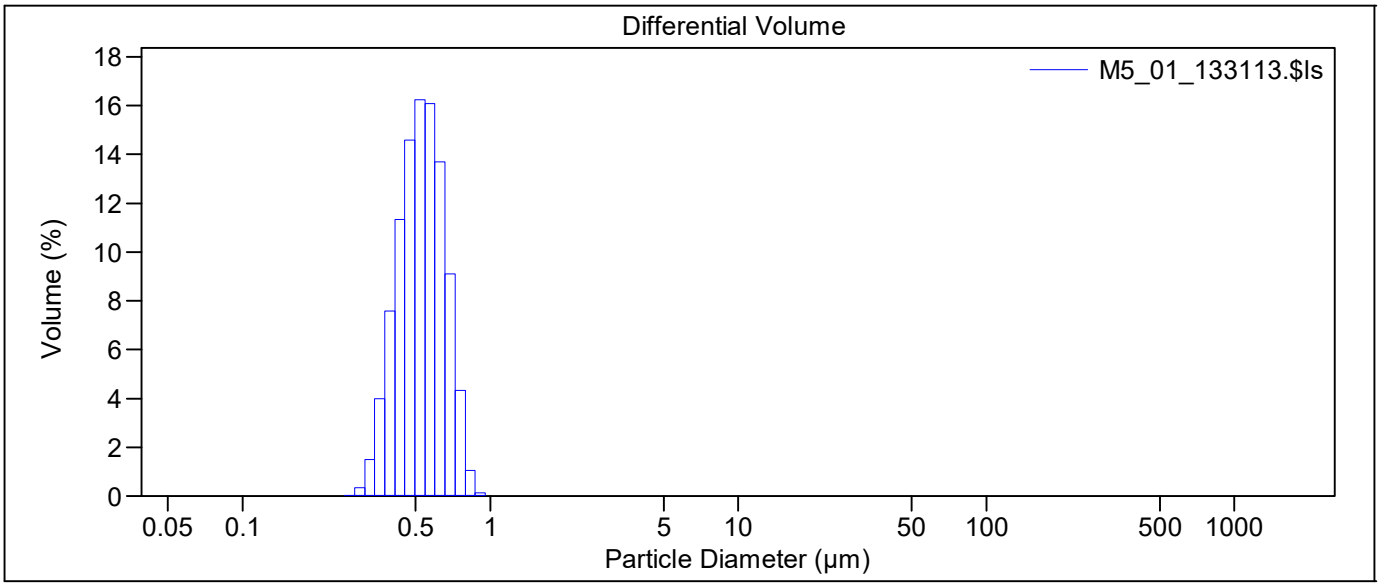
Number Statistics (Arithmetic) M5_01_133113.$ls

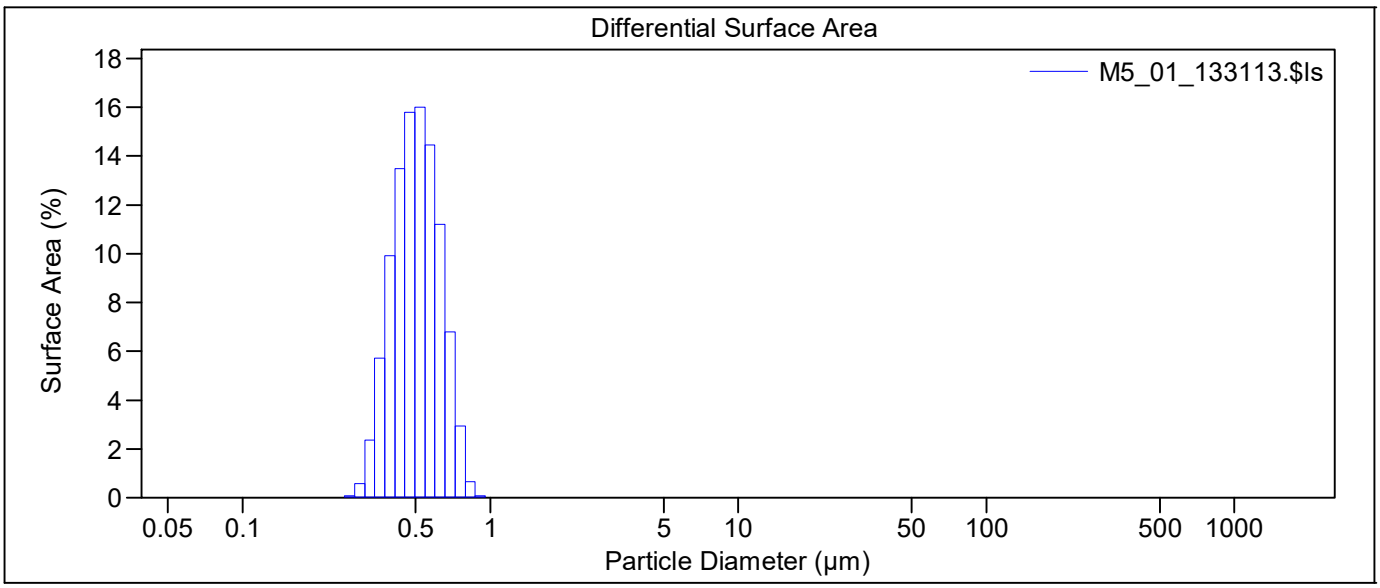
Calculations from 0.040 µm to 2000 µm

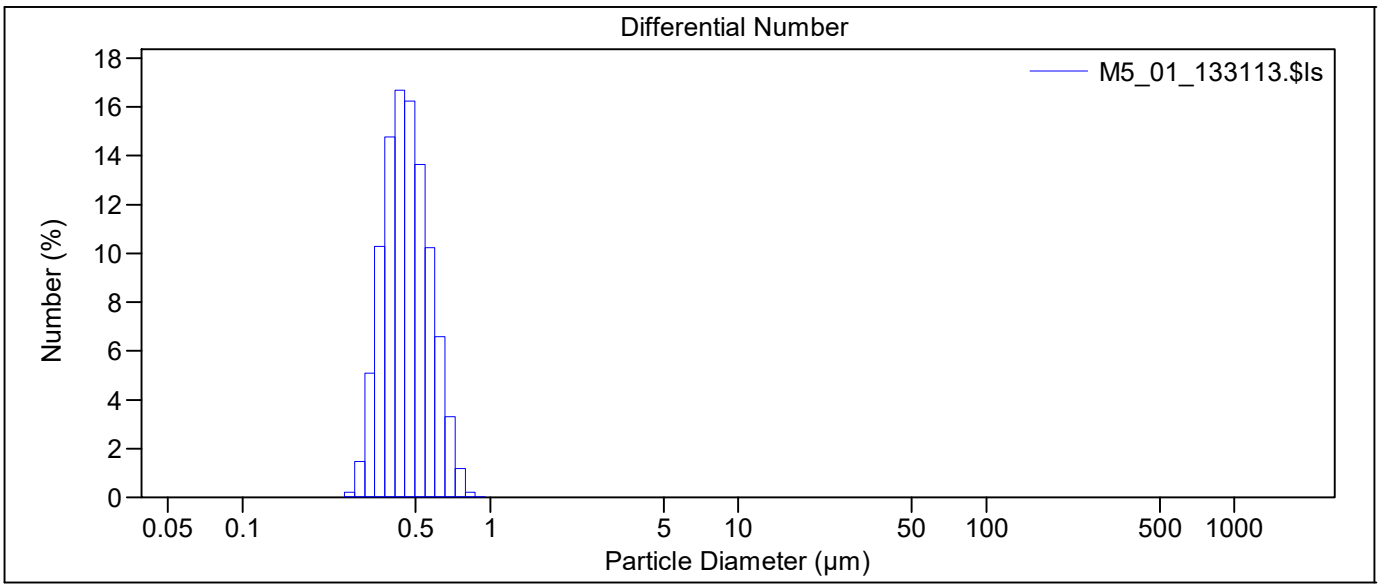
Number:	100%		
Mean:	0.470 µm	S.D.:	0.099 µm
Median:	0.456 µm	Variance:	0.0098 µm^2
Mean/Median ratio:	1.030	C.V.:	21.1%
Mode:	0.431 µm	Skewness:	0.662 Right skewed
		Kurtosis:	0.179 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.352 µm	0.395 µm	0.456 µm	0.532 µm	0.610 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0.000004	0.000008	0.000038
20	0.235	0.247	0.00100	0.0021	0.0079
21	0.258	0.271	0.036	0.068	0.22
22	0.284	0.297	0.33	0.57	1.48
23	0.311	0.326	1.50	2.35	5.10
24	0.342	0.358	3.99	5.71	10.3
25	0.375	0.393	7.59	9.91	14.8
26	0.412	0.431	11.3	13.5	16.7
27	0.452	0.474	14.6	15.8	16.2
28	0.496	0.520	16.2	16.0	13.7
29	0.545	0.571	16.1	14.4	10.2
30	0.598	0.627	13.7	11.2	6.58
31	0.656	0.688	9.10	6.78	3.31
32	0.721	0.755	4.33	2.94	1.19
33	0.791	0.829	1.04	0.64	0.22
34	0.868	0.910	0.13	0.072	0.020
35	0.953	0.999	0.0012	0.00063	0.00014
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_02_133302.$ls M5_02_133302.$ls		
File ID:	M5		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.98%		
LS 13 320	Universal Liquid Module		
Start time:	13:31 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	49%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_02_133302.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.534 µm	S.D.:	0.108 µm
Median:	0.526 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.014	C.V.:	20.3%
Mode:	0.520 µm	Skewness:	0.333 Right skewed
		Kurtosis:	-0.365 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.396 µm	0.452 µm	0.526 µm	0.610 µm	0.686 µm

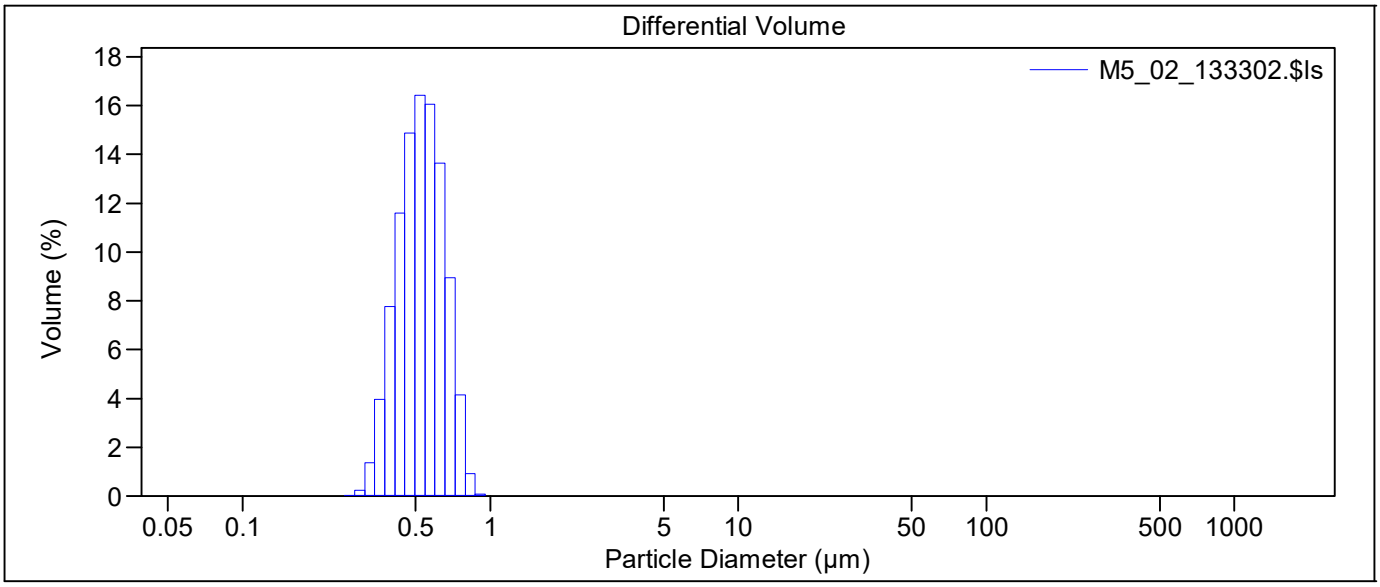
Number Statistics (Arithmetic) M5_02_133302.$ls

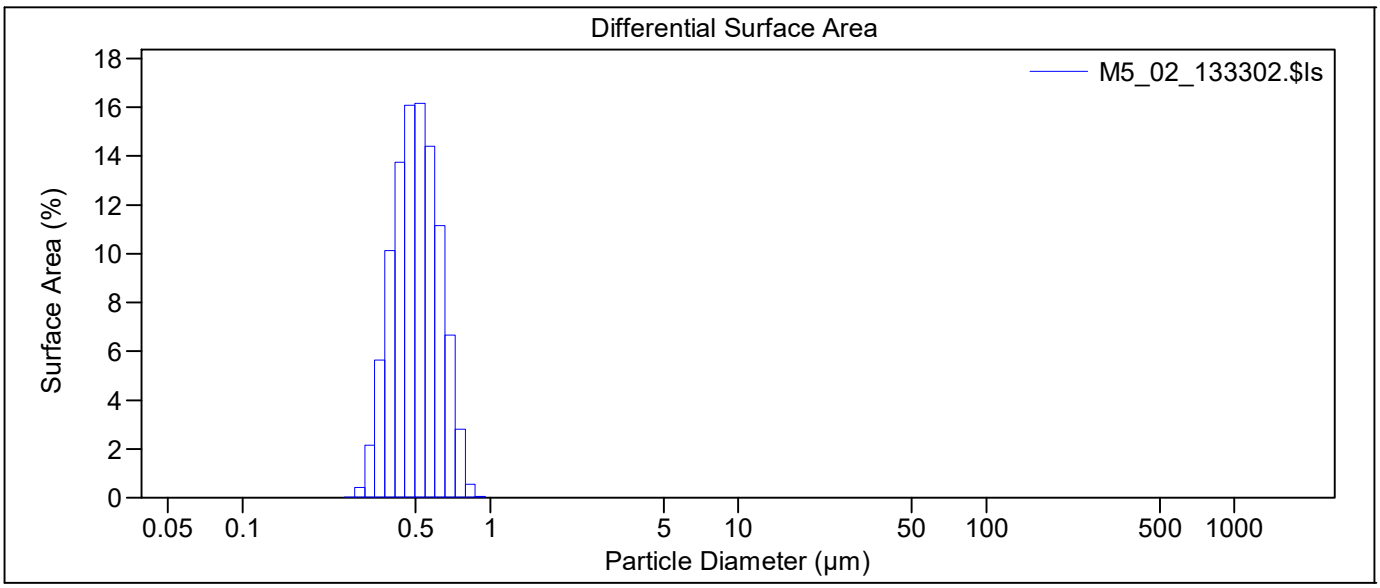
Calculations from 0.040 µm to 2000 µm

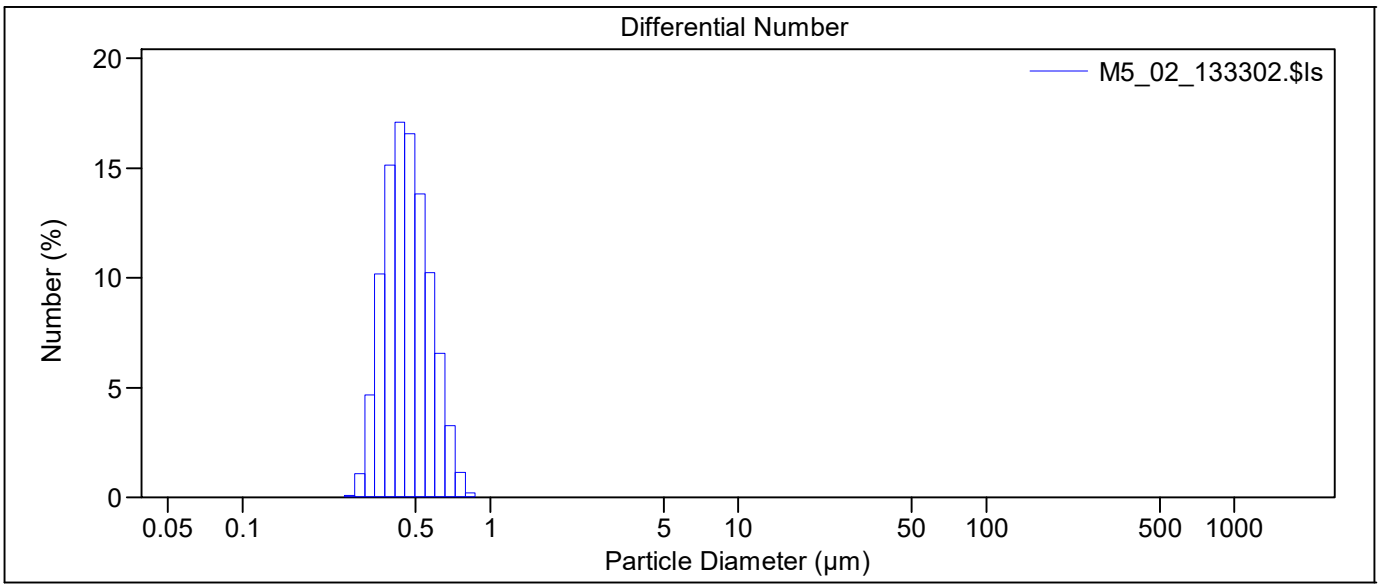
Number:	100%		
Mean:	0.471 µm	S.D.:	0.097 µm
Median:	0.457 µm	Variance:	0.0095 µm^2
Mean/Median ratio:	1.031	C.V.:	20.7%
Mode:	0.431 µm	Skewness:	0.680 Right skewed
		Kurtosis:	0.187 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.355 µm	0.397 µm	0.457 µm	0.532 µm	0.608 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0	0	0
21	0.258	0.271	0.016	0.030	0.093
22	0.284	0.297	0.24	0.41	1.07
23	0.311	0.326	1.37	2.15	4.68
24	0.342	0.358	3.95	5.65	10.2
25	0.375	0.393	7.76	10.1	15.1
26	0.412	0.431	11.6	13.8	17.1
27	0.452	0.474	14.9	16.1	16.6
28	0.496	0.520	16.4	16.2	13.8
29	0.545	0.571	16.1	14.4	10.2
30	0.598	0.627	13.6	11.1	6.56
31	0.656	0.688	8.95	6.67	3.26
32	0.721	0.755	4.14	2.81	1.14
33	0.791	0.829	0.91	0.56	0.19
34	0.868	0.910	0.089	0.050	0.014
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_03_133449.$ls M5_03_133449.$ls		
File ID:	M5		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.86%		
LS 13 320	Universal Liquid Module		
Start time:	13:33 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	49%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_03_133449.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.498 µm	S.D.:	0.320 µm
Median:	0.438 µm	Variance:	0.103 µm^2
Mean/Median ratio:	1.138	C.V.:	64.3%
Mode:	0.627 µm	Skewness:	0.722 Right skewed
		Kurtosis:	-0.174 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.128 µm	0.229 µm	0.438 µm	0.711 µm	0.967 µm

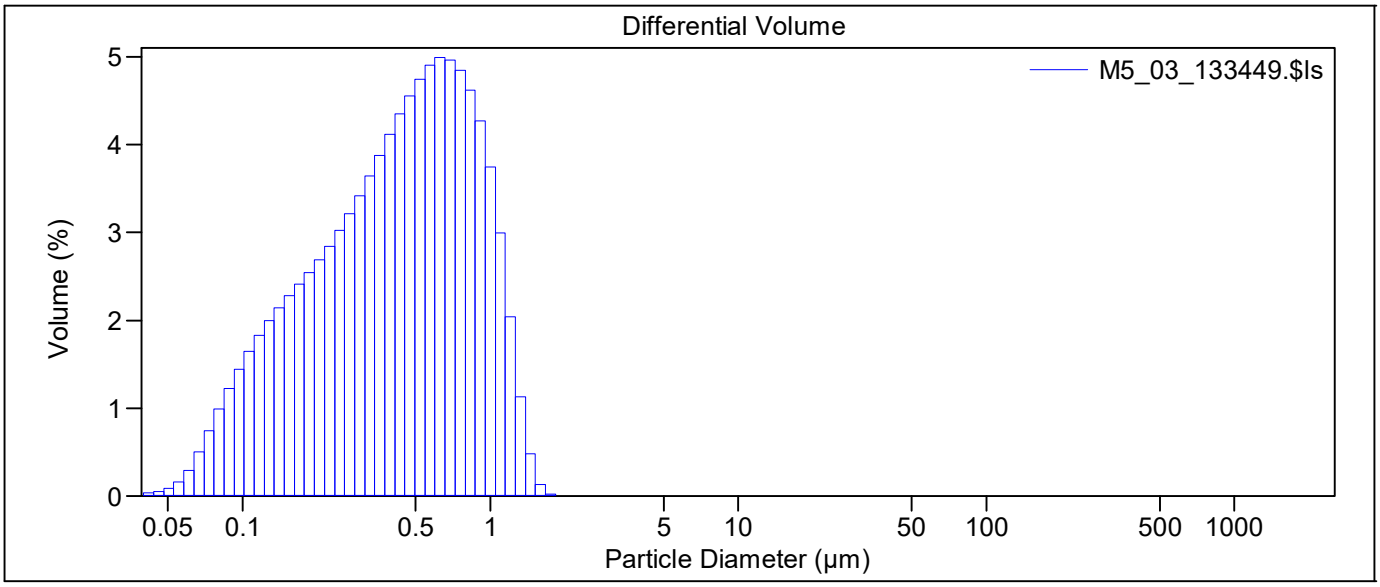
Number Statistics (Arithmetic) M5_03_133449.$ls

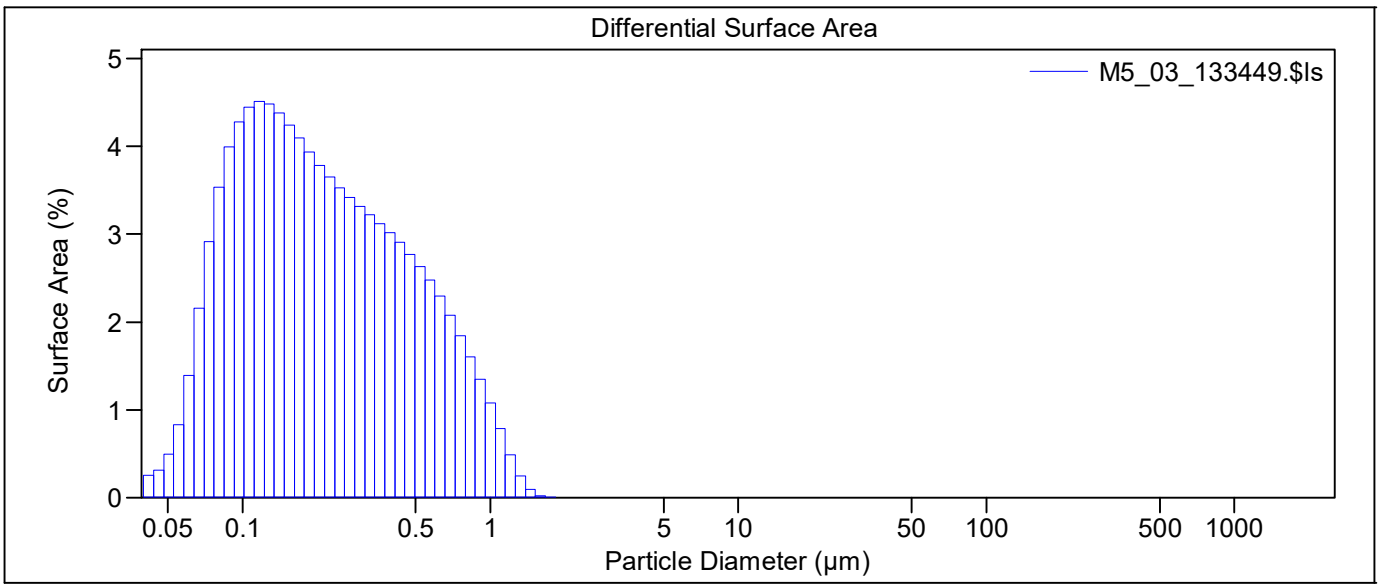
Calculations from 0.040 µm to 2000 µm

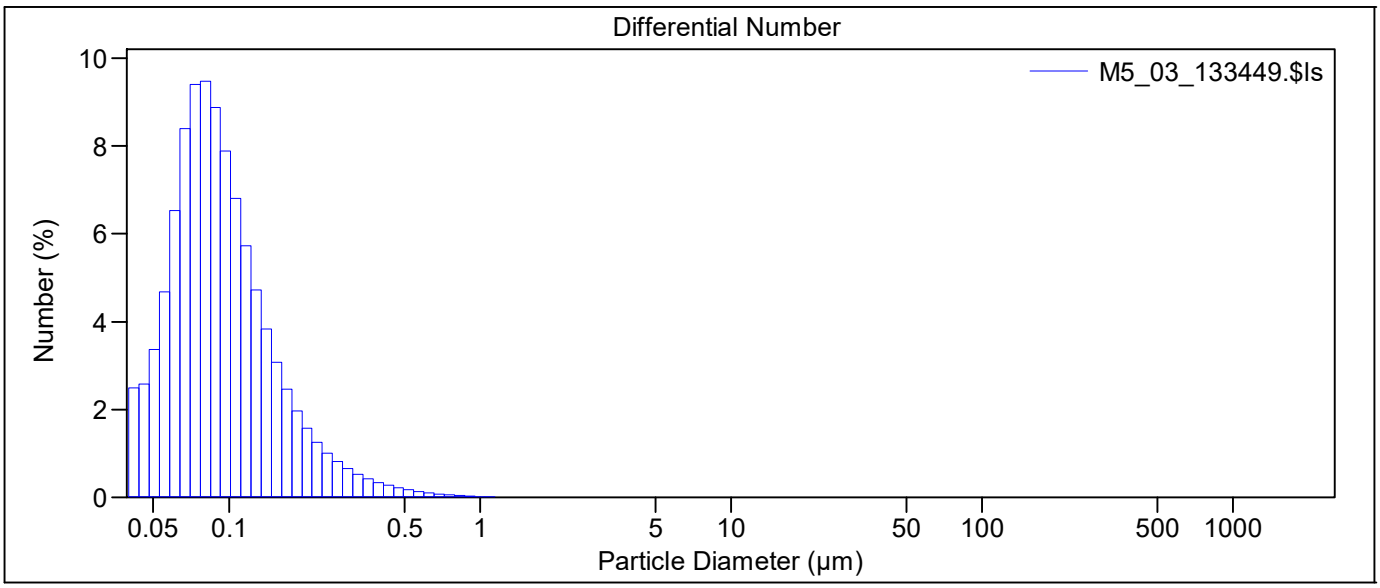
Number:	100%		
Mean:	0.108 µm	S.D.:	0.076 µm
Median:	0.087 µm	Variance:	0.0057 µm^2
Mean/Median ratio:	1.236	C.V.:	70.3%
Mode:	0.080 µm	Skewness:	4.348 Right skewed
		Kurtosis:	31.56 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.055 µm	0.068 µm	0.087 µm	0.120 µm	0.176 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.037	0.25	2.49
2	0.044	0.046	0.050	0.32	2.59
3	0.048	0.050	0.087	0.49	3.36
4	0.053	0.055	0.16	0.83	4.68
5	0.058	0.061	0.29	1.39	6.53
6	0.064	0.067	0.50	2.16	8.39
7	0.070	0.073	0.74	2.92	9.41
8	0.077	0.080	0.99	3.54	9.47
9	0.084	0.088	1.23	3.99	8.88
10	0.093	0.097	1.44	4.28	7.89
11	0.102	0.106	1.64	4.45	6.80
12	0.112	0.117	1.83	4.51	5.73
13	0.122	0.128	2.00	4.48	4.72
14	0.134	0.141	2.14	4.38	3.83
15	0.148	0.155	2.28	4.24	3.08
16	0.162	0.170	2.42	4.10	2.47
17	0.178	0.186	2.55	3.94	1.97
18	0.195	0.205	2.69	3.78	1.57
19	0.214	0.225	2.85	3.65	1.26
20	0.235	0.247	3.02	3.53	1.01
21	0.258	0.271	3.21	3.42	0.81
22	0.284	0.297	3.42	3.31	0.65
23	0.311	0.326	3.65	3.22	0.53
24	0.342	0.358	3.88	3.12	0.42
25	0.375	0.393	4.12	3.02	0.34
26	0.412	0.431	4.35	2.91	0.27
27	0.452	0.474	4.56	2.77	0.21
28	0.496	0.520	4.75	2.63	0.17
29	0.545	0.571	4.91	2.48	0.13
30	0.598	0.627	4.99	2.29	0.10
31	0.656	0.688	4.97	2.08	0.076
32	0.721	0.755	4.84	1.85	0.056
33	0.791	0.829	4.62	1.60	0.041
34	0.868	0.910	4.27	1.35	0.028
35	0.953	0.999	3.74	1.08	0.019
36	1.047	1.097	2.99	0.79	0.011
37	1.149	1.204	2.04	0.49	0.0058
38	1.261	1.321	1.13	0.25	0.0024
39	1.385	1.451	0.48	0.095	0.00079
40	1.520	1.592	0.13	0.024	0.00016
41	1.668	1.748	0.024	0.0040	0.000023
42	1.832	1.919	0.0019	0.00029	0.000001
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_04_134608.$ls M5_04_134608.$ls		
File ID:	M5		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.00%		
LS 13 320	Universal Liquid Module		
Start time:	13:44 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	44%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_04_134608.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.483 µm	S.D.:	0.222 µm
Median:	0.508 µm	Variance:	0.049 μm^2
Mean/Median ratio:	0.952	C.V.:	45.9%
Mode:	0.571 µm	Skewness:	-0.202 Left skewed
		Kurtosis:	-0.334 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.118 µm	0.365 µm	0.508 µm	0.632 µm	0.749 µm

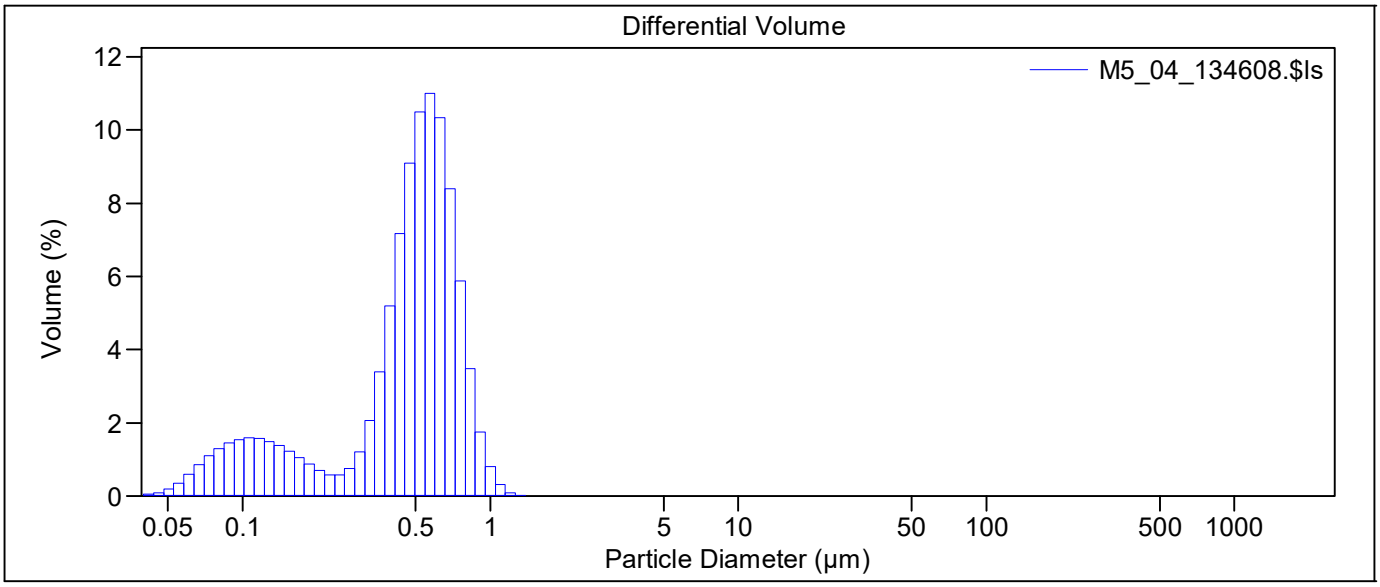
Number Statistics (Arithmetic) M5_04_134608.$ls

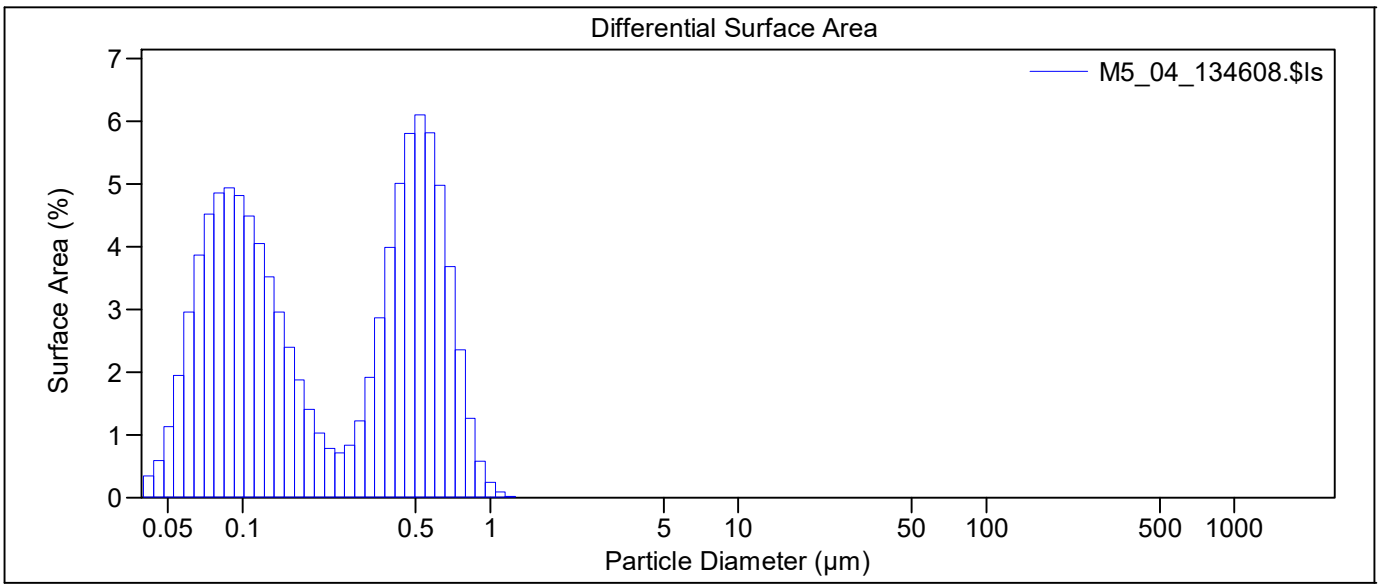
Calculations from 0.040 µm to 2000 µm

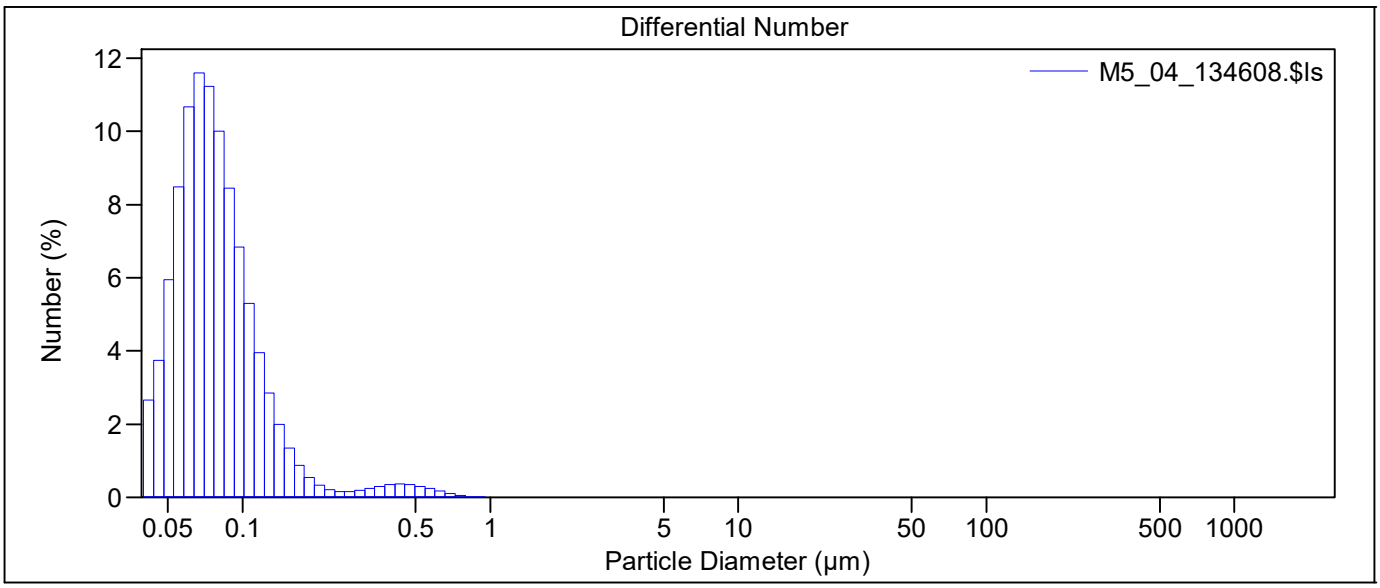
Number:	100%		
Mean:	0.091 µm	S.D.:	0.072 µm
Median:	0.074 µm	Variance:	0.0051 μm^2
Mean/Median ratio:	1.224	C.V.:	78.8%
Mode:	0.067 µm	Skewness:	5.175 Right skewed
		Kurtosis:	33.04 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.127 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.048	0.35	2.66
2	0.044	0.046	0.090	0.59	3.74
3	0.048	0.050	0.19	1.14	5.95
4	0.053	0.055	0.36	1.95	8.48
5	0.058	0.061	0.60	2.96	10.7
6	0.064	0.067	0.86	3.87	11.6
7	0.070	0.073	1.10	4.52	11.2
8	0.077	0.080	1.29	4.85	10.0
9	0.084	0.088	1.45	4.94	8.45
10	0.093	0.097	1.55	4.81	6.83
11	0.102	0.106	1.58	4.49	5.29
12	0.112	0.117	1.57	4.05	3.96
13	0.122	0.128	1.49	3.52	2.85
14	0.134	0.141	1.38	2.96	1.99
15	0.148	0.155	1.23	2.40	1.34
16	0.162	0.170	1.06	1.88	0.87
17	0.178	0.186	0.87	1.41	0.54
18	0.195	0.205	0.70	1.03	0.33
19	0.214	0.225	0.58	0.78	0.21
20	0.235	0.247	0.58	0.71	0.16
21	0.258	0.271	0.75	0.83	0.15
22	0.284	0.297	1.20	1.22	0.19
23	0.311	0.326	2.07	1.92	0.24
24	0.342	0.358	3.39	2.86	0.30
25	0.375	0.393	5.19	3.99	0.34
26	0.412	0.431	7.16	5.01	0.36
27	0.452	0.474	9.10	5.80	0.35
28	0.496	0.520	10.5	6.10	0.30
29	0.545	0.571	11.0	5.82	0.24
30	0.598	0.627	10.3	4.98	0.17
31	0.656	0.688	8.39	3.68	0.10
32	0.721	0.755	5.88	2.35	0.055
33	0.791	0.829	3.48	1.27	0.025
34	0.868	0.910	1.75	0.58	0.0093
35	0.953	0.999	0.80	0.24	0.0032
36	1.047	1.097	0.32	0.087	0.00097
37	1.149	1.204	0.086	0.022	0.00020
38	1.261	1.321	0.017	0.0040	0.000031
39	1.385	1.451	0.0013	0.00027	0.000002
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_05_134755.$ls M5_05_134755.$ls		
File ID:	M5		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.84%		
LS 13 320	Universal Liquid Module		
Start time:	13:46 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_05_134755.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.496 µm	S.D.:	0.337 µm
Median:	0.421 µm	Variance:	0.113 μm^2
Mean/Median ratio:	1.179	C.V.:	67.9%
Mode:	0.627 µm	Skewness:	0.854 Right skewed
		Kurtosis:	0.115 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.124 µm	0.216 µm	0.421 µm	0.711 µm	0.993 µm

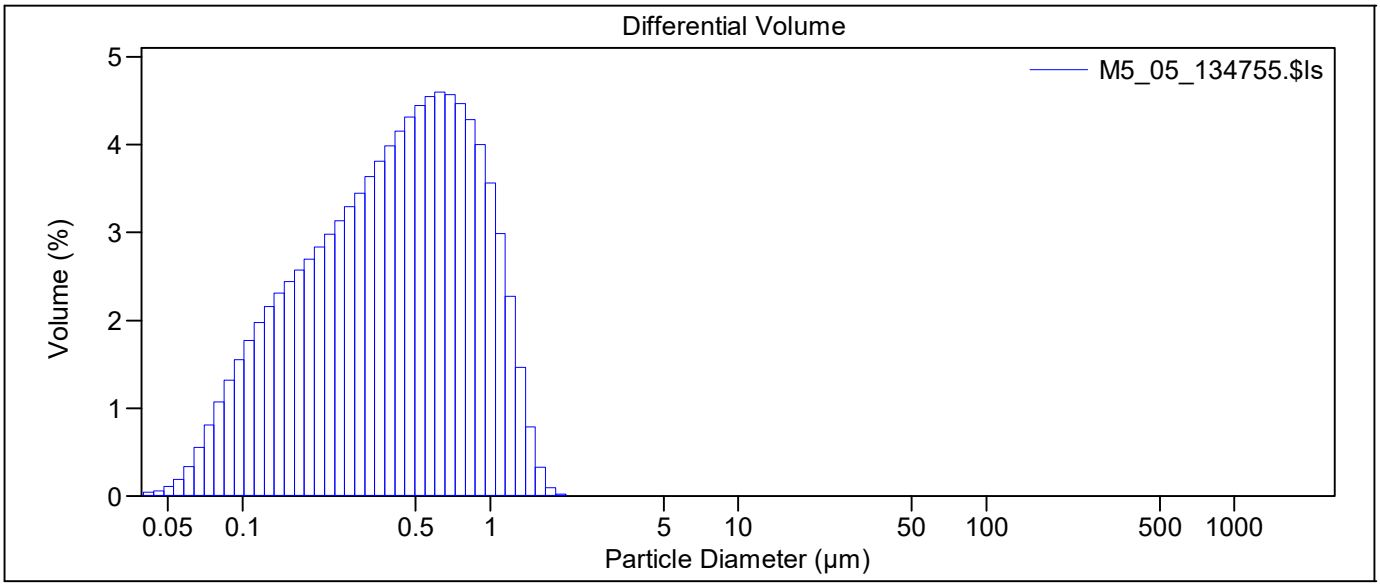
Number Statistics (Arithmetic) M5_05_134755.$ls

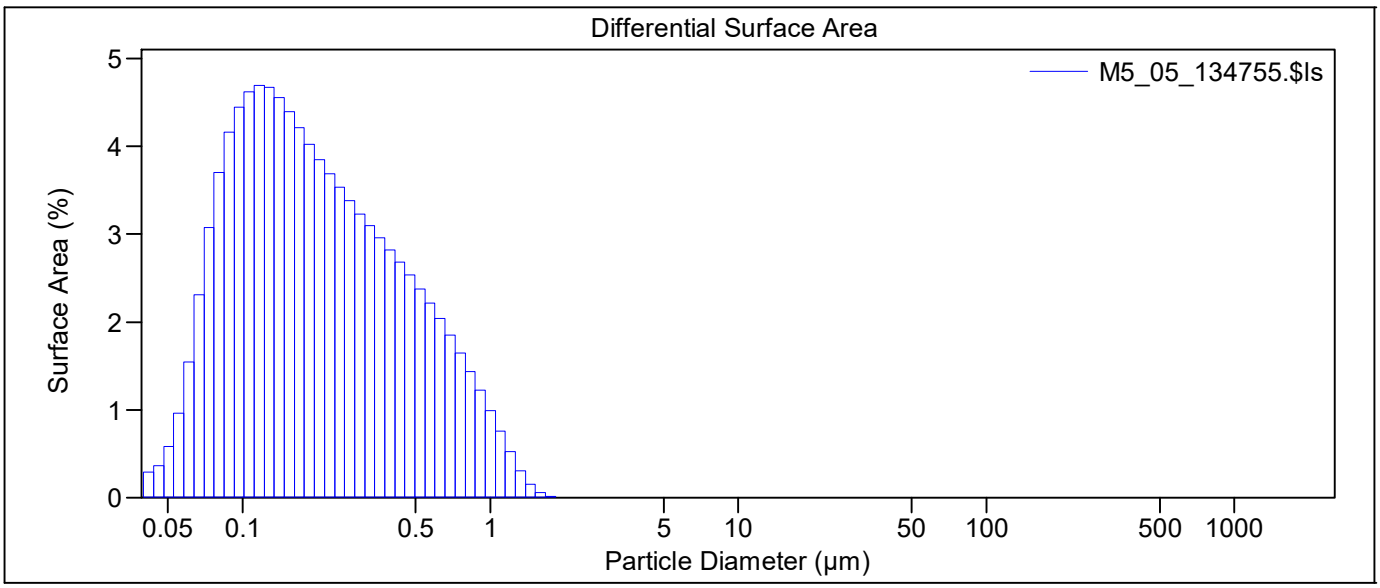
Calculations from 0.040 µm to 2000 µm

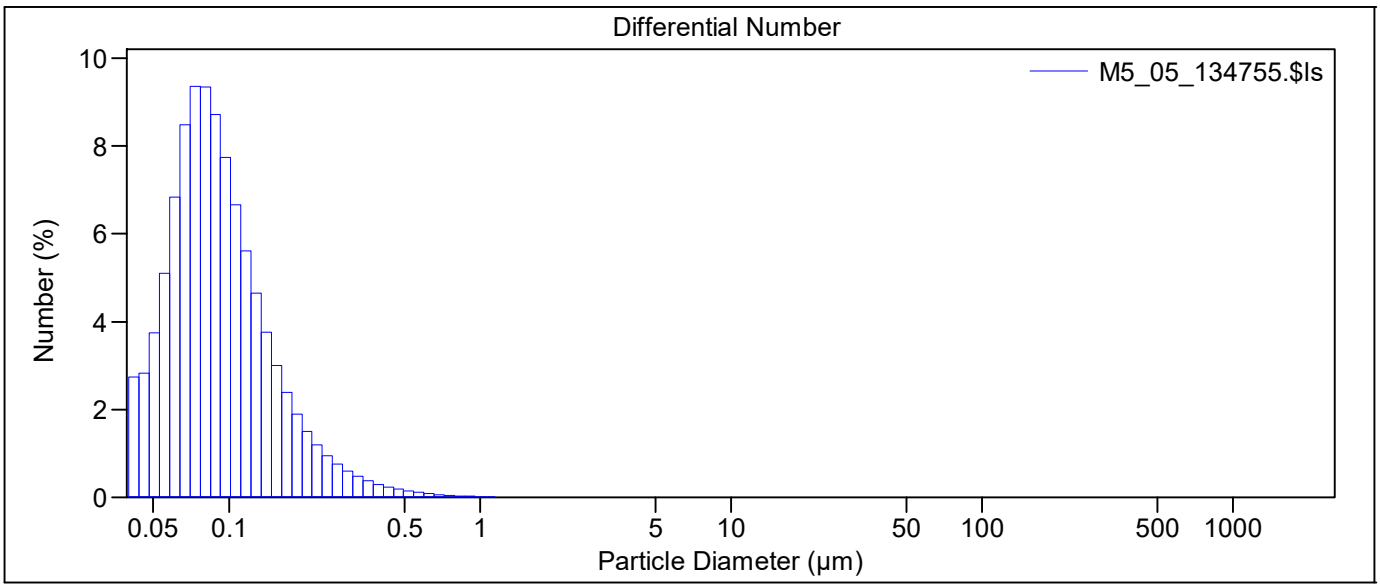
Number:	100%		
Mean:	0.105 µm	S.D.:	0.073 µm
Median:	0.086 µm	Variance:	0.0053 μm^2
Mean/Median ratio:	1.227	C.V.:	69.0%
Mode:	0.073 µm	Skewness:	4.477 Right skewed
		Kurtosis:	35.07 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.066 µm	0.086 µm	0.118 µm	0.171 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.044	0.29	2.75
2	0.044	0.046	0.061	0.37	2.83
3	0.048	0.050	0.11	0.58	3.75
4	0.053	0.055	0.19	0.96	5.10
5	0.058	0.061	0.34	1.55	6.83
6	0.064	0.067	0.56	2.31	8.48
7	0.070	0.073	0.81	3.07	9.35
8	0.077	0.080	1.07	3.70	9.35
9	0.084	0.088	1.32	4.16	8.71
10	0.093	0.097	1.55	4.45	7.74
11	0.102	0.106	1.77	4.62	6.66
12	0.112	0.117	1.97	4.69	5.62
13	0.122	0.128	2.16	4.67	4.64
14	0.134	0.141	2.31	4.56	3.76
15	0.148	0.155	2.44	4.39	3.00
16	0.162	0.170	2.57	4.22	2.39
17	0.178	0.186	2.70	4.03	1.90
18	0.195	0.205	2.83	3.85	1.51
19	0.214	0.225	2.98	3.69	1.20
20	0.235	0.247	3.13	3.54	0.95
21	0.258	0.271	3.29	3.38	0.76
22	0.284	0.297	3.45	3.23	0.60
23	0.311	0.326	3.63	3.10	0.48
24	0.342	0.358	3.81	2.96	0.38
25	0.375	0.393	3.99	2.82	0.30
26	0.412	0.431	4.16	2.68	0.24
27	0.452	0.474	4.31	2.53	0.18
28	0.496	0.520	4.45	2.38	0.14
29	0.545	0.571	4.55	2.22	0.11
30	0.598	0.627	4.60	2.04	0.085
31	0.656	0.688	4.57	1.85	0.064
32	0.721	0.755	4.47	1.65	0.047
33	0.791	0.829	4.29	1.44	0.034
34	0.868	0.910	4.00	1.22	0.024
35	0.953	0.999	3.57	0.99	0.016
36	1.047	1.097	2.99	0.76	0.010
37	1.149	1.204	2.27	0.52	0.0059
38	1.261	1.321	1.46	0.31	0.0029
39	1.385	1.451	0.79	0.15	0.0012
40	1.520	1.592	0.33	0.058	0.00037
41	1.668	1.748	0.096	0.015	0.000081
42	1.832	1.919	0.019	0.0028	0.000012
43	2.011	2.107	0.0016	0.00021	0.000001
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_06_134942.$ls M5_06_134942.$ls		
File ID:	M5		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.20%		
LS 13 320	Universal Liquid Module		
Start time:	13:48 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_06_134942.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.506 µm	S.D.:	0.215 µm
Median:	0.516 µm	Variance:	0.046 µm^2
Mean/Median ratio:	0.980	C.V.:	42.5%
Mode:	0.571 µm	Skewness:	-0.158 Left skewed
		Kurtosis:	-0.036 Platykurtic

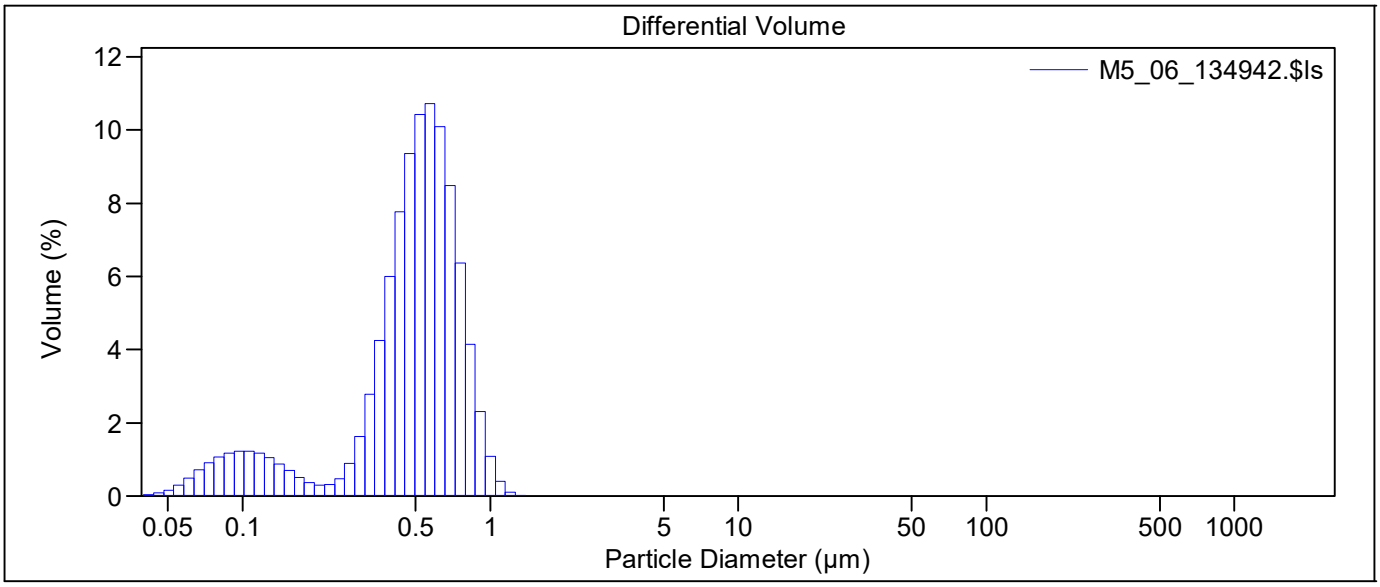
<10%	<25%	<50%	<75%	<90%
0.140 µm	0.389 µm	0.516 µm	0.645 µm	0.770 µm

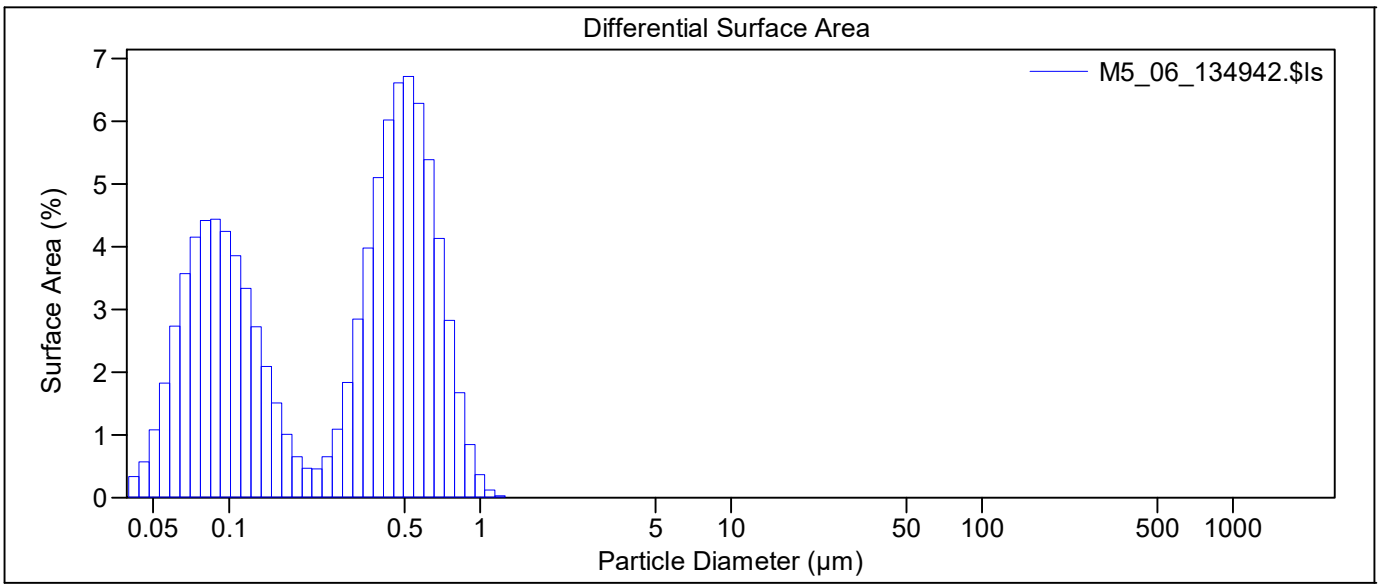
Number Statistics (Arithmetic) M5_06_134942.$ls

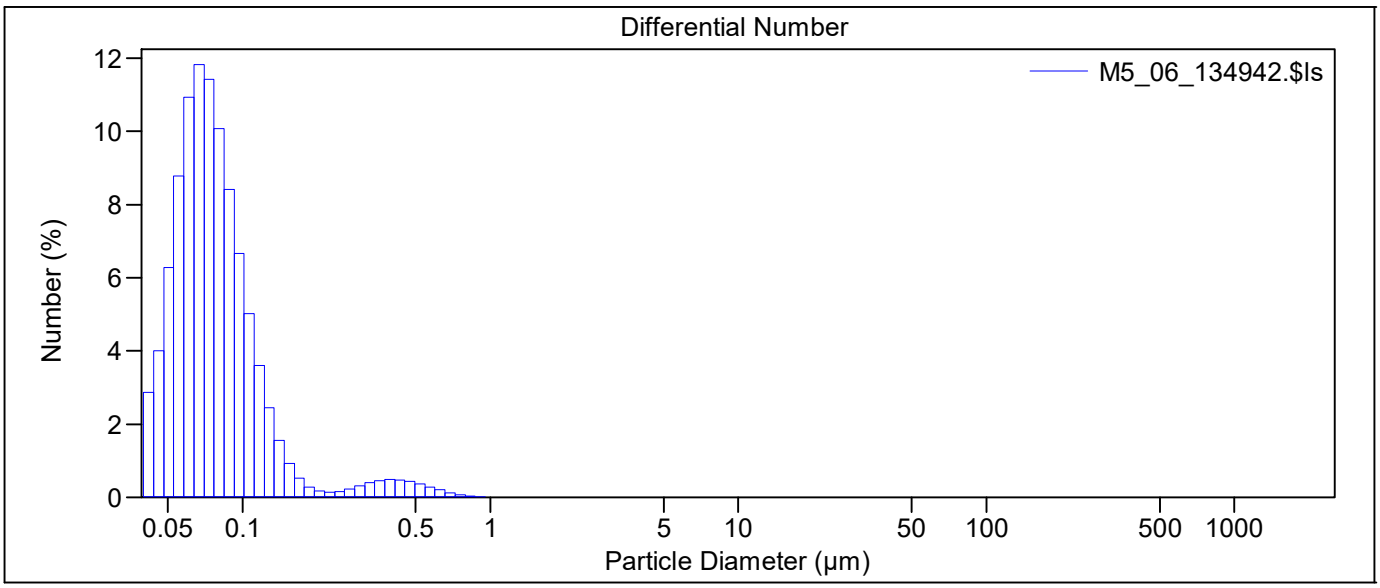
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.092 µm	S.D.:	0.079 µm
Median:	0.073 µm	Variance:	0.0063 µm^2
Mean/Median ratio:	1.258	C.V.:	86.3%
Mode:	0.067 µm	Skewness:	4.827 Right skewed
		Kurtosis:	27.48 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.073 µm	0.093 µm	0.123 µm


Differential Volume
M5_06_134942.$ls
Volume (%)
0
2
4
6
8
10
12
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M5_06_134942.$ls
Surface Area (%)
0
1
2
3
4
5
6
7
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M5_06_134942.$ls
Number (%)
0
2
4
6
8
10
12
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.043	0.34	2.86
2	0.044	0.046	0.079	0.57	4.00
3	0.048	0.050	0.16	1.08	6.28
4	0.053	0.055	0.30	1.82	8.78
5	0.058	0.061	0.50	2.74	10.9
6	0.064	0.067	0.71	3.57	11.8
7	0.070	0.073	0.91	4.15	11.4
8	0.077	0.080	1.06	4.42	10.1
9	0.084	0.088	1.17	4.44	8.41
10	0.093	0.097	1.23	4.24	6.67
11	0.102	0.106	1.23	3.85	5.03
12	0.112	0.117	1.16	3.33	3.61
13	0.122	0.128	1.04	2.72	2.44
14	0.134	0.141	0.88	2.10	1.56
15	0.148	0.155	0.70	1.51	0.93
16	0.162	0.170	0.51	1.01	0.52
17	0.178	0.186	0.36	0.65	0.28
18	0.195	0.205	0.29	0.47	0.17
19	0.214	0.225	0.31	0.46	0.13
20	0.235	0.247	0.48	0.65	0.16
21	0.258	0.271	0.89	1.09	0.22
22	0.284	0.297	1.63	1.84	0.31
23	0.311	0.326	2.78	2.85	0.40
24	0.342	0.358	4.25	3.98	0.46
25	0.375	0.393	6.00	5.10	0.49
26	0.412	0.431	7.76	6.02	0.48
27	0.452	0.474	9.36	6.61	0.44
28	0.496	0.520	10.4	6.71	0.37
29	0.545	0.571	10.7	6.29	0.29
30	0.598	0.627	10.1	5.39	0.20
31	0.656	0.688	8.49	4.13	0.13
32	0.721	0.755	6.37	2.82	0.073
33	0.791	0.829	4.15	1.68	0.036
34	0.868	0.910	2.31	0.85	0.015
35	0.953	0.999	1.09	0.36	0.0054
36	1.047	1.097	0.40	0.12	0.0015
37	1.149	1.204	0.10	0.028	0.00029
38	1.261	1.321	0.017	0.0044	0.000037
39	1.385	1.451	0.0011	0.00026	0.000002
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.049	0.35	2.58
2	0.044	0.046	0.092	0.59	3.62
3	0.048	0.050	0.20	1.14	5.82
4	0.053	0.055	0.38	2.00	8.46
5	0.058	0.061	0.63	3.05	10.7
6	0.064	0.067	0.91	3.99	11.7
7	0.070	0.073	1.16	4.65	11.3
8	0.077	0.080	1.37	4.99	10.0
9	0.084	0.088	1.52	5.07	8.46
10	0.093	0.097	1.63	4.94	6.84
11	0.102	0.106	1.67	4.61	5.30
12	0.112	0.117	1.66	4.17	3.98
13	0.122	0.128	1.59	3.64	2.88
14	0.134	0.141	1.49	3.11	2.04
15	0.148	0.155	1.36	2.58	1.41
16	0.162	0.170	1.21	2.09	0.94
17	0.178	0.186	1.03	1.63	0.61
18	0.195	0.205	0.86	1.23	0.38
19	0.214	0.225	0.71	0.93	0.24
20	0.235	0.247	0.65	0.78	0.17
21	0.258	0.271	0.75	0.82	0.14
22	0.284	0.297	1.12	1.10	0.16
23	0.311	0.326	1.88	1.69	0.21
24	0.342	0.358	3.12	2.56	0.26
25	0.375	0.393	4.88	3.65	0.31
26	0.412	0.431	6.88	4.69	0.33
27	0.452	0.474	8.91	5.53	0.32
28	0.496	0.520	10.4	5.90	0.28
29	0.545	0.571	11.0	5.68	0.23
30	0.598	0.627	10.4	4.90	0.16
31	0.656	0.688	8.46	3.62	0.100
32	0.721	0.755	5.86	2.28	0.052
33	0.791	0.829	3.36	1.19	0.023
34	0.868	0.910	1.63	0.53	0.0083
35	0.953	0.999	0.73	0.21	0.0028
36	1.047	1.097	0.29	0.077	0.00083
37	1.149	1.204	0.076	0.019	0.00017
38	1.261	1.321	0.015	0.0033	0.000024
39	1.385	1.451	0.00089	0.00018	0.000001
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_08_140123.$ls M5_08_140123.$ls		
File ID:	M5		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.93%		
LS 13 320	Universal Liquid Module		
Start time:	13:59 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_08_140123.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.482 µm	S.D.:	0.222 µm
Median:	0.508 µm	Variance:	0.049 μm^2
Mean/Median ratio:	0.949	C.V.:	46.0%
Mode:	0.571 µm	Skewness:	-0.215 Left skewed
		Kurtosis:	-0.363 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.117 µm	0.364 µm	0.508 µm	0.632 µm	0.746 µm

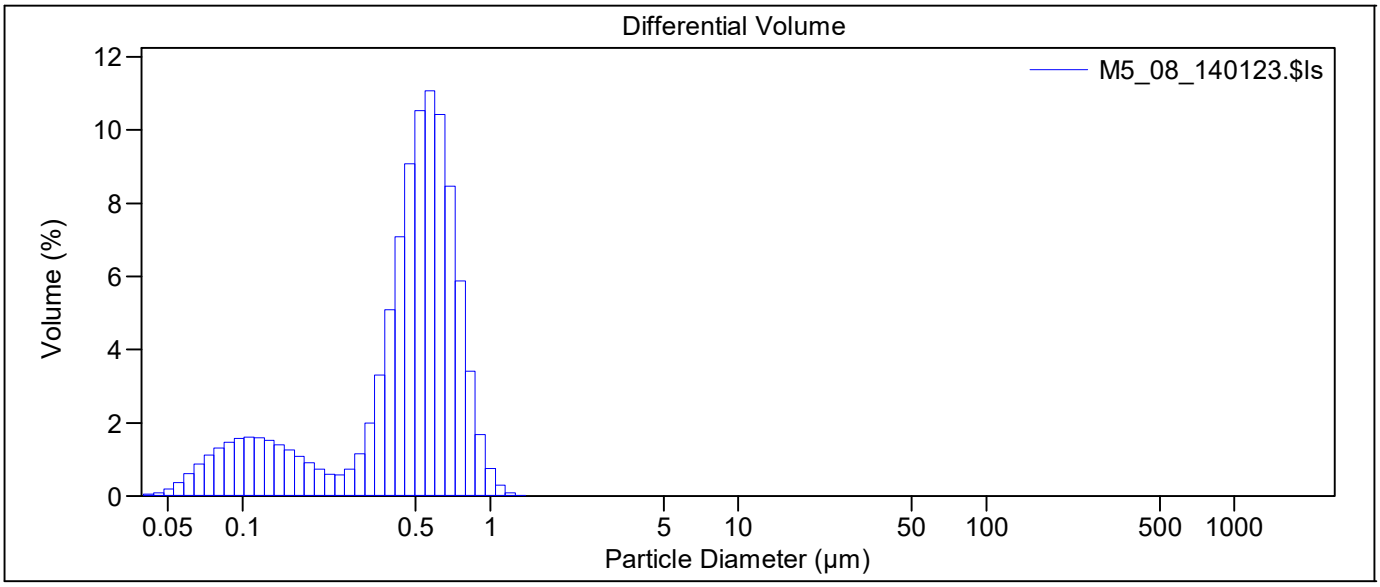
Number Statistics (Arithmetic) M5_08_140123.$ls

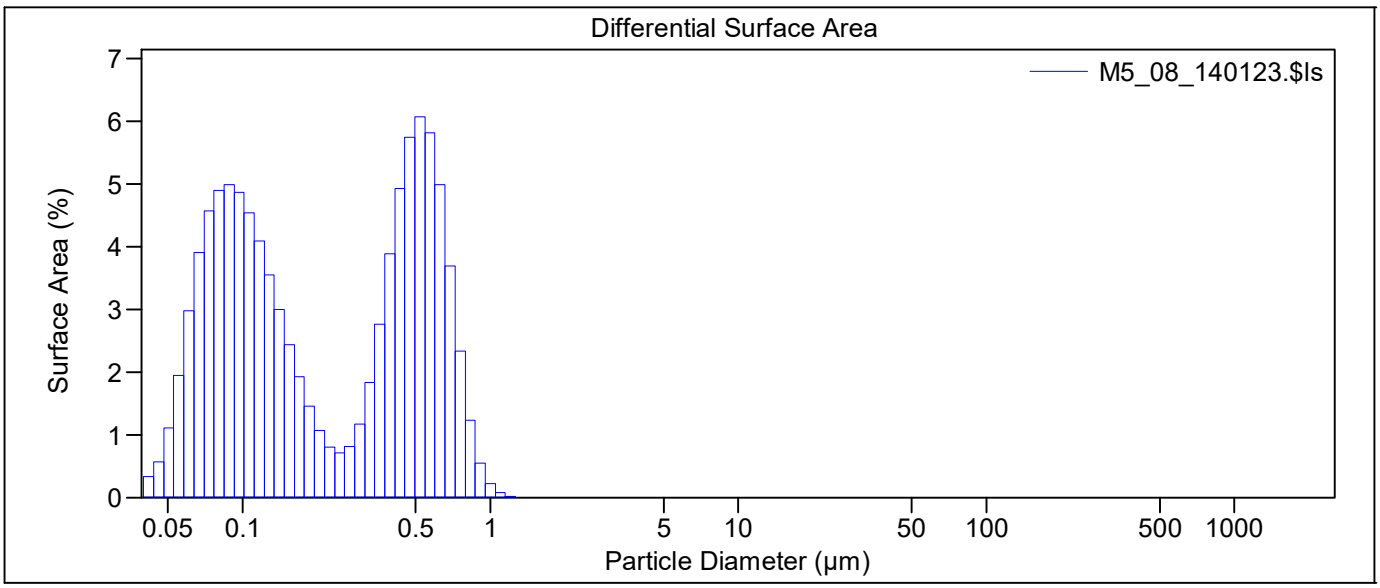
Calculations from 0.040 µm to 2000 µm

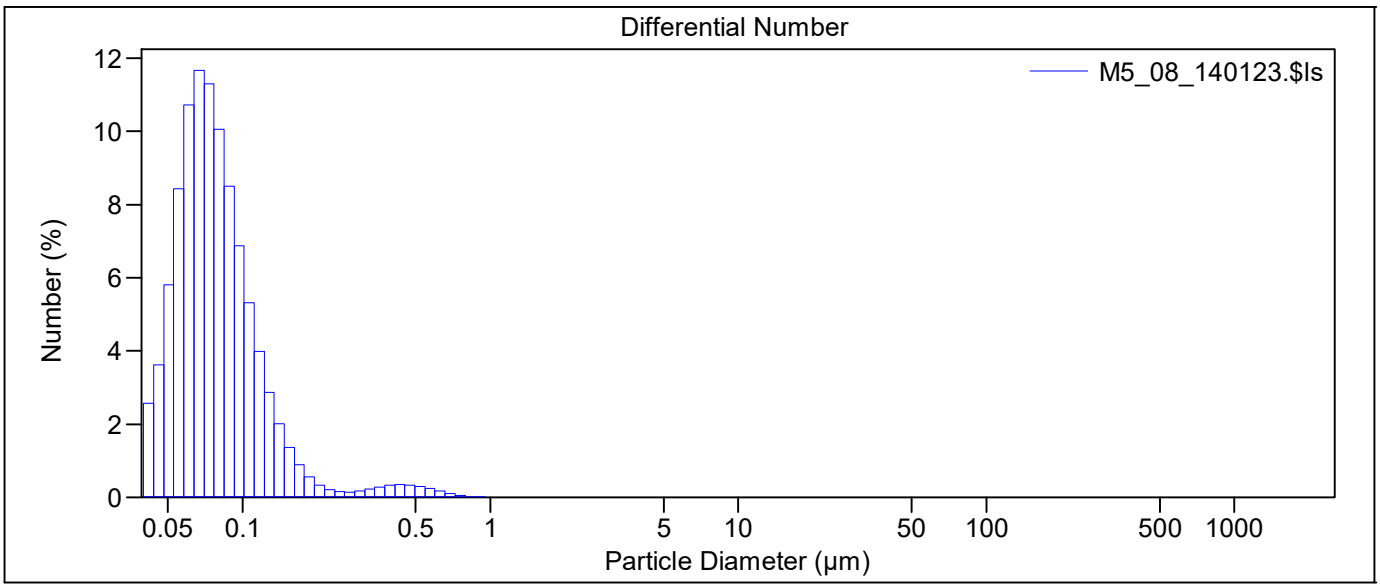
Number:	100%		
Mean:	0.091 µm	S.D.:	0.071 µm
Median:	0.074 µm	Variance:	0.0050 μm^2
Mean/Median ratio:	1.222	C.V.:	78.2%
Mode:	0.067 µm	Skewness:	5.202 Right skewed
		Kurtosis:	33.42 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.127 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.047	0.34	2.57
2	0.044	0.046	0.088	0.57	3.61
3	0.048	0.050	0.19	1.11	5.80
4	0.053	0.055	0.36	1.95	8.44
5	0.058	0.061	0.61	2.98	10.7
6	0.064	0.067	0.87	3.91	11.7
7	0.070	0.073	1.12	4.57	11.3
8	0.077	0.080	1.32	4.90	10.1
9	0.084	0.088	1.47	4.99	8.50
10	0.093	0.097	1.57	4.86	6.87
11	0.102	0.106	1.61	4.54	5.33
12	0.112	0.117	1.60	4.10	3.99
13	0.122	0.128	1.52	3.56	2.87
14	0.134	0.141	1.41	3.00	2.01
15	0.148	0.155	1.26	2.44	1.36
16	0.162	0.170	1.09	1.93	0.89
17	0.178	0.186	0.91	1.46	0.56
18	0.195	0.205	0.73	1.07	0.34
19	0.214	0.225	0.60	0.81	0.21
20	0.235	0.247	0.58	0.71	0.16
21	0.258	0.271	0.73	0.81	0.15
22	0.284	0.297	1.16	1.17	0.18
23	0.311	0.326	2.00	1.84	0.23
24	0.342	0.358	3.30	2.77	0.29
25	0.375	0.393	5.10	3.89	0.33
26	0.412	0.431	7.09	4.93	0.35
27	0.452	0.474	9.07	5.75	0.34
28	0.496	0.520	10.5	6.07	0.30
29	0.545	0.571	11.1	5.82	0.24
30	0.598	0.627	10.4	4.99	0.17
31	0.656	0.688	8.46	3.69	0.10
32	0.721	0.755	5.88	2.34	0.054
33	0.791	0.829	3.41	1.23	0.024
34	0.868	0.910	1.68	0.55	0.0089
35	0.953	0.999	0.76	0.23	0.0030
36	1.047	1.097	0.30	0.083	0.00091
37	1.149	1.204	0.081	0.020	0.00018
38	1.261	1.321	0.015	0.0035	0.000027
39	1.385	1.451	0.00093	0.00019	0.000001
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M5.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_09_140311.$ls M5_09_140311.$ls		
File ID:	M5		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.92%		
LS 13 320	Universal Liquid Module		
Start time:	14:01 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_09_140311.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.477 µm	S.D.:	0.228 µm
Median:	0.503 µm	Variance:	0.052 μm^2
Mean/Median ratio:	0.947	C.V.:	47.9%
Mode:	0.571 µm	Skewness:	-0.137 Left skewed
		Kurtosis:	-0.453 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.113 µm	0.343 µm	0.503 µm	0.632 µm	0.752 µm

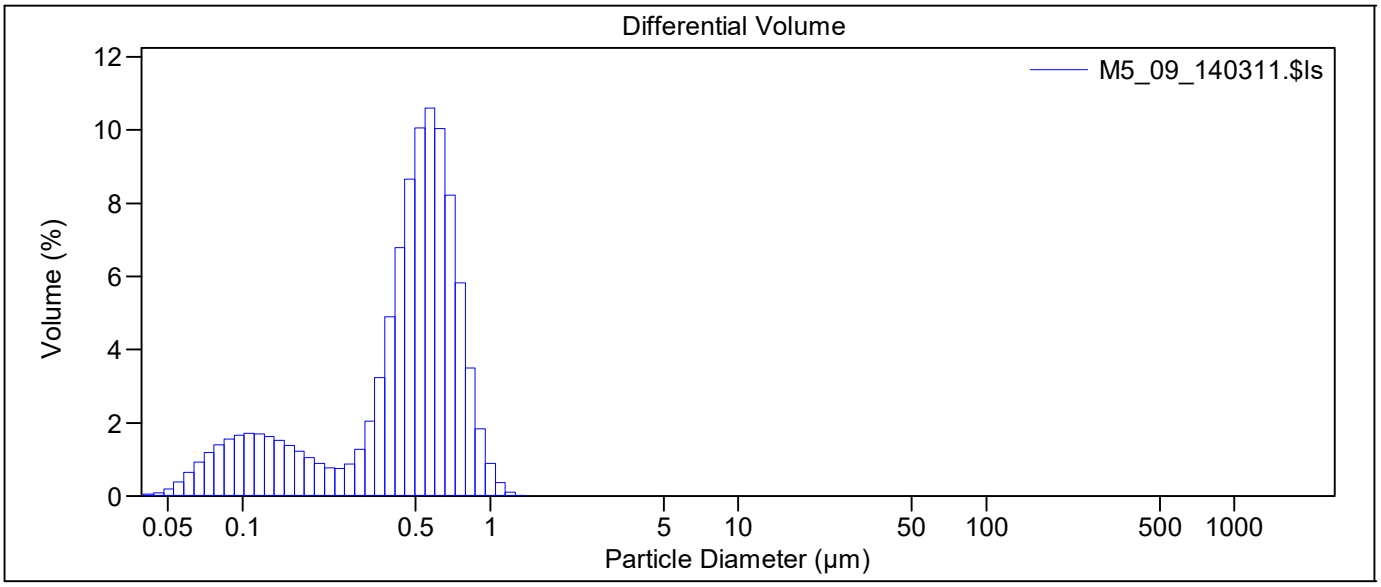
Number Statistics (Arithmetic) M5_09_140311.$ls

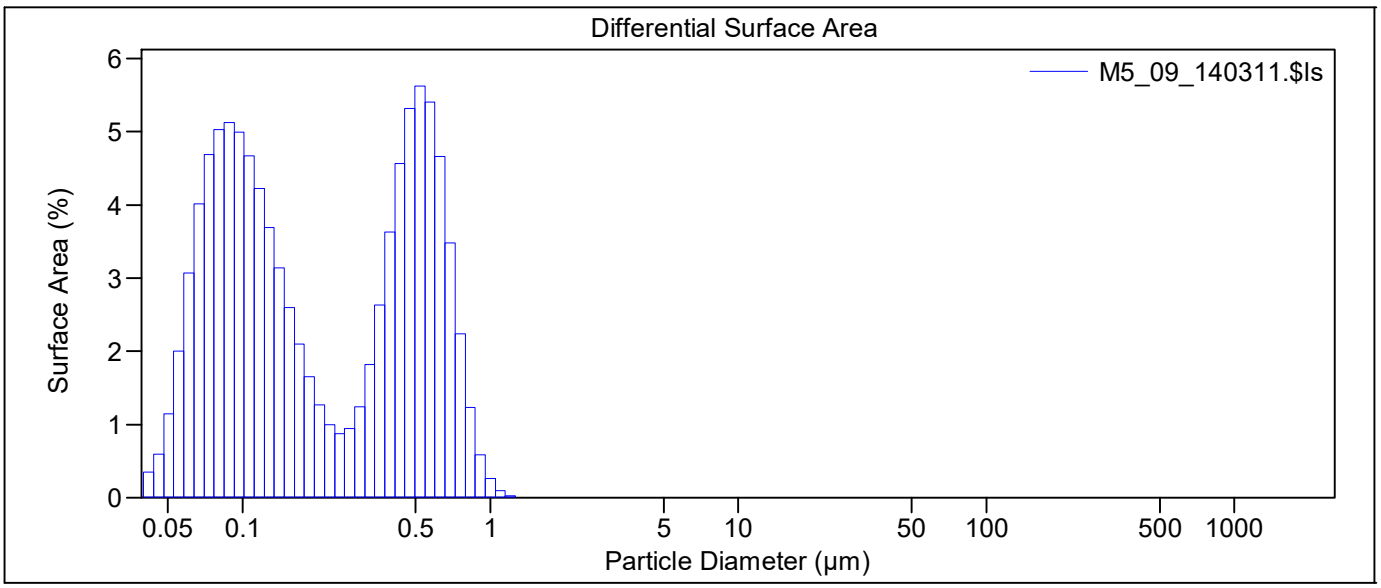
Calculations from 0.040 µm to 2000 µm

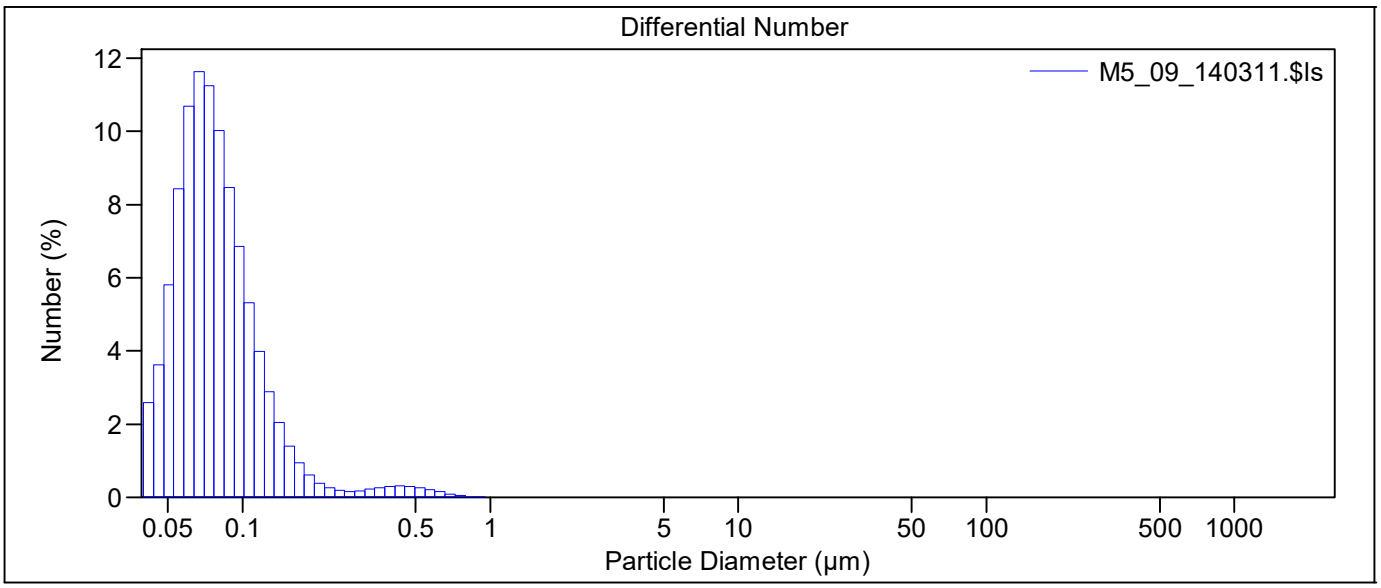
Number:	100%		
Mean:	0.090 µm	S.D.:	0.069 µm
Median:	0.074 µm	Variance:	0.0047 μm^2
Mean/Median ratio:	1.215	C.V.:	76.2%
Mode:	0.067 µm	Skewness:	5.287 Right skewed
		Kurtosis:	35.38 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.128 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.051	0.35	2.59
2	0.044	0.046	0.094	0.59	3.62
3	0.048	0.050	0.20	1.15	5.81
4	0.053	0.055	0.38	2.01	8.43
5	0.058	0.061	0.64	3.07	10.7
6	0.064	0.067	0.92	4.02	11.6
7	0.070	0.073	1.18	4.69	11.3
8	0.077	0.080	1.39	5.03	10.0
9	0.084	0.088	1.56	5.12	8.47
10	0.093	0.097	1.67	4.99	6.85
11	0.102	0.106	1.71	4.67	5.32
12	0.112	0.117	1.70	4.23	3.99
13	0.122	0.128	1.63	3.69	2.89
14	0.134	0.141	1.52	3.14	2.04
15	0.148	0.155	1.38	2.60	1.40
16	0.162	0.170	1.23	2.10	0.94
17	0.178	0.186	1.06	1.65	0.61
18	0.195	0.205	0.89	1.27	0.39
19	0.214	0.225	0.77	0.99	0.25
20	0.235	0.247	0.74	0.88	0.19
21	0.258	0.271	0.88	0.94	0.17
22	0.284	0.297	1.27	1.24	0.18
23	0.311	0.326	2.04	1.82	0.22
24	0.342	0.358	3.24	2.63	0.27
25	0.375	0.393	4.90	3.63	0.30
26	0.412	0.431	6.78	4.57	0.32
27	0.452	0.474	8.66	5.32	0.31
28	0.496	0.520	10.1	5.63	0.27
29	0.545	0.571	10.6	5.40	0.21
30	0.598	0.627	10.0	4.66	0.15
31	0.656	0.688	8.23	3.48	0.095
32	0.721	0.755	5.82	2.24	0.051
33	0.791	0.829	3.51	1.23	0.023
34	0.868	0.910	1.83	0.58	0.0091
35	0.953	0.999	0.89	0.26	0.0034
36	1.047	1.097	0.37	0.099	0.0011
37	1.149	1.204	0.10	0.025	0.00022
38	1.261	1.321	0.020	0.0043	0.000032
39	1.385	1.451	0.0012	0.00024	0.000001
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_10_141257.$ls M5_10_141257.$ls		
File ID:	M5		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.88%		
LS 13 320	Universal Liquid Module		
Start time:	14:11 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_10_141257.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.476 µm	S.D.:	0.246 µm
Median:	0.495 µm	Variance:	0.060 µm^2
Mean/Median ratio:	0.962	C.V.:	51.6%
Mode:	0.571 µm	Skewness:	0.052 Right skewed
		Kurtosis:	-0.556 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.110 µm	0.297 µm	0.495 µm	0.644 µm	0.784 µm

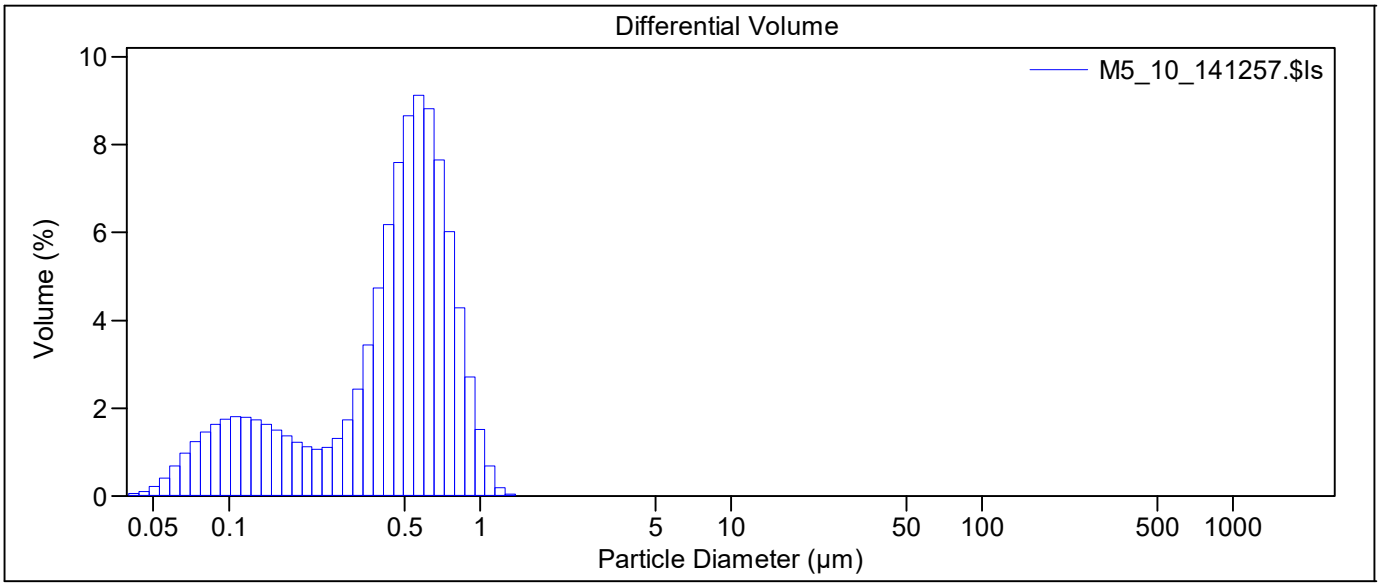
Number Statistics (Arithmetic) M5_10_141257.$ls

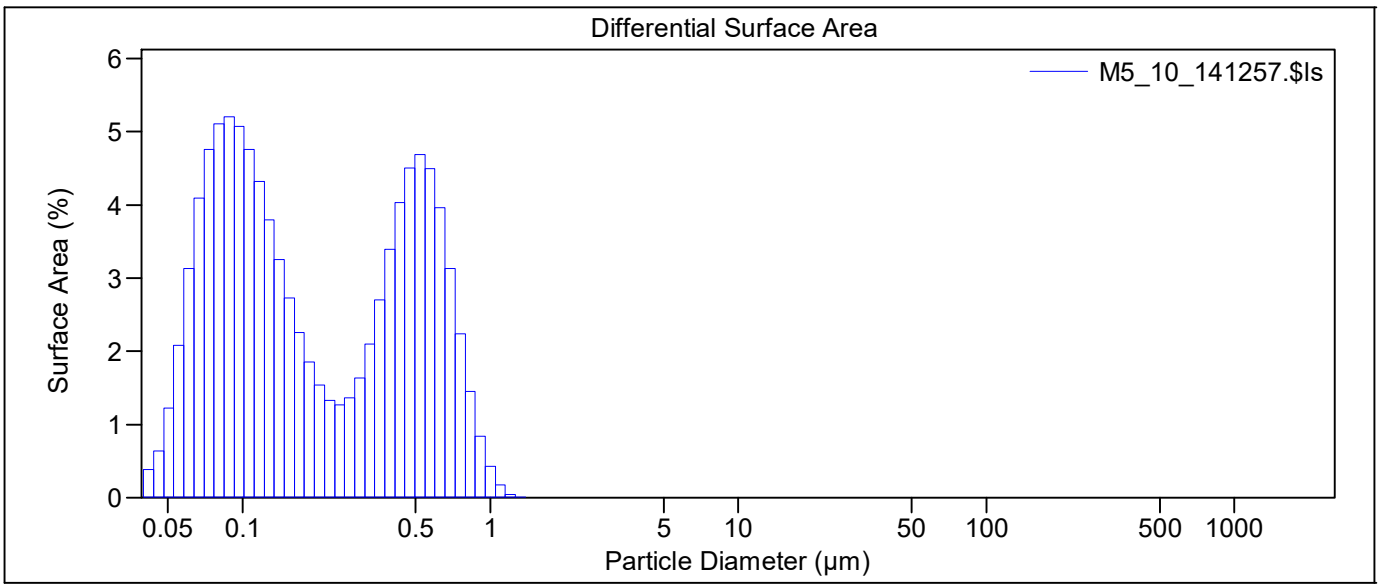
Calculations from 0.040 µm to 2000 µm

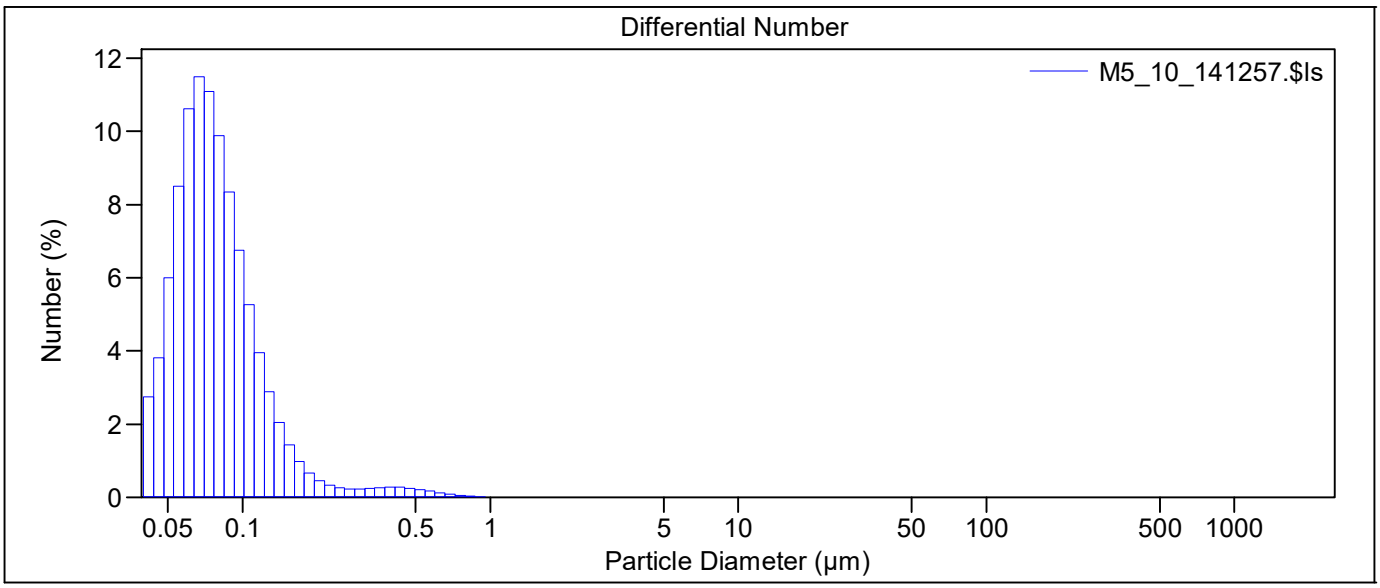
Number:	100%		
Mean:	0.090 µm	S.D.:	0.067 µm
Median:	0.074 µm	Variance:	0.0045 µm^2
Mean/Median ratio:	1.211	C.V.:	74.3%
Mode:	0.067 µm	Skewness:	5.372 Right skewed
		Kurtosis:	38.39 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.129 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.057	0.38	2.74
2	0.044	0.046	0.11	0.64	3.81
3	0.048	0.050	0.22	1.22	6.01
4	0.053	0.055	0.41	2.08	8.50
5	0.058	0.061	0.68	3.14	10.6
6	0.064	0.067	0.97	4.09	11.5
7	0.070	0.073	1.24	4.76	11.1
8	0.077	0.080	1.46	5.11	9.88
9	0.084	0.088	1.63	5.20	8.35
10	0.093	0.097	1.75	5.07	6.75
11	0.102	0.106	1.80	4.76	5.26
12	0.112	0.117	1.79	4.32	3.96
13	0.122	0.128	1.73	3.79	2.89
14	0.134	0.141	1.63	3.25	2.05
15	0.148	0.155	1.50	2.73	1.43
16	0.162	0.170	1.36	2.26	0.98
17	0.178	0.186	1.23	1.85	0.67
18	0.195	0.205	1.12	1.54	0.46
19	0.214	0.225	1.06	1.33	0.33
20	0.235	0.247	1.11	1.27	0.26
21	0.258	0.271	1.31	1.36	0.23
22	0.284	0.297	1.73	1.64	0.23
23	0.311	0.326	2.43	2.10	0.25
24	0.342	0.358	3.44	2.70	0.26
25	0.375	0.393	4.74	3.39	0.28
26	0.412	0.431	6.19	4.03	0.27
27	0.452	0.474	7.59	4.51	0.25
28	0.496	0.520	8.67	4.69	0.22
29	0.545	0.571	9.12	4.49	0.17
30	0.598	0.627	8.82	3.96	0.13
31	0.656	0.688	7.66	3.13	0.083
32	0.721	0.755	6.02	2.24	0.049
33	0.791	0.829	4.29	1.46	0.027
34	0.868	0.910	2.70	0.84	0.013
35	0.953	0.999	1.52	0.43	0.0054
36	1.047	1.097	0.68	0.17	0.0018
37	1.149	1.204	0.19	0.045	0.00039
38	1.261	1.321	0.037	0.0079	0.000056
39	1.385	1.451	0.0025	0.00048	0.000003
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_11_141445.$ls M5_11_141445.$ls		
File ID:	M5		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.71%		
LS 13 320	Universal Liquid Module		
Start time:	14:13 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_11_141445.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.511 µm	S.D.:	0.369 µm
Median:	0.416 µm	Variance:	0.136 µm^2
Mean/Median ratio:	1.228	C.V.:	72.4%
Mode:	0.571 µm	Skewness:	1.077 Right skewed
		Kurtosis:	0.788 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.123 µm	0.214 µm	0.416 µm	0.720 µm	1.049 µm

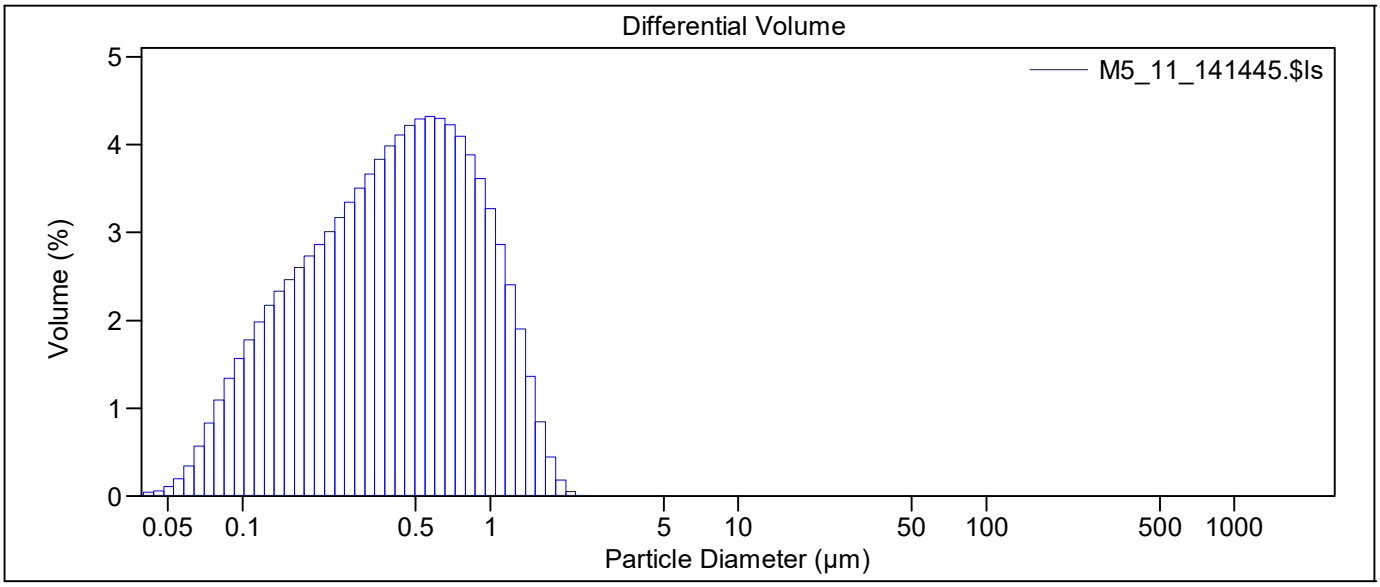
Number Statistics (Arithmetic) M5_11_141445.$ls

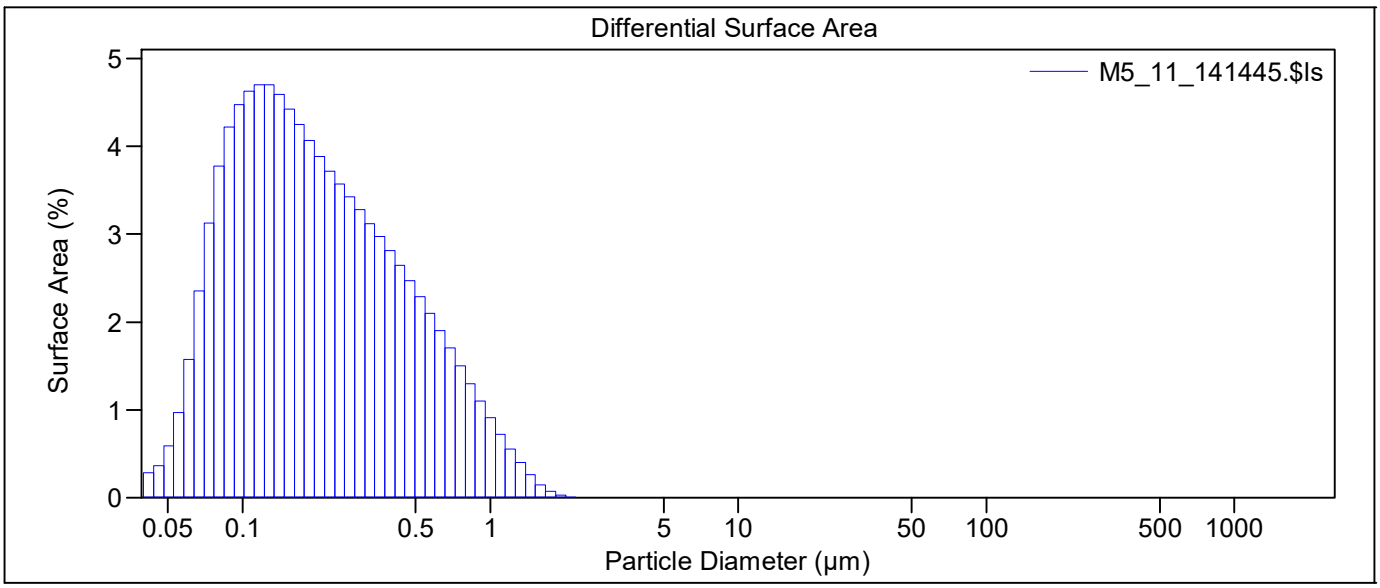
Calculations from 0.040 µm to 2000 µm

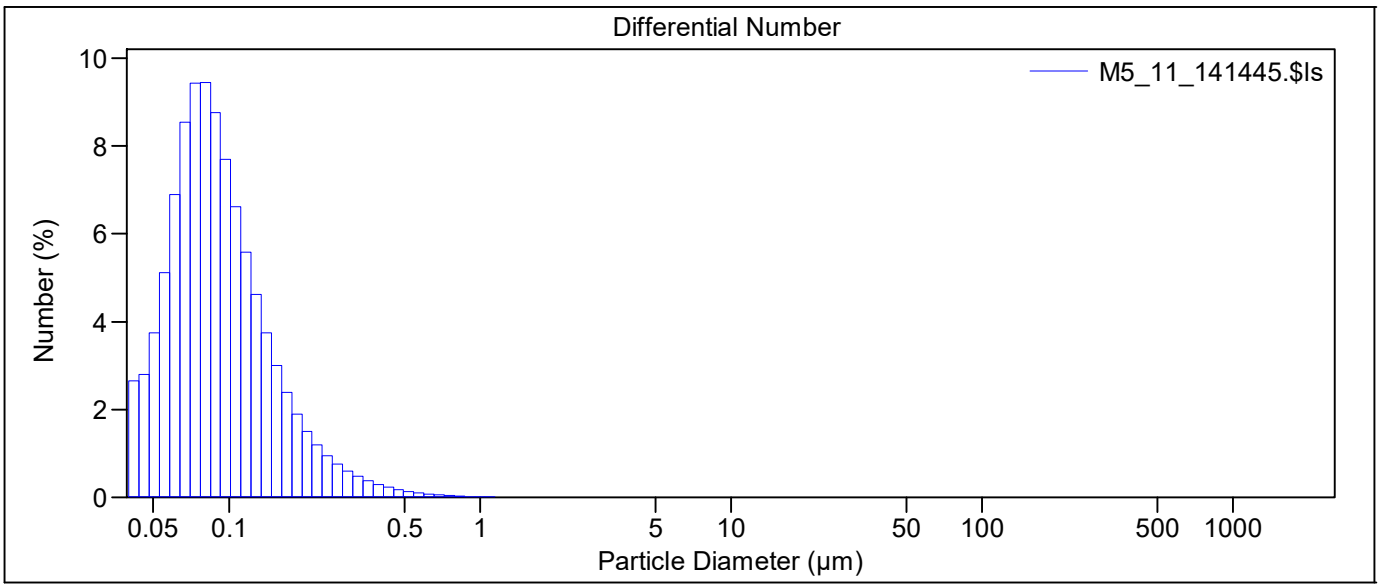
Number:	100%		
Mean:	0.105 µm	S.D.:	0.072 µm
Median:	0.086 µm	Variance:	0.0052 µm^2
Mean/Median ratio:	1.226	C.V.:	68.5%
Mode:	0.080 µm	Skewness:	4.579 Right skewed
		Kurtosis:	38.56 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.086 µm	0.118 µm	0.171 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.043	0.29	2.65
2	0.044	0.046	0.061	0.37	2.81
3	0.048	0.050	0.11	0.59	3.75
4	0.053	0.055	0.19	0.97	5.11
5	0.058	0.061	0.35	1.58	6.90
6	0.064	0.067	0.57	2.35	8.54
7	0.070	0.073	0.83	3.13	9.43
8	0.077	0.080	1.10	3.78	9.45
9	0.084	0.088	1.34	4.22	8.75
10	0.093	0.097	1.56	4.47	7.70
11	0.102	0.106	1.78	4.63	6.62
12	0.112	0.117	1.98	4.70	5.58
13	0.122	0.128	2.17	4.70	4.62
14	0.134	0.141	2.33	4.59	3.75
15	0.148	0.155	2.47	4.42	3.00
16	0.162	0.170	2.60	4.25	2.39
17	0.178	0.186	2.73	4.06	1.90
18	0.195	0.205	2.86	3.88	1.50
19	0.214	0.225	3.01	3.72	1.19
20	0.235	0.247	3.17	3.57	0.95
21	0.258	0.271	3.35	3.43	0.76
22	0.284	0.297	3.51	3.28	0.60
23	0.311	0.326	3.67	3.12	0.48
24	0.342	0.358	3.83	2.97	0.38
25	0.375	0.393	3.99	2.81	0.30
26	0.412	0.431	4.11	2.64	0.23
27	0.452	0.474	4.22	2.47	0.18
28	0.496	0.520	4.29	2.29	0.14
29	0.545	0.571	4.32	2.10	0.10
30	0.598	0.627	4.30	1.90	0.079
31	0.656	0.688	4.23	1.71	0.058
32	0.721	0.755	4.09	1.50	0.043
33	0.791	0.829	3.89	1.30	0.031
34	0.868	0.910	3.61	1.10	0.022
35	0.953	0.999	3.27	0.91	0.015
36	1.047	1.097	2.86	0.72	0.0098
37	1.149	1.204	2.40	0.55	0.0062
38	1.261	1.321	1.91	0.40	0.0037
39	1.385	1.451	1.37	0.26	0.0020
40	1.520	1.592	0.85	0.15	0.00094
41	1.668	1.748	0.44	0.070	0.00037
42	1.832	1.919	0.18	0.026	0.00011
43	2.011	2.107	0.051	0.0067	0.000025
44	2.207	2.313	0.0097	0.0012	0.000004
45	2.423	2.539	0.00066	0.000072	1.81E-7

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_12_141632.$ls M5_12_141632.$ls		
File ID:	M5		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.76%		
LS 13 320	Universal Liquid Module		
Start time:	14:14 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_12_141632.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.558 µm	S.D.:	0.231 µm
Median:	0.527 µm	Variance:	0.054 μm^2
Mean/Median ratio:	1.060	C.V.:	41.5%
Mode:	0.571 µm	Skewness:	0.606 Right skewed
		Kurtosis:	-0.031 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.282 µm	0.380 µm	0.527 µm	0.708 µm	0.885 µm

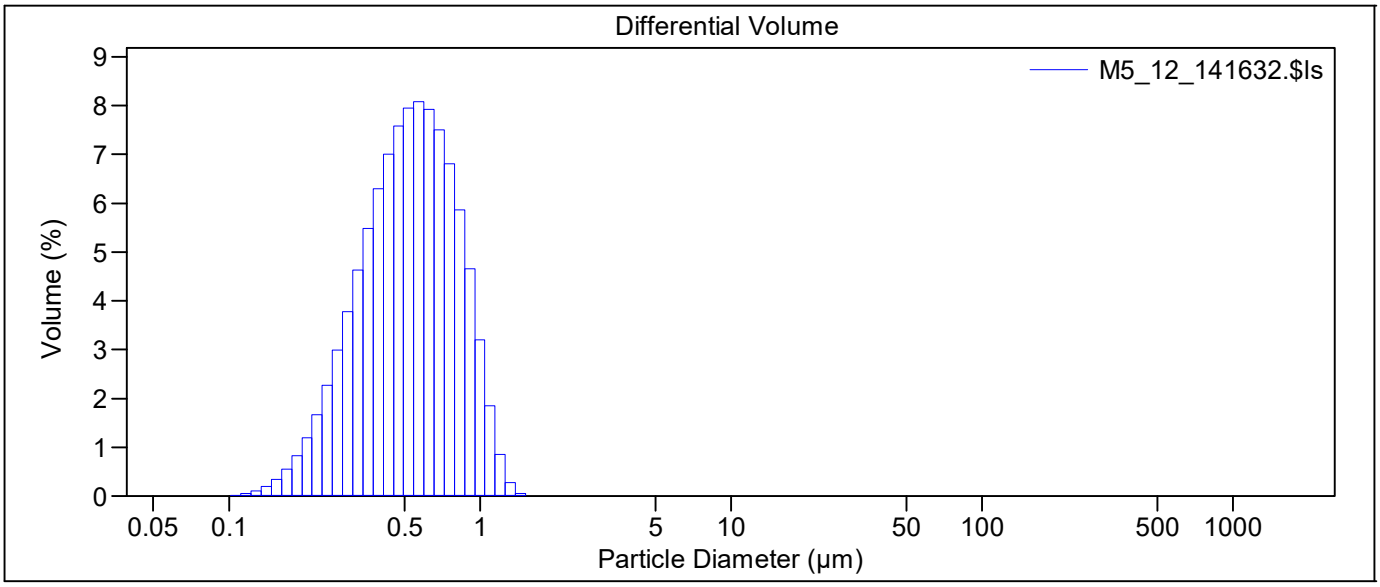
Number Statistics (Arithmetic) M5_12_141632.$ls

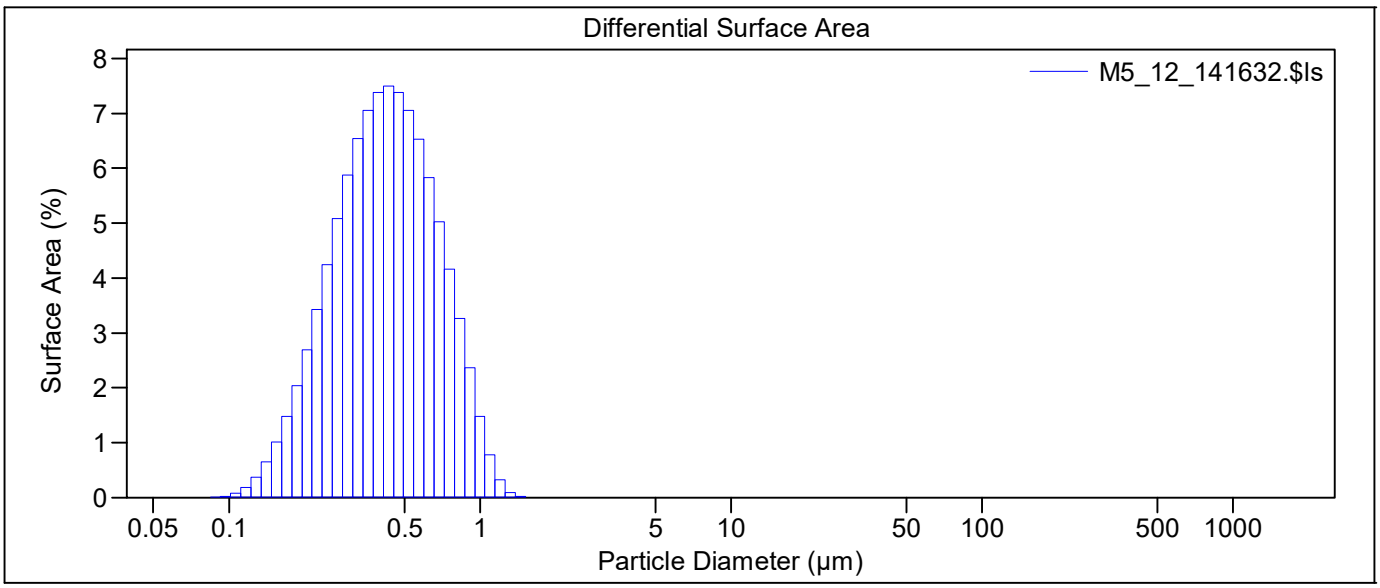
Calculations from 0.040 µm to 2000 µm

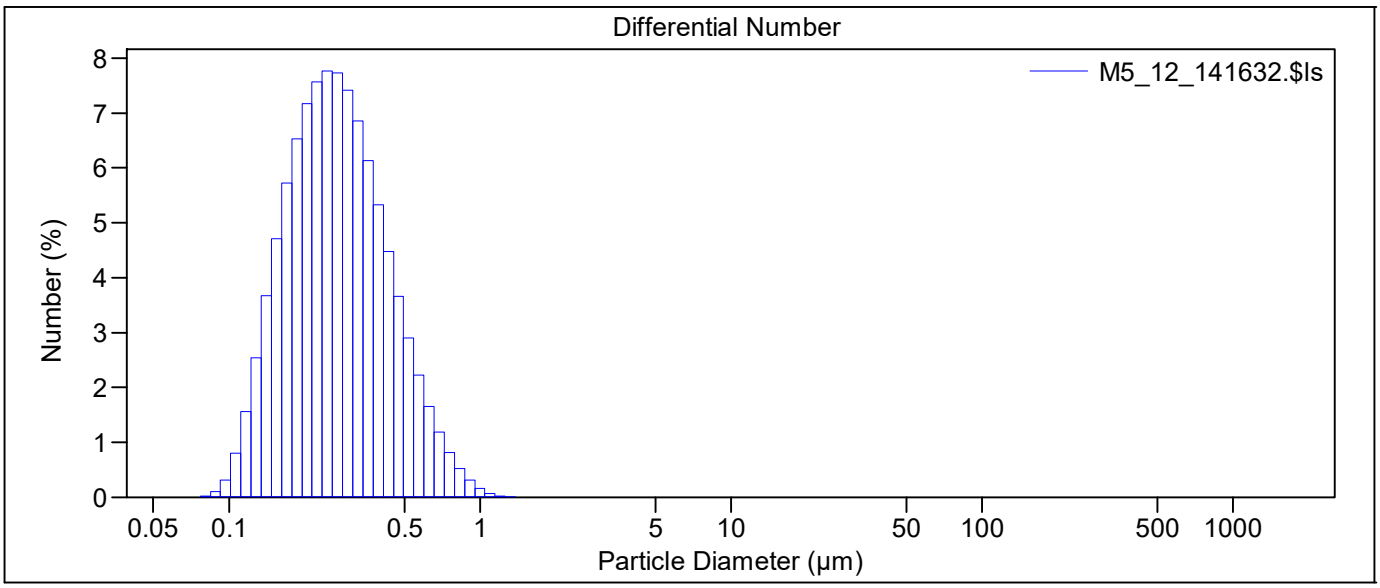
Number:	100%		
Mean:	0.299 µm	S.D.:	0.148 µm
Median:	0.263 µm	Variance:	0.022 μm^2
Mean/Median ratio:	1.136	C.V.:	49.5%
Mode:	0.247 µm	Skewness:	1.524 Right skewed
		Kurtosis:	3.217 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.151 µm	0.193 µm	0.263 µm	0.366 µm	0.495 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0.00023	0.0013	0.022
9	0.084	0.088	0.0014	0.0073	0.10
10	0.093	0.097	0.0056	0.027	0.31
11	0.102	0.106	0.019	0.082	0.80
12	0.112	0.117	0.048	0.19	1.56
13	0.122	0.128	0.10	0.38	2.54
14	0.134	0.141	0.20	0.65	3.67
15	0.148	0.155	0.34	1.01	4.71
16	0.162	0.170	0.54	1.48	5.72
17	0.178	0.186	0.82	2.04	6.53
18	0.195	0.205	1.19	2.69	7.17
19	0.214	0.225	1.67	3.43	7.57
20	0.235	0.247	2.27	4.24	7.77
21	0.258	0.271	2.98	5.09	7.74
22	0.284	0.297	3.78	5.88	7.41
23	0.311	0.326	4.63	6.54	6.85
24	0.342	0.358	5.48	7.06	6.13
25	0.375	0.393	6.29	7.39	5.33
26	0.412	0.431	7.01	7.49	4.48
27	0.452	0.474	7.58	7.39	3.67
28	0.496	0.520	7.96	7.06	2.91
29	0.545	0.571	8.08	6.53	2.23
30	0.598	0.627	7.92	5.83	1.65
31	0.656	0.688	7.50	5.03	1.18
32	0.721	0.755	6.81	4.16	0.81
33	0.791	0.829	5.86	3.26	0.53
34	0.868	0.910	4.66	2.36	0.32
35	0.953	0.999	3.20	1.48	0.16
36	1.047	1.097	1.86	0.78	0.072
37	1.149	1.204	0.85	0.33	0.025
38	1.261	1.321	0.27	0.095	0.0060
39	1.385	1.451	0.058	0.019	0.00098
40	1.520	1.592	0.0056	0.0016	0.000071
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_13_142605.$ls M5_13_142605.$ls		
File ID:	M5		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.10%		
LS 13 320	Universal Liquid Module		
Start time:	14:24 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_13_142605.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.534 µm	S.D.:	0.110 µm
Median:	0.526 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.015	C.V.:	20.5%
Mode:	0.520 µm	Skewness:	0.366 Right skewed
		Kurtosis:	-0.271 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.395 µm	0.452 µm	0.526 µm	0.609 µm	0.687 µm

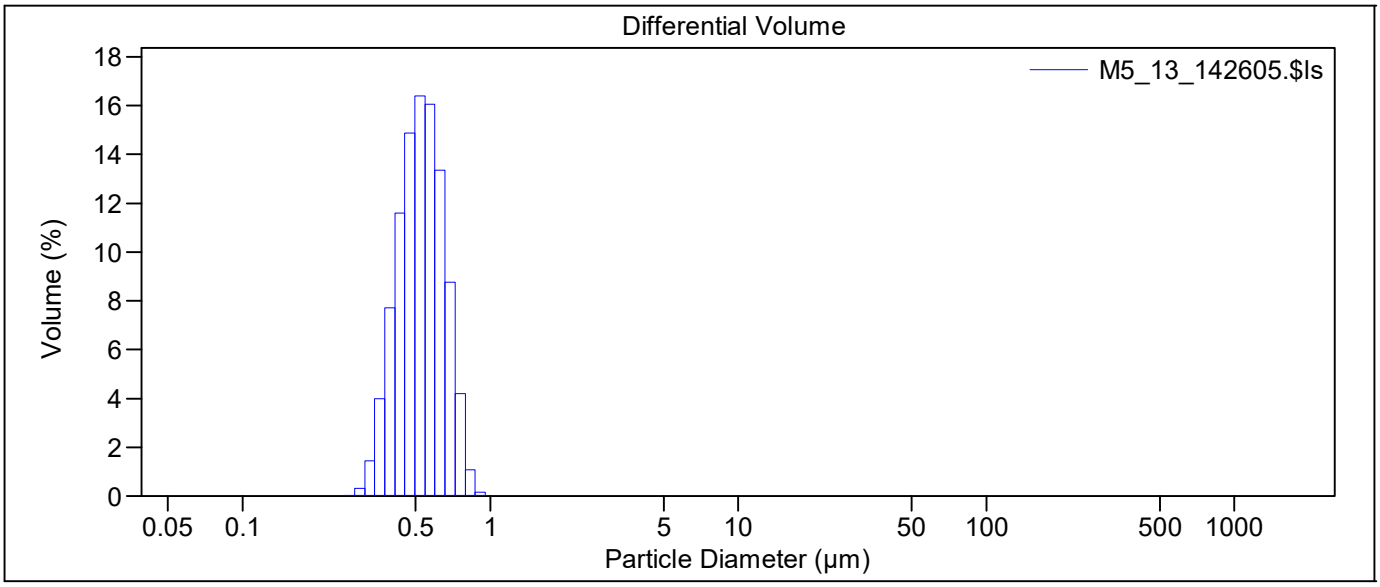
Number Statistics (Arithmetic) M5_13_142605.$ls

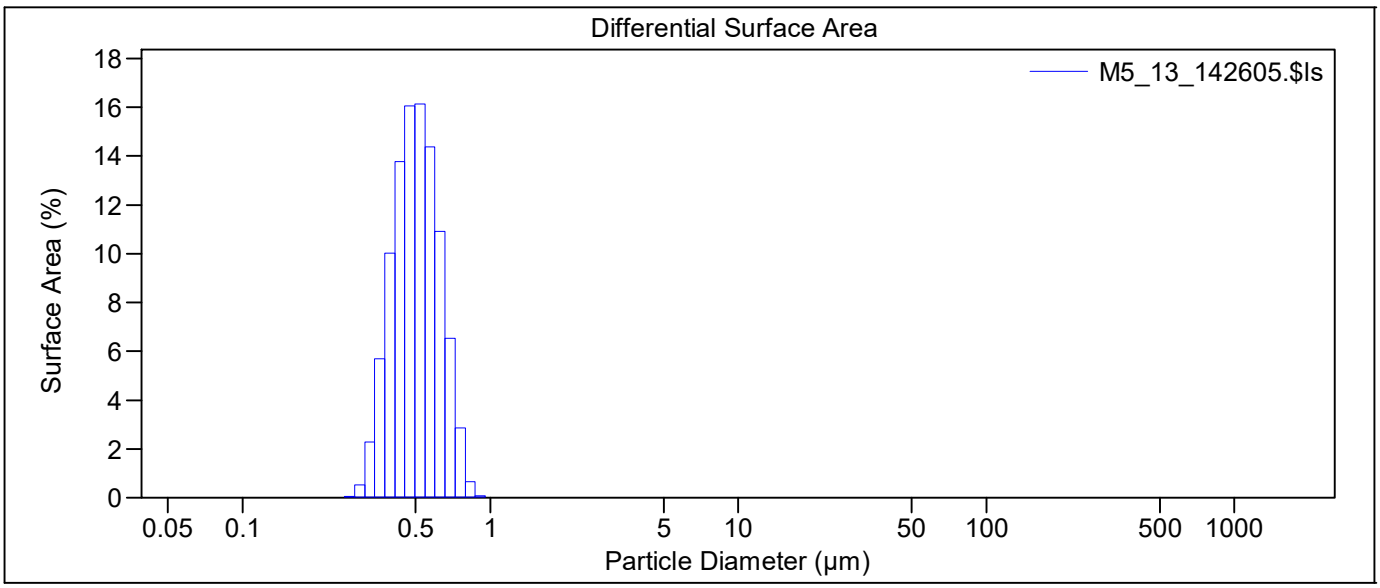
Calculations from 0.040 µm to 2000 µm

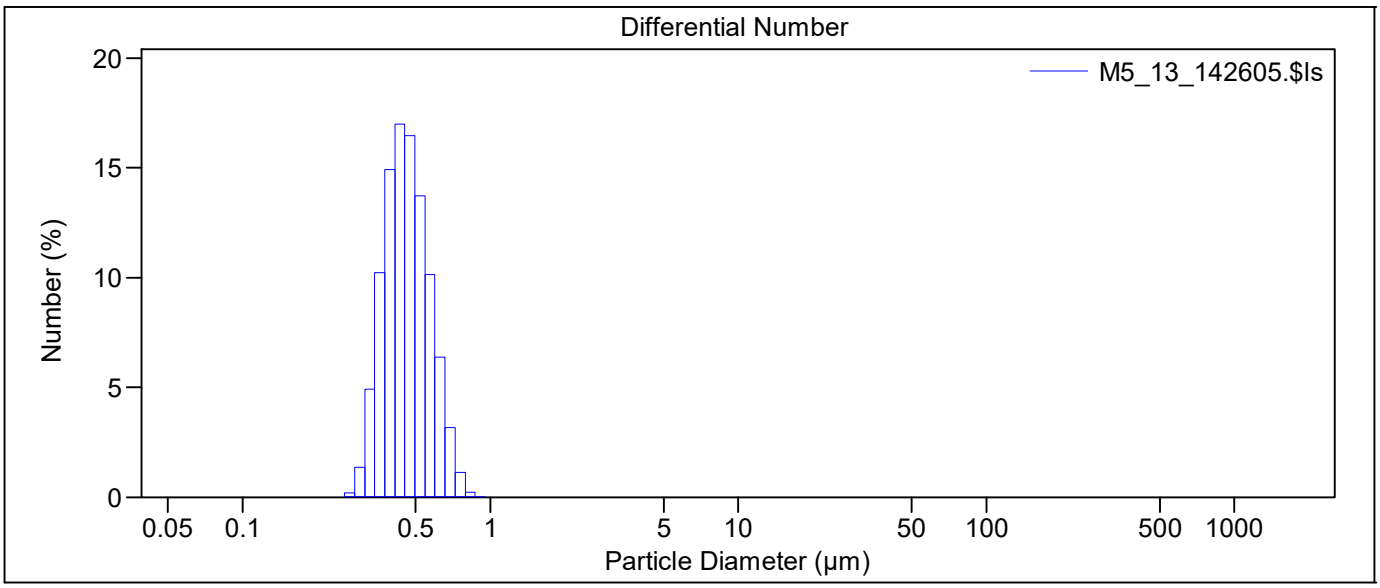
Number:	100%		
Mean:	0.469 µm	S.D.:	0.098 µm
Median:	0.456 µm	Variance:	0.0096 µm^2
Mean/Median ratio:	1.030	C.V.:	20.9%
Mode:	0.431 µm	Skewness:	0.682 Right skewed
		Kurtosis:	0.257 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.353 µm	0.395 µm	0.456 µm	0.531 µm	0.607 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.00066	0.0014	0.0052
21	0.258	0.271	0.032	0.061	0.19
22	0.284	0.297	0.30	0.52	1.36
23	0.311	0.326	1.45	2.28	4.93
24	0.342	0.358	3.99	5.70	10.2
25	0.375	0.393	7.71	10.0	14.9
26	0.412	0.431	11.6	13.8	17.0
27	0.452	0.474	14.9	16.1	16.5
28	0.496	0.520	16.4	16.1	13.7
29	0.545	0.571	16.1	14.4	10.2
30	0.598	0.627	13.4	10.9	6.39
31	0.656	0.688	8.77	6.52	3.17
32	0.721	0.755	4.21	2.85	1.15
33	0.791	0.829	1.08	0.66	0.22
34	0.868	0.910	0.15	0.086	0.024
35	0.953	0.999	0.0040	0.0020	0.00047
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_14_142752.$ls M5_14_142752.$ls		
File ID:	M5		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.07%		
LS 13 320	Universal Liquid Module		
Start time:	14:26 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_14_142752.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.535 µm	S.D.:	0.110 µm
Median:	0.527 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.015	C.V.:	20.6%
Mode:	0.520 µm	Skewness:	0.357 Right skewed
		Kurtosis:	-0.283 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.396 µm	0.453 µm	0.527 µm	0.611 µm	0.689 µm

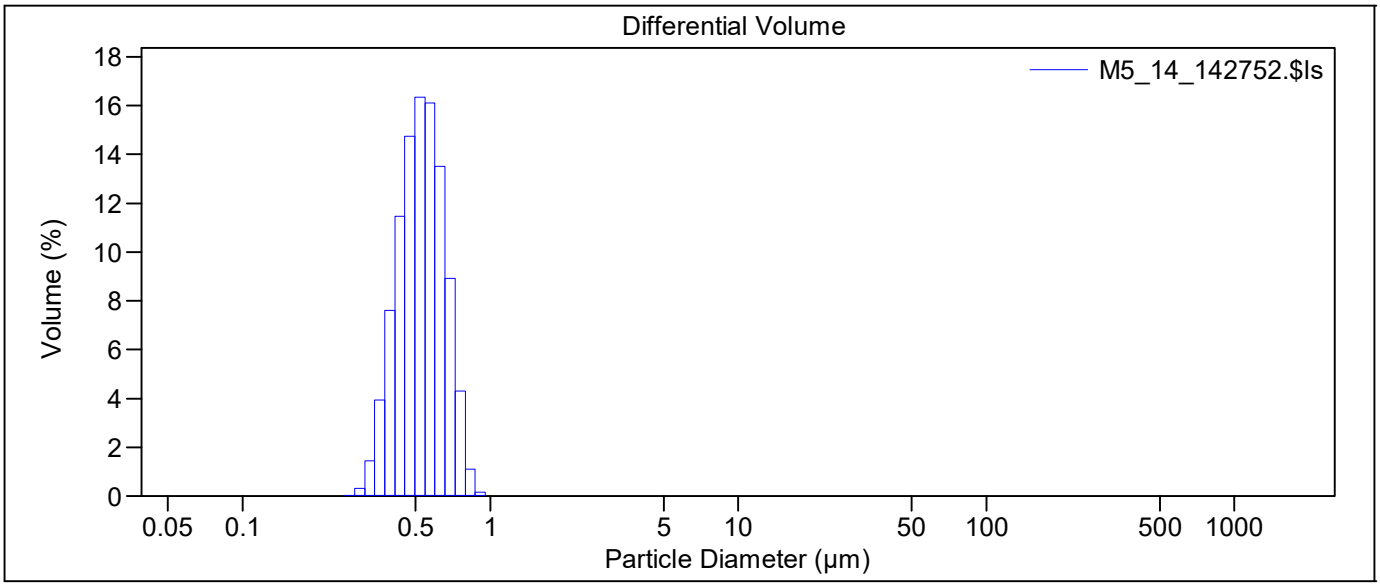
Number Statistics (Arithmetic) M5_14_142752.$ls

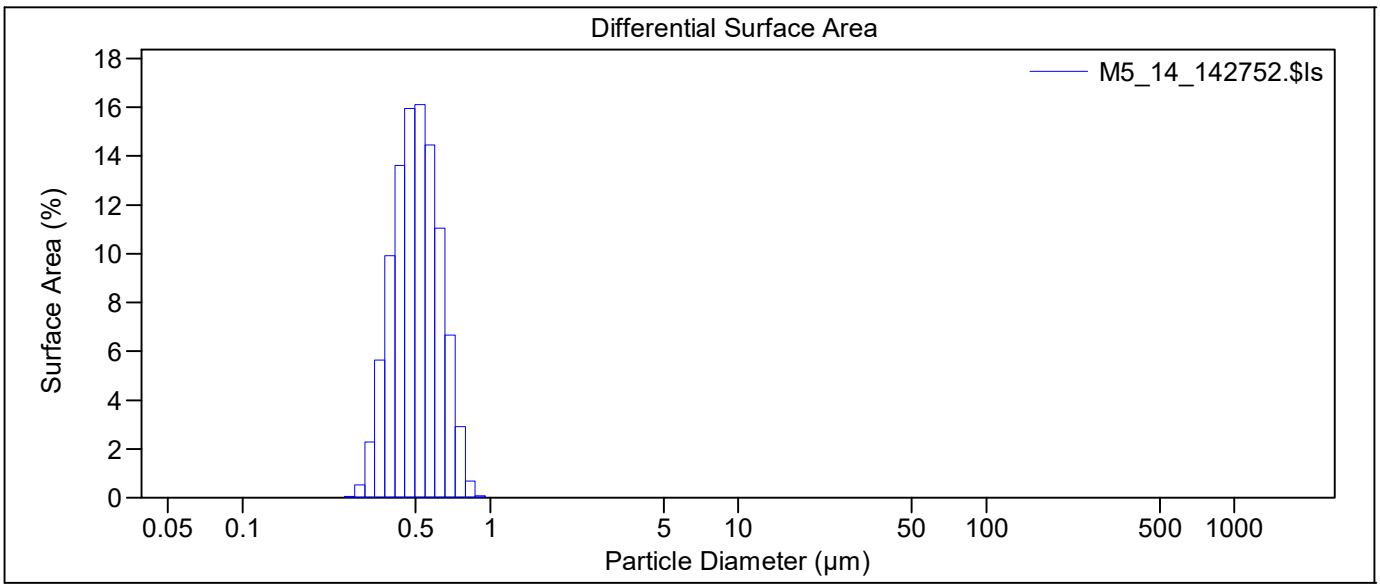
Calculations from 0.040 µm to 2000 µm

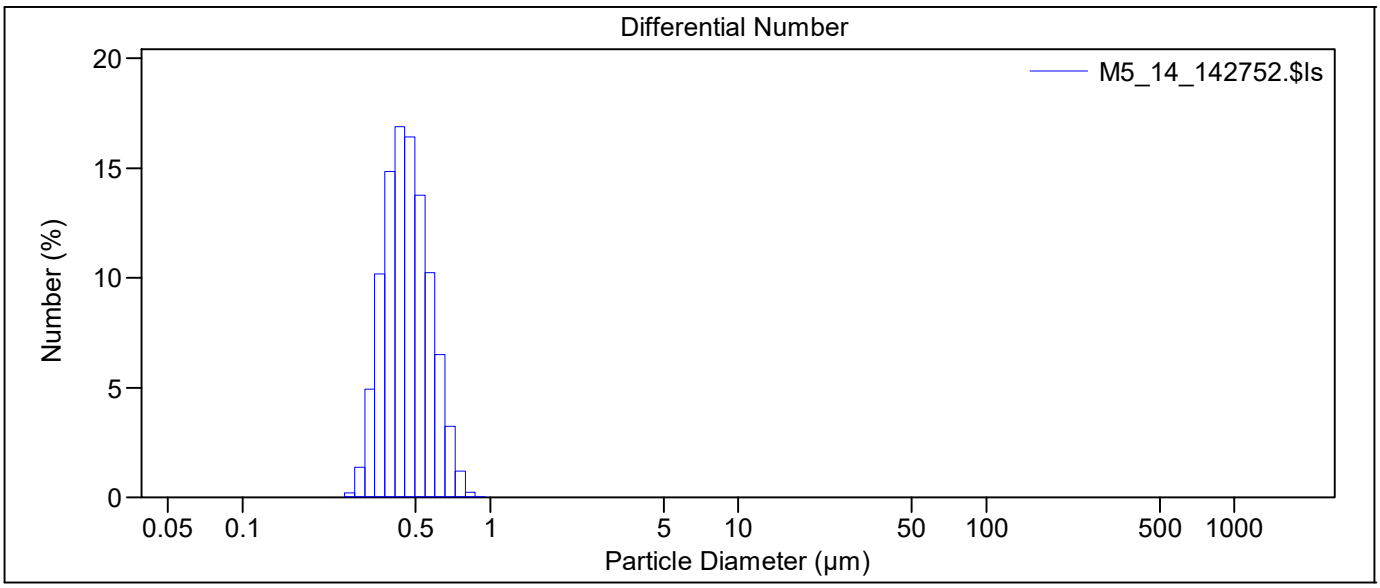
Number:	100%		
Mean:	0.470 µm	S.D.:	0.099 µm
Median:	0.456 µm	Variance:	0.0097 μm^2
Mean/Median ratio:	1.030	C.V.:	21.0%
Mode:	0.431 µm	Skewness:	0.677 Right skewed
		Kurtosis:	0.237 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.353 µm	0.396 µm	0.456 µm	0.532 µm	0.609 µm

Beckman Coulter LS13320







M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.00068	0.0014	0.0053
21	0.258	0.271	0.032	0.061	0.19
22	0.284	0.297	0.30	0.52	1.37
23	0.311	0.326	1.45	2.28	4.94
24	0.342	0.358	3.95	5.65	10.2
25	0.375	0.393	7.61	9.93	14.8
26	0.412	0.431	11.5	13.6	16.9
27	0.452	0.474	14.7	16.0	16.4
28	0.496	0.520	16.3	16.1	13.8
29	0.545	0.571	16.1	14.5	10.2
30	0.598	0.627	13.5	11.0	6.49
31	0.656	0.688	8.93	6.65	3.25
32	0.721	0.755	4.30	2.92	1.18
33	0.791	0.829	1.10	0.68	0.23
34	0.868	0.910	0.16	0.089	0.025
35	0.953	0.999	0.0041	0.0021	0.00049
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M5\M5_15_142939.$ls M5_15_142939.$ls		
File ID:	M5		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.94%		
LS 13 320	Universal Liquid Module		
Start time:	14:27 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M5_15_142939.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.531 µm	S.D.:	0.146 µm
Median:	0.532 µm	Variance:	0.021 μm^2
Mean/Median ratio:	0.998	C.V.:	27.4%
Mode:	0.571 µm	Skewness:	-0.519 Left skewed
		Kurtosis:	1.342 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.376 µm	0.446 µm	0.532 µm	0.627 µm	0.711 µm

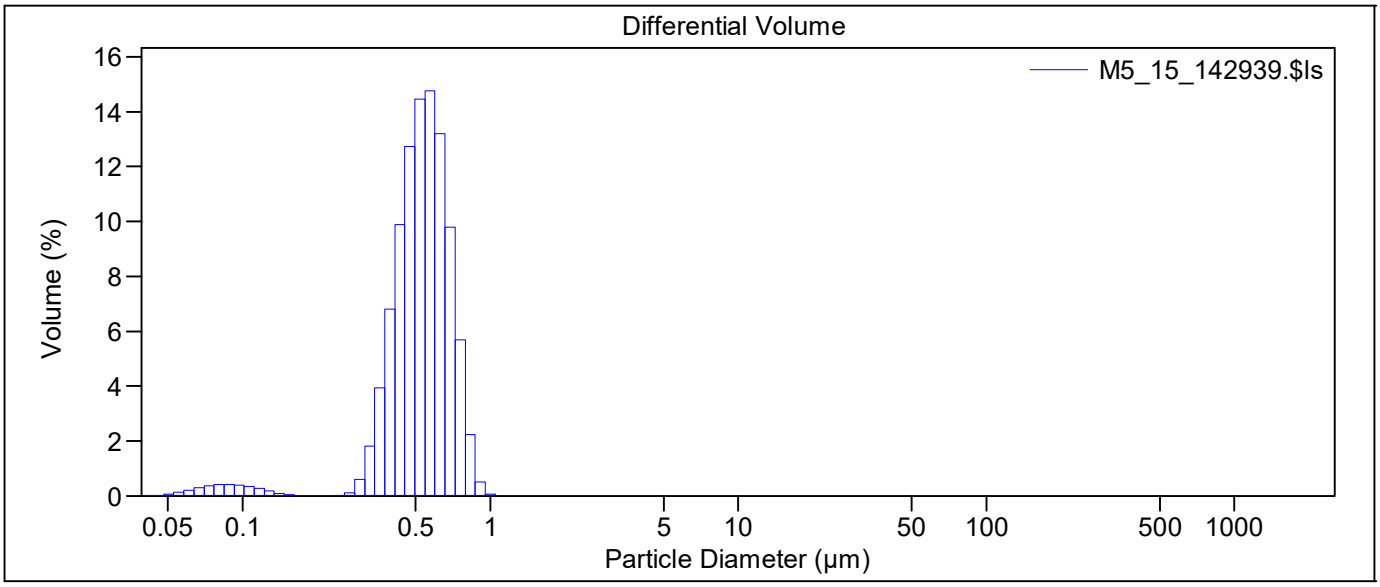
Number Statistics (Arithmetic) M5_15_142939.$ls

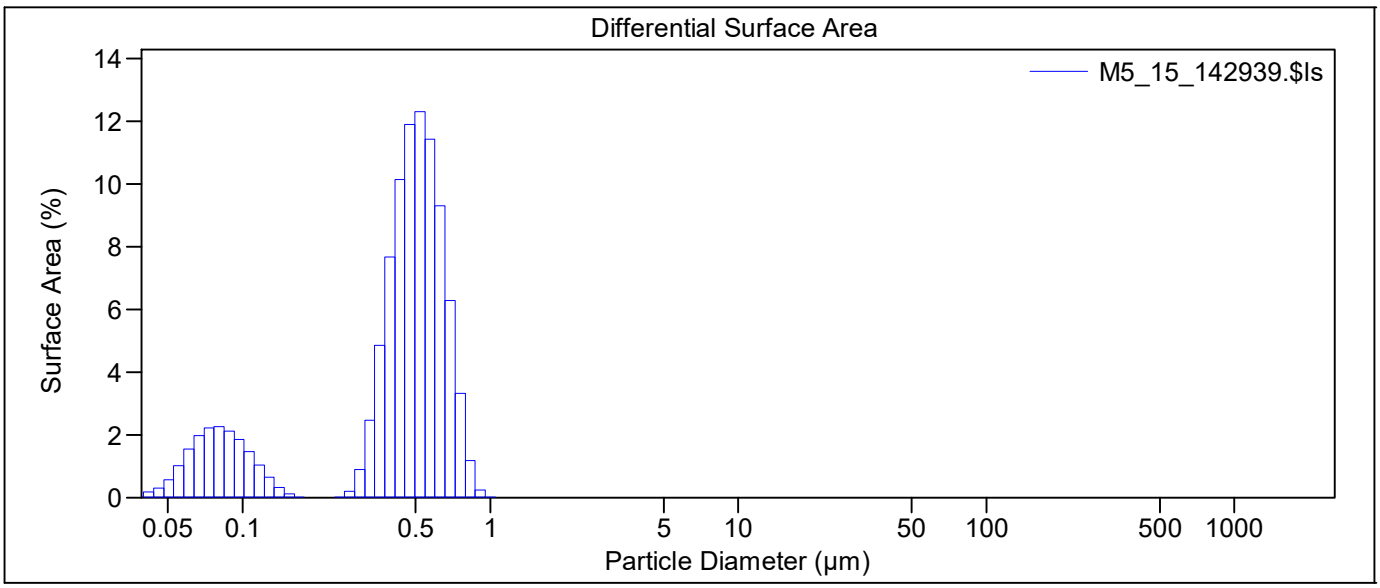
Calculations from 0.040 µm to 2000 µm

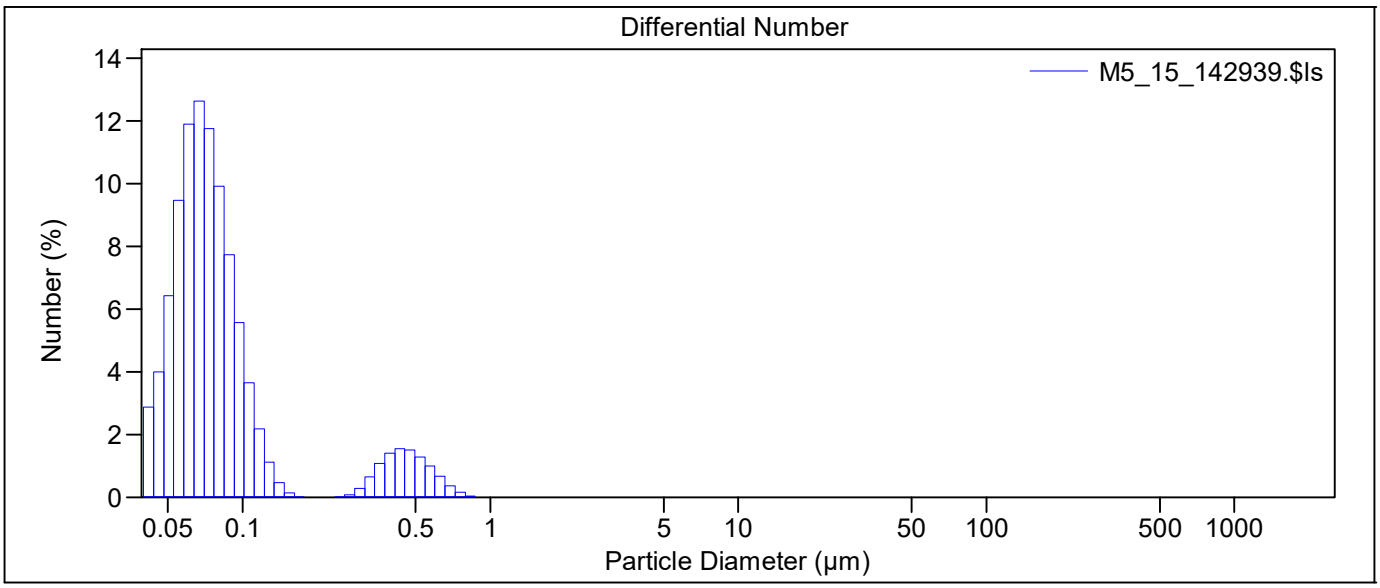
Number:	100%		
Mean:	0.112 µm	S.D.:	0.126 µm
Median:	0.072 µm	Variance:	0.016 μm^2
Mean/Median ratio:	1.569	C.V.:	112%
Mode:	0.067 µm	Skewness:	2.935 Right skewed
		Kurtosis:	7.847 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.050 µm	0.059 µm	0.072 µm	0.091 µm	0.288 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.017	0.18	2.88
2	0.044	0.046	0.031	0.30	3.99
3	0.048	0.050	0.066	0.58	6.43
4	0.053	0.055	0.13	1.02	9.46
5	0.058	0.061	0.21	1.55	11.9
6	0.064	0.067	0.30	1.99	12.6
7	0.070	0.073	0.37	2.23	11.8
8	0.077	0.080	0.41	2.26	9.91
9	0.084	0.088	0.43	2.13	7.73
10	0.093	0.097	0.41	1.85	5.58
11	0.102	0.106	0.35	1.46	3.66
12	0.112	0.117	0.28	1.05	2.18
13	0.122	0.128	0.19	0.65	1.11
14	0.134	0.141	0.10	0.32	0.46
15	0.148	0.155	0.043	0.12	0.15
16	0.162	0.170	0.010	0.027	0.027
17	0.178	0.186	0.0015	0.0036	0.0029
18	0.195	0.205	0.000059	0.00013	0.000086
19	0.214	0.225	0.00043	0.00084	0.00047
20	0.235	0.247	0.014	0.025	0.012
21	0.258	0.271	0.12	0.20	0.078
22	0.284	0.297	0.61	0.90	0.29
23	0.311	0.326	1.81	2.46	0.66
24	0.342	0.358	3.94	4.86	1.08
25	0.375	0.393	6.81	7.66	1.41
26	0.412	0.431	9.90	10.1	1.55
27	0.452	0.474	12.7	11.9	1.50
28	0.496	0.520	14.5	12.3	1.29
29	0.545	0.571	14.8	11.4	1.00
30	0.598	0.627	13.2	9.31	0.67
31	0.656	0.688	9.79	6.29	0.38
32	0.721	0.755	5.69	3.33	0.17
33	0.791	0.829	2.23	1.19	0.049
34	0.868	0.910	0.51	0.25	0.0086
35	0.953	0.999	0.061	0.027	0.00077
36	1.047	1.097	0.0018	0.00072	0.000017
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M5.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7.$av M7.$av
File ID:	M7
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_01_193416.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_02_193603.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_03_193750.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_04_194911.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_05_195058.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_06_195246.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_07_200147.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_08_200334.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_09_200522.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_10_201656.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_11_201843.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_12_202030.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_13_202932.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_14_203119.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_15_203306.$ls

Volume Statistics (Arithmetic) M7.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.496 µm	S.D.:	0.286 µm
Median:	0.464 µm	Variance:	0.082 µm^2
Mean/Median ratio:	1.069	C.V.:	57.7%
Mode:	0.474 µm	Skewness:	1.188 Right skewed
		Kurtosis:	2.701 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.149 µm	0.305 µm	0.464 µm	0.631 µm	0.856 µm

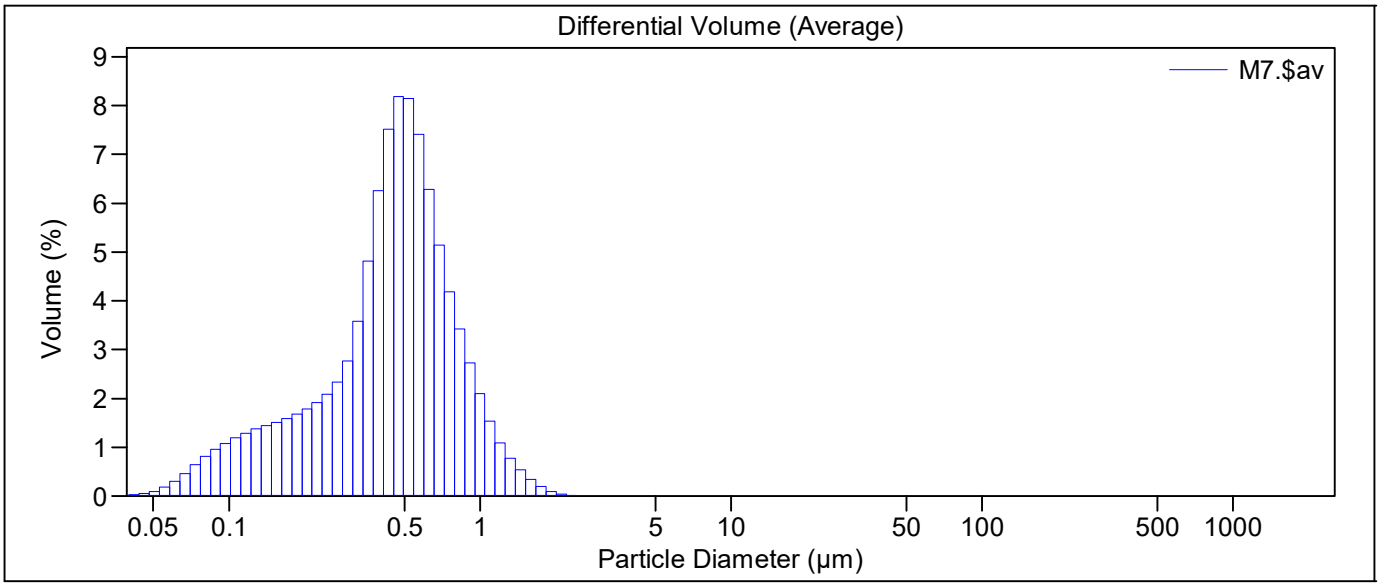
Number Statistics (Arithmetic) M7.$av

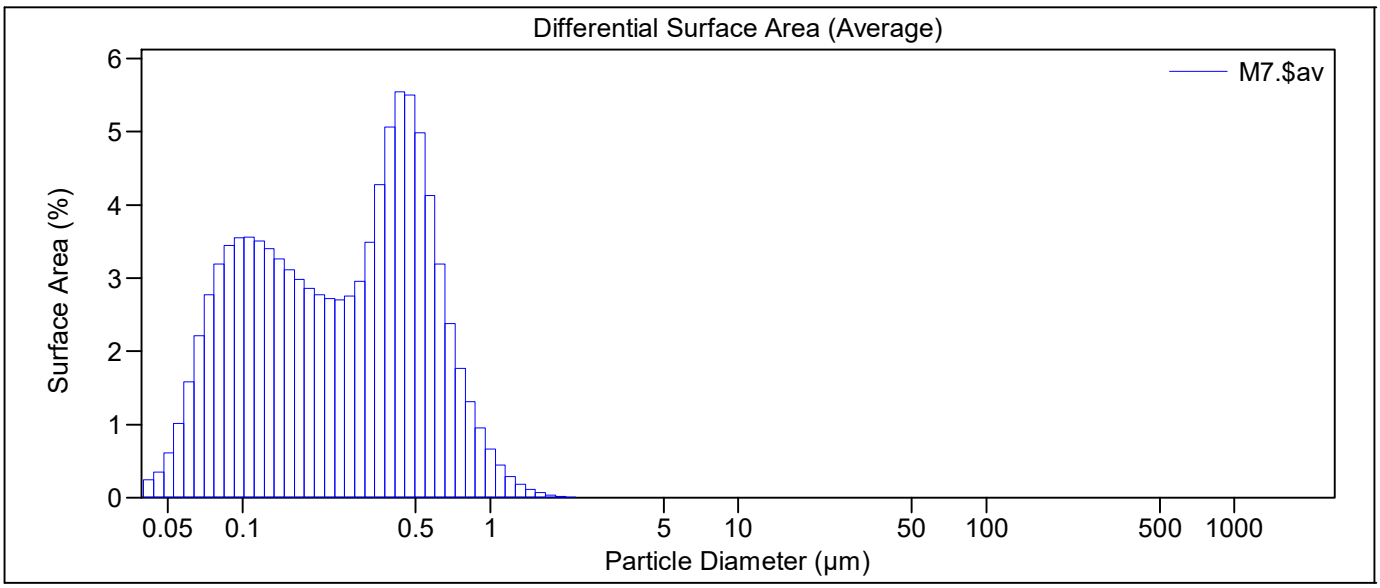
Calculations from 0.040 µm to 2000 µm

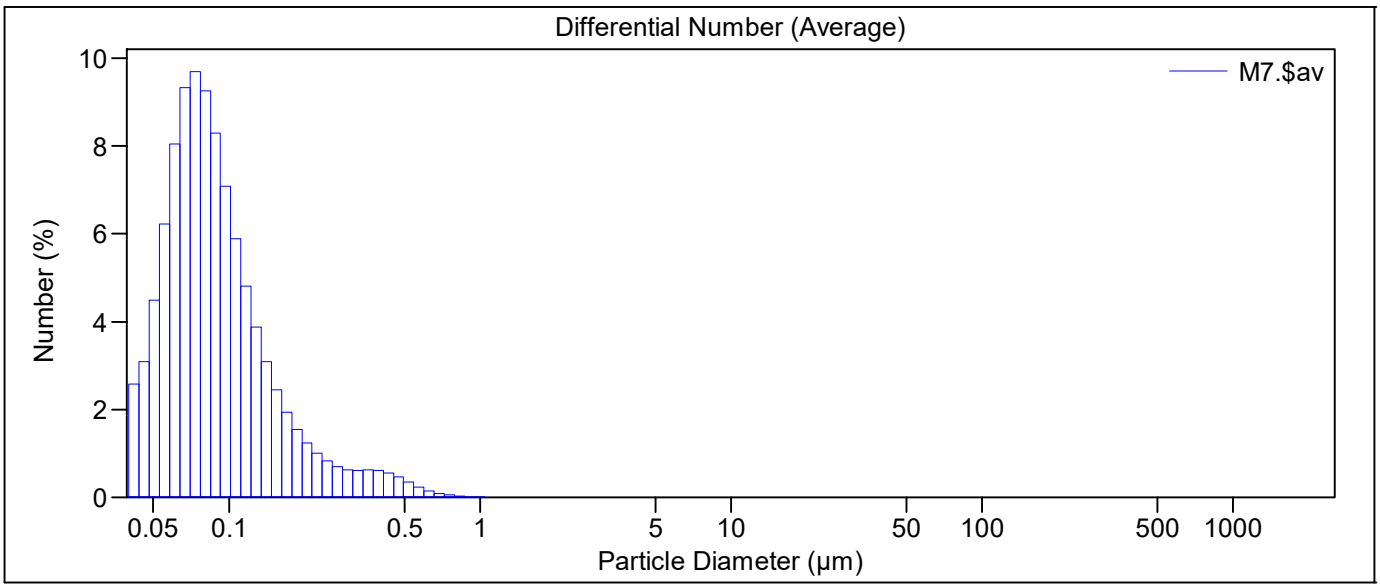
Number:	100%		
Mean:	0.107 µm	S.D.:	0.085 µm
Median:	0.082 µm	Variance:	0.0073 µm^2
Mean/Median ratio:	1.306	C.V.:	79.6%
Mode:	0.073 µm	Skewness:	3.861 Right skewed
		Kurtosis:	21.52 Leptokurtic

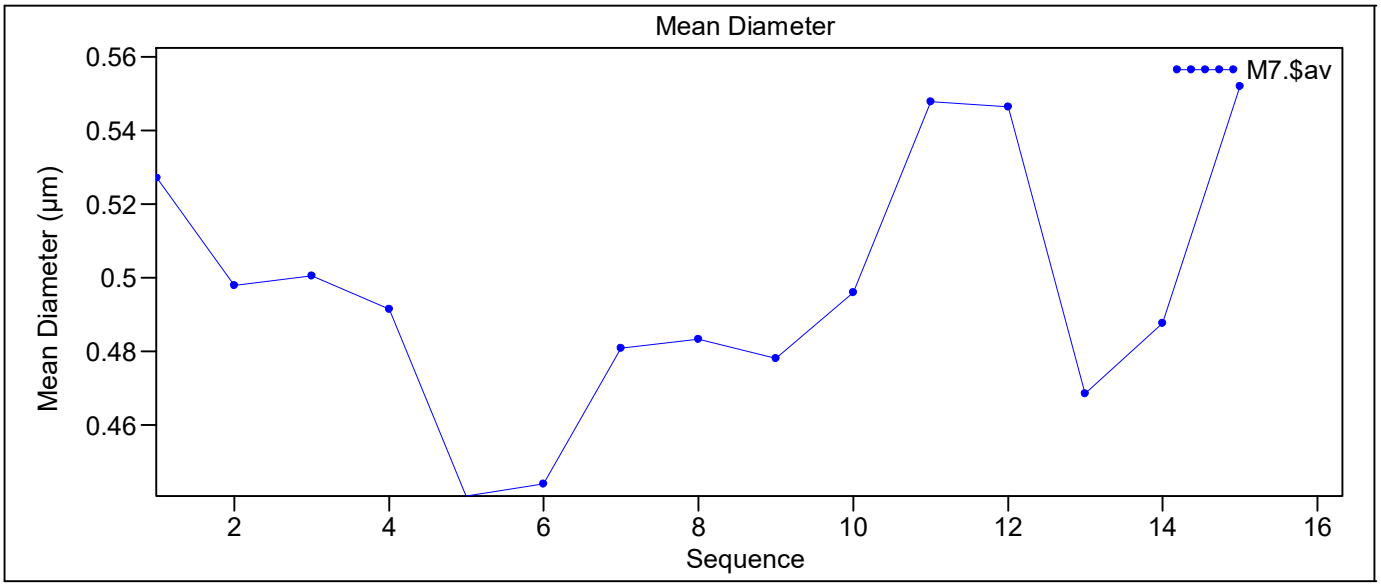
<10%	<25%	<50%	<75%	<90%
0.053 µm	0.064 µm	0.082 µm	0.114 µm	0.176 µm

Beckman Coulter LS13320









M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.032	0.24	2.59
2	0.044	0.046	0.050	0.35	3.09
3	0.048	0.050	0.097	0.61	4.49
4	0.053	0.055	0.18	1.02	6.22
5	0.058	0.061	0.30	1.59	8.05
6	0.064	0.067	0.47	2.22	9.33
7	0.070	0.073	0.64	2.78	9.70
8	0.077	0.080	0.81	3.19	9.26
9	0.084	0.088	0.96	3.45	8.29
10	0.093	0.097	1.08	3.55	7.09
11	0.102	0.106	1.19	3.56	5.90
12	0.112	0.117	1.29	3.50	4.82
13	0.122	0.128	1.37	3.40	3.88
14	0.134	0.141	1.44	3.26	3.09
15	0.148	0.155	1.51	3.11	2.44
16	0.162	0.170	1.59	2.98	1.94
17	0.178	0.186	1.68	2.86	1.55
18	0.195	0.205	1.78	2.77	1.25
19	0.214	0.225	1.92	2.72	1.01
20	0.235	0.247	2.09	2.70	0.83
21	0.258	0.271	2.34	2.75	0.71
22	0.284	0.297	2.76	2.96	0.63
23	0.311	0.326	3.58	3.49	0.62
24	0.342	0.358	4.81	4.28	0.63
25	0.375	0.393	6.26	5.07	0.62
26	0.412	0.431	7.52	5.55	0.56
27	0.452	0.474	8.19	5.50	0.46
28	0.496	0.520	8.14	4.98	0.35
29	0.545	0.571	7.41	4.13	0.24
30	0.598	0.627	6.29	3.19	0.15
31	0.656	0.688	5.14	2.38	0.094
32	0.721	0.755	4.19	1.77	0.058
33	0.791	0.829	3.42	1.31	0.036
34	0.868	0.910	2.73	0.96	0.022
35	0.953	0.999	2.10	0.67	0.013
36	1.047	1.097	1.54	0.45	0.0070
37	1.149	1.204	1.09	0.29	0.0037
38	1.261	1.321	0.78	0.19	0.0020
39	1.385	1.451	0.54	0.12	0.0010
40	1.520	1.592	0.34	0.068	0.00051
41	1.668	1.748	0.20	0.036	0.00022

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.097	0.016	0.000082
43	2.011	2.107	0.041	0.0062	0.000026
44	2.207	2.313	0.015	0.0021	0.000007
45	2.423	2.539	0.0045	0.00056	0.000002
46	2.660	2.787	0.0010	0.00011	2.76E-7
47	2.920	3.059	0.00012	0.000012	2.45E-8
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_01_193416.$ls M7_01_193416.$ls		
File ID:	M7		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.40%		
LS 13 320	Universal Liquid Module		
Start time:	19:32 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_01_193416.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.527 µm	S.D.:	0.415 µm
Median:	0.411 µm	Variance:	0.173 μm^2
Mean/Median ratio:	1.283	C.V.:	78.8%
Mode:	0.520 µm	Skewness:	1.453 Right skewed
		Kurtosis:	2.263 Leptokurtic

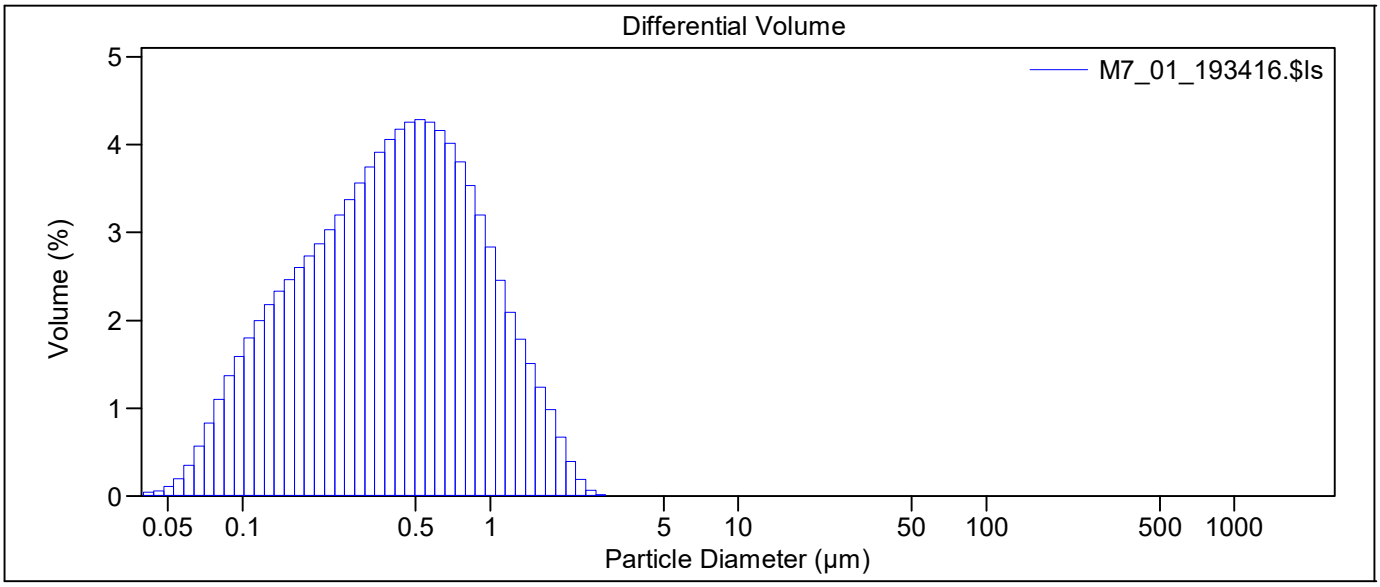
<10%	<25%	<50%	<75%	<90%
0.122 µm	0.213 µm	0.411 µm	0.717 µm	1.105 µm

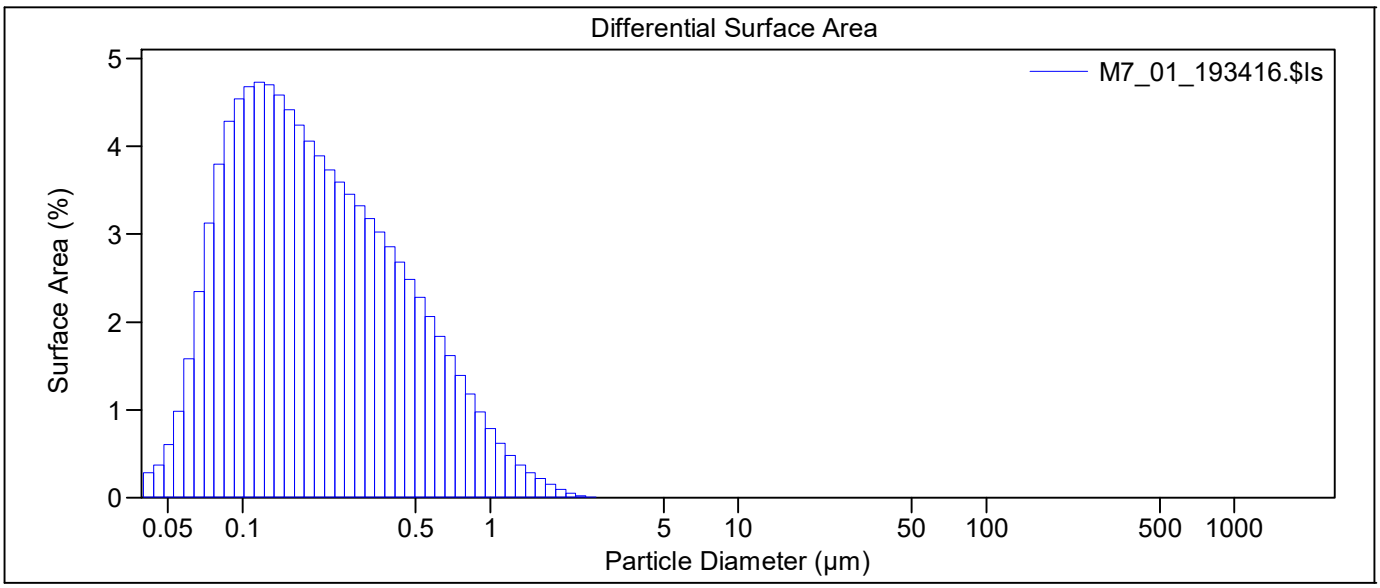
Number Statistics (Arithmetic) M7_01_193416.$ls

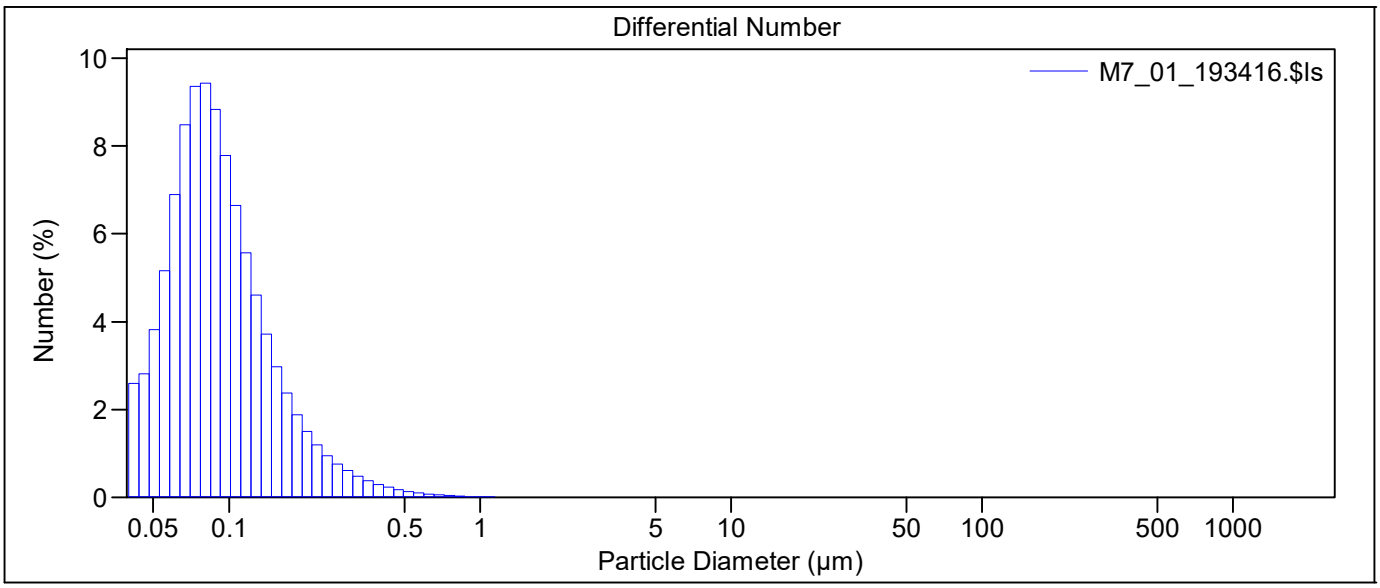
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.105 µm	S.D.:	0.072 µm
Median:	0.086 µm	Variance:	0.0051 μm^2
Mean/Median ratio:	1.224	C.V.:	68.2%
Mode:	0.080 µm	Skewness:	4.643 Right skewed
		Kurtosis:	42.14 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.066 µm	0.086 µm	0.118 µm	0.171 µm


Differential Volume
M7_01_193416.$ls
Volume (%)
0
1
2
3
4
5
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M7_01_193416.$ls
Surface Area (%)
0
1
2
3
4
5
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M7_01_193416.$ls
Number (%)
0
2
4
6
8
10
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.043	0.28	2.59
2	0.044	0.046	0.061	0.37	2.81
3	0.048	0.050	0.11	0.60	3.82
4	0.053	0.055	0.20	0.98	5.16
5	0.058	0.061	0.35	1.58	6.89
6	0.064	0.067	0.57	2.35	8.48
7	0.070	0.073	0.83	3.13	9.36
8	0.077	0.080	1.10	3.80	9.44
9	0.084	0.088	1.37	4.28	8.84
10	0.093	0.097	1.59	4.54	7.78
11	0.102	0.106	1.80	4.68	6.64
12	0.112	0.117	2.00	4.73	5.58
13	0.122	0.128	2.18	4.70	4.60
14	0.134	0.141	2.33	4.58	3.72
15	0.148	0.155	2.47	4.42	2.97
16	0.162	0.170	2.60	4.24	2.37
17	0.178	0.186	2.73	4.06	1.88
18	0.195	0.205	2.87	3.89	1.50
19	0.214	0.225	3.03	3.73	1.19
20	0.235	0.247	3.20	3.59	0.95
21	0.258	0.271	3.38	3.45	0.76
22	0.284	0.297	3.56	3.32	0.61
23	0.311	0.326	3.74	3.18	0.48
24	0.342	0.358	3.91	3.02	0.38
25	0.375	0.393	4.06	2.86	0.30
26	0.412	0.431	4.18	2.68	0.23
27	0.452	0.474	4.25	2.49	0.18
28	0.496	0.520	4.28	2.28	0.14
29	0.545	0.571	4.26	2.06	0.10
30	0.598	0.627	4.16	1.84	0.075
31	0.656	0.688	4.01	1.61	0.055
32	0.721	0.755	3.80	1.39	0.039
33	0.791	0.829	3.53	1.18	0.028
34	0.868	0.910	3.20	0.97	0.019
35	0.953	0.999	2.83	0.78	0.013
36	1.047	1.097	2.46	0.62	0.0083
37	1.149	1.204	2.09	0.48	0.0054
38	1.261	1.321	1.78	0.37	0.0034
39	1.385	1.451	1.51	0.29	0.0022
40	1.520	1.592	1.24	0.22	0.0014
41	1.668	1.748	0.98	0.16	0.00082
42	1.832	1.919	0.67	0.097	0.00042
43	2.011	2.107	0.40	0.052	0.00019
44	2.207	2.313	0.19	0.023	0.000069
45	2.423	2.539	0.064	0.0070	0.000017

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0.015	0.0015	0.000003
47	2.920	3.059	0.0018	0.00016	2.75E-7
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_02_193603.$ls M7_02_193603.$ls		
File ID:	M7		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.04%		
LS 13 320	Universal Liquid Module		
Start time:	19:34 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_02_193603.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.498 µm	S.D.:	0.353 µm
Median:	0.408 µm	Variance:	0.125 μm^2
Mean/Median ratio:	1.221	C.V.:	71.0%
Mode:	0.571 µm	Skewness:	1.038 Right skewed
		Kurtosis:	0.654 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.125 µm	0.214 µm	0.408 µm	0.703 µm	1.017 µm

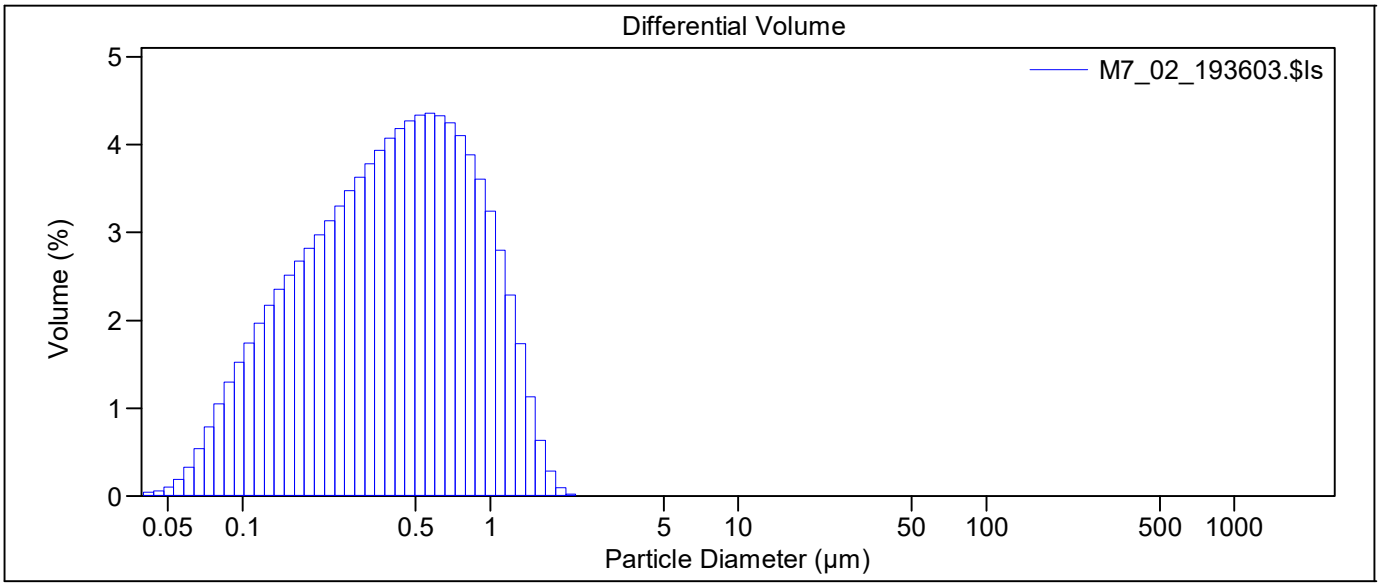
Number Statistics (Arithmetic) M7_02_193603.$ls

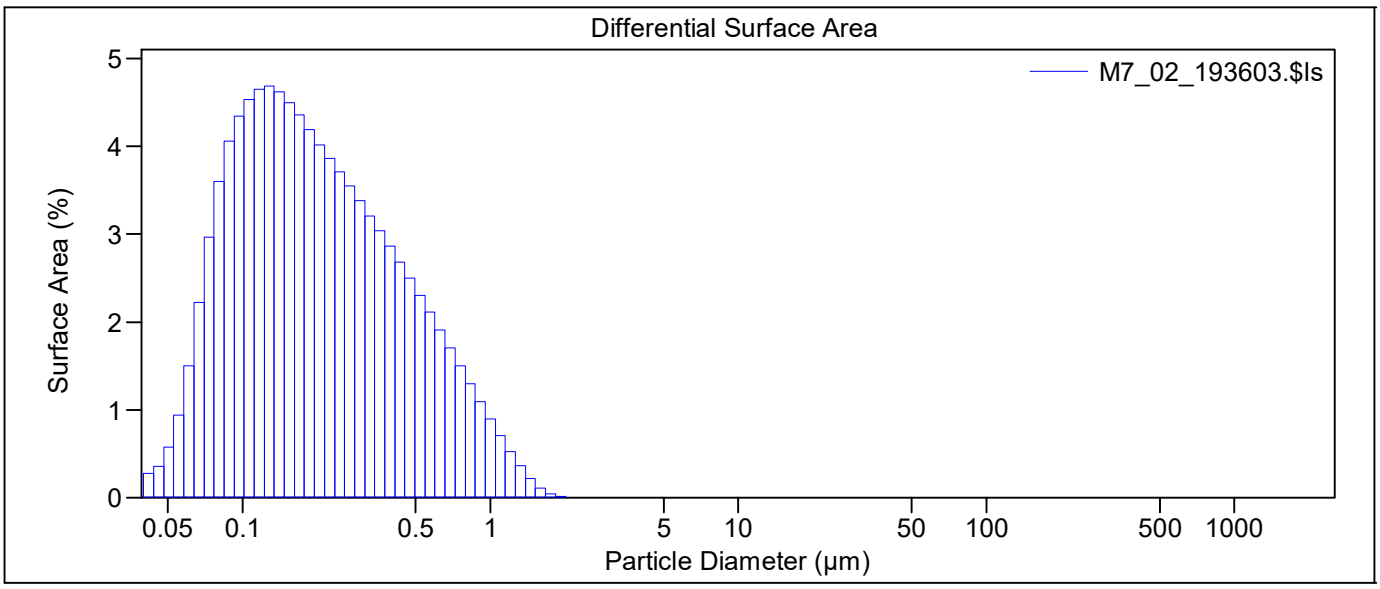
Calculations from 0.040 µm to 2000 µm

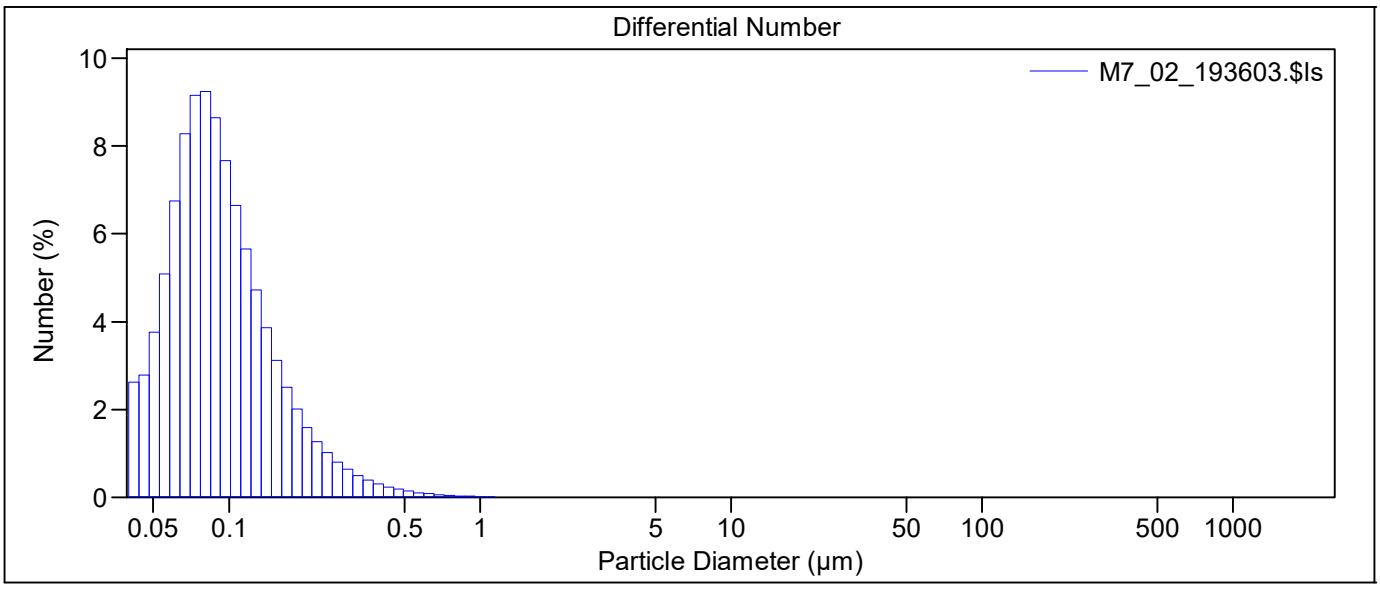
Number:	100%		
Mean:	0.106 µm	S.D.:	0.073 µm
Median:	0.087 µm	Variance:	0.0053 μm^2
Mean/Median ratio:	1.229	C.V.:	68.5%
Mode:	0.080 µm	Skewness:	4.394 Right skewed
		Kurtosis:	35.18 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.087 µm	0.120 µm	0.175 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.042	0.28	2.63
2	0.044	0.046	0.059	0.35	2.79
3	0.048	0.050	0.11	0.58	3.76
4	0.053	0.055	0.19	0.94	5.09
5	0.058	0.061	0.33	1.50	6.75
6	0.064	0.067	0.54	2.22	8.28
7	0.070	0.073	0.79	2.96	9.16
8	0.077	0.080	1.05	3.60	9.24
9	0.084	0.088	1.30	4.06	8.64
10	0.093	0.097	1.52	4.34	7.67
11	0.102	0.106	1.74	4.53	6.64
12	0.112	0.117	1.96	4.65	5.65
13	0.122	0.128	2.17	4.69	4.73
14	0.134	0.141	2.35	4.62	3.87
15	0.148	0.155	2.51	4.49	3.12
16	0.162	0.170	2.67	4.36	2.51
17	0.178	0.186	2.82	4.19	2.00
18	0.195	0.205	2.97	4.02	1.60
19	0.214	0.225	3.13	3.86	1.27
20	0.235	0.247	3.30	3.71	1.01
21	0.258	0.271	3.48	3.55	0.81
22	0.284	0.297	3.63	3.38	0.64
23	0.311	0.326	3.78	3.21	0.50
24	0.342	0.358	3.94	3.04	0.39
25	0.375	0.393	4.07	2.87	0.31
26	0.412	0.431	4.18	2.68	0.24
27	0.452	0.474	4.27	2.50	0.18
28	0.496	0.520	4.33	2.31	0.14
29	0.545	0.571	4.36	2.11	0.11
30	0.598	0.627	4.33	1.91	0.081
31	0.656	0.688	4.25	1.71	0.060
32	0.721	0.755	4.10	1.50	0.044
33	0.791	0.829	3.89	1.30	0.031
34	0.868	0.910	3.61	1.10	0.022
35	0.953	0.999	3.24	0.90	0.015
36	1.047	1.097	2.80	0.71	0.0098
37	1.149	1.204	2.29	0.53	0.0060
38	1.261	1.321	1.73	0.36	0.0035
39	1.385	1.451	1.13	0.22	0.0017
40	1.520	1.592	0.63	0.11	0.00072
41	1.668	1.748	0.29	0.045	0.00025
42	1.832	1.919	0.093	0.013	0.000060
43	2.011	2.107	0.021	0.0028	0.000010
44	2.207	2.313	0.0024	0.00028	0.000001
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_03_193750.$ls M7_03_193750.$ls		
File ID:	M7		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.87%		
LS 13 320	Universal Liquid Module		
Start time:	19:36 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_03_193750.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.501 µm	S.D.:	0.363 µm
Median:	0.404 µm	Variance:	0.132 µm^2
Mean/Median ratio:	1.240	C.V.:	72.5%
Mode:	0.571 µm	Skewness:	1.097 Right skewed
		Kurtosis:	0.822 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.124 µm	0.211 µm	0.404 µm	0.705 µm	1.033 µm

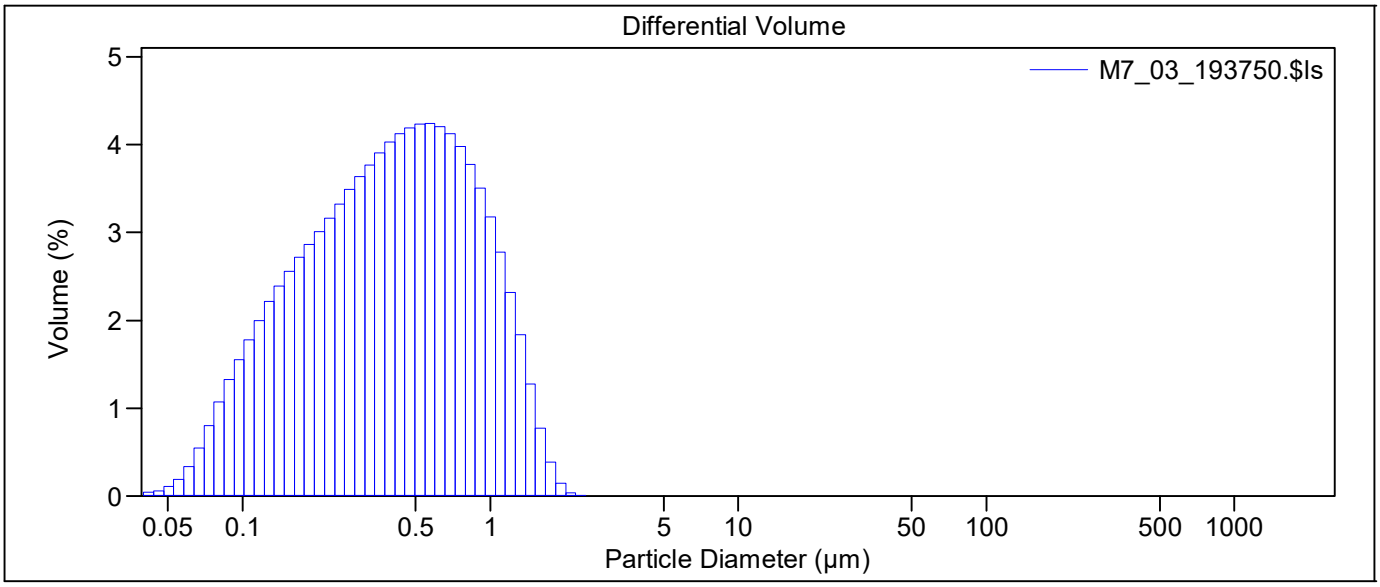
Number Statistics (Arithmetic) M7_03_193750.$ls

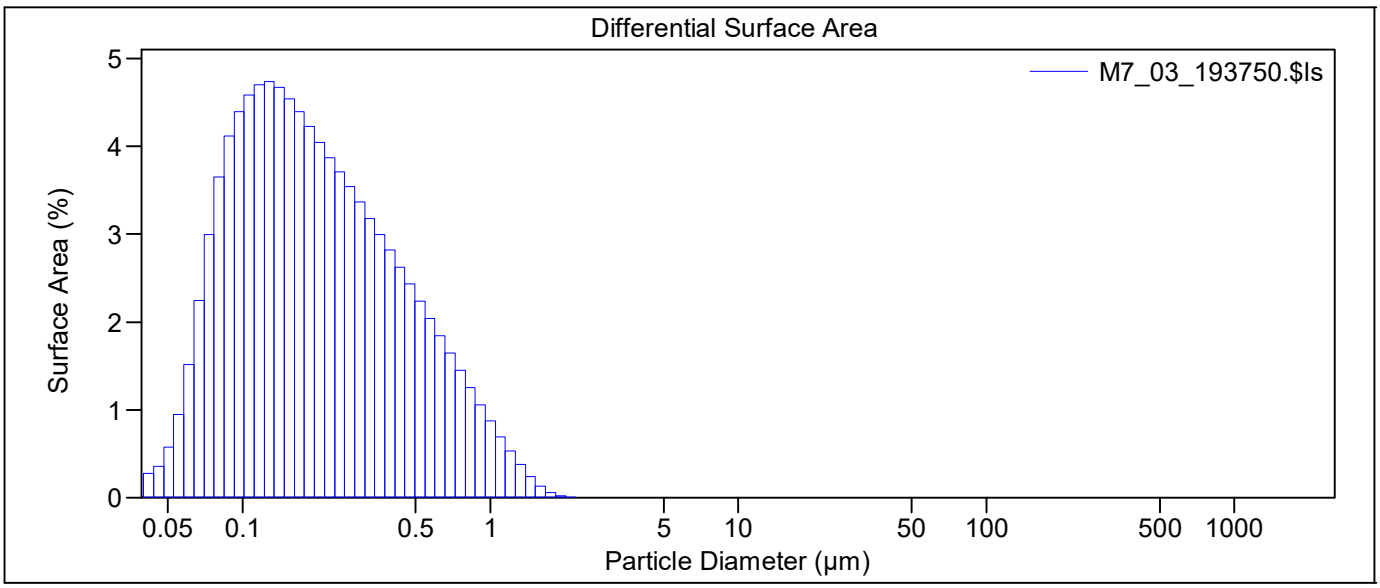
Calculations from 0.040 µm to 2000 µm

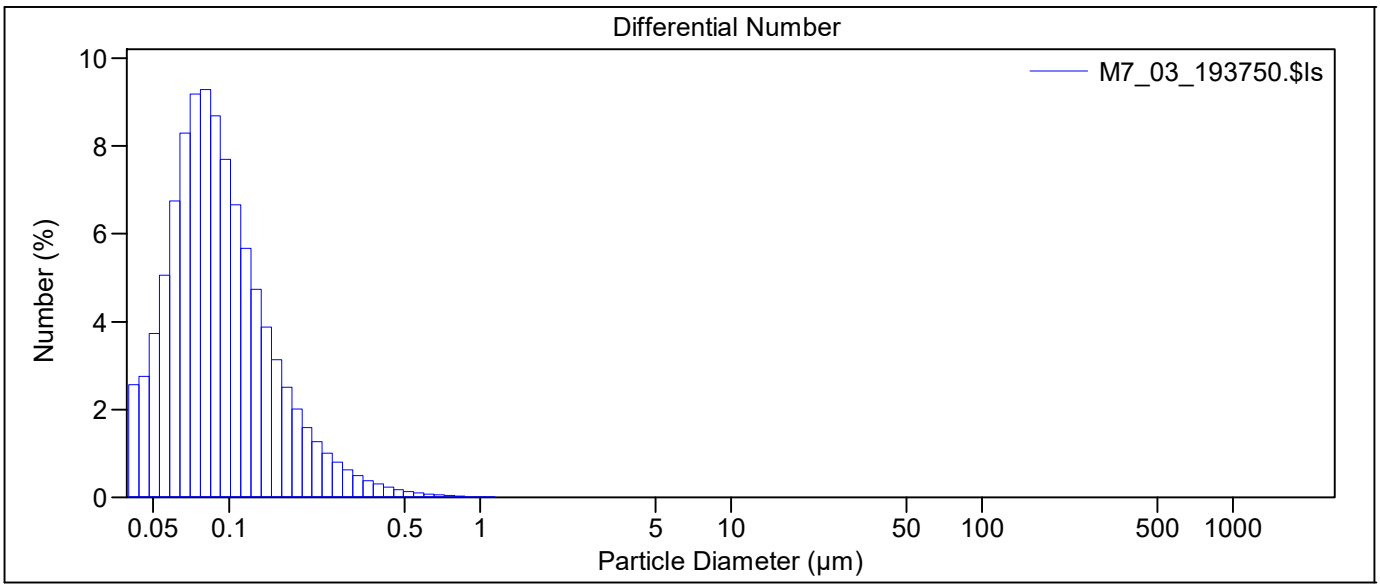
Number:	100%		
Mean:	0.106 µm	S.D.:	0.072 µm
Median:	0.087 µm	Variance:	0.0052 µm^2
Mean/Median ratio:	1.226	C.V.:	68.1%
Mode:	0.080 µm	Skewness:	4.441 Right skewed
		Kurtosis:	36.61 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.087 µm	0.120 µm	0.174 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.042	0.27	2.57
2	0.044	0.046	0.059	0.35	2.76
3	0.048	0.050	0.11	0.58	3.74
4	0.053	0.055	0.19	0.94	5.06
5	0.058	0.061	0.34	1.52	6.76
6	0.064	0.067	0.55	2.24	8.29
7	0.070	0.073	0.80	3.00	9.18
8	0.077	0.080	1.07	3.65	9.28
9	0.084	0.088	1.32	4.12	8.69
10	0.093	0.097	1.55	4.40	7.70
11	0.102	0.106	1.78	4.58	6.66
12	0.112	0.117	2.00	4.70	5.67
13	0.122	0.128	2.21	4.74	4.74
14	0.134	0.141	2.39	4.67	3.88
15	0.148	0.155	2.56	4.54	3.13
16	0.162	0.170	2.72	4.40	2.51
17	0.178	0.186	2.87	4.23	2.01
18	0.195	0.205	3.01	4.04	1.59
19	0.214	0.225	3.16	3.87	1.26
20	0.235	0.247	3.33	3.71	1.01
21	0.258	0.271	3.49	3.55	0.80
22	0.284	0.297	3.64	3.37	0.63
23	0.311	0.326	3.77	3.18	0.49
24	0.342	0.358	3.91	3.00	0.39
25	0.375	0.393	4.03	2.82	0.30
26	0.412	0.431	4.12	2.63	0.23
27	0.452	0.474	4.19	2.43	0.18
28	0.496	0.520	4.24	2.24	0.14
29	0.545	0.571	4.24	2.04	0.10
30	0.598	0.627	4.21	1.85	0.077
31	0.656	0.688	4.12	1.65	0.057
32	0.721	0.755	3.98	1.45	0.042
33	0.791	0.829	3.77	1.25	0.030
34	0.868	0.910	3.51	1.06	0.021
35	0.953	0.999	3.18	0.87	0.014
36	1.047	1.097	2.77	0.70	0.0095
37	1.149	1.204	2.32	0.53	0.0060
38	1.261	1.321	1.83	0.38	0.0036
39	1.385	1.451	1.27	0.24	0.0019
40	1.520	1.592	0.77	0.13	0.00086
41	1.668	1.748	0.39	0.061	0.00033
42	1.832	1.919	0.15	0.021	0.000093
43	2.011	2.107	0.040	0.0052	0.000019
44	2.207	2.313	0.0066	0.00079	0.000002
45	2.423	2.539	0.00019	0.000020	5.14E-8

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_04_194911.$ls M7_04_194911.$ls		
File ID:	M7		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.61%		
LS 13 320	Universal Liquid Module		
Start time:	19:47 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_04_194911.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.491 µm	S.D.:	0.371 µm
Median:	0.386 µm	Variance:	0.138 μm^2
Mean/Median ratio:	1.272	C.V.:	75.5%
Mode:	0.571 µm	Skewness:	1.168 Right skewed
		Kurtosis:	1.017 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.116 µm	0.196 µm	0.386 µm	0.694 µm	1.036 µm

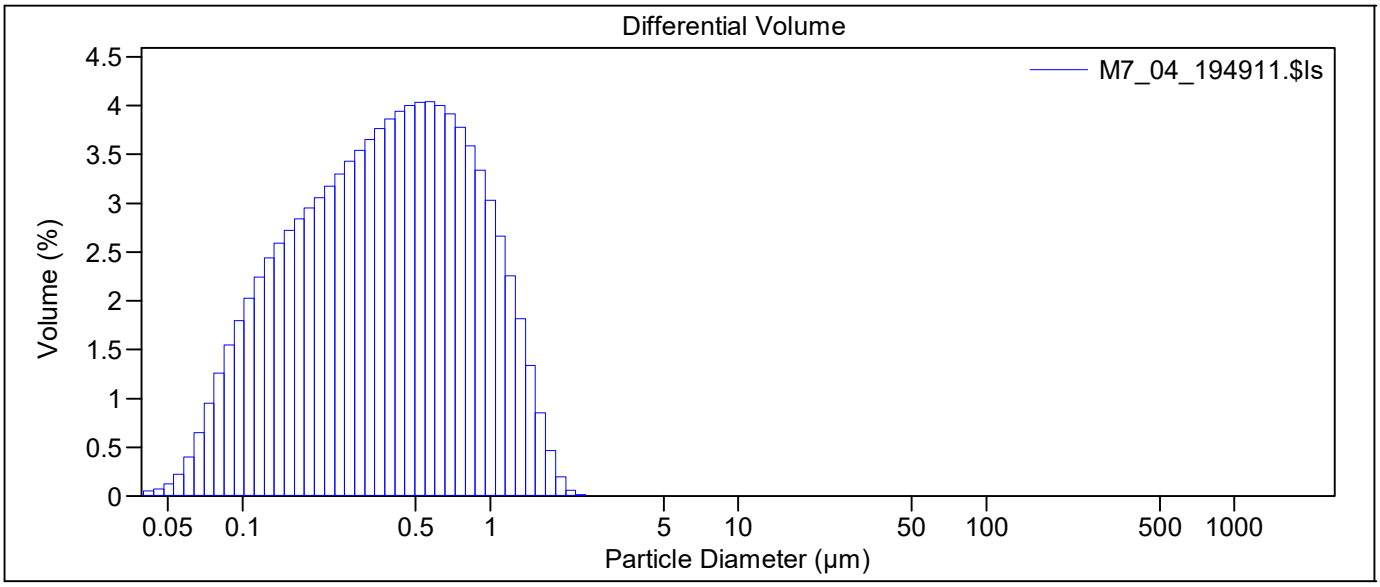
Number Statistics (Arithmetic) M7_04_194911.$ls

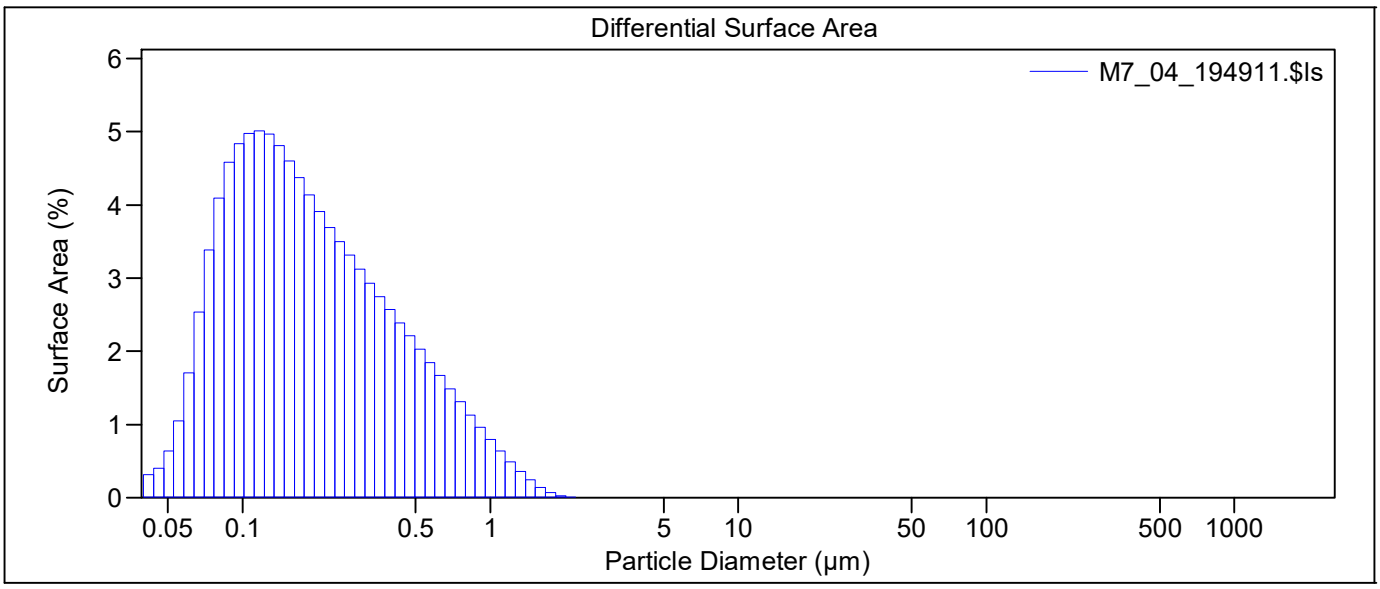
Calculations from 0.040 µm to 2000 µm

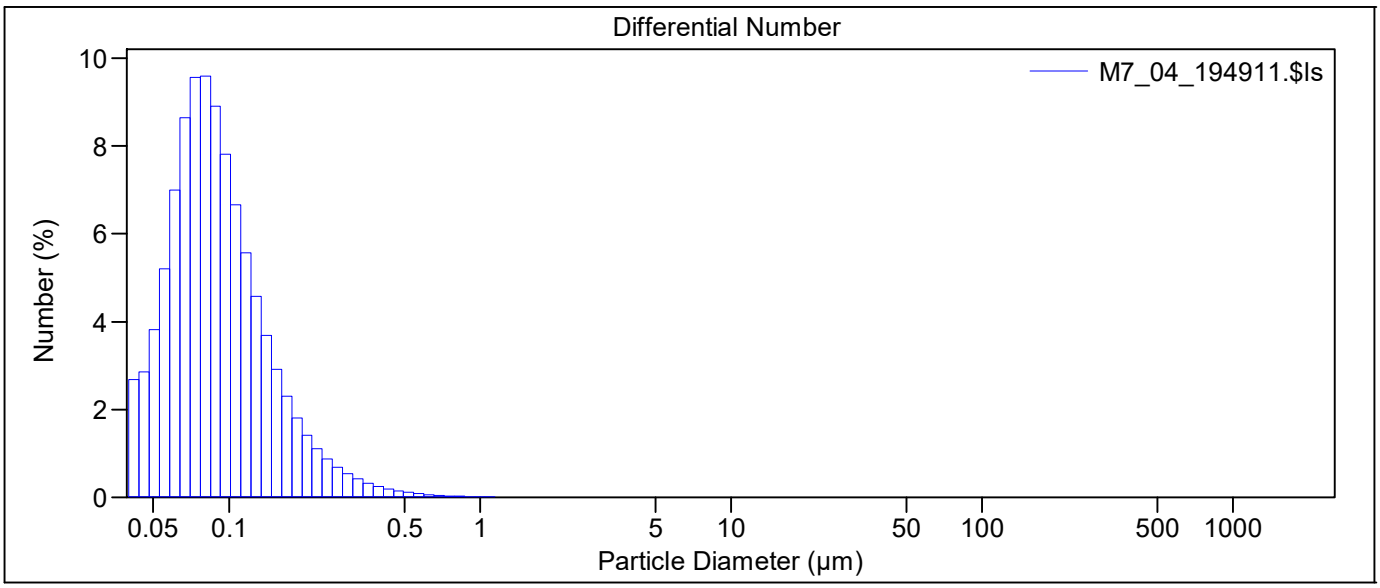
Number:	100%		
Mean:	0.103 µm	S.D.:	0.068 µm
Median:	0.085 µm	Variance:	0.0046 μm^2
Mean/Median ratio:	1.211	C.V.:	66.1%
Mode:	0.080 µm	Skewness:	4.657 Right skewed
		Kurtosis:	41.46 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.066 µm	0.085 µm	0.116 µm	0.166 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.050	0.31	2.69
2	0.044	0.046	0.070	0.40	2.86
3	0.048	0.050	0.12	0.64	3.82
4	0.053	0.055	0.22	1.05	5.20
5	0.058	0.061	0.40	1.71	6.99
6	0.064	0.067	0.65	2.54	8.64
7	0.070	0.073	0.95	3.39	9.56
8	0.077	0.080	1.26	4.09	9.60
9	0.084	0.088	1.55	4.58	8.91
10	0.093	0.097	1.80	4.84	7.81
11	0.102	0.106	2.03	4.97	6.66
12	0.112	0.117	2.24	5.02	5.57
13	0.122	0.128	2.44	4.97	4.58
14	0.134	0.141	2.59	4.81	3.68
15	0.148	0.155	2.72	4.60	2.92
16	0.162	0.170	2.84	4.38	2.31
17	0.178	0.186	2.95	4.14	1.81
18	0.195	0.205	3.06	3.91	1.42
19	0.214	0.225	3.17	3.69	1.11
20	0.235	0.247	3.30	3.50	0.87
21	0.258	0.271	3.43	3.31	0.69
22	0.284	0.297	3.54	3.12	0.54
23	0.311	0.326	3.65	2.93	0.42
24	0.342	0.358	3.76	2.75	0.33
25	0.375	0.393	3.87	2.57	0.25
26	0.412	0.431	3.94	2.39	0.19
27	0.452	0.474	4.00	2.21	0.15
28	0.496	0.520	4.04	2.03	0.11
29	0.545	0.571	4.04	1.85	0.086
30	0.598	0.627	4.00	1.67	0.065
31	0.656	0.688	3.92	1.49	0.048
32	0.721	0.755	3.78	1.31	0.035
33	0.791	0.829	3.59	1.13	0.025
34	0.868	0.910	3.34	0.96	0.018
35	0.953	0.999	3.03	0.79	0.012
36	1.047	1.097	2.66	0.64	0.0080
37	1.149	1.204	2.26	0.49	0.0051
38	1.261	1.321	1.82	0.36	0.0031
39	1.385	1.451	1.34	0.24	0.0017
40	1.520	1.592	0.85	0.14	0.00084
41	1.668	1.748	0.46	0.069	0.00034
42	1.832	1.919	0.20	0.027	0.00011
43	2.011	2.107	0.060	0.0074	0.000025
44	2.207	2.313	0.013	0.0014	0.000004
45	2.423	2.539	0.0011	0.00011	2.55E-7

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_05_195058.$ls M7_05_195058.$ls		
File ID:	M7		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.71%		
LS 13 320	Universal Liquid Module		
Start time:	19:49 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_05_195058.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.441 µm	S.D.:	0.264 µm
Median:	0.446 µm	Variance:	0.070 μm^2
Mean/Median ratio:	0.987	C.V.:	60.0%
Mode:	0.571 µm	Skewness:	0.307 Right skewed
		Kurtosis:	-0.738 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.098 µm	0.185 µm	0.446 µm	0.634 µm	0.793 µm

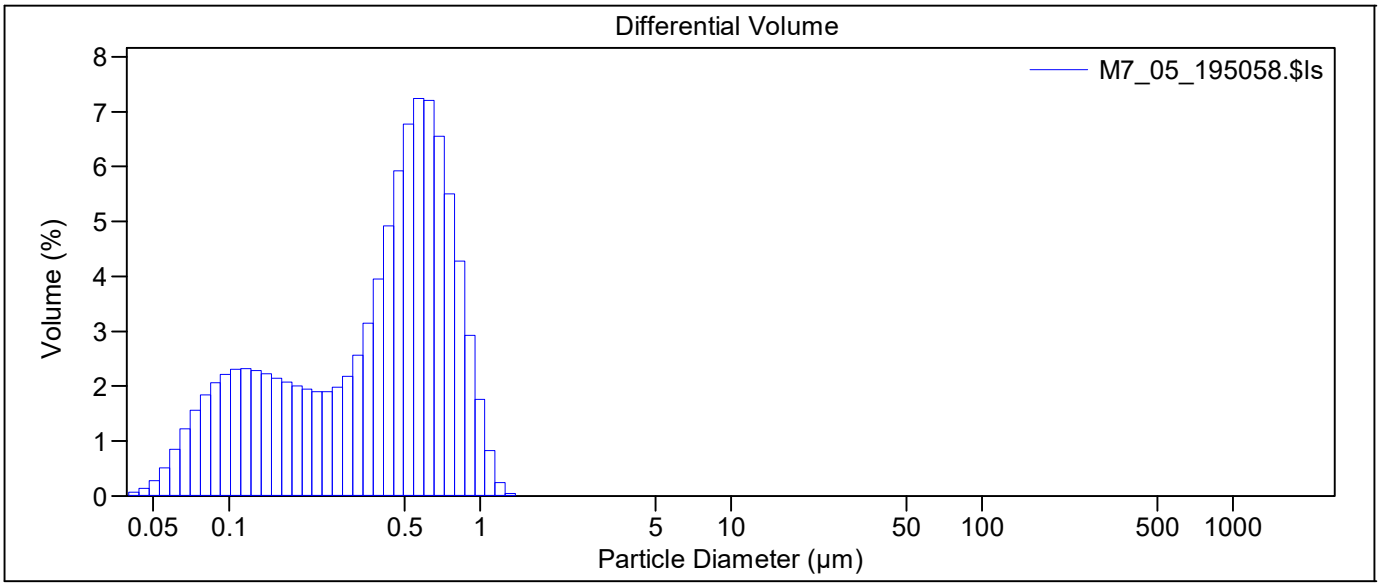
Number Statistics (Arithmetic) M7_05_195058.$ls

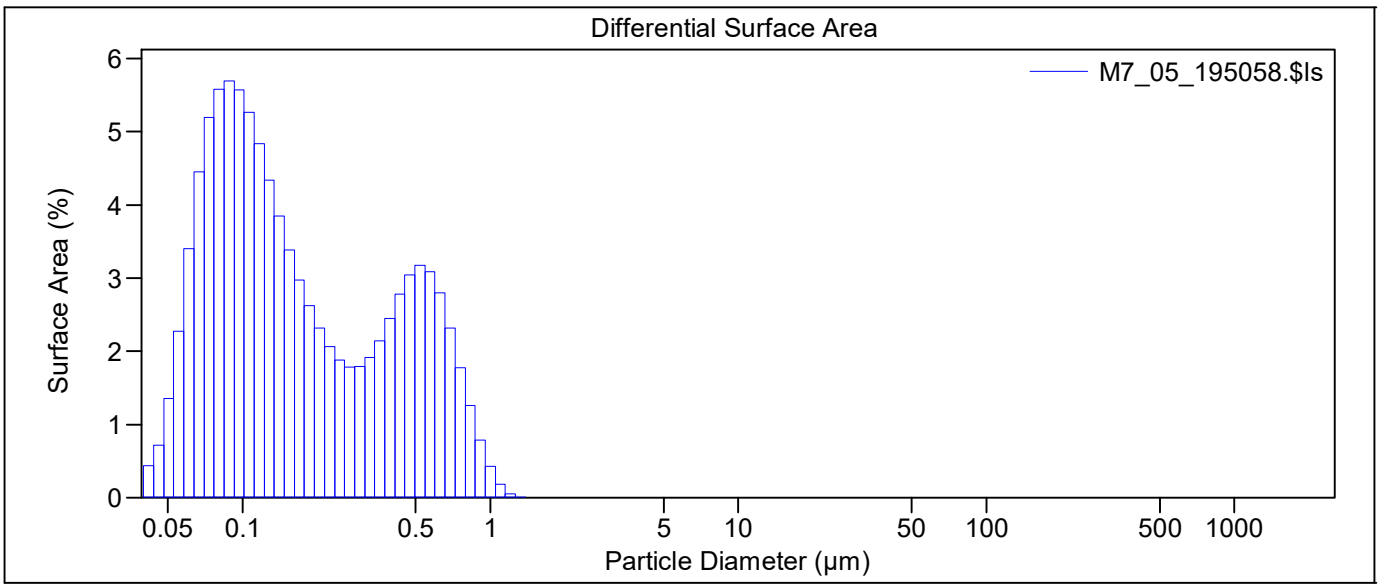
Calculations from 0.040 µm to 2000 µm

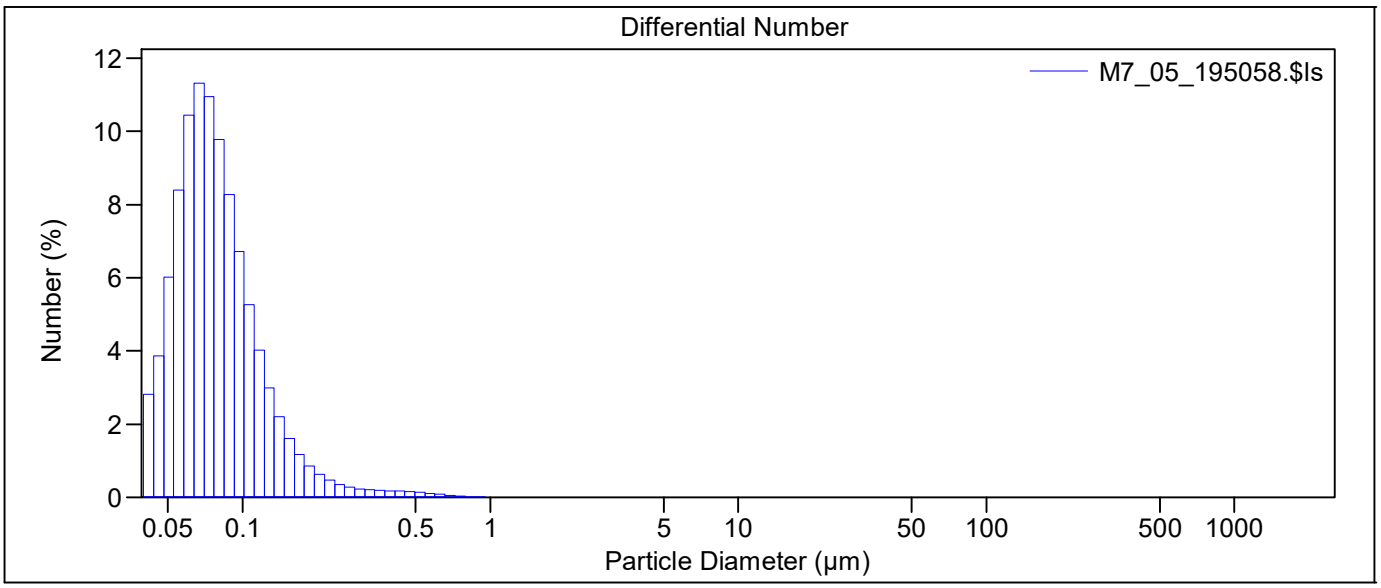
Number:	100%		
Mean:	0.089 µm	S.D.:	0.059 µm
Median:	0.074 µm	Variance:	0.0035 μm^2
Mean/Median ratio:	1.190	C.V.:	66.8%
Mode:	0.067 µm	Skewness:	5.481 Right skewed
		Kurtosis:	44.90 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.097 µm	0.131 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.075	0.44	2.81
2	0.044	0.046	0.14	0.72	3.87
3	0.048	0.050	0.28	1.35	6.02
4	0.053	0.055	0.52	2.27	8.39
5	0.058	0.061	0.85	3.41	10.4
6	0.064	0.067	1.22	4.45	11.3
7	0.070	0.073	1.56	5.19	11.0
8	0.077	0.080	1.85	5.58	9.78
9	0.084	0.088	2.07	5.70	8.28
10	0.093	0.097	2.22	5.57	6.72
11	0.102	0.106	2.31	5.27	5.27
12	0.112	0.117	2.32	4.84	4.02
13	0.122	0.128	2.29	4.34	2.99
14	0.134	0.141	2.22	3.84	2.20
15	0.148	0.155	2.15	3.38	1.61
16	0.162	0.170	2.08	2.98	1.17
17	0.178	0.186	2.01	2.62	0.86
18	0.195	0.205	1.95	2.32	0.63
19	0.214	0.225	1.91	2.07	0.46
20	0.235	0.247	1.90	1.88	0.35
21	0.258	0.271	1.99	1.79	0.28
22	0.284	0.297	2.19	1.79	0.23
23	0.311	0.326	2.57	1.91	0.20
24	0.342	0.358	3.15	2.14	0.19
25	0.375	0.393	3.95	2.45	0.18
26	0.412	0.431	4.93	2.78	0.17
27	0.452	0.474	5.92	3.04	0.15
28	0.496	0.520	6.78	3.17	0.13
29	0.545	0.571	7.24	3.09	0.11
30	0.598	0.627	7.21	2.80	0.081
31	0.656	0.688	6.56	2.32	0.056
32	0.721	0.755	5.50	1.77	0.035
33	0.791	0.829	4.28	1.26	0.021
34	0.868	0.910	2.93	0.78	0.011
35	0.953	0.999	1.76	0.43	0.0049
36	1.047	1.097	0.83	0.18	0.0017
37	1.149	1.204	0.25	0.050	0.00039
38	1.261	1.321	0.051	0.0093	0.000061
39	1.385	1.451	0.0038	0.00064	0.000003
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

LS Particle Size Analyzer

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_06_195246.$ls M7_06_195246.$ls		
File ID:	M7		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.83%		
LS 13 320	Universal Liquid Module		
Start time:	19:51 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	45%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_06_195246.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.444 µm	S.D.:	0.252 µm
Median:	0.463 µm	Variance:	0.064 μm^2
Mean/Median ratio:	0.958	C.V.:	56.8%
Mode:	0.571 µm	Skewness:	0.185 Right skewed
		Kurtosis:	-0.730 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.100 µm	0.199 µm	0.463 µm	0.626 µm	0.770 µm

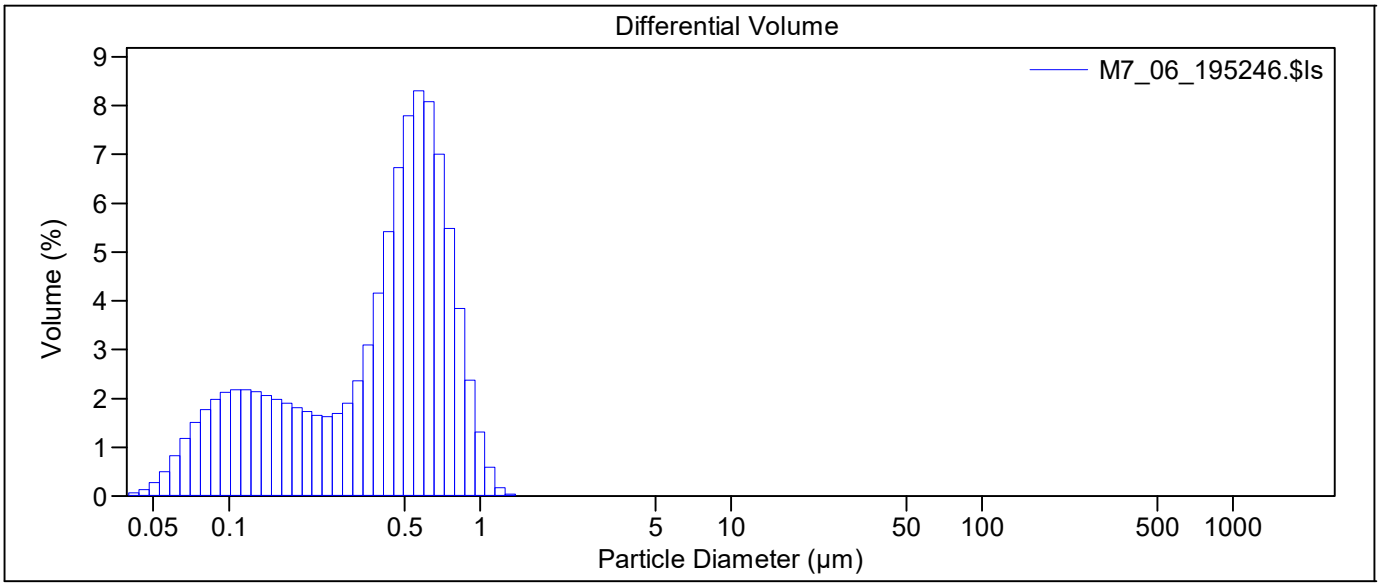
Number Statistics (Arithmetic) M7_06_195246.$ls

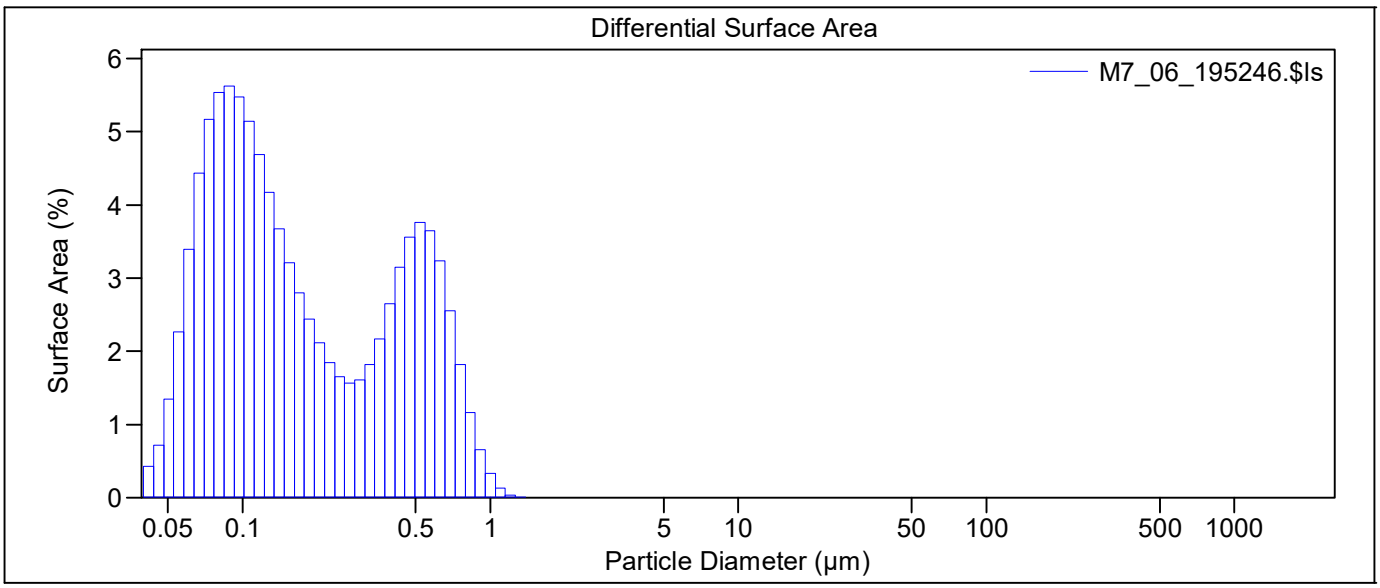
Calculations from 0.040 µm to 2000 µm

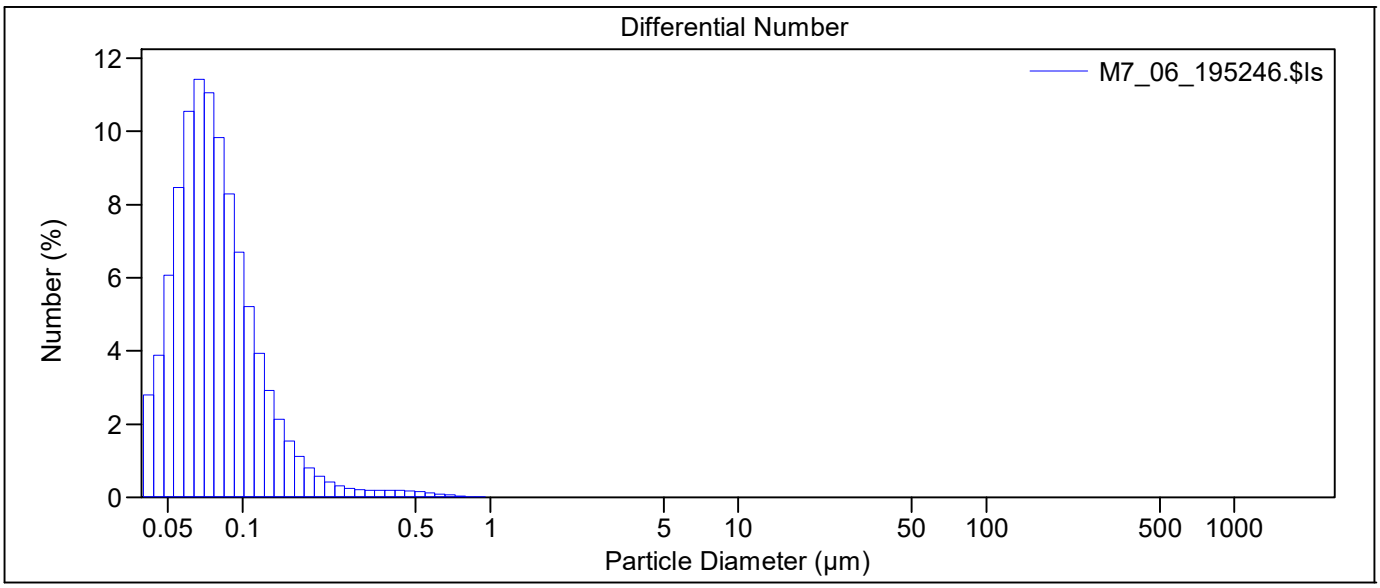
Number:	100%		
Mean:	0.088 µm	S.D.:	0.061 µm
Median:	0.074 µm	Variance:	0.0037 μm^2
Mean/Median ratio:	1.193	C.V.:	68.5%
Mode:	0.067 µm	Skewness:	5.466 Right skewed
		Kurtosis:	42.68 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.060 µm	0.074 µm	0.096 µm	0.130 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.072	0.43	2.81
2	0.044	0.046	0.13	0.71	3.88
3	0.048	0.050	0.27	1.34	6.07
4	0.053	0.055	0.50	2.26	8.47
5	0.058	0.061	0.82	3.39	10.5
6	0.064	0.067	1.18	4.43	11.4
7	0.070	0.073	1.51	5.17	11.1
8	0.077	0.080	1.78	5.54	9.83
9	0.084	0.088	1.98	5.63	8.29
10	0.093	0.097	2.12	5.48	6.70
11	0.102	0.106	2.18	5.14	5.22
12	0.112	0.117	2.18	4.69	3.94
13	0.122	0.128	2.14	4.17	2.92
14	0.134	0.141	2.06	3.67	2.13
15	0.148	0.155	1.98	3.21	1.54
16	0.162	0.170	1.90	2.80	1.12
17	0.178	0.186	1.81	2.44	0.81
18	0.195	0.205	1.73	2.12	0.58
19	0.214	0.225	1.65	1.85	0.42
20	0.235	0.247	1.62	1.65	0.31
21	0.258	0.271	1.69	1.56	0.25
22	0.284	0.297	1.91	1.61	0.21
23	0.311	0.326	2.36	1.82	0.20
24	0.342	0.358	3.10	2.17	0.19
25	0.375	0.393	4.16	2.65	0.20
26	0.412	0.431	5.42	3.15	0.19
27	0.452	0.474	6.73	3.56	0.18
28	0.496	0.520	7.79	3.76	0.16
29	0.545	0.571	8.31	3.65	0.13
30	0.598	0.627	8.09	3.24	0.095
31	0.656	0.688	7.01	2.56	0.062
32	0.721	0.755	5.48	1.82	0.037
33	0.791	0.829	3.85	1.16	0.019
34	0.868	0.910	2.37	0.65	0.0091
35	0.953	0.999	1.31	0.33	0.0038
36	1.047	1.097	0.58	0.13	0.0013
37	1.149	1.204	0.17	0.036	0.00028
38	1.261	1.321	0.035	0.0066	0.000044
39	1.385	1.451	0.0027	0.00046	0.000003
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_07_200147.$ls M7_07_200147.$ls		
File ID:	M7		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.73%		
LS 13 320	Universal Liquid Module		
Start time:	20:00 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	1%	PIDS Obscur:	50%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_07_200147.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.481 µm	S.D.:	0.094 µm
Median:	0.472 µm	Variance:	0.0088 µm^2
Mean/Median ratio:	1.019	C.V.:	19.5%
Mode:	0.474 µm	Skewness:	0.536 Right skewed
		Kurtosis:	0.168 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.366 µm	0.412 µm	0.472 µm	0.540 µm	0.609 µm

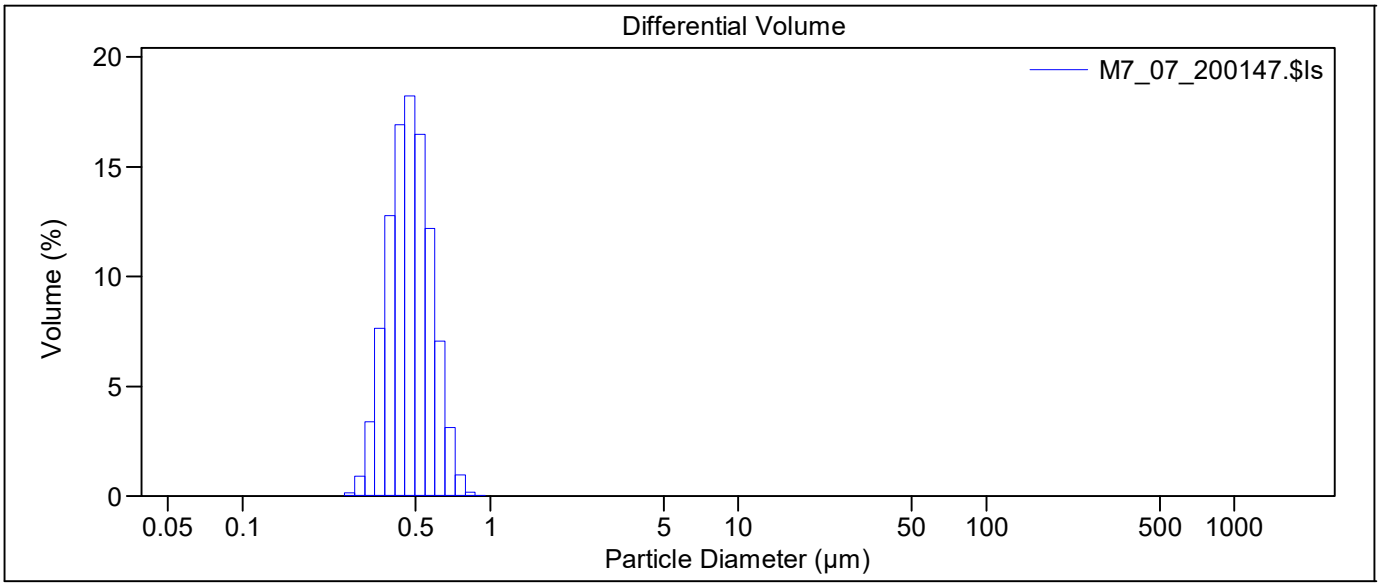
Number Statistics (Arithmetic) M7_07_200147.$ls

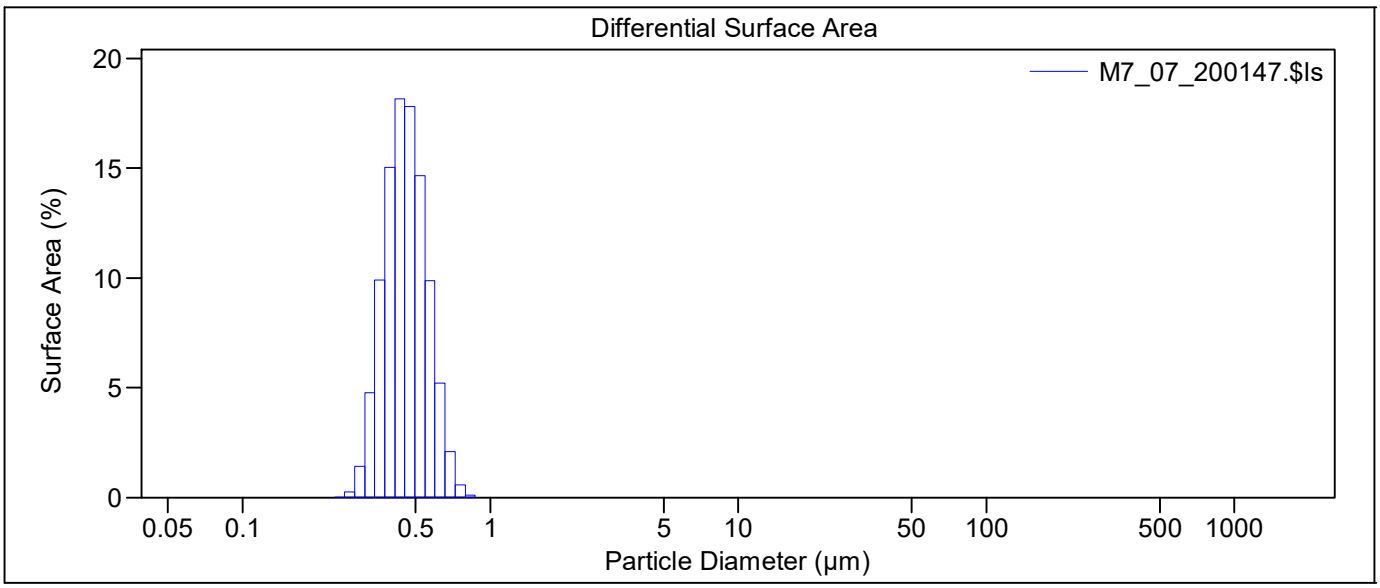
Calculations from 0.040 µm to 2000 µm

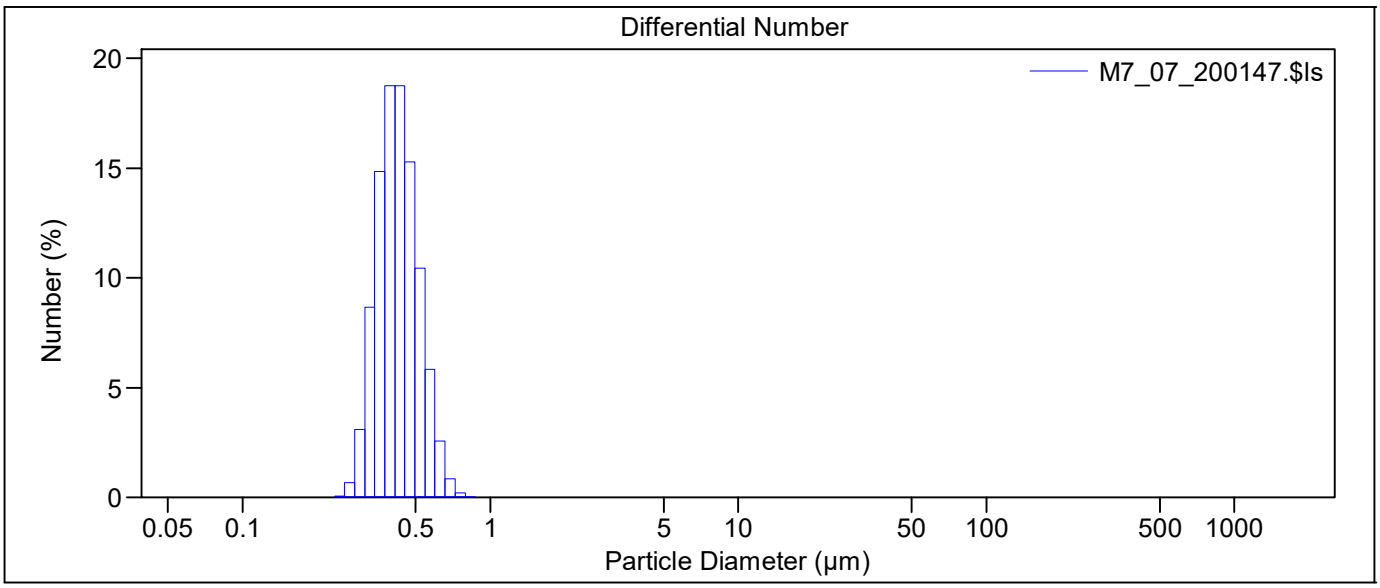
Number:	100%		
Mean:	0.431 µm	S.D.:	0.082 µm
Median:	0.420 µm	Variance:	0.0068 µm^2
Mean/Median ratio:	1.025	C.V.:	19.2%
Mode:	0.431 µm	Skewness:	0.719 Right skewed
		Kurtosis:	0.568 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.333 µm	0.370 µm	0.420 µm	0.482 µm	0.542 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.0087	0.016	0.052
21	0.258	0.271	0.15	0.26	0.68
22	0.284	0.297	0.91	1.41	3.08
23	0.311	0.326	3.37	4.79	8.66
24	0.342	0.358	7.65	9.90	14.9
25	0.375	0.393	12.8	15.1	18.7
26	0.412	0.431	16.9	18.1	18.7
27	0.452	0.474	18.2	17.8	15.3
28	0.496	0.520	16.5	14.7	10.4
29	0.545	0.571	12.2	9.89	5.84
30	0.598	0.627	7.07	5.23	2.56
31	0.656	0.688	3.12	2.10	0.85
32	0.721	0.755	0.96	0.59	0.20
33	0.791	0.829	0.19	0.11	0.029
34	0.868	0.910	0.021	0.011	0.0025
35	0.953	0.999	0.00075	0.00035	0.000067
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_08_200334.$ls M7_08_200334.$ls		
File ID:	M7		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.62%		
LS 13 320	Universal Liquid Module		
Start time:	20:01 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	1%	PIDS Obscur:	50%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_08_200334.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.483 µm	S.D.:	0.096 µm
Median:	0.474 µm	Variance:	0.0093 µm^2
Mean/Median ratio:	1.020	C.V.:	19.9%
Mode:	0.474 µm	Skewness:	0.550 Right skewed
		Kurtosis:	0.193 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.366 µm	0.413 µm	0.474 µm	0.544 µm	0.616 µm

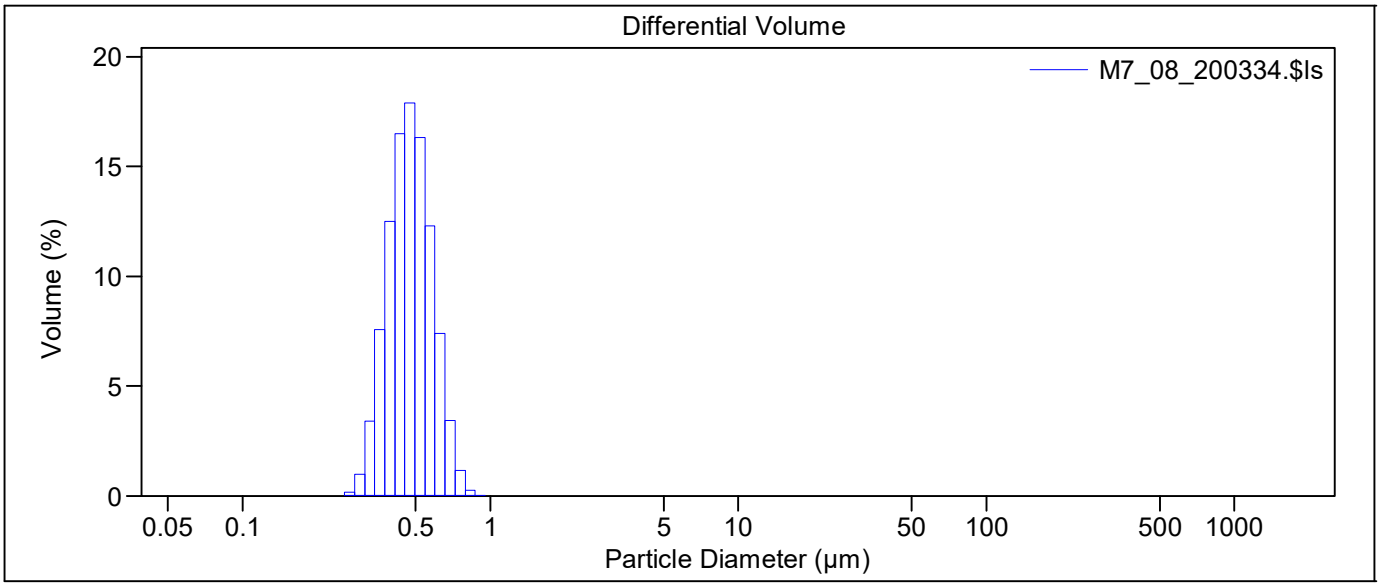
Number Statistics (Arithmetic) M7_08_200334.$ls

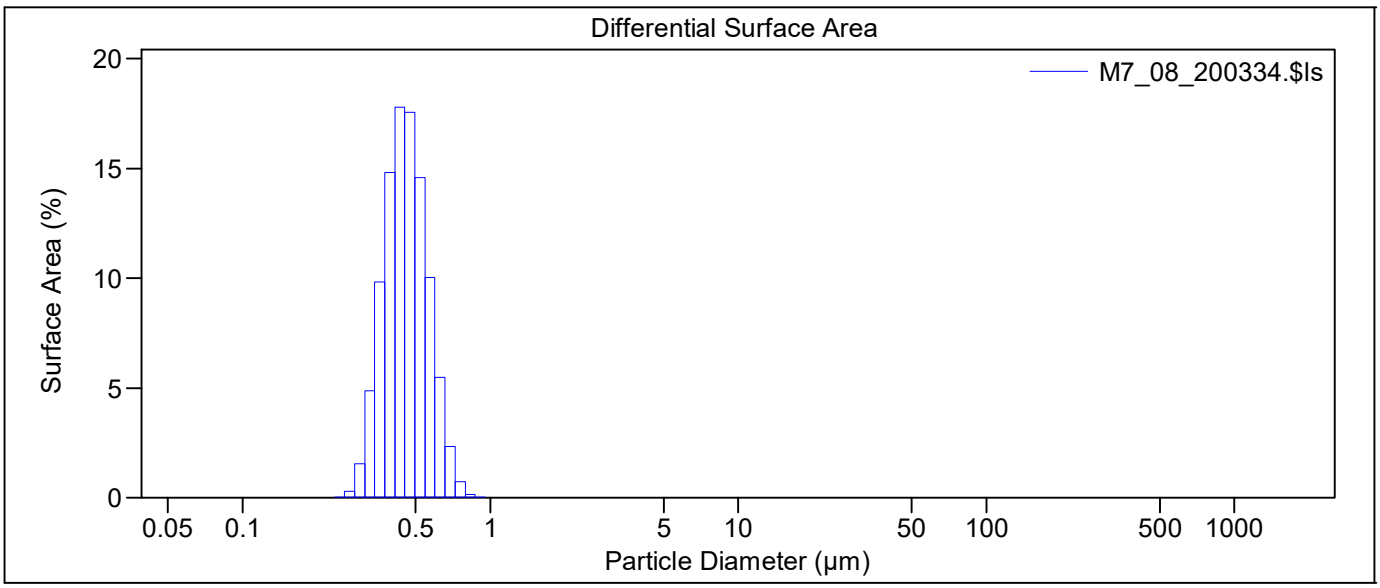
Calculations from 0.040 µm to 2000 µm

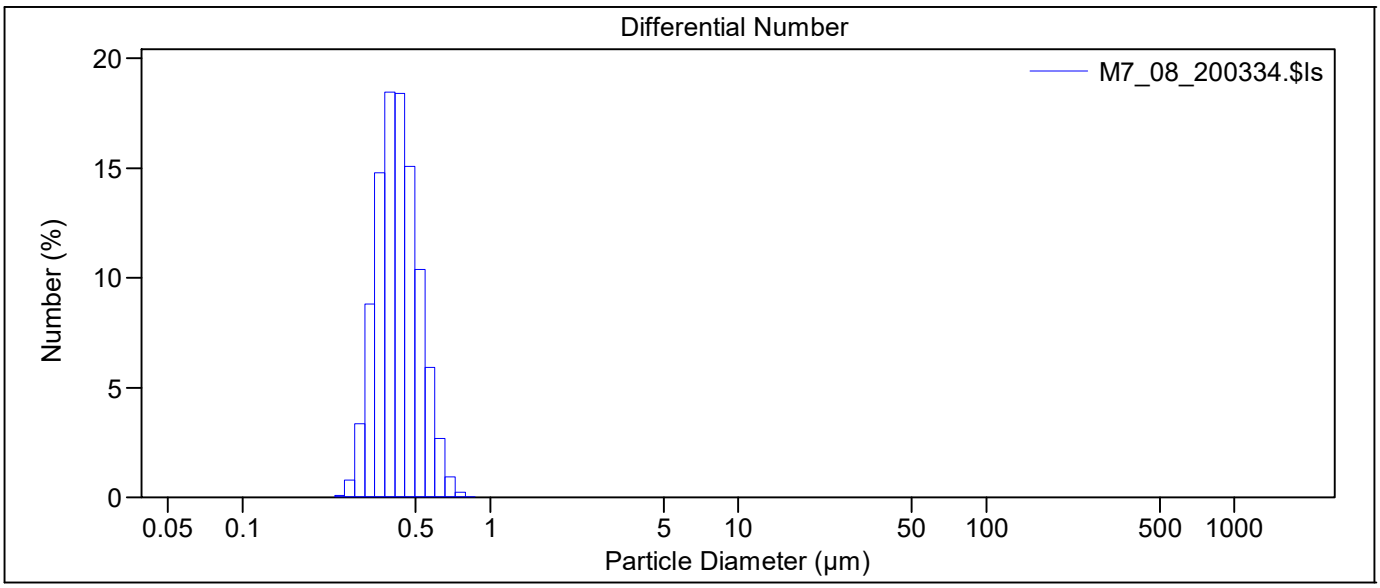
Number:	100%		
Mean:	0.431 µm	S.D.:	0.084 µm
Median:	0.420 µm	Variance:	0.0071 µm^2
Mean/Median ratio:	1.026	C.V.:	19.5%
Mode:	0.393 µm	Skewness:	0.734 Right skewed
		Kurtosis:	0.614 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.331 µm	0.369 µm	0.420 µm	0.482 µm	0.544 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0.000073	0.00015	0.00057
20	0.235	0.247	0.013	0.025	0.078
21	0.258	0.271	0.18	0.30	0.79
22	0.284	0.297	0.98	1.53	3.35
23	0.311	0.326	3.42	4.87	8.82
24	0.342	0.358	7.58	9.83	14.8
25	0.375	0.393	12.5	14.8	18.5
26	0.412	0.431	16.5	17.8	18.4
27	0.452	0.474	17.9	17.6	15.1
28	0.496	0.520	16.3	14.6	10.4
29	0.545	0.571	12.3	10.0	5.93
30	0.598	0.627	7.40	5.49	2.69
31	0.656	0.688	3.44	2.33	0.95
32	0.721	0.755	1.17	0.72	0.24
33	0.791	0.829	0.25	0.14	0.039
34	0.868	0.910	0.033	0.017	0.0039
35	0.953	0.999	0.0015	0.00072	0.00014
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_09_200522.$ls M7_09_200522.$ls		
File ID:	M7		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	4.79%		
LS 13 320	Universal Liquid Module		
Start time:	20:03 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	1%	PIDS Obscur:	50%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_09_200522.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.478 µm	S.D.:	0.092 µm
Median:	0.470 µm	Variance:	0.0084 µm^2
Mean/Median ratio:	1.017	C.V.:	19.2%
Mode:	0.474 µm	Skewness:	0.506 Right skewed
		Kurtosis:	0.105 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.365 µm	0.411 µm	0.470 µm	0.537 µm	0.602 µm

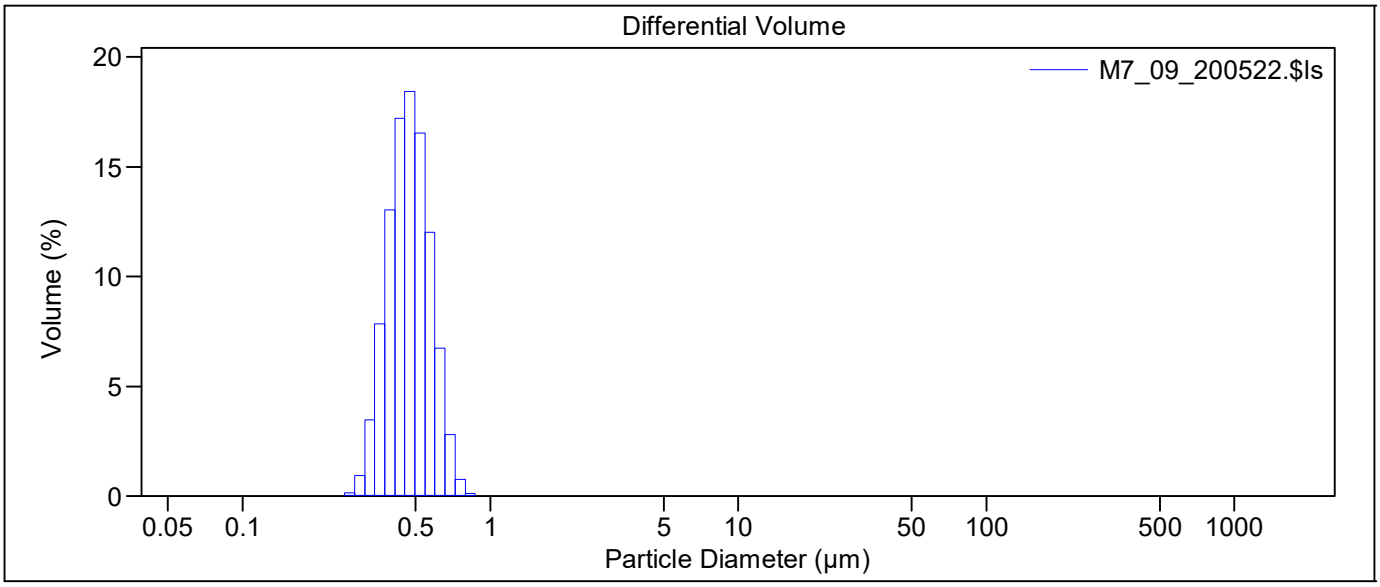
Number Statistics (Arithmetic) M7_09_200522.$ls

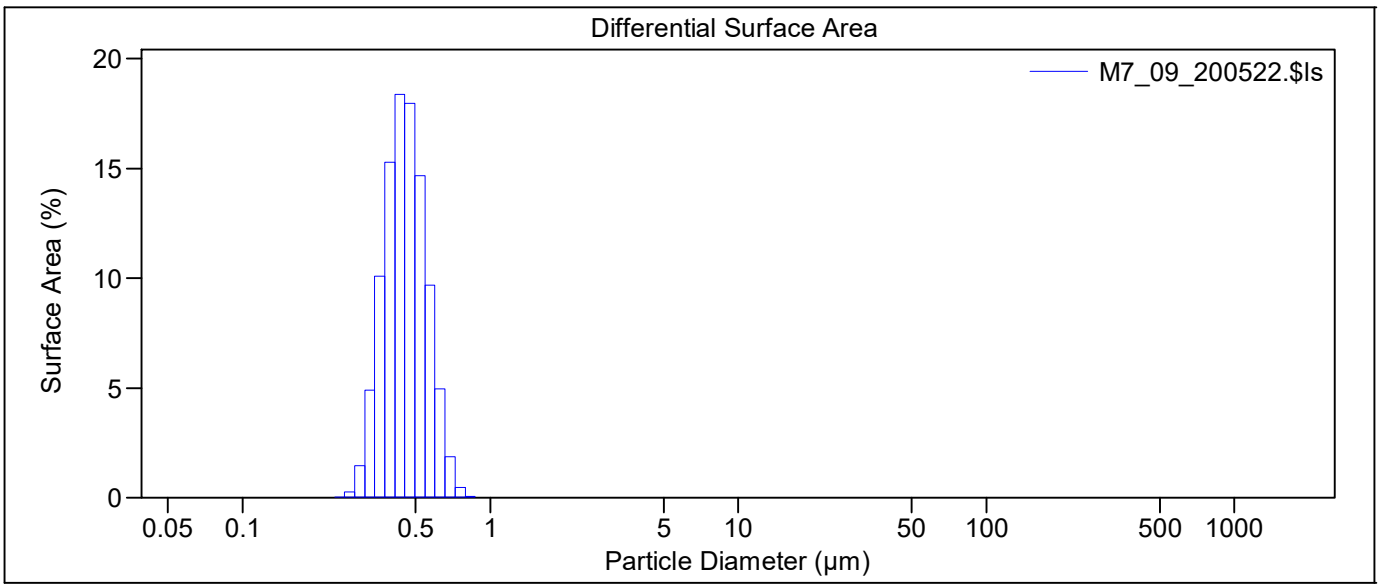
Calculations from 0.040 µm to 2000 µm

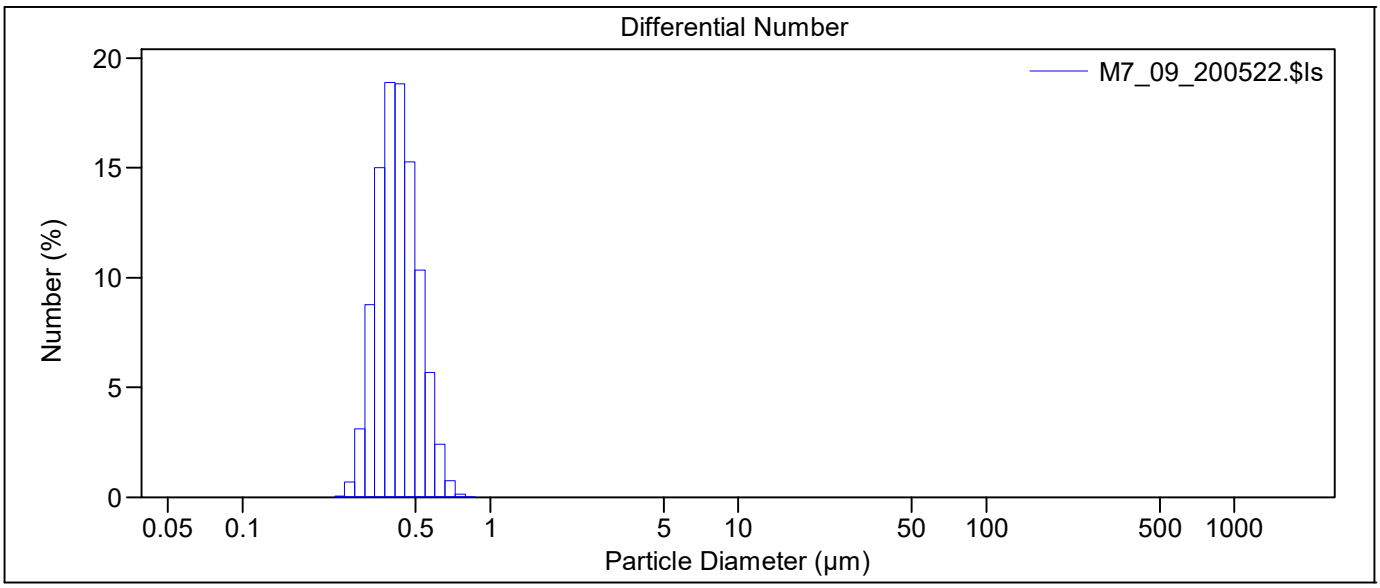
Number:	100%		
Mean:	0.429 µm	S.D.:	0.081 µm
Median:	0.419 µm	Variance:	0.0066 µm^2
Mean/Median ratio:	1.024	C.V.:	18.9%
Mode:	0.393 µm	Skewness:	0.693 Right skewed
		Kurtosis:	0.491 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.333 µm	0.369 µm	0.419 µm	0.480 µm	0.540 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.0090	0.017	0.053
21	0.258	0.271	0.16	0.26	0.69
22	0.284	0.297	0.93	1.45	3.13
23	0.311	0.326	3.46	4.89	8.77
24	0.342	0.358	7.83	10.1	15.0
25	0.375	0.393	13.0	15.3	18.9
26	0.412	0.431	17.2	18.4	18.8
27	0.452	0.474	18.4	17.9	15.3
28	0.496	0.520	16.5	14.7	10.3
29	0.545	0.571	12.0	9.69	5.68
30	0.598	0.627	6.73	4.95	2.41
31	0.656	0.688	2.79	1.87	0.75
32	0.721	0.755	0.76	0.47	0.16
33	0.791	0.829	0.13	0.072	0.020
34	0.868	0.910	0.011	0.0055	0.0013
35	0.953	0.999	0.00017	0.000081	0.000015
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_10_201656.$ls M7_10_201656.$ls		
File ID:	M7		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.50%		
LS 13 320	Universal Liquid Module		
Start time:	20:15 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	46%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_10_201656.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.496 µm	S.D.:	0.384 µm
Median:	0.382 µm	Variance:	0.147 μm^2
Mean/Median ratio:	1.299	C.V.:	77.3%
Mode:	0.520 µm	Skewness:	1.220 Right skewed
		Kurtosis:	1.130 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.116 µm	0.194 µm	0.382 µm	0.698 µm	1.063 µm

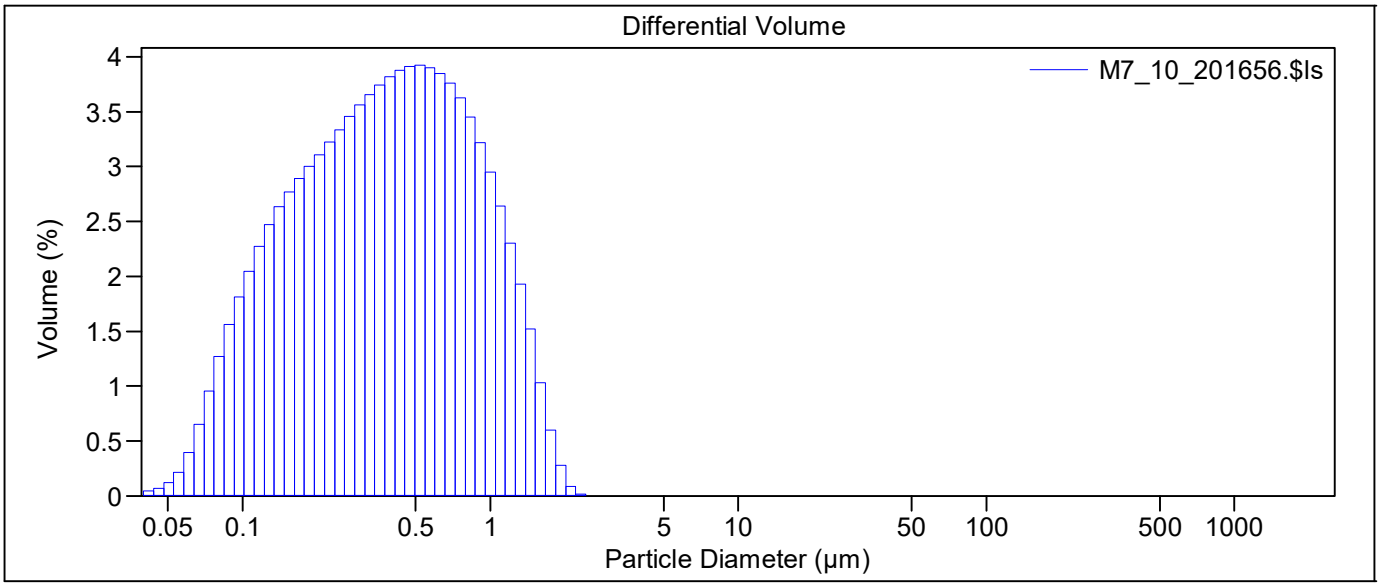
Number Statistics (Arithmetic) M7_10_201656.$ls

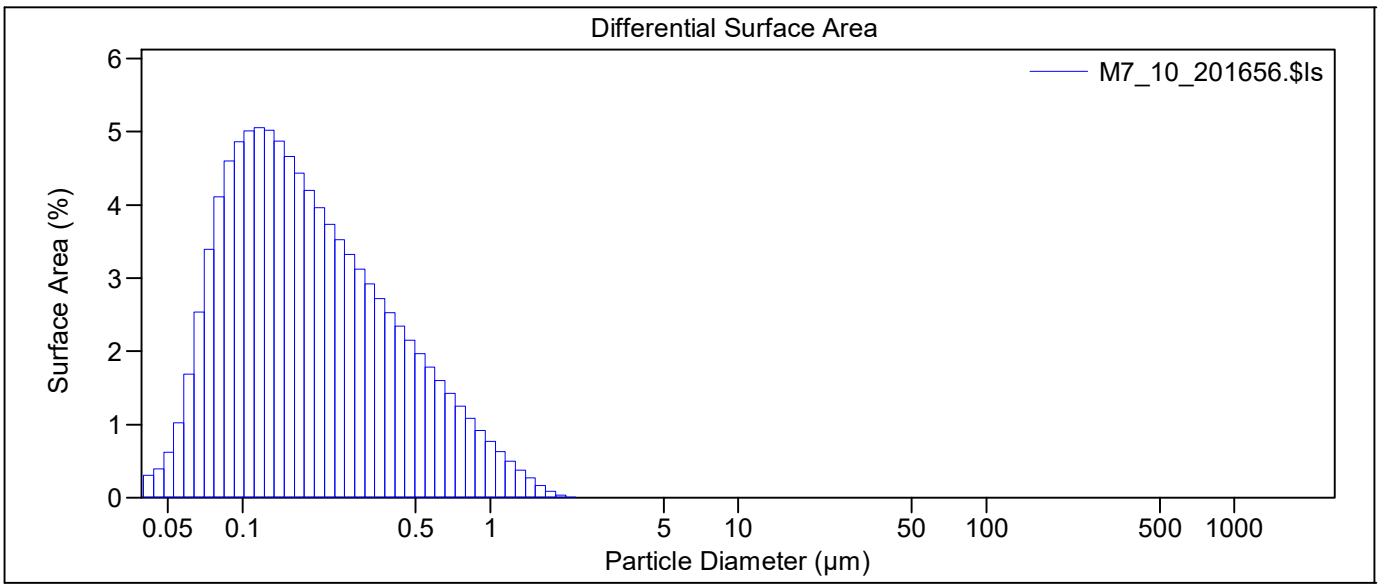
Calculations from 0.040 µm to 2000 µm

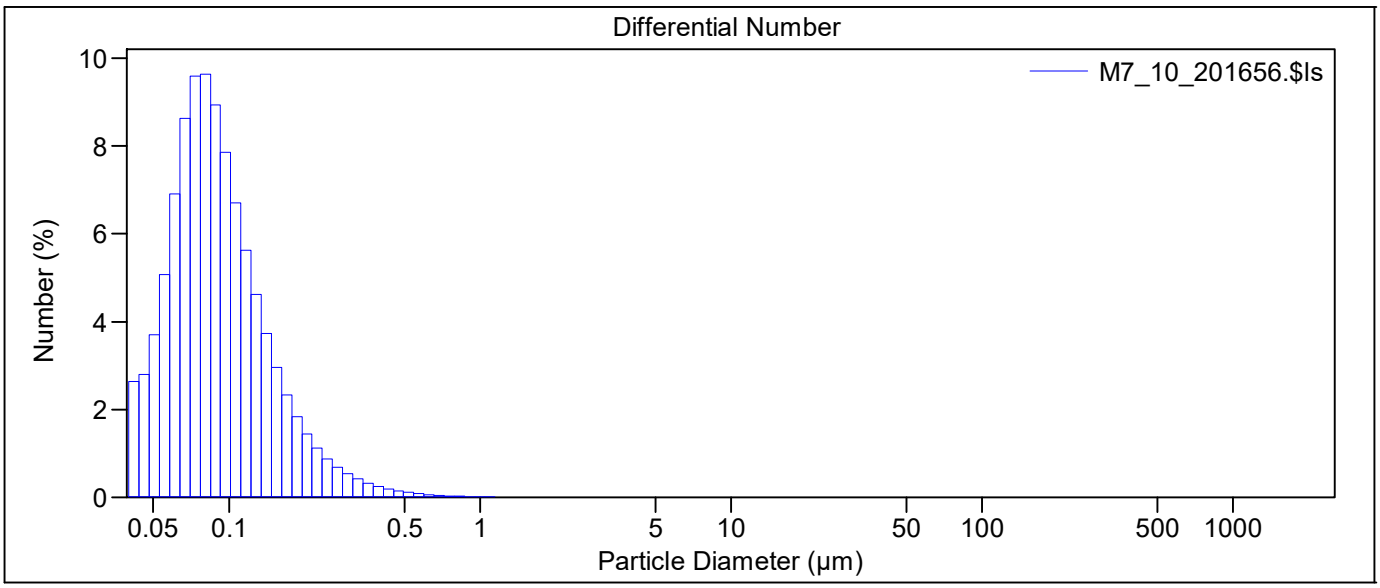
Number:	100%		
Mean:	0.103 µm	S.D.:	0.068 µm
Median:	0.085 µm	Variance:	0.0046 μm^2
Mean/Median ratio:	1.208	C.V.:	65.6%
Mode:	0.080 µm	Skewness:	4.691 Right skewed
		Kurtosis:	43.05 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.085 µm	0.116 µm	0.166 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.049	0.31	2.64
2	0.044	0.046	0.069	0.39	2.80
3	0.048	0.050	0.12	0.62	3.71
4	0.053	0.055	0.22	1.03	5.08
5	0.058	0.061	0.39	1.68	6.91
6	0.064	0.067	0.65	2.54	8.64
7	0.070	0.073	0.96	3.40	9.59
8	0.077	0.080	1.27	4.11	9.63
9	0.084	0.088	1.56	4.60	8.94
10	0.093	0.097	1.81	4.87	7.85
11	0.102	0.106	2.05	5.01	6.71
12	0.112	0.117	2.27	5.06	5.62
13	0.122	0.128	2.47	5.02	4.63
14	0.134	0.141	2.64	4.87	3.73
15	0.148	0.155	2.77	4.66	2.96
16	0.162	0.170	2.89	4.43	2.34
17	0.178	0.186	3.00	4.20	1.83
18	0.195	0.205	3.11	3.96	1.44
19	0.214	0.225	3.22	3.74	1.12
20	0.235	0.247	3.34	3.52	0.88
21	0.258	0.271	3.46	3.33	0.69
22	0.284	0.297	3.56	3.12	0.54
23	0.311	0.326	3.66	2.92	0.42
24	0.342	0.358	3.75	2.72	0.32
25	0.375	0.393	3.82	2.53	0.25
26	0.412	0.431	3.88	2.34	0.19
27	0.452	0.474	3.91	2.15	0.15
28	0.496	0.520	3.92	1.96	0.11
29	0.545	0.571	3.90	1.78	0.083
30	0.598	0.627	3.85	1.60	0.062
31	0.656	0.688	3.76	1.42	0.046
32	0.721	0.755	3.63	1.25	0.033
33	0.791	0.829	3.45	1.08	0.024
34	0.868	0.910	3.22	0.92	0.017
35	0.953	0.999	2.95	0.77	0.012
36	1.047	1.097	2.64	0.63	0.0079
37	1.149	1.204	2.30	0.50	0.0052
38	1.261	1.321	1.93	0.38	0.0033
39	1.385	1.451	1.52	0.27	0.0020
40	1.520	1.592	1.03	0.17	0.0010
41	1.668	1.748	0.60	0.090	0.00045
42	1.832	1.919	0.28	0.038	0.00016
43	2.011	2.107	0.088	0.011	0.000037
44	2.207	2.313	0.019	0.0022	0.000006
45	2.423	2.539	0.0019	0.00020	4.7E-7
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M7.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_11_201843.$ls M7_11_201843.$ls		
File ID:	M7		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.69%		
LS 13 320	Universal Liquid Module		
Start time:	20:17 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_11_201843.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.548 µm	S.D.:	0.225 µm
Median:	0.518 µm	Variance:	0.051 μm^2
Mean/Median ratio:	1.058	C.V.:	41.1%
Mode:	0.571 µm	Skewness:	0.608 Right skewed
		Kurtosis:	-0.0064 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.279 µm	0.375 µm	0.518 µm	0.694 µm	0.864 µm

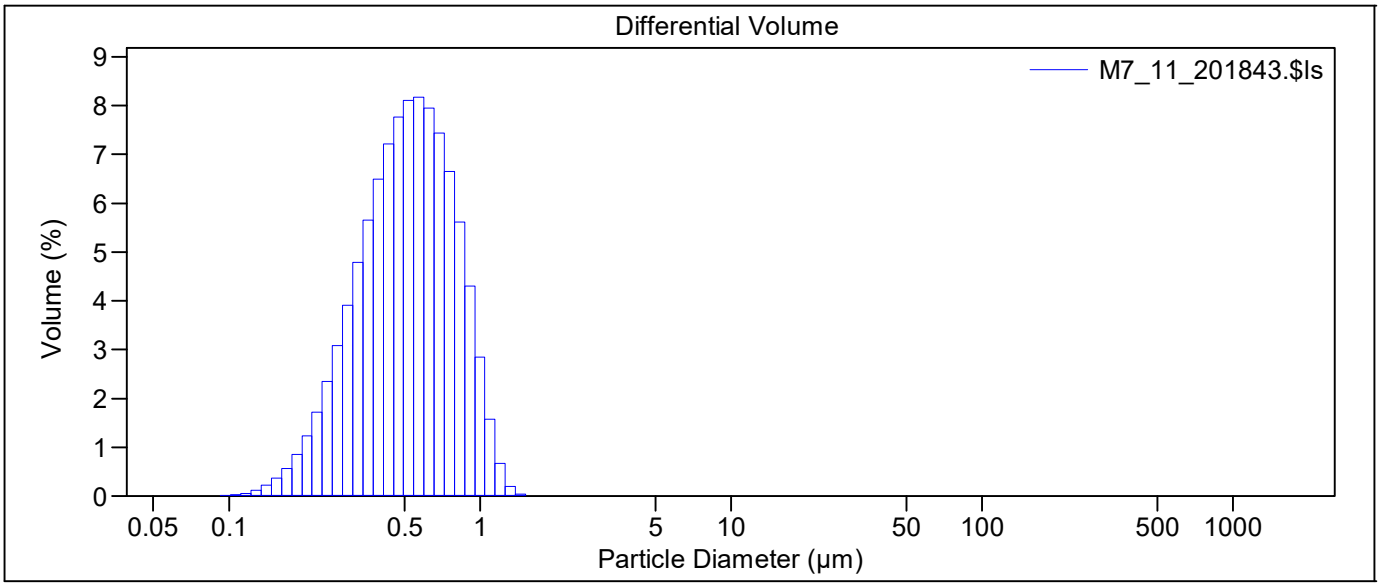
Number Statistics (Arithmetic) M7_11_201843.$ls

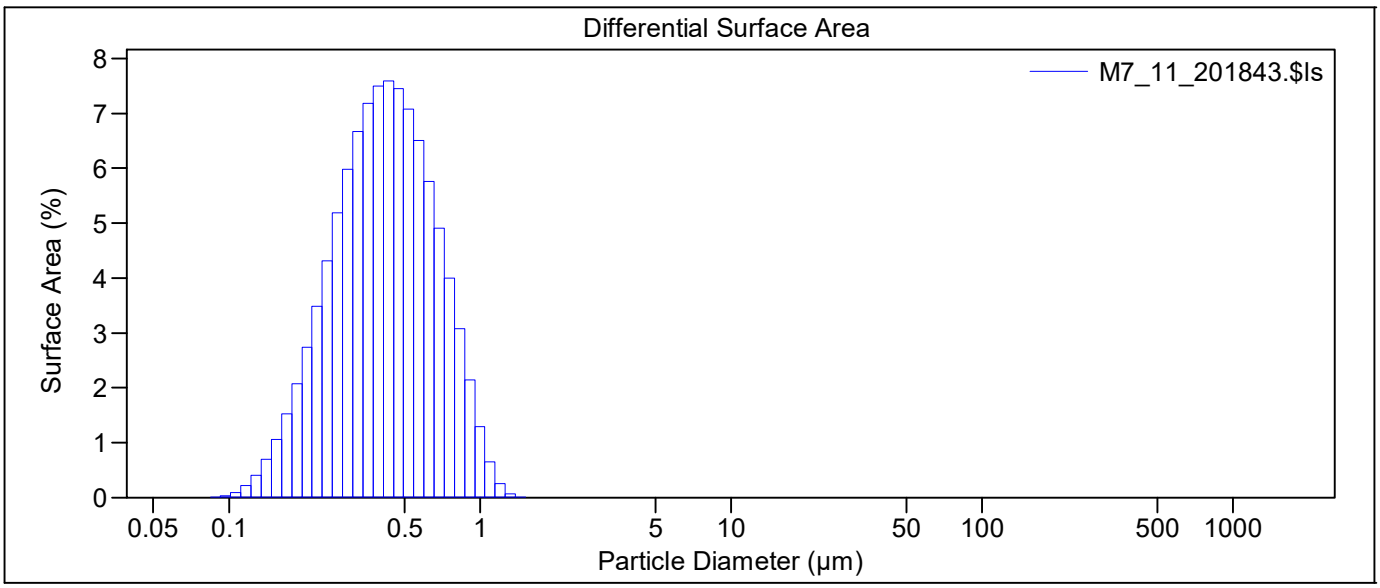
Calculations from 0.040 µm to 2000 µm

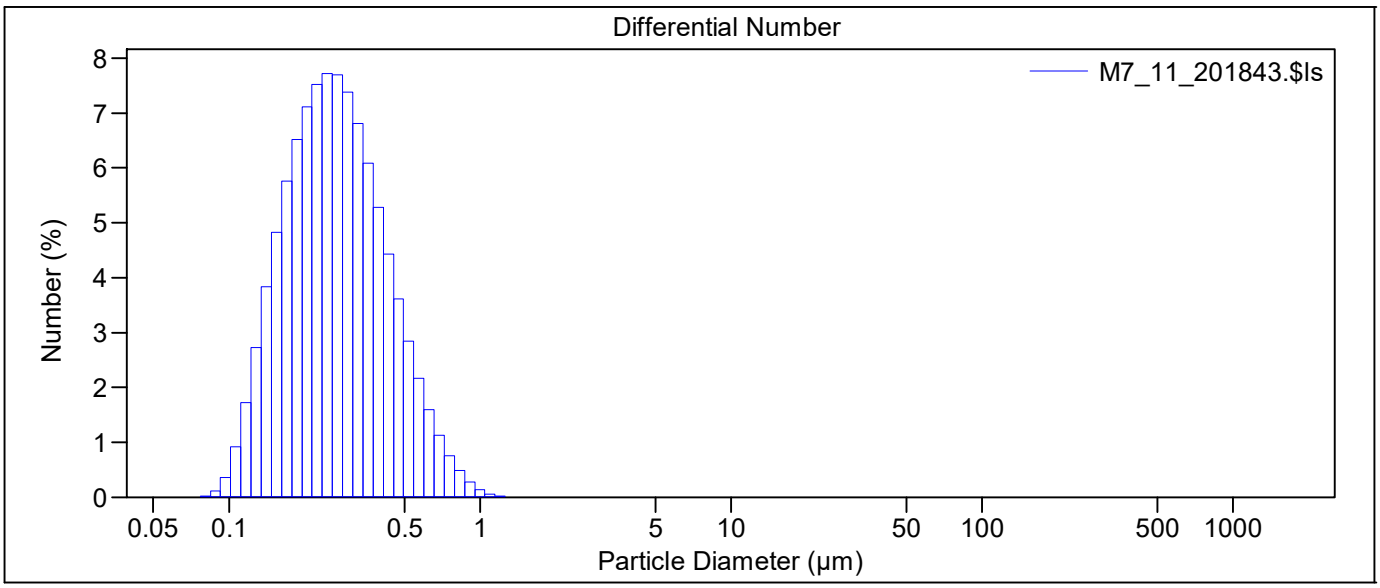
Number:	100%		
Mean:	0.296 µm	S.D.:	0.146 µm
Median:	0.261 µm	Variance:	0.021 μm^2
Mean/Median ratio:	1.133	C.V.:	49.4%
Mode:	0.247 µm	Skewness:	1.490 Right skewed
		Kurtosis:	3.070 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.148 µm	0.190 µm	0.261 µm	0.363 µm	0.490 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0.00025	0.0014	0.024
9	0.084	0.088	0.0017	0.0087	0.12
10	0.093	0.097	0.0067	0.032	0.36
11	0.102	0.106	0.023	0.096	0.92
12	0.112	0.117	0.056	0.22	1.73
13	0.122	0.128	0.12	0.41	2.73
14	0.134	0.141	0.22	0.70	3.84
15	0.148	0.155	0.36	1.06	4.83
16	0.162	0.170	0.57	1.53	5.76
17	0.178	0.186	0.85	2.08	6.51
18	0.195	0.205	1.23	2.74	7.12
19	0.214	0.225	1.73	3.49	7.52
20	0.235	0.247	2.34	4.31	7.72
21	0.258	0.271	3.09	5.18	7.70
22	0.284	0.297	3.92	5.99	7.38
23	0.311	0.326	4.79	6.66	6.82
24	0.342	0.358	5.66	7.18	6.09
25	0.375	0.393	6.49	7.50	5.28
26	0.412	0.431	7.21	7.59	4.43
27	0.452	0.474	7.77	7.45	3.61
28	0.496	0.520	8.11	7.08	2.85
29	0.545	0.571	8.18	6.51	2.17
30	0.598	0.627	7.95	5.76	1.60
31	0.656	0.688	7.44	4.91	1.13
32	0.721	0.755	6.65	4.00	0.76
33	0.791	0.829	5.61	3.07	0.49
34	0.868	0.910	4.30	2.15	0.28
35	0.953	0.999	2.85	1.30	0.14
36	1.047	1.097	1.57	0.65	0.059
37	1.149	1.204	0.67	0.25	0.019
38	1.261	1.321	0.20	0.069	0.0043
39	1.385	1.451	0.039	0.012	0.00063
40	1.520	1.592	0.0029	0.00084	0.000036
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_12_202030.$ls M7_12_202030.$ls		
File ID:	M7		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.65%		
LS 13 320	Universal Liquid Module		
Start time:	20:18 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_12_202030.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.546 µm	S.D.:	0.229 µm
Median:	0.516 µm	Variance:	0.053 μm^2
Mean/Median ratio:	1.059	C.V.:	41.9%
Mode:	0.571 µm	Skewness:	0.596 Right skewed
		Kurtosis:	-0.021 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.272 µm	0.371 µm	0.516 µm	0.695 µm	0.867 µm

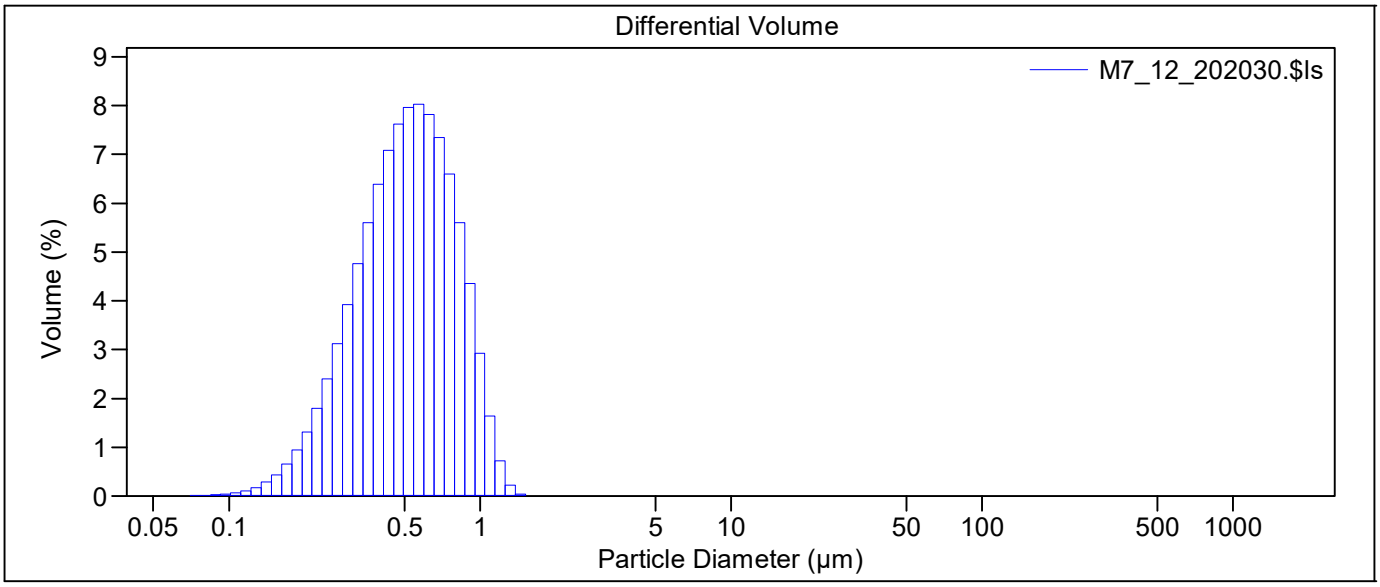
Number Statistics (Arithmetic) M7_12_202030.$ls

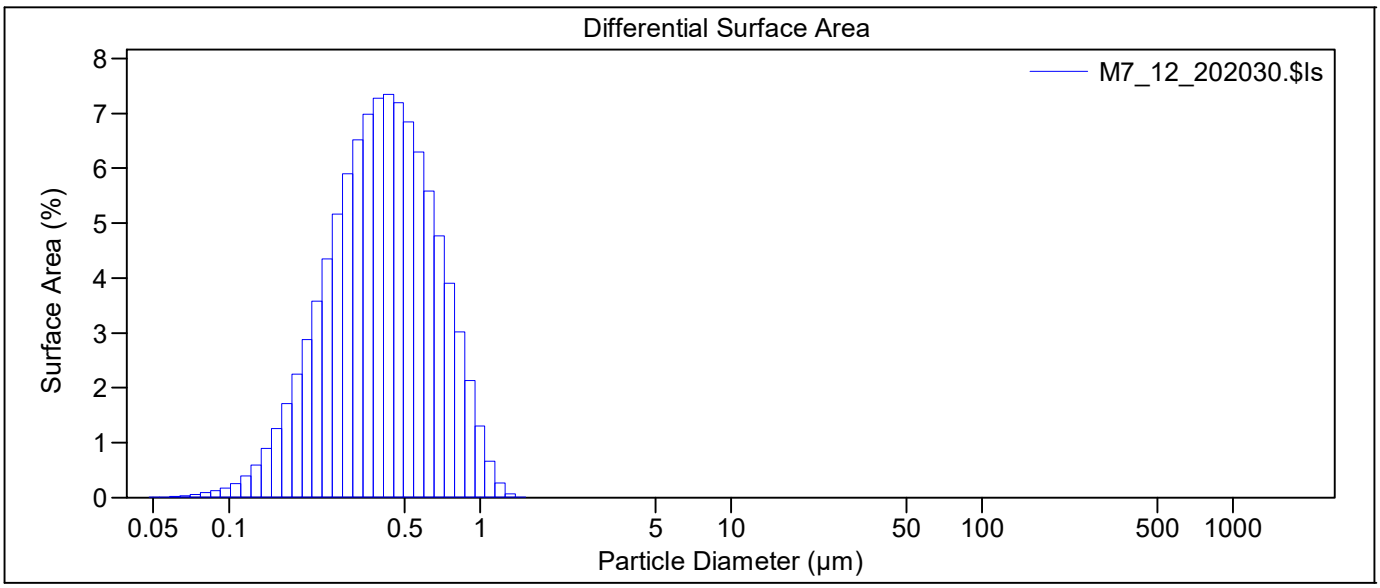
Calculations from 0.040 µm to 2000 µm

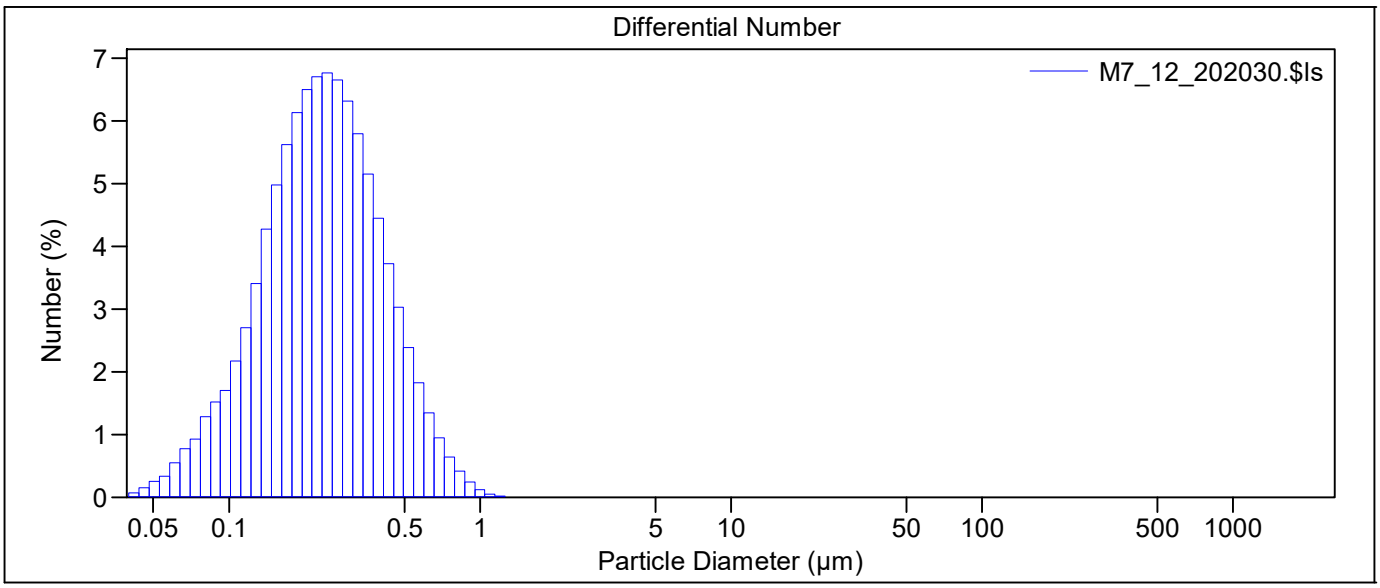
Number:	100%		
Mean:	0.268 µm	S.D.:	0.150 µm
Median:	0.235 µm	Variance:	0.023 μm^2
Mean/Median ratio:	1.141	C.V.:	56.1%
Mode:	0.247 µm	Skewness:	1.416 Right skewed
		Kurtosis:	2.915 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.113 µm	0.162 µm	0.235 µm	0.338 µm	0.467 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.00012	0.0013	0.071
2	0.044	0.046	0.00035	0.0034	0.15
3	0.048	0.050	0.00077	0.0068	0.25
4	0.053	0.055	0.0014	0.011	0.34
5	0.058	0.061	0.0030	0.022	0.55
6	0.064	0.067	0.0055	0.037	0.78
7	0.070	0.073	0.0087	0.053	0.93
8	0.077	0.080	0.016	0.089	1.29
9	0.084	0.088	0.025	0.13	1.52
10	0.093	0.097	0.037	0.17	1.71
11	0.102	0.106	0.062	0.26	2.18
12	0.112	0.117	0.10	0.39	2.71
13	0.122	0.128	0.17	0.59	3.41
14	0.134	0.141	0.28	0.90	4.28
15	0.148	0.155	0.44	1.26	4.98
16	0.162	0.170	0.65	1.72	5.62
17	0.178	0.186	0.94	2.26	6.13
18	0.195	0.205	1.32	2.88	6.50
19	0.214	0.225	1.80	3.58	6.71
20	0.235	0.247	2.40	4.35	6.76
21	0.258	0.271	3.12	5.16	6.66
22	0.284	0.297	3.92	5.90	6.32
23	0.311	0.326	4.76	6.52	5.79
24	0.342	0.358	5.60	6.99	5.15
25	0.375	0.393	6.39	7.27	4.45
26	0.412	0.431	7.08	7.34	3.73
27	0.452	0.474	7.62	7.20	3.03
28	0.496	0.520	7.96	6.85	2.39
29	0.545	0.571	8.03	6.29	1.82
30	0.598	0.627	7.82	5.58	1.34
31	0.656	0.688	7.34	4.77	0.95
32	0.721	0.755	6.59	3.91	0.65
33	0.791	0.829	5.60	3.02	0.42
34	0.868	0.910	4.35	2.14	0.24
35	0.953	0.999	2.92	1.31	0.12
36	1.047	1.097	1.64	0.67	0.053
37	1.149	1.204	0.72	0.27	0.017
38	1.261	1.321	0.22	0.074	0.0040
39	1.385	1.451	0.043	0.013	0.00060
40	1.520	1.592	0.0036	0.0010	0.000038
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_13_202932.$ls M7_13_202932.$ls		
File ID:	M7		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.90%		
LS 13 320	Universal Liquid Module		
Start time:	20:27 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_13_202932.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.468 µm	S.D.:	0.235 µm
Median:	0.496 µm	Variance:	0.055 μm^2
Mean/Median ratio:	0.944	C.V.:	50.1%
Mode:	0.571 µm	Skewness:	-0.061 Left skewed
		Kurtosis:	-0.578 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.110 µm	0.300 µm	0.496 µm	0.631 µm	0.756 µm

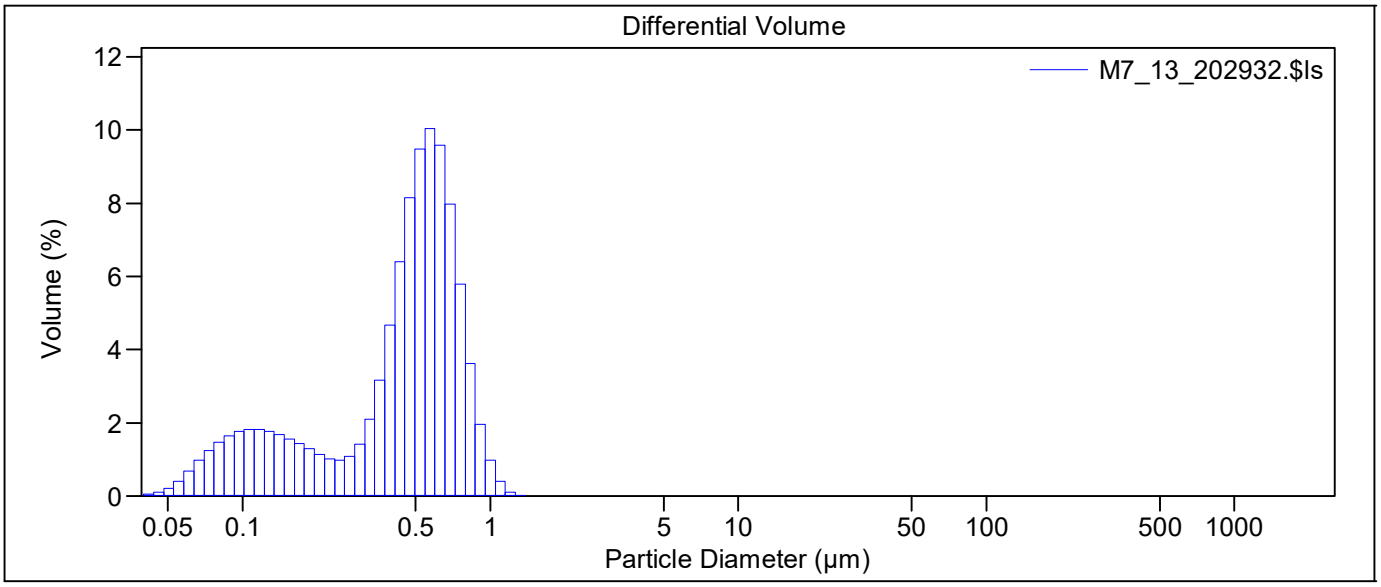
Number Statistics (Arithmetic) M7_13_202932.$ls

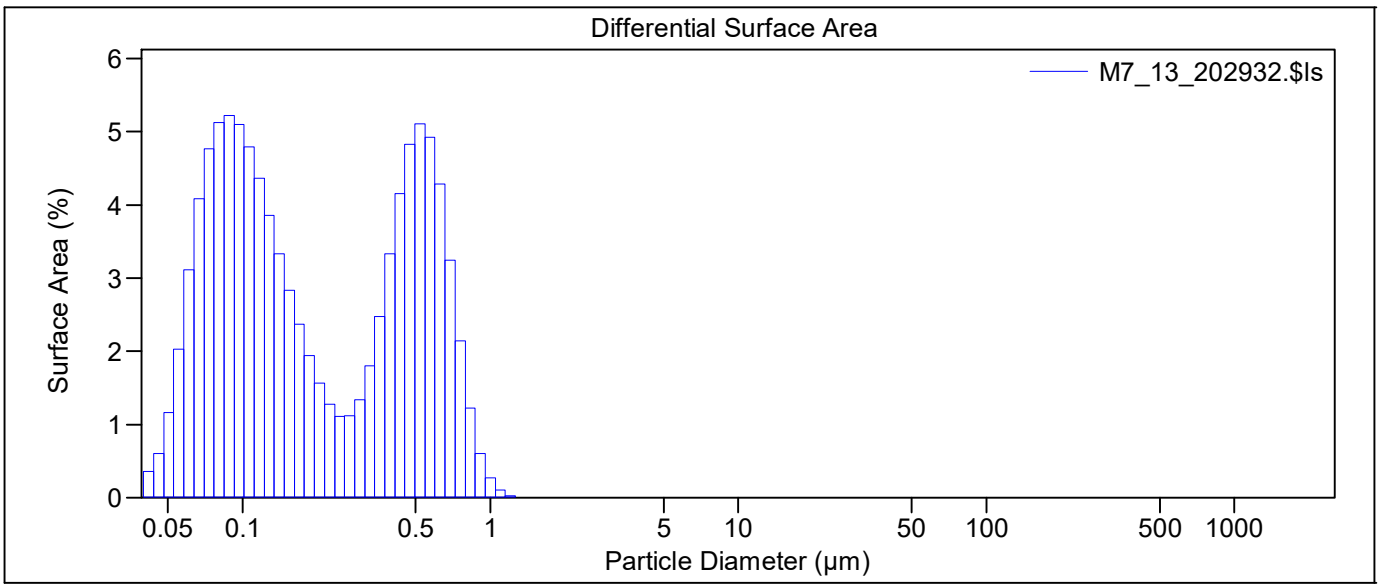
Calculations from 0.040 µm to 2000 µm

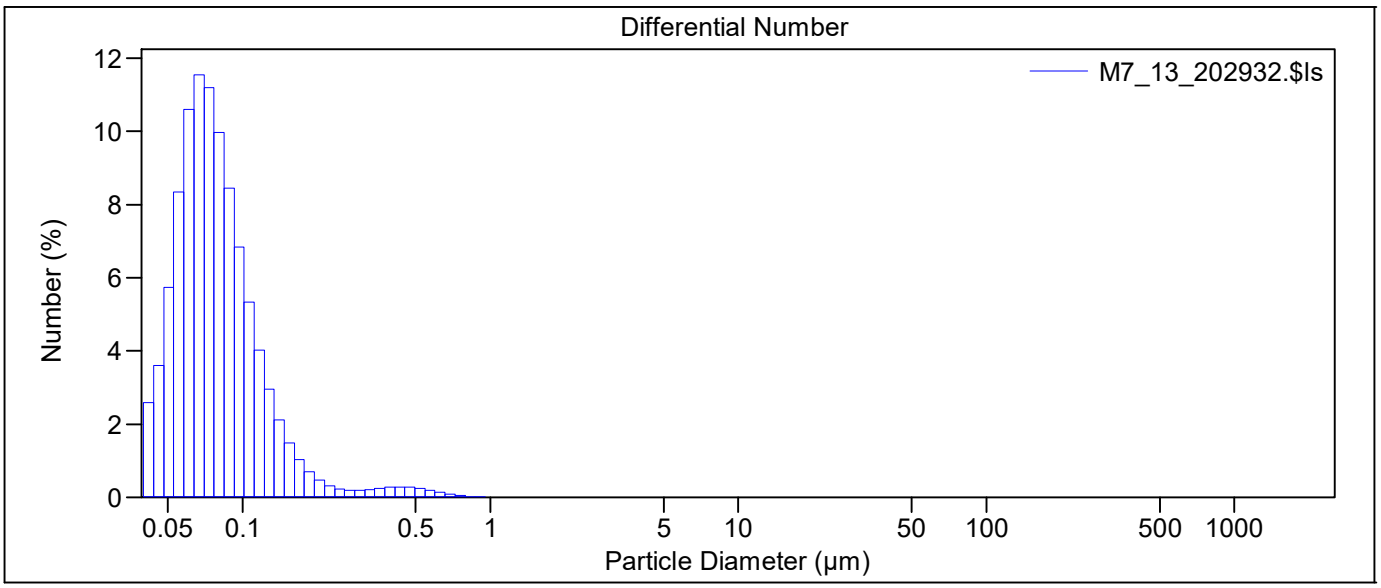
Number:	100%		
Mean:	0.090 µm	S.D.:	0.067 µm
Median:	0.075 µm	Variance:	0.0045 μm^2
Mean/Median ratio:	1.210	C.V.:	74.1%
Mode:	0.067 µm	Skewness:	5.318 Right skewed
		Kurtosis:	36.89 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.061 µm	0.075 µm	0.096 µm	0.130 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.054	0.36	2.59
2	0.044	0.046	0.099	0.60	3.60
3	0.048	0.050	0.21	1.16	5.74
4	0.053	0.055	0.40	2.03	8.35
5	0.058	0.061	0.68	3.11	10.6
6	0.064	0.067	0.97	4.08	11.5
7	0.070	0.073	1.25	4.77	11.2
8	0.077	0.080	1.47	5.12	9.98
9	0.084	0.088	1.65	5.22	8.44
10	0.093	0.097	1.77	5.10	6.85
11	0.102	0.106	1.82	4.80	5.34
12	0.112	0.117	1.82	4.37	4.03
13	0.122	0.128	1.77	3.86	2.96
14	0.134	0.141	1.68	3.33	2.12
15	0.148	0.155	1.56	2.83	1.49
16	0.162	0.170	1.43	2.37	1.04
17	0.178	0.186	1.29	1.94	0.71
18	0.195	0.205	1.15	1.57	0.47
19	0.214	0.225	1.02	1.28	0.32
20	0.235	0.247	0.98	1.11	0.23
21	0.258	0.271	1.08	1.12	0.19
22	0.284	0.297	1.42	1.34	0.19
23	0.311	0.326	2.09	1.80	0.21
24	0.342	0.358	3.17	2.48	0.24
25	0.375	0.393	4.67	3.33	0.27
26	0.412	0.431	6.40	4.16	0.28
27	0.452	0.474	8.15	4.82	0.27
28	0.496	0.520	9.48	5.11	0.24
29	0.545	0.571	10.0	4.93	0.19
30	0.598	0.627	9.58	4.28	0.14
31	0.656	0.688	7.97	3.25	0.087
32	0.721	0.755	5.79	2.15	0.048
33	0.791	0.829	3.61	1.22	0.022
34	0.868	0.910	1.97	0.61	0.0092
35	0.953	0.999	0.98	0.27	0.0035
36	1.047	1.097	0.41	0.10	0.0011
37	1.149	1.204	0.11	0.026	0.00022
38	1.261	1.321	0.020	0.0042	0.000031
39	1.385	1.451	0.0011	0.00022	0.000001
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_14_203119.$ls M7_14_203119.$ls		
File ID:	M7		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.66%		
LS 13 320	Universal Liquid Module		
Start time:	20:29 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	8%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_14_203119.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.488 µm	S.D.:	0.359 µm
Median:	0.387 µm	Variance:	0.129 μm^2
Mean/Median ratio:	1.259	C.V.:	73.5%
Mode:	0.627 µm	Skewness:	1.014 Right skewed
		Kurtosis:	0.443 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.116 µm	0.195 µm	0.387 µm	0.704 µm	1.024 µm

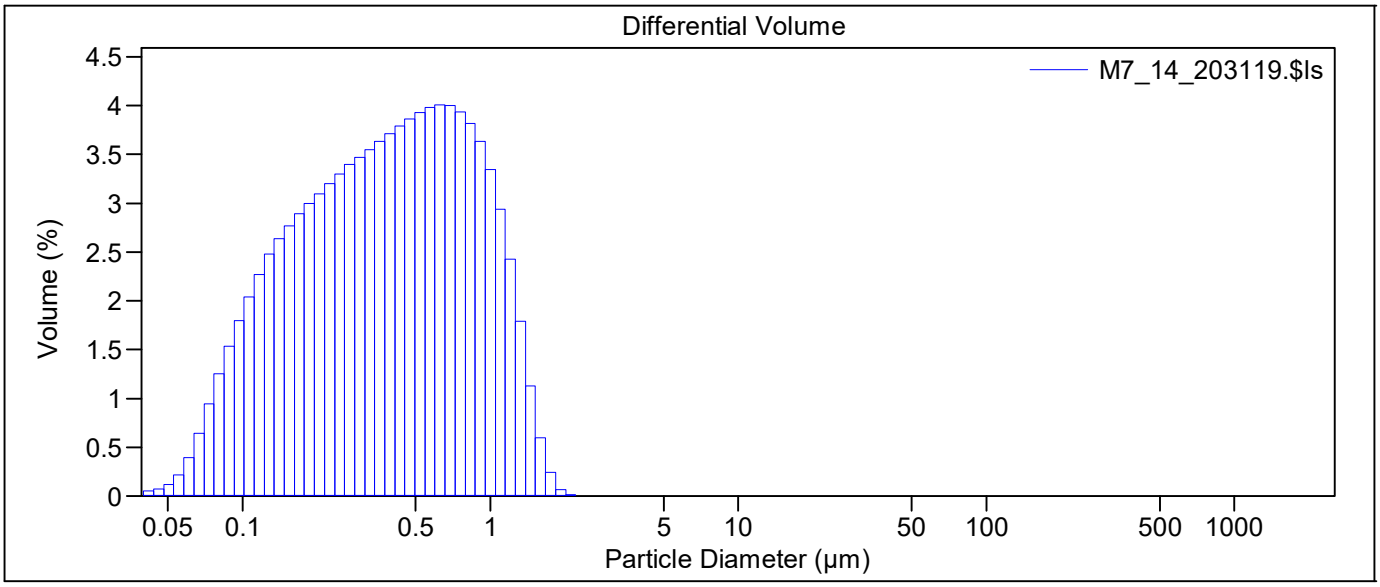
Number Statistics (Arithmetic) M7_14_203119.$ls

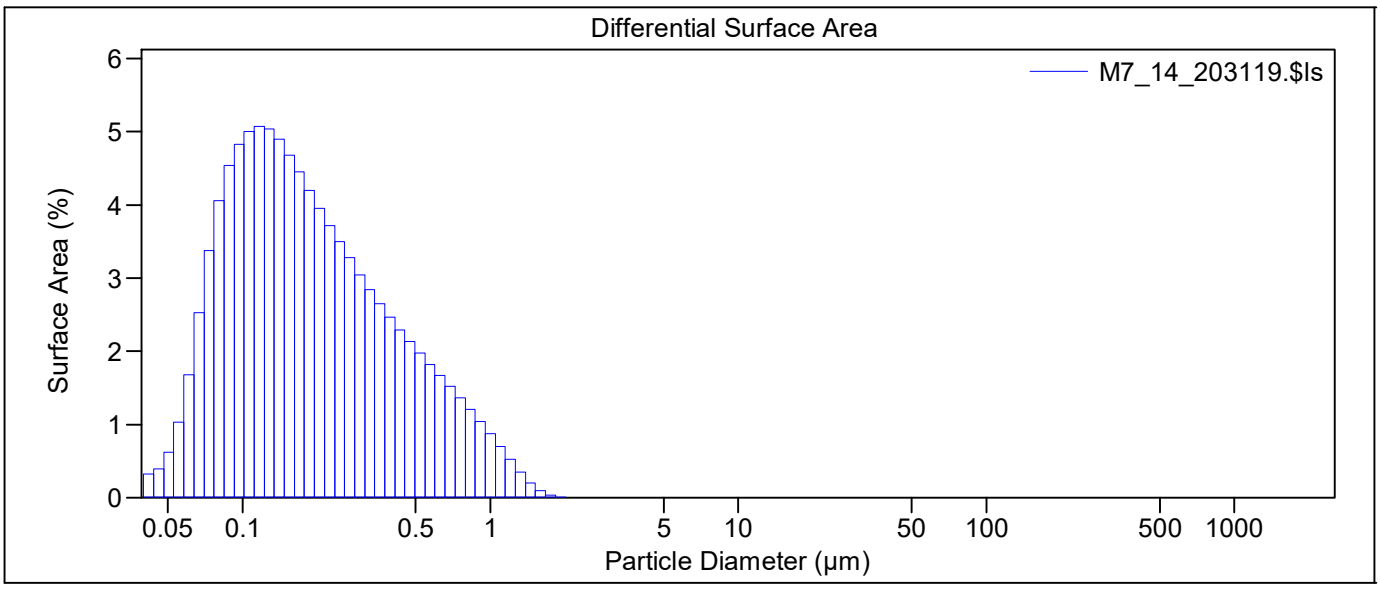
Calculations from 0.040 µm to 2000 µm

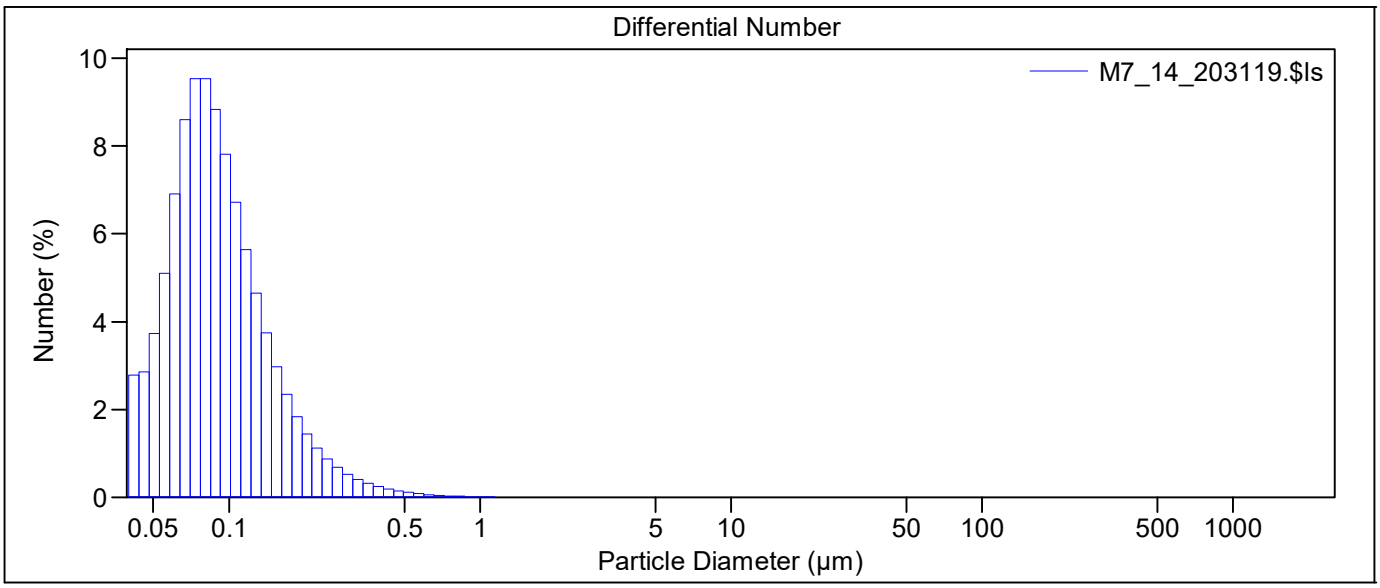
Number:	100%		
Mean:	0.103 µm	S.D.:	0.068 µm
Median:	0.085 µm	Variance:	0.0046 μm^2
Mean/Median ratio:	1.209	C.V.:	65.9%
Mode:	0.073 µm	Skewness:	4.665 Right skewed
		Kurtosis:	40.94 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.066 µm	0.085 µm	0.117 µm	0.166 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.052	0.32	2.79
2	0.044	0.046	0.070	0.40	2.86
3	0.048	0.050	0.12	0.63	3.73
4	0.053	0.055	0.22	1.03	5.11
5	0.058	0.061	0.39	1.68	6.90
6	0.064	0.067	0.65	2.53	8.61
7	0.070	0.073	0.95	3.37	9.54
8	0.077	0.080	1.25	4.06	9.53
9	0.084	0.088	1.54	4.54	8.84
10	0.093	0.097	1.79	4.83	7.81
11	0.102	0.106	2.04	5.01	6.71
12	0.112	0.117	2.27	5.07	5.65
13	0.122	0.128	2.48	5.04	4.66
14	0.134	0.141	2.64	4.89	3.75
15	0.148	0.155	2.77	4.68	2.98
16	0.162	0.170	2.89	4.45	2.35
17	0.178	0.186	3.00	4.20	1.84
18	0.195	0.205	3.10	3.95	1.44
19	0.214	0.225	3.20	3.72	1.12
20	0.235	0.247	3.30	3.50	0.87
21	0.258	0.271	3.40	3.28	0.68
22	0.284	0.297	3.47	3.05	0.53
23	0.311	0.326	3.55	2.84	0.41
24	0.342	0.358	3.64	2.65	0.31
25	0.375	0.393	3.71	2.47	0.24
26	0.412	0.431	3.79	2.29	0.19
27	0.452	0.474	3.87	2.13	0.14
28	0.496	0.520	3.93	1.97	0.11
29	0.545	0.571	3.98	1.82	0.085
30	0.598	0.627	4.01	1.67	0.065
31	0.656	0.688	4.00	1.52	0.049
32	0.721	0.755	3.94	1.36	0.036
33	0.791	0.829	3.82	1.20	0.027
34	0.868	0.910	3.63	1.04	0.019
35	0.953	0.999	3.35	0.87	0.013
36	1.047	1.097	2.94	0.70	0.0089
37	1.149	1.204	2.43	0.53	0.0055
38	1.261	1.321	1.79	0.35	0.0031
39	1.385	1.451	1.13	0.20	0.0015
40	1.520	1.592	0.59	0.097	0.00058
41	1.668	1.748	0.24	0.036	0.00018
42	1.832	1.919	0.069	0.0093	0.000039
43	2.011	2.107	0.013	0.0016	0.000006
44	2.207	2.313	0.0010	0.00012	3.31E-7
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M7\M7_15_203306.$ls M7_15_203306.$ls		
File ID:	M7		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.77%		
LS 13 320	Universal Liquid Module		
Start time:	20:31 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M7_15_203306.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.552 µm	S.D.:	0.230 µm
Median:	0.521 µm	Variance:	0.053 μm^2
Mean/Median ratio:	1.059	C.V.:	41.6%
Mode:	0.571 µm	Skewness:	0.603 Right skewed
		Kurtosis:	-0.020 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.277 µm	0.376 µm	0.521 µm	0.701 µm	0.874 µm

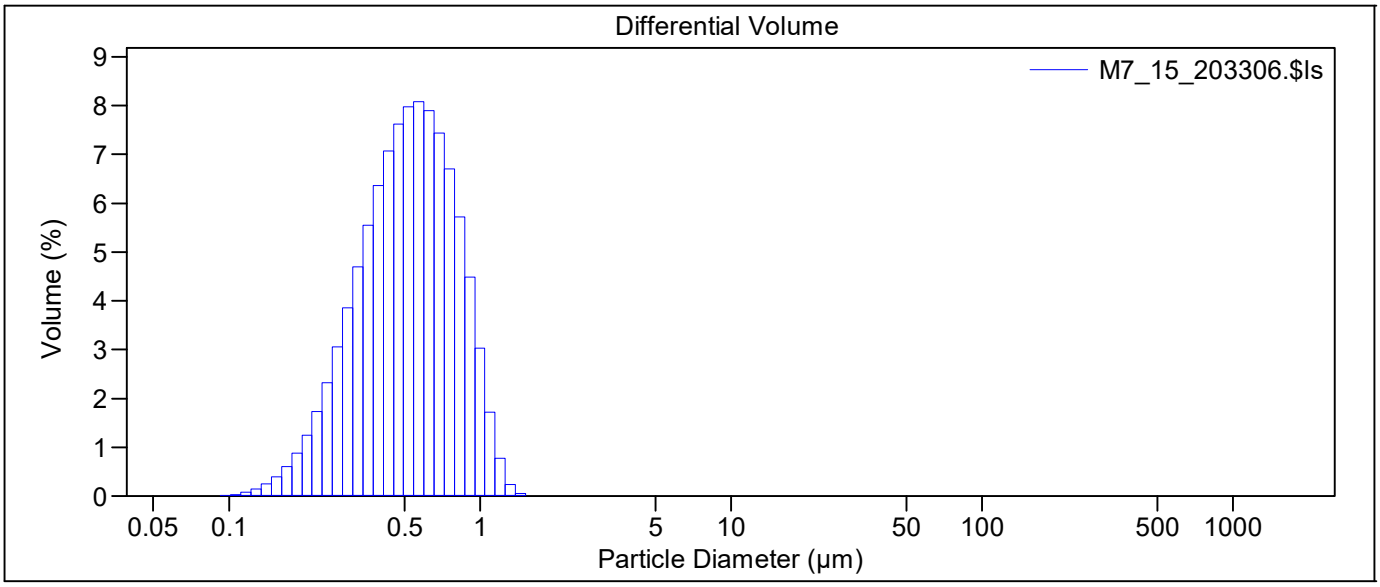
Number Statistics (Arithmetic) M7_15_203306.$ls

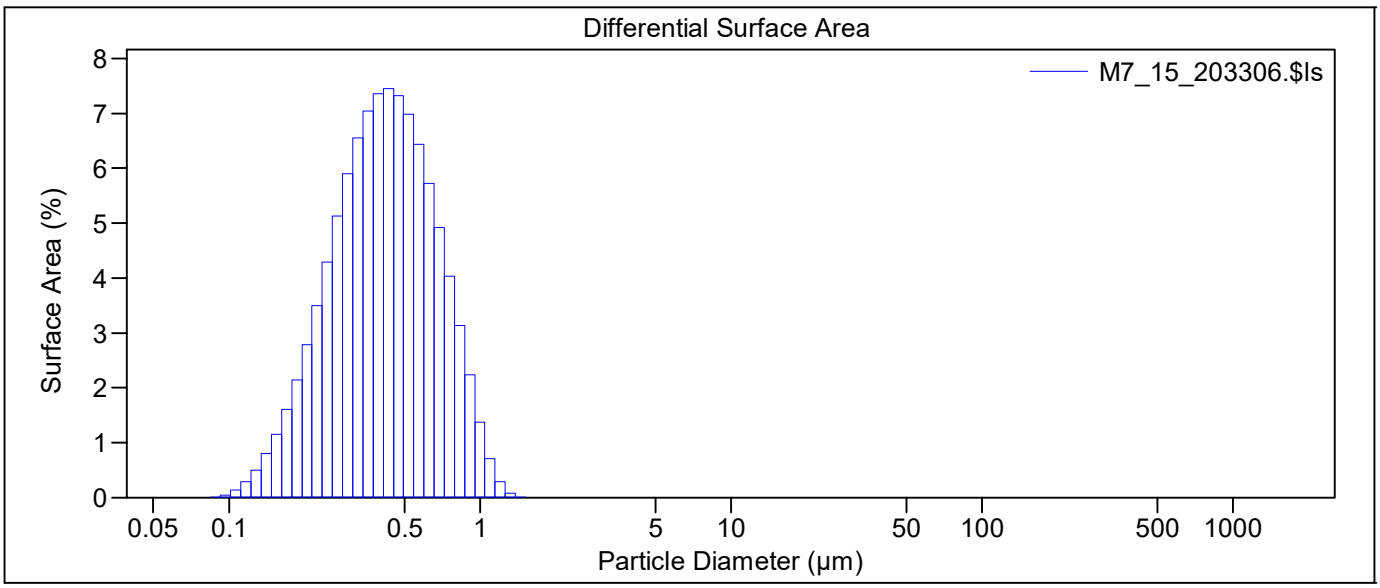
Calculations from 0.040 µm to 2000 µm

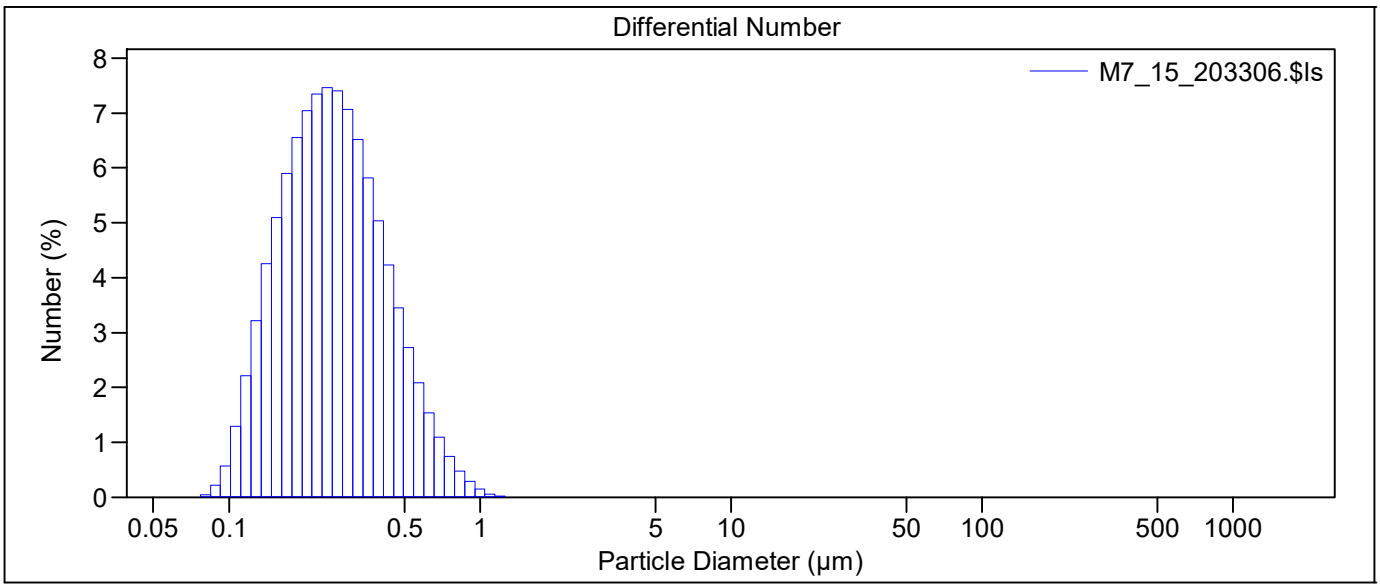
Number:	100%		
Mean:	0.290 µm	S.D.:	0.147 µm
Median:	0.255 µm	Variance:	0.022 μm^2
Mean/Median ratio:	1.140	C.V.:	50.8%
Mode:	0.247 µm	Skewness:	1.517 Right skewed
		Kurtosis:	3.185 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.142 µm	0.184 µm	0.255 µm	0.358 µm	0.486 µm

Beckman Coulter LS13320







M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0.00047	0.0026	0.043
9	0.084	0.088	0.0031	0.016	0.22
10	0.093	0.097	0.011	0.051	0.57
11	0.102	0.106	0.033	0.14	1.30
12	0.112	0.117	0.074	0.29	2.22
13	0.122	0.128	0.14	0.50	3.22
14	0.134	0.141	0.25	0.80	4.26
15	0.148	0.155	0.39	1.15	5.10
16	0.162	0.170	0.60	1.61	5.90
17	0.178	0.186	0.88	2.15	6.55
18	0.195	0.205	1.25	2.79	7.04
19	0.214	0.225	1.73	3.50	7.34
20	0.235	0.247	2.32	4.29	7.47
21	0.258	0.271	3.05	5.13	7.41
22	0.284	0.297	3.85	5.90	7.07
23	0.311	0.326	4.70	6.55	6.52
24	0.342	0.358	5.54	7.04	5.82
25	0.375	0.393	6.36	7.36	5.04
26	0.412	0.431	7.07	7.45	4.23
27	0.452	0.474	7.63	7.32	3.45
28	0.496	0.520	7.98	6.98	2.73
29	0.545	0.571	8.08	6.44	2.09
30	0.598	0.627	7.89	5.73	1.54
31	0.656	0.688	7.43	4.92	1.10
32	0.721	0.755	6.71	4.04	0.75
33	0.791	0.829	5.73	3.14	0.48
34	0.868	0.910	4.48	2.24	0.29
35	0.953	0.999	3.03	1.38	0.15
36	1.047	1.097	1.72	0.72	0.063
37	1.149	1.204	0.77	0.29	0.021
38	1.261	1.321	0.24	0.083	0.0050
39	1.385	1.451	0.050	0.016	0.00079
40	1.520	1.592	0.0044	0.0013	0.000053
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M7.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

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File ID:	M8
Operator:	KW
Optical model:	TiO2_KW.rf780d PIDS included
LS 13 320	Universal Liquid Module
Pump speed:	50%
Fluid:	water

Average of 15 files
D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_01_144053.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_02_144240.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_03_144429.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_04_145425.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_05_145612.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_06_145800.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_07_150727.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_08_150914.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_09_151101.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_10_151947.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_11_152135.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_12_152322.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_13_153432.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_14_153619.$ls D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_15_153807.$ls

Volume Statistics (Arithmetic) M8.$av

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.510 µm	S.D.:	0.236 µm
Median:	0.497 µm	Variance:	0.056 µm^2
Mean/Median ratio:	1.027	C.V.:	46.2%
Mode:	0.520 µm	Skewness:	0.886 Right skewed
		Kurtosis:	2.397 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.205 µm	0.375 µm	0.497 µm	0.627 µm	0.781 µm

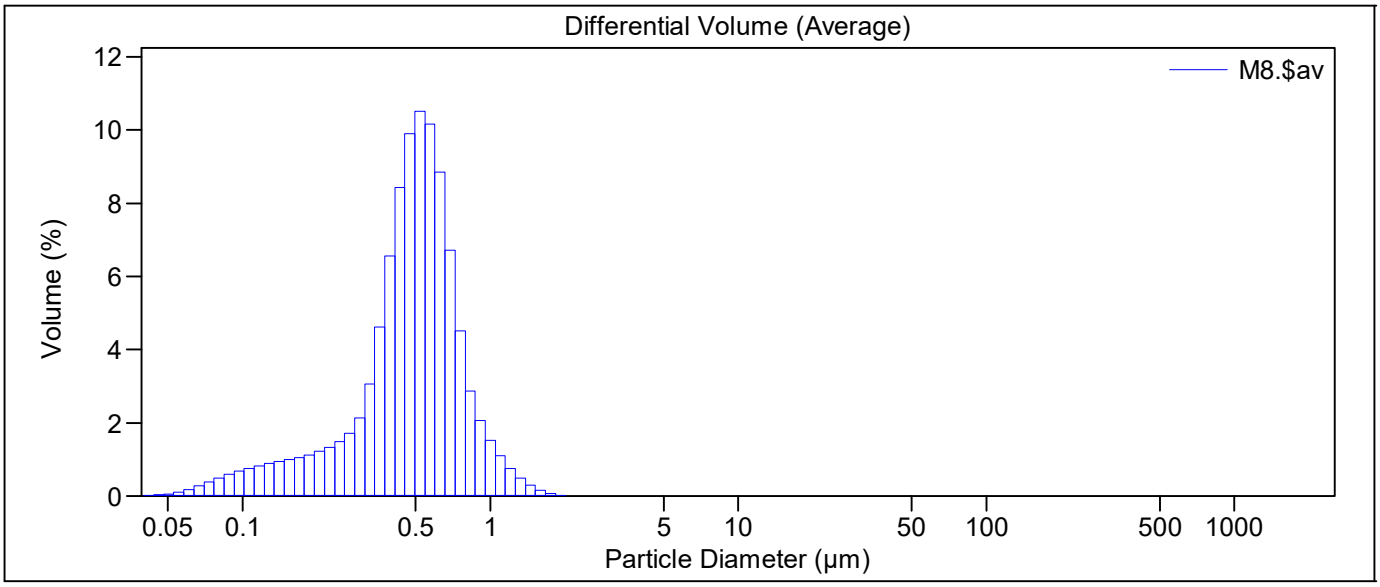
Number Statistics (Arithmetic) M8.$av

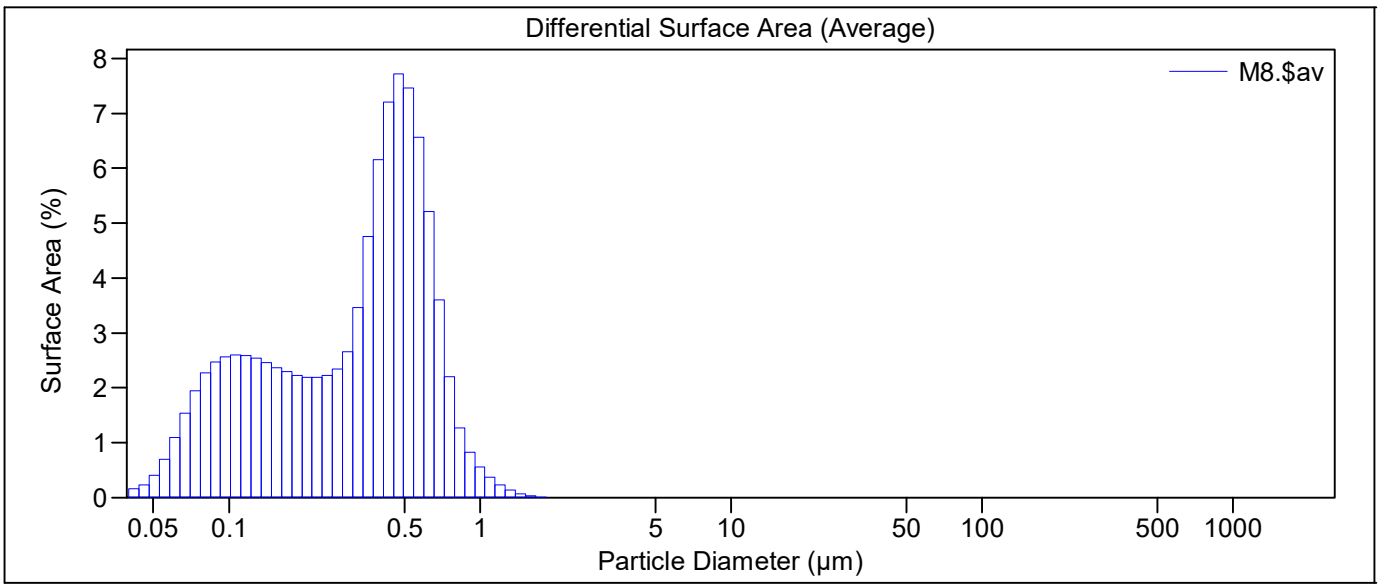
Calculations from 0.040 µm to 2000 µm

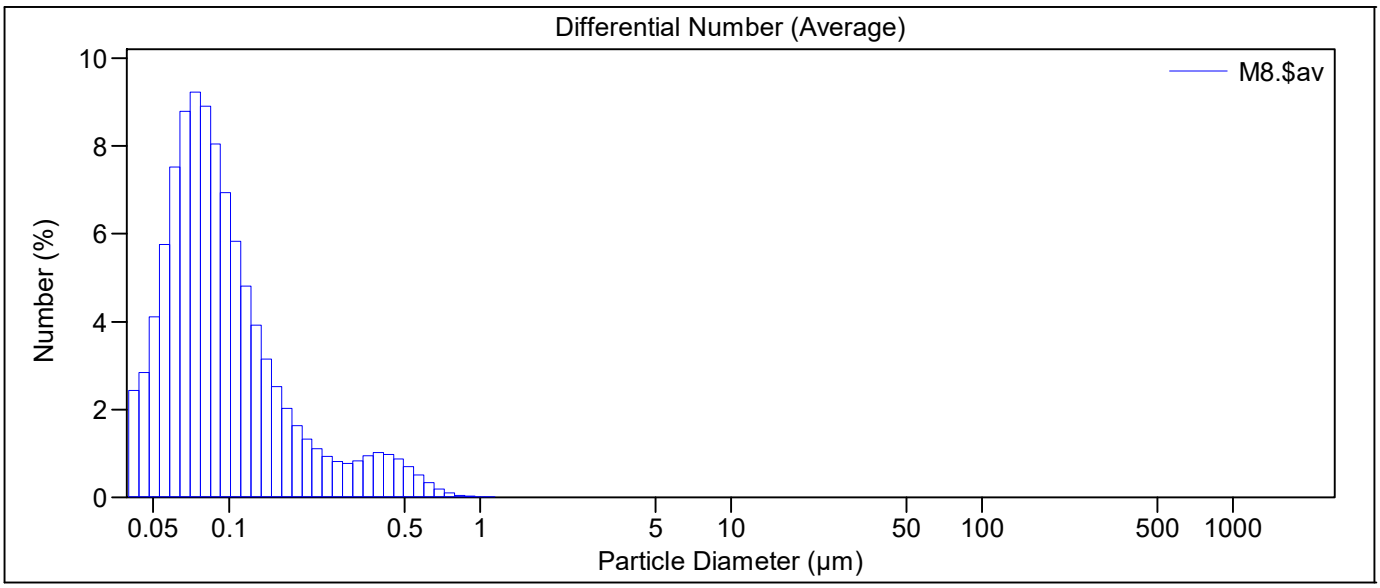
Number:	100%		
Mean:	0.120 µm	S.D.:	0.105 µm
Median:	0.085 µm	Variance:	0.011 µm^2
Mean/Median ratio:	1.411	C.V.:	88.1%
Mode:	0.073 µm	Skewness:	3.138 Right skewed
		Kurtosis:	12.10 Leptokurtic

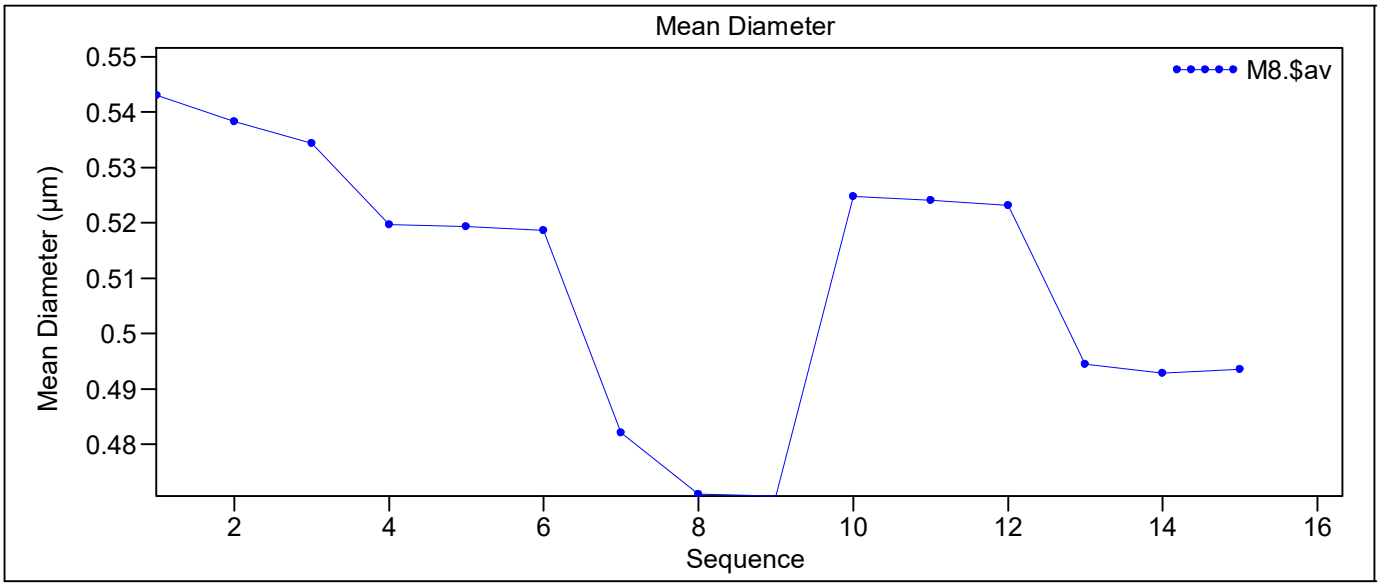
<10%	<25%	<50%	<75%	<90%
0.053 µm	0.065 µm	0.085 µm	0.122 µm	0.218 µm

Beckman Coulter LS13320









M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.019	0.17	2.43
2	0.044	0.046	0.029	0.24	2.84
3	0.048	0.050	0.056	0.41	4.11
4	0.053	0.055	0.10	0.70	5.76
5	0.058	0.061	0.18	1.10	7.52
6	0.064	0.067	0.28	1.54	8.79
7	0.070	0.073	0.39	1.95	9.23
8	0.077	0.080	0.50	2.27	8.90
9	0.084	0.088	0.59	2.47	8.04
10	0.093	0.097	0.68	2.57	6.94
11	0.102	0.106	0.75	2.60	5.84
12	0.112	0.117	0.82	2.59	4.82
13	0.122	0.128	0.88	2.54	3.92
14	0.134	0.141	0.94	2.46	3.15
15	0.148	0.155	0.99	2.37	2.52
16	0.162	0.170	1.06	2.29	2.02
17	0.178	0.186	1.13	2.23	1.63
18	0.195	0.205	1.22	2.19	1.33
19	0.214	0.225	1.33	2.19	1.10
20	0.235	0.247	1.49	2.23	0.93
21	0.258	0.271	1.72	2.34	0.81
22	0.284	0.297	2.14	2.66	0.77
23	0.311	0.326	3.07	3.47	0.83
24	0.342	0.358	4.62	4.76	0.94
25	0.375	0.393	6.56	6.16	1.01
26	0.412	0.431	8.43	7.20	0.98
27	0.452	0.474	9.91	7.72	0.87
28	0.496	0.520	10.5	7.46	0.70
29	0.545	0.571	10.2	6.57	0.51
30	0.598	0.627	8.86	5.21	0.34
31	0.656	0.688	6.72	3.60	0.19
32	0.721	0.755	4.52	2.21	0.098
33	0.791	0.829	2.87	1.28	0.047
34	0.868	0.910	2.06	0.83	0.026
35	0.953	0.999	1.53	0.56	0.014
36	1.047	1.097	1.10	0.37	0.0078
37	1.149	1.204	0.76	0.23	0.0041
38	1.261	1.321	0.49	0.14	0.0020
39	1.385	1.451	0.29	0.074	0.00090
40	1.520	1.592	0.15	0.035	0.00035
41	1.668	1.748	0.065	0.014	0.00011

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
42	1.832	1.919	0.020	0.0038	0.000026
43	2.011	2.107	0.0041	0.00071	0.000004
44	2.207	2.313	0.00037	0.000060	2.84E-7
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_01_144053.$ls M8_01_144053.$ls		
File ID:	M8		
Operator:	KW		
Run number:	1		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.71%		
LS 13 320	Universal Liquid Module		
Start time:	14:39 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_01_144053.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.543 µm	S.D.:	0.230 µm
Median:	0.513 µm	Variance:	0.053 µm^2
Mean/Median ratio:	1.059	C.V.:	42.4%
Mode:	0.571 µm	Skewness:	0.593 Right skewed
		Kurtosis:	-0.015 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.268 µm	0.367 µm	0.513 µm	0.693 µm	0.865 µm

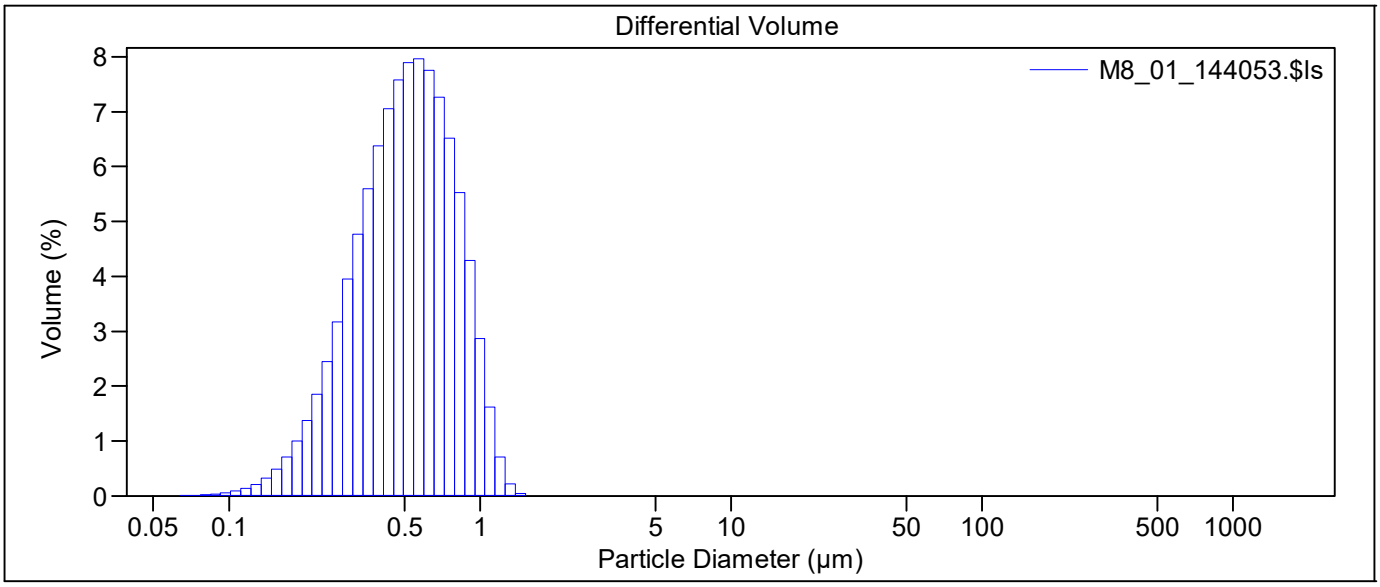
Number Statistics (Arithmetic) M8_01_144053.$ls

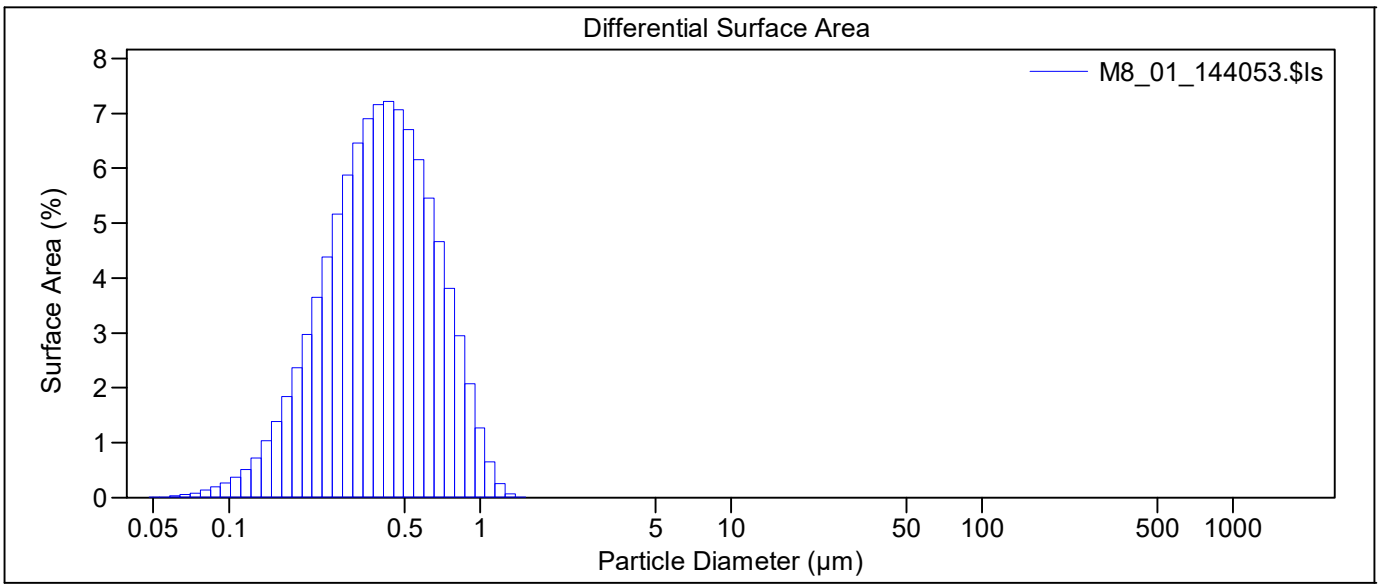
Calculations from 0.040 µm to 2000 µm

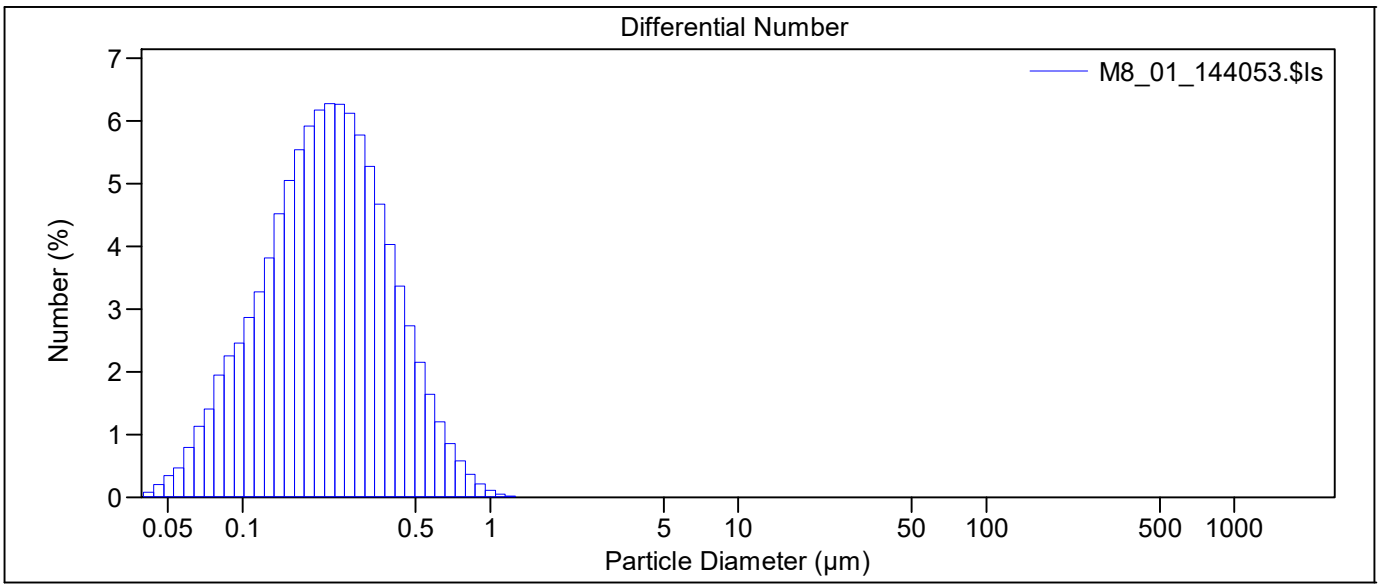
Number:	100%		
Mean:	0.254 µm	S.D.:	0.150 µm
Median:	0.220 µm	Variance:	0.022 µm^2
Mean/Median ratio:	1.152	C.V.:	59.1%
Mode:	0.225 µm	Skewness:	1.447 Right skewed
		Kurtosis:	2.997 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.098 µm	0.146 µm	0.220 µm	0.324 µm	0.451 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.00016	0.0016	0.081
2	0.044	0.046	0.00051	0.0049	0.20
3	0.048	0.050	0.0012	0.010	0.35
4	0.053	0.055	0.0021	0.017	0.47
5	0.058	0.061	0.0047	0.034	0.80
6	0.064	0.067	0.0088	0.058	1.13
7	0.070	0.073	0.015	0.087	1.41
8	0.077	0.080	0.027	0.15	1.95
9	0.084	0.088	0.041	0.20	2.25
10	0.093	0.097	0.059	0.27	2.46
11	0.102	0.106	0.090	0.37	2.87
12	0.112	0.117	0.14	0.52	3.27
13	0.122	0.128	0.21	0.72	3.82
14	0.134	0.141	0.33	1.03	4.52
15	0.148	0.155	0.49	1.39	5.05
16	0.162	0.170	0.71	1.84	5.54
17	0.178	0.186	1.00	2.37	5.92
18	0.195	0.205	1.38	2.97	6.17
19	0.214	0.225	1.86	3.65	6.28
20	0.235	0.247	2.45	4.38	6.27
21	0.258	0.271	3.17	5.17	6.13
22	0.284	0.297	3.95	5.87	5.78
23	0.311	0.326	4.77	6.46	5.27
24	0.342	0.358	5.60	6.90	4.67
25	0.375	0.393	6.38	7.16	4.03
26	0.412	0.431	7.06	7.22	3.37
27	0.452	0.474	7.58	7.06	2.73
28	0.496	0.520	7.90	6.71	2.15
29	0.545	0.571	7.96	6.16	1.64
30	0.598	0.627	7.75	5.46	1.21
31	0.656	0.688	7.27	4.66	0.86
32	0.721	0.755	6.52	3.81	0.58
33	0.791	0.829	5.53	2.94	0.37
34	0.868	0.910	4.29	2.08	0.22
35	0.953	0.999	2.87	1.27	0.11
36	1.047	1.097	1.62	0.65	0.047
37	1.149	1.204	0.71	0.26	0.016
38	1.261	1.321	0.22	0.073	0.0036
39	1.385	1.451	0.045	0.014	0.00056
40	1.520	1.592	0.0038	0.0011	0.000036
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_02_144240.$ls M8_02_144240.$ls		
File ID:	M8		
Operator:	KW		
Run number:	2		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.68%		
LS 13 320	Universal Liquid Module		
Start time:	14:41 0	Run length:	93 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_02_144240.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.538 µm	S.D.:	0.236 µm
Median:	0.508 µm	Variance:	0.056 µm^2
Mean/Median ratio:	1.059	C.V.:	43.8%
Mode:	0.571 µm	Skewness:	0.564 Right skewed
		Kurtosis:	-0.046 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.256 µm	0.359 µm	0.508 µm	0.692 µm	0.867 µm

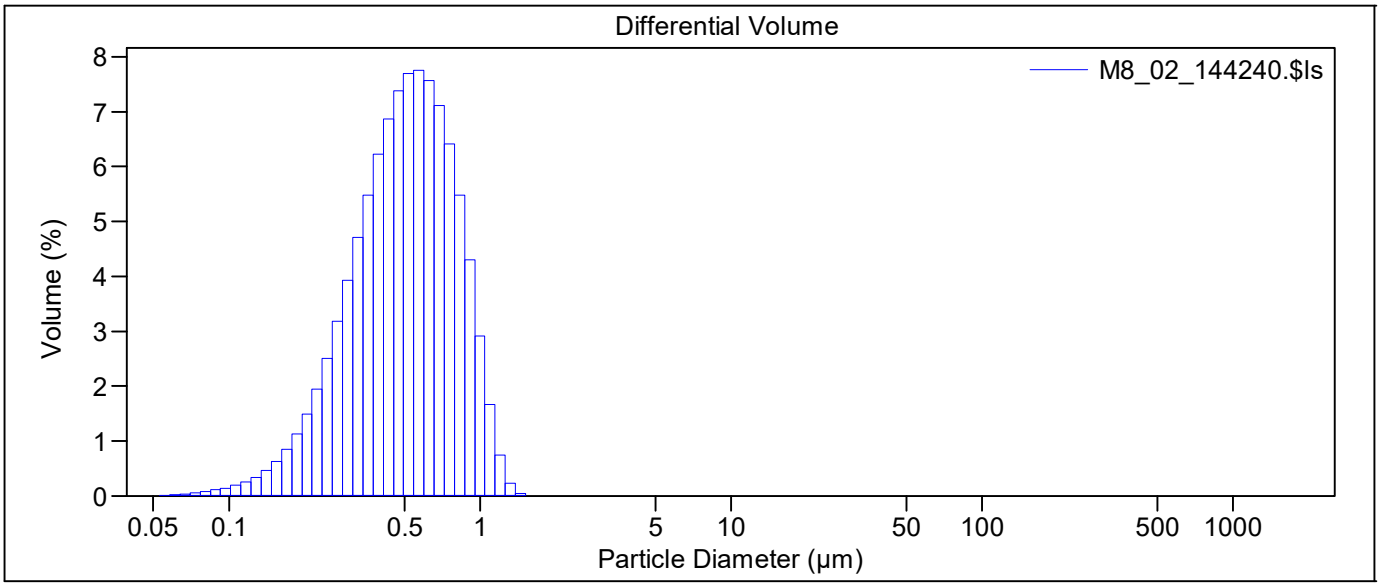
Number Statistics (Arithmetic) M8_02_144240.$ls

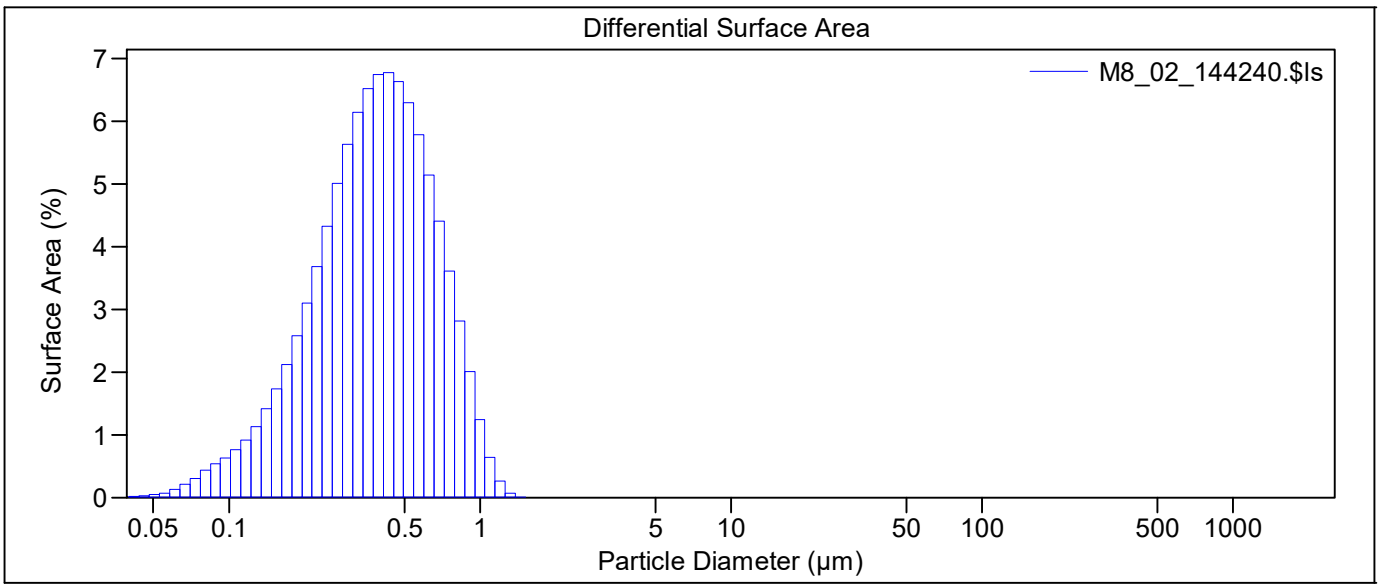
Calculations from 0.040 µm to 2000 µm

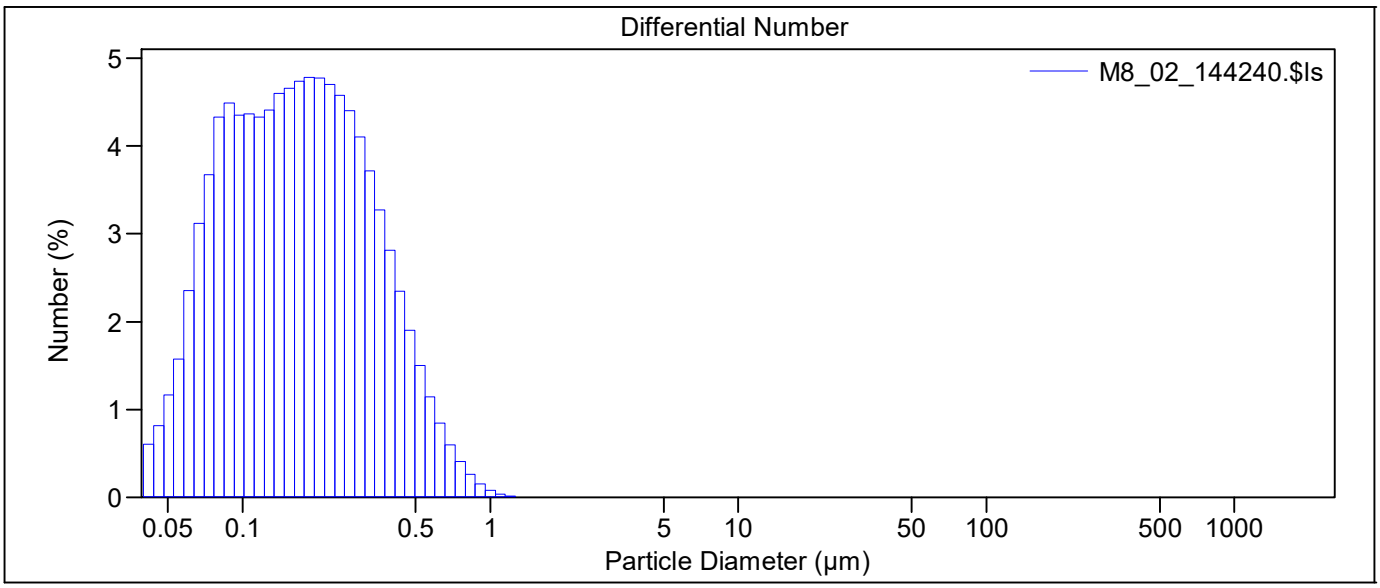
Number:	100%		
Mean:	0.207 µm	S.D.:	0.146 µm
Median:	0.166 µm	Variance:	0.021 µm^2
Mean/Median ratio:	1.250	C.V.:	70.4%
Mode:	0.186 µm	Skewness:	1.672 Right skewed
		Kurtosis:	3.775 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.071 µm	0.099 µm	0.166 µm	0.273 µm	0.402 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0016	0.016	0.60
2	0.044	0.046	0.0029	0.027	0.81
3	0.048	0.050	0.0055	0.046	1.17
4	0.053	0.055	0.0098	0.075	1.57
5	0.058	0.061	0.019	0.14	2.35
6	0.064	0.067	0.034	0.22	3.12
7	0.070	0.073	0.053	0.31	3.67
8	0.077	0.080	0.082	0.44	4.33
9	0.084	0.088	0.11	0.54	4.49
10	0.093	0.097	0.15	0.64	4.35
11	0.102	0.106	0.19	0.77	4.37
12	0.112	0.117	0.25	0.92	4.33
13	0.122	0.128	0.34	1.13	4.41
14	0.134	0.141	0.47	1.42	4.60
15	0.148	0.155	0.63	1.73	4.66
16	0.162	0.170	0.85	2.12	4.74
17	0.178	0.186	1.13	2.58	4.78
18	0.195	0.205	1.49	3.10	4.77
19	0.214	0.225	1.94	3.68	4.70
20	0.235	0.247	2.51	4.33	4.58
21	0.258	0.271	3.19	5.01	4.40
22	0.284	0.297	3.93	5.63	4.10
23	0.311	0.326	4.71	6.14	3.72
24	0.342	0.358	5.49	6.52	3.27
25	0.375	0.393	6.23	6.75	2.81
26	0.412	0.431	6.87	6.78	2.34
27	0.452	0.474	7.38	6.63	1.90
28	0.496	0.520	7.69	6.30	1.50
29	0.545	0.571	7.76	5.79	1.14
30	0.598	0.627	7.57	5.14	0.84
31	0.656	0.688	7.12	4.41	0.60
32	0.721	0.755	6.42	3.62	0.41
33	0.791	0.829	5.48	2.81	0.26
34	0.868	0.910	4.30	2.01	0.16
35	0.953	0.999	2.91	1.24	0.080
36	1.047	1.097	1.66	0.65	0.035
37	1.149	1.204	0.75	0.26	0.012
38	1.261	1.321	0.23	0.075	0.0028
39	1.385	1.451	0.049	0.014	0.00044
40	1.520	1.592	0.0044	0.0012	0.000030
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_03_144429.$ls M8_03_144429.$ls		
File ID:	M8		
Operator:	KW		
Run number:	3		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.63%		
LS 13 320	Universal Liquid Module		
Start time:	14:42 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_03_144429.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.534 µm	S.D.:	0.240 µm
Median:	0.505 µm	Variance:	0.058 μm^2
Mean/Median ratio:	1.058	C.V.:	44.9%
Mode:	0.571 µm	Skewness:	0.545 Right skewed
		Kurtosis:	-0.074 Platykurtic

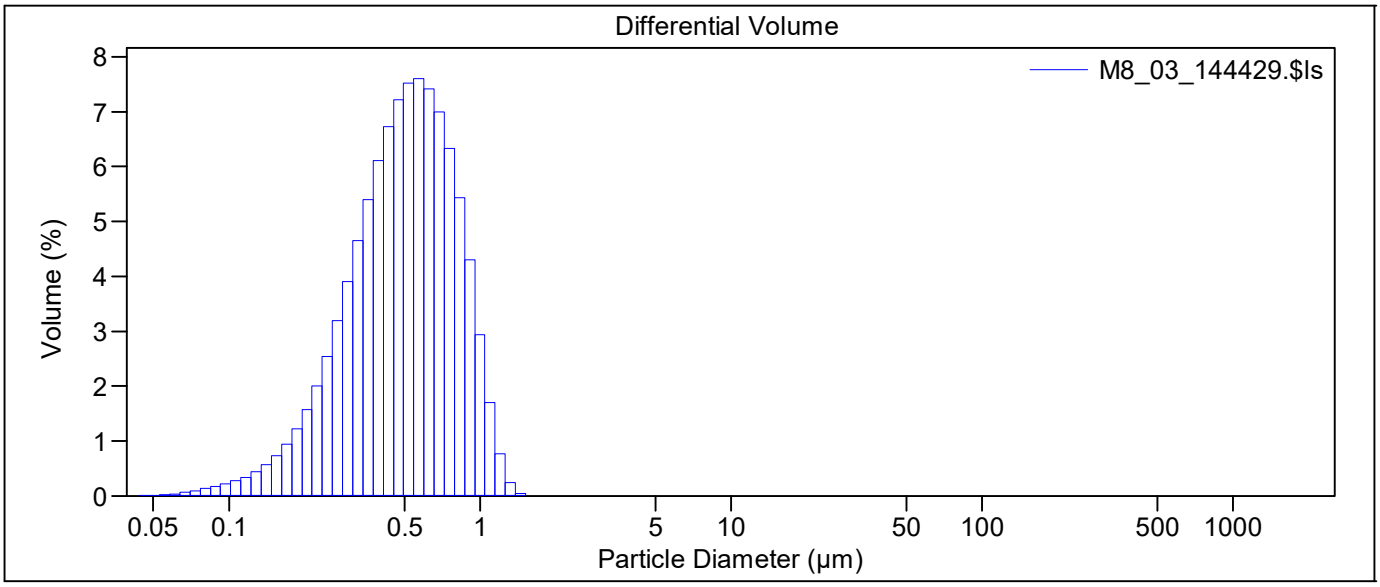
<10%	<25%	<50%	<75%	<90%
0.245 µm	0.353 µm	0.505 µm	0.691 µm	0.869 µm

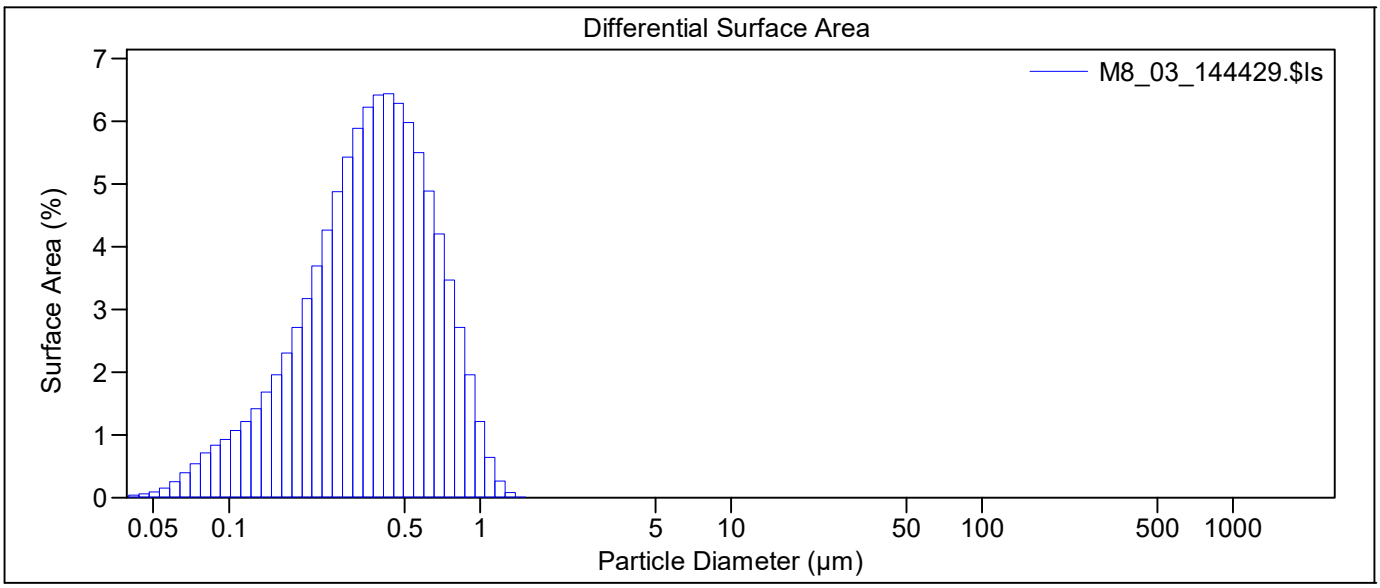
Number Statistics (Arithmetic) M8_03_144429.$ls

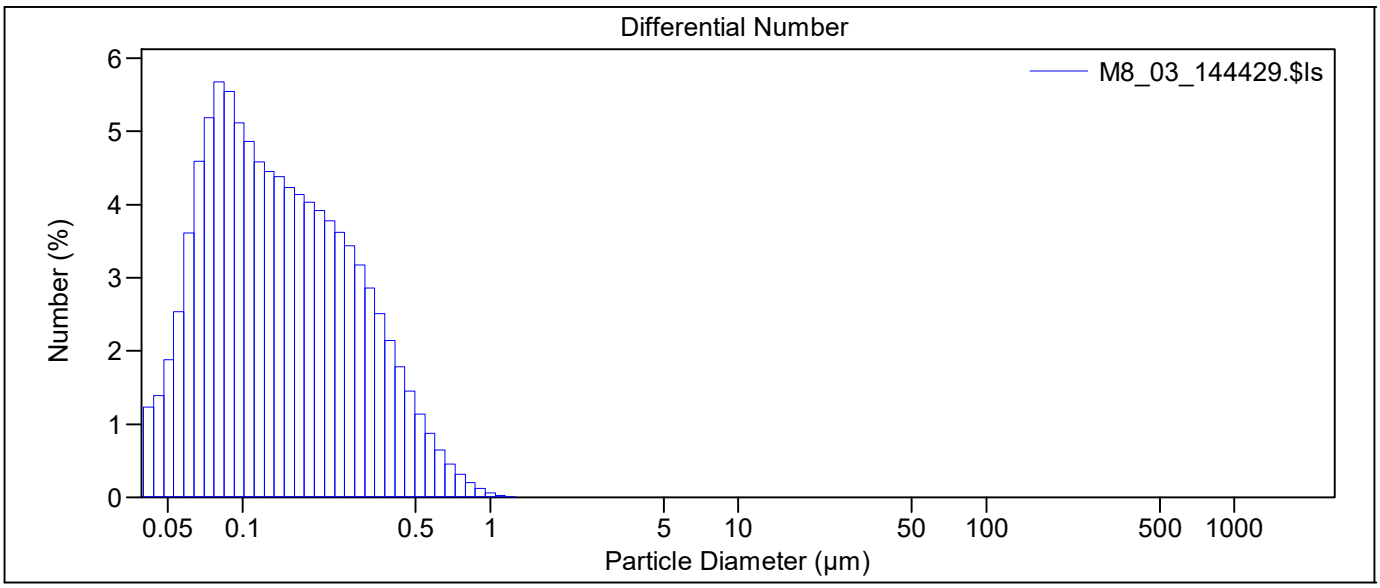
Calculations from 0.040 µm to 2000 µm

Number:	100%		
Mean:	0.180 µm	S.D.:	0.138 µm
Median:	0.133 µm	Variance:	0.019 μm^2
Mean/Median ratio:	1.359	C.V.:	76.7%
Mode:	0.080 µm	Skewness:	1.936 Right skewed
		Kurtosis:	4.986 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.063 µm	0.083 µm	0.133 µm	0.234 µm	0.365 µm


Differential Volume
M8_03_144429.$ls
Volume (%)
0
1
2
3
4
5
6
7
8
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Surface Area
M8_03_144429.$ls
Surface Area (%)
0
1
2
3
4
5
6
7
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)


Differential Number
M8_03_144429.$ls
Number (%)
0
1
2
3
4
5
6
0.05
0.1
0.5
1
5
10
50
100
500
1000
Particle Diameter (µm)

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.0043	0.042	1.23
2	0.044	0.046	0.0064	0.057	1.39
3	0.048	0.050	0.011	0.093	1.88
4	0.053	0.055	0.020	0.15	2.54
5	0.058	0.061	0.038	0.26	3.61
6	0.064	0.067	0.064	0.40	4.60
7	0.070	0.073	0.096	0.54	5.19
8	0.077	0.080	0.14	0.71	5.68
9	0.084	0.088	0.18	0.84	5.55
10	0.093	0.097	0.22	0.93	5.12
11	0.102	0.106	0.28	1.07	4.86
12	0.112	0.117	0.34	1.21	4.58
13	0.122	0.128	0.44	1.42	4.45
14	0.134	0.141	0.57	1.68	4.38
15	0.148	0.155	0.73	1.96	4.24
16	0.162	0.170	0.95	2.31	4.14
17	0.178	0.186	1.23	2.72	4.04
18	0.195	0.205	1.57	3.18	3.92
19	0.214	0.225	2.01	3.69	3.78
20	0.235	0.247	2.55	4.27	3.62
21	0.258	0.271	3.20	4.88	3.44
22	0.284	0.297	3.91	5.43	3.18
23	0.311	0.326	4.65	5.89	2.86
24	0.342	0.358	5.40	6.22	2.51
25	0.375	0.393	6.11	6.42	2.14
26	0.412	0.431	6.73	6.44	1.79
27	0.452	0.474	7.22	6.29	1.45
28	0.496	0.520	7.52	5.97	1.14
29	0.545	0.571	7.60	5.50	0.87
30	0.598	0.627	7.42	4.89	0.64
31	0.656	0.688	7.00	4.20	0.46
32	0.721	0.755	6.34	3.46	0.31
33	0.791	0.829	5.44	2.71	0.20
34	0.868	0.910	4.31	1.95	0.12
35	0.953	0.999	2.94	1.22	0.063
36	1.047	1.097	1.70	0.64	0.027
37	1.149	1.204	0.77	0.27	0.0095
38	1.261	1.321	0.25	0.077	0.0023
39	1.385	1.451	0.052	0.015	0.00036
40	1.520	1.592	0.0049	0.0013	0.000026
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_04_145425.$ls M8_04_145425.$ls		
File ID:	M8		
Operator:	KW		
Run number:	4		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.07%		
LS 13 320	Universal Liquid Module		
Start time:	14:52 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_04_145425.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.520 µm	S.D.:	0.106 µm
Median:	0.511 µm	Variance:	0.011 µm^2
Mean/Median ratio:	1.018	C.V.:	20.5%
Mode:	0.520 µm	Skewness:	0.399 Right skewed
		Kurtosis:	-0.303 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.386 µm	0.439 µm	0.511 µm	0.592 µm	0.668 µm

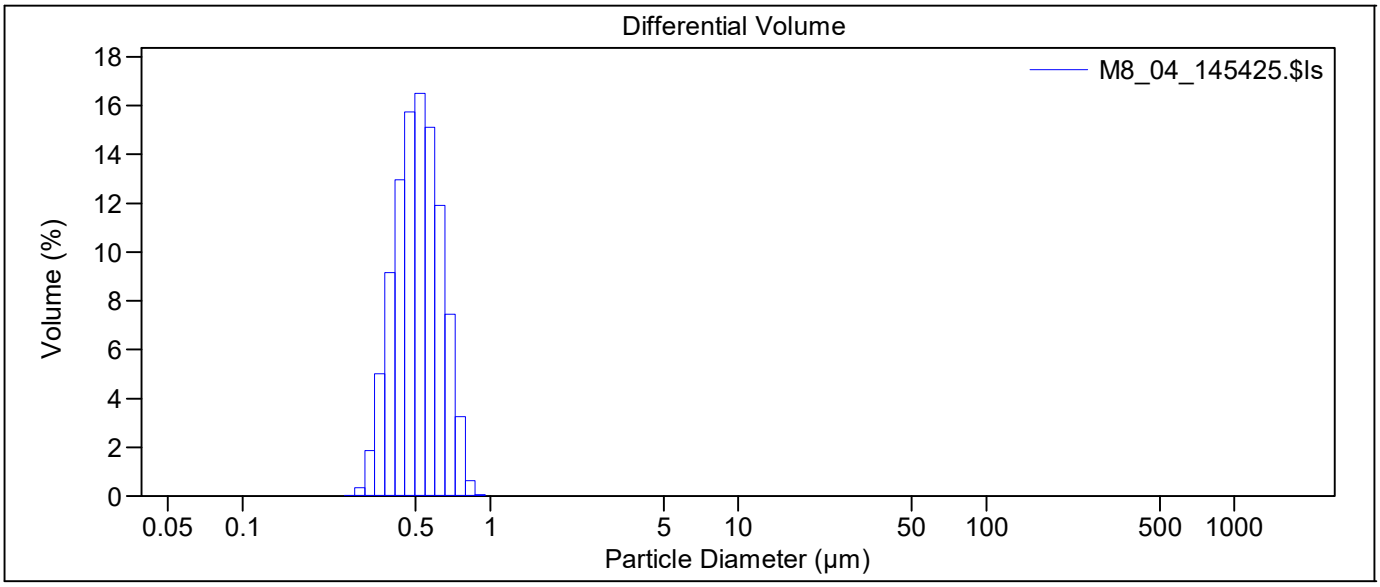
Number Statistics (Arithmetic) M8_04_145425.$ls

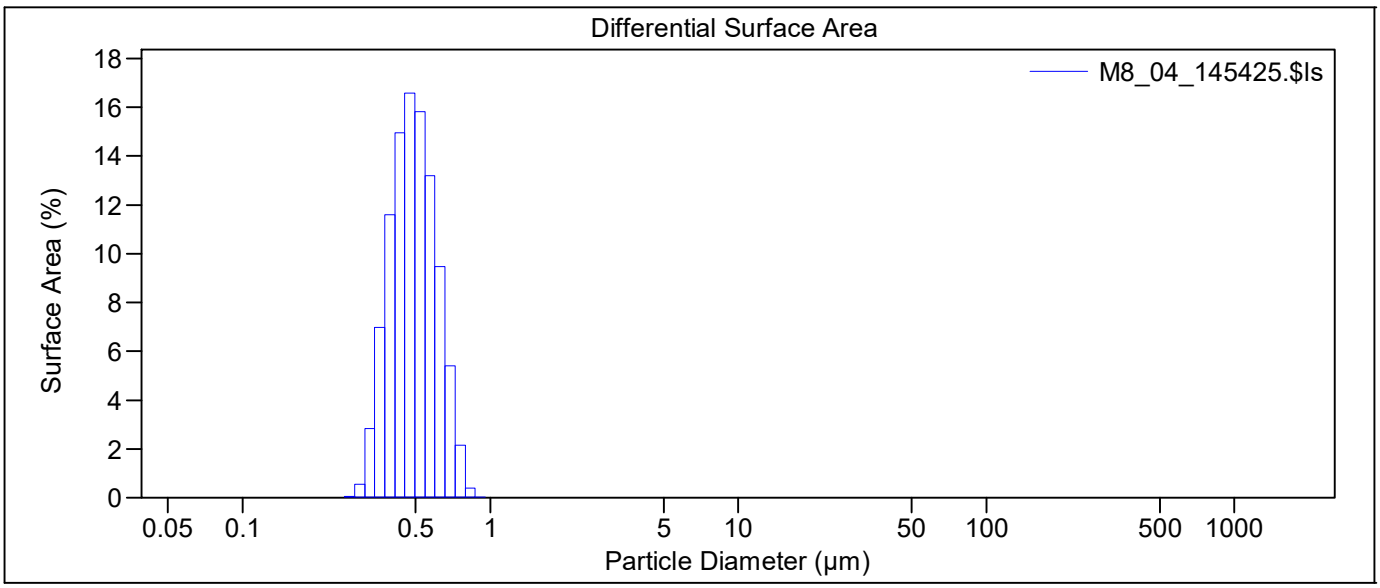
Calculations from 0.040 µm to 2000 µm

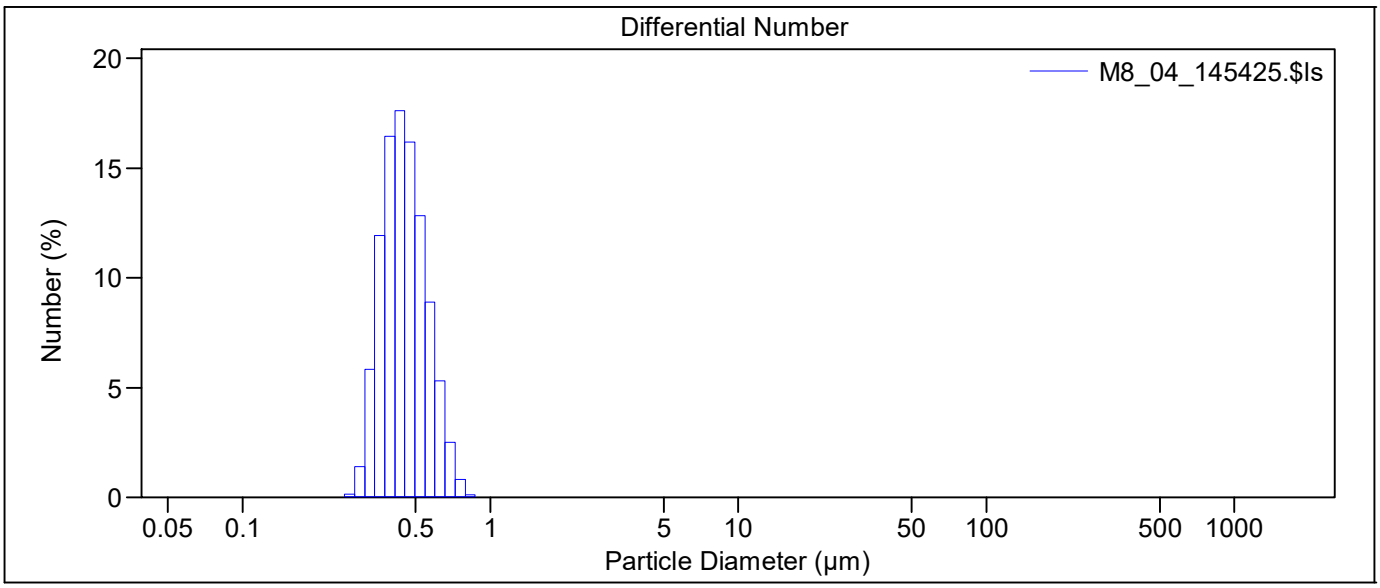
Number:	100%		
Mean:	0.459 µm	S.D.:	0.094 µm
Median:	0.444 µm	Variance:	0.0088 µm^2
Mean/Median ratio:	1.032	C.V.:	20.5%
Mode:	0.431 µm	Skewness:	0.742 Right skewed
		Kurtosis:	0.349 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.349 µm	0.388 µm	0.444 µm	0.517 µm	0.590 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.000067	0.00013	0.00049
21	0.258	0.271	0.024	0.044	0.13
22	0.284	0.297	0.34	0.56	1.40
23	0.311	0.326	1.85	2.83	5.83
24	0.342	0.358	5.01	6.98	11.9
25	0.375	0.393	9.15	11.6	16.5
26	0.412	0.431	12.9	15.0	17.6
27	0.452	0.474	15.8	16.6	16.2
28	0.496	0.520	16.5	15.8	12.8
29	0.545	0.571	15.1	13.2	8.88
30	0.598	0.627	11.9	9.48	5.29
31	0.656	0.688	7.44	5.39	2.50
32	0.721	0.755	3.25	2.14	0.82
33	0.791	0.829	0.63	0.38	0.12
34	0.868	0.910	0.049	0.027	0.0072
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_05_145612.$ls M8_05_145612.$ls		
File ID:	M8		
Operator:	KW		
Run number:	5		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.04%		
LS 13 320	Universal Liquid Module		
Start time:	14:54 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_05_145612.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.519 µm	S.D.:	0.107 µm
Median:	0.510 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.018	C.V.:	20.6%
Mode:	0.520 µm	Skewness:	0.394 Right skewed
		Kurtosis:	-0.305 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.386 µm	0.438 µm	0.510 µm	0.592 µm	0.668 µm

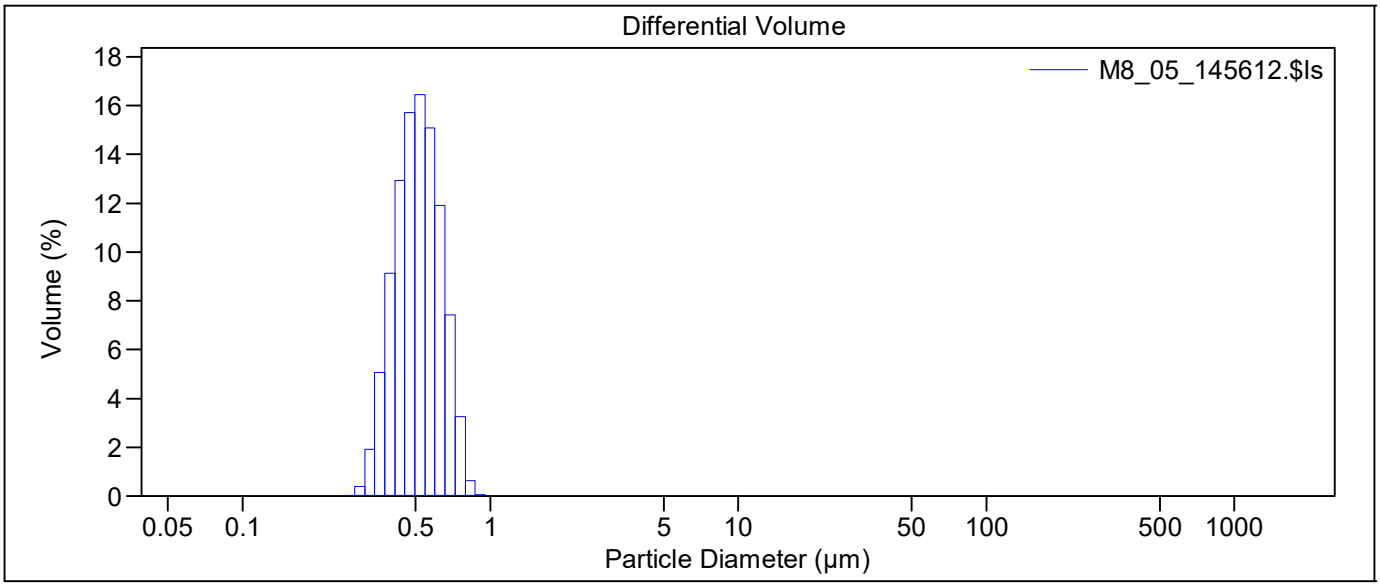
Number Statistics (Arithmetic) M8_05_145612.$ls

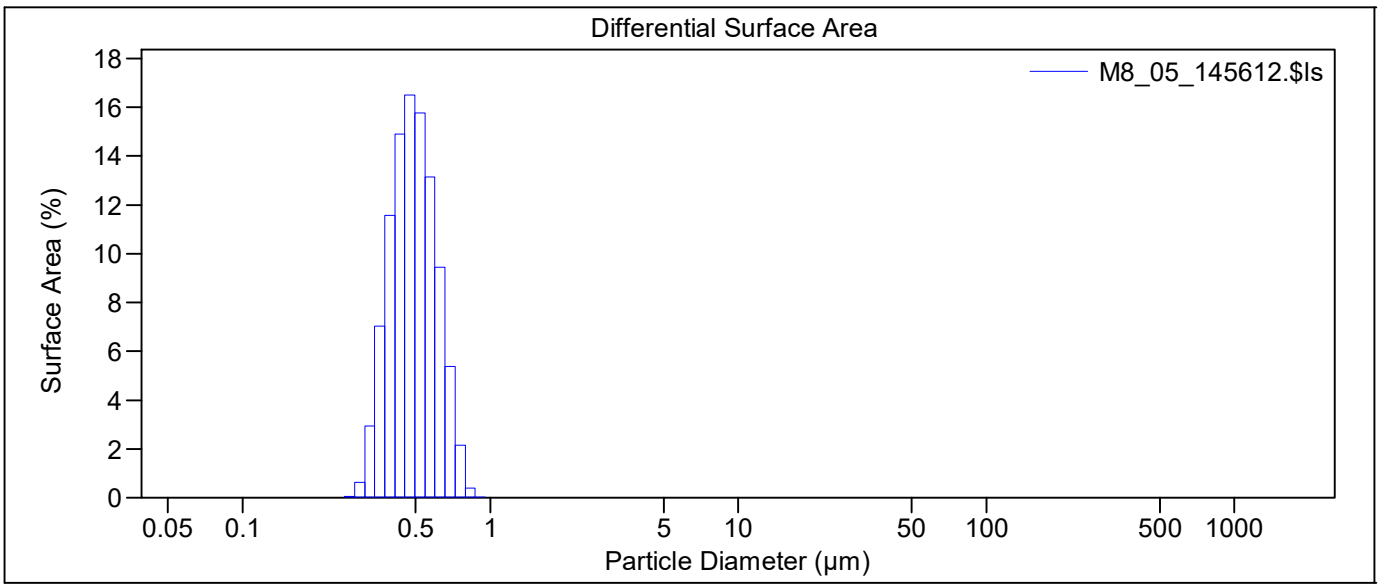
Calculations from 0.040 µm to 2000 µm

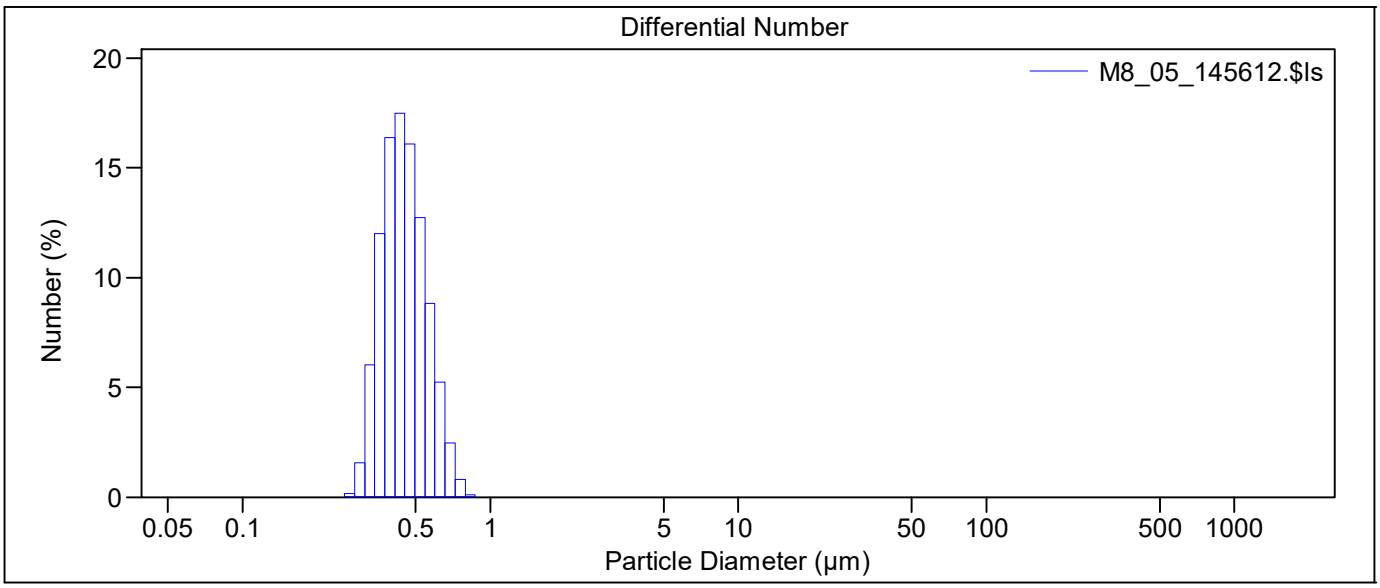
Number:	100%		
Mean:	0.458 µm	S.D.:	0.094 µm
Median:	0.444 µm	Variance:	0.0089 μm^2
Mean/Median ratio:	1.032	C.V.:	20.6%
Mode:	0.431 µm	Skewness:	0.736 Right skewed
		Kurtosis:	0.341 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.348 µm	0.387 µm	0.444 µm	0.516 µm	0.590 µm

Beckman Coulter LS13320







Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.00033	0.00067	0.0024
21	0.258	0.271	0.032	0.059	0.18
22	0.284	0.297	0.38	0.64	1.58
23	0.311	0.326	1.93	2.94	6.03
24	0.342	0.358	5.07	7.04	12.0
25	0.375	0.393	9.14	11.6	16.4
26	0.412	0.431	12.9	14.9	17.5
27	0.452	0.474	15.7	16.5	16.1
28	0.496	0.520	16.5	15.8	12.7
29	0.545	0.571	15.1	13.2	8.82
30	0.598	0.627	11.9	9.46	5.26
31	0.656	0.688	7.44	5.38	2.49
32	0.721	0.755	3.25	2.14	0.82
33	0.791	0.829	0.63	0.38	0.12
34	0.868	0.910	0.049	0.027	0.0071
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_06_145800.$ls M8_06_145800.$ls		
File ID:	M8		
Operator:	KW		
Run number:	6		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.09%		
LS 13 320	Universal Liquid Module		
Start time:	14:56 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	56%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_06_145800.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.519 µm	S.D.:	0.106 µm
Median:	0.510 µm	Variance:	0.011 μm^2
Mean/Median ratio:	1.018	C.V.:	20.5%
Mode:	0.520 µm	Skewness:	0.404 Right skewed
		Kurtosis:	-0.294 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.386 µm	0.438 µm	0.510 µm	0.591 µm	0.667 µm

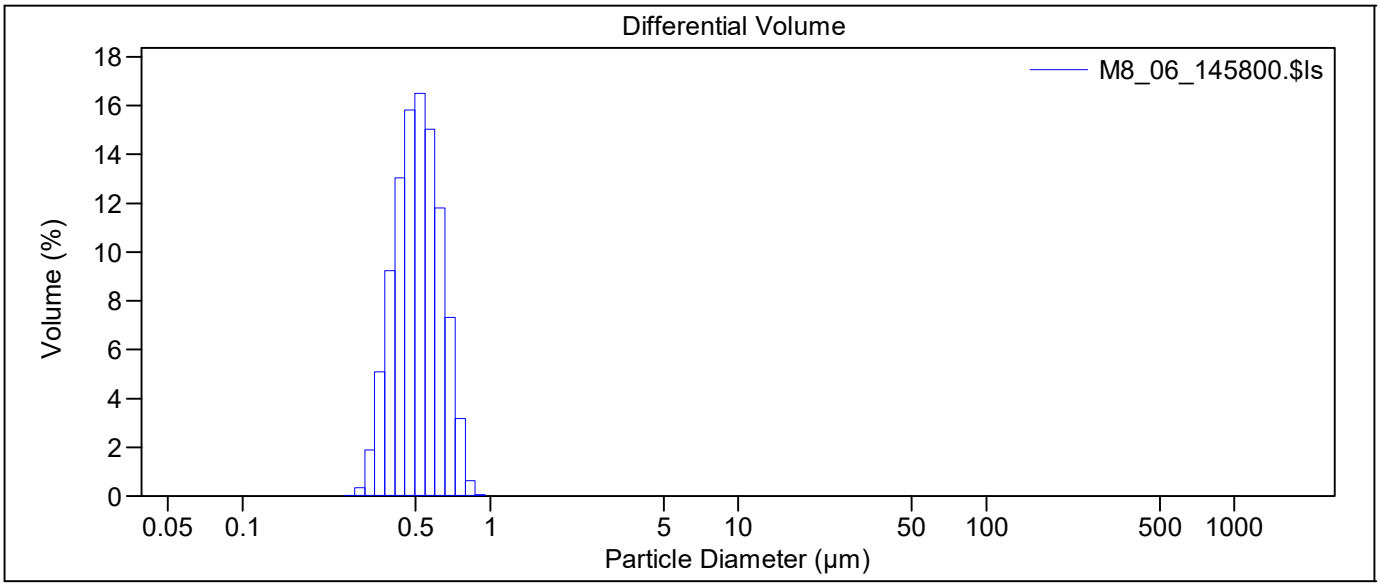
Number Statistics (Arithmetic) M8_06_145800.$ls

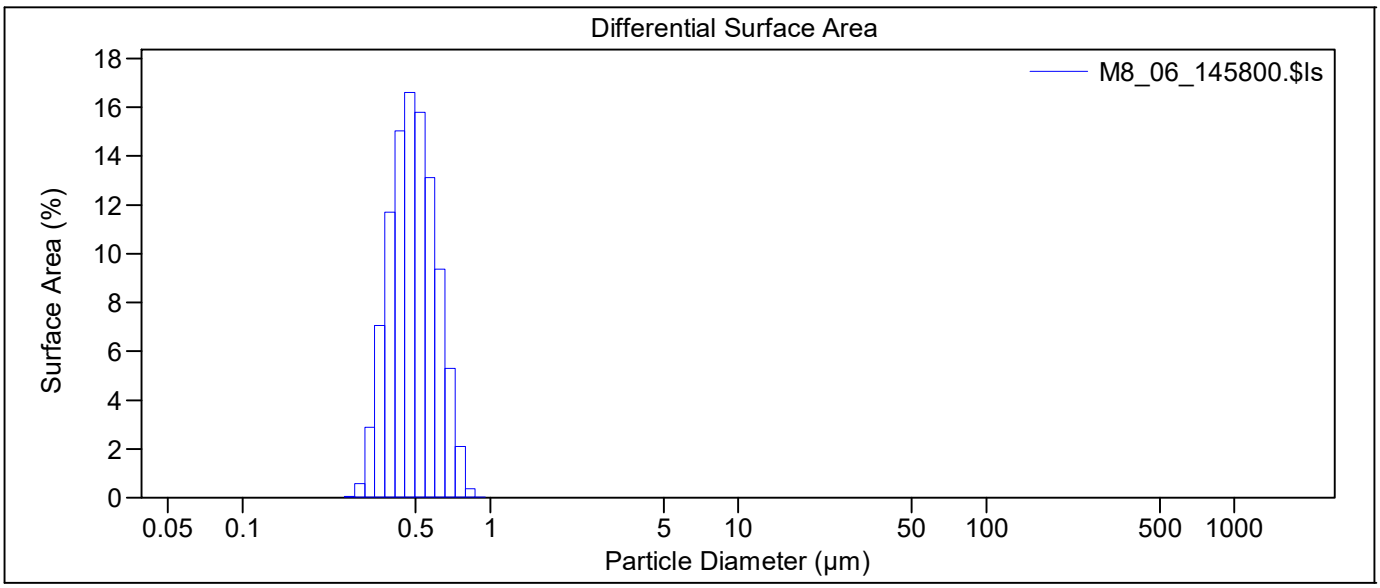
Calculations from 0.040 µm to 2000 µm

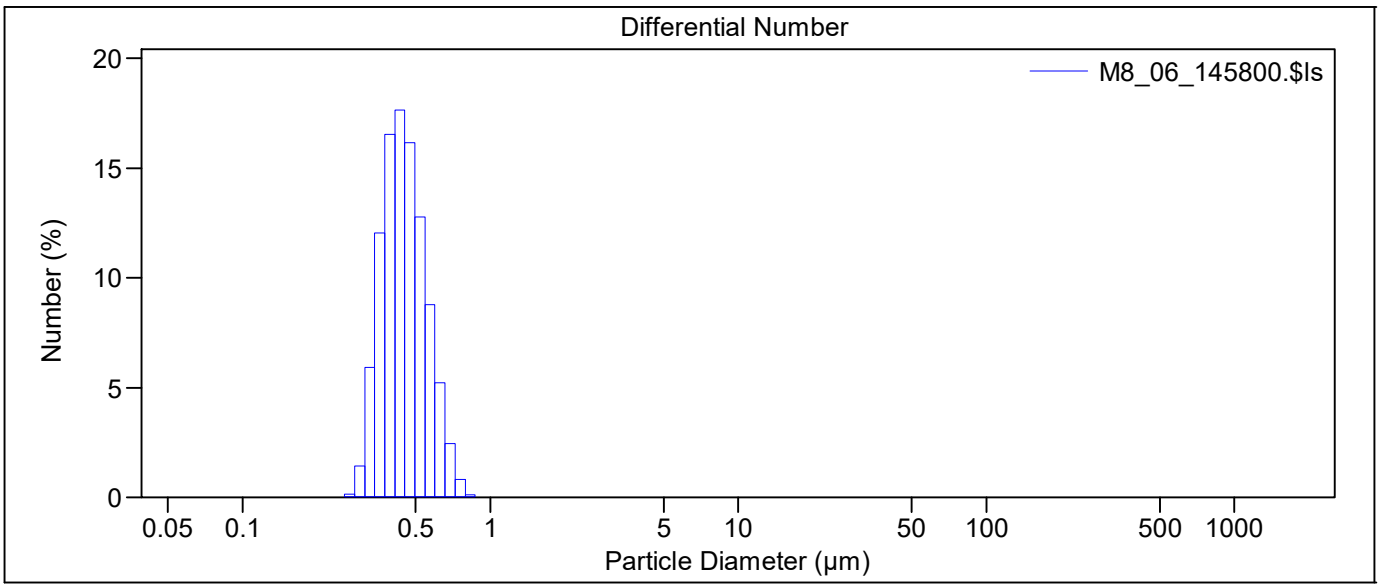
Number:	100%		
Mean:	0.458 µm	S.D.:	0.094 µm
Median:	0.444 µm	Variance:	0.0088 μm^2
Mean/Median ratio:	1.032	C.V.:	20.5%
Mode:	0.431 µm	Skewness:	0.746 Right skewed
		Kurtosis:	0.362 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.349 µm	0.387 µm	0.444 µm	0.516 µm	0.589 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0	0	0
20	0.235	0.247	0.000089	0.00018	0.00064
21	0.258	0.271	0.025	0.047	0.14
22	0.284	0.297	0.35	0.58	1.44
23	0.311	0.326	1.89	2.88	5.92
24	0.342	0.358	5.09	7.07	12.0
25	0.375	0.393	9.25	11.7	16.5
26	0.412	0.431	13.0	15.0	17.6
27	0.452	0.474	15.8	16.6	16.2
28	0.496	0.520	16.5	15.8	12.8
29	0.545	0.571	15.0	13.1	8.79
30	0.598	0.627	11.8	9.36	5.21
31	0.656	0.688	7.33	5.30	2.44
32	0.721	0.755	3.18	2.10	0.80
33	0.791	0.829	0.62	0.37	0.12
34	0.868	0.910	0.048	0.026	0.0070
35	0.953	0.999	0	0	0
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_07_150727.$ls M8_07_150727.$ls		
File ID:	M8		
Operator:	KW		
Run number:	7		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	0.56%		
LS 13 320	Universal Liquid Module		
Start time:	15:05 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	9%	PIDS Obscur:	47%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_07_150727.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.482 µm	S.D.:	0.364 µm
Median:	0.375 µm	Variance:	0.132 µm^2
Mean/Median ratio:	1.284	C.V.:	75.4%
Mode:	0.571 µm	Skewness:	1.102 Right skewed
		Kurtosis:	0.699 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.114 µm	0.190 µm	0.375 µm	0.690 µm	1.026 µm

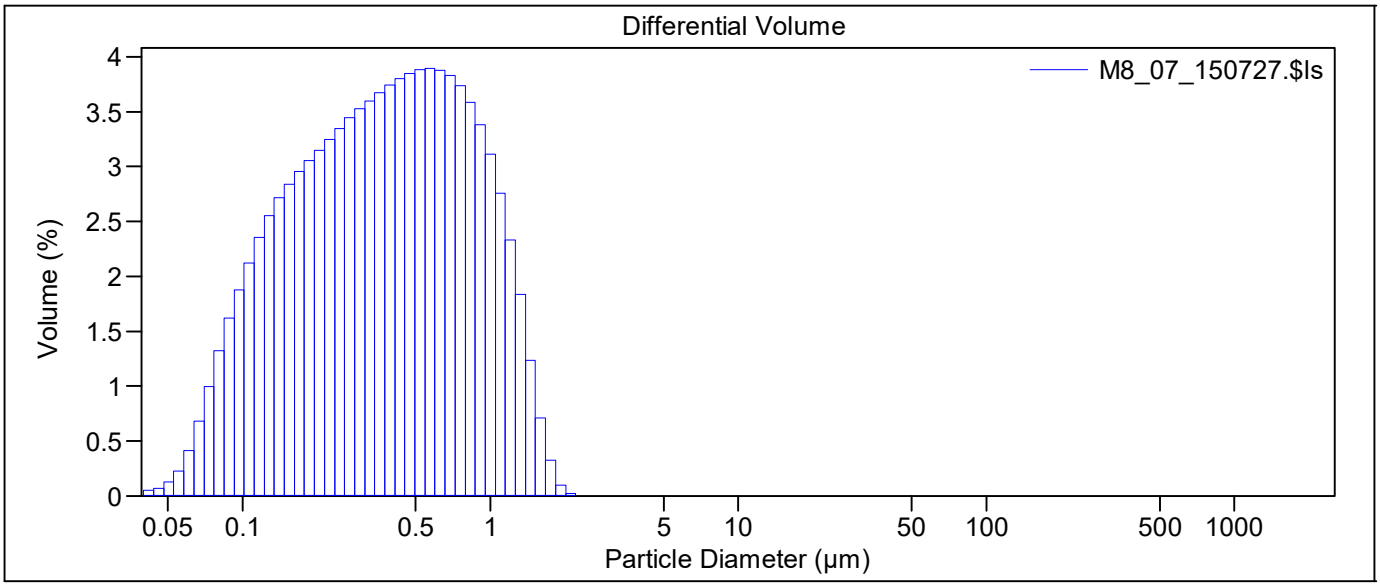
Number Statistics (Arithmetic) M8_07_150727.$ls

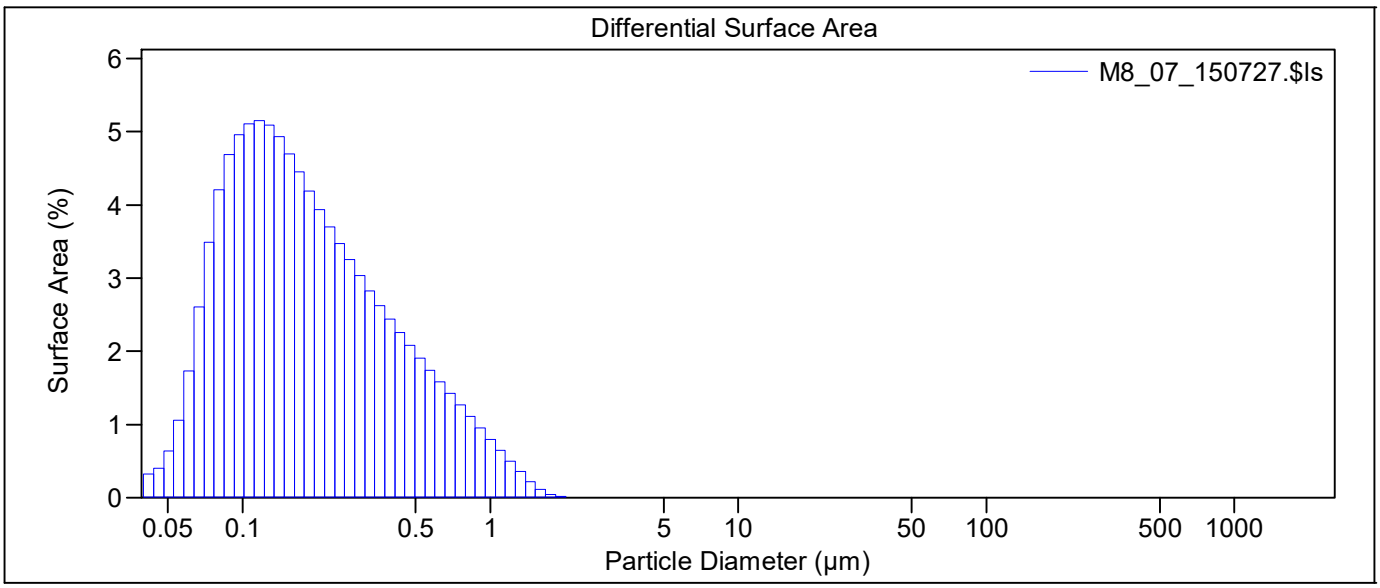
Calculations from 0.040 µm to 2000 µm

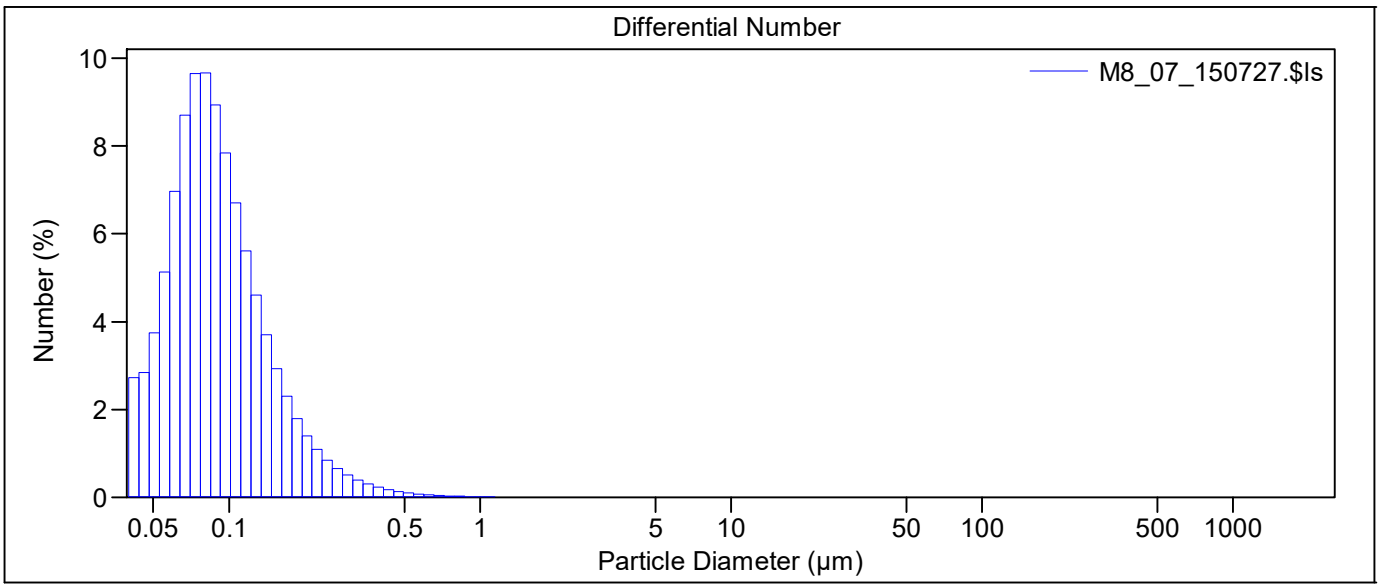
Number:	100%		
Mean:	0.102 µm	S.D.:	0.067 µm
Median:	0.085 µm	Variance:	0.0044 µm^2
Mean/Median ratio:	1.205	C.V.:	65.1%
Mode:	0.080 µm	Skewness:	4.683 Right skewed
		Kurtosis:	42.10 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.066 µm	0.085 µm	0.116 µm	0.164 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.053	0.32	2.72
2	0.044	0.046	0.073	0.40	2.85
3	0.048	0.050	0.13	0.64	3.75
4	0.053	0.055	0.23	1.06	5.14
5	0.058	0.061	0.41	1.74	6.98
6	0.064	0.067	0.68	2.61	8.70
7	0.070	0.073	1.00	3.49	9.65
8	0.077	0.080	1.32	4.20	9.66
9	0.084	0.088	1.62	4.69	8.93
10	0.093	0.097	1.88	4.96	7.84
11	0.102	0.106	2.13	5.10	6.70
12	0.112	0.117	2.35	5.15	5.61
13	0.122	0.128	2.56	5.09	4.60
14	0.134	0.141	2.71	4.93	3.70
15	0.148	0.155	2.84	4.70	2.92
16	0.162	0.170	2.95	4.45	2.30
17	0.178	0.186	3.05	4.19	1.80
18	0.195	0.205	3.15	3.94	1.40
19	0.214	0.225	3.25	3.70	1.09
20	0.235	0.247	3.35	3.47	0.85
21	0.258	0.271	3.44	3.26	0.66
22	0.284	0.297	3.53	3.03	0.51
23	0.311	0.326	3.60	2.82	0.39
24	0.342	0.358	3.68	2.63	0.30
25	0.375	0.393	3.74	2.44	0.23
26	0.412	0.431	3.80	2.25	0.18
27	0.452	0.474	3.85	2.08	0.14
28	0.496	0.520	3.88	1.91	0.11
29	0.545	0.571	3.89	1.74	0.080
30	0.598	0.627	3.88	1.58	0.060
31	0.656	0.688	3.83	1.42	0.045
32	0.721	0.755	3.74	1.27	0.033
33	0.791	0.829	3.59	1.11	0.024
34	0.868	0.910	3.38	0.95	0.017
35	0.953	0.999	3.11	0.80	0.012
36	1.047	1.097	2.76	0.64	0.0080
37	1.149	1.204	2.33	0.50	0.0051
38	1.261	1.321	1.83	0.36	0.0030
39	1.385	1.451	1.24	0.22	0.0015
40	1.520	1.592	0.71	0.11	0.00067
41	1.668	1.748	0.33	0.048	0.00023
42	1.832	1.919	0.10	0.014	0.000055
43	2.011	2.107	0.022	0.0027	0.000009
44	2.207	2.313	0.0023	0.00026	0.000001
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_08_150914.$ls M8_08_150914.$ls		
File ID:	M8		
Operator:	KW		
Run number:	8		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.86%		
LS 13 320	Universal Liquid Module		
Start time:	15:07 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_08_150914.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.471 µm	S.D.:	0.222 µm
Median:	0.497 µm	Variance:	0.049 μm^2
Mean/Median ratio:	0.948	C.V.:	47.2%
Mode:	0.571 µm	Skewness:	-0.171 Left skewed
		Kurtosis:	-0.502 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.115 µm	0.340 µm	0.497 µm	0.625 µm	0.740 µm

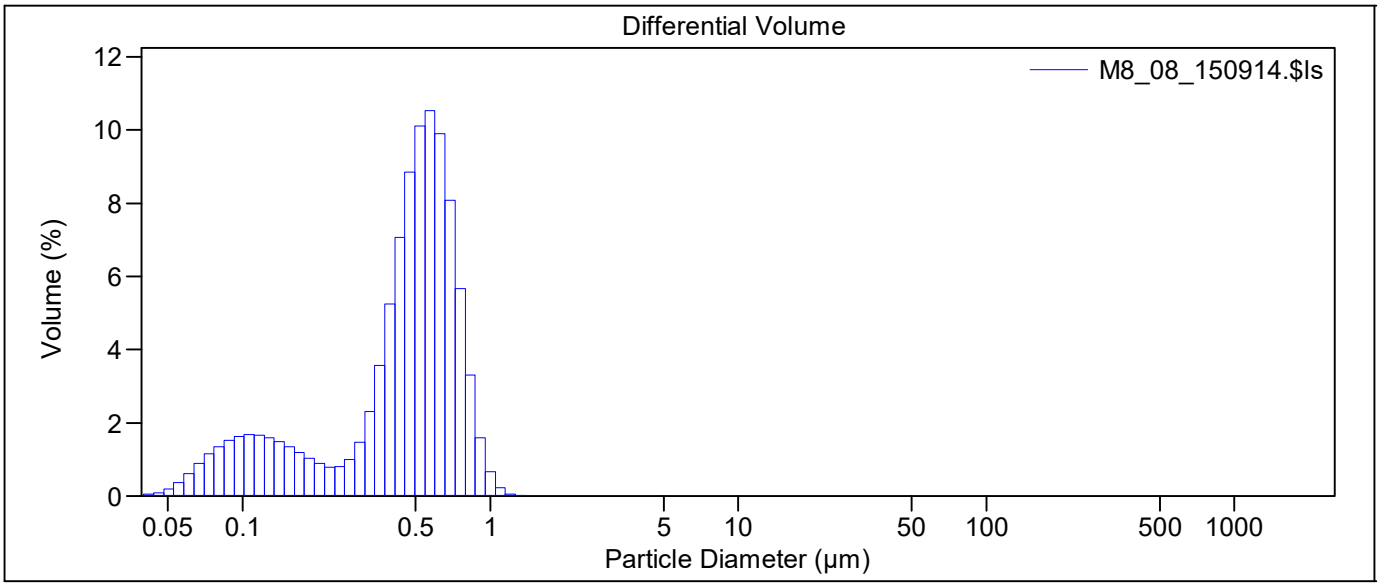
Number Statistics (Arithmetic) M8_08_150914.$ls

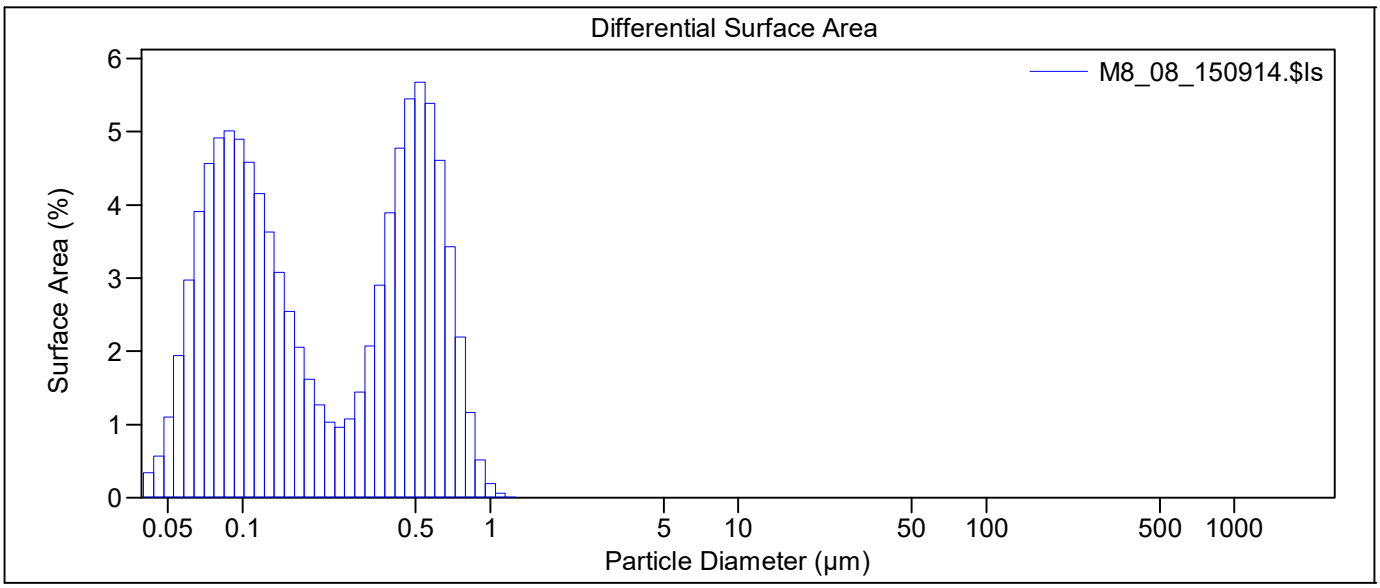
Calculations from 0.040 µm to 2000 µm

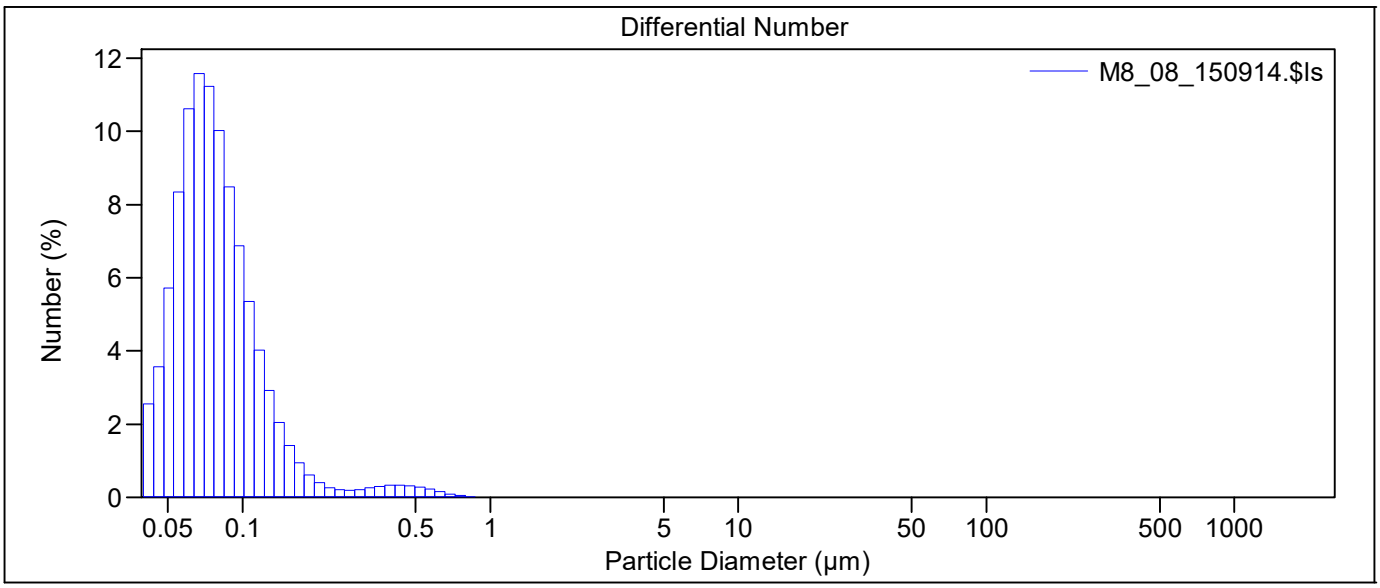
Number:	100%		
Mean:	0.091 µm	S.D.:	0.070 µm
Median:	0.075 µm	Variance:	0.0049 μm^2
Mean/Median ratio:	1.222	C.V.:	76.9%
Mode:	0.067 µm	Skewness:	5.108 Right skewed
		Kurtosis:	32.76 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.061 µm	0.075 µm	0.096 µm	0.129 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.049	0.34	2.56
2	0.044	0.046	0.090	0.57	3.57
3	0.048	0.050	0.19	1.10	5.73
4	0.053	0.055	0.37	1.94	8.34
5	0.058	0.061	0.62	2.97	10.6
6	0.064	0.067	0.89	3.91	11.6
7	0.070	0.073	1.15	4.57	11.2
8	0.077	0.080	1.36	4.91	10.0
9	0.084	0.088	1.52	5.01	8.49
10	0.093	0.097	1.63	4.90	6.88
11	0.102	0.106	1.67	4.59	5.35
12	0.112	0.117	1.66	4.15	4.02
13	0.122	0.128	1.60	3.63	2.91
14	0.134	0.141	1.49	3.08	2.05
15	0.148	0.155	1.35	2.55	1.41
16	0.162	0.170	1.20	2.06	0.94
17	0.178	0.186	1.03	1.62	0.62
18	0.195	0.205	0.89	1.27	0.40
19	0.214	0.225	0.79	1.03	0.27
20	0.235	0.247	0.81	0.96	0.21
21	0.258	0.271	1.00	1.08	0.19
22	0.284	0.297	1.47	1.44	0.22
23	0.311	0.326	2.31	2.07	0.26
24	0.342	0.358	3.57	2.91	0.30
25	0.375	0.393	5.24	3.89	0.33
26	0.412	0.431	7.06	4.78	0.34
27	0.452	0.474	8.84	5.45	0.32
28	0.496	0.520	10.1	5.67	0.28
29	0.545	0.571	10.5	5.39	0.22
30	0.598	0.627	9.90	4.61	0.16
31	0.656	0.688	8.08	3.43	0.096
32	0.721	0.755	5.67	2.19	0.051
33	0.791	0.829	3.30	1.16	0.022
34	0.868	0.910	1.60	0.51	0.0082
35	0.953	0.999	0.66	0.19	0.0026
36	1.047	1.097	0.23	0.061	0.00067
37	1.149	1.204	0.054	0.013	0.00012
38	1.261	1.321	0.0088	0.0019	0.000015
39	1.385	1.451	0.00048	0.000096	0.000001
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

M8.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_09_151101.$ls M8_09_151101.$ls		
File ID:	M8		
Operator:	KW		
Run number:	9		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.85%		
LS 13 320	Universal Liquid Module		
Start time:	15:09 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	48%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_09_151101.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.471 µm	S.D.:	0.221 µm
Median:	0.497 µm	Variance:	0.049 μm^2
Mean/Median ratio:	0.946	C.V.:	46.9%
Mode:	0.571 µm	Skewness:	-0.192 Left skewed
		Kurtosis:	-0.501 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.115 µm	0.343 µm	0.497 µm	0.623 µm	0.736 µm

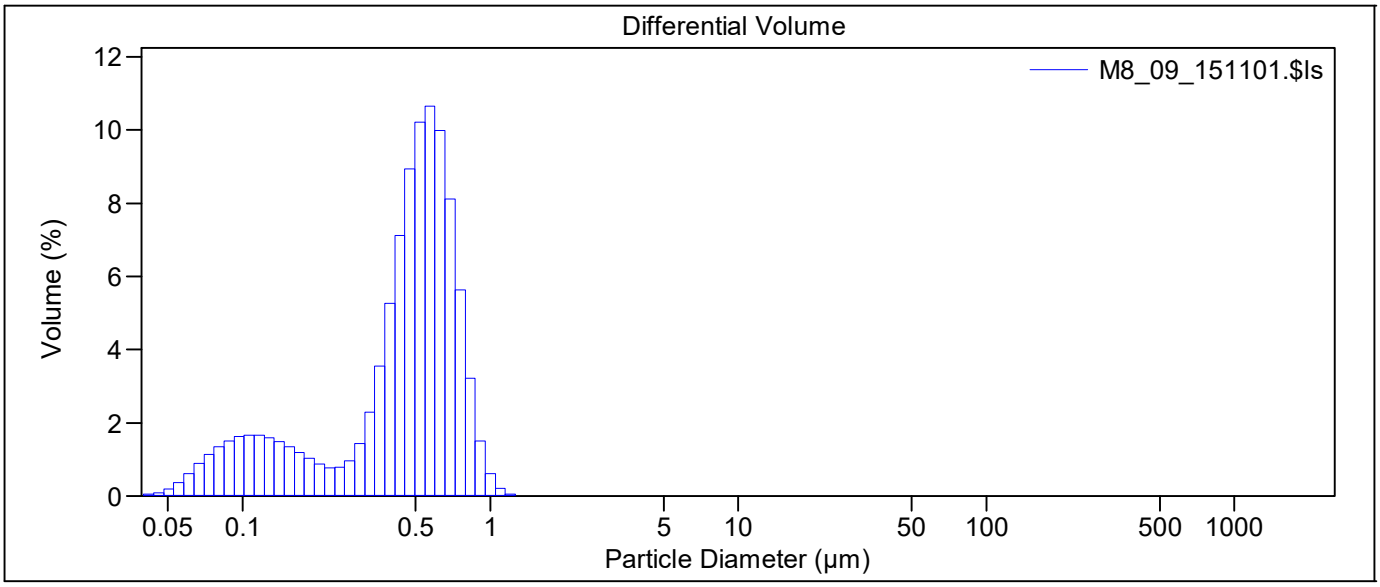
Number Statistics (Arithmetic) M8_09_151101.$ls

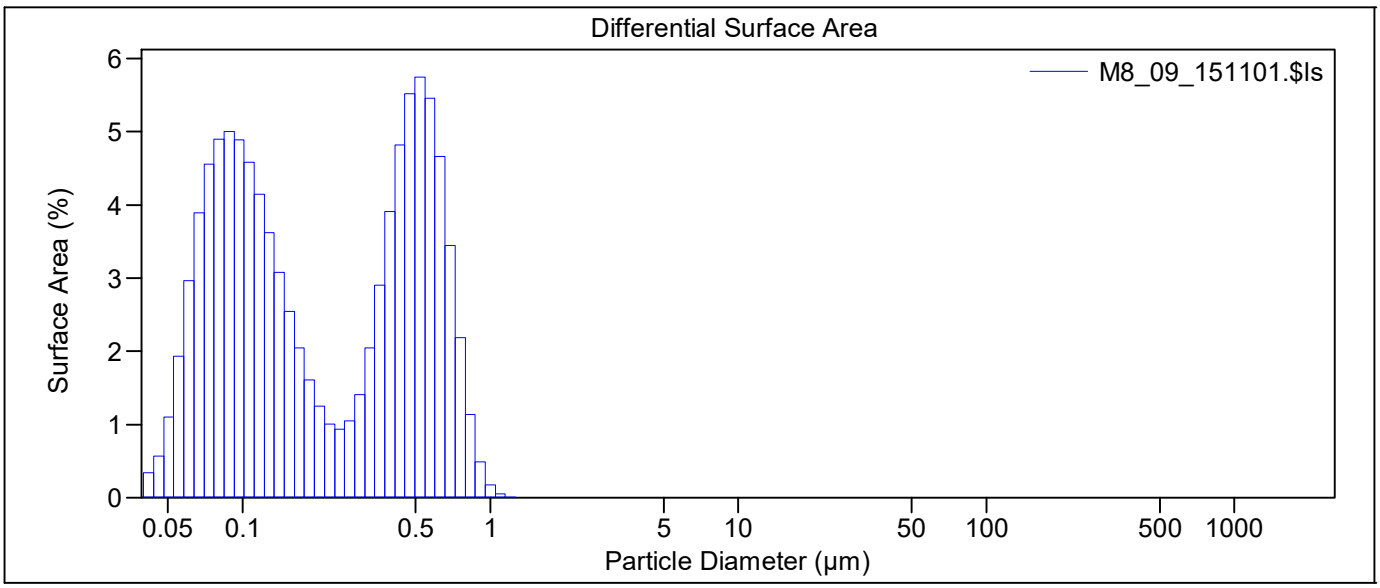
Calculations from 0.040 µm to 2000 µm

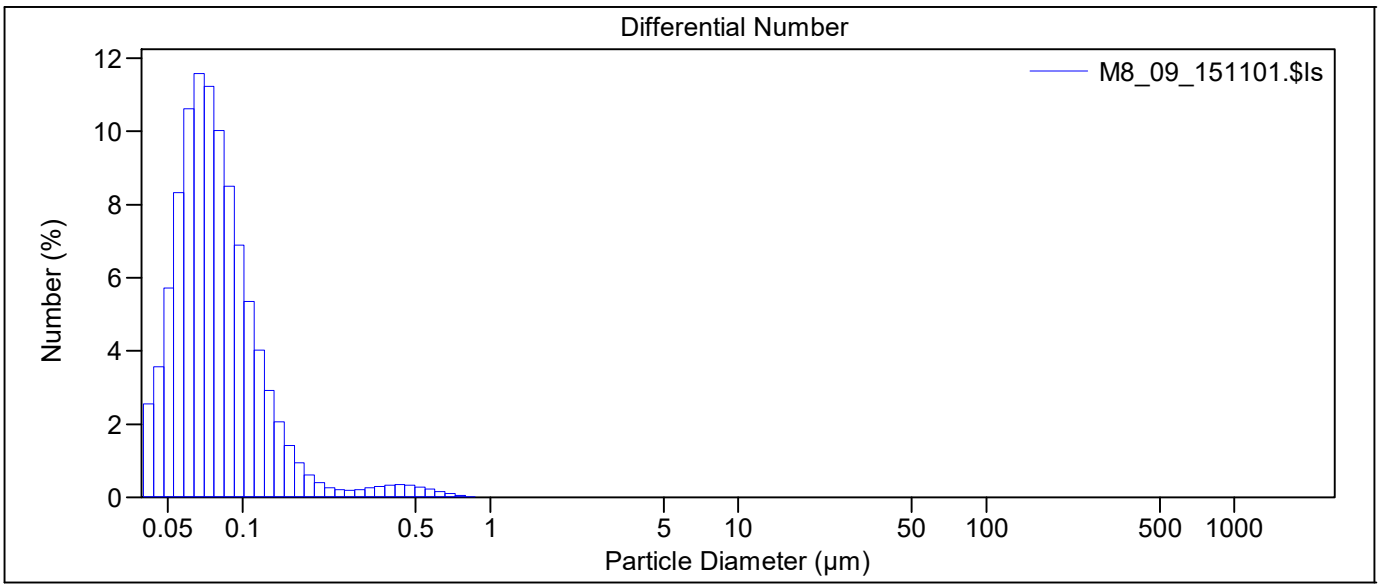
Number:	100%		
Mean:	0.091 µm	S.D.:	0.070 µm
Median:	0.075 µm	Variance:	0.0049 μm^2
Mean/Median ratio:	1.222	C.V.:	77.0%
Mode:	0.067 µm	Skewness:	5.097 Right skewed
		Kurtosis:	32.49 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.051 µm	0.061 µm	0.075 µm	0.096 µm	0.129 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.048	0.34	2.55
2	0.044	0.046	0.089	0.57	3.57
3	0.048	0.050	0.19	1.10	5.72
4	0.053	0.055	0.37	1.93	8.33
5	0.058	0.061	0.62	2.96	10.6
6	0.064	0.067	0.89	3.89	11.6
7	0.070	0.073	1.14	4.56	11.2
8	0.077	0.080	1.35	4.90	10.0
9	0.084	0.088	1.51	5.00	8.49
10	0.093	0.097	1.62	4.89	6.89
11	0.102	0.106	1.67	4.58	5.36
12	0.112	0.117	1.66	4.15	4.03
13	0.122	0.128	1.59	3.62	2.92
14	0.134	0.141	1.48	3.08	2.06
15	0.148	0.155	1.35	2.54	1.41
16	0.162	0.170	1.19	2.05	0.94
17	0.178	0.186	1.02	1.61	0.61
18	0.195	0.205	0.88	1.25	0.40
19	0.214	0.225	0.77	1.01	0.27
20	0.235	0.247	0.79	0.93	0.20
21	0.258	0.271	0.97	1.05	0.19
22	0.284	0.297	1.43	1.41	0.21
23	0.311	0.326	2.29	2.05	0.26
24	0.342	0.358	3.56	2.90	0.30
25	0.375	0.393	5.26	3.91	0.34
26	0.412	0.431	7.12	4.82	0.34
27	0.452	0.474	8.93	5.51	0.33
28	0.496	0.520	10.2	5.75	0.28
29	0.545	0.571	10.7	5.46	0.22
30	0.598	0.627	9.99	4.66	0.16
31	0.656	0.688	8.11	3.45	0.097
32	0.721	0.755	5.64	2.18	0.051
33	0.791	0.829	3.22	1.14	0.022
34	0.868	0.910	1.51	0.49	0.0078
35	0.953	0.999	0.61	0.18	0.0024
36	1.047	1.097	0.20	0.055	0.00060
37	1.149	1.204	0.048	0.012	0.00011
38	1.261	1.321	0.0078	0.0017	0.000013
39	1.385	1.451	0.00043	0.000087	0.000001
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_10_151947.$ls M8_10_151947.$ls		
File ID:	M8		
Operator:	KW		
Run number:	10		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.08%		
LS 13 320	Universal Liquid Module		
Start time:	15:18 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	6%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_10_151947.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.525 µm	S.D.:	0.112 µm
Median:	0.517 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.015	C.V.:	21.3%
Mode:	0.520 µm	Skewness:	0.341 Right skewed
		Kurtosis:	-0.321 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.384 µm	0.440 µm	0.517 µm	0.601 µm	0.680 µm

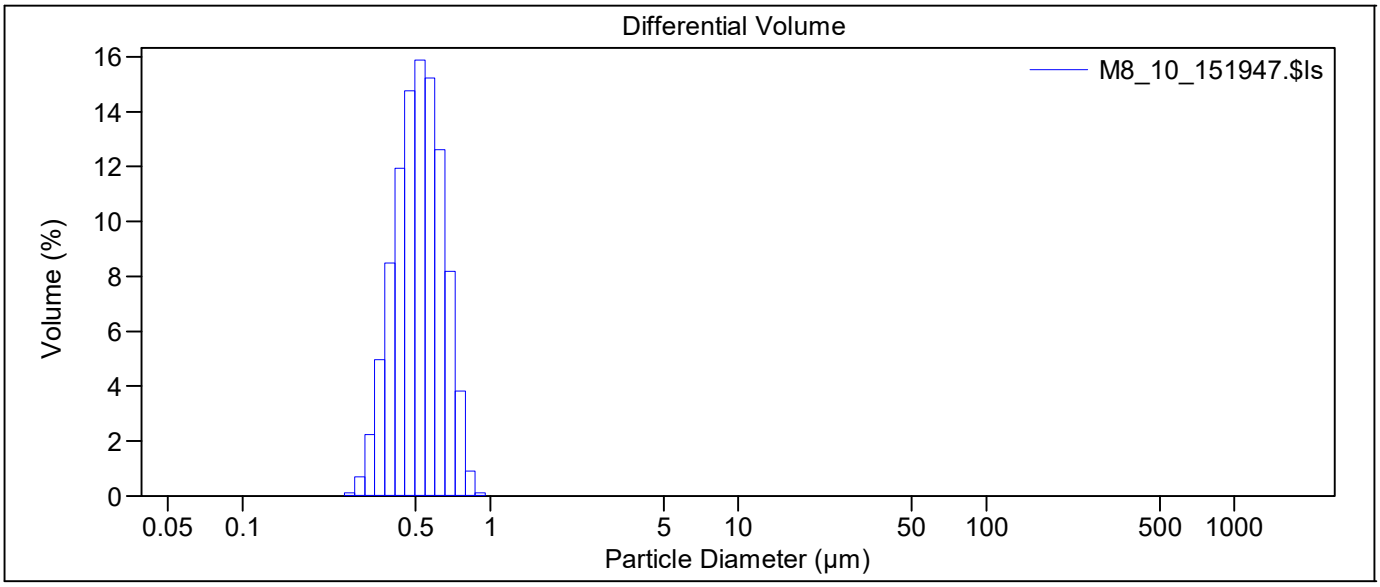
Number Statistics (Arithmetic) M8_10_151947.$ls

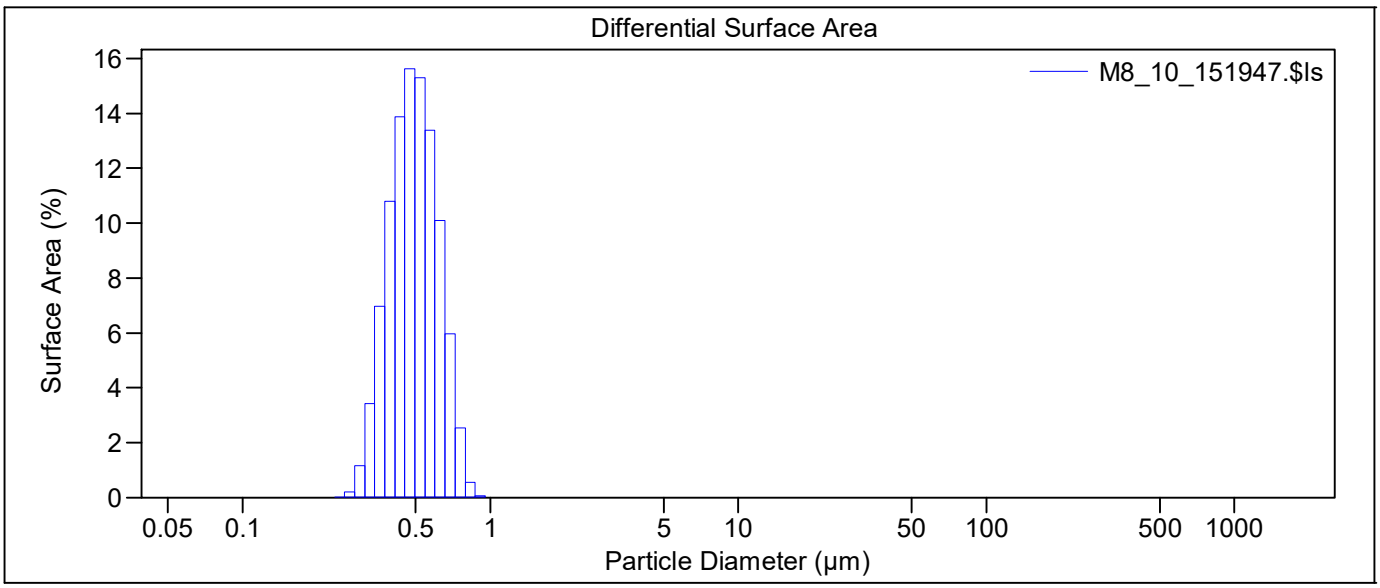
Calculations from 0.040 µm to 2000 µm

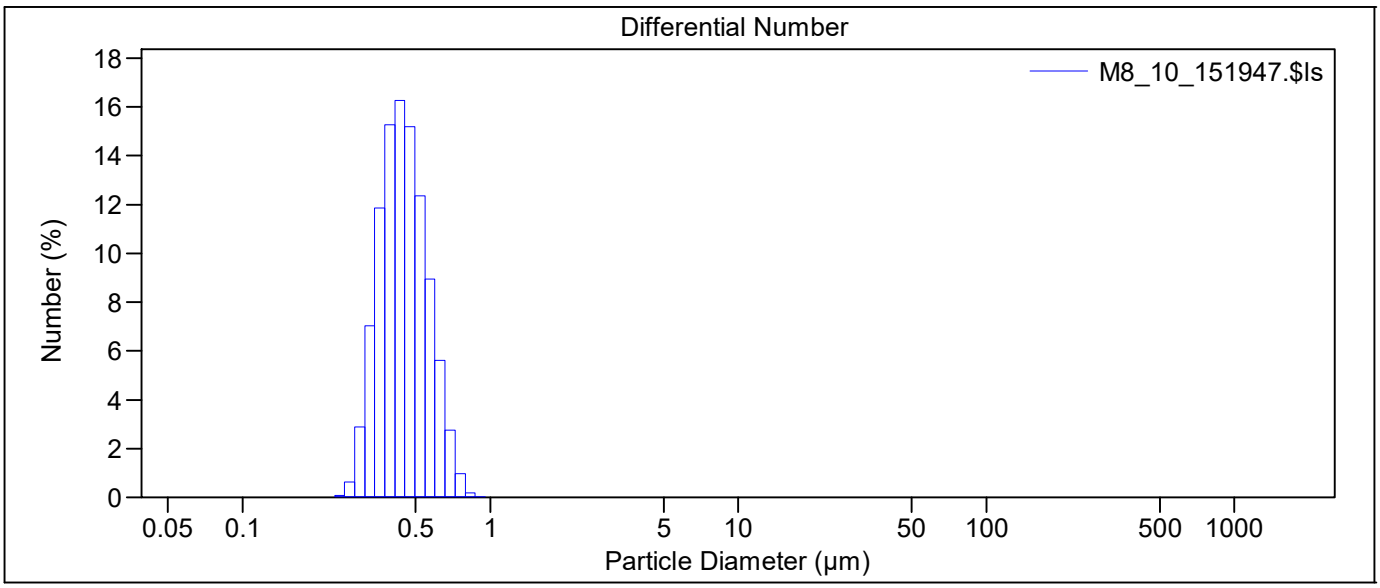
Number:	100%		
Mean:	0.456 µm	S.D.:	0.100 µm
Median:	0.442 µm	Variance:	0.0100 µm^2
Mean/Median ratio:	1.032	C.V.:	21.9%
Mode:	0.431 µm	Skewness:	0.682 Right skewed
		Kurtosis:	0.238 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.339 µm	0.381 µm	0.442 µm	0.519 µm	0.595 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0.000076	0.00017	0.00073
20	0.235	0.247	0.0093	0.019	0.068
21	0.258	0.271	0.12	0.22	0.64
22	0.284	0.297	0.69	1.16	2.88
23	0.311	0.326	2.23	3.43	7.03
24	0.342	0.358	4.98	6.96	11.8
25	0.375	0.393	8.48	10.8	15.3
26	0.412	0.431	11.9	13.9	16.3
27	0.452	0.474	14.8	15.6	15.2
28	0.496	0.520	15.9	15.3	12.4
29	0.545	0.571	15.2	13.4	8.96
30	0.598	0.627	12.6	10.1	5.60
31	0.656	0.688	8.19	5.96	2.75
32	0.721	0.755	3.83	2.54	0.97
33	0.791	0.829	0.91	0.55	0.18
34	0.868	0.910	0.11	0.061	0.016
35	0.953	0.999	0.0011	0.00053	0.00012
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0

Beckman Coulter LS13320

M8.$av

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

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_11_152135.$ls M8_11_152135.$ls		
File ID:	M8		
Operator:	KW		
Run number:	11		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.09%		
LS 13 320	Universal Liquid Module		
Start time:	15:19 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_11_152135.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.524 µm	S.D.:	0.111 µm
Median:	0.516 µm	Variance:	0.012 μm^2
Mean/Median ratio:	1.015	C.V.:	21.2%
Mode:	0.520 µm	Skewness:	0.351 Right skewed
		Kurtosis:	-0.308 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.384 µm	0.440 µm	0.516 µm	0.600 µm	0.679 µm

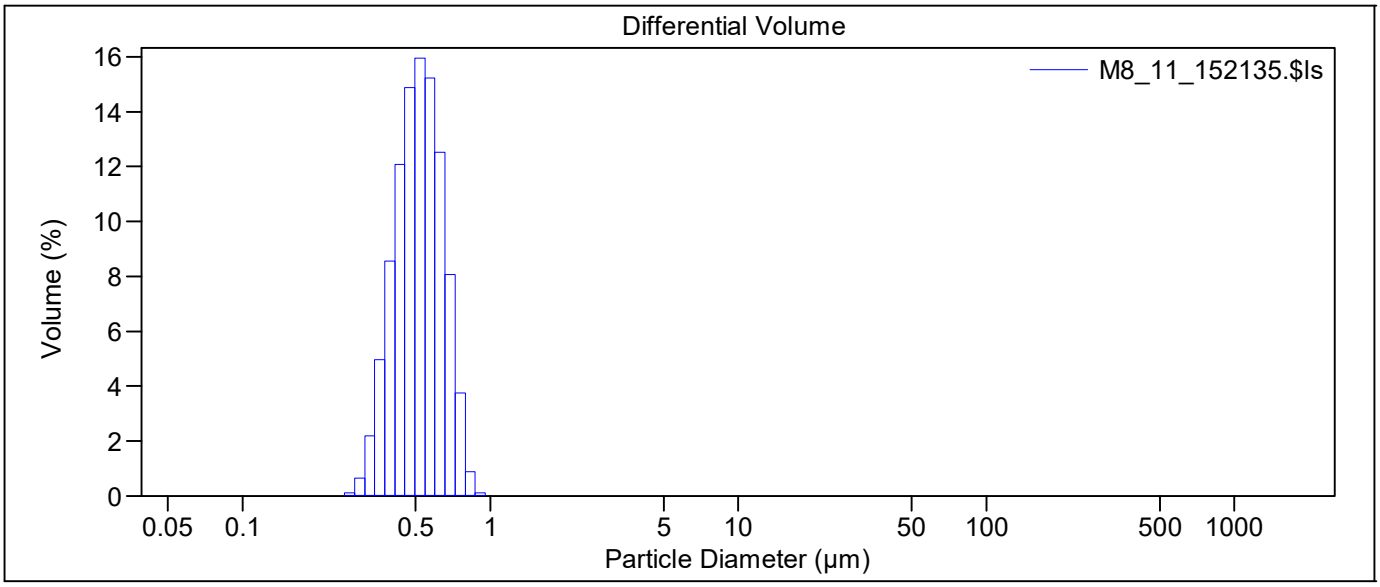
Number Statistics (Arithmetic) M8_11_152135.$ls

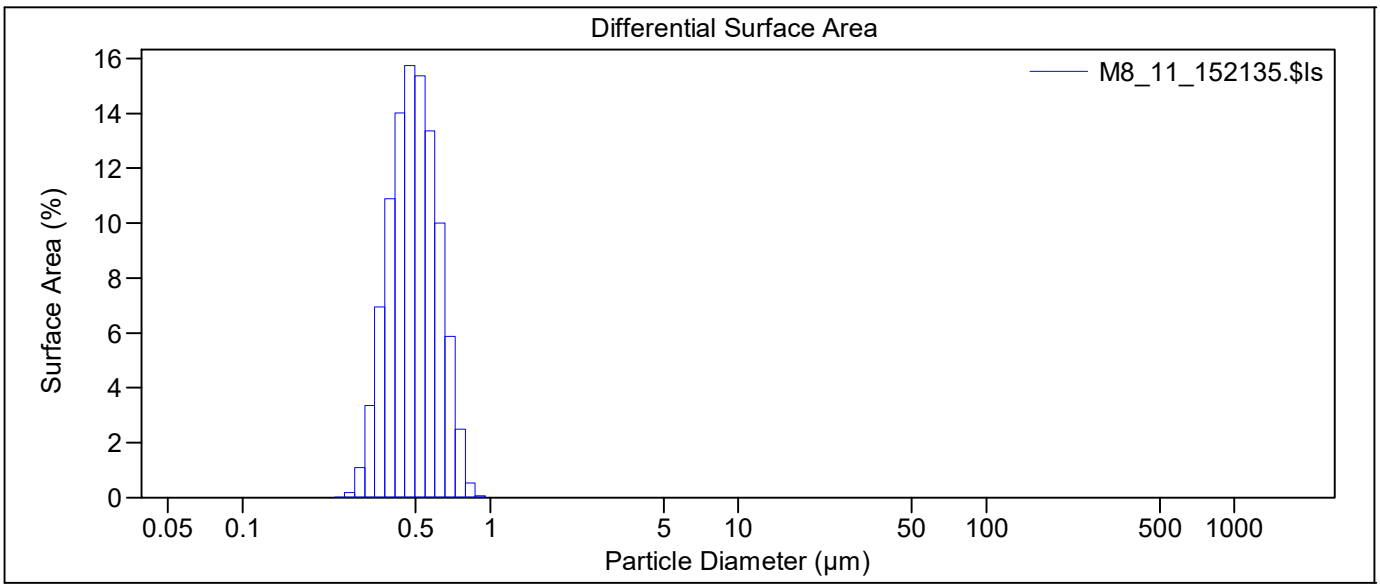
Calculations from 0.040 µm to 2000 µm

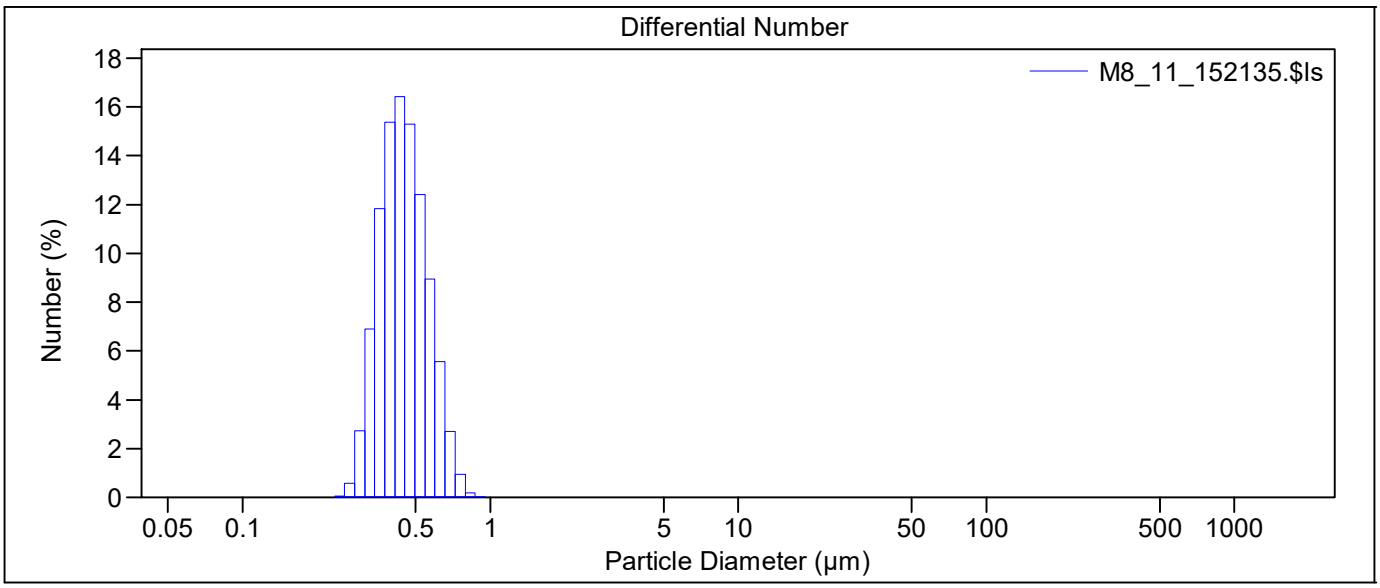
Number:	100%		
Mean:	0.456 µm	S.D.:	0.099 µm
Median:	0.442 µm	Variance:	0.0099 μm^2
Mean/Median ratio:	1.032	C.V.:	21.8%
Mode:	0.431 µm	Skewness:	0.688 Right skewed
		Kurtosis:	0.257 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.340 µm	0.382 µm	0.442 µm	0.519 µm	0.595 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0.000063	0.00014	0.00060
20	0.235	0.247	0.0080	0.016	0.058
21	0.258	0.271	0.11	0.20	0.59
22	0.284	0.297	0.66	1.11	2.73
23	0.311	0.326	2.19	3.37	6.91
24	0.342	0.358	4.97	6.96	11.8
25	0.375	0.393	8.55	10.9	15.4
26	0.412	0.431	12.1	14.0	16.4
27	0.452	0.474	14.9	15.7	15.3
28	0.496	0.520	16.0	15.4	12.4
29	0.545	0.571	15.2	13.4	8.95
30	0.598	0.627	12.5	10.0	5.56
31	0.656	0.688	8.08	5.88	2.71
32	0.721	0.755	3.76	2.49	0.95
33	0.791	0.829	0.89	0.54	0.17
34	0.868	0.910	0.11	0.059	0.016
35	0.953	0.999	0.0010	0.00052	0.00011
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

Beckman Coulter LS13320

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_12_152322.$ls M8_12_152322.$ls		
File ID:	M8		
Operator:	KW		
Run number:	12		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	2.13%		
LS 13 320	Universal Liquid Module		
Start time:	15:21 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	7%	PIDS Obscur:	51%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_12_152322.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.523 µm	S.D.:	0.111 µm
Median:	0.515 µm	Variance:	0.012 µm^2
Mean/Median ratio:	1.016	C.V.:	21.2%
Mode:	0.520 µm	Skewness:	0.358 Right skewed
		Kurtosis:	-0.300 Platykurtic

<10%	<25%	<50%	<75%	<90%
0.384 µm	0.439 µm	0.515 µm	0.598 µm	0.678 µm

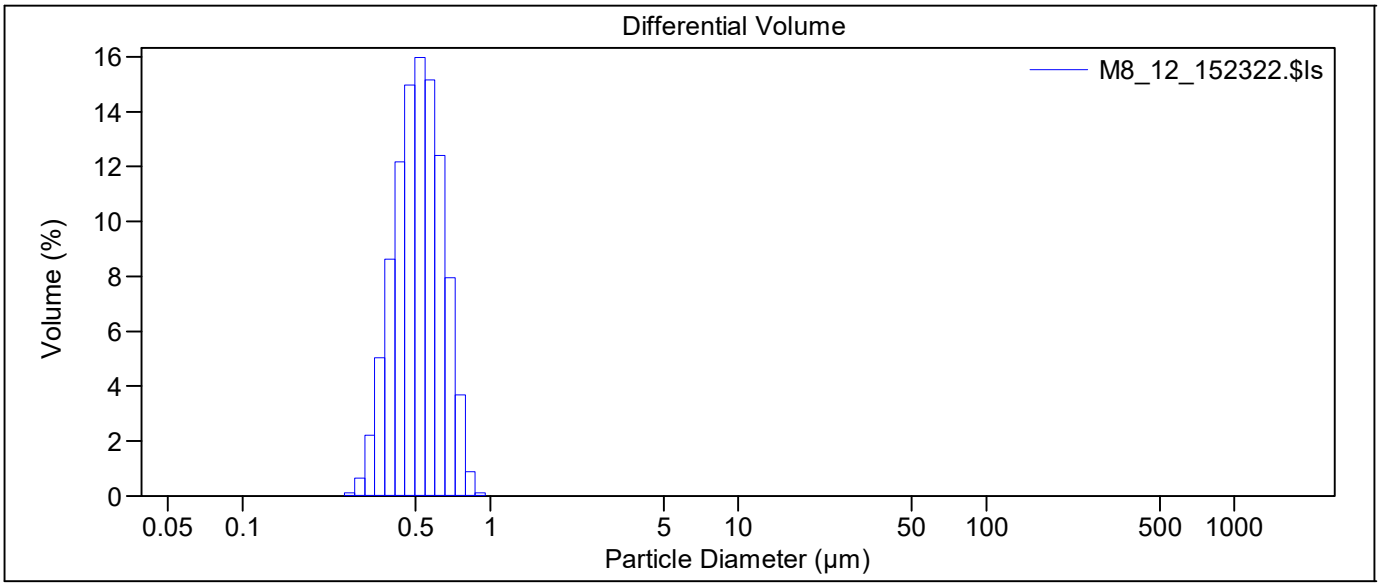
Number Statistics (Arithmetic) M8_12_152322.$ls

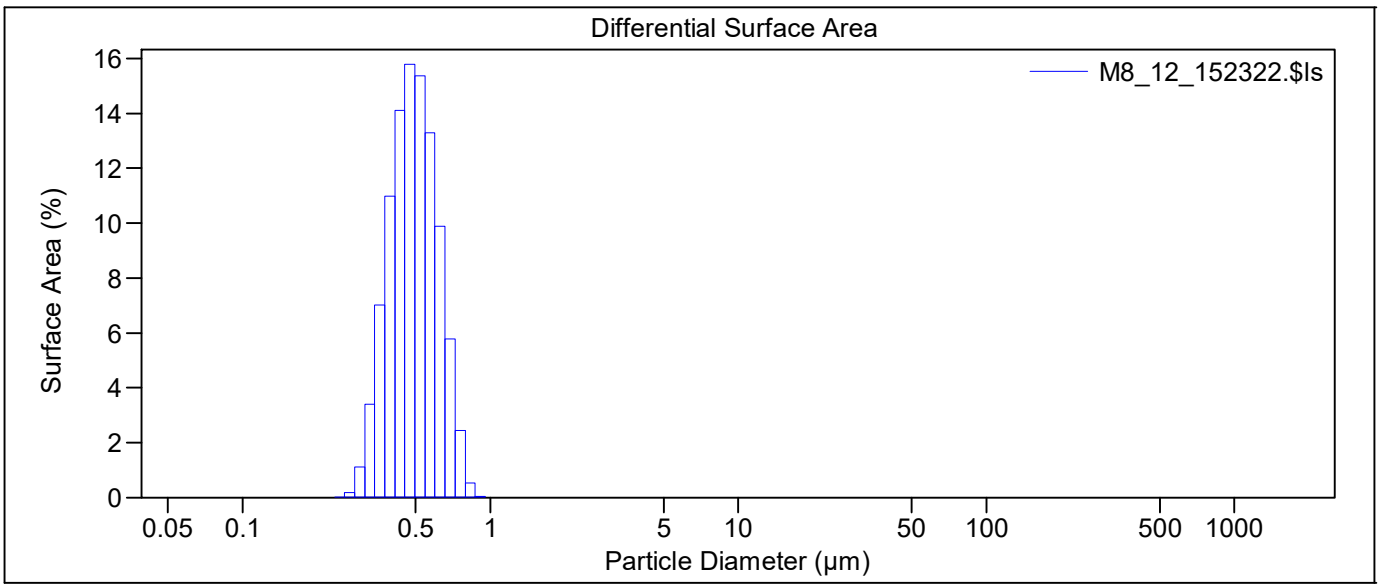
Calculations from 0.040 µm to 2000 µm

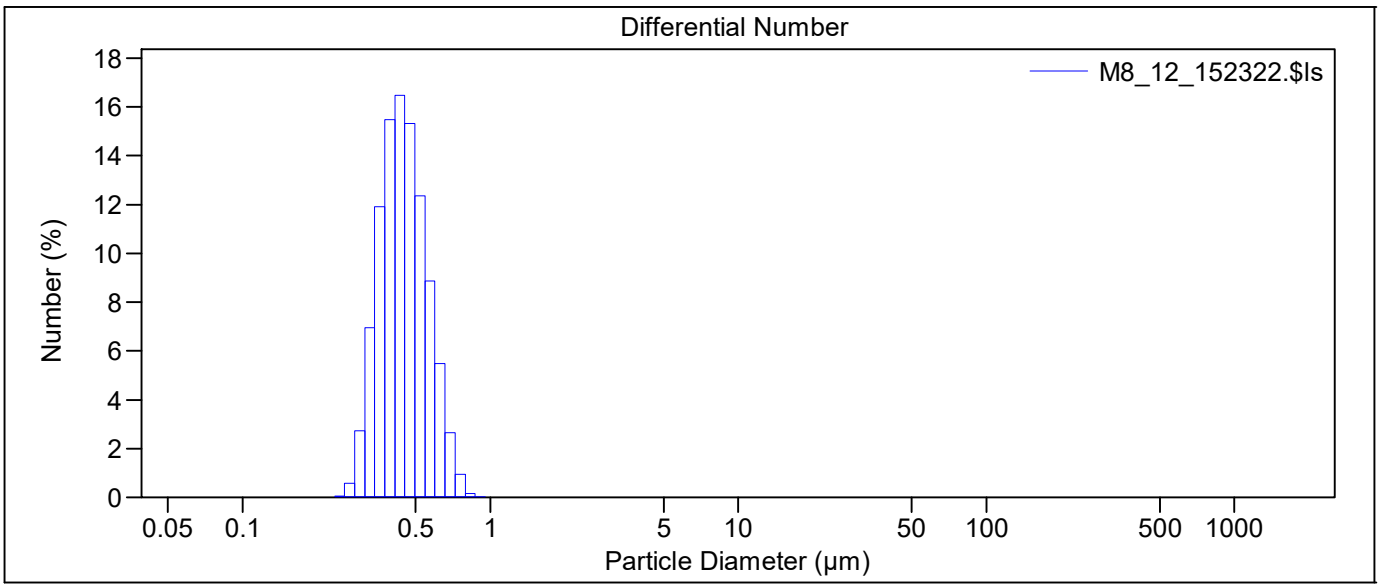
Number:	100%		
Mean:	0.456 µm	S.D.:	0.099 µm
Median:	0.442 µm	Variance:	0.0098 µm^2
Mean/Median ratio:	1.032	C.V.:	21.7%
Mode:	0.431 µm	Skewness:	0.693 Right skewed
		Kurtosis:	0.272 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.340 µm	0.382 µm	0.442 µm	0.518 µm	0.594 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0	0	0
2	0.044	0.046	0	0	0
3	0.048	0.050	0	0	0
4	0.053	0.055	0	0	0
5	0.058	0.061	0	0	0
6	0.064	0.067	0	0	0
7	0.070	0.073	0	0	0
8	0.077	0.080	0	0	0
9	0.084	0.088	0	0	0
10	0.093	0.097	0	0	0
11	0.102	0.106	0	0	0
12	0.112	0.117	0	0	0
13	0.122	0.128	0	0	0
14	0.134	0.141	0	0	0
15	0.148	0.155	0	0	0
16	0.162	0.170	0	0	0
17	0.178	0.186	0	0	0
18	0.195	0.205	0	0	0
19	0.214	0.225	0.000061	0.00014	0.00058
20	0.235	0.247	0.0078	0.016	0.057
21	0.258	0.271	0.11	0.20	0.58
22	0.284	0.297	0.66	1.11	2.73
23	0.311	0.326	2.22	3.40	6.95
24	0.342	0.358	5.03	7.02	11.9
25	0.375	0.393	8.64	11.0	15.5
26	0.412	0.431	12.2	14.1	16.5
27	0.452	0.474	15.0	15.8	15.3
28	0.496	0.520	16.0	15.4	12.4
29	0.545	0.571	15.2	13.3	8.87
30	0.598	0.627	12.4	9.90	5.48
31	0.656	0.688	7.96	5.79	2.66
32	0.721	0.755	3.69	2.44	0.93
33	0.791	0.829	0.87	0.53	0.17
34	0.868	0.910	0.11	0.058	0.015
35	0.953	0.999	0.0010	0.00051	0.00011
36	1.047	1.097	0	0	0
37	1.149	1.204	0	0	0
38	1.261	1.321	0	0	0
39	1.385	1.451	0	0	0
40	1.520	1.592	0	0	0
41	1.668	1.748	0	0	0
42	1.832	1.919	0	0	0
43	2.011	2.107	0	0	0
44	2.207	2.313	0	0	0
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_13_153432.$ls M8_13_153432.$ls		
File ID:	M8		
Operator:	KW		
Run number:	13		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.14%		
LS 13 320	Universal Liquid Module		
Start time:	15:32 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_13_153432.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.494 µm	S.D.:	0.349 µm
Median:	0.406 µm	Variance:	0.122 μm^2
Mean/Median ratio:	1.217	C.V.:	70.6%
Mode:	0.571 µm	Skewness:	1.020 Right skewed
		Kurtosis:	0.600 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.124 µm	0.212 µm	0.406 µm	0.699 µm	1.008 µm

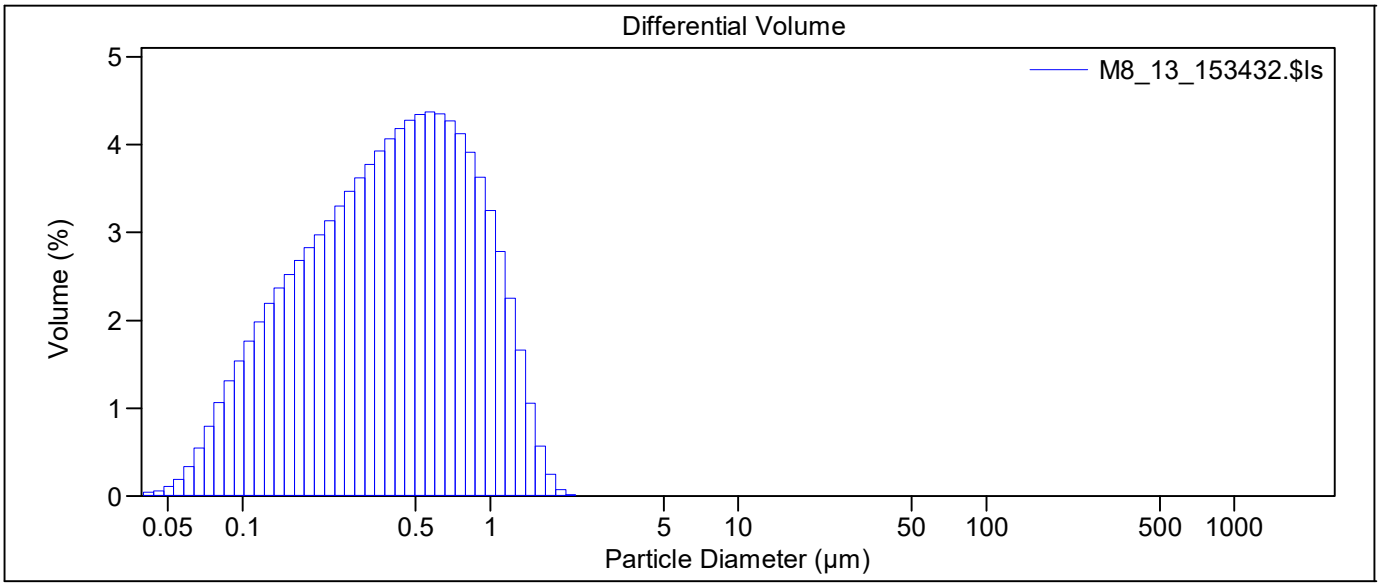
Number Statistics (Arithmetic) M8_13_153432.$ls

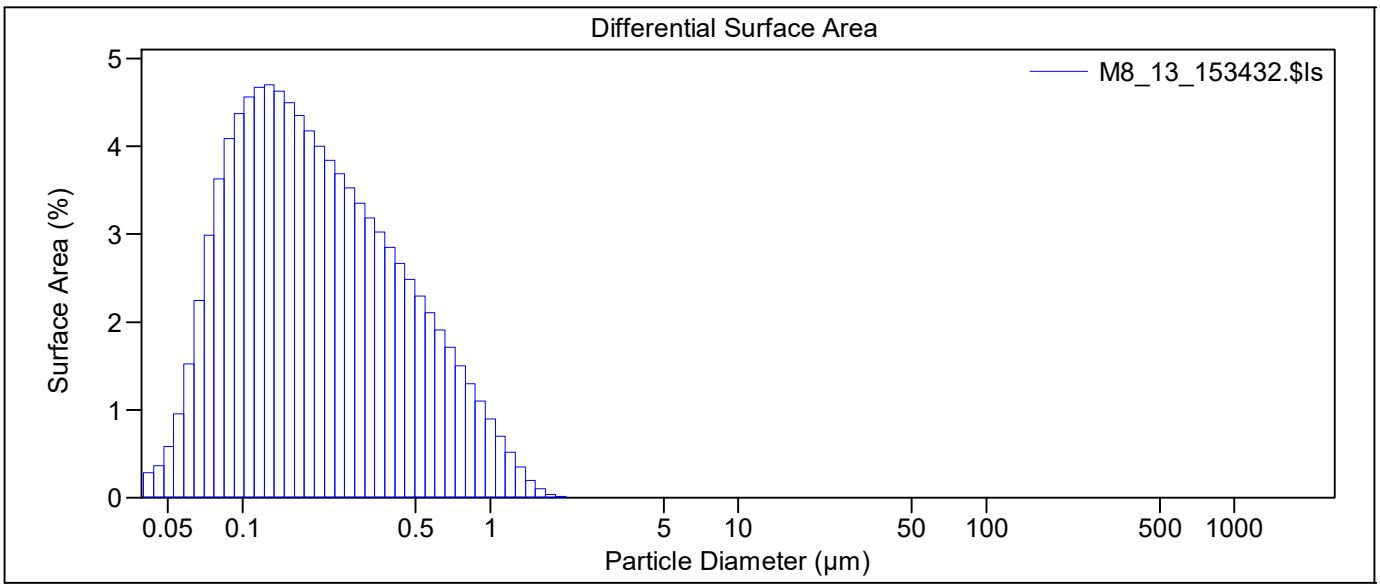
Calculations from 0.040 µm to 2000 µm

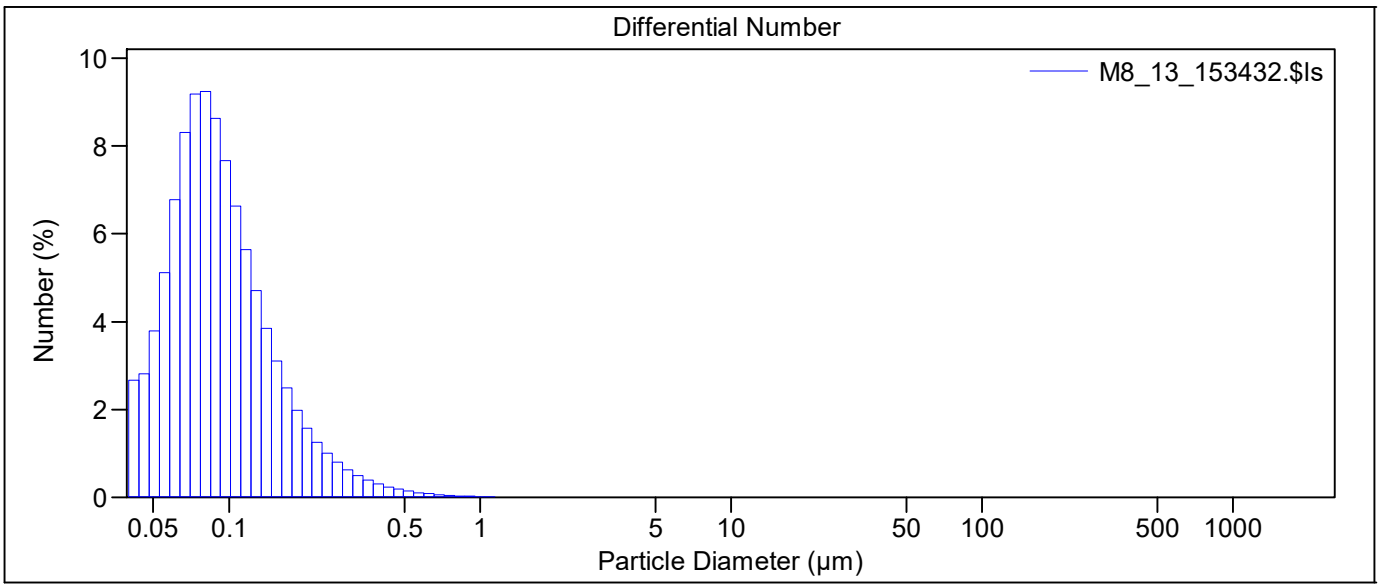
Number:	100%		
Mean:	0.106 µm	S.D.:	0.073 µm
Median:	0.086 µm	Variance:	0.0053 μm^2
Mean/Median ratio:	1.228	C.V.:	68.4%
Mode:	0.080 µm	Skewness:	4.394 Right skewed
		Kurtosis:	35.03 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.086 µm	0.120 µm	0.174 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.043	0.28	2.67
2	0.044	0.046	0.060	0.36	2.81
3	0.048	0.050	0.11	0.59	3.79
4	0.053	0.055	0.19	0.95	5.12
5	0.058	0.061	0.34	1.52	6.78
6	0.064	0.067	0.55	2.25	8.31
7	0.070	0.073	0.80	2.99	9.18
8	0.077	0.080	1.06	3.63	9.24
9	0.084	0.088	1.31	4.09	8.63
10	0.093	0.097	1.54	4.37	7.67
11	0.102	0.106	1.76	4.56	6.64
12	0.112	0.117	1.98	4.67	5.64
13	0.122	0.128	2.19	4.70	4.71
14	0.134	0.141	2.37	4.63	3.85
15	0.148	0.155	2.53	4.50	3.10
16	0.162	0.170	2.68	4.35	2.49
17	0.178	0.186	2.83	4.18	1.98
18	0.195	0.205	2.98	4.00	1.58
19	0.214	0.225	3.14	3.84	1.26
20	0.235	0.247	3.30	3.69	1.00
21	0.258	0.271	3.47	3.53	0.80
22	0.284	0.297	3.62	3.35	0.63
23	0.311	0.326	3.78	3.19	0.49
24	0.342	0.358	3.93	3.02	0.39
25	0.375	0.393	4.07	2.85	0.30
26	0.412	0.431	4.18	2.67	0.24
27	0.452	0.474	4.28	2.49	0.18
28	0.496	0.520	4.34	2.30	0.14
29	0.545	0.571	4.37	2.11	0.11
30	0.598	0.627	4.35	1.91	0.080
31	0.656	0.688	4.27	1.71	0.060
32	0.721	0.755	4.12	1.50	0.044
33	0.791	0.829	3.91	1.30	0.031
34	0.868	0.910	3.63	1.10	0.022
35	0.953	0.999	3.25	0.90	0.015
36	1.047	1.097	2.79	0.70	0.0096
37	1.149	1.204	2.25	0.52	0.0059
38	1.261	1.321	1.66	0.35	0.0033
39	1.385	1.451	1.05	0.20	0.0016
40	1.520	1.592	0.57	0.099	0.00064
41	1.668	1.748	0.25	0.039	0.00021
42	1.832	1.919	0.076	0.011	0.000049
43	2.011	2.107	0.016	0.0021	0.000008
44	2.207	2.313	0.0016	0.00019	0.000001
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_14_153619.$ls M8_14_153619.$ls		
File ID:	M8		
Operator:	KW		
Run number:	14		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.26%		
LS 13 320	Universal Liquid Module		
Start time:	15:34 0	Run length:	94 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_14_153619.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.493 µm	S.D.:	0.342 µm
Median:	0.410 µm	Variance:	0.117 μm^2
Mean/Median ratio:	1.202	C.V.:	69.3%
Mode:	0.571 µm	Skewness:	0.971 Right skewed
		Kurtosis:	0.470 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.125 µm	0.215 µm	0.410 µm	0.698 µm	0.995 µm

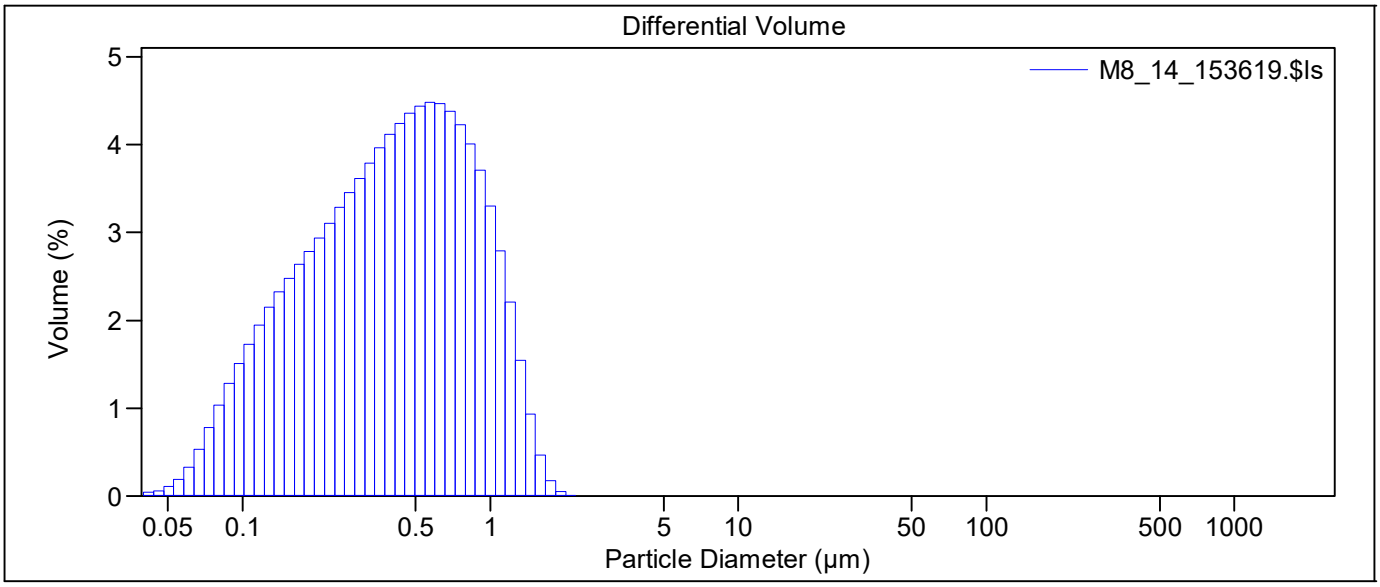
Number Statistics (Arithmetic) M8_14_153619.$ls

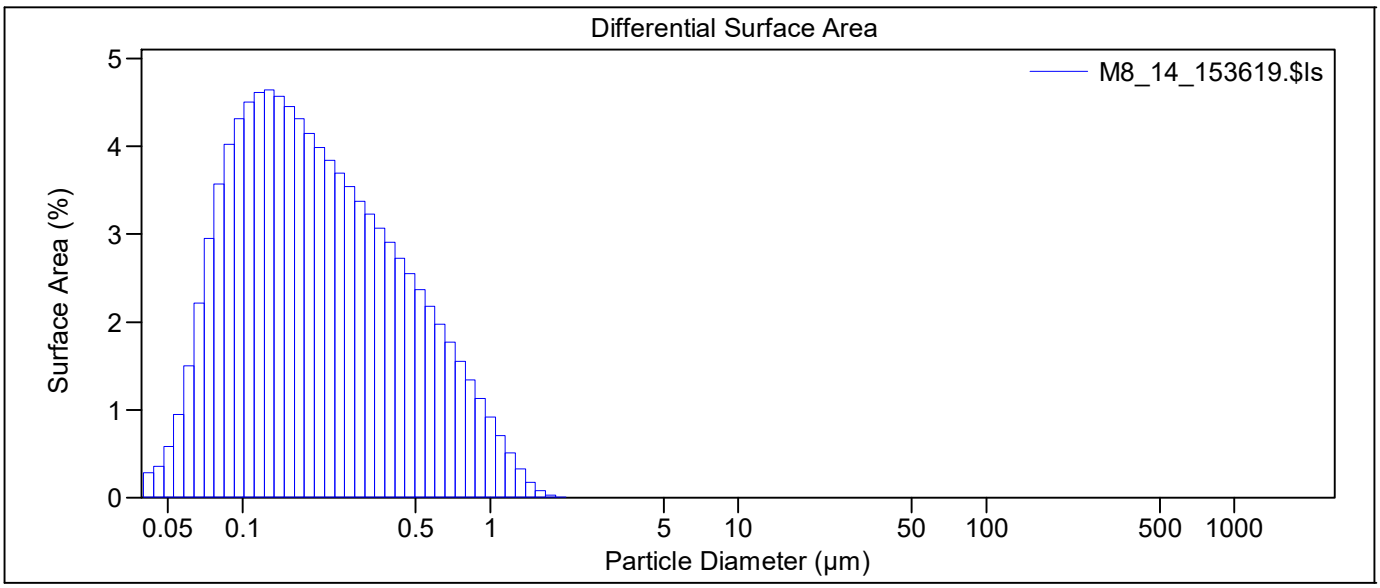
Calculations from 0.040 µm to 2000 µm

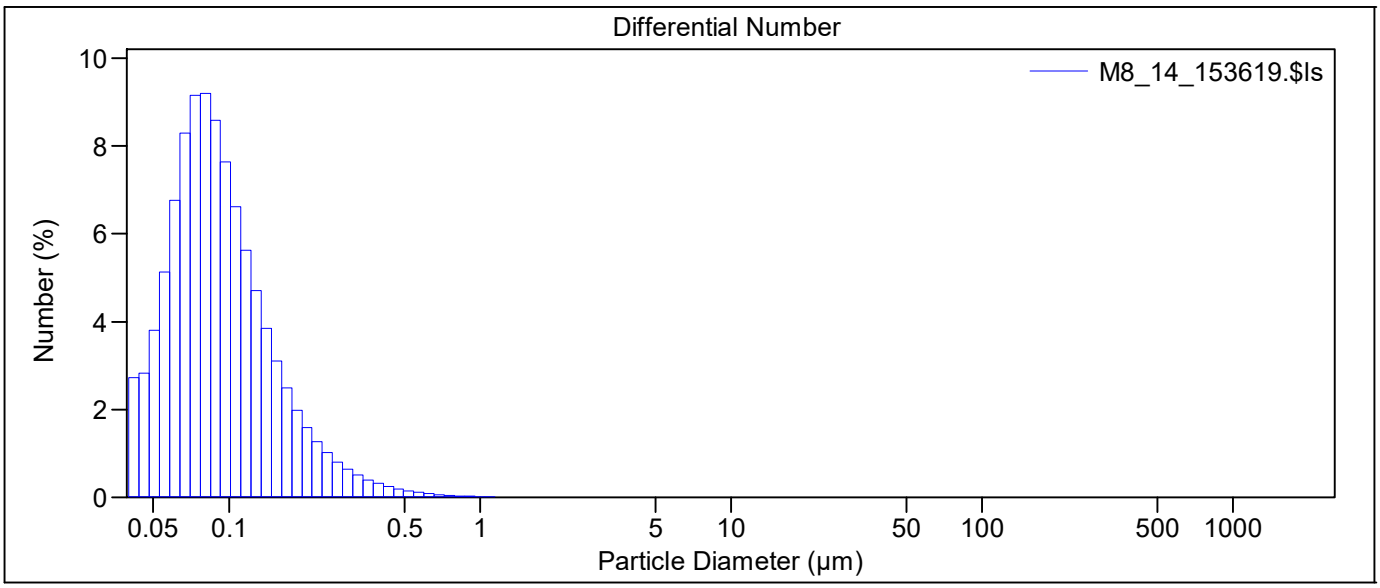
Number:	100%		
Mean:	0.106 µm	S.D.:	0.073 µm
Median:	0.086 µm	Variance:	0.0054 μm^2
Mean/Median ratio:	1.231	C.V.:	68.9%
Mode:	0.080 µm	Skewness:	4.348 Right skewed
		Kurtosis:	33.76 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.086 µm	0.120 µm	0.175 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.043	0.29	2.72
2	0.044	0.046	0.060	0.36	2.83
3	0.048	0.050	0.11	0.58	3.80
4	0.053	0.055	0.19	0.95	5.13
5	0.058	0.061	0.33	1.50	6.77
6	0.064	0.067	0.53	2.22	8.29
7	0.070	0.073	0.78	2.95	9.15
8	0.077	0.080	1.04	3.57	9.19
9	0.084	0.088	1.28	4.02	8.59
10	0.093	0.097	1.51	4.31	7.64
11	0.102	0.106	1.73	4.51	6.62
12	0.112	0.117	1.95	4.62	5.63
13	0.122	0.128	2.15	4.65	4.70
14	0.134	0.141	2.32	4.57	3.84
15	0.148	0.155	2.48	4.45	3.10
16	0.162	0.170	2.64	4.31	2.49
17	0.178	0.186	2.78	4.15	1.99
18	0.195	0.205	2.94	3.99	1.59
19	0.214	0.225	3.11	3.84	1.27
20	0.235	0.247	3.28	3.70	1.01
21	0.258	0.271	3.46	3.54	0.81
22	0.284	0.297	3.62	3.38	0.64
23	0.311	0.326	3.79	3.23	0.51
24	0.342	0.358	3.96	3.07	0.40
25	0.375	0.393	4.12	2.91	0.31
26	0.412	0.431	4.24	2.73	0.24
27	0.452	0.474	4.36	2.55	0.19
28	0.496	0.520	4.44	2.37	0.15
29	0.545	0.571	4.48	2.18	0.11
30	0.598	0.627	4.47	1.98	0.084
31	0.656	0.688	4.38	1.77	0.062
32	0.721	0.755	4.23	1.55	0.045
33	0.791	0.829	4.01	1.34	0.033
34	0.868	0.910	3.71	1.13	0.023
35	0.953	0.999	3.30	0.92	0.015
36	1.047	1.097	2.79	0.71	0.0098
37	1.149	1.204	2.21	0.51	0.0059
38	1.261	1.321	1.55	0.32	0.0031
39	1.385	1.451	0.93	0.18	0.0014
40	1.520	1.592	0.47	0.081	0.00053
41	1.668	1.748	0.18	0.028	0.00015
42	1.832	1.919	0.050	0.0072	0.000033
43	2.011	2.107	0.0087	0.0011	0.000004
44	2.207	2.313	0.00051	0.000062	1.93E-7
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				

Beckman Coulter LS13320

File name:	D:\KW\PROFARB\POMIARY\a11 TiO2\M8\M8_15_153807.$ls M8_15_153807.$ls		
File ID:	M8		
Operator:	KW		
Run number:	15		
Optical model:	TiO2_KW.rf780d PIDS included		
Fluid R.I.:	1.333	Sample R.I.:	2.8 i0
Residual:	1.18%		
LS 13 320	Universal Liquid Module		
Start time:	15:36 0	Run length:	95 seconds
Pump speed:	50%		
Obscuration:	5%	PIDS Obscur:	43%
Fluid:	water		
Software:	6.01	Firmware:	2.02

Volume Statistics (Arithmetic) M8_15_153807.$ls

Calculations from 0.040 µm to 2000 µm

Volume:	100%		
Mean:	0.494 µm	S.D.:	0.346 µm
Median:	0.407 µm	Variance:	0.120 μm^2
Mean/Median ratio:	1.212	C.V.:	70.2%
Mode:	0.571 µm	Skewness:	1.004 Right skewed
		Kurtosis:	0.557 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.124 µm	0.213 µm	0.407 µm	0.698 µm	1.003 µm

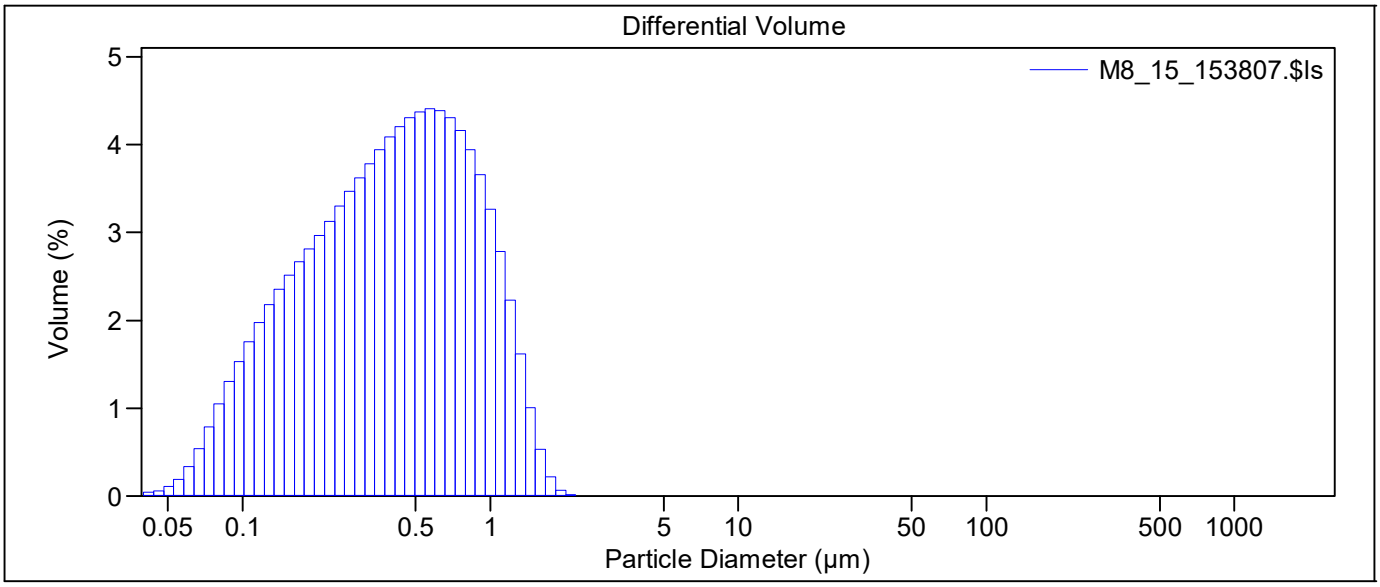
Number Statistics (Arithmetic) M8_15_153807.$ls

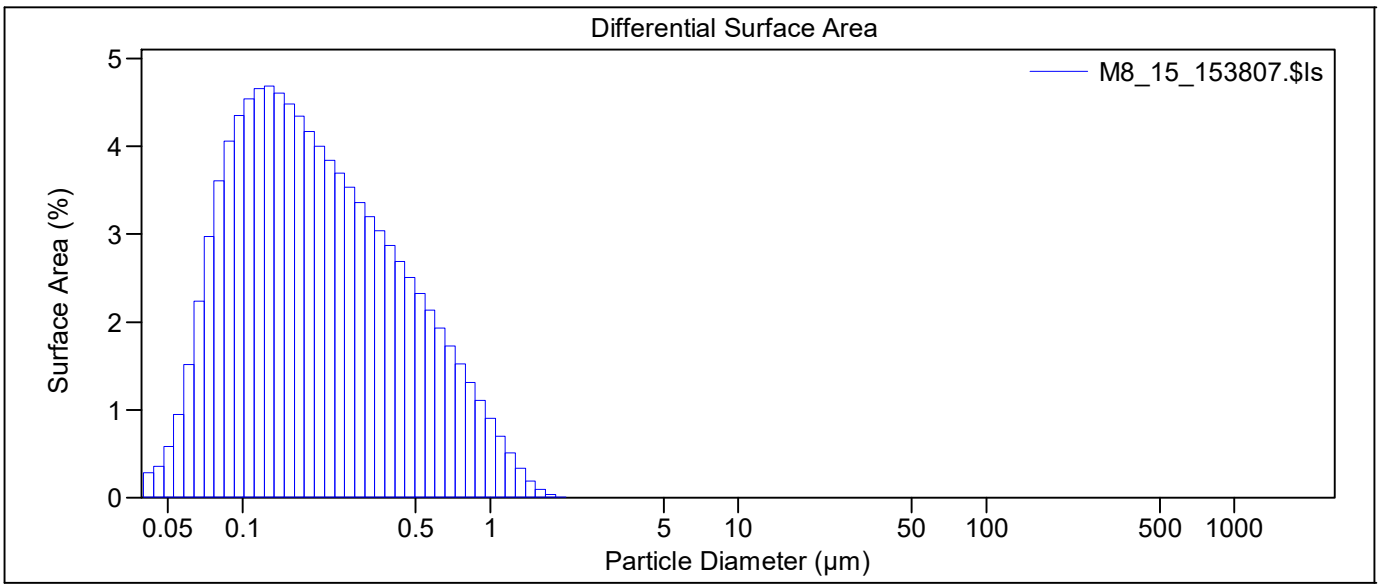
Calculations from 0.040 µm to 2000 µm

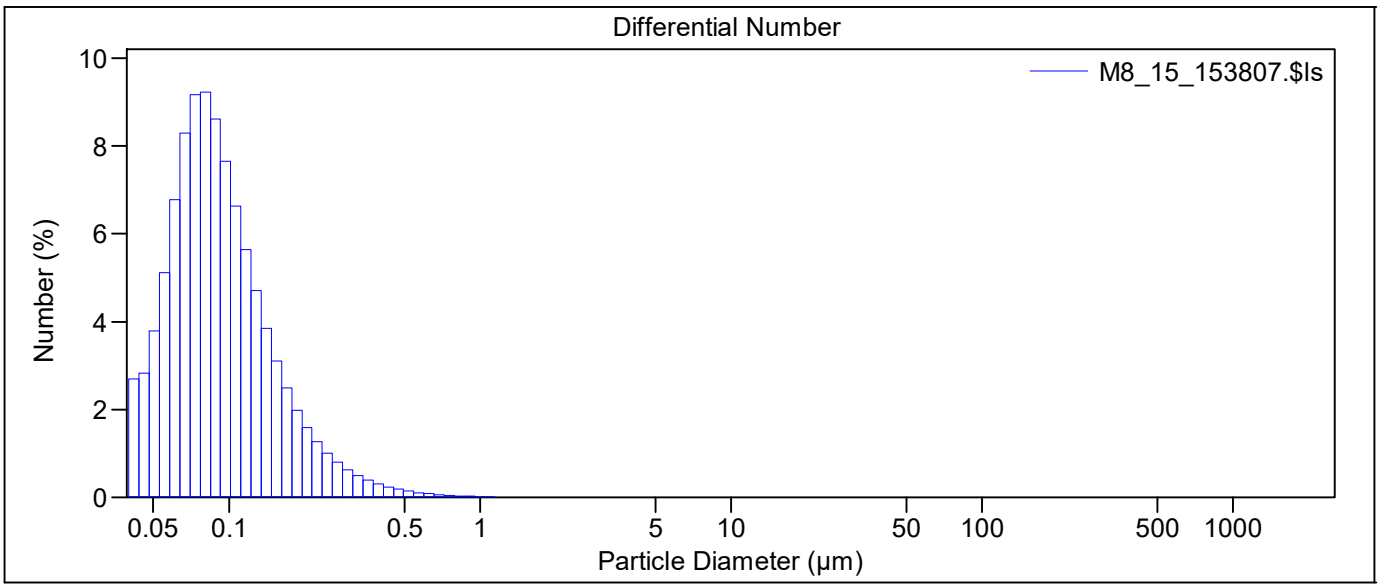
Number:	100%		
Mean:	0.106 µm	S.D.:	0.073 µm
Median:	0.086 µm	Variance:	0.0053 μm^2
Mean/Median ratio:	1.229	C.V.:	68.6%
Mode:	0.080 µm	Skewness:	4.375 Right skewed
		Kurtosis:	34.53 Leptokurtic

<10%	<25%	<50%	<75%	<90%
0.054 µm	0.067 µm	0.086 µm	0.120 µm	0.174 µm

Beckman Coulter LS13320







M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
1	0.040	0.042	0.043	0.29	2.69
2	0.044	0.046	0.060	0.36	2.82
3	0.048	0.050	0.11	0.58	3.79
4	0.053	0.055	0.19	0.95	5.12
5	0.058	0.061	0.33	1.51	6.77
6	0.064	0.067	0.54	2.24	8.30
7	0.070	0.073	0.79	2.98	9.17
8	0.077	0.080	1.05	3.61	9.22
9	0.084	0.088	1.30	4.06	8.62
10	0.093	0.097	1.53	4.35	7.66
11	0.102	0.106	1.75	4.54	6.63
12	0.112	0.117	1.97	4.65	5.64
13	0.122	0.128	2.18	4.68	4.71
14	0.134	0.141	2.35	4.61	3.85
15	0.148	0.155	2.51	4.48	3.10
16	0.162	0.170	2.67	4.34	2.49
17	0.178	0.186	2.82	4.17	1.99
18	0.195	0.205	2.97	4.00	1.58
19	0.214	0.225	3.13	3.84	1.26
20	0.235	0.247	3.30	3.69	1.01
21	0.258	0.271	3.47	3.54	0.80
22	0.284	0.297	3.62	3.36	0.63
23	0.311	0.326	3.78	3.20	0.50
24	0.342	0.358	3.94	3.04	0.39
25	0.375	0.393	4.09	2.87	0.31
26	0.412	0.431	4.20	2.69	0.24
27	0.452	0.474	4.31	2.51	0.19
28	0.496	0.520	4.38	2.32	0.14
29	0.545	0.571	4.41	2.13	0.11
30	0.598	0.627	4.39	1.93	0.082
31	0.656	0.688	4.31	1.73	0.061
32	0.721	0.755	4.16	1.52	0.044
33	0.791	0.829	3.95	1.31	0.032
34	0.868	0.910	3.66	1.11	0.022
35	0.953	0.999	3.27	0.90	0.015
36	1.047	1.097	2.79	0.70	0.0097
37	1.149	1.204	2.23	0.51	0.0058
38	1.261	1.321	1.62	0.34	0.0032
39	1.385	1.451	1.01	0.19	0.0015
40	1.520	1.592	0.53	0.092	0.00060
41	1.668	1.748	0.22	0.035	0.00019
42	1.832	1.919	0.066	0.0095	0.000043
43	2.011	2.107	0.013	0.0017	0.000007
44	2.207	2.313	0.0012	0.00014	4.28E-7
45	2.423	2.539	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
46	2.660	2.787	0	0	0
47	2.920	3.059	0	0	0
48	3.205	3.358	0	0	0
49	3.519	3.687	0	0	0
50	3.863	4.047	0	0	0
51	4.240	4.443	0	0	0
52	4.655	4.877	0	0	0
53	5.110	5.354	0	0	0
54	5.610	5.878	0	0	0
55	6.158	6.452	0	0	0
56	6.760	7.083	0	0	0
57	7.421	7.775	0	0	0
58	8.147	8.536	0	0	0
59	8.943	9.370	0	0	0
60	9.817	10.29	0	0	0
61	10.78	11.29	0	0	0
62	11.83	12.40	0	0	0
63	12.99	13.61	0	0	0
64	14.26	14.94	0	0	0
65	15.65	16.40	0	0	0
66	17.18	18.00	0	0	0
67	18.86	19.76	0	0	0
68	20.70	21.69	0	0	0
69	22.73	23.81	0	0	0
70	24.95	26.14	0	0	0
71	27.39	28.70	0	0	0
72	30.07	31.50	0	0	0
73	33.01	34.58	0	0	0
74	36.24	37.97	0	0	0
75	39.78	41.68	0	0	0
76	43.67	45.75	0	0	0
77	47.94	50.22	0	0	0
78	52.62	55.13	0	0	0
79	57.77	60.52	0	0	0
80	63.41	66.44	0	0	0
81	69.61	72.94	0	0	0
82	76.42	80.07	0	0	0
83	83.89	87.90	0	0	0
84	92.09	96.49	0	0	0
85	101.1	105.9	0	0	0
86	111.0	116.3	0	0	0
87	121.8	127.6	0	0	0
88	133.7	140.1	0	0	0
89	146.8	153.8	0	0	0
90	161.2	168.9	0	0	0

M8.$av

Channel Number	Channel Diameter (Lower) µm	Channel Diameter (Center) µm	Diff. Volume %	Diff. Surface Area %	Diff. Number %
91	176.9	185.4	0	0	0
92	194.2	203.5	0	0	0
93	213.2	223.4	0	0	0
94	234.1	245.2	0	0	0
95	256.9	269.2	0	0	0
96	282.1	295.5	0	0	0
97	309.6	324.4	0	0	0
98	339.9	356.1	0	0	0
99	373.1	390.9	0	0	0
100	409.6	429.2	0	0	0
101	449.7	471.1	0	0	0
102	493.6	517.2	0	0	0
103	541.9	567.7	0	0	0
104	594.9	623.3	0	0	0
105	653.0	684.2	0	0	0
106	716.8	751.1	0	0	0
107	786.9	824.5	0	0	0
108	863.9	905.1	0	0	0
109	948.3	993.6	0	0	0
110	1041	1091	0	0	0
111	1143	1197	0	0	0
112	1255	1314	0	0	0
113	1377	1443	0	0	0
114	1512	1584	0	0	0
115	1660	1739	0	0	0
116	1822	1909	0	0	0
	2000				