

Appendix 1: Subtidal sediment and catchpit sampling locations

Table A1.1: Site position and collection details for the Wellington Harbour subtidal sediment quality survey carried out over October to December 2011 (sites sampled in 2006 only are also listed)

Site	Location	Sample date	Position (NZTM coordinates)		Depth (m)
WH1	Southern Evans Bay	12/11/2011	1751530	5425348	19
WH1B		14/11/2011	1751492	5425333	
WH2	Northern Evans Bay	12/11/2011	1751710	5427288	19
WH2B		12/11/2011	1751744	5427271	
WH3	Lambton Basin entrance	14/11/2011	1750056	5428340	18
WH3B		05/12/2011	1750055	5428303	
WH4	~ 0.7 km NW of Point Jerningham	14/11/2011	1750763	5428789	20
WH4B		05/12/2011	1750775	5428760	
WH5	~ 1.2 km NNE of Point Jerningham	14/11/2011	1751748	5429138	21
WH5B		14/11/2011	1751743	5429104	
WH6	≈ 1.25 km NW of Point Halswell	Sampled in 2006 only	1752665	5429581	22
WH6B		Sampled in 2006 only	1752646	5429560	
WH7	≈ 1.5 km N of Point Halswell	Sampled in 2006 only	1753581	5429932	22
WH7B		Sampled in 2006 only	1753604	5429907	
WH8	≈ 1.5 km SW of Matiu/Somes Island	Sampled in 2006 only	1754566	5430282	23
WH8B		Sampled in 2006 only	1754571	5430310	
WH9	~ 1.5 km SSE of Ngauranga Stream mouth	30/11/2011	1751921	5430708	20
WH9B		30/11/2011	1751975	5430747	
WH10	~ 0.5 km SSE of Ngauranga Stream mouth	30/11/2011	1752012	5431724	20
WH10B		30/11/2011	1752008	5431740	
WH11	≈ 0.5 km E of Ngauranga Stream mouth	Sampled in 2006 only	1752508	5432084	20
WH11B		Sampled in 2006 only	1752541	5432099	
WH12	≈ 1.5km E of Ngauranga Stream mouth	Sampled in 2006 only	1753480	5431786	21
WH12B		Sampled in 2006 only	1753516	5431804	
WH13	~ 1.25 km S of Petone Wharf	12/11/2011	1756023	5433121	16
WH13B		28/10/2011	1756061	5433126	
WH14	≈ 0.65 km S of Petone Wharf	Sampled in 2006 only	1756382	5433576	12
WH14B		Sampled in 2006 only	1756422	5433553	
WH15	~ 1.1 km SW of Seaview (Hutt River mouth)	28/10/2011	1758160	5431778	16
WH15B		28/10/2011	1758176	5431750	
WH16	≈ 2.1 km SW of Seaview (Hutt River mouth)	Sampled in 2006 only	1757243	5431336	19
WH16B		Sampled in 2006 only	1757129	5431335	
WH17	~ 1.6 km NNW of Makaro/Ward Island	28/10/2011	1756770	5428847	21
WH17B		28/10/2011	1756793	5428858	
WH18	~1.75 km WSW of Seaview (Hutt River mouth)	12/11/2011	1757450	5432426	16
WH18B		28/10/2011	1757460	5432435	
EB	SW Evans Bay ~250 m from shore (Cobham Drive)	12/11/2011	1750921	5424829	7
EB B		12/11/2011	1750920	5424860	
LB1	Lambton Harbour ~ 250 m from shore (FK Park)	30/11/2011	1749263	5427887	10
LB1B		30/11/2011	1749262	5427872	
LB2	Lambton Harbour ~ 500 m from shore (FK Park)	30/11/2011	1749576	5427939	14
LB2 B		14/11/2011	1749541	5427940	
AQ1	~ 0.5 km ENE of Aotea Quay east	05/12/2011	1750317	5429346	20
AQ1 B		05/12/2011	1750331	5429374	
AQ2	~ 0.5 km ENE of Aotea Quay west	05/12/2011	1750125	5430214	16
AQ2 B		05/12/2011	1750133	5430254	

Table A1.2: Catchments and location of the Wellington city catchpits sampled on 23 September 2011

Catchment	Location (NZTM)	
	Northing	Easting
Thorndon	5429342.68	1749358.23
Waring-Taylor St	5429274.71	1748886.66
Newtown	5427400.92	1749358.23
Hataitai	5425098.54	1750148.81
Miramar	5424793.40	1751743.83

Appendix 2: Sediment particle size results

Table A2.1: Summary of particle size results for five replicates from each of 16 sediment quality collection areas in Wellington Harbour, 2011

NIWA code	GWRC code	Mean (μm)	Standard deviation (μm)	Maximum (μm)	10–62.5 μm % mud
OA154/1	WH 1/6	91.03	55.14	226.29	37.06
OA154/2	WH 1/7	88.64	47.36	182.77	36.32
OA154/3	WH 1/8	99.56	63.06	251.49	33.24
OA154/4	WH 1/9	100.75	58.8	219.78	32.26
OA154/5	WH 1/10	86.39	45.23	164.78	35.64
OA154/6	WH 2/6	54.25	31.97	135.59	63.45
OA154/7	WH 2/7	62.82	40.12	157.46	59.49
OA154/8	WH 2/8	48.91	27.53	113.72	70.08
OA154/9	WH 2/9	67.5	44.35	187.12	56.75
OA154/10	WH 2/10	49.89	27.25	125.81	71.03
OA154/11	WH 3/6	54.26	33.76	129.89	65.74
OA154/12	WH 3/7	51.21	30.11	120.15	70.31
OA154/13	WH 3/8	53.39	33.21	134.9	65.77
OA154/14	WH 3/9	50.88	31.04	143.61	69.94
OA154/15	WH 3/10	54.23	33.86	133.82	66.36
OA154/16	WH 4/6	57.22	42.44	162.1	67.56
OA154/17	WH 4/7	63.01	42.51	139.26	59.34
OA154/18	WH 4/8	65.14	46.43	175.16	60.25
OA154/19	WH 4/9	53.68	38.36	159.93	67.92
OA154/20	WH 4/10	50.05	34.55	140.7	71.69
OA154/21	WH 5/6	47.5	27.79	120.76	74.41
OA154/22	WH 5/7	43.54	24.53	116.41	79.78
OA154/23	WH 5/8	45.88	27.92	141.43	78.41
OA154/24	WH 5/9	42.7	24.24	124.65	81.1
OA154/25	WH 5/10	47.05	28.18	126.2	75.65
OA154/26	EB 1/1	166.94	56.48	311.15	1.91
OA154/27	EB 1/2	165.71	58.29	298.5	1.9
OA154/28	EB 1/3	162.87	55.78	329.1	1.97
OA154/29	EB 1/4	171.78	58.61	323.57	1.57
OA154/30	EB 1/5	169.52	61.48	360.84	1.79
OA154/31	LB 1/1	139.3	74.04	295.33	19.89
OA154/32	LB 1/2	160.25	82.82	342.7	14.27
OA154/33	LB 1/3	133.04	62.6	239.47	18.48
OA154/34	LB 1/4	159.63	81.64	346.62	13.56
OA154/35	LB 1/5	141.59	70.71	286.34	17.9

Table A2.1 *continued*: Summary of particle size results for five replicates from each of 16 sediment quality collection areas in Wellington Harbour, 2011

NIWA code	GWRC code	Mean (μm)	Standard deviation (μm)	Maximum (μm)	10–62.5 μm % mud
OA154/36	LB 2/1	92.38	57.81	211.07	40.68
OA154/37	LB 2/2	87.05	50.01	189.3	37.78
OA154/38	LB 2/3	94.2	56.21	200.18	37.82
OA154/39	LB 2/4	88.55	55.51	187.12	42.32
OA154/40	LB 2/5	129.64	79.91	278.86	28.02
OA154/41	WH 9/6	44.79	30.77	131.64	79.61
OA154/42	WH 9/7	40.02	24.29	117.5	84.78
OA154/43	WH 9/8	37.99	22.89	110.97	87.66
OA154/44	WH 9/9	32.53	14.87	73.98	94.26
OA154/45	WH 9/10	31.06	12.45	65.28	99.23
OA154/46	WH 10/6	34.25	18.47	96.83	91.03
OA154/47	WH 10/7	37.66	21.84	107.71	86.09
OA154/48	WH 10/8	31.8	15.57	81.59	94.08
OA154/49	WH 10/9	34.37	17.46	88.12	91.04
OA154/50	WH 10/10	37.83	22.03	106.62	87.44
OA154/51	AQ 1/1	56.56	37.44	160.2	67.1
OA154/52	AQ 1/2	62.96	40.83	171.8	59.7
OA154/53	AQ 1/3	80.95	51.75	204.53	45.4
OA154/54	AQ 1/4	62.88	41.51	165.37	60.17
OA154/55	AQ 1/5	72.39	49.64	192.56	55.47
OA154/56	AQ 2/1	129.19	75.1	273.07	25.1
OA154/57	AQ 2/2	134.93	75.62	300.67	23.53
OA154/58	AQ 2/3	136.9	78.37	298.09	23.73
OA154/59	AQ 2/4	136.73	77.44	273.52	23.99
OA154/60	AQ 2/5	140.97	90.24	338.35	26.27
OA154/61	WH 13/6	46.05	30.61	127.29	78.37
OA154/62	WH 13/7	48.8	36.87	152.31	77.33
OA154/63	WH 13/8	40.82	25.78	126.2	83.47
OA154/64	WH 13/9	37.64	18.96	99	87.28
OA154/65	WH 13/10	41.96	25.52	113.14	81.27
OA154/66	WH 18/1	40.81	19.56	100.64	84.14
OA154/67	WH 18/2	42.03	21.55	101.18	81.94
OA154/68	WH 18/3	45.55	26.64	135.59	77.14
OA154/69	WH 18/4	40.57	19.85	94.04	83.84
OA154/70	WH 18/5	47.57	27.23	121.85	75.38
OA154/71	WH 15/6	56.67	32.05	151.22	64.43
OA154/72	WH 15/7	58.73	34.6	144.11	63.37

Table A2.1 *continued*: Summary of particle size results for five replicates from each of 16 sediment quality collection areas in Wellington Harbour, 2011

NIWA code	GWRC code	Mean (μm)	Standard deviation (μm)	Maximum (μm)	10–62.5 μm
OA154/73	WH 15/8	56.78	31.55	145.78	64.4
OA154/74	WH 15/9	63.59	34.4	149.05	57.17
OA154/75	WH 15/10	60.2	34.09	145.78	61.32
OA154/76	WH 17/6	80.36	45.07	204.58	42.69
OA154/77	WH 17/7	77.81	42.9	193.65	43.36
OA154/78	WH 17/8	76.34	44.38	181.68	47.37
OA154/79	WH 17/9	70.54	37.76	175.16	47.76
OA154/80	WH 17/10	79.92	47.98	205.62	44.03

Table A2.2: Summary of particle size results for a single sample from each of 16 benthic ecology collection areas in Wellington Harbour, 2011

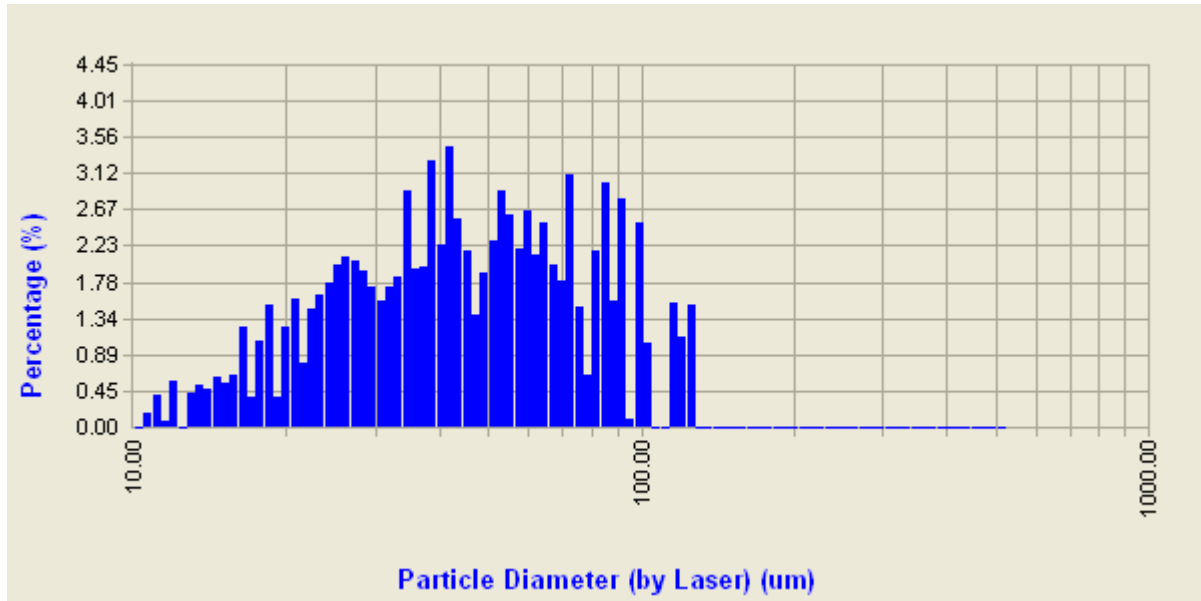
NIWA code	GWRC code	Mean (μm)	Standard deviation (μm)	Maximum (μm)	10–62.5 μm % mud
OA154/81	WH 1B	78.69	46.18	181.68	41.89
OA154/82	WH 2B	51.24	31.14	131.64	69.49
OA154/83	WH 5B	46.86	28.54	122.94	77.47
OA154/84	WH 13B	39.14	22.76	116.41	87.63
OA154/85	WH 15B	51.3	27.78	125.11	71.13
OA154/86	WH 17B	71.67	40.06	165.37	49.03
OA154/87	EB 1B	168.71	57.19	325.16	1.82
OA154/88	LB 2B	158.99	83.7	322.03	16.76
OA154/89	WH 3B	56.8	35.97	146.87	63.82
OA154/90	WH 4B	52.37	33.29	143.24	68.28
OA154/91	WH 9B	41.05	26.42	118.09	82.01
OA154/92	WH 10B	39.46	24.76	126.84	82.54
OA154/93	WH 18B	43.24	25.02	131.21	80.12
OA154/94	AQ 1B	51.57	32.01	139.26	70.36
OA154/95	AQ 2B	115.73	69.33	272.29	28.71
OA154/96	LB 1B	129.06	70.03	303.98	23.01

Table A2.3: Summary of dry sieving data for sites LB1, AQ2 and EB1 sampled in Wellington Harbour, 2011

NWA code OA154/*	GWRC code Site	Weight of fraction (g)		Percent distribution (%)		Comments
		>500um	<500um	>500um	<500um	
31	LB1-1	14.9	147.4	9.2	90.8	Gravel/stones
32	LB1-2	42.6	209.2	16.9	83.1	Gravel/stones
33	LB1-3	14.0	144.6	8.8	91.2	Gravel/stones
34	LB1-4	22.8	179.7	11.2	88.8	Gravel/stones
35	LB1-5	20.6	178.6	10.3	89.7	Gravel/stones
56	AQ2-1	10.6	187.2	5.4	94.6	Gravel/stones
57	AQ2-2	13.5	157.4	7.9	92.1	Gravel/stones
58	AQ2-3	15.2	167.0	8.3	91.7	Gravel/stones
59	AQ2-4	18.1	178.1	9.2	90.8	Gravel/stones
60	AQ2-5	14.8	180.0	7.6	92.4	Gravel/stones
26	EB1-1	36.5	219.0	14.3	85.7	Shell fragments & seaweed
27	EB1-2	47.7	239.0	16.6	83.4	Shell fragments & seaweed
28	EB1-3	35.6	210.0	14.5	85.5	Shell fragments & seaweed
29	EB1-4	43.1	284.0	13.2	86.8	Shell fragments & seaweed
30	EB1-5	36.1	260.4	12.2	87.8	Shell fragments & seaweed
87	EB1B	59.5	316.2	15.8	84.2	Shell fragments
95	AQ2B	5.7	185.5	3.0	97.0	Small shell/gravel
96	LB1B	3.1	176.3	1.7	98.3	Small shell/gravel

*Particle size distribution histograms and tables***QA replicate samples****Volume Distribution: OA154/10(a)****Volume Histogram : OA154/10(a)**

Mean: 49.89 um STD: 27.25 um Conf.: 99.96 %
 D10 : 19.19 um D50: 43.13 um D90: 89.91 um

**Area Ranges Table : OA154/10(a)**

Range	Local(%)	Under(%)
10.0-15.6	11.96	13.69
15.6-31.2	38.75	52.44
31.2-62.5	34.91	87.34
62.5-125.0	12.46	99.80
125.0-250.0	0.20	100.00
250.0-500.0	0.00	100.00

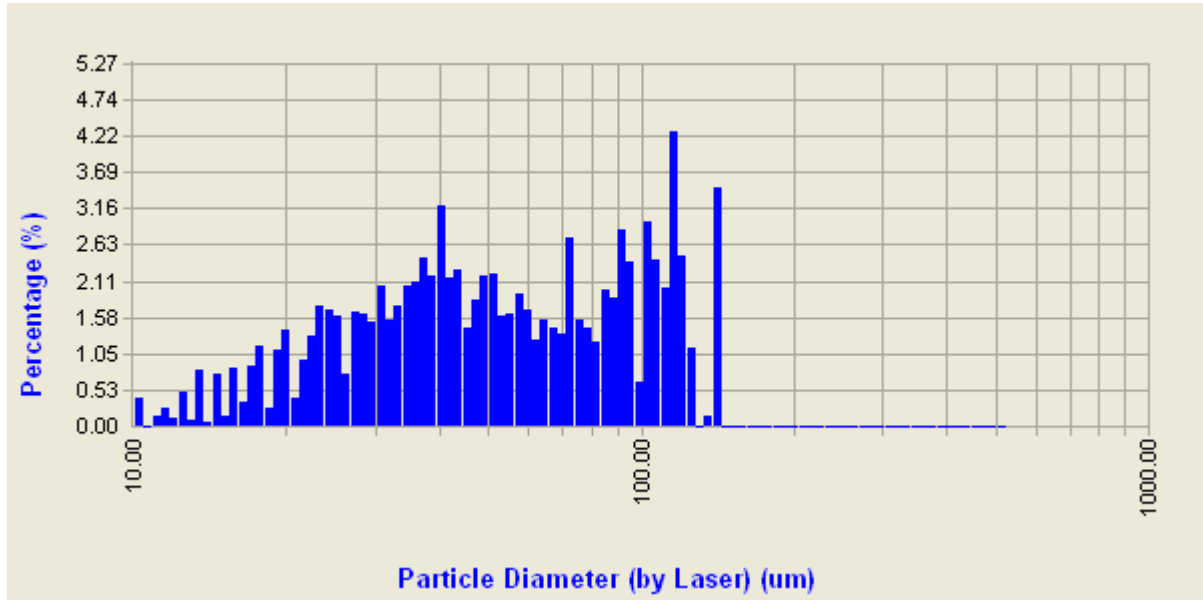
Volume Ranges Table : OA154/10(a)

Range	Local(%)	Under(%)
10.0-15.6	4.29	4.74
15.6-31.2	24.38	29.12
31.2-62.5	41.91	71.03
62.5-125.0	28.28	99.31
125.0-250.0	0.69	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/10(b)

Volume Histogram : OA154/10(b)

Mean: 59.90 um STD: 35.12 um Conf.: 99.97 %
 D10 : 20.67 um D50: 50.04 um D90: 114.23 um



Area Ranges Table : OA154/10(b)

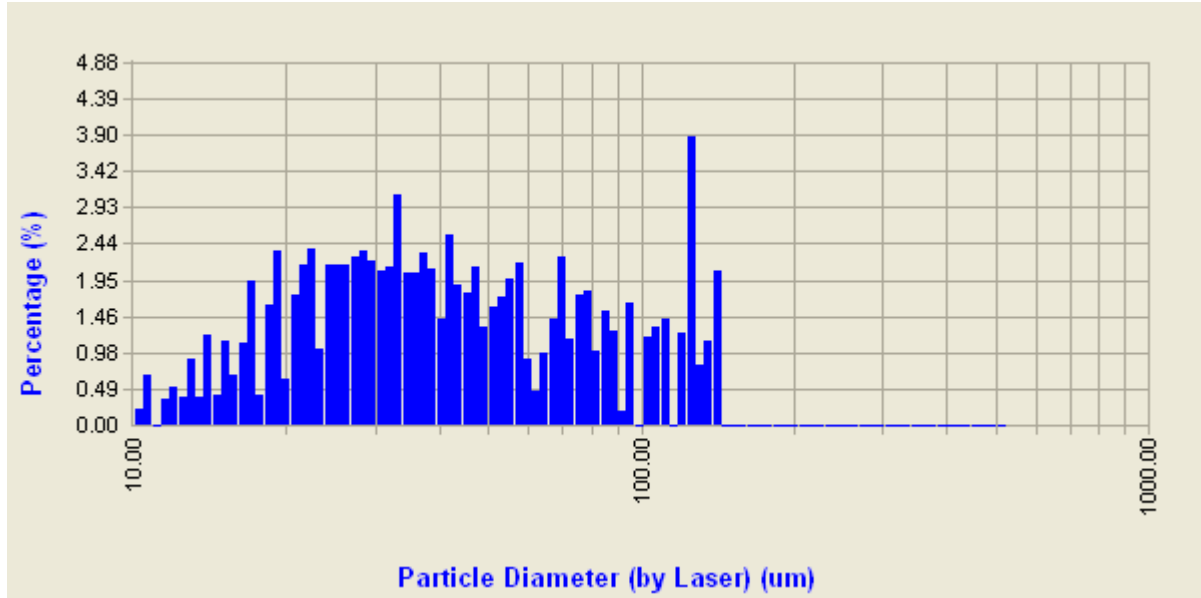
Range	Local(%)	Under(%)
10.0-15.6	11.18	11.57
15.6-31.2	37.63	49.20
31.2-62.5	33.32	82.52
62.5-125.0	16.44	98.95
125.0-250.0	1.05	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/10(b)

Range	Local(%)	Under(%)
10.0-15.6	3.48	3.57
15.6-31.2	21.12	24.69
31.2-62.5	35.06	59.75
62.5-125.0	36.63	96.38
125.0-250.0	3.62	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/20(a)**Volume Histogram : OA154/20(a)**

Mean: 50.05 um STD: 34.55 um Conf.: 99.76 %
 D10 : 16.67 um D50: 37.34 um D90: 110.23 um

**Area Ranges Table : OA154/20(a)**

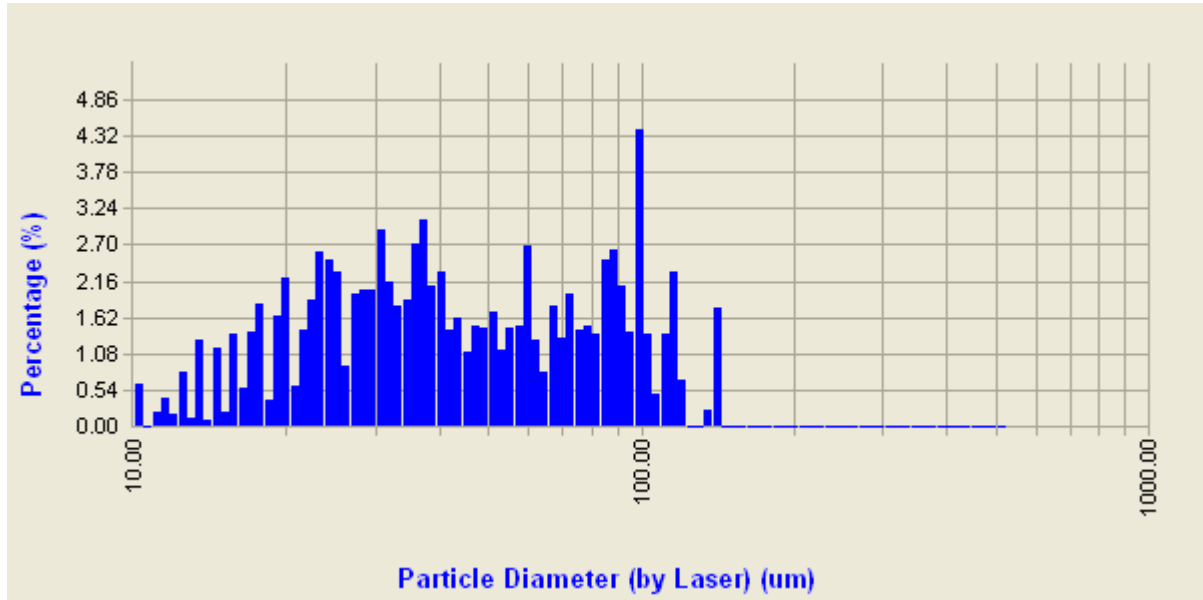
Range	Local(%)	Under(%)
10.0-15.6	16.03	17.95
15.6-31.2	46.00	63.95
31.2-62.5	26.10	90.05
62.5-125.0	8.99	99.05
125.0-250.0	0.95	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/20(a)

Range	Local(%)	Under(%)
10.0-15.6	6.22	6.76
15.6-31.2	31.56	38.32
31.2-62.5	33.36	71.69
62.5-125.0	24.30	95.98
125.0-250.0	4.02	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/20(b)

Volume Histogram : OA154/20(b)
 Mean: 50.91 um STD: 31.77 um Conf.: 99.84 %
 D10 : 17.41 um D50: 39.17 um D90: 97.91 um



Area Ranges Table : OA154/20(b)

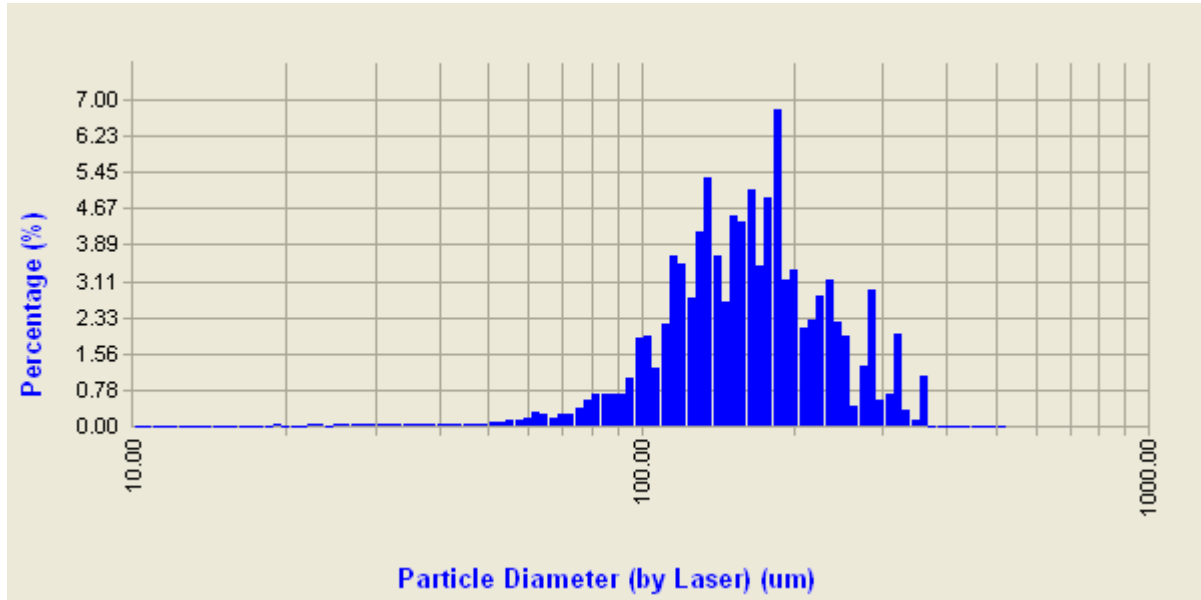
Range	Local(%)	Under(%)
10.0-15.6	14.74	15.25
15.6-31.2	46.05	61.30
31.2-62.5	26.50	87.80
62.5-125.0	11.71	99.51
125.0-250.0	0.49	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/20(b)

Range	Local(%)	Under(%)
10.0-15.6	5.43	5.57
15.6-31.2	30.18	35.75
31.2-62.5	32.55	68.30
62.5-125.0	29.70	98.00
125.0-250.0	2.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/30(a)**Volume Histogram : OA154/30(a)**

Mean: 169.52 um STD: 61.48 um Conf.: 99.54 %
 D10 : 101.69 um D50: 161.83 um D90: 254.77 um

**Area Ranges Table : OA154/30(a)**

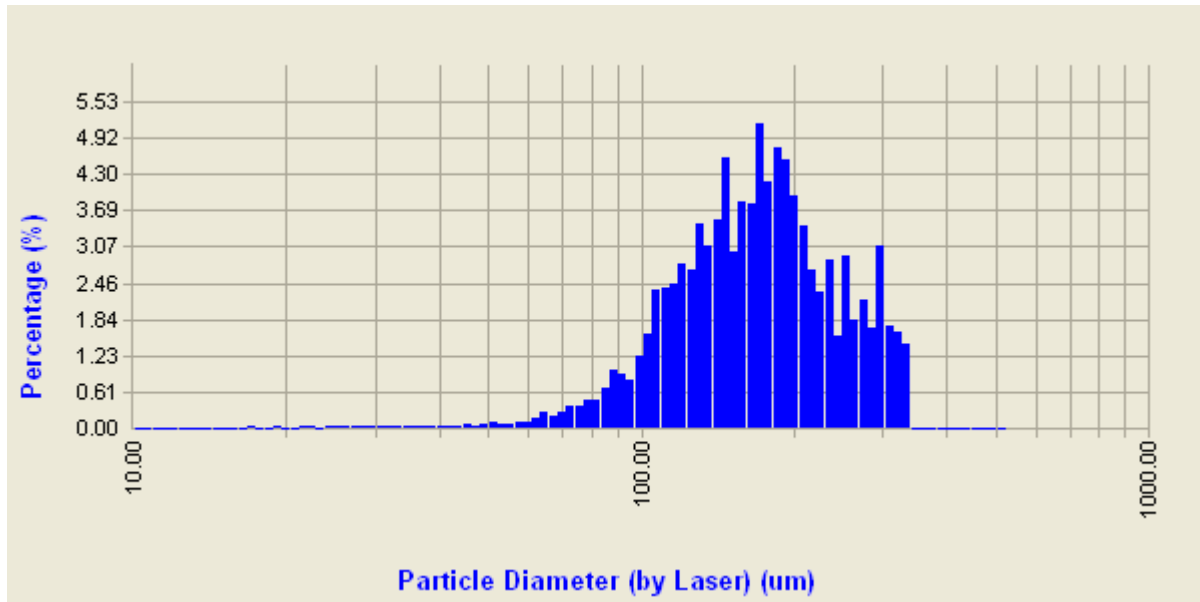
Range	Local(%)	Under(%)
10.0-15.6	0.64	0.66
15.6-31.2	2.47	3.13
31.2-62.5	4.05	7.18
62.5-125.0	30.58	37.77
125.0-250.0	56.82	94.59
250.0-500.0	5.41	100.00

Volume Ranges Table : OA154/30(a)

Range	Local(%)	Under(%)
10.0-15.6	0.06	0.06
15.6-31.2	0.39	0.44
31.2-62.5	1.35	1.79
62.5-125.0	21.43	23.22
125.0-250.0	65.88	89.09
250.0-500.0	10.91	100.00

Volume Distribution: OA154/30(b)

Volume Histogram : OA154/30(b)
 Mean: 177.05 um STD: 63.88 um Conf.: 99.86 %
 D10 : 104.14 um D50: 169.74 um D90: 275.81 um



Area Ranges Table : OA154/30(b)

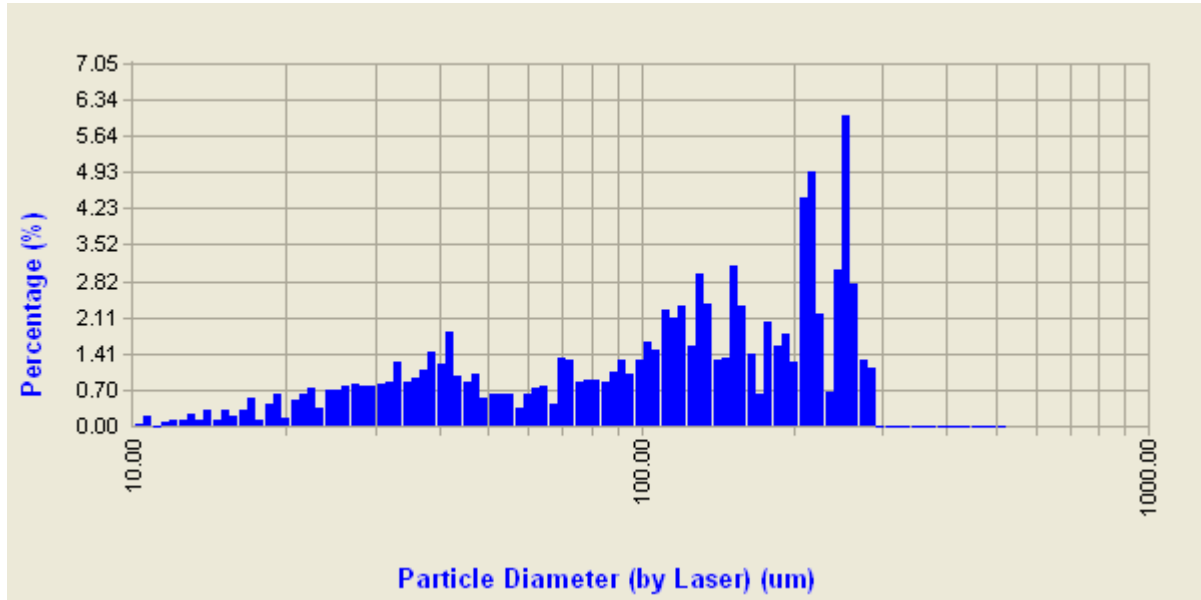
Range	Local(%)	Under(%)
10.0-15.6	0.65	0.72
15.6-31.2	2.06	2.78
31.2-62.5	3.40	6.18
62.5-125.0	29.95	36.13
125.0-250.0	55.55	91.69
250.0-500.0	8.31	100.00

Volume Ranges Table : OA154/30(b)

Range	Local(%)	Under(%)
10.0-15.6	0.05	0.06
15.6-31.2	0.31	0.36
31.2-62.5	1.08	1.45
62.5-125.0	19.96	21.41
125.0-250.0	62.83	84.23
250.0-500.0	15.77	100.00

Volume Distribution: OA154/40(a)**Volume Histogram : OA154/40(a)**

Mean: 129.64 um STD: 79.91 um Conf.: 99.99 %
 D10 : 27.55 um D50: 122.20 um D90: 247.31 um

**Area Ranges Table : OA154/40(a)**

Range	Local(%)	Under(%)
10.0-15.6	8.82	9.89
15.6-31.2	29.57	39.46
31.2-62.5	26.50	65.96
62.5-125.0	16.87	82.84
125.0-250.0	15.35	98.19
250.0-500.0	1.81	100.00

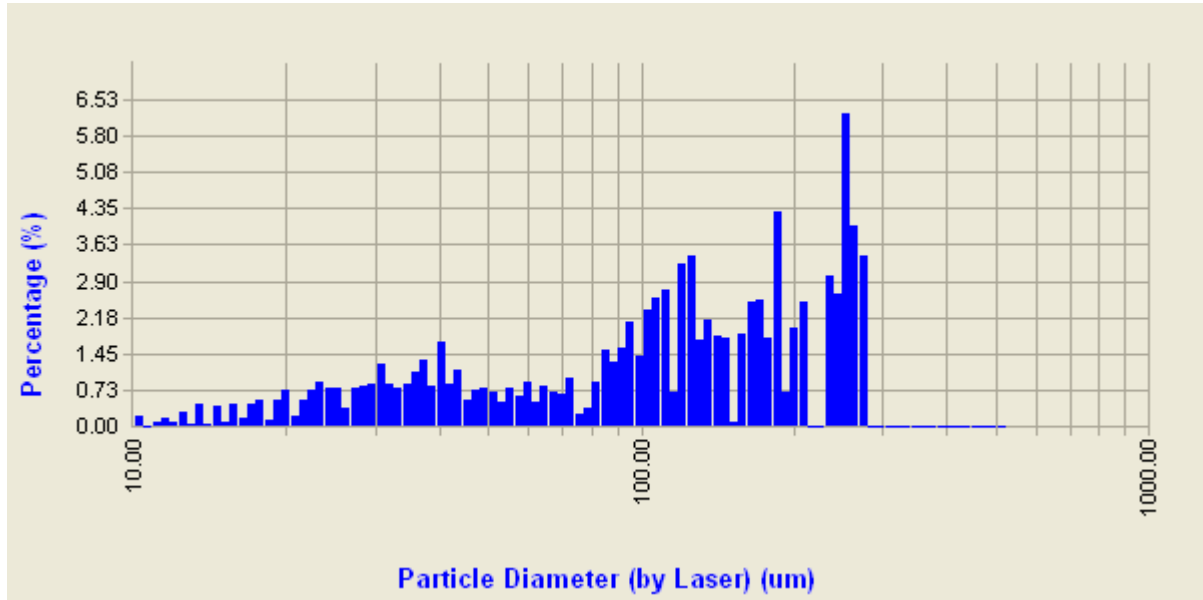
Volume Ranges Table : OA154/40(a)

Range	Local(%)	Under(%)
10.0-15.6	1.64	1.79
15.6-31.2	9.98	11.77
31.2-62.5	16.25	28.02
62.5-125.0	23.31	51.33
125.0-250.0	41.56	92.89
250.0-500.0	7.11	100.00

Volume Distribution: OA154/40(b)

Volume Histogram : OA154/40(b)

Mean: 128.53 um STD: 80.24 um Conf.: 99.95 %
 D10 : 27.20 um D50: 119.67 um D90: 249.14 um



Area Ranges Table : OA154/40(b)

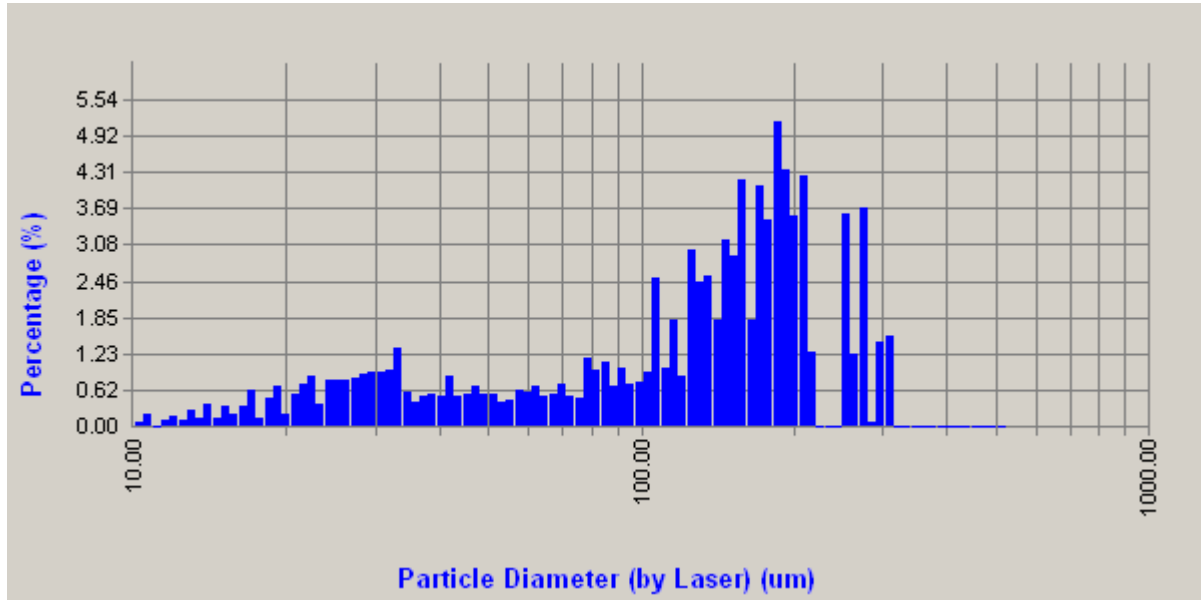
Range	Local(%)	Under(%)
10.0-15.6	9.93	10.25
15.6-31.2	31.36	41.62
31.2-62.5	24.08	65.70
62.5-125.0	18.24	83.94
125.0-250.0	13.54	97.48
250.0-500.0	2.52	100.00

Volume Ranges Table : OA154/40(b)

Range	Local(%)	Under(%)
10.0-15.6	1.86	1.91
15.6-31.2	10.71	12.62
31.2-62.5	15.07	27.69
62.5-125.0	26.20	53.89
125.0-250.0	36.12	90.01
250.0-500.0	9.99	100.00

Volume Distribution: OA154/40(c)**Volume Histogram : OA154/40(c)**

Mean: 135.26 um STD: 77.75 um Conf.: 100.00 %
 D10 : 26.46 um D50: 141.78 um D90: 251.67 um

**Area Ranges Table : OA154/40(c)**

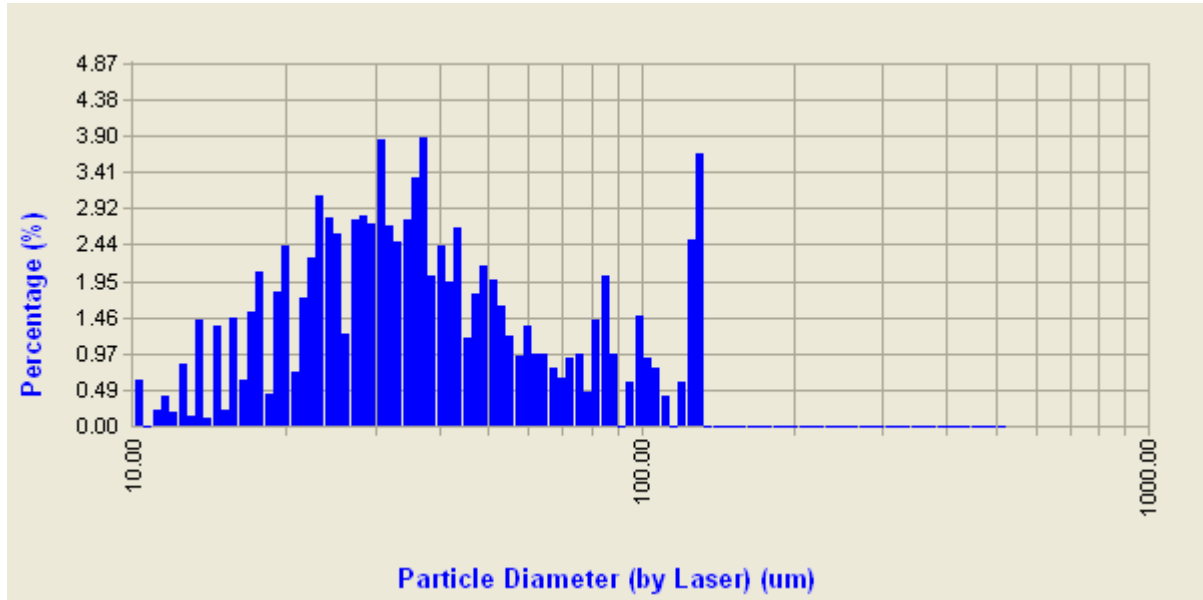
Range	Local(%)	Under(%)
10.0-15.6	10.57	11.80
15.6-31.2	34.10	45.90
31.2-62.5	18.45	64.35
62.5-125.0	13.29	77.64
125.0-250.0	19.45	97.09
250.0-500.0	2.91	100.00

Volume Ranges Table : OA154/40(c)

Range	Local(%)	Under(%)
10.0-15.6	1.91	2.07
15.6-31.2	11.09	13.16
31.2-62.5	11.06	24.22
62.5-125.0	17.78	42.00
125.0-250.0	46.61	88.61
250.0-500.0	11.39	100.00

Volume Distribution: OA154/41(a)

Volume Histogram : OA154/41(a)
 Mean: 44.79 um STD: 30.77 um Conf.: 99.98 %
 D10 : 17.41 um D50: 33.73 um D90: 96.83 um



Area Ranges Table : OA154/41(a)

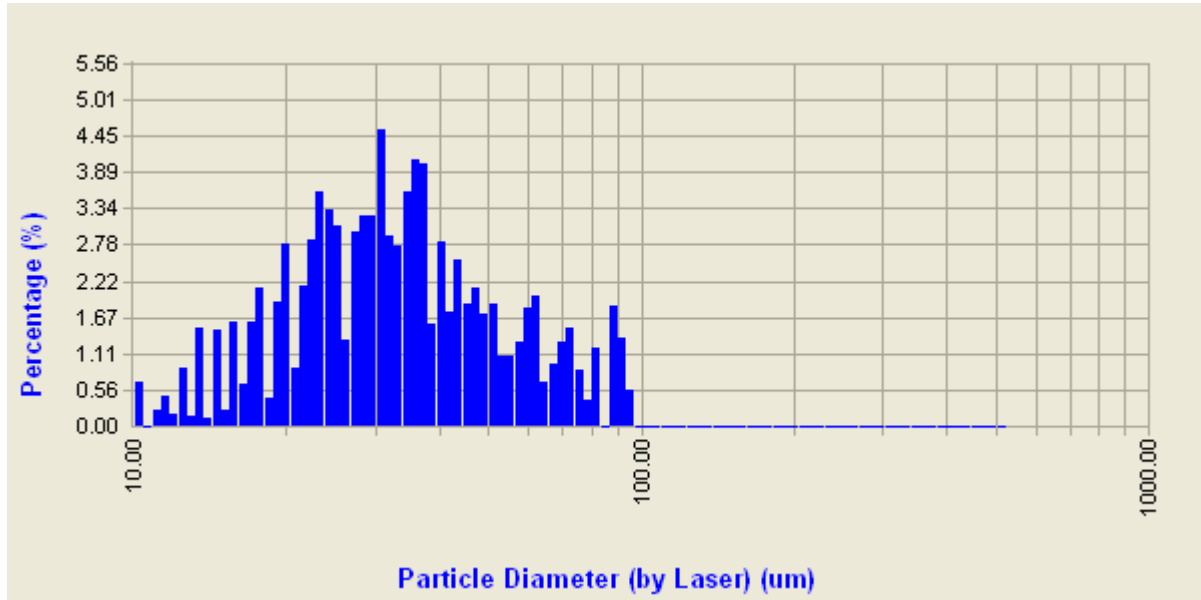
Range	Local(%)	Under(%)
10.0-15.6	14.34	14.80
15.6-31.2	50.03	64.82
31.2-62.5	28.36	93.18
62.5-125.0	5.70	98.89
125.0-250.0	1.11	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/41(a)

Range	Local(%)	Under(%)
10.0-15.6	5.84	5.98
15.6-31.2	36.55	42.53
31.2-62.5	37.08	79.61
62.5-125.0	15.77	95.37
125.0-250.0	4.63	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/41(b)**Volume Histogram : OA154/41(b)**

Mean: 36.27 um STD: 18.84 um Conf.: 100.00 %
 D10 : 17.41 um D50: 31.55 um D90: 65.28 um

**Area Ranges Table : OA154/41(b)**

Range	Local(%)	Under(%)
10.0-15.6	14.34	14.81
15.6-31.2	52.54	67.35
31.2-62.5	28.50	95.84
62.5-125.0	4.16	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

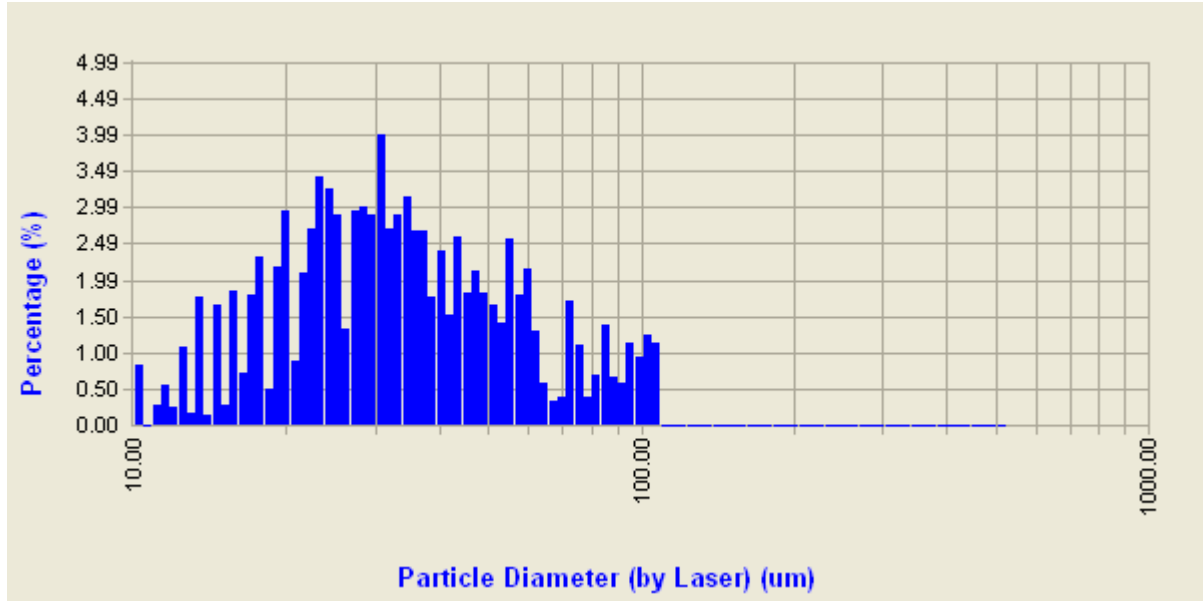
Volume Ranges Table : OA154/41(b)

Range	Local(%)	Under(%)
10.0-15.6	6.33	6.49
15.6-31.2	41.93	48.42
31.2-62.5	40.45	88.87
62.5-125.0	11.13	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/50(a)

Volume Histogram : OA154/50(a)

Mean: 37.83 um STD: 22.03 um Conf.: 99.99 %
 D10 : 16.32 um D50: 31.55 um D90: 71.80 um



Area Ranges Table : OA154/50(a)

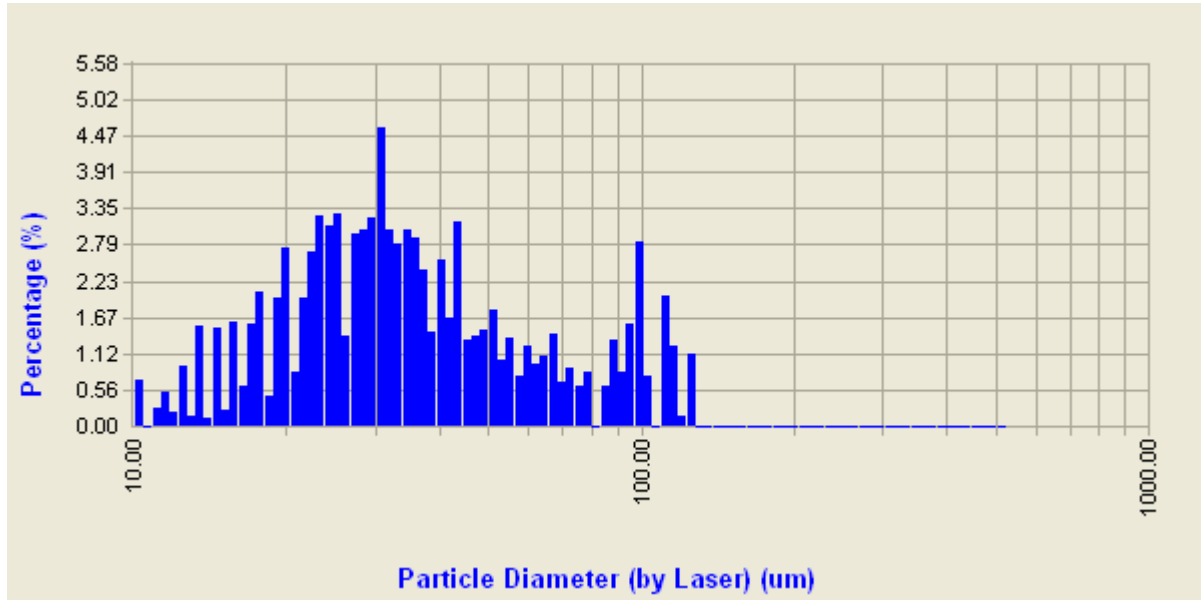
Range	Local(%)	Under(%)
10.0-15.6	16.73	17.29
15.6-31.2	52.02	69.31
31.2-62.5	26.41	95.71
62.5-125.0	4.29	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/50(a)

Range	Local(%)	Under(%)
10.0-15.6	7.41	7.61
15.6-31.2	41.18	48.78
31.2-62.5	38.66	87.44
62.5-125.0	12.56	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/50(b)**Volume Histogram : OA154/50(b)**

Mean: 41.27 um STD: 27.05 um Conf.: 99.99 %
 D10 : 16.32 um D50: 31.55 um D90: 92.47 um

**Area Ranges Table : OA154/50(b)**

Range	Local(%)	Under(%)
10.0-15.6	15.43	15.94
15.6-31.2	53.00	68.94
31.2-62.5	24.98	93.91
62.5-125.0	6.09	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

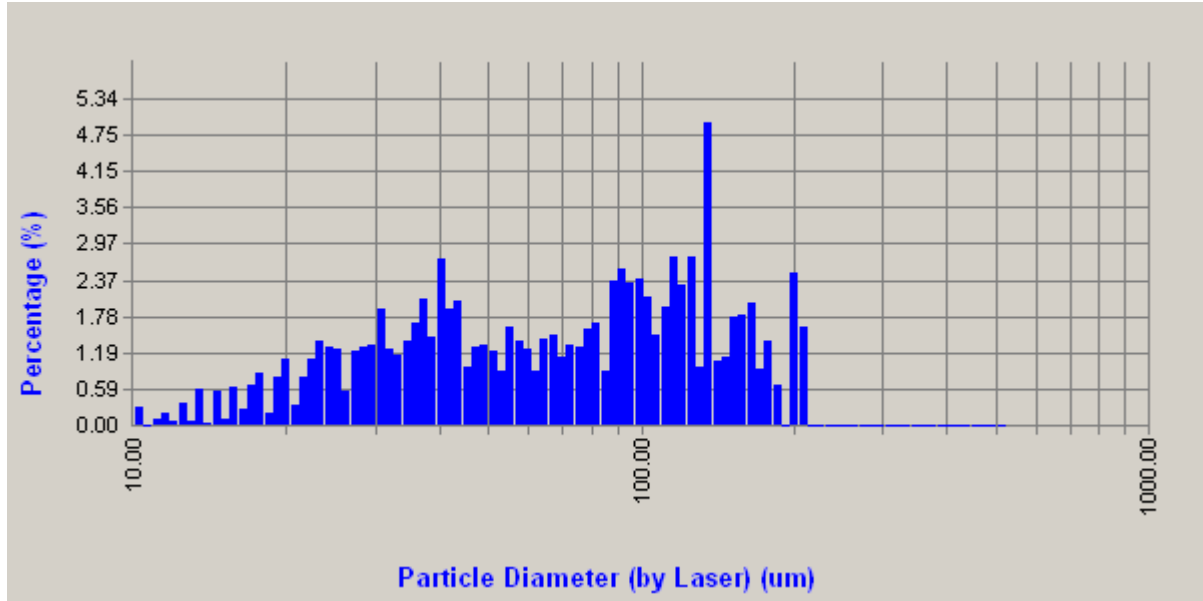
Volume Ranges Table : OA154/50(b)

Range	Local(%)	Under(%)
10.0-15.6	6.58	6.75
15.6-31.2	41.00	47.75
31.2-62.5	34.05	81.80
62.5-125.0	18.20	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/53(a)

Volume Histogram : OA154/53(a)

Mean: 80.95 um STD: 51.75 um Conf.: 99.99 %
 D10 : 22.85 um D50: 70.72 um D90: 156.66 um



Area Ranges Table : OA154/53(a)

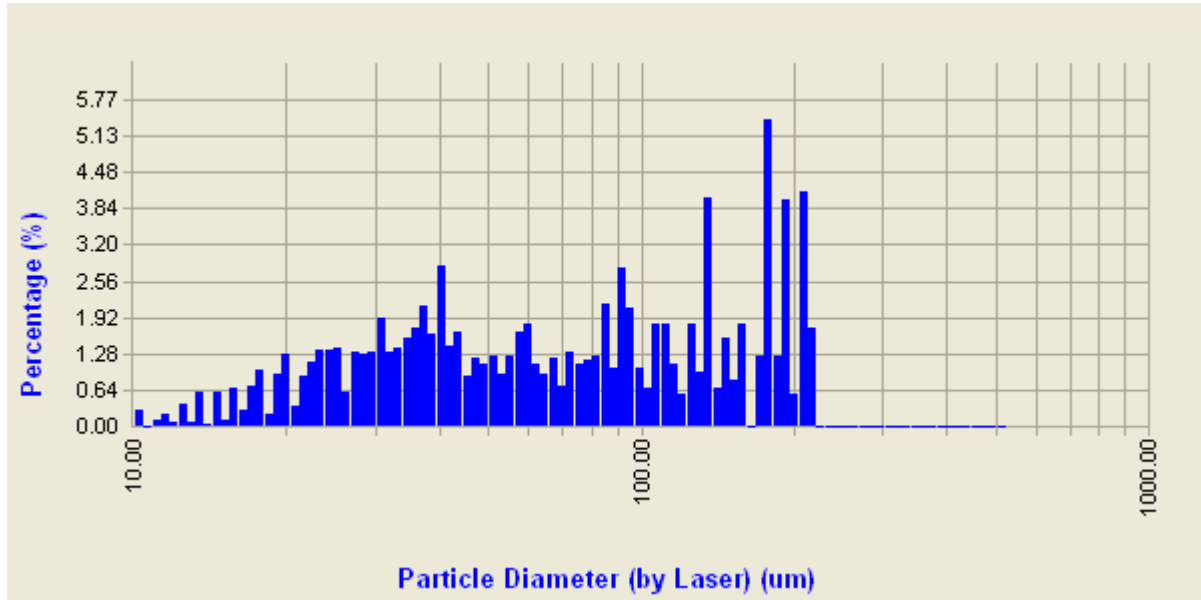
Range	Local(%)	Under(%)
10.0-15.6	9.76	10.09
15.6-31.2	35.44	45.53
31.2-62.5	30.05	75.58
62.5-125.0	17.79	93.37
125.0-250.0	6.63	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/53(a)

Range	Local(%)	Under(%)
10.0-15.6	2.52	2.59
15.6-31.2	16.68	19.27
31.2-62.5	26.13	45.40
62.5-125.0	33.24	78.63
125.0-250.0	21.37	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/53(b)**Volume Histogram : OA154/53(b)**

Mean: 87.78 um STD: 61.66 um Conf.: 99.94 %
 D10 : 21.76 um D50: 69.63 um D90: 189.30 um

**Area Ranges Table : OA154/53(b)**

Range	Local(%)	Under(%)
10.0-15.6	10.26	10.60
15.6-31.2	37.76	48.36
31.2-62.5	30.23	78.59
62.5-125.0	13.02	91.62
125.0-250.0	8.38	100.00
250.0-500.0	0.00	100.00

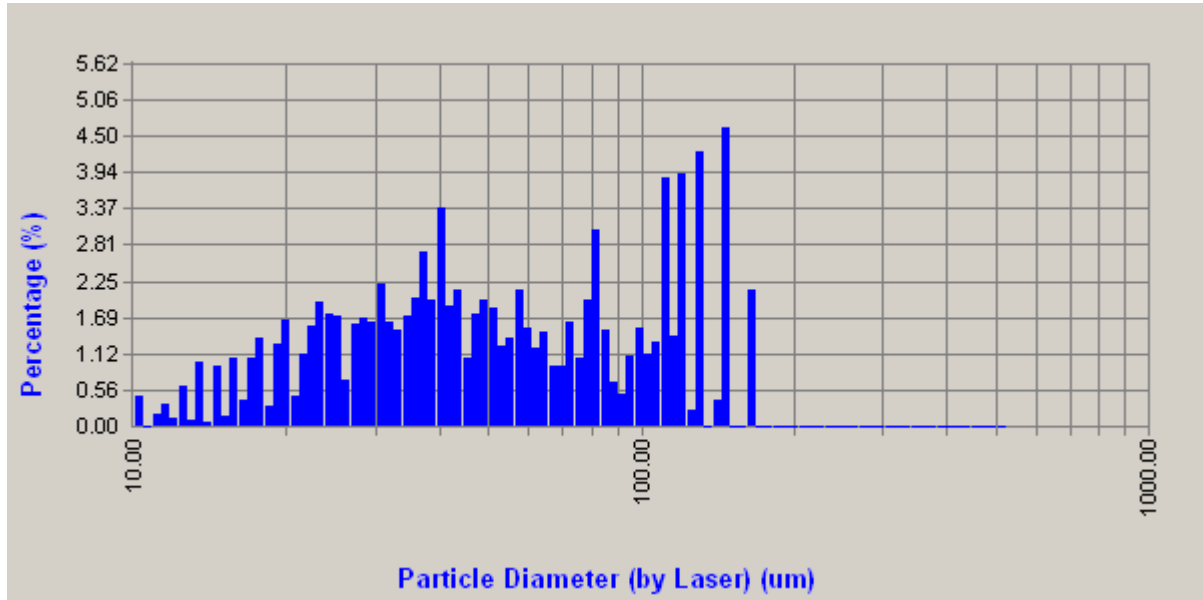
Volume Ranges Table : OA154/53(b)

Range	Local(%)	Under(%)
10.0-15.6	2.68	2.75
15.6-31.2	17.77	20.52
31.2-62.5	26.54	47.06
62.5-125.0	23.65	70.71
125.0-250.0	29.29	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/54(a)

Volume Histogram : OA154/54(a)

Mean: 62.88 um STD: 41.51 um Conf.: 99.71 %
 D10 : 19.58 um D50: 47.87 um D90: 128.38 um



Area Ranges Table : OA154/54(a)

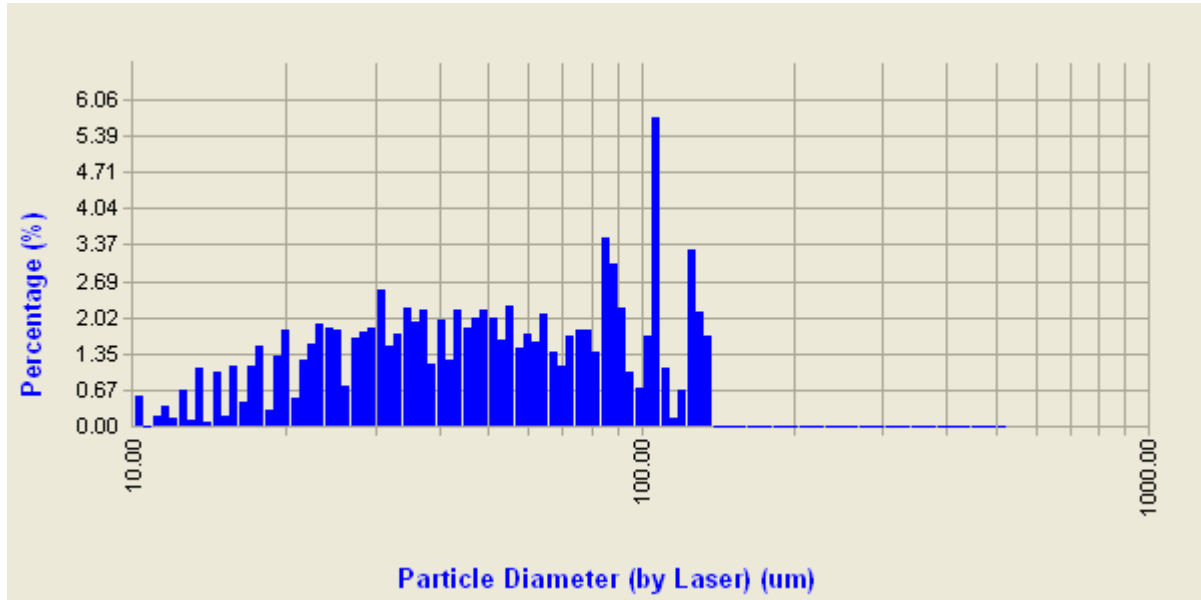
Range	Local(%)	Under(%)
10.0-15.6	13.28	13.73
15.6-31.2	40.51	54.24
31.2-62.5	30.20	84.44
62.5-125.0	12.41	96.85
125.0-250.0	3.15	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/54(a)

Range	Local(%)	Under(%)
10.0-15.6	4.26	4.37
15.6-31.2	23.15	27.52
31.2-62.5	32.65	60.17
62.5-125.0	28.42	88.59
125.0-250.0	11.41	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/54(b)**Volume Histogram : OA154/54(b)**

Mean: 57.12 um STD: 34.33 um Conf.: 99.88 %
 D10 : 18.49 um D50: 47.87 um D90: 106.62 um

**Area Ranges Table : OA154/54(b)**

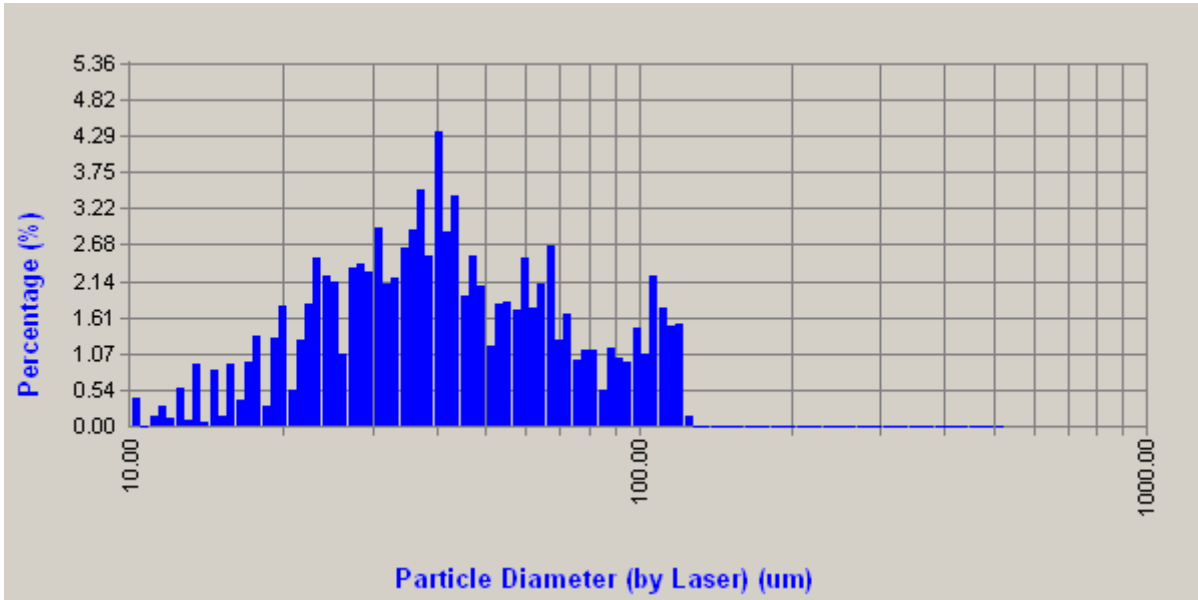
Range	Local(%)	Under(%)
10.0-15.6	14.07	14.58
15.6-31.2	41.32	55.89
31.2-62.5	28.17	84.06
62.5-125.0	14.10	98.17
125.0-250.0	1.83	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/54(b)

Range	Local(%)	Under(%)
10.0-15.6	4.67	4.81
15.6-31.2	24.59	29.40
31.2-62.5	32.15	61.55
62.5-125.0	32.16	93.71
125.0-250.0	6.29	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/70(a)

Volume Histogram : OA154/70(a)
 Mean: 47.57 um STD: 27.23 um Conf.: 100.00 %
 D10 : 19.58 um D50: 40.25 um D90: 95.74 um



Area Ranges Table : OA154/70(a)

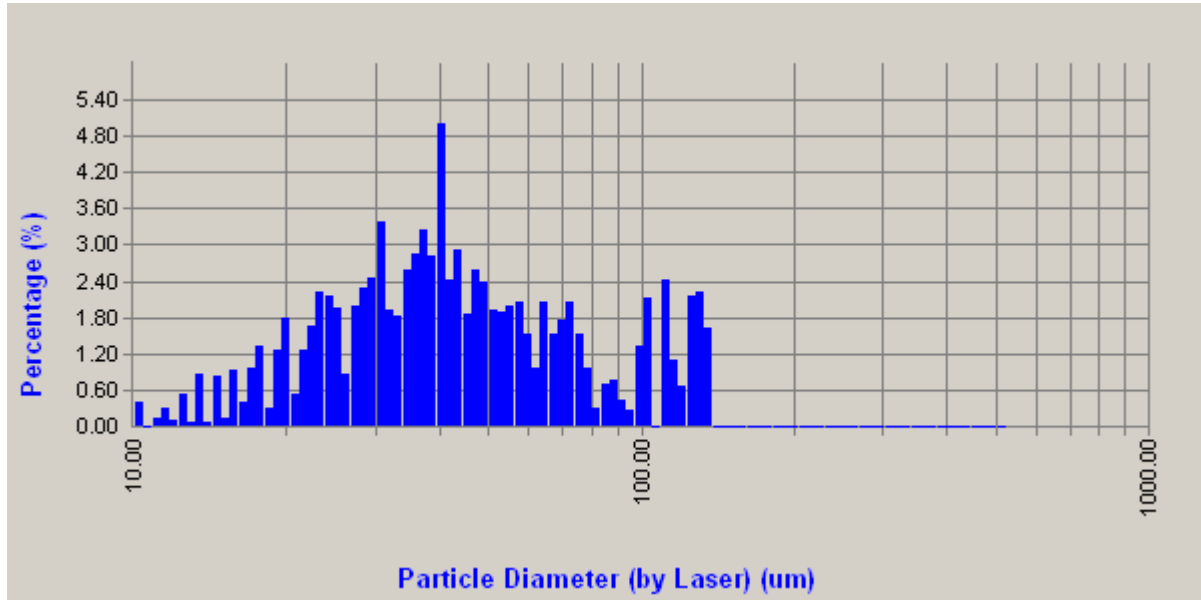
Range	Local(%)	Under(%)
10.0-15.6	10.63	10.97
15.6-31.2	42.70	53.67
31.2-62.5	36.15	89.81
62.5-125.0	10.19	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/70(a)

Range	Local(%)	Under(%)
10.0-15.6	3.83	3.92
15.6-31.2	28.15	32.07
31.2-62.5	43.31	75.38
62.5-125.0	24.62	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/70(b)**Volume Histogram : OA154/70(b)**

Mean: 50.48 um STD: 31.60 um Conf.: 99.99 %
 D10 : 19.58 um D50: 40.25 um D90: 108.79 um

**Area Ranges Table : OA154/70(b)**

Range	Local(%)	Under(%)
10.0-15.6	10.38	10.73
15.6-31.2	42.55	53.28
31.2-62.5	36.26	89.53
62.5-125.0	9.04	98.57
125.0-250.0	1.43	100.00
250.0-500.0	0.00	100.00

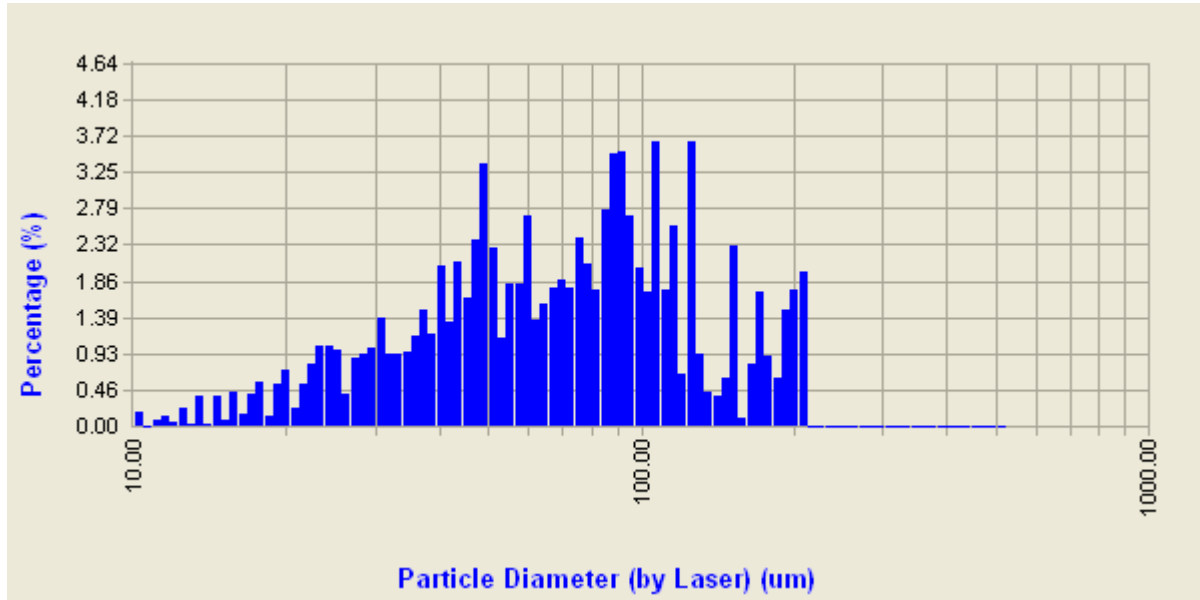
Volume Ranges Table : OA154/70(b)

Range	Local(%)	Under(%)
10.0-15.6	3.65	3.75
15.6-31.2	27.48	31.23
31.2-62.5	42.44	73.67
62.5-125.0	21.12	94.79
125.0-250.0	5.21	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/80(a)

Volume Histogram : OA154/80(a)

Mean: 79.92 um STD: 47.98 um Conf.: 99.98 %
 D10 : 26.11 um D50: 70.72 um D90: 152.31 um



Area Ranges Table : OA154/80(a)

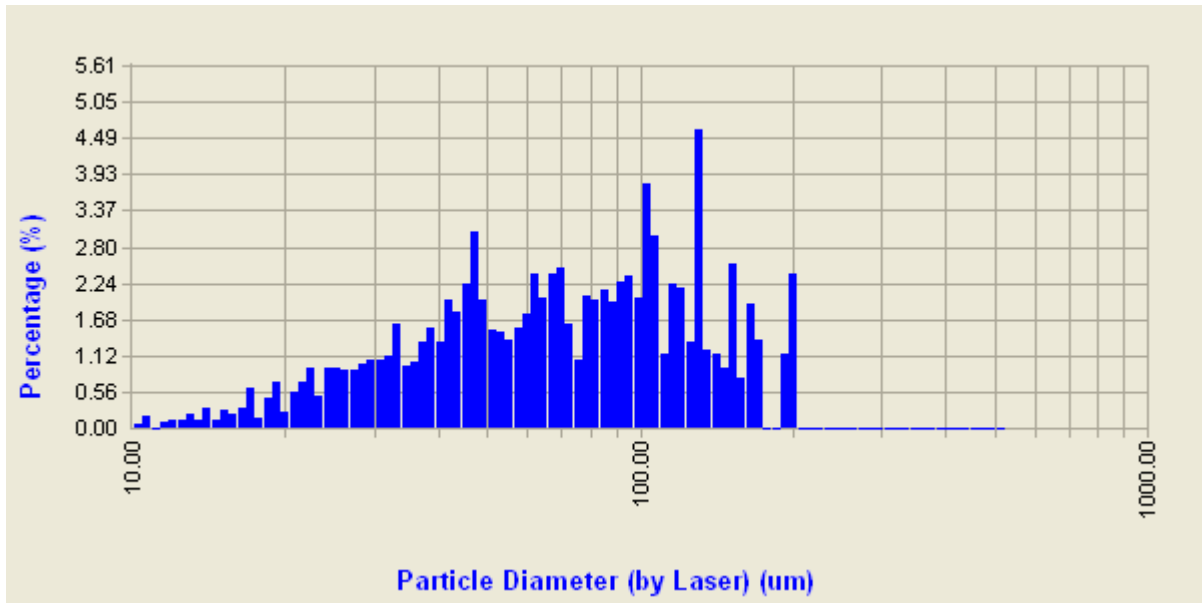
Range	Local(%)	Under(%)
10.0-15.6	7.12	7.36
15.6-31.2	27.67	35.03
31.2-62.5	35.60	70.64
62.5-125.0	24.15	94.78
125.0-250.0	5.22	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/80(a)

Range	Local(%)	Under(%)
10.0-15.6	1.69	1.73
15.6-31.2	12.02	13.76
31.2-62.5	30.27	44.03
62.5-125.0	39.94	83.97
125.0-250.0	16.03	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/80(b)**Volume Histogram : OA154/80(b)**

Mean: 79.40 um STD: 46.09 um Conf.: 99.99 %
 D10 : 26.41 um D50: 68.84 um D90: 148.26 um

**Area Ranges Table : OA154/80(b)**

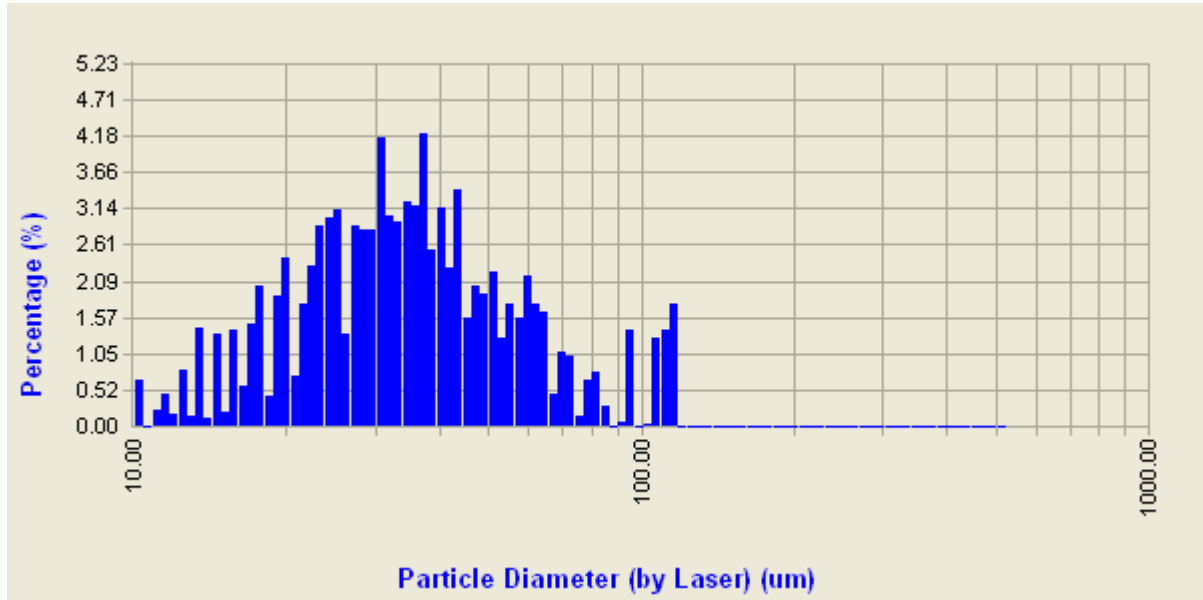
Range	Local(%)	Under(%)
10.0-15.6	7.04	7.84
15.6-31.2	28.02	35.86
31.2-62.5	34.64	70.50
62.5-125.0	23.13	93.64
125.0-250.0	6.36	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/80(b)

Range	Local(%)	Under(%)
10.0-15.6	1.69	1.82
15.6-31.2	12.25	14.07
31.2-62.5	29.12	43.19
62.5-125.0	38.42	81.61
125.0-250.0	18.39	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/84(a)

Volume Histogram : OA154/84(a)
 Mean: 39.14 um STD: 22.76 um Conf.: 99.99 %
 D10 : 17.41 um D50: 33.73 um D90: 65.28 um



Area Ranges Table : OA154/84(a)

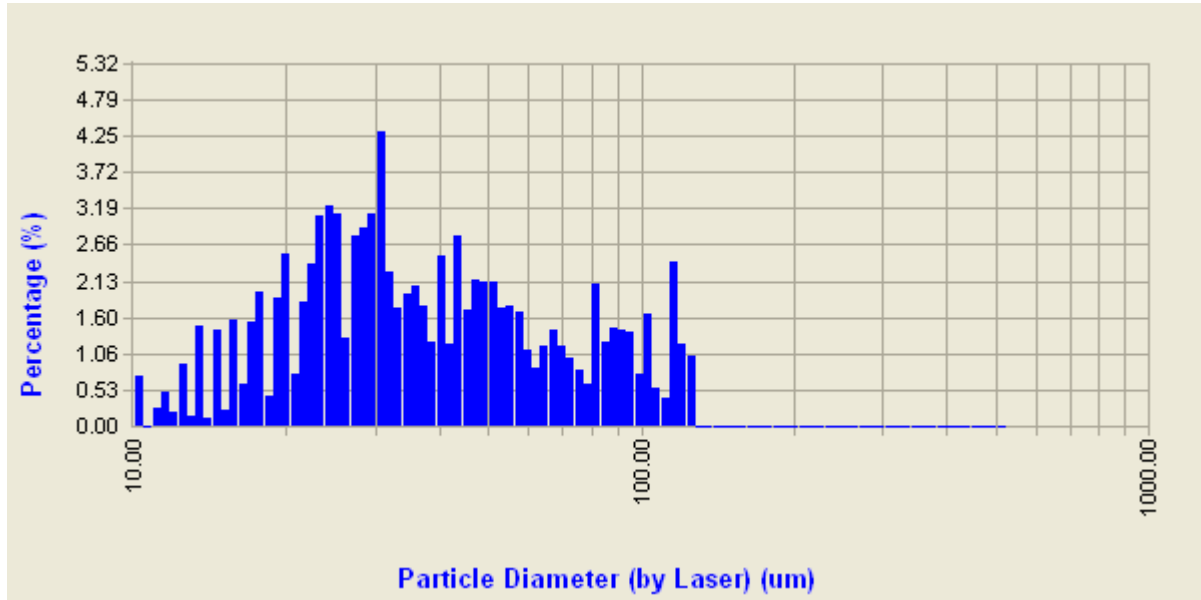
Range	Local(%)	Under(%)
10.0-15.6	13.94	14.41
15.6-31.2	49.31	63.72
31.2-62.5	31.88	95.60
62.5-125.0	4.40	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/84(a)

Range	Local(%)	Under(%)
10.0-15.6	5.87	6.03
15.6-31.2	37.72	43.75
31.2-62.5	43.88	87.63
62.5-125.0	12.37	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/84(b)**Volume Histogram : OA154/84(b)**

Mean: 44.14 um STD: 28.48 um Conf.: 99.99 %
 D10 : 17.41 um D50: 33.73 um D90: 90.30 um

**Area Ranges Table : OA154/84(b)**

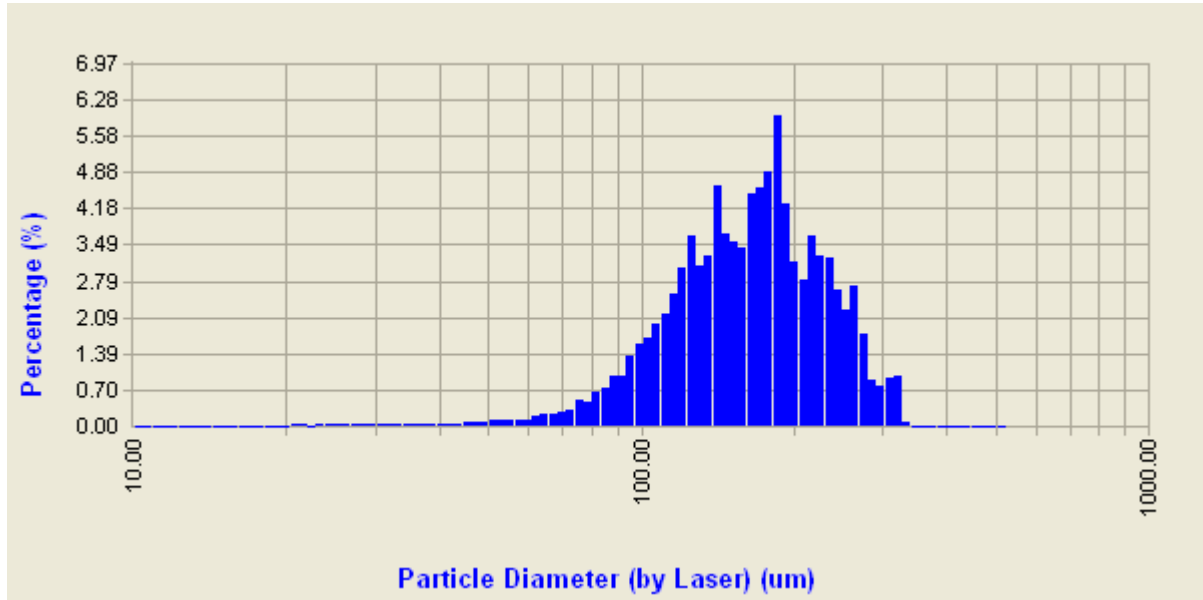
Range	Local(%)	Under(%)
10.0-15.6	15.60	16.15
15.6-31.2	52.48	68.63
31.2-62.5	23.59	92.23
62.5-125.0	7.77	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/84(b)

Range	Local(%)	Under(%)
10.0-15.6	6.37	6.54
15.6-31.2	38.96	45.50
31.2-62.5	32.41	77.91
62.5-125.0	22.09	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/87(a)

Volume Histogram : OA154/87(a)
 Mean: 168.71 um STD: 57.19 um Conf.: 100.00 %
 D10 : 99.91 um D50: 165.52 um D90: 247.52 um



Area Ranges Table : OA154/87(a)

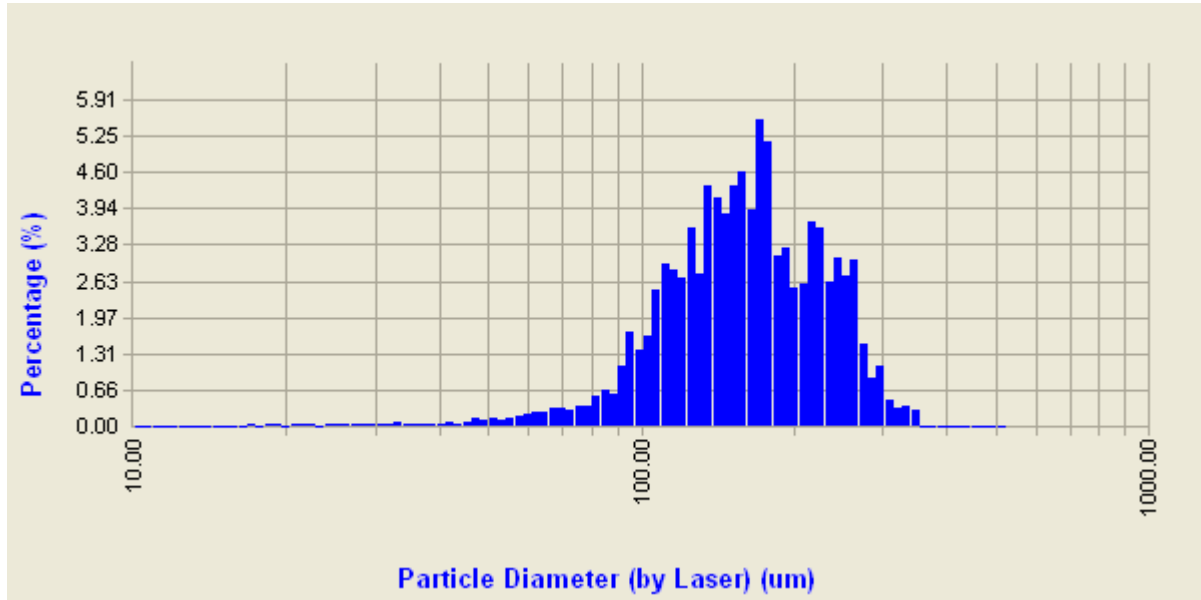
Range	Local(%)	Under(%)
10.0-15.6	0.77	0.88
15.6-31.2	2.39	3.27
31.2-62.5	4.16	7.43
62.5-125.0	31.46	38.89
125.0-250.0	56.13	95.02
250.0-500.0	4.98	100.00

Volume Ranges Table : OA154/87(a)

Range	Local(%)	Under(%)
10.0-15.6	0.07	0.07
15.6-31.2	0.37	0.45
31.2-62.5	1.38	1.82
62.5-125.0	21.90	23.72
125.0-250.0	66.75	90.48
250.0-500.0	9.52	100.00

Volume Distribution: OA154/87(b)**Volume Histogram : OA154/87(b)**

Mean: 166.59 um STD: 57.69 um Conf.: 100.00 %
 D10 : 99.31 um D50: 160.23 um D90: 248.35 um

**Area Ranges Table : OA154/87(b)**

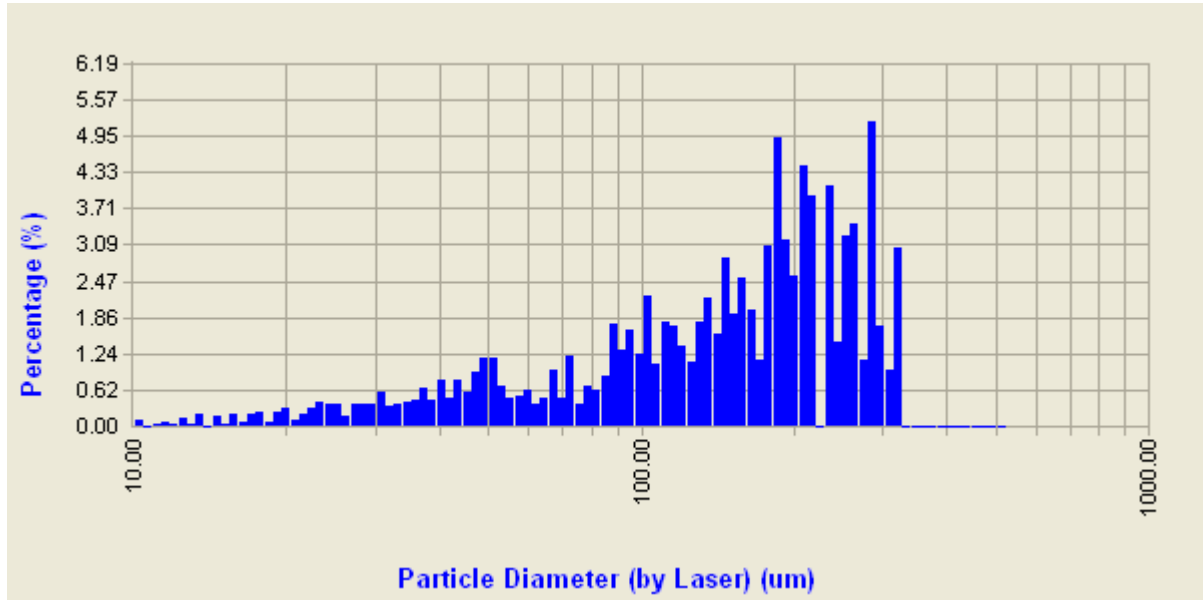
Range	Local(%)	Under(%)
10.0-15.6	0.88	0.98
15.6-31.2	2.87	3.85
31.2-62.5	4.98	8.84
62.5-125.0	31.64	40.47
125.0-250.0	54.59	95.06
250.0-500.0	4.94	100.00

Volume Ranges Table : OA154/87(b)

Range	Local(%)	Under(%)
10.0-15.6	0.08	0.08
15.6-31.2	0.45	0.54
31.2-62.5	1.69	2.23
62.5-125.0	22.60	24.83
125.0-250.0	65.59	90.42
250.0-500.0	9.58	100.00

Volume Distribution: OA154/88(a)

Volume Histogram : OA154/88(a)
 Mean: 158.99 um STD: 83.70 um Conf.: 100.00 %
 D10 : 43.52 um D50: 159.93 um D90: 280.69 um



Area Ranges Table : OA154/88(a)

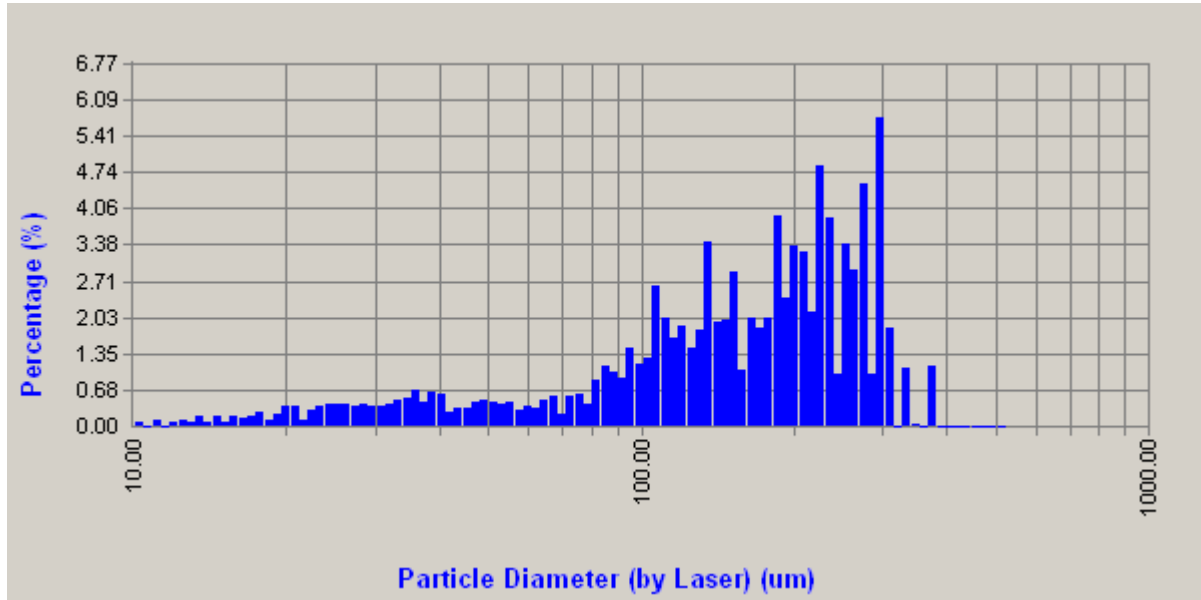
Range	Local(%)	Under(%)
10.0-15.6	6.17	6.39
15.6-31.2	19.88	26.27
31.2-62.5	23.42	49.69
62.5-125.0	20.72	70.41
125.0-250.0	23.45	93.86
250.0-500.0	6.14	100.00

Volume Ranges Table : OA154/88(a)

Range	Local(%)	Under(%)
10.0-15.6	0.83	0.85
15.6-31.2	4.85	5.69
31.2-62.5	11.06	16.76
62.5-125.0	20.32	37.08
125.0-250.0	44.52	81.60
250.0-500.0	18.40	100.00

Volume Distribution: OA154/88(b)**Volume Histogram : OA154/88(b)**

Mean: 167.18 um STD: 86.04 um Conf.: 100.00 %
 D10 : 40.06 um D50: 168.43 um D90: 288.11 um

**Area Ranges Table : OA154/88(b)**

Range	Local(%)	Under(%)
10.0-15.6	8.45	8.88
15.6-31.2	22.19	31.07
31.2-62.5	18.13	49.20
62.5-125.0	19.69	68.89
125.0-250.0	24.61	93.51
250.0-500.0	6.49	100.00

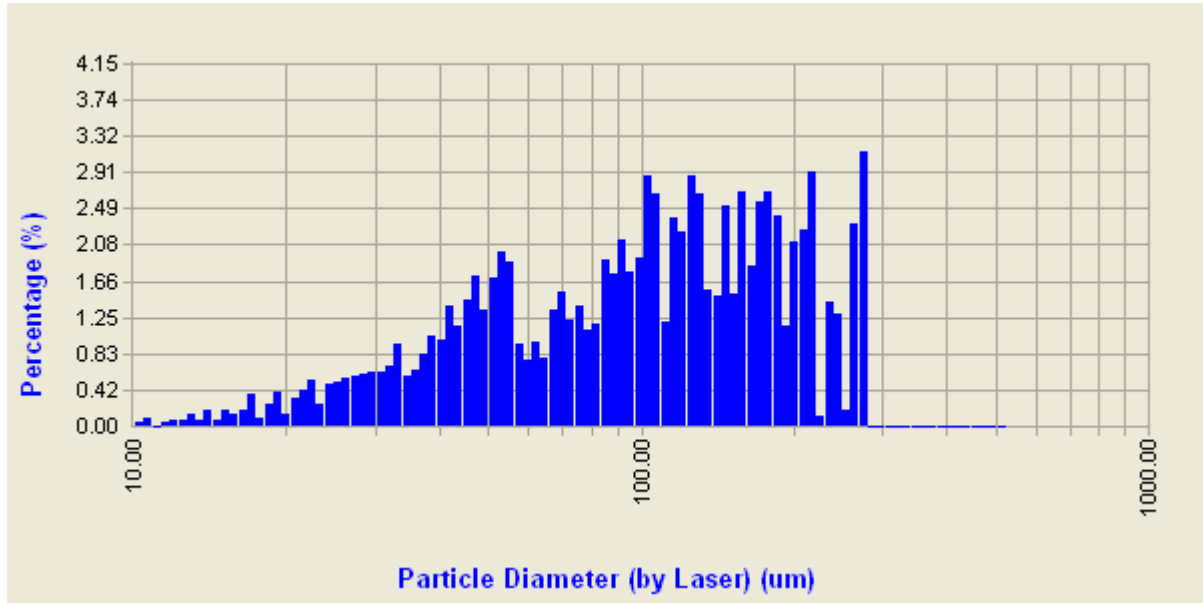
Volume Ranges Table : OA154/88(b)

Range	Local(%)	Under(%)
10.0-15.6	1.13	1.18
15.6-31.2	5.27	6.45
31.2-62.5	7.97	14.41
62.5-125.0	19.76	34.18
125.0-250.0	46.34	80.52
250.0-500.0	19.48	100.00

Volume Distribution: OA154/95(a)

Volume Histogram : OA154/95(a)

Mean: 115.73 um STD: 69.33 um Conf.: 100.00 %
 D10 : 34.03 um D50: 104.75 um D90: 216.80 um



Area Ranges Table : OA154/95(a)

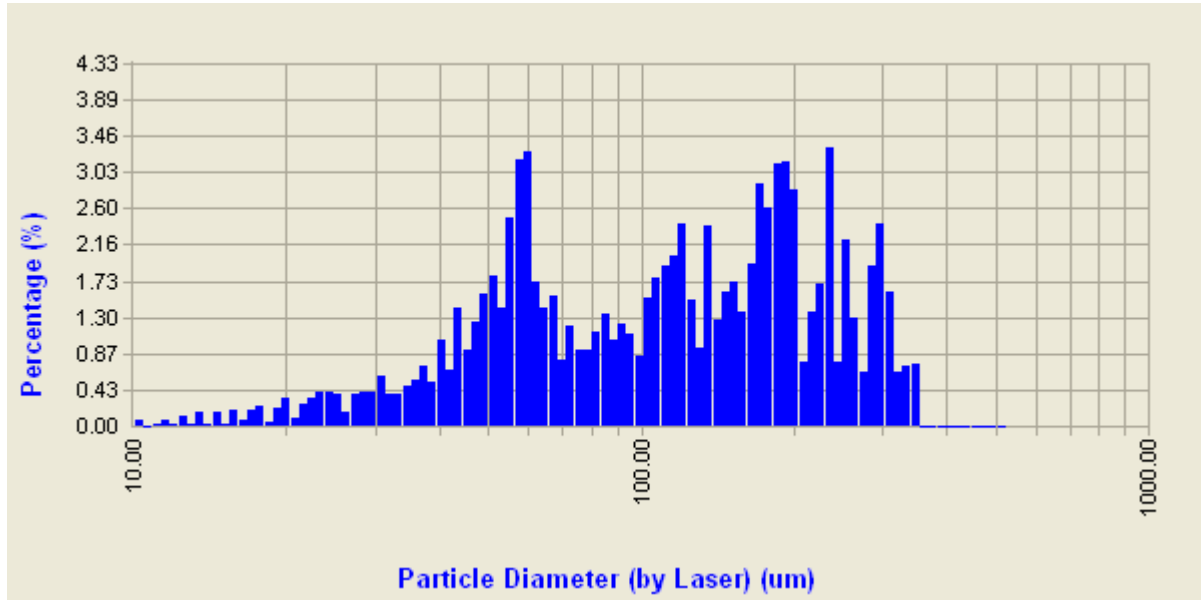
Range	Local(%)	Under(%)
10.0-15.6	5.66	6.29
15.6-31.2	21.59	27.89
31.2-62.5	32.29	60.17
62.5-125.0	24.14	84.31
125.0-250.0	14.25	98.56
250.0-500.0	1.44	100.00

Volume Ranges Table : OA154/95(a)

Range	Local(%)	Under(%)
10.0-15.6	1.02	1.10
15.6-31.2	7.06	8.15
31.2-62.5	20.55	28.71
62.5-125.0	31.40	60.10
125.0-250.0	34.42	94.52
250.0-500.0	5.48	100.00

Volume Distribution: OA154/95(b)**Volume Histogram : OA154/95(b)**

Mean: 132.69 um STD: 83.34 um Conf.: 100.00 %
 D10 : 41.34 um D50: 116.41 um D90: 256.75 um

**Area Ranges Table : OA154/95(b)**

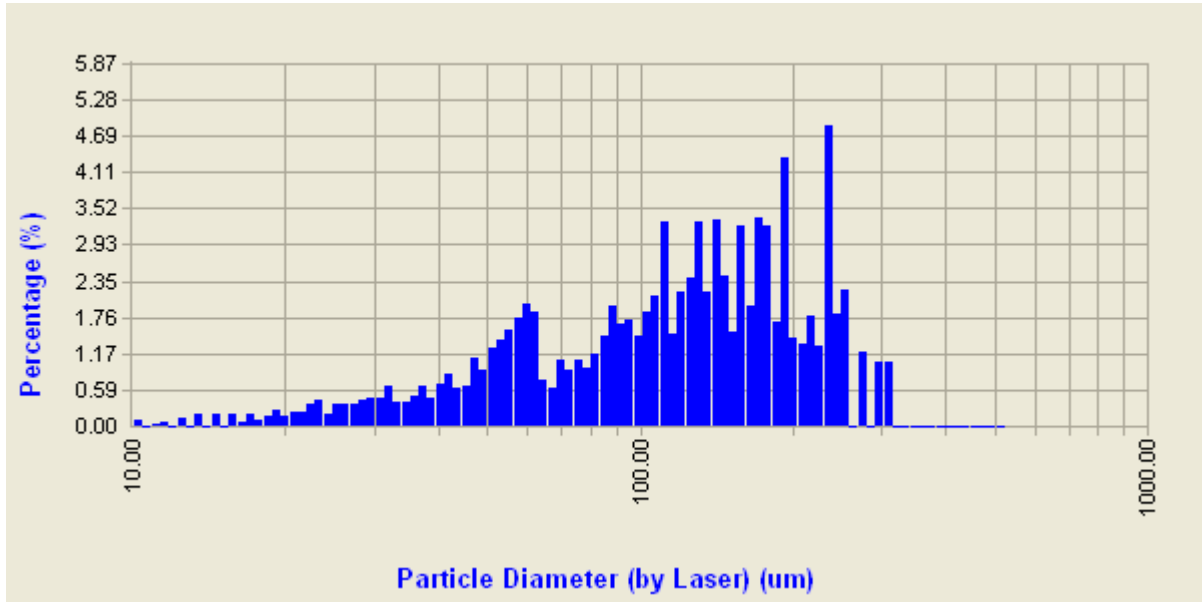
Range	Local(%)	Under(%)
10.0-15.6	4.69	4.85
15.6-31.2	17.45	22.30
31.2-62.5	37.64	59.95
62.5-125.0	21.48	81.43
125.0-250.0	15.47	96.90
250.0-500.0	3.10	100.00

Volume Ranges Table : OA154/95(b)

Range	Local(%)	Under(%)
10.0-15.6	0.75	0.77
15.6-31.2	5.10	5.87
31.2-62.5	23.26	29.13
62.5-125.0	24.51	53.64
125.0-250.0	34.95	88.60
250.0-500.0	11.40	100.00

Volume Distribution: OA154/96(a)

Volume Histogram : OA154/96(a)
 Mean: 129.06 um STD: 70.03 um Conf.: 100.00 %
 D10 : 41.55 um D50: 123.56 um D90: 231.81 um



Area Ranges Table : OA154/96(a)

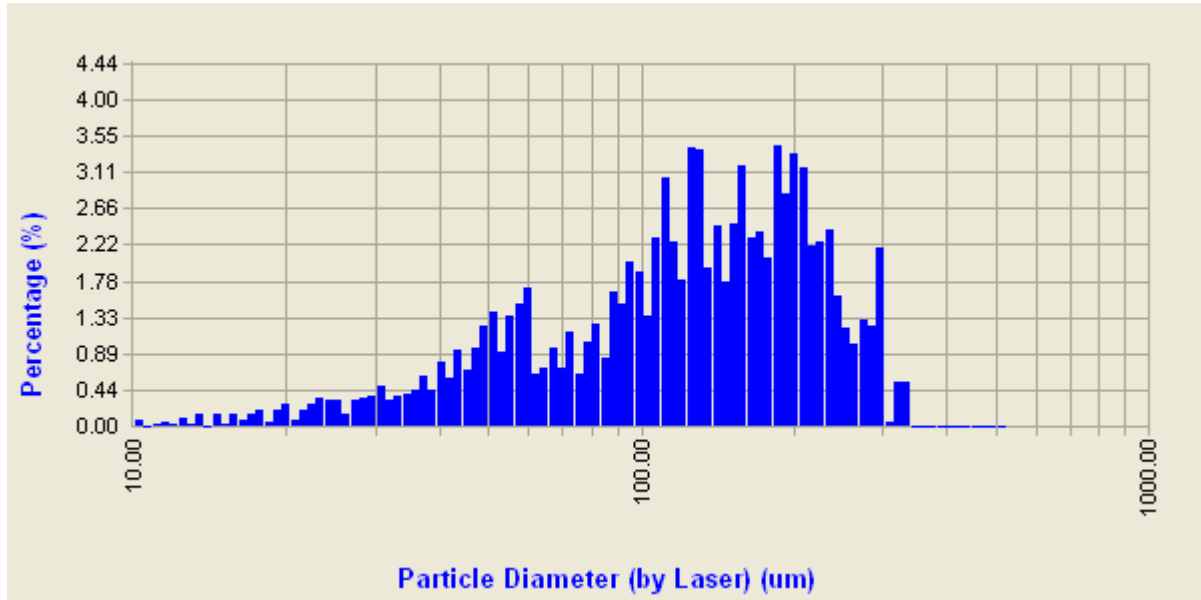
Range	Local(%)	Under(%)
10.0-15.6	5.12	5.25
15.6-31.2	18.55	23.81
31.2-62.5	29.21	53.02
62.5-125.0	24.27	77.30
125.0-250.0	21.60	98.90
250.0-500.0	1.10	100.00

Volume Ranges Table : OA154/96(a)

Range	Local(%)	Under(%)
10.0-15.6	0.78	0.80
15.6-31.2	5.21	6.01
31.2-62.5	17.00	23.01
62.5-125.0	27.52	50.53
125.0-250.0	45.65	96.18
250.0-500.0	3.82	100.00

Volume Distribution: OA154/96(b)**Volume Histogram : OA154/96(b)**

Mean: 136.88 um STD: 73.30 um Conf.: 100.00 %
 D10 : 44.61 um D50: 129.46 um D90: 237.17 um

**Area Ranges Table : OA154/96(b)**

Range	Local(%)	Under(%)
10.0-15.6	4.72	4.89
15.6-31.2	16.19	21.07
31.2-62.5	28.23	49.30
62.5-125.0	25.46	74.76
125.0-250.0	22.73	97.49
250.0-500.0	2.51	100.00

Volume Ranges Table : OA154/96(b)

Range	Local(%)	Under(%)
10.0-15.6	0.67	0.69
15.6-31.2	4.25	4.94
31.2-62.5	15.07	20.01
62.5-125.0	27.31	47.31
125.0-250.0	44.61	91.92
250.0-500.0	8.08	100.00

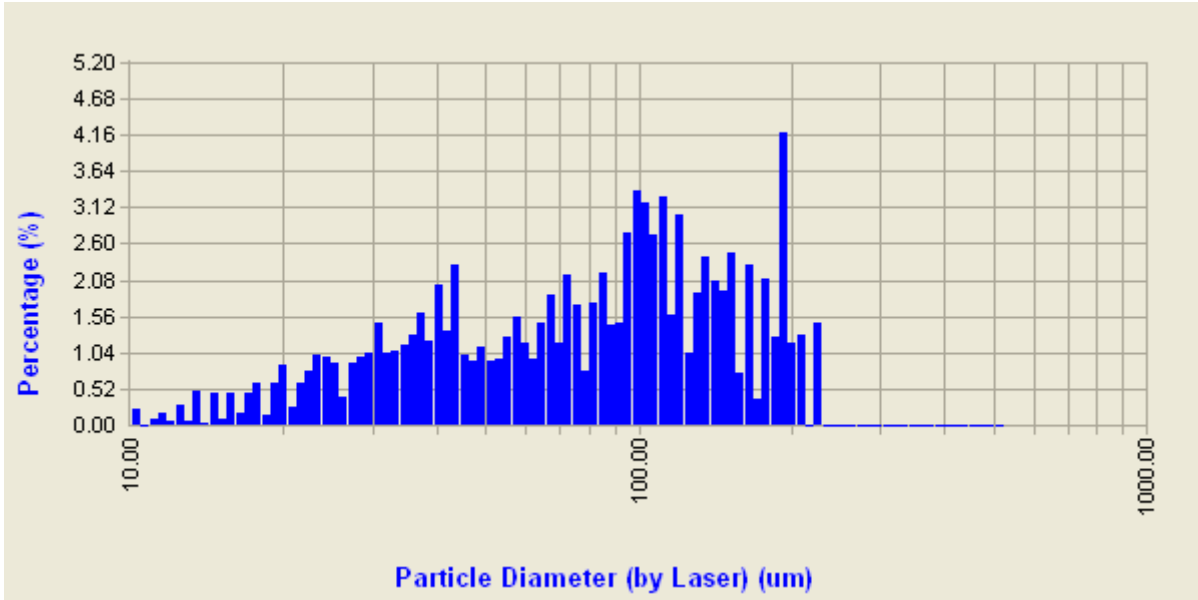
CV% percent coefficient of variation = (standard deviation/mean) x 100.

Sediment chemistry sites

Volume Distribution: OA154/1

Volume Histogram : OA154/1

Mean: 91.03 um STD: 55.14 um Conf: 99.99 %
 D10 : 26.11 um D50: 84.86 um D90: 179.51 um



Area Ranges Table : OA154/1

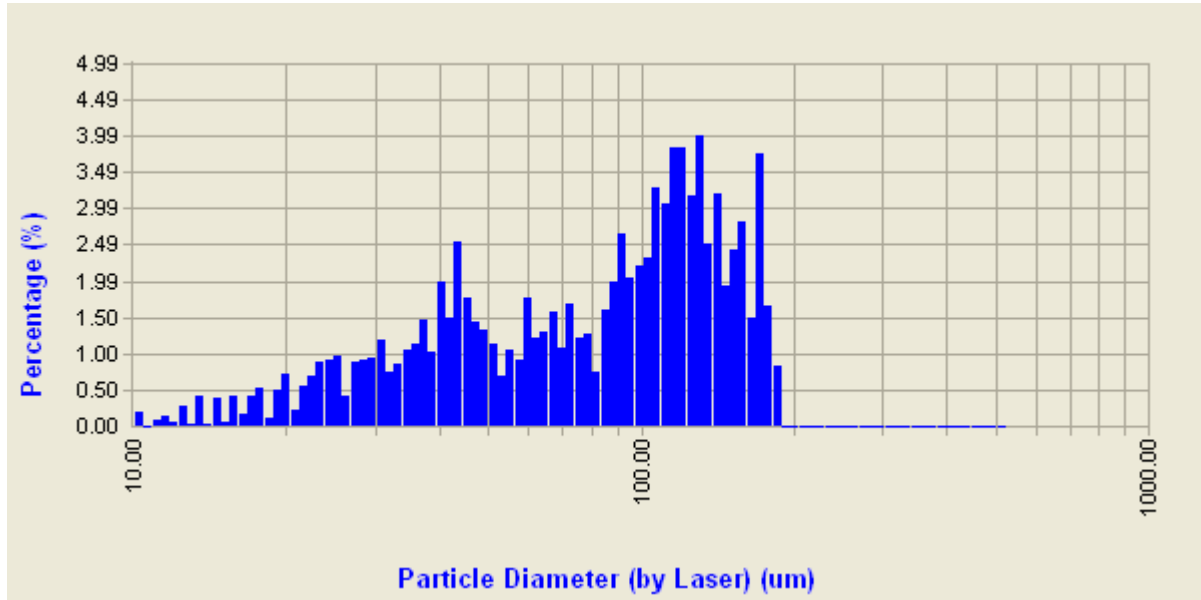
Range	Local(%)	Under(%)
10.0-15.6	9.00	9.31
15.6-31.2	30.13	39.44
31.2-62.5	29.11	68.56
62.5-125.0	22.49	91.05
125.0-250.0	8.95	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/1

Range	Local(%)	Under(%)
10.0-15.6	2.04	2.10
15.6-31.2	12.47	14.57
31.2-62.5	22.49	37.06
62.5-125.0	36.56	73.62
125.0-250.0	26.38	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/2**Volume Histogram : OA154/2**

Mean: 88.64 um STD: 47.36 um Conf.: 100.00 %
 D10 : 27.20 um D50: 90.30 um D90: 154.49 um

**Area Ranges Table : OA154/2**

Range	Local(%)	Under(%)
10.0-15.6	8.00	8.29
15.6-31.2	28.20	36.48
31.2-62.5	30.49	66.97
62.5-125.0	22.89	89.86
125.0-250.0	10.14	100.00
250.0-500.0	0.00	100.00

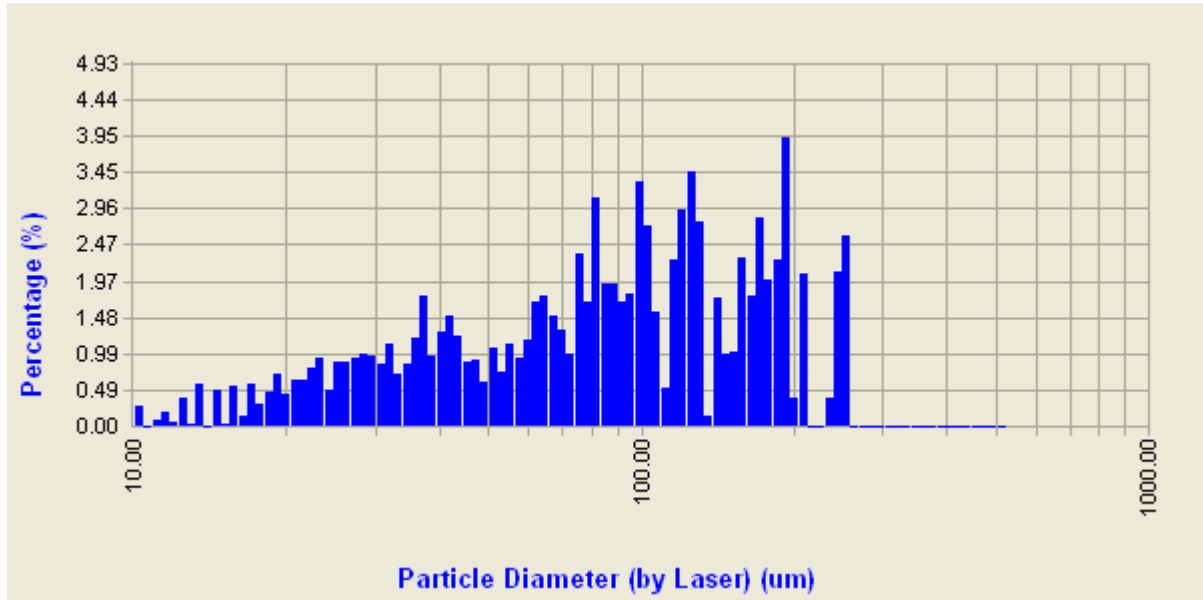
Volume Ranges Table : OA154/2

Range	Local(%)	Under(%)
10.0-15.6	1.75	1.80
15.6-31.2	11.33	13.13
31.2-62.5	23.19	36.32
62.5-125.0	37.35	73.67
125.0-250.0	26.33	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/3

Volume Histogram : OA154/3

Mean: 99.56 um STD: 63.06 um Conf.: 99.69 %
 D10 : 25.15 um D50: 88.57 um D90: 193.54 um



Area Ranges Table : OA154/3

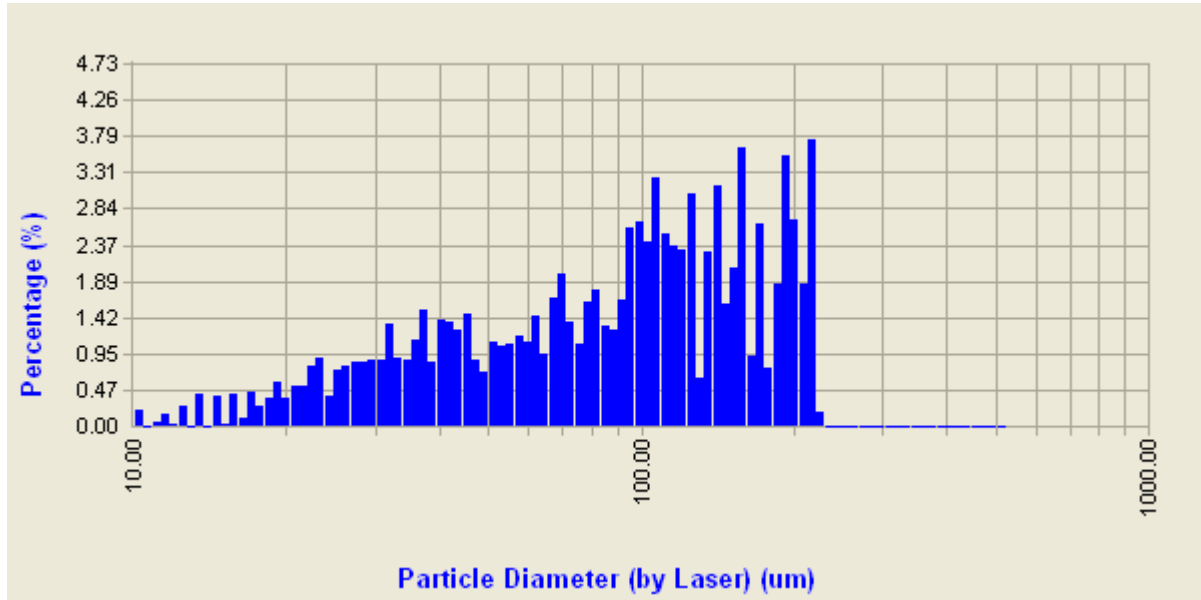
Range	Local(%)	Under(%)
10.0-15.6	10.22	10.51
15.6-31.2	31.29	41.80
31.2-62.5	24.72	66.52
62.5-125.0	23.17	89.69
125.0-250.0	9.88	99.57
250.0-500.0	0.43	100.00

Volume Ranges Table : OA154/3

Range	Local(%)	Under(%)
10.0-15.6	2.23	2.27
15.6-31.2	12.38	14.66
31.2-62.5	18.59	33.24
62.5-125.0	35.82	69.06
125.0-250.0	29.07	98.13
250.0-500.0	1.87	100.00

Volume Distribution: OA154/4**Volume Histogram : OA154/4**

Mean: 100.75 um STD: 58.80 um Conf.: 99.99 %
 D10 : 27.34 um D50: 96.22 um D90: 192.45 um

**Area Ranges Table : OA154/4**

Range	Local(%)	Under(%)
10.0-15.6	8.10	8.31
15.6-31.2	29.00	37.30
31.2-62.5	27.51	64.81
62.5-125.0	23.35	88.16
125.0-250.0	11.84	100.00
250.0-500.0	0.00	100.00

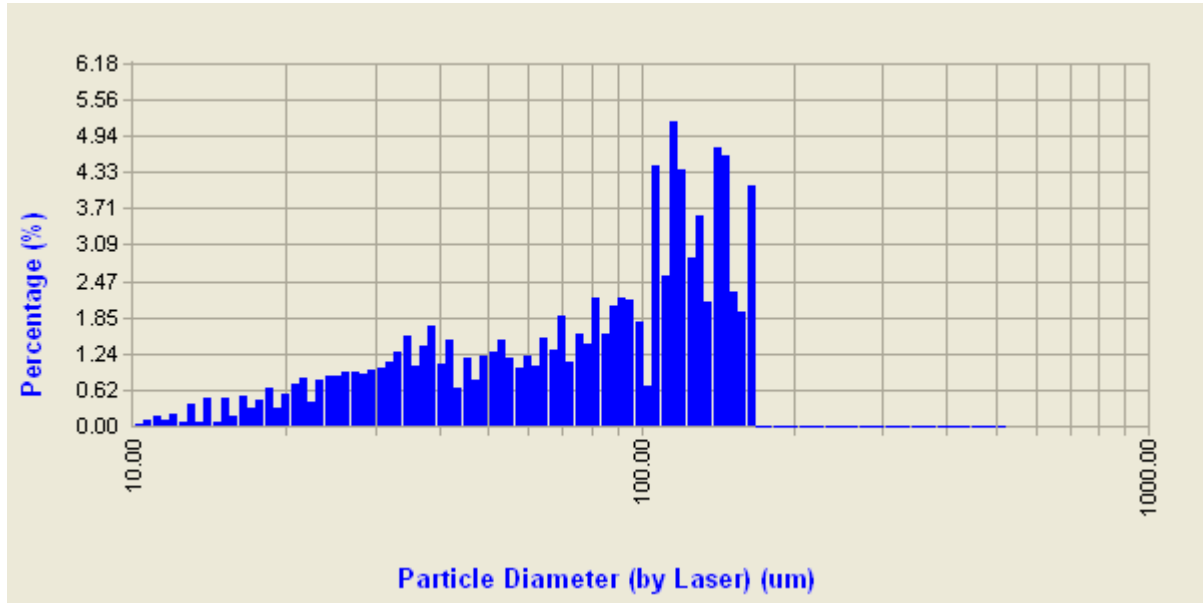
Volume Ranges Table : OA154/4

Range	Local(%)	Under(%)
10.0-15.6	1.67	1.71
15.6-31.2	10.97	12.67
31.2-62.5	19.59	32.26
62.5-125.0	35.03	67.29
125.0-250.0	32.71	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/5

Volume Histogram : OA154/5

Mean: 86.39 um STD: 45.23 um Conf.: 99.99 %
 D10 : 25.52 um D50: 88.62 um D90: 144.11 um



Area Ranges Table : OA154/5

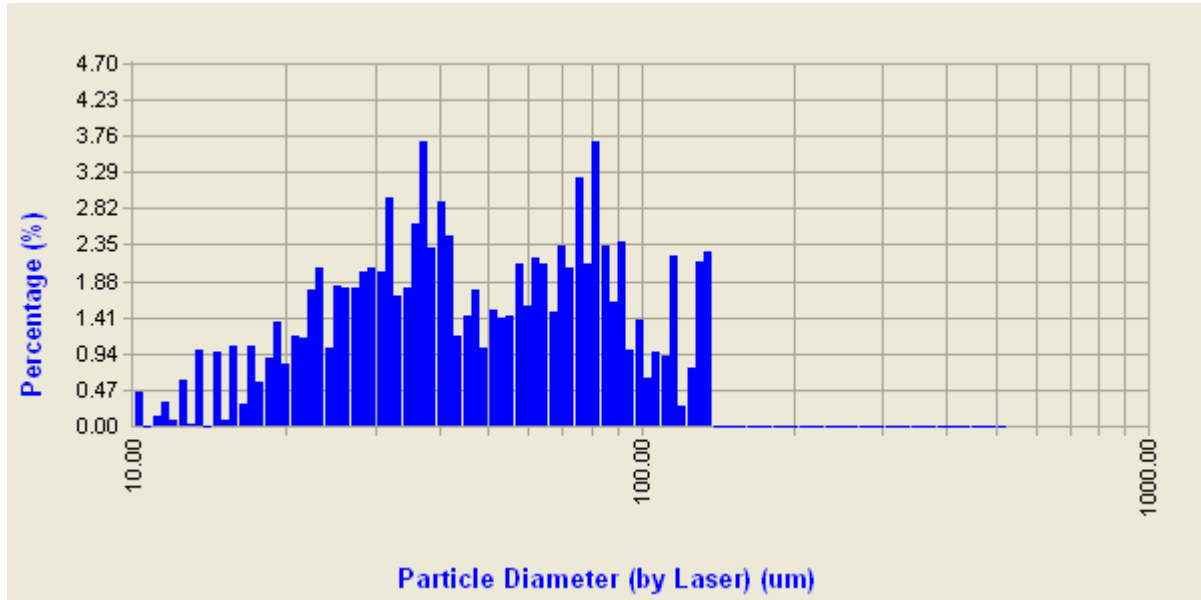
Range	Local(%)	Under(%)
10.0-15.6	9.22	10.52
15.6-31.2	29.51	40.02
31.2-62.5	27.20	67.23
62.5-125.0	23.35	90.57
125.0-250.0	9.43	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/5

Range	Local(%)	Under(%)
10.0-15.6	2.14	2.35
15.6-31.2	12.16	14.51
31.2-62.5	21.12	35.64
62.5-125.0	39.65	75.28
125.0-250.0	24.72	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/6**Volume Histogram : OA154/6**

Mean: 54.25 um STD: 31.97 um Conf.: 99.99 %
 D10 : 19.68 um D50: 43.74 um D90: 100.60 um

**Area Ranges Table : OA154/6**

Range	Local(%)	Under(%)
10.0-15.6	11.39	11.68
15.6-31.2	41.63	53.31
31.2-62.5	30.72	84.03
62.5-125.0	14.72	98.76
125.0-250.0	1.24	100.00
250.0-500.0	0.00	100.00

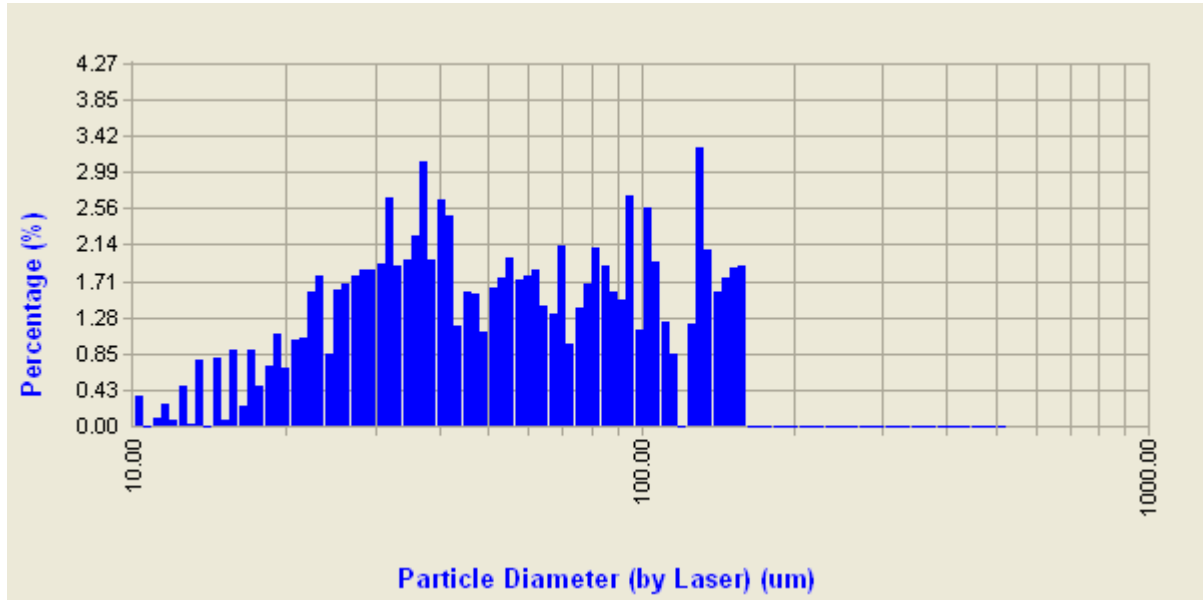
Volume Ranges Table : OA154/6

Range	Local(%)	Under(%)
10.0-15.6	3.81	3.89
15.6-31.2	25.42	29.31
31.2-62.5	34.14	63.45
62.5-125.0	32.17	95.62
125.0-250.0	4.38	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/7

Volume Histogram : OA154/7

Mean: 62.82 um STD: 40.12 um Conf.: 100.00 %
 D10 : 20.78 um D50: 50.30 um D90: 130.12 um



Area Ranges Table : OA154/7

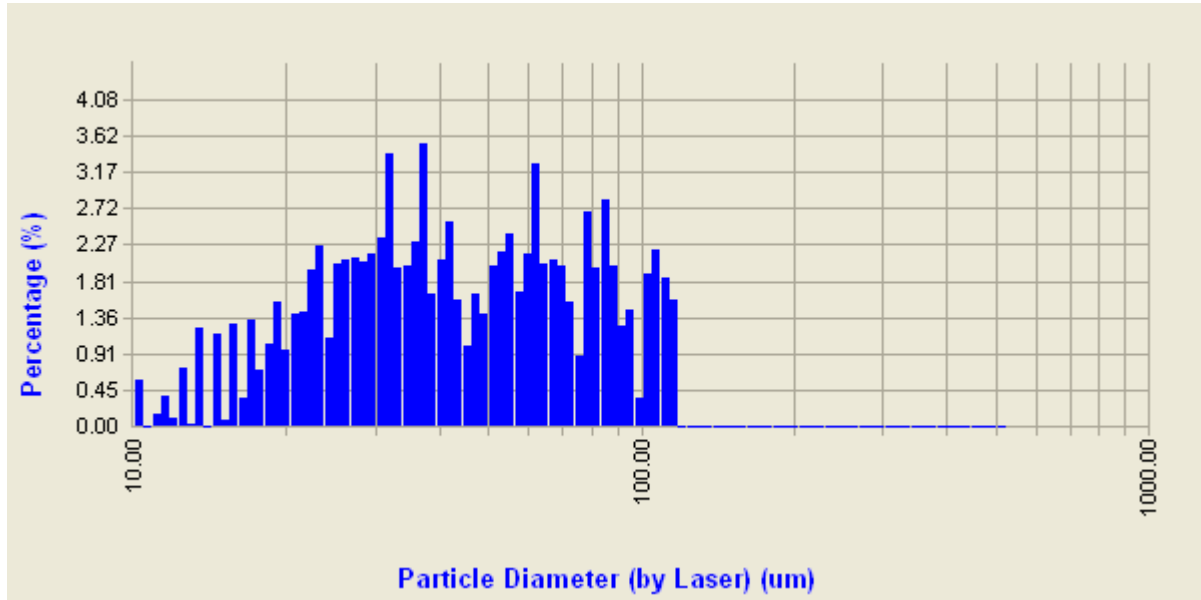
Range	Local(%)	Under(%)
10.0-15.6	10.13	10.39
15.6-31.2	40.14	50.53
31.2-62.5	32.49	83.02
62.5-125.0	13.16	96.18
125.0-250.0	3.82	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/7

Range	Local(%)	Under(%)
10.0-15.6	3.13	3.19
15.6-31.2	22.73	25.92
31.2-62.5	33.58	59.49
62.5-125.0	27.40	86.89
125.0-250.0	13.11	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/8**Volume Histogram : OA154/8**

Mean: 48.91 um STD: 27.53 um Conf.: 99.97 %
 D10 : 18.59 um D50: 40.46 um D90: 90.76 um

**Area Ranges Table : OA154/8**

Range	Local(%)	Under(%)
10.0-15.6	13.09	13.43
15.6-31.2	44.31	57.74
31.2-62.5	29.61	87.36
62.5-125.0	12.64	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

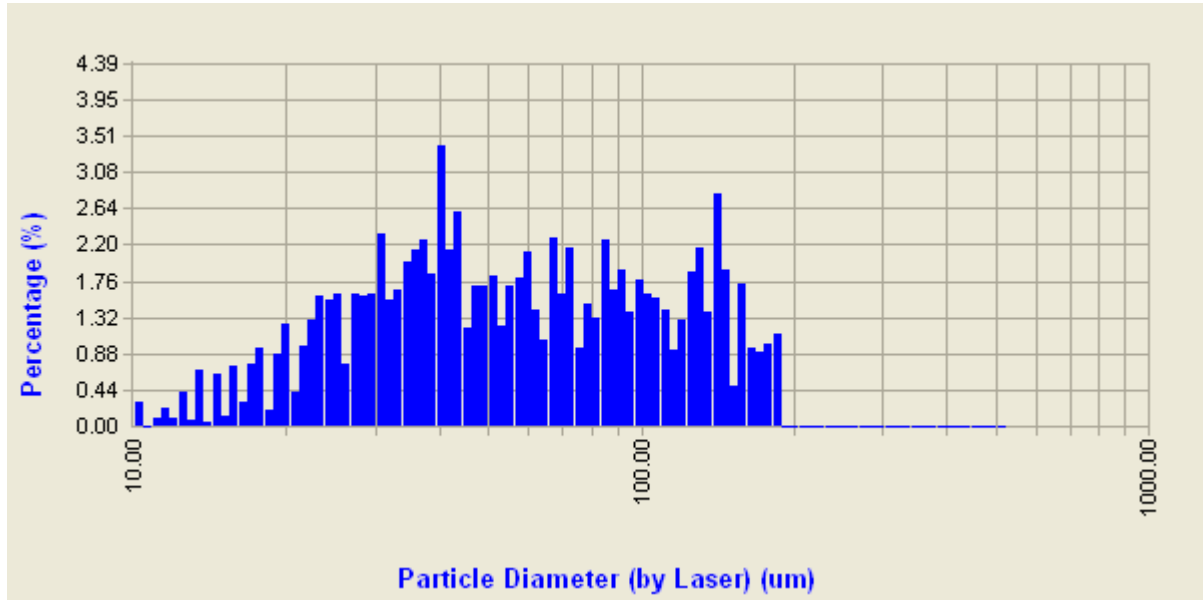
Volume Ranges Table : OA154/8

Range	Local(%)	Under(%)
10.0-15.6	4.73	4.82
15.6-31.2	29.01	33.83
31.2-62.5	36.25	70.08
62.5-125.0	29.92	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/9

Volume Histogram : OA154/9

Mean: 67.50 um STD: 44.35 um Conf.: 100.00 %
 D10 : 21.76 um D50: 53.31 um D90: 138.17 um



Area Ranges Table : OA154/9

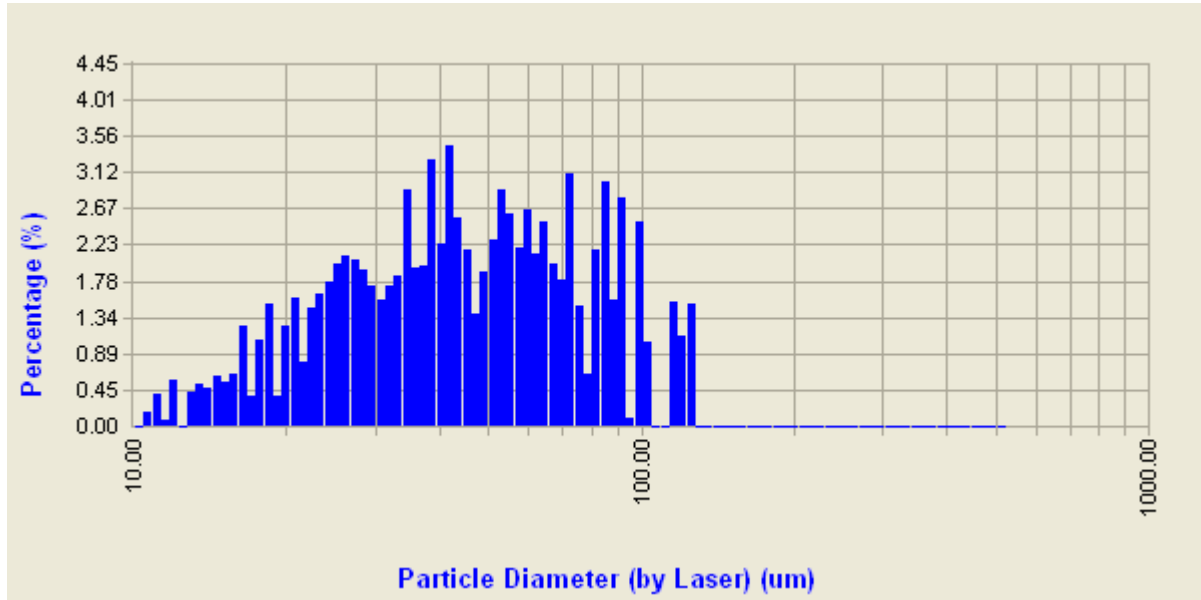
Range	Local(%)	Under(%)
10.0-15.6	9.59	9.90
15.6-31.2	37.51	47.42
31.2-62.5	34.12	81.54
62.5-125.0	14.01	95.54
125.0-250.0	4.46	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/9

Range	Local(%)	Under(%)
10.0-15.6	2.82	2.89
15.6-31.2	20.09	22.98
31.2-62.5	33.76	56.75
62.5-125.0	27.92	84.67
125.0-250.0	15.33	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/10**Volume Histogram : OA154/10**

Mean: 49.89 um STD: 27.25 um Conf.: 99.96 %
 D10 : 19.19 um D50: 43.13 um D90: 89.91 um

**Area Ranges Table : OA154/10**

Range	Local(%)	Under(%)
10.0-15.6	11.96	13.69
15.6-31.2	38.75	52.44
31.2-62.5	34.91	87.34
62.5-125.0	12.46	99.80
125.0-250.0	0.20	100.00
250.0-500.0	0.00	100.00

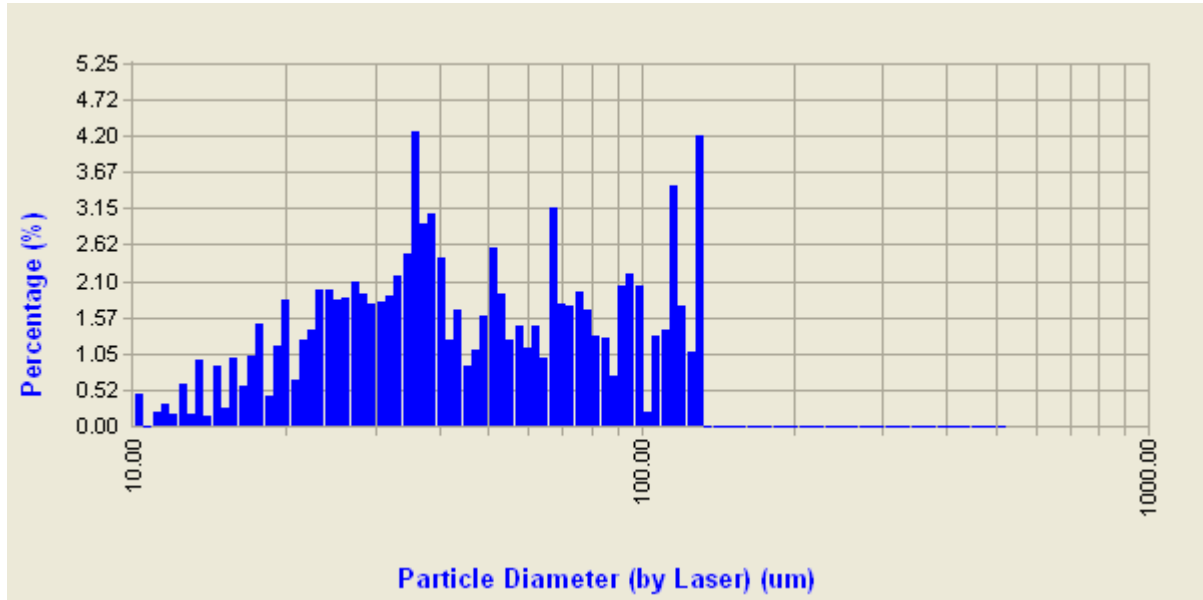
Volume Ranges Table : OA154/10

Range	Local(%)	Under(%)
10.0-15.6	4.29	4.74
15.6-31.2	24.38	29.12
31.2-62.5	41.91	71.03
62.5-125.0	28.28	99.31
125.0-250.0	0.69	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/11

Volume Histogram : OA154/11

Mean: 54.26 um STD: 33.76 um Conf.: 99.97 %
 D10 : 19.48 um D50: 41.13 um D90: 113.65 um



Area Ranges Table : OA154/11

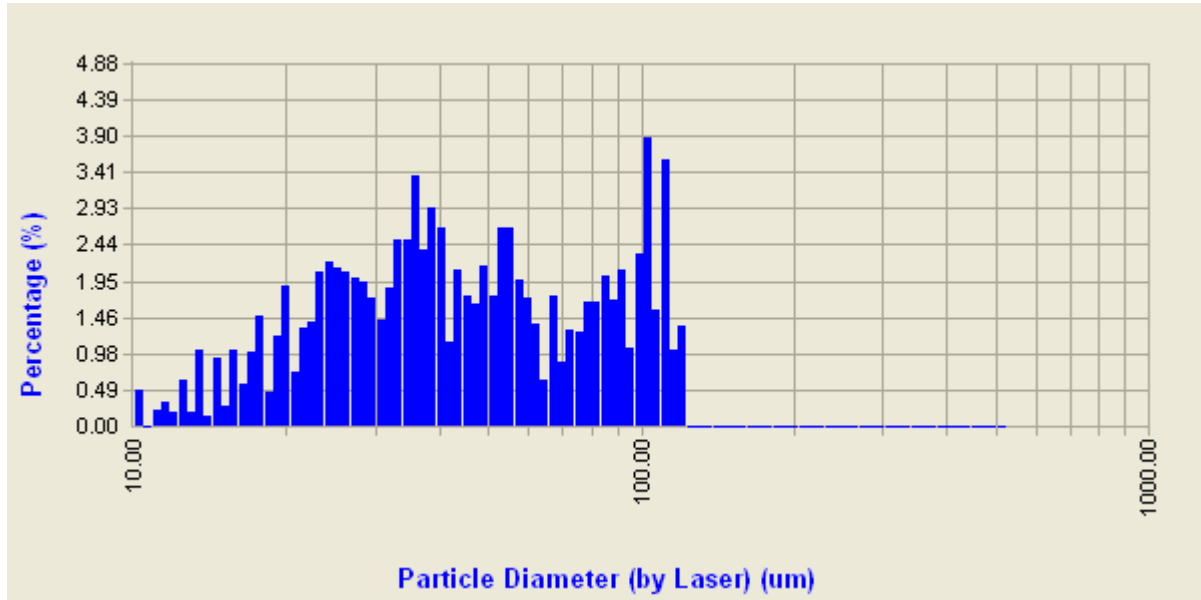
Range	Local(%)	Under(%)
10.0-15.6	12.79	13.32
15.6-31.2	41.55	54.88
31.2-62.5	31.36	86.24
62.5-125.0	12.45	98.69
125.0-250.0	1.31	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/11

Range	Local(%)	Under(%)
10.0-15.6	4.41	4.55
15.6-31.2	25.73	30.28
31.2-62.5	35.46	65.74
62.5-125.0	29.63	95.37
125.0-250.0	4.63	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/12**Volume Histogram : OA154/12**

Mean: 51.21 um STD: 30.11 um Conf: 99.93 %
 D10 : 18.40 um D50: 41.13 um D90: 101.75 um

**Area Ranges Table : OA154/12**

Range	Local(%)	Under(%)
10.0-15.6	13.08	13.64
15.6-31.2	41.75	55.39
31.2-62.5	32.87	88.26
62.5-125.0	11.74	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

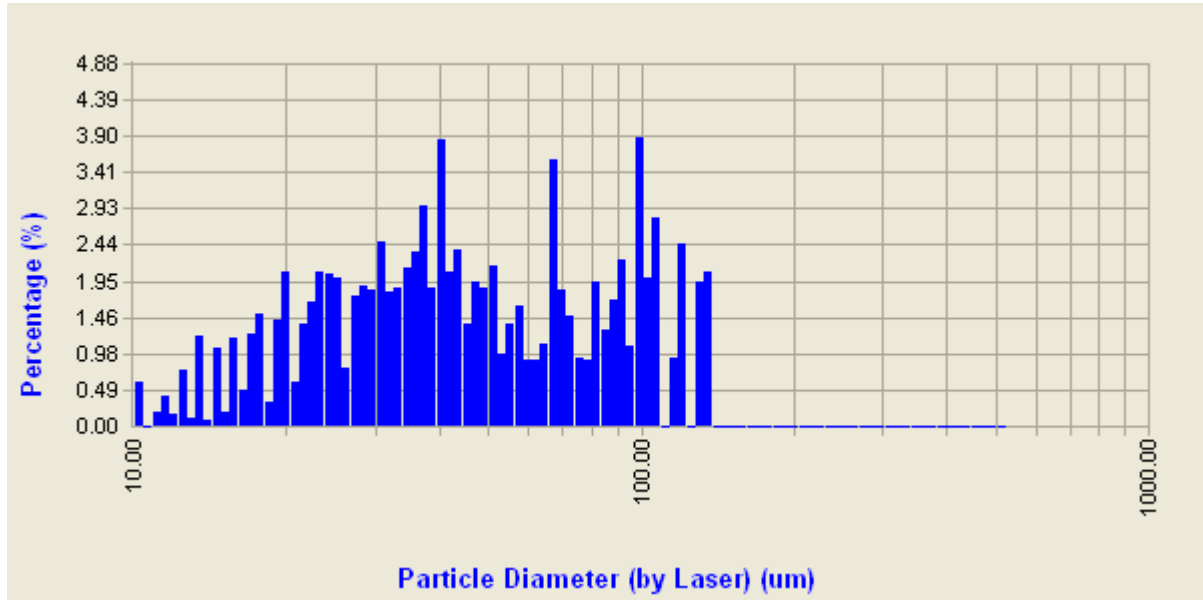
Volume Ranges Table : OA154/12

Range	Local(%)	Under(%)
10.0-15.6	4.63	4.78
15.6-31.2	26.41	31.19
31.2-62.5	39.11	70.31
62.5-125.0	29.69	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/13

Volume Histogram : OA154/13

Mean: 53.39 um STD: 33.21 um Conf: 99.64 %
 D10 : 18.49 um D50: 41.34 um D90: 104.44 um



Area Ranges Table : OA154/13

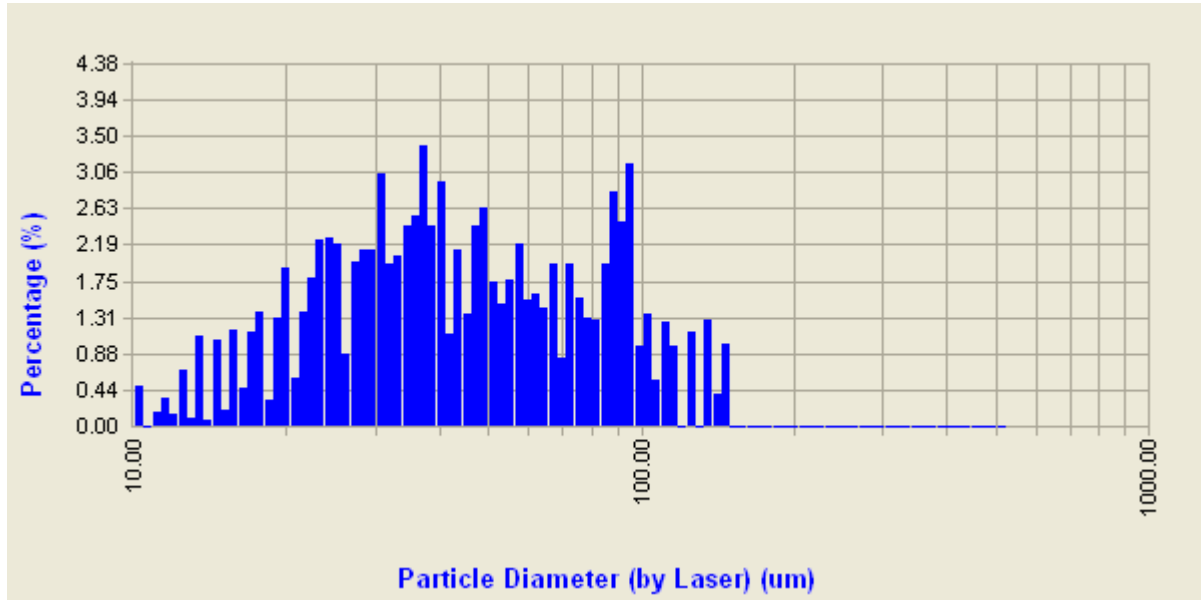
Range	Local(%)	Under(%)
10.0-15.6	14.31	14.81
15.6-31.2	42.22	57.03
31.2-62.5	29.35	86.38
62.5-125.0	12.53	98.91
125.0-250.0	1.09	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/13

Range	Local(%)	Under(%)
10.0-15.6	5.03	5.17
15.6-31.2	26.47	31.64
31.2-62.5	34.13	65.77
62.5-125.0	30.21	95.98
125.0-250.0	4.02	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/14**Volume Histogram : OA154/14**

Mean: 50.88 um STD: 31.04 um Conf.: 99.98 %
 D10 : 18.49 um D50: 40.25 um D90: 94.65 um

**Area Ranges Table : OA154/14**

Range	Local(%)	Under(%)
10.0-15.6	12.77	13.18
15.6-31.2	43.43	56.61
31.2-62.5	31.28	87.90
62.5-125.0	11.40	99.29
125.0-250.0	0.71	100.00
250.0-500.0	0.00	100.00

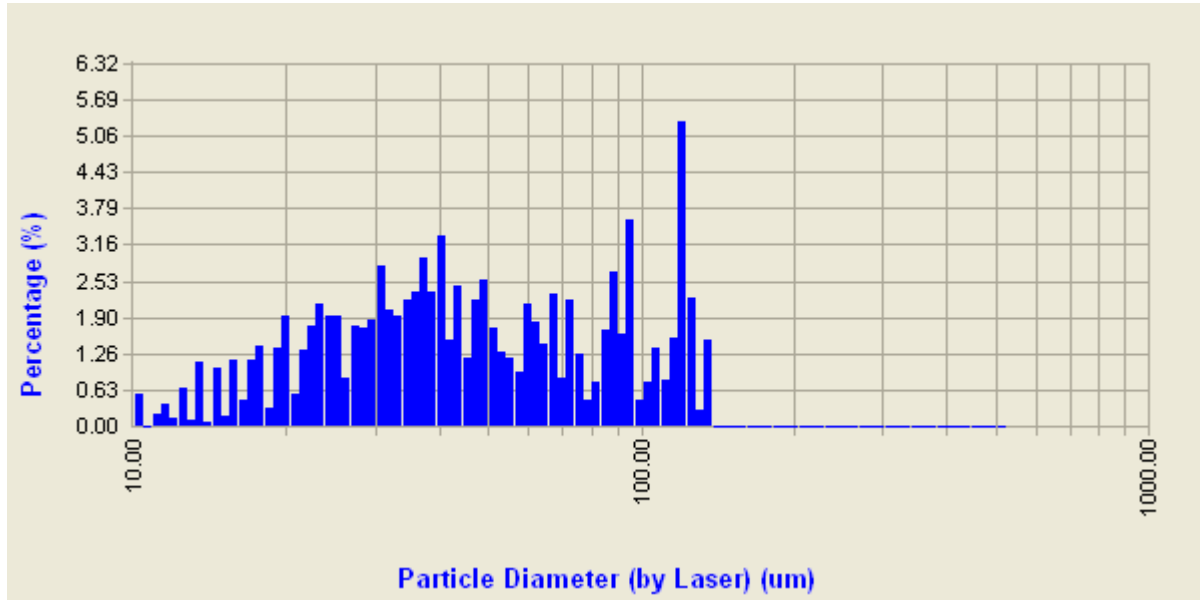
Volume Ranges Table : OA154/14

Range	Local(%)	Under(%)
10.0-15.6	4.56	4.68
15.6-31.2	28.00	32.68
31.2-62.5	37.26	69.94
62.5-125.0	27.28	97.22
125.0-250.0	2.78	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/15

Volume Histogram : OA154/15

Mean: 54.23 um STD: 33.86 um Conf.: 99.88 %
 D10 : 18.49 um D50: 42.43 um D90: 116.41 um



Area Ranges Table : OA154/15

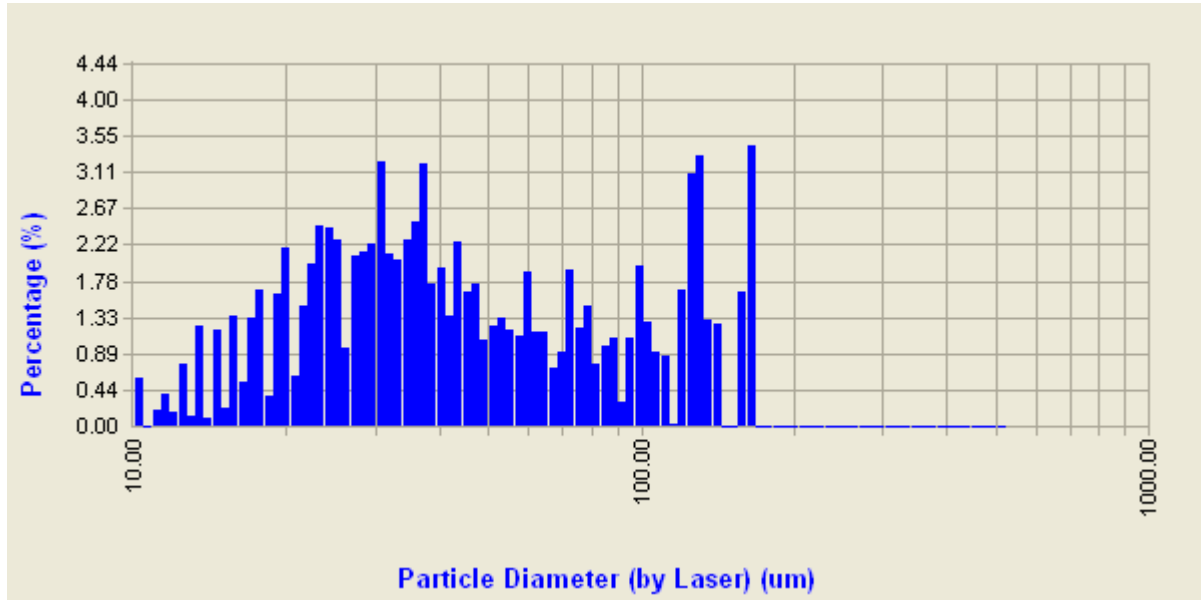
Range	Local(%)	Under(%)
10.0-15.6	13.58	14.06
15.6-31.2	41.95	56.01
31.2-62.5	30.67	86.68
62.5-125.0	12.48	99.16
125.0-250.0	0.84	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/15

Range	Local(%)	Under(%)
10.0-15.6	4.70	4.83
15.6-31.2	26.08	30.91
31.2-62.5	35.45	66.36
62.5-125.0	30.61	96.98
125.0-250.0	3.02	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/16**Volume Histogram : OA154/16**

Mean: 57.22 um STD: 42.44 um Conf.: 99.87 %
 D10 : 18.49 um D50: 39.17 um D90: 129.46 um

**Area Ranges Table : OA154/16**

Range	Local(%)	Under(%)
10.0-15.6	14.56	15.05
15.6-31.2	47.30	62.34
31.2-62.5	26.63	88.98
62.5-125.0	7.85	96.83
125.0-250.0	3.17	100.00
250.0-500.0	0.00	100.00

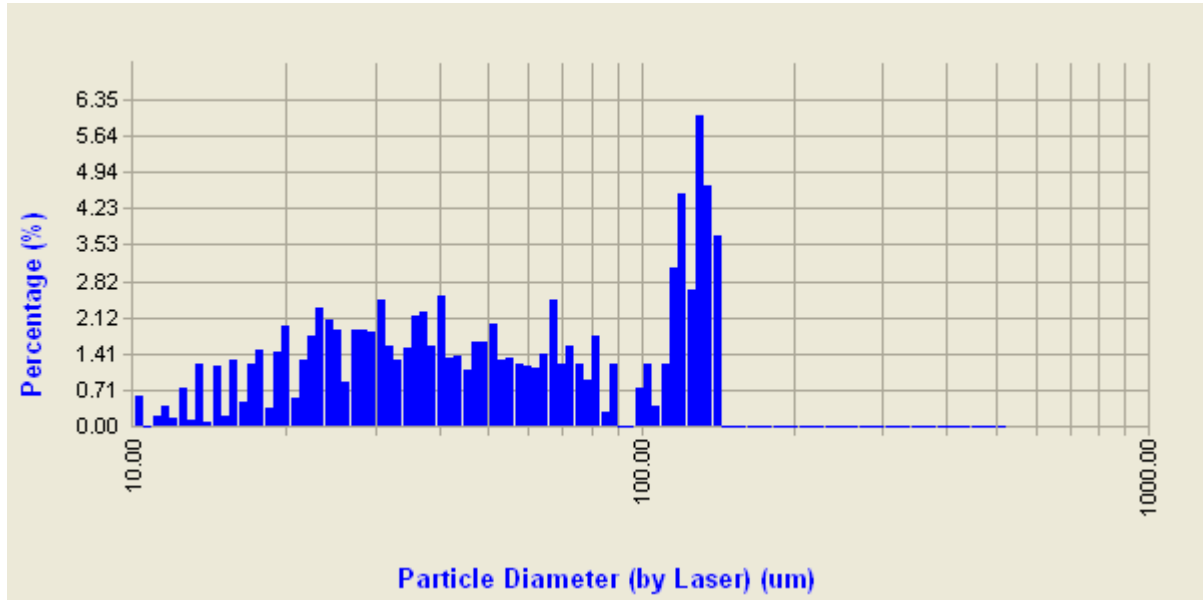
Volume Ranges Table : OA154/16

Range	Local(%)	Under(%)
10.0-15.6	5.26	5.40
15.6-31.2	30.62	36.02
31.2-62.5	31.54	67.56
62.5-125.0	19.51	87.07
125.0-250.0	12.93	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/17

Volume Histogram : OA154/17

Mean: 63.01 um STD: 42.51 um Conf.: 99.26 %
 D10 : 18.49 um D50: 46.78 um D90: 129.46 um



Area Ranges Table : OA154/17

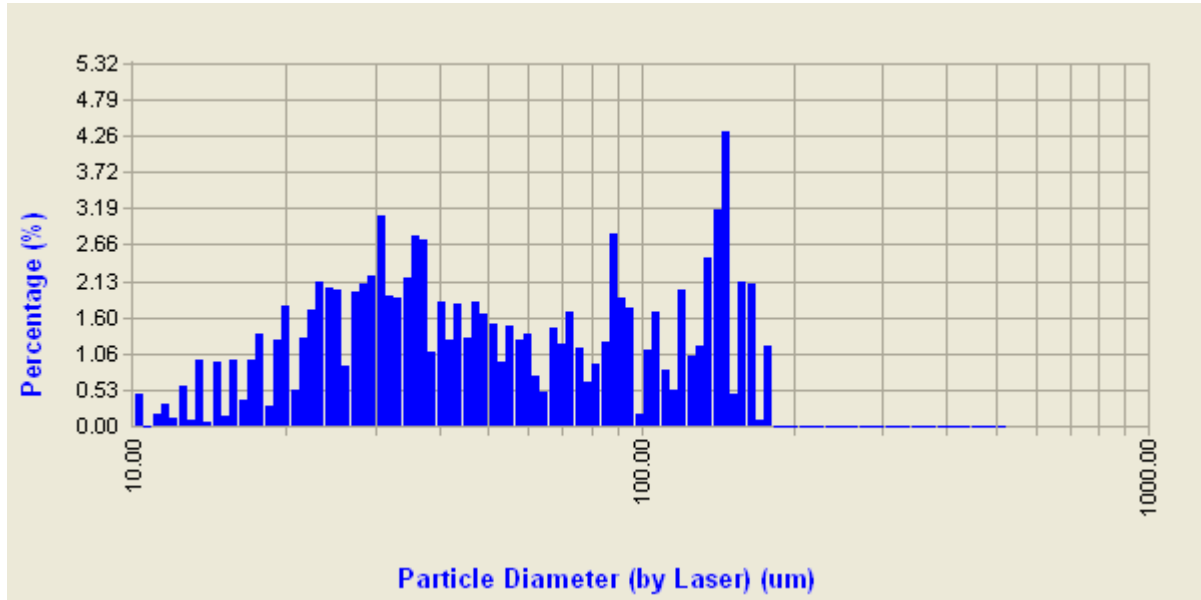
Range	Local(%)	Under(%)
10.0-15.6	15.22	15.74
15.6-31.2	44.67	60.41
31.2-62.5	24.60	85.01
62.5-125.0	10.45	95.46
125.0-250.0	4.54	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/17

Range	Local(%)	Under(%)
10.0-15.6	5.10	5.23
15.6-31.2	26.56	31.79
31.2-62.5	27.55	59.34
62.5-125.0	24.62	83.96
125.0-250.0	16.04	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/18**Volume Histogram : OA154/18**

Mean: 65.14 um STD: 46.43 um Conf.: 99.99 %
 D10 : 19.58 um D50: 45.69 um D90: 142.52 um

**Area Ranges Table : OA154/18**

Range	Local(%)	Under(%)
10.0-15.6	12.63	13.06
15.6-31.2	44.96	58.02
31.2-62.5	27.53	85.54
62.5-125.0	9.89	95.43
125.0-250.0	4.57	100.00
250.0-500.0	0.00	100.00

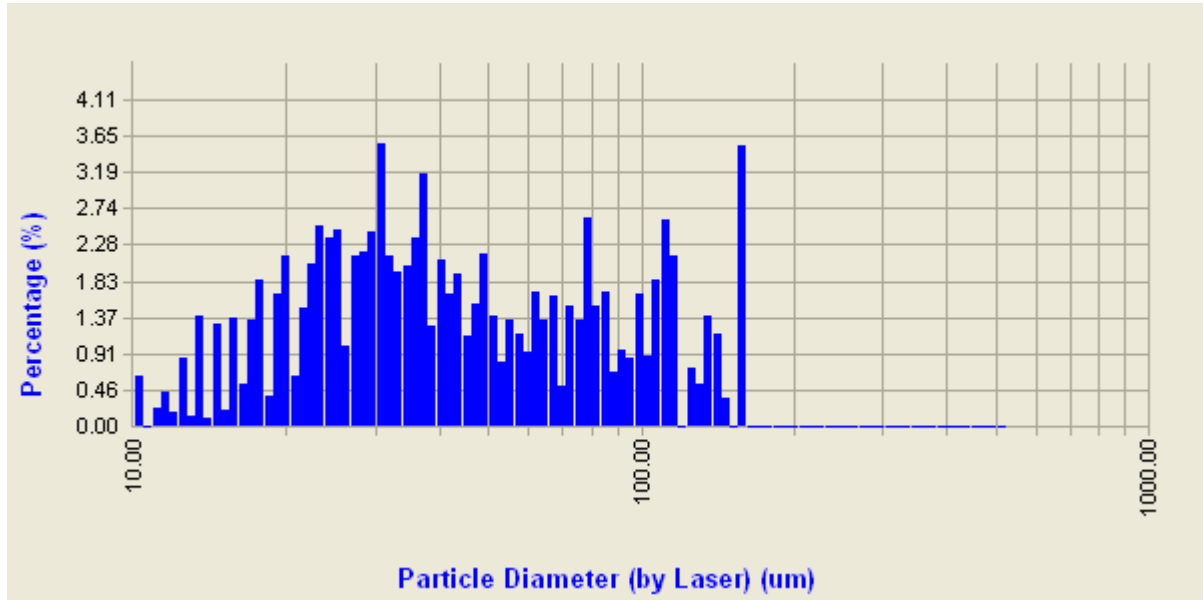
Volume Ranges Table : OA154/18

Range	Local(%)	Under(%)
10.0-15.6	4.11	4.22
15.6-31.2	26.66	30.87
31.2-62.5	29.38	60.25
62.5-125.0	22.38	82.63
125.0-250.0	17.37	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/19

Volume Histogram : OA154/19

Mean: 53.68 um STD: 38.36 um Conf.: 99.90 %
 D10 : 17.41 um D50: 38.08 um D90: 112.06 um



Area Ranges Table : OA154/19

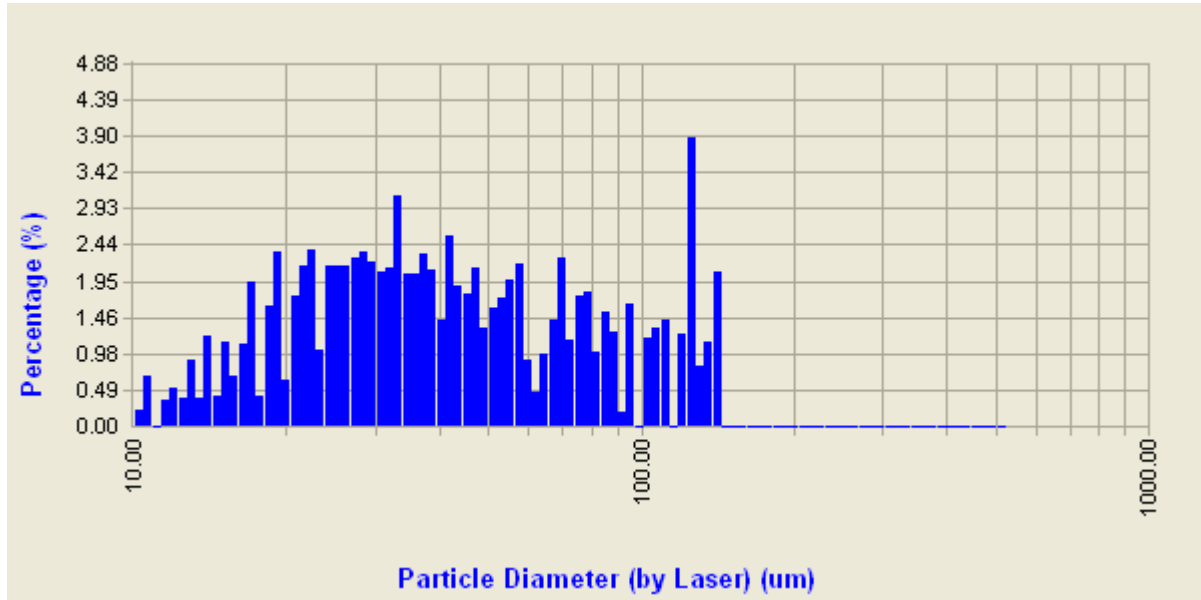
Range	Local(%)	Under(%)
10.0-15.6	15.52	16.03
15.6-31.2	47.67	63.71
31.2-62.5	24.82	88.53
62.5-125.0	9.67	98.20
125.0-250.0	1.80	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/19

Range	Local(%)	Under(%)
10.0-15.6	5.77	5.92
15.6-31.2	31.84	37.75
31.2-62.5	30.17	67.92
62.5-125.0	24.39	92.31
125.0-250.0	7.69	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/20**Volume Histogram : OA154/20**

Mean: 50.05 um STD: 34.55 um Conf.: 99.76 %
 D10 : 16.67 um D50: 37.34 um D90: 110.23 um

**Area Ranges Table : OA154/20**

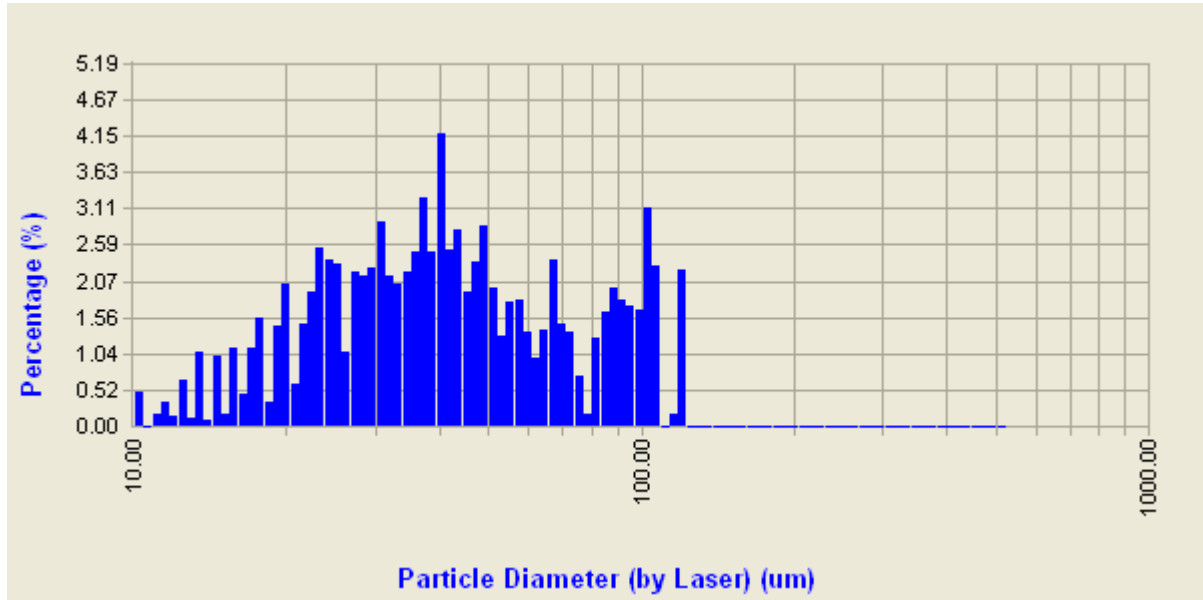
Range	Local(%)	Under(%)
10.0-15.6	16.03	17.95
15.6-31.2	46.00	63.95
31.2-62.5	26.10	90.05
62.5-125.0	8.99	99.05
125.0-250.0	0.95	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/20

Range	Local(%)	Under(%)
10.0-15.6	6.22	6.76
15.6-31.2	31.56	38.32
31.2-62.5	33.36	71.69
62.5-125.0	24.30	95.98
125.0-250.0	4.02	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/21

Volume Histogram : OA154/21
 Mean: 47.50 um STD: 27.79 um Conf.: 99.97 %
 D10 : 18.49 um D50: 39.17 um D90: 94.65 um



Area Ranges Table : OA154/21

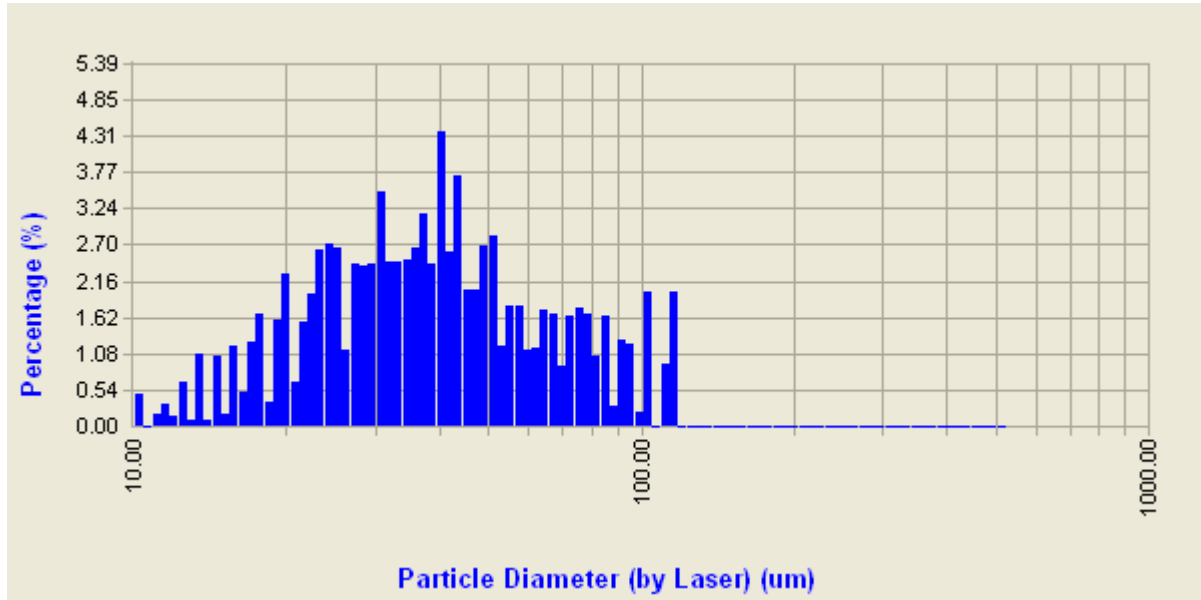
Range	Local(%)	Under(%)
10.0-15.6	12.17	12.56
15.6-31.2	44.41	56.97
31.2-62.5	32.88	89.85
62.5-125.0	10.15	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/21

Range	Local(%)	Under(%)
10.0-15.6	4.49	4.61
15.6-31.2	29.59	34.20
31.2-62.5	40.21	74.41
62.5-125.0	25.59	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/22**Volume Histogram : OA154/22**

Mean: 43.54 um STD: 24.53 um Conf.: 100.00 %
 D10 : 18.49 um D50: 36.99 um D90: 81.59 um

**Area Ranges Table : OA154/22**

Range	Local(%)	Under(%)
10.0-15.6	11.65	12.02
15.6-31.2	46.53	58.55
31.2-62.5	33.41	91.97
62.5-125.0	8.03	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

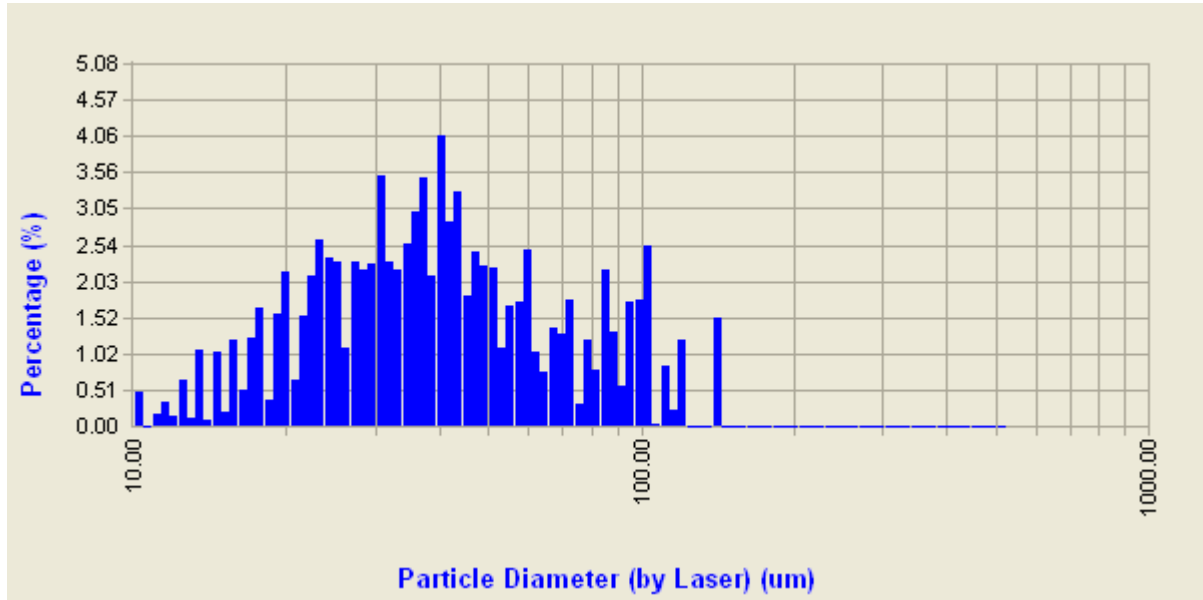
Volume Ranges Table : OA154/22

Range	Local(%)	Under(%)
10.0-15.6	4.52	4.63
15.6-31.2	32.54	37.18
31.2-62.5	42.61	79.78
62.5-125.0	20.22	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/23

Volume Histogram : OA154/23

Mean: 45.88 um STD: 27.92 um Conf.: 99.97 %
 D10 : 18.49 um D50: 38.08 um D90: 90.30 um



Area Ranges Table : OA154/23

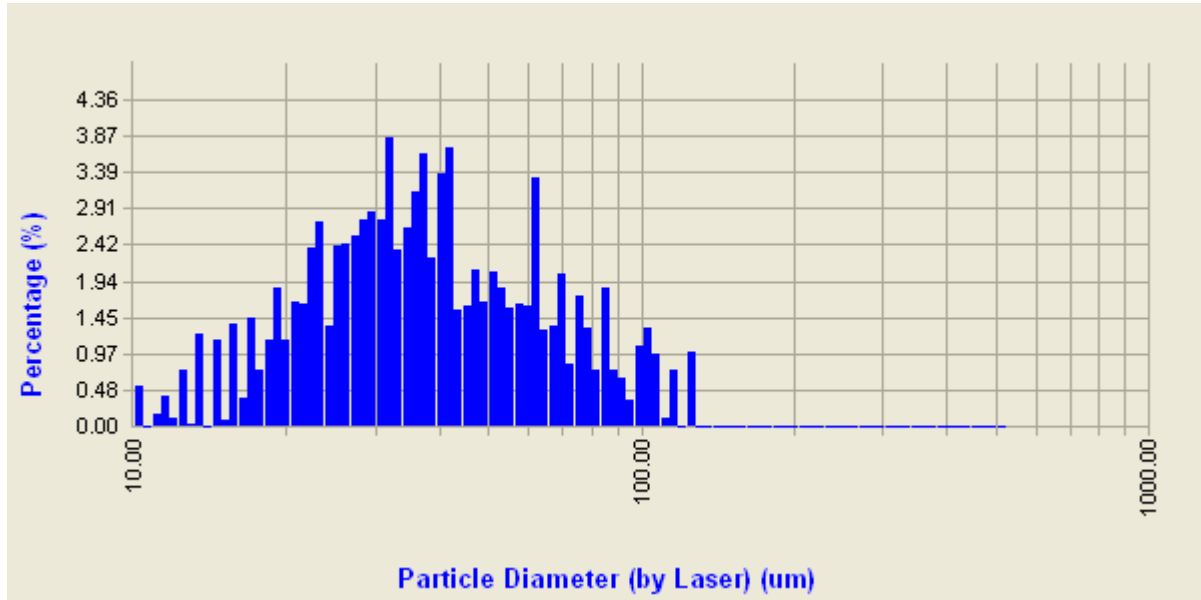
Range	Local(%)	Under(%)
10.0-15.6	12.00	12.39
15.6-31.2	45.73	58.12
31.2-62.5	33.70	91.82
62.5-125.0	7.82	99.64
125.0-250.0	0.36	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/23

Range	Local(%)	Under(%)
10.0-15.6	4.57	4.68
15.6-31.2	31.32	36.00
31.2-62.5	42.41	78.41
62.5-125.0	20.07	98.47
125.0-250.0	1.53	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/24**Volume Histogram : OA154/24**

Mean: 42.70 um STD: 24.24 um Conf.: 100.00 %
 D10 : 18.59 um D50: 36.08 um D90: 77.64 um

**Area Ranges Table : OA154/24**

Range	Local(%)	Under(%)
10.0-15.6	12.02	12.31
15.6-31.2	48.29	60.60
31.2-62.5	31.95	92.55
62.5-125.0	7.41	99.96
125.0-250.0	0.04	100.00
250.0-500.0	0.00	100.00

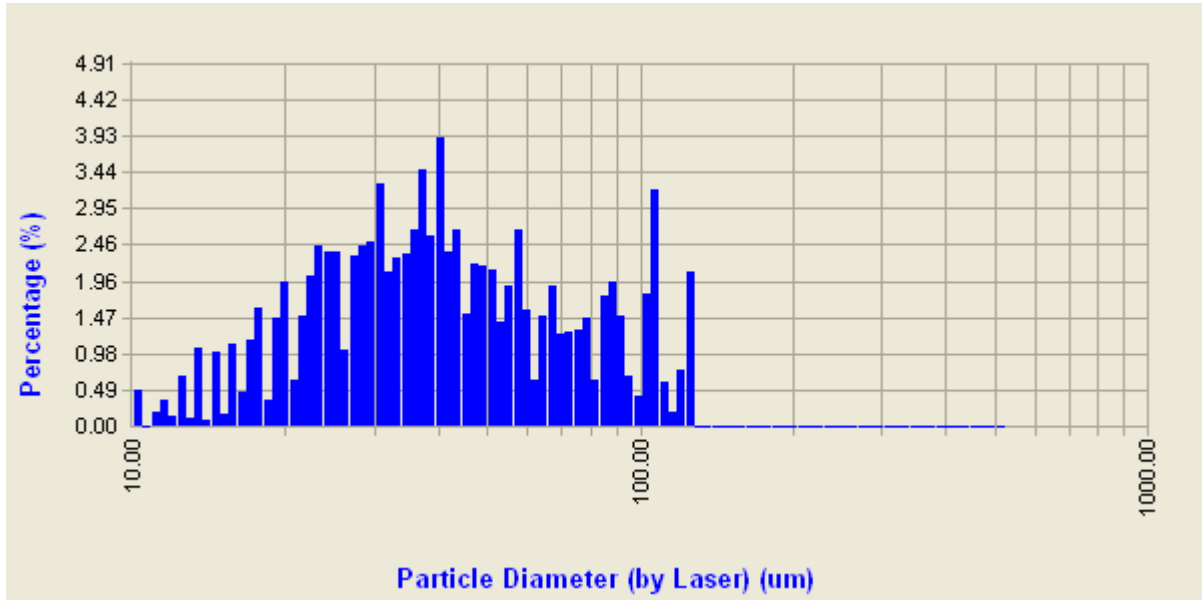
Volume Ranges Table : OA154/24

Range	Local(%)	Under(%)
10.0-15.6	4.73	4.82
15.6-31.2	34.63	39.45
31.2-62.5	41.65	81.10
62.5-125.0	18.76	99.86
125.0-250.0	0.14	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/25

Volume Histogram : OA154/25

Mean: 47.05 um STD: 28.18 um Conf.: 99.99 %
 D10 : 18.49 um D50: 38.08 um D90: 91.39 um



Area Ranges Table : OA154/25

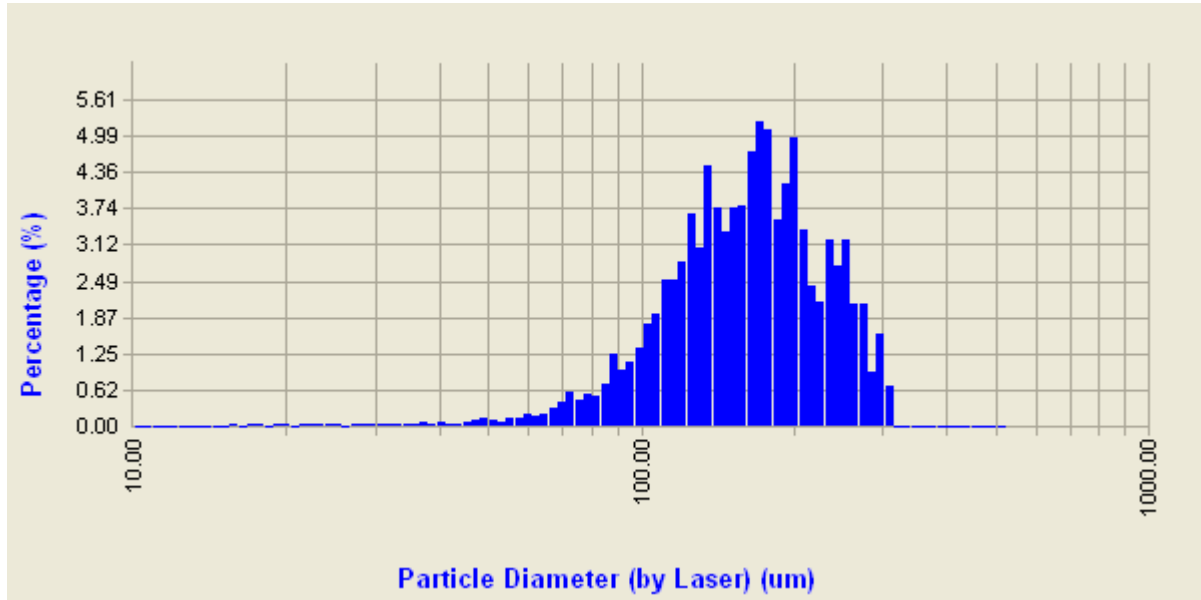
Range	Local(%)	Under(%)
10.0-15.6	12.10	12.48
15.6-31.2	45.38	57.86
31.2-62.5	32.62	90.48
62.5-125.0	9.19	99.67
125.0-250.0	0.33	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/25

Range	Local(%)	Under(%)
10.0-15.6	4.51	4.62
15.6-31.2	30.70	35.32
31.2-62.5	40.33	75.65
62.5-125.0	23.13	98.78
125.0-250.0	1.22	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/26**Volume Histogram : OA154/26**

Mean: 166.94 um STD: 56.48 um Conf.: 99.98 %
 D10 : 99.00 um D50: 163.19 um D90: 248.05 um

**Area Ranges Table : OA154/26**

Range	Local(%)	Under(%)
10.0-15.6	0.82	0.85
15.6-31.2	2.55	3.40
31.2-62.5	4.31	7.71
62.5-125.0	31.57	39.27
125.0-250.0	55.85	95.13
250.0-500.0	4.87	100.00

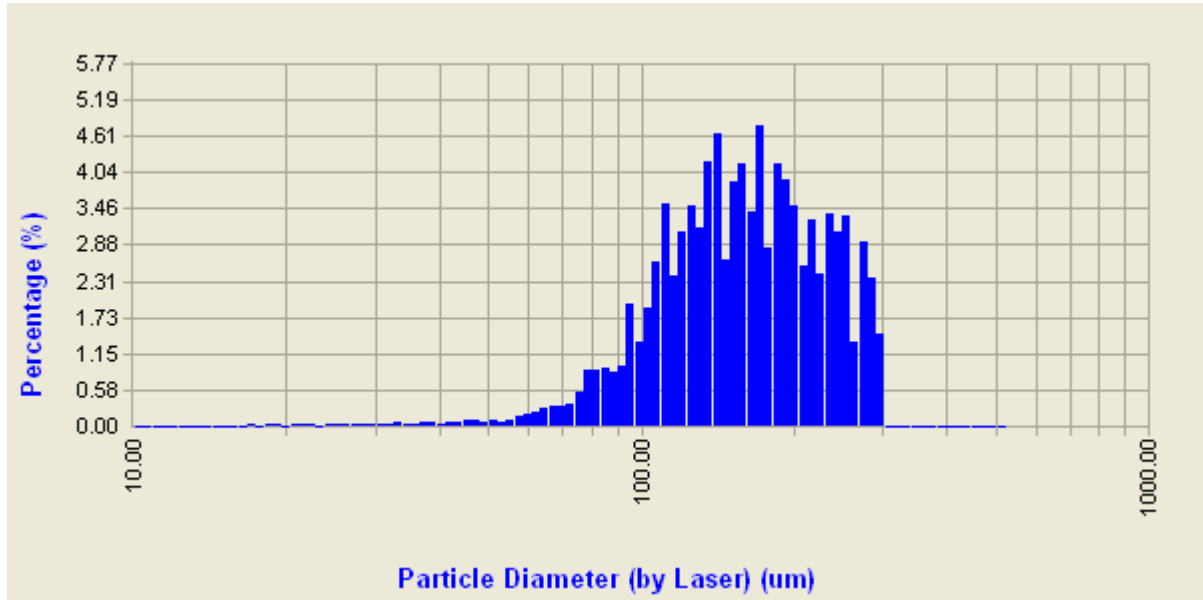
Volume Ranges Table : OA154/26

Range	Local(%)	Under(%)
10.0-15.6	0.07	0.07
15.6-31.2	0.40	0.48
31.2-62.5	1.44	1.91
62.5-125.0	21.97	23.89
125.0-250.0	66.81	90.70
250.0-500.0	9.30	100.00

Volume Distribution: OA154/27

Volume Histogram : OA154/27

Mean: 165.71 um STD: 58.29 um Conf.: 99.69 %
 D10 : 96.14 um D50: 158.15 um D90: 250.63 um



Area Ranges Table : OA154/27

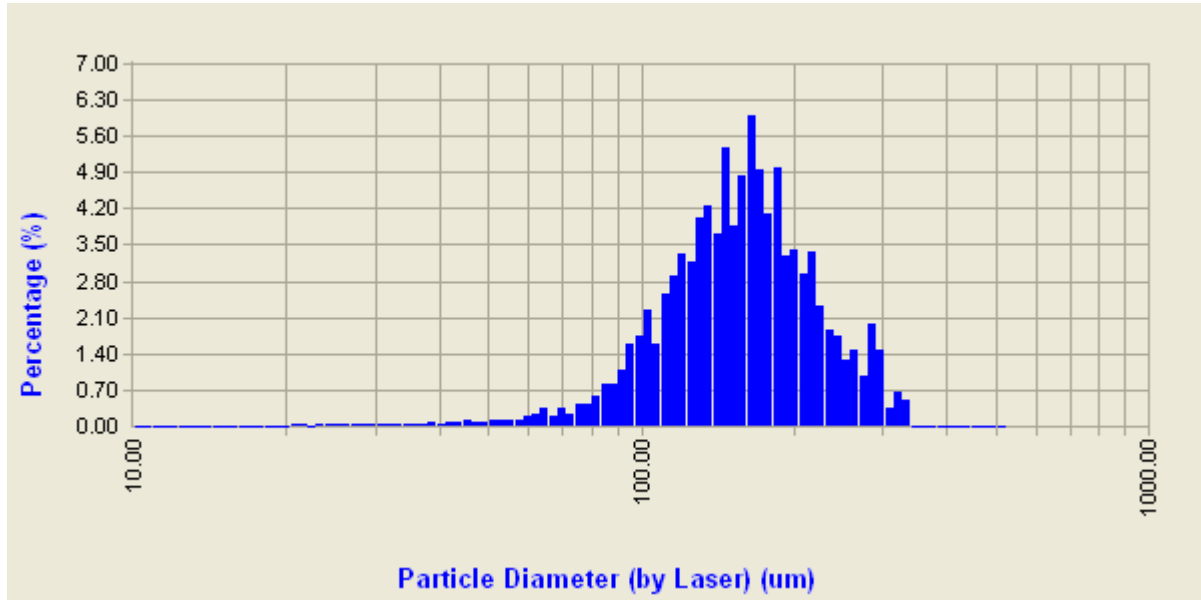
Range	Local(%)	Under(%)
10.0-15.6	0.73	0.82
15.6-31.2	2.39	3.21
31.2-62.5	4.29	7.50
62.5-125.0	34.98	42.48
125.0-250.0	51.88	94.36
250.0-500.0	5.64	100.00

Volume Ranges Table : OA154/27

Range	Local(%)	Under(%)
10.0-15.6	0.07	0.07
15.6-31.2	0.38	0.45
31.2-62.5	1.45	1.90
62.5-125.0	24.71	26.61
125.0-250.0	62.58	89.19
250.0-500.0	10.81	100.00

Volume Distribution: OA154/28**Volume Histogram : OA154/28**

Mean: 162.87 um STD: 55.78 um Conf.: 99.98 %
 D10 : 98.46 um D50: 158.30 um D90: 238.81 um

**Area Ranges Table : OA154/28**

Range	Local(%)	Under(%)
10.0-15.6	0.70	0.80
15.6-31.2	2.17	2.97
31.2-62.5	4.57	7.53
62.5-125.0	31.97	39.51
125.0-250.0	56.29	95.80
250.0-500.0	4.20	100.00

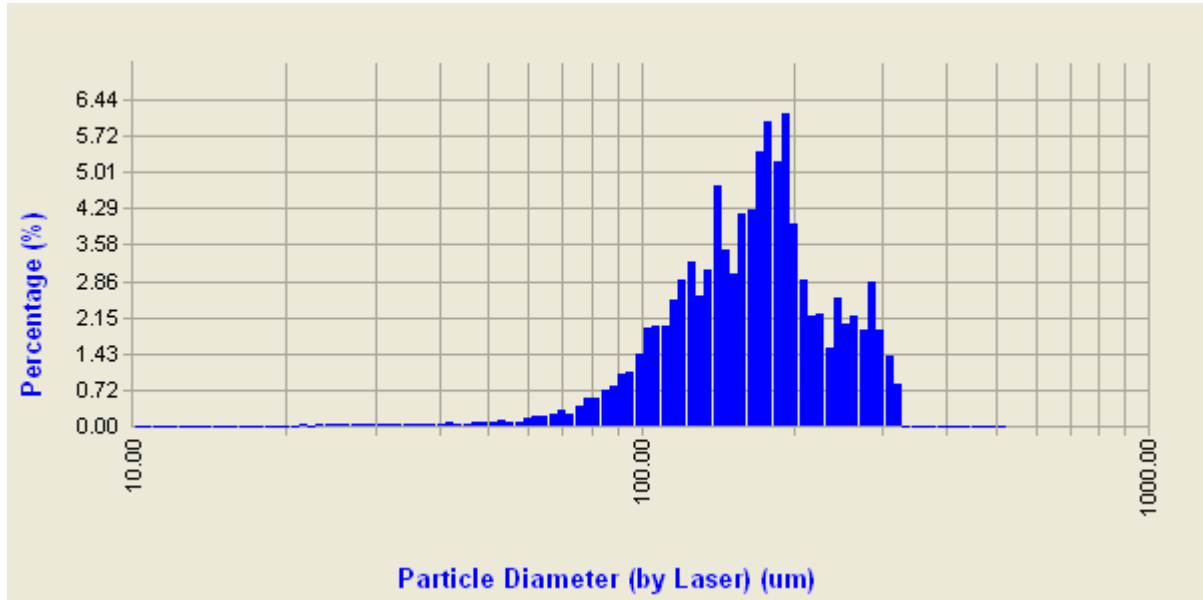
Volume Ranges Table : OA154/28

Range	Local(%)	Under(%)
10.0-15.6	0.06	0.07
15.6-31.2	0.35	0.42
31.2-62.5	1.56	1.97
62.5-125.0	22.92	24.90
125.0-250.0	66.68	91.58
250.0-500.0	8.42	100.00

Volume Distribution: OA154/29

Volume Histogram : OA154/29

Mean: 171.78 um STD: 58.61 um Conf.: 99.99 %
 D10 : 102.72 um D50: 169.08 um D90: 263.73 um



Area Ranges Table : OA154/29

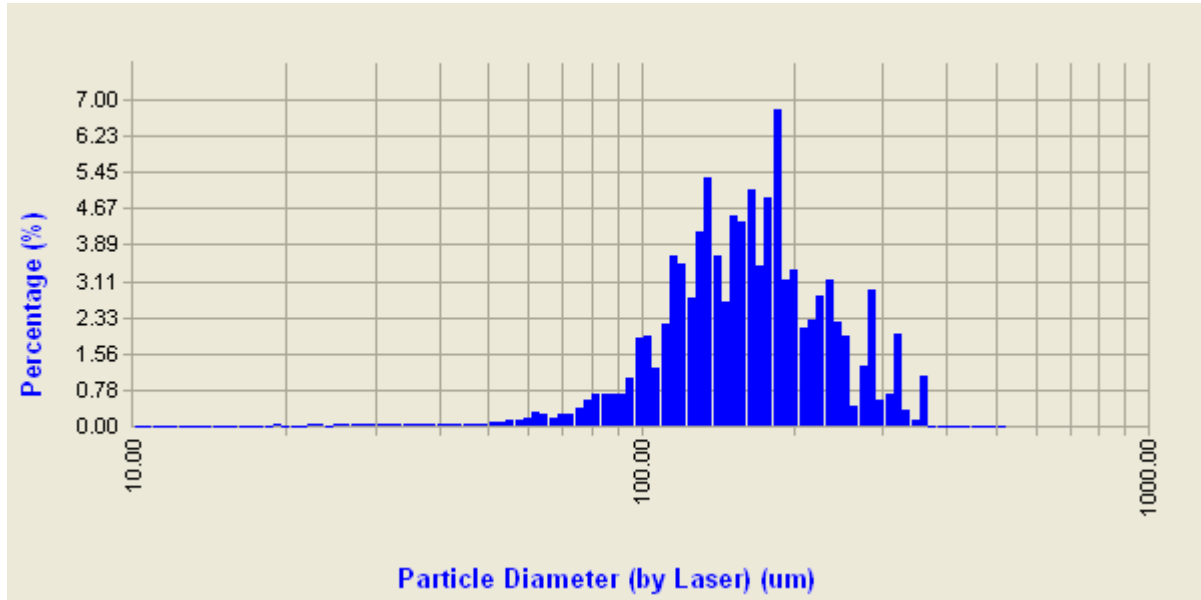
Range	Local(%)	Under(%)
10.0-15.6	0.70	0.79
15.6-31.2	2.03	2.82
31.2-62.5	3.66	6.48
62.5-125.0	29.84	36.32
125.0-250.0	57.01	93.33
250.0-500.0	6.67	100.00

Volume Ranges Table : OA154/29

Range	Local(%)	Under(%)
10.0-15.6	0.06	0.06
15.6-31.2	0.31	0.38
31.2-62.5	1.20	1.57
62.5-125.0	20.31	21.88
125.0-250.0	65.51	87.39
250.0-500.0	12.61	100.00

Volume Distribution: OA154/30**Volume Histogram : OA154/30**

Mean: 169.52 um STD: 61.48 um Conf.: 99.54 %
 D10 : 101.69 um D50: 161.83 um D90: 254.77 um

**Area Ranges Table : OA154/30**

Range	Local(%)	Under(%)
10.0-15.6	0.64	0.66
15.6-31.2	2.47	3.13
31.2-62.5	4.05	7.18
62.5-125.0	30.58	37.77
125.0-250.0	56.82	94.59
250.0-500.0	5.41	100.00

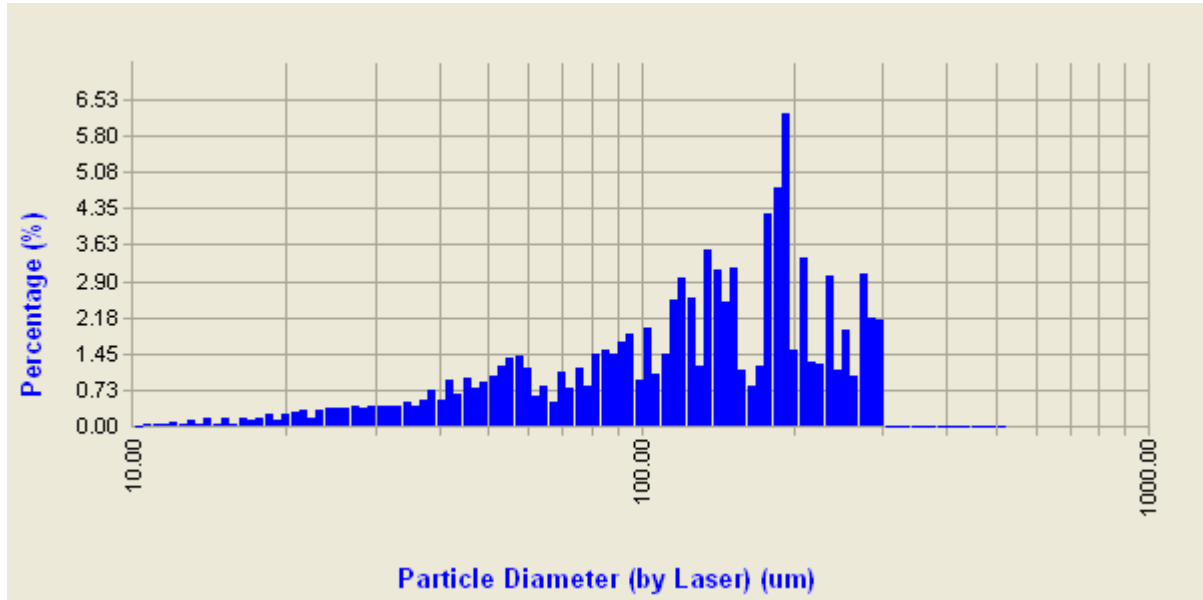
Volume Ranges Table : OA154/30

Range	Local(%)	Under(%)
10.0-15.6	0.06	0.06
15.6-31.2	0.39	0.44
31.2-62.5	1.35	1.79
62.5-125.0	21.43	23.22
125.0-250.0	65.88	89.09
250.0-500.0	10.91	100.00

Volume Distribution: OA154/31

Volume Histogram : OA154/31

Mean: 139.30 um STD: 74.04 um Conf.: 99.98 %
 D10 : 42.93 um D50: 135.40 um D90: 247.46 um



Area Ranges Table : OA154/31

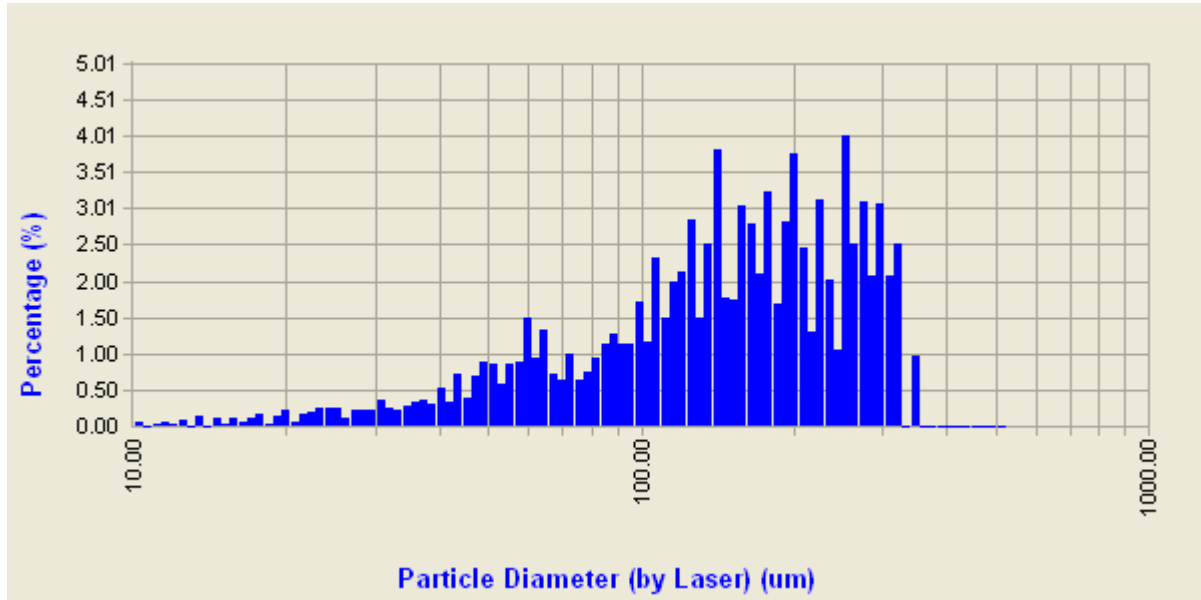
Range	Local(%)	Under(%)
10.0-15.6	5.22	5.89
15.6-31.2	18.37	24.26
31.2-62.5	26.66	50.92
62.5-125.0	23.45	74.37
125.0-250.0	22.87	97.25
250.0-500.0	2.75	100.00

Volume Ranges Table : OA154/31

Range	Local(%)	Under(%)
10.0-15.6	0.76	0.84
15.6-31.2	4.84	5.68
31.2-62.5	14.21	19.89
62.5-125.0	25.26	45.15
125.0-250.0	46.01	91.16
250.0-500.0	8.84	100.00

Volume Distribution: OA154/32**Volume Histogram : OA154/32**

Mean: 160.25 um STD: 82.82 um Conf.: 99.99 %
 D10 : 52.22 um D50: 152.31 um D90: 282.86 um

**Area Ranges Table : OA154/32**

Range	Local(%)	Under(%)
10.0-15.6	4.33	4.47
15.6-31.2	14.13	18.60
31.2-62.5	22.93	41.53
62.5-125.0	25.70	67.23
125.0-250.0	25.55	92.77
250.0-500.0	7.23	100.00

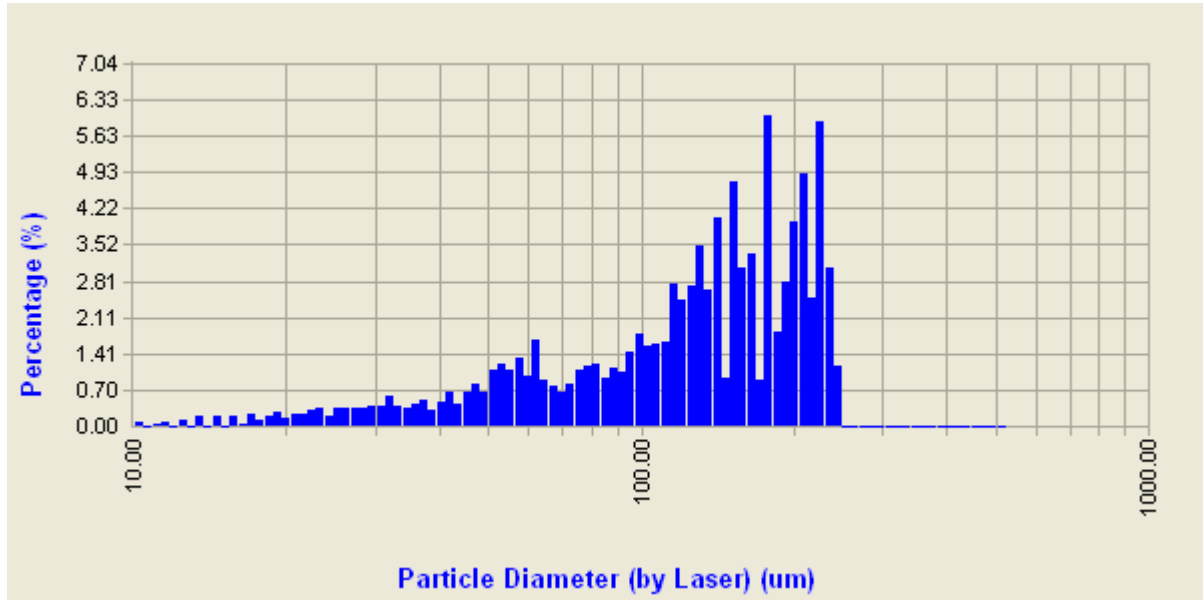
Volume Ranges Table : OA154/32

Range	Local(%)	Under(%)
10.0-15.6	0.53	0.54
15.6-31.2	3.15	3.69
31.2-62.5	10.58	14.27
62.5-125.0	23.08	37.34
125.0-250.0	42.69	80.04
250.0-500.0	19.96	100.00

Volume Distribution: OA154/33

Volume Histogram : OA154/33

Mean: 133.04 um STD: 62.60 um Conf.: 99.91 %
 D10 : 44.83 um D50: 136.68 um D90: 219.78 um



Area Ranges Table : OA154/33

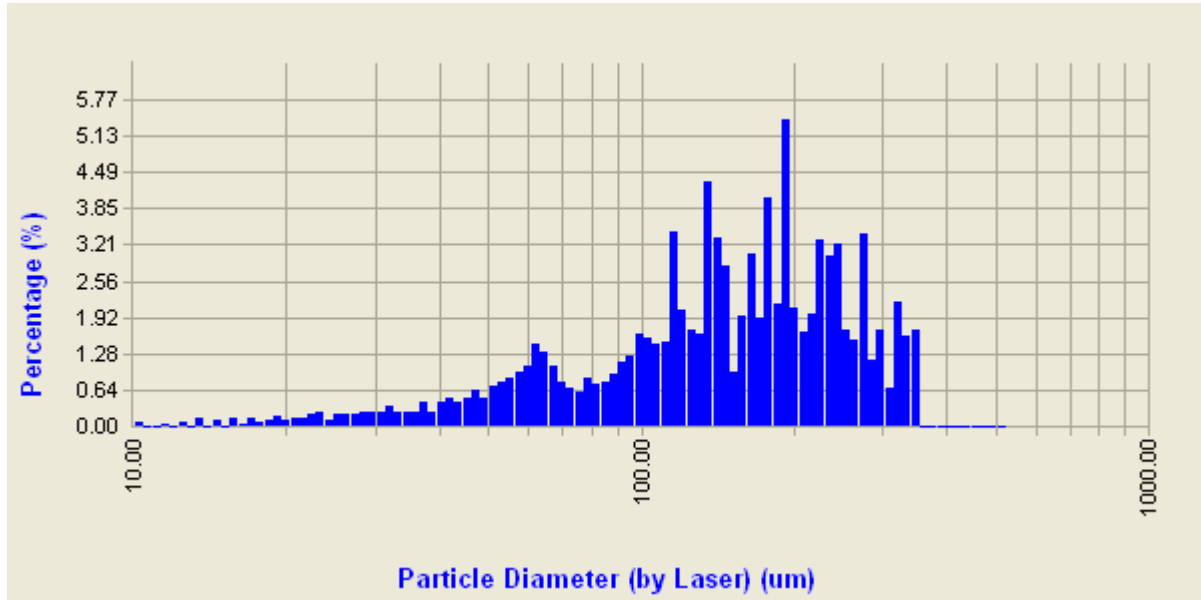
Range	Local(%)	Under(%)
10.0-15.6	5.24	5.38
15.6-31.2	18.70	24.09
31.2-62.5	23.91	47.99
62.5-125.0	23.52	71.51
125.0-250.0	28.49	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/33

Range	Local(%)	Under(%)
10.0-15.6	0.75	0.77
15.6-31.2	4.88	5.65
31.2-62.5	12.83	18.48
62.5-125.0	24.93	43.40
125.0-250.0	56.60	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/34**Volume Histogram : OA154/34**

Mean: 159.63 um STD: 81.64 um Conf.: 100.00 %
 D10 : 53.58 um D50: 148.71 um D90: 274.46 um

**Area Ranges Table : OA154/34**

Range	Local(%)	Under(%)
10.0-15.6	4.21	4.33
15.6-31.2	13.91	18.23
31.2-62.5	21.80	40.04
62.5-125.0	26.02	66.06
125.0-250.0	28.54	94.60
250.0-500.0	5.40	100.00

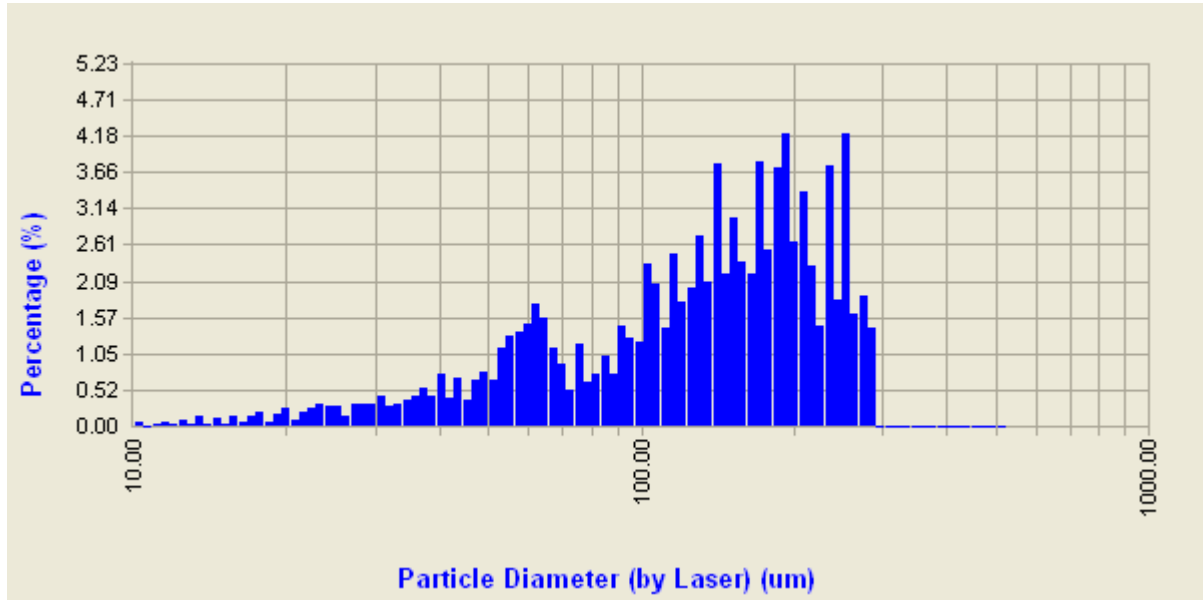
Volume Ranges Table : OA154/34

Range	Local(%)	Under(%)
10.0-15.6	0.51	0.52
15.6-31.2	3.07	3.59
31.2-62.5	9.97	13.56
62.5-125.0	23.11	36.67
125.0-250.0	48.08	84.75
250.0-500.0	15.25	100.00

Volume Distribution: OA154/35

Volume Histogram : OA154/35

Mean: 141.59 um STD: 70.71 um Conf.: 100.00 %
 D10 : 47.96 um D50: 139.81 um D90: 244.79 um



Area Ranges Table : OA154/35

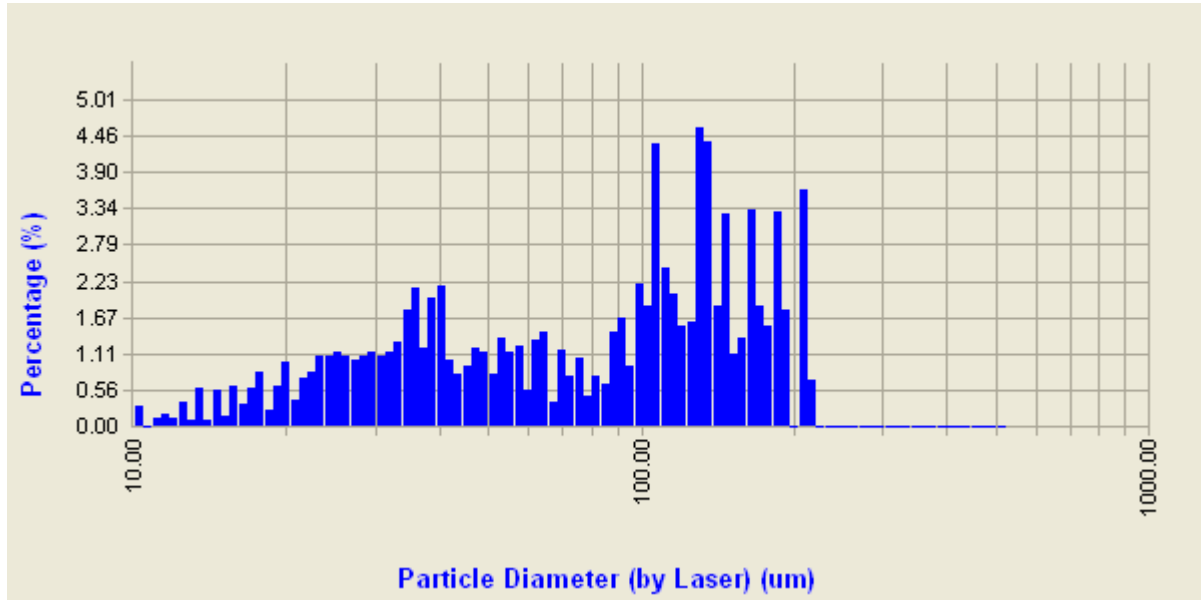
Range	Local(%)	Under(%)
10.0-15.6	4.63	4.86
15.6-31.2	16.29	21.14
31.2-62.5	25.49	46.63
62.5-125.0	24.07	70.70
125.0-250.0	26.80	97.50
250.0-500.0	2.50	100.00

Volume Ranges Table : OA154/35

Range	Local(%)	Under(%)
10.0-15.6	0.63	0.66
15.6-31.2	4.06	4.72
31.2-62.5	13.19	17.90
62.5-125.0	23.77	41.67
125.0-250.0	51.07	92.75
250.0-500.0	7.25	100.00

Volume Distribution: OA154/36**Volume Histogram : OA154/36**

Mean: 92.38 um STD: 57.81 um Conf.: 99.88 %
 D10 : 23.81 um D50: 90.92 um D90: 178.60 um

**Area Ranges Table : OA154/36**

Range	Local(%)	Under(%)
10.0-15.6	11.51	12.02
15.6-31.2	33.82	45.84
31.2-62.5	28.72	74.55
62.5-125.0	14.66	89.21
125.0-250.0	10.79	100.00
250.0-500.0	0.00	100.00

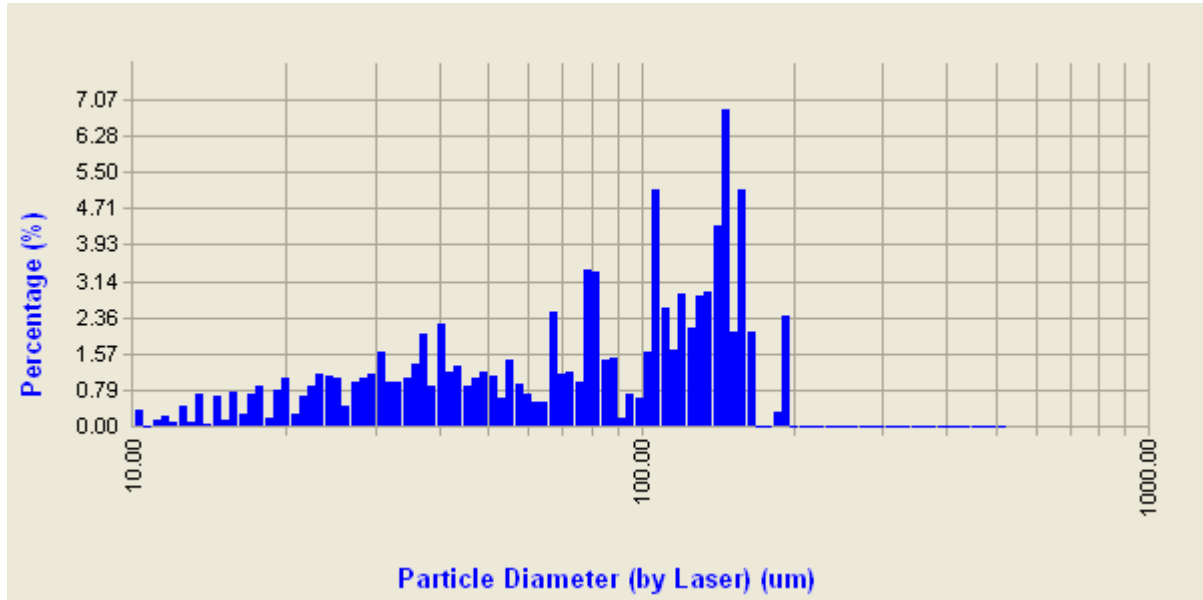
Volume Ranges Table : OA154/36

Range	Local(%)	Under(%)
10.0-15.6	2.78	2.87
15.6-31.2	14.69	17.57
31.2-62.5	23.11	40.68
62.5-125.0	26.49	67.17
125.0-250.0	32.83	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/37

Volume Histogram : OA154/37

Mean: 87.05 um STD: 50.01 um Conf.: 99.59 %
 D10 : 22.85 um D50: 81.59 um D90: 154.49 um



Area Ranges Table : OA154/37

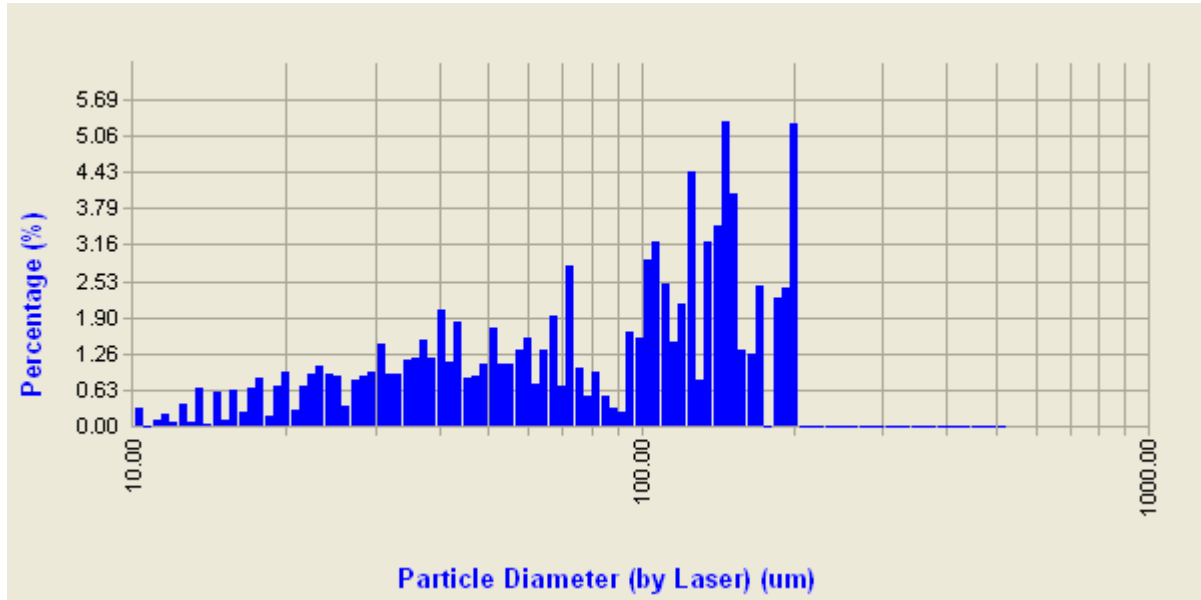
Range	Local(%)	Under(%)
10.0-15.6	12.49	12.94
15.6-31.2	33.51	46.45
31.2-62.5	24.60	71.05
62.5-125.0	18.61	89.66
125.0-250.0	10.34	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/37

Range	Local(%)	Under(%)
10.0-15.6	3.03	3.12
15.6-31.2	14.60	17.71
31.2-62.5	20.06	37.78
62.5-125.0	32.52	70.30
125.0-250.0	29.70	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/38**Volume Histogram : OA154/38**

Mean: 94.20 um STD: 56.21 um Conf.: 99.50 %
 D10 : 23.93 um D50: 96.83 um D90: 169.72 um

**Area Ranges Table : OA154/38**

Range	Local(%)	Under(%)
10.0-15.6	11.53	11.93
15.6-31.2	32.02	43.95
31.2-62.5	27.55	71.50
62.5-125.0	17.29	88.79
125.0-250.0	11.21	100.00
250.0-500.0	0.00	100.00

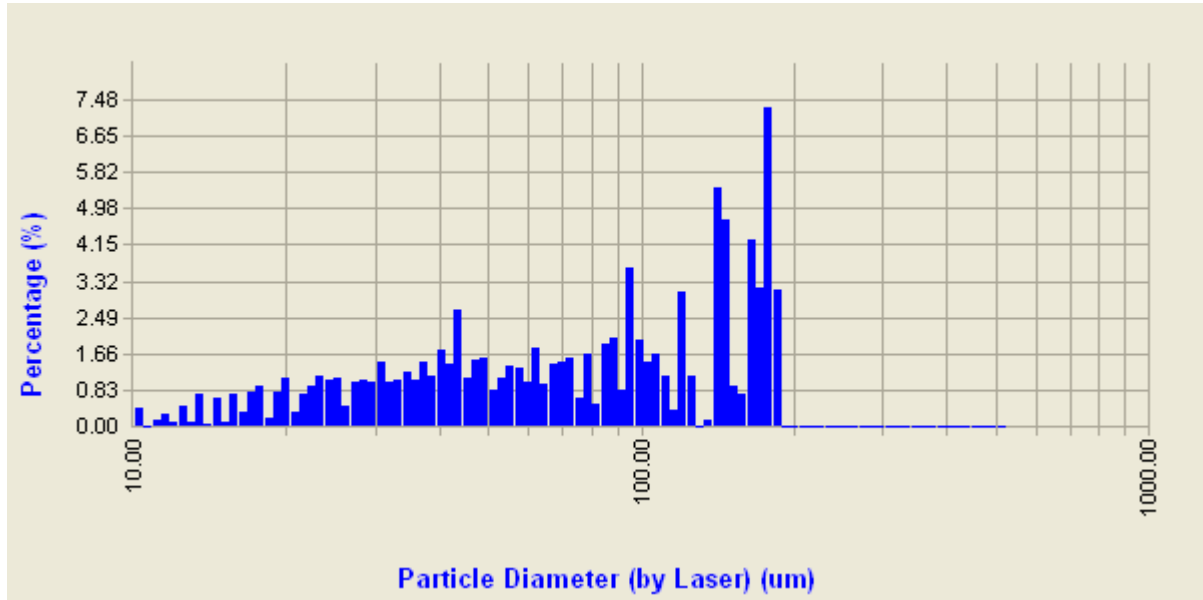
Volume Ranges Table : OA154/38

Range	Local(%)	Under(%)
10.0-15.6	2.67	2.74
15.6-31.2	13.16	15.90
31.2-62.5	21.93	37.82
62.5-125.0	29.43	67.25
125.0-250.0	32.75	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/39

Volume Histogram : OA154/39

Mean: 88.55 um STD: 55.51 um Conf.: 98.68 %
 D10 : 22.85 um D50: 77.24 um D90: 174.07 um



Area Ranges Table : OA154/39

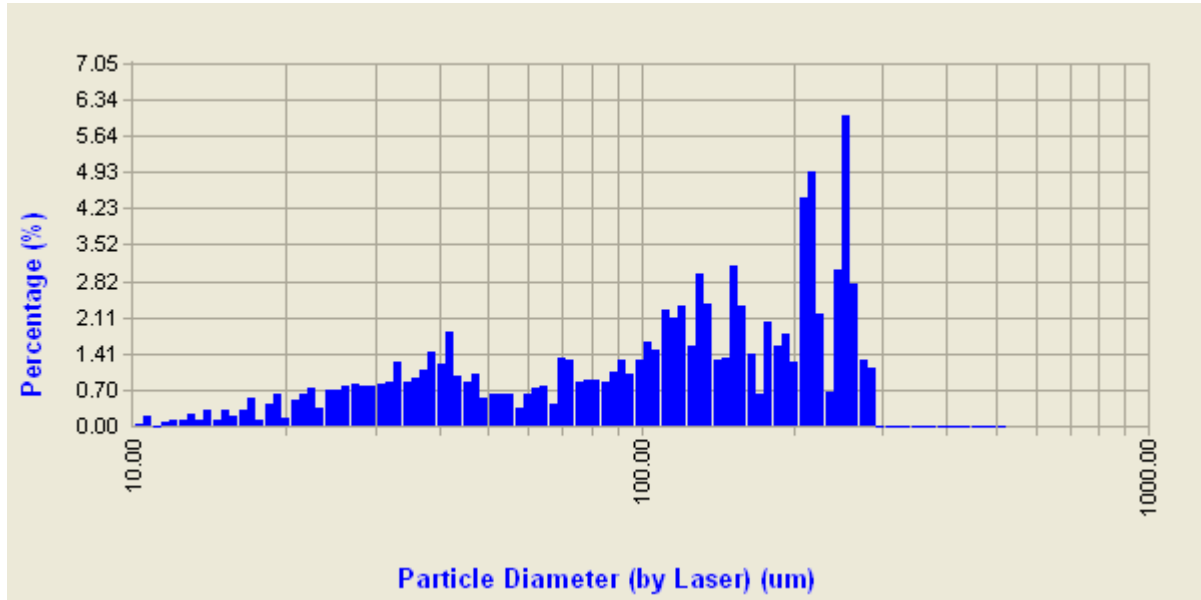
Range	Local(%)	Under(%)
10.0-15.6	12.70	13.18
15.6-31.2	33.77	46.95
31.2-62.5	28.00	74.95
62.5-125.0	15.70	90.65
125.0-250.0	9.35	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/39

Range	Local(%)	Under(%)
10.0-15.6	3.14	3.24
15.6-31.2	14.96	18.19
31.2-62.5	24.13	42.32
62.5-125.0	27.79	70.11
125.0-250.0	29.89	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/40**Volume Histogram : OA154/40**

Mean: 129.64 um STD: 79.91 um Conf.: 99.99 %
 D10 : 27.55 um D50: 122.20 um D90: 247.31 um

**Area Ranges Table : OA154/40**

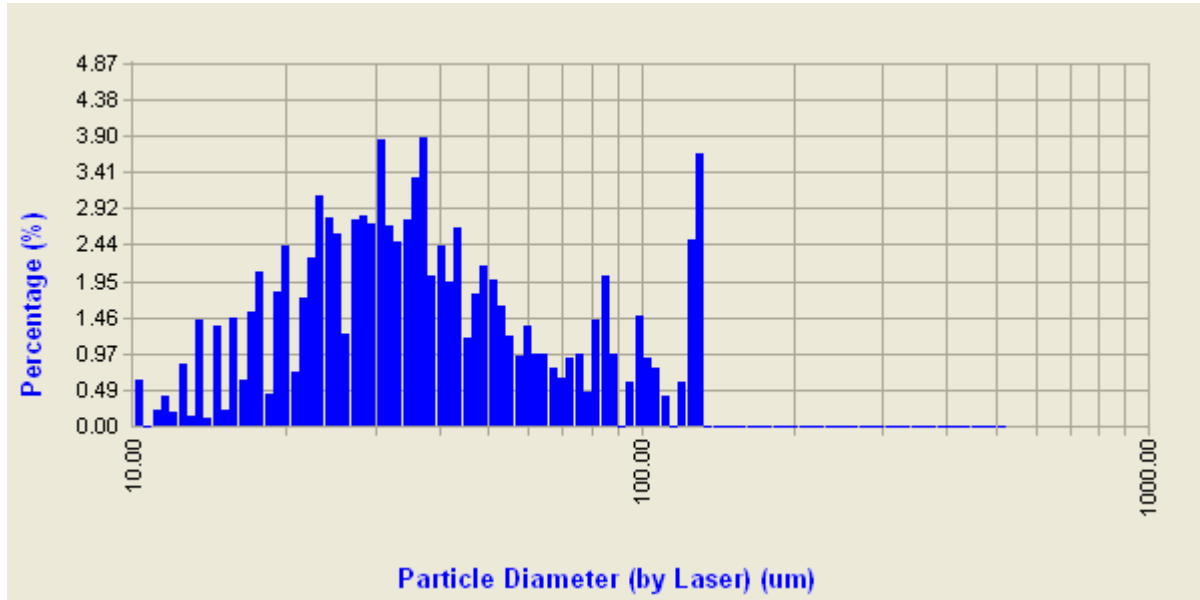
Range	Local(%)	Under(%)
10.0-15.6	8.82	9.89
15.6-31.2	29.57	39.46
31.2-62.5	26.50	65.96
62.5-125.0	16.87	82.84
125.0-250.0	15.35	98.19
250.0-500.0	1.81	100.00

Volume Ranges Table : OA154/40

Range	Local(%)	Under(%)
10.0-15.6	1.64	1.79
15.6-31.2	9.98	11.77
31.2-62.5	16.25	28.02
62.5-125.0	23.31	51.33
125.0-250.0	41.56	92.89
250.0-500.0	7.11	100.00

Volume Distribution: OA154/41

Volume Histogram : OA154/41
 Mean: 44.79 um STD: 30.77 um Conf.: 99.98 %
 D10 : 17.41 um D50: 33.73 um D90: 96.83 um



Area Ranges Table : OA154/41

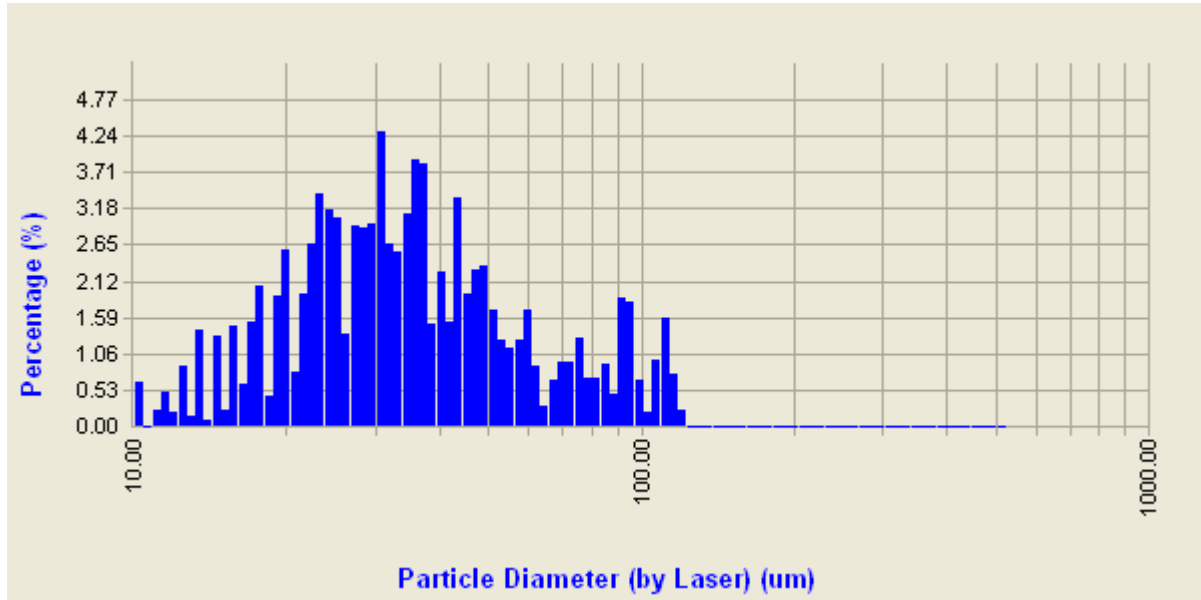
Range	Local(%)	Under(%)
10.0-15.6	14.34	14.80
15.6-31.2	50.03	64.82
31.2-62.5	28.36	93.18
62.5-125.0	5.70	98.89
125.0-250.0	1.11	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/41

Range	Local(%)	Under(%)
10.0-15.6	5.84	5.98
15.6-31.2	36.55	42.53
31.2-62.5	37.08	79.61
62.5-125.0	15.77	95.37
125.0-250.0	4.63	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/42**Volume Histogram : OA154/42**

Mean: 40.02 um STD: 24.29 um Conf.: 100.00 %
 D10 : 17.41 um D50: 32.64 um D90: 79.42 um

**Area Ranges Table : OA154/42**

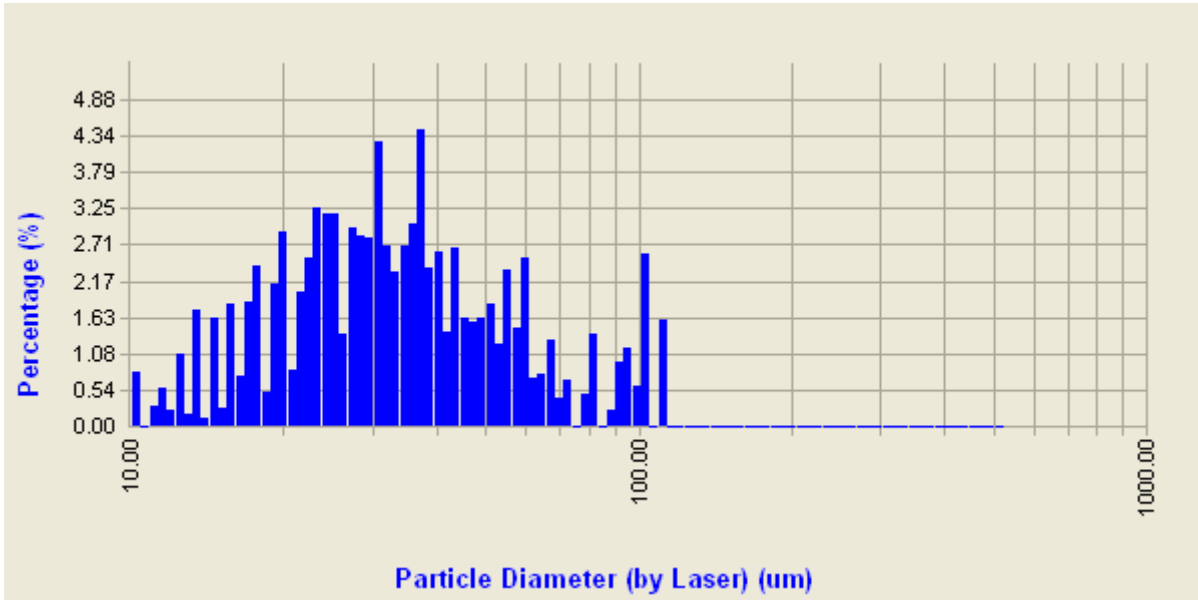
Range	Local(%)	Under(%)
10.0-15.6	14.21	14.68
15.6-31.2	51.65	66.34
31.2-62.5	28.45	94.79
62.5-125.0	5.21	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/42

Range	Local(%)	Under(%)
10.0-15.6	6.00	6.16
15.6-31.2	39.63	45.79
31.2-62.5	38.99	84.78
62.5-125.0	15.22	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/43

Volume Histogram : OA154/43
 Mean: 37.99 um STD: 22.89 um Conf.: 99.96 %
 D10 : 16.32 um D50: 31.55 um D90: 68.54 um



Area Ranges Table : OA154/43

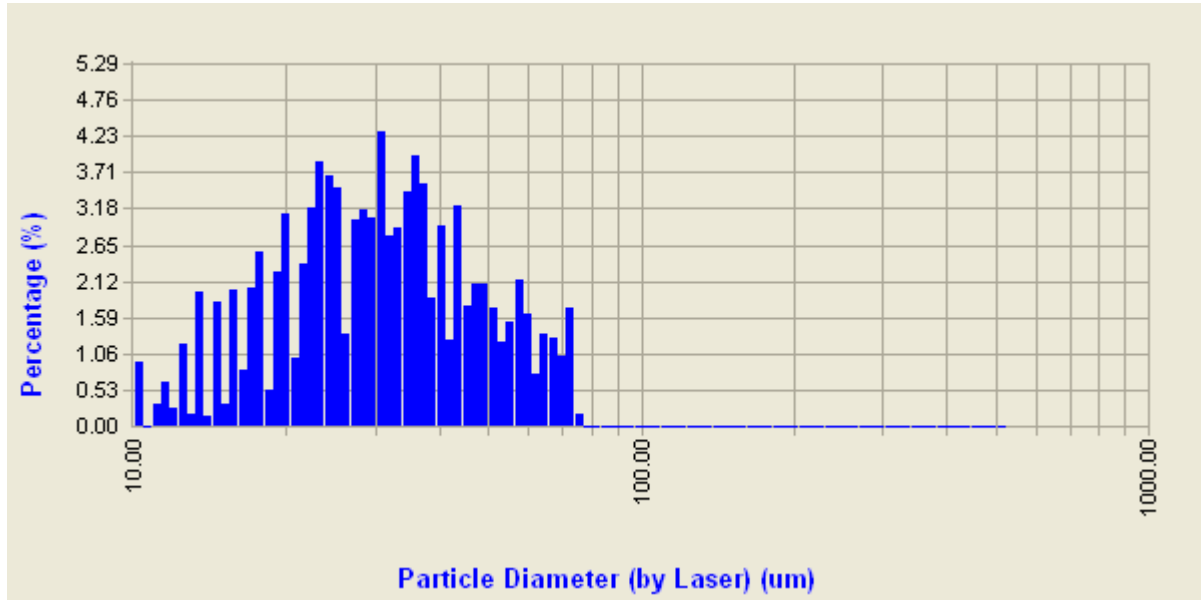
Range	Local(%)	Under(%)
10.0-15.6	16.59	17.14
15.6-31.2	51.99	69.14
31.2-62.5	26.77	95.91
62.5-125.0	4.09	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/43

Range	Local(%)	Under(%)
10.0-15.6	7.36	7.55
15.6-31.2	41.21	48.76
31.2-62.5	38.91	87.66
62.5-125.0	12.34	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/44**Volume Histogram : OA154/44**

Mean: 32.53 um STD: 14.87 um Conf.: 100.00 %
 D10 : 16.32 um D50: 29.37 um D90: 55.48 um

**Area Ranges Table : OA154/44**

Range	Local(%)	Under(%)
10.0-15.6	17.35	17.94
15.6-31.2	53.37	71.32
31.2-62.5	26.46	97.77
62.5-125.0	2.23	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

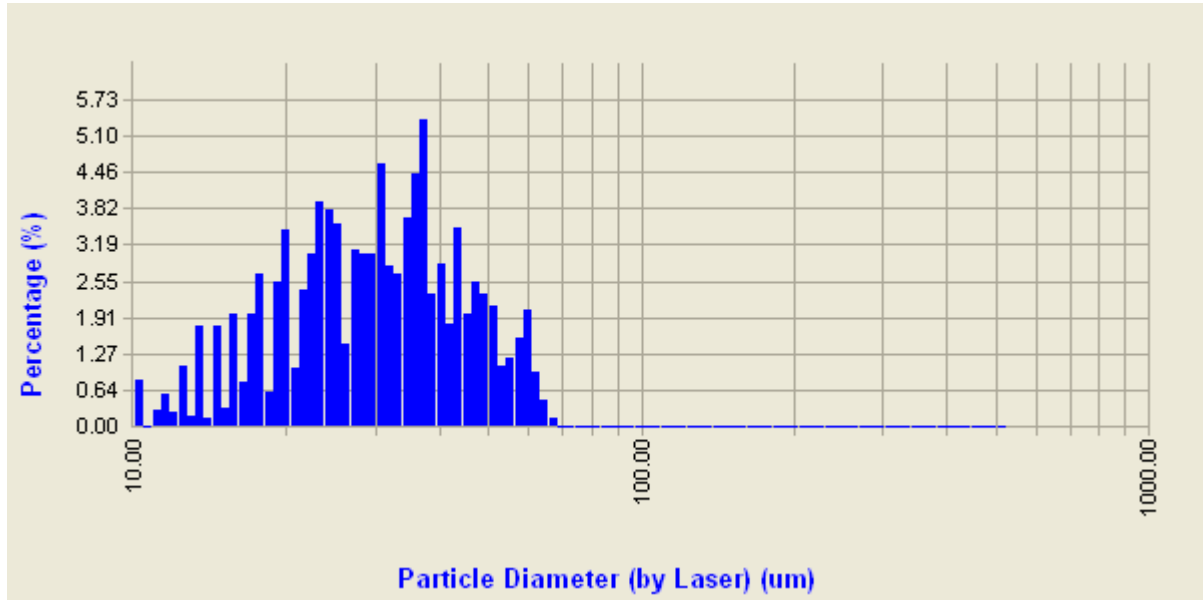
Volume Ranges Table : OA154/44

Range	Local(%)	Under(%)
10.0-15.6	8.22	8.44
15.6-31.2	45.18	53.62
31.2-62.5	40.64	94.26
62.5-125.0	5.74	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/45

Volume Histogram : OA154/45

Mean: 31.06 um STD: 12.45 um Conf.: 100.00 %
 D10 : 16.32 um D50: 29.37 um D90: 48.96 um



Area Ranges Table : OA154/45

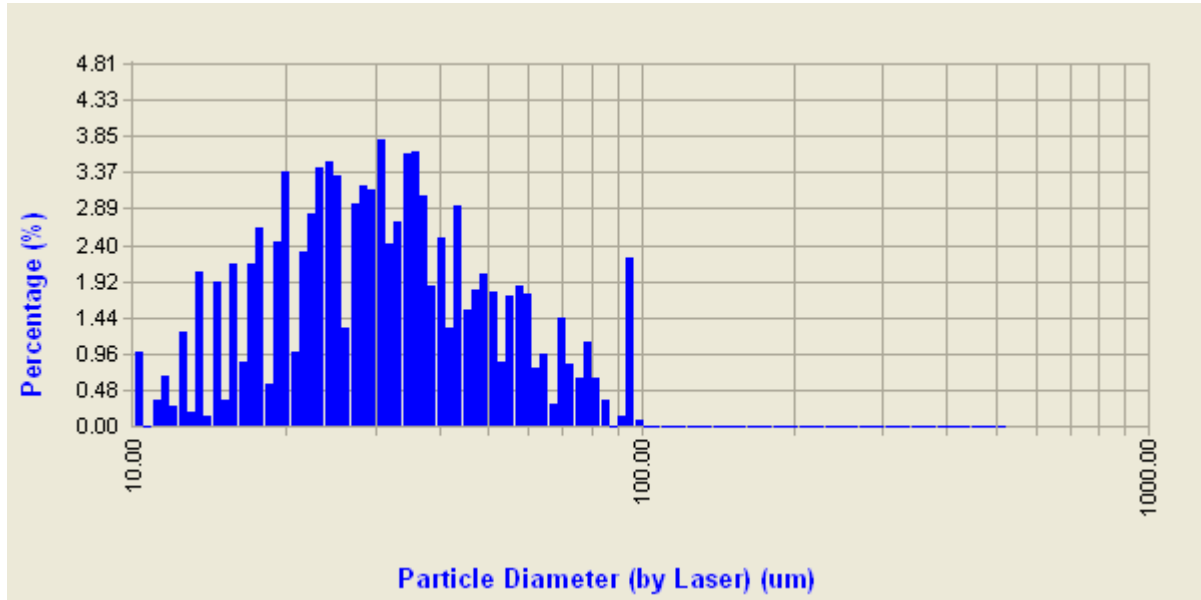
Range	Local(%)	Under(%)
10.0-15.6	15.72	16.24
15.6-31.2	54.36	70.59
31.2-62.5	29.09	99.68
62.5-125.0	0.32	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/45

Range	Local(%)	Under(%)
10.0-15.6	7.56	7.75
15.6-31.2	46.47	54.22
31.2-62.5	45.00	99.23
62.5-125.0	0.77	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/46**Volume Histogram : OA154/46**

Mean: 34.25 um STD: 18.47 um Conf.: 99.99 %
 D10 : 15.23 um D50: 29.37 um D90: 58.75 um

**Area Ranges Table : OA154/46**

Range	Local(%)	Under(%)
10.0-15.6	18.38	19.01
15.6-31.2	53.14	72.15
31.2-62.5	24.74	96.89
62.5-125.0	3.11	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

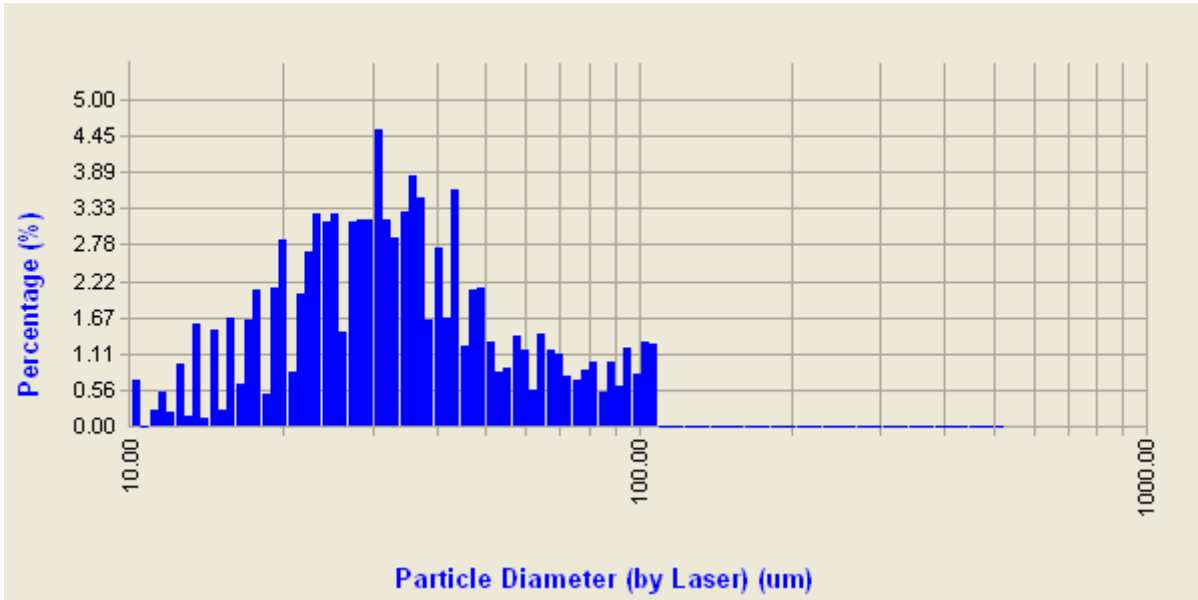
Volume Ranges Table : OA154/46

Range	Local(%)	Under(%)
10.0-15.6	8.66	8.89
15.6-31.2	44.34	53.23
31.2-62.5	37.80	91.03
62.5-125.0	8.97	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/47

Volume Histogram : OA154/47

Mean: 37.66 um STD: 21.84 um Conf.: 100.00 %
 D10 : 16.32 um D50: 31.55 um D90: 70.72 um



Area Ranges Table : OA154/47

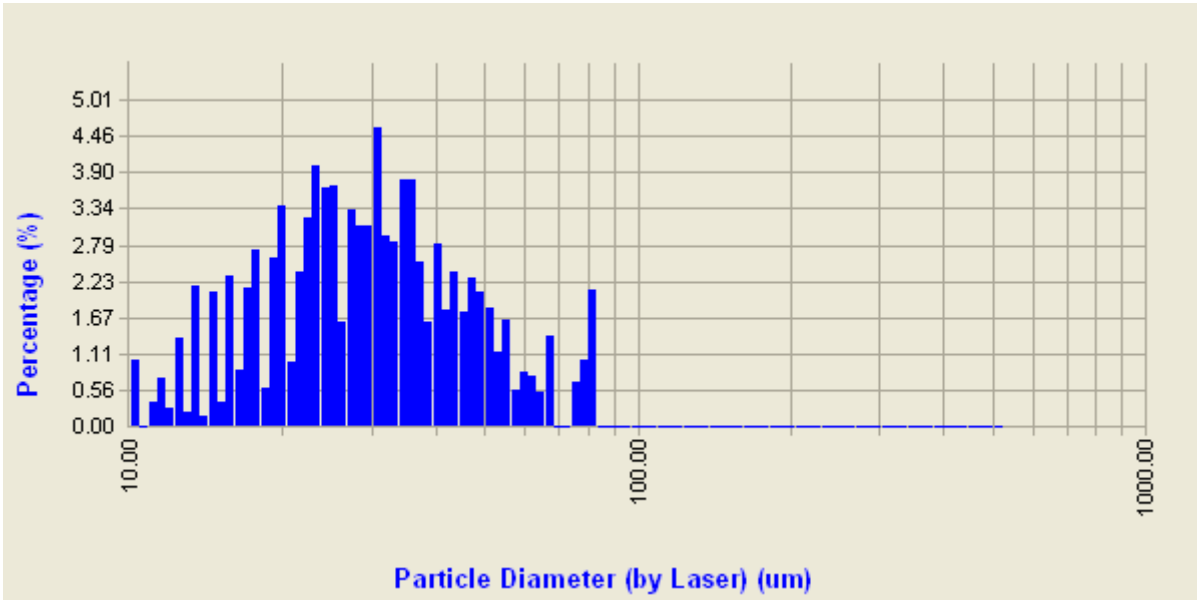
Range	Local(%)	Under(%)
10.0-15.6	14.97	15.45
15.6-31.2	52.51	67.96
31.2-62.5	27.12	95.08
62.5-125.0	4.92	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/47

Range	Local(%)	Under(%)
10.0-15.6	6.57	6.74
15.6-31.2	41.69	48.43
31.2-62.5	37.66	86.09
62.5-125.0	13.91	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/48**Volume Histogram : OA154/48**

Mean: 31.80 um STD: 15.57 um Conf.: 100.00 %
 D10 : 15.23 um D50: 28.29 um D90: 52.22 um

**Area Ranges Table : OA154/48**

Range	Local(%)	Under(%)
10.0-15.6	18.86	19.49
15.6-31.2	54.67	74.17
31.2-62.5	23.76	97.93
62.5-125.0	2.07	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

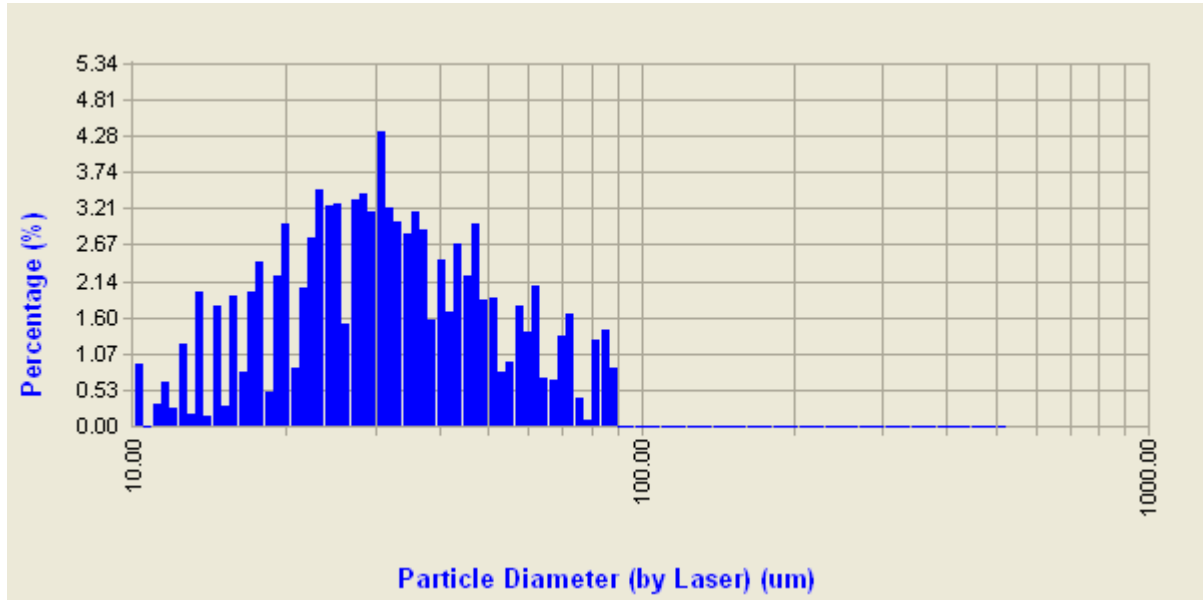
Volume Ranges Table : OA154/48

Range	Local(%)	Under(%)
10.0-15.6	9.23	9.47
15.6-31.2	47.59	57.06
31.2-62.5	37.02	94.08
62.5-125.0	5.92	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/49

Volume Histogram : OA154/49

Mean: 34.37 um STD: 17.46 um Conf.: 100.00 %
 D10 : 16.32 um D50: 30.46 um D90: 60.92 um



Area Ranges Table : OA154/49

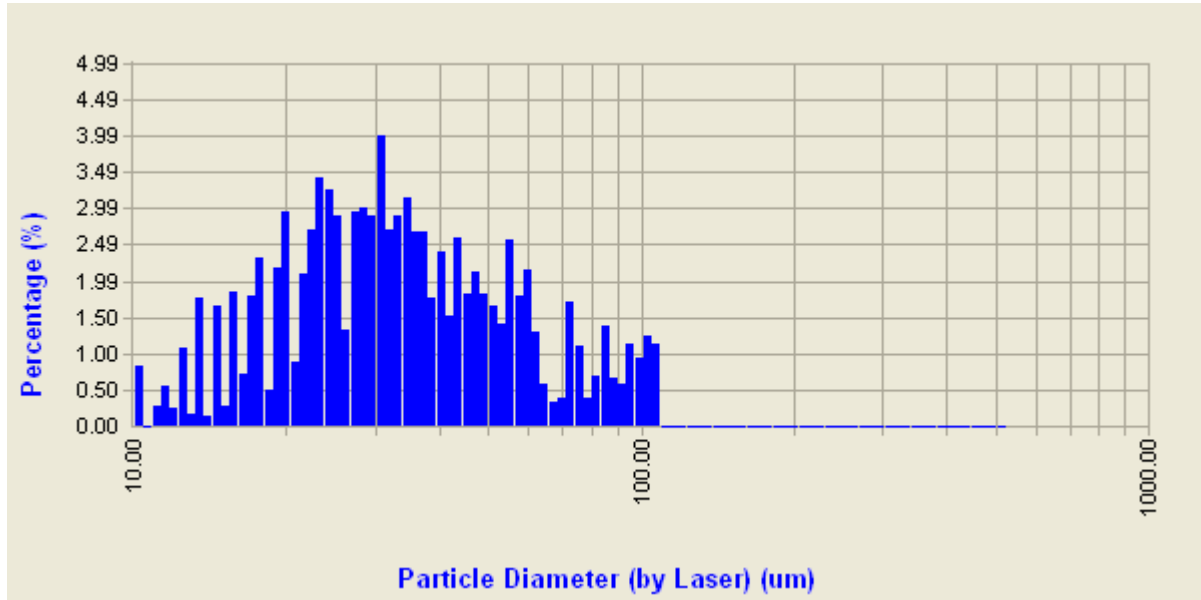
Range	Local(%)	Under(%)
10.0-15.6	17.76	18.37
15.6-31.2	52.62	70.99
31.2-62.5	25.72	96.71
62.5-125.0	3.29	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/49

Range	Local(%)	Under(%)
10.0-15.6	8.21	8.44
15.6-31.2	43.79	52.23
31.2-62.5	38.81	91.04
62.5-125.0	8.96	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/50**Volume Histogram : OA154/50**

Mean: 37.83 um STD: 22.03 um Conf.: 99.99 %
 D10 : 16.32 um D50: 31.55 um D90: 71.80 um

**Area Ranges Table : OA154/50**

Range	Local(%)	Under(%)
10.0-15.6	16.73	17.29
15.6-31.2	52.02	69.31
31.2-62.5	26.41	95.71
62.5-125.0	4.29	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

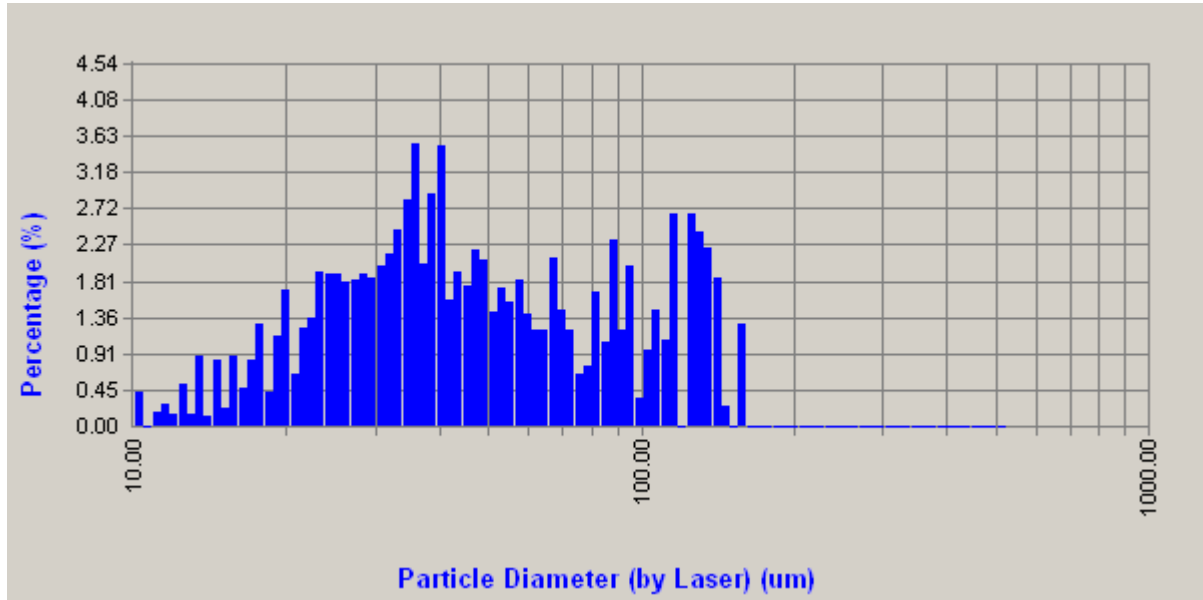
Volume Ranges Table : OA154/50

Range	Local(%)	Under(%)
10.0-15.6	7.41	7.61
15.6-31.2	41.18	48.78
31.2-62.5	38.66	87.44
62.5-125.0	12.56	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/51

Volume Histogram : OA154/51

Mean: 56.56 um STD: 37.44 um Conf.: 99.98 %
 D10 : 19.48 um D50: 42.21 um D90: 122.31 um



Area Ranges Table : OA154/51

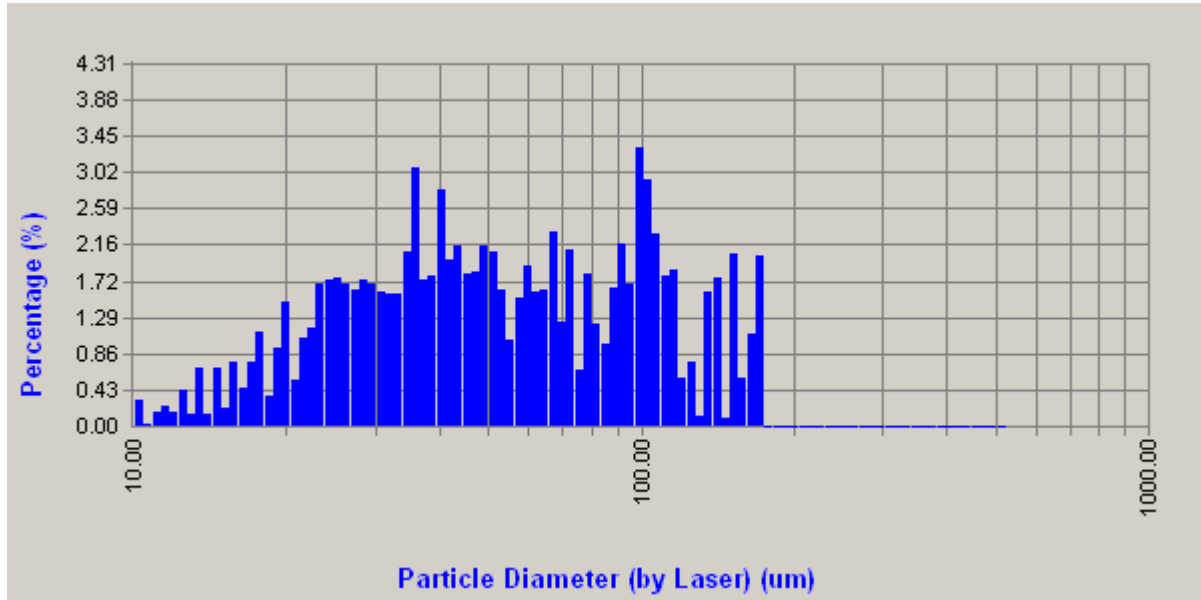
Range	Local(%)	Under(%)
10.0-15.6	11.78	12.28
15.6-31.2	40.69	52.96
31.2-62.5	34.36	87.33
62.5-125.0	10.41	97.74
125.0-250.0	2.26	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/51

Range	Local(%)	Under(%)
10.0-15.6	3.98	4.11
15.6-31.2	24.88	28.98
31.2-62.5	38.12	67.10
62.5-125.0	24.54	91.64
125.0-250.0	8.36	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/52**Volume Histogram : OA154/52**

Mean: 62.96 um STD: 40.83 um Conf.: 99.98 %
 D10 : 20.57 um D50: 49.95 um D90: 123.93 um

**Area Ranges Table : OA154/52**

Range	Local(%)	Under(%)
10.0-15.6	10.97	11.48
15.6-31.2	39.06	50.54
31.2-62.5	32.64	83.19
62.5-125.0	14.19	97.38
125.0-250.0	2.62	100.00
250.0-500.0	0.00	100.00

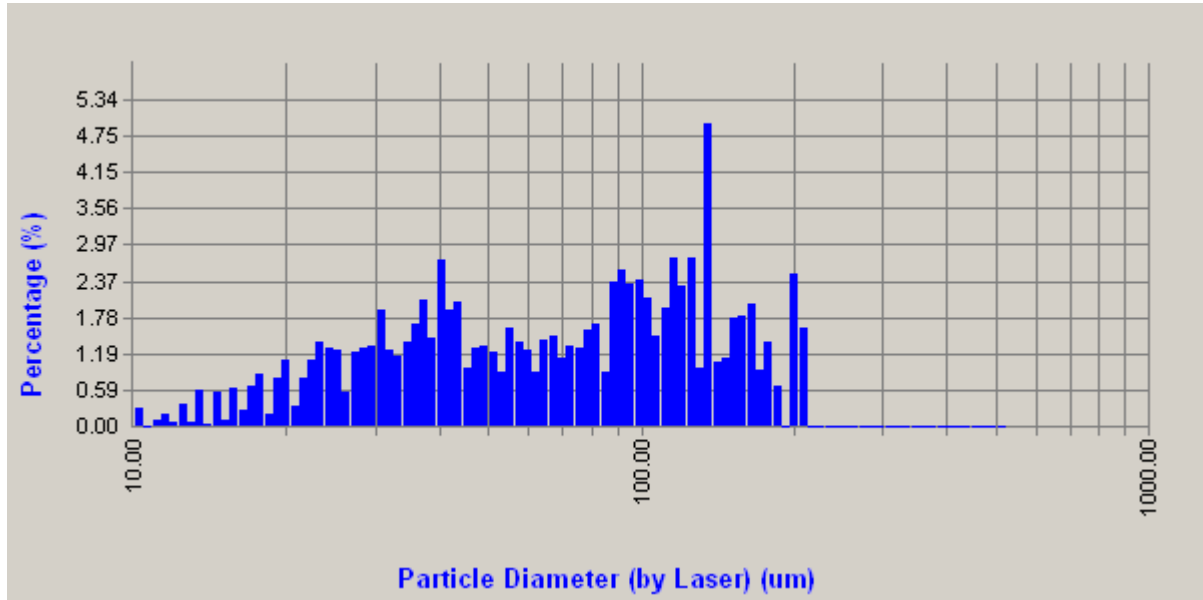
Volume Ranges Table : OA154/52

Range	Local(%)	Under(%)
10.0-15.6	3.40	3.52
15.6-31.2	21.93	25.46
31.2-62.5	34.24	59.70
62.5-125.0	30.58	90.28
125.0-250.0	9.72	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/53

Volume Histogram : OA154/53

Mean: 80.95 um STD: 51.75 um Conf.: 99.99 %
 D10 : 22.85 um D50: 70.72 um D90: 156.66 um



Area Ranges Table : OA154/53

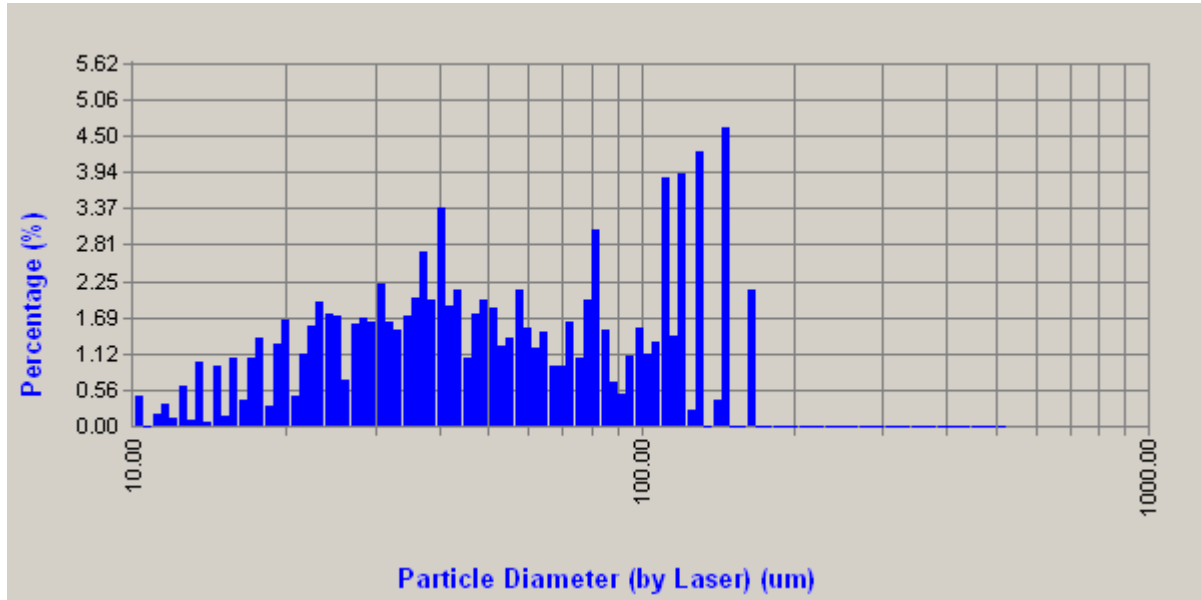
Range	Local(%)	Under(%)
10.0-15.6	9.76	10.09
15.6-31.2	35.44	45.53
31.2-62.5	30.05	75.58
62.5-125.0	17.79	93.37
125.0-250.0	6.63	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/53

Range	Local(%)	Under(%)
10.0-15.6	2.52	2.59
15.6-31.2	16.68	19.27
31.2-62.5	26.13	45.40
62.5-125.0	33.24	78.63
125.0-250.0	21.37	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/54**Volume Histogram : OA154/54**

Mean: 62.88 um STD: 41.51 um Conf.: 99.71 %
 D10 : 19.58 um D50: 47.87 um D90: 128.38 um

**Area Ranges Table : OA154/54**

Range	Local(%)	Under(%)
10.0-15.6	13.28	13.73
15.6-31.2	40.51	54.24
31.2-62.5	30.20	84.44
62.5-125.0	12.41	96.85
125.0-250.0	3.15	100.00
250.0-500.0	0.00	100.00

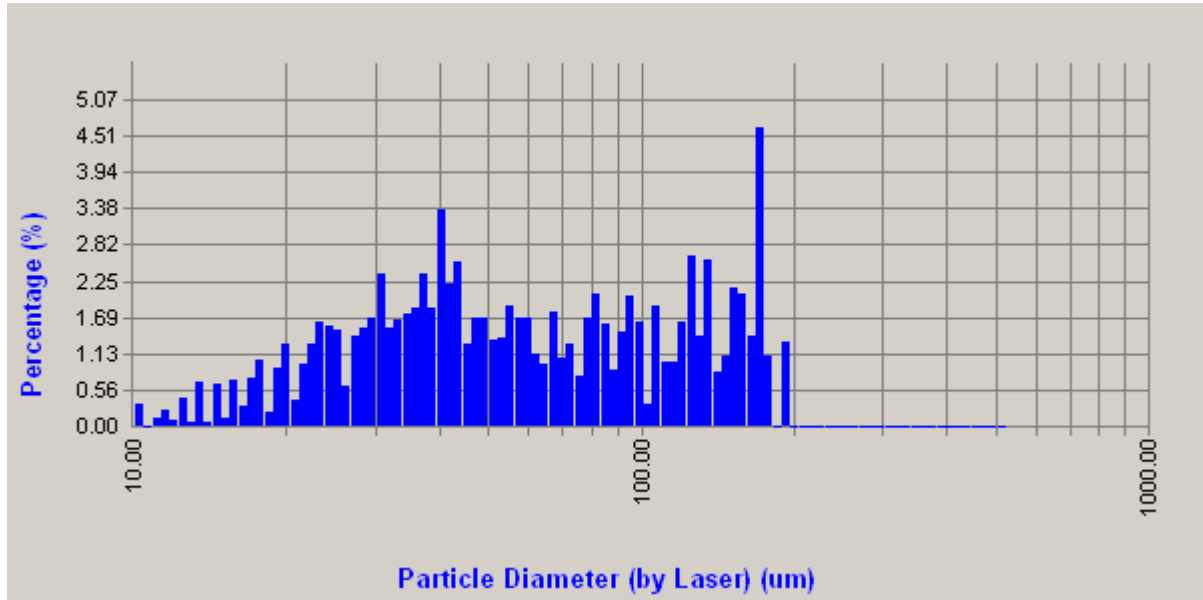
Volume Ranges Table : OA154/54

Range	Local(%)	Under(%)
10.0-15.6	4.26	4.37
15.6-31.2	23.15	27.52
31.2-62.5	32.65	60.17
62.5-125.0	28.42	88.59
125.0-250.0	11.41	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/55

Volume Histogram : OA154/55

Mean: 72.39 um STD: 49.64 um Conf.: 99.98 %
 D10 : 21.76 um D50: 54.40 um D90: 155.57 um



Area Ranges Table : OA154/55

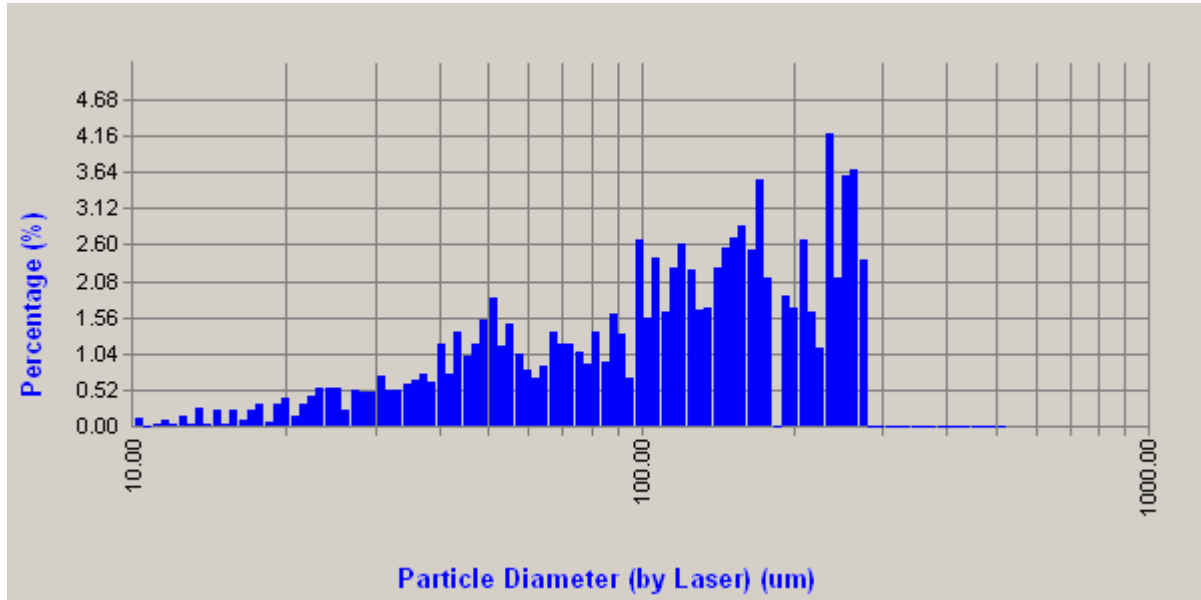
Range	Local(%)	Under(%)
10.0-15.6	10.32	10.67
15.6-31.2	37.96	48.63
31.2-62.5	33.41	82.04
62.5-125.0	12.46	94.50
125.0-250.0	5.50	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/55

Range	Local(%)	Under(%)
10.0-15.6	2.97	3.05
15.6-31.2	19.95	23.00
31.2-62.5	32.47	55.47
62.5-125.0	25.06	80.53
125.0-250.0	19.47	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/56**Volume Histogram : OA154/56**

Mean: 129.19 um STD: 75.10 um Conf.: 99.99 %
 D10 : 35.90 um D50: 119.67 um D90: 244.78 um

**Area Ranges Table : OA154/56**

Range	Local(%)	Under(%)
10.0-15.6	6.17	6.37
15.6-31.2	21.98	28.36
31.2-62.5	29.58	57.93
62.5-125.0	22.24	80.17
125.0-250.0	17.43	97.60
250.0-500.0	2.40	100.00

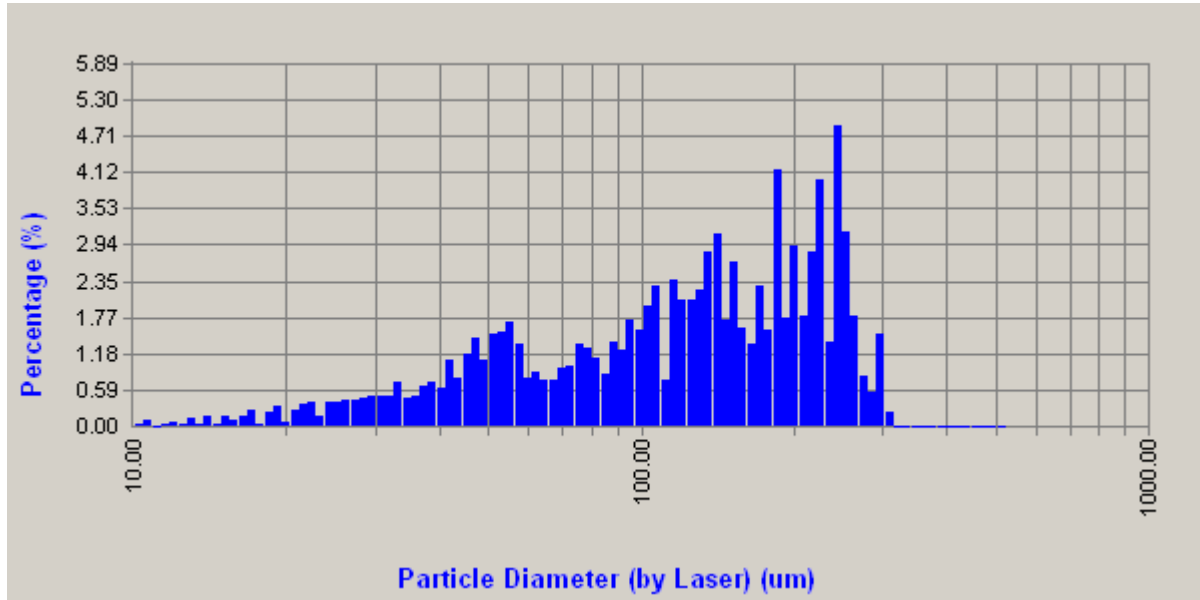
Volume Ranges Table : OA154/56

Range	Local(%)	Under(%)
10.0-15.6	1.02	1.04
15.6-31.2	6.60	7.64
31.2-62.5	17.45	25.10
62.5-125.0	26.67	51.77
125.0-250.0	39.90	91.67
250.0-500.0	8.33	100.00

Volume Distribution: OA154/57

Volume Histogram : OA154/57

Mean: 134.93 um STD: 75.62 um Conf.: 100.00 %
 D10 : 39.57 um D50: 129.87 um D90: 241.92 um



Area Ranges Table : OA154/57

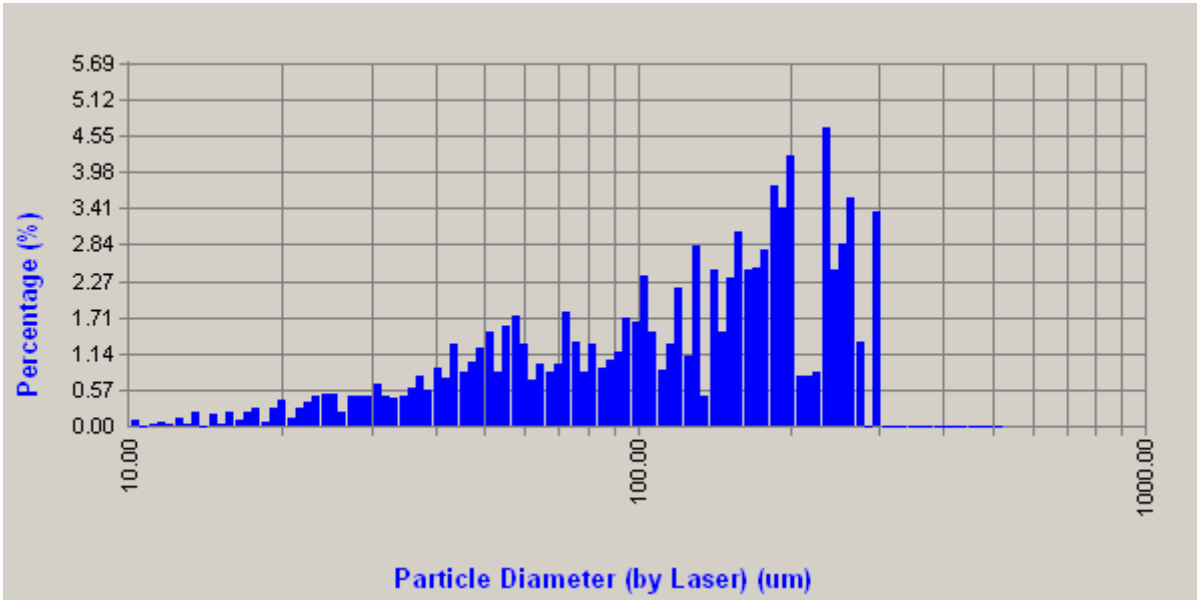
Range	Local(%)	Under(%)
10.0-15.6	5.38	6.01
15.6-31.2	19.23	25.24
31.2-62.5	30.52	55.76
62.5-125.0	21.81	77.57
125.0-250.0	20.34	97.90
250.0-500.0	2.10	100.00

Volume Ranges Table : OA154/57

Range	Local(%)	Under(%)
10.0-15.6	0.84	0.91
15.6-31.2	5.44	6.35
31.2-62.5	17.19	23.53
62.5-125.0	24.78	48.31
125.0-250.0	44.67	92.98
250.0-500.0	7.02	100.00

Volume Distribution: OA154/58**Volume Histogram : OA154/58**

Mean: 136.90 um STD: 78.37 um Conf.: 99.98 %
 D10 : 38.08 um D50: 131.64 um D90: 253.49 um

**Area Ranges Table : OA154/58**

Range	Local(%)	Under(%)
10.0-15.6	5.71	5.90
15.6-31.2	21.17	27.07
31.2-62.5	29.40	56.47
62.5-125.0	21.07	77.55
125.0-250.0	19.16	96.70
250.0-500.0	3.30	100.00

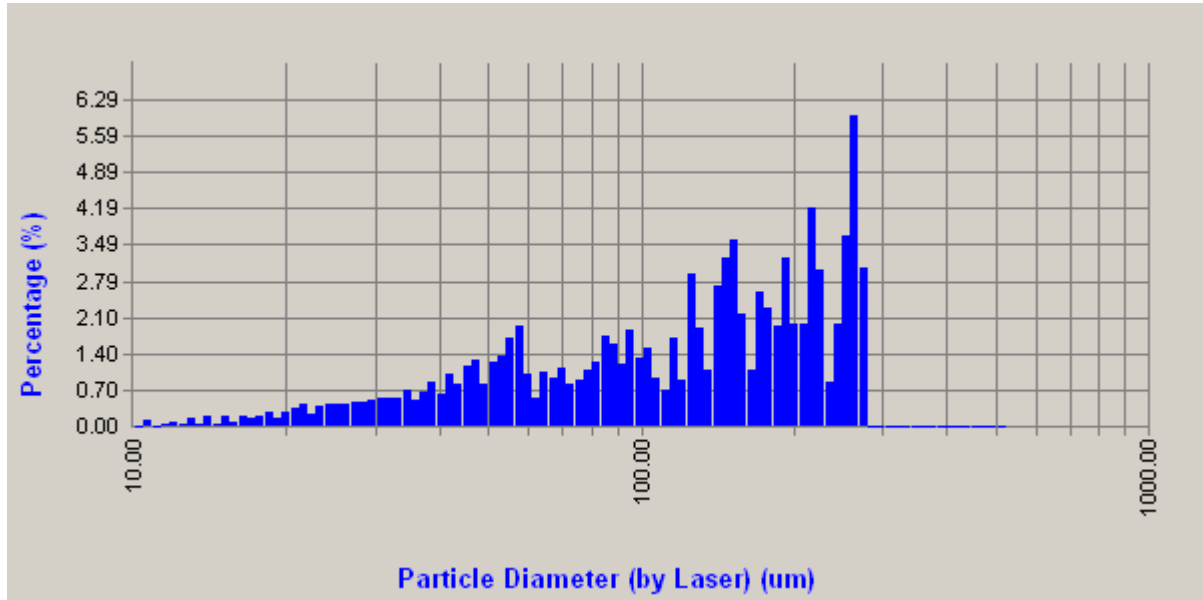
Volume Ranges Table : OA154/58

Range	Local(%)	Under(%)
10.0-15.6	0.89	0.91
15.6-31.2	6.03	6.94
31.2-62.5	16.79	23.73
62.5-125.0	23.30	47.03
125.0-250.0	41.89	88.92
250.0-500.0	11.08	100.00

Volume Distribution: OA154/59

Volume Histogram : OA154/59

Mean: 136.73 um STD: 77.44 um Conf.: 99.99 %
 D10 : 37.44 um D50: 135.35 um D90: 255.03 um



Area Ranges Table : OA154/59

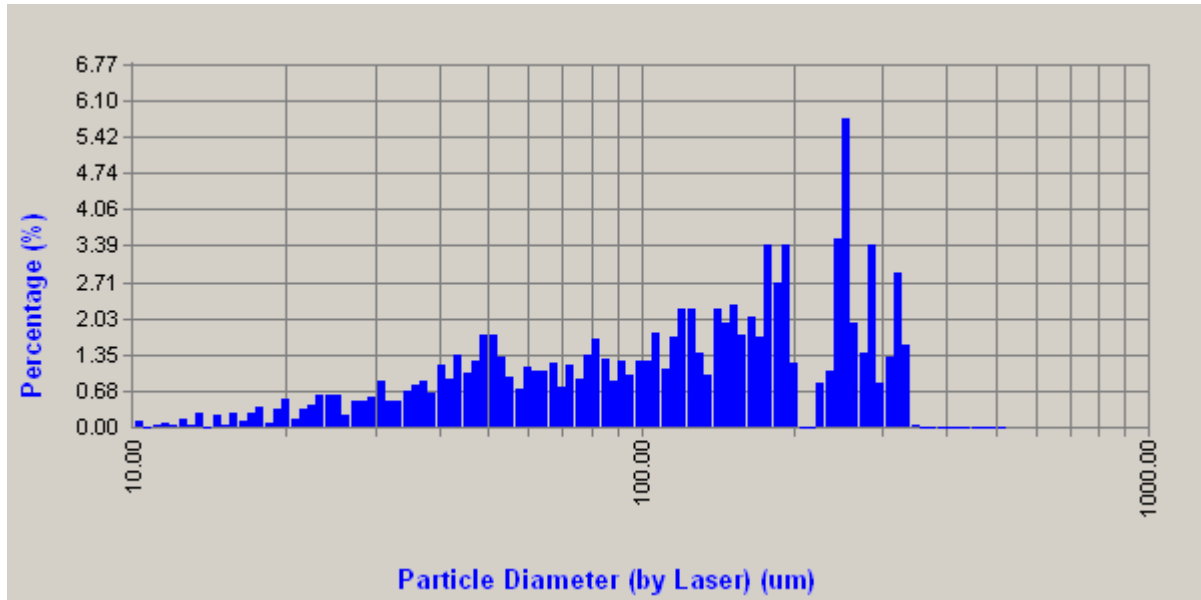
Range	Local(%)	Under(%)
10.0-15.6	5.48	6.15
15.6-31.2	20.77	26.92
31.2-62.5	30.16	57.07
62.5-125.0	19.98	77.05
125.0-250.0	19.52	96.58
250.0-500.0	3.42	100.00

Volume Ranges Table : OA154/59

Range	Local(%)	Under(%)
10.0-15.6	0.86	0.94
15.6-31.2	5.92	6.87
31.2-62.5	17.12	23.99
62.5-125.0	22.19	46.18
125.0-250.0	42.58	88.76
250.0-500.0	11.24	100.00

Volume Distribution: OA154/60**Volume Histogram : OA154/60**

Mean: 140.97 um STD: 90.24 um Conf.: 99.95 %
 D10 : 34.81 um D50: 126.20 um D90: 278.51 um

**Area Ranges Table : OA154/60**

Range	Local(%)	Under(%)
10.0-15.6	6.68	6.90
15.6-31.2	24.05	30.94
31.2-62.5	30.26	61.21
62.5-125.0	19.46	80.67
125.0-250.0	14.76	95.43
250.0-500.0	4.57	100.00

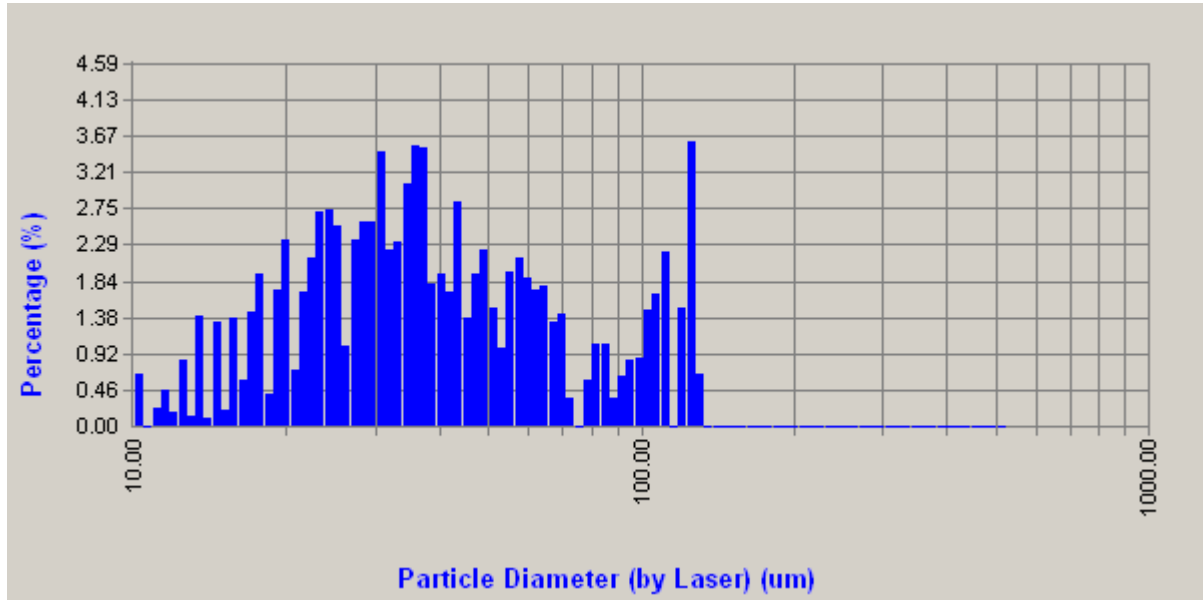
Volume Ranges Table : OA154/60

Range	Local(%)	Under(%)
10.0-15.6	1.10	1.13
15.6-31.2	7.24	8.37
31.2-62.5	17.90	26.27
62.5-125.0	22.86	49.13
125.0-250.0	33.74	82.87
250.0-500.0	17.13	100.00

Volume Distribution: OA154/61

Volume Histogram : OA154/61

Mean: 46.05 um STD: 30.61 um Conf.: 99.92 %
 D10 : 17.41 um D50: 34.81 um D90: 103.35 um



Area Ranges Table : OA154/61

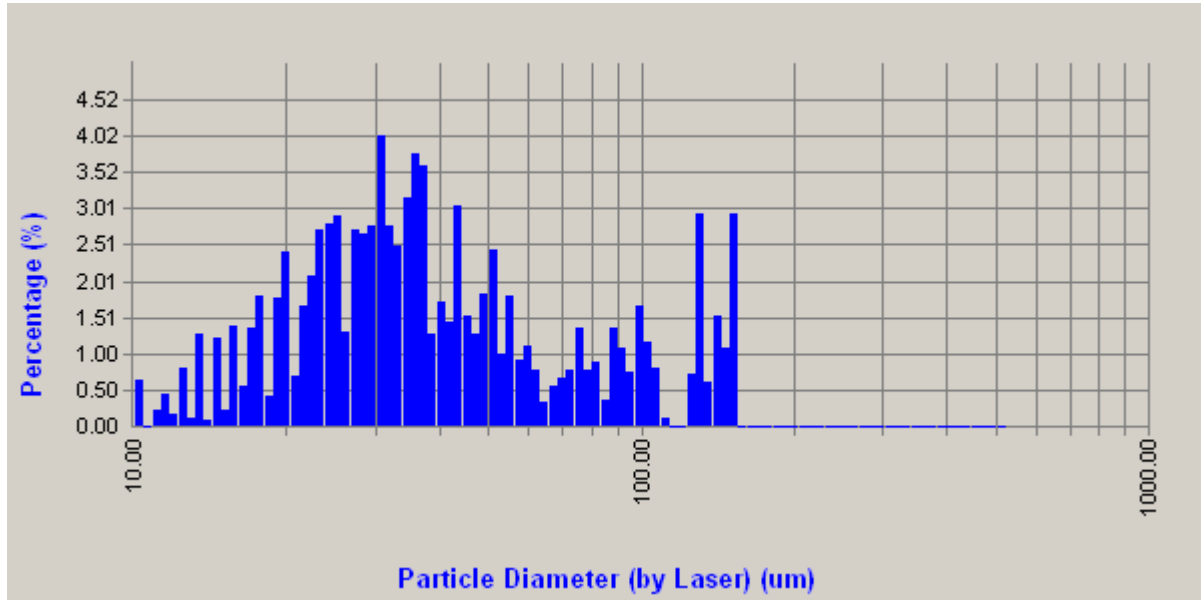
Range	Local(%)	Under(%)
10.0-15.6	14.85	15.35
15.6-31.2	47.89	63.24
31.2-62.5	29.27	92.50
62.5-125.0	7.09	99.60
125.0-250.0	0.40	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/61

Range	Local(%)	Under(%)
10.0-15.6	5.87	6.03
15.6-31.2	34.07	40.10
31.2-62.5	38.27	78.37
62.5-125.0	20.01	98.38
125.0-250.0	1.62	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/62**Volume Histogram : OA154/62**

Mean: 48.80 um STD: 36.87 um Conf.: 99.87 %
 D10 : 17.41 um D50: 34.81 um D90: 107.71 um

**Area Ranges Table : OA154/62**

Range	Local(%)	Under(%)
10.0-15.6	14.11	14.60
15.6-31.2	49.98	64.58
31.2-62.5	28.31	92.89
62.5-125.0	4.86	97.75
125.0-250.0	2.25	100.00
250.0-500.0	0.00	100.00

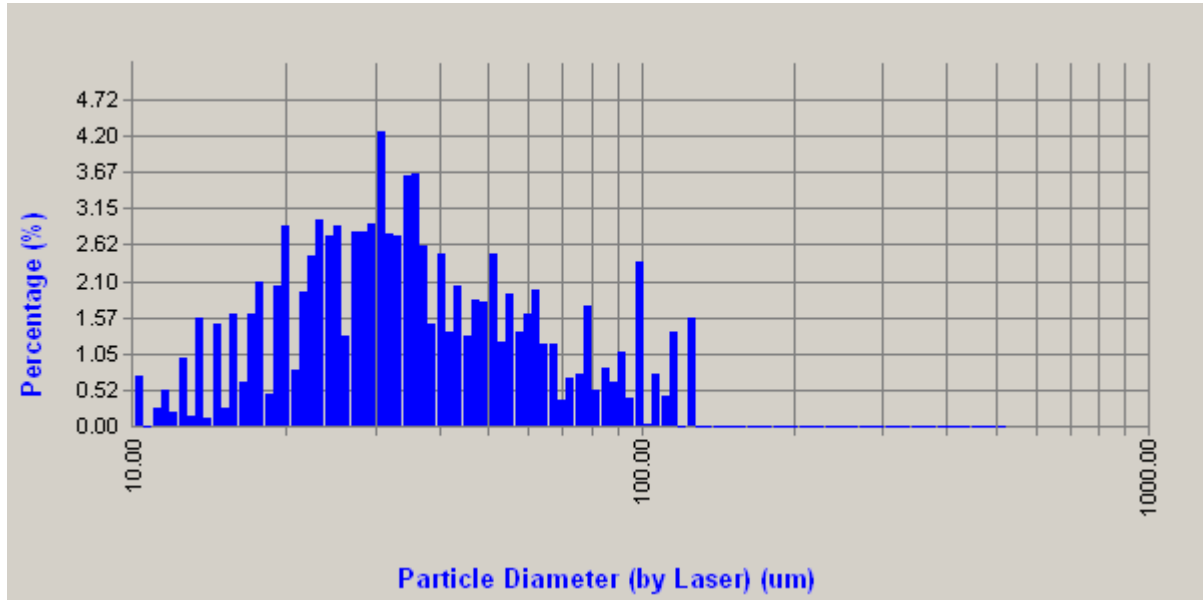
Volume Ranges Table : OA154/62

Range	Local(%)	Under(%)
10.0-15.6	5.55	5.70
15.6-31.2	35.79	41.50
31.2-62.5	35.83	77.33
62.5-125.0	12.83	90.16
125.0-250.0	9.84	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/63

Volume Histogram : OA154/63

Mean: 40.82 um STD: 25.78 um Conf.: 99.97 %
 D10 : 16.32 um D50: 32.64 um D90: 79.42 um



Area Ranges Table : OA154/63

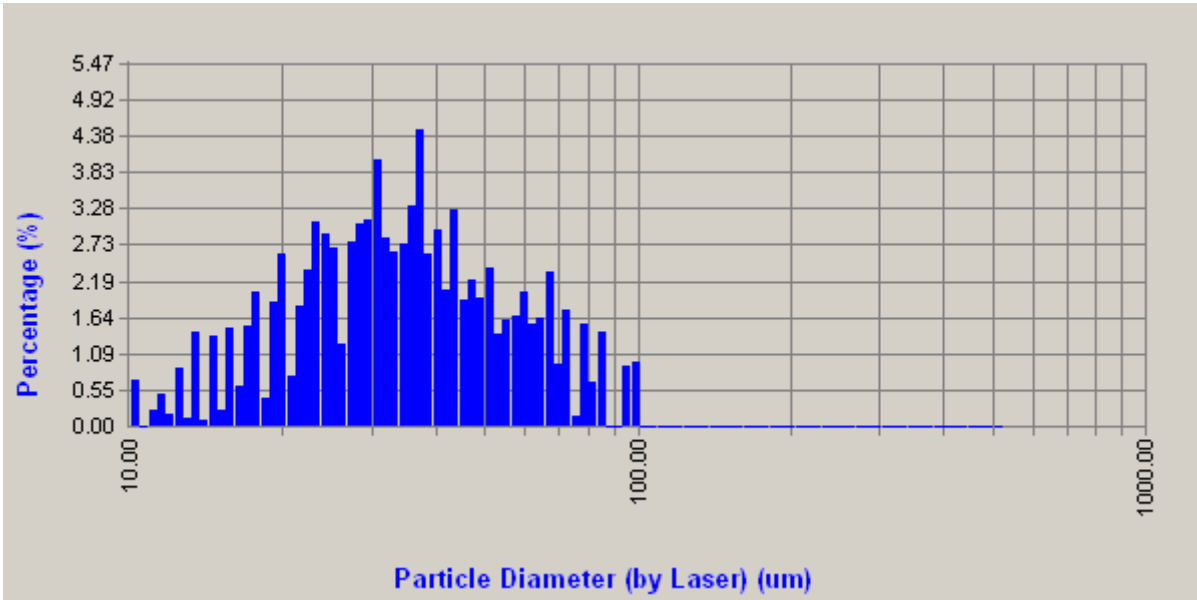
Range	Local(%)	Under(%)
10.0-15.6	15.61	16.13
15.6-31.2	50.97	67.10
31.2-62.5	27.21	94.31
62.5-125.0	5.47	99.78
125.0-250.0	0.22	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/63

Range	Local(%)	Under(%)
10.0-15.6	6.62	6.80
15.6-31.2	38.96	45.75
31.2-62.5	37.72	83.47
62.5-125.0	15.58	99.06
125.0-250.0	0.94	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/64**Volume Histogram : OA154/64**

Mean: 37.64 um STD: 18.96 um Conf.: 100.00 %
 D10 : 17.41 um D50: 33.73 um D90: 65.28 um

**Area Ranges Table : OA154/64**

Range	Local(%)	Under(%)
10.0-15.6	14.27	14.76
15.6-31.2	49.26	64.02
31.2-62.5	30.92	94.94
62.5-125.0	5.06	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

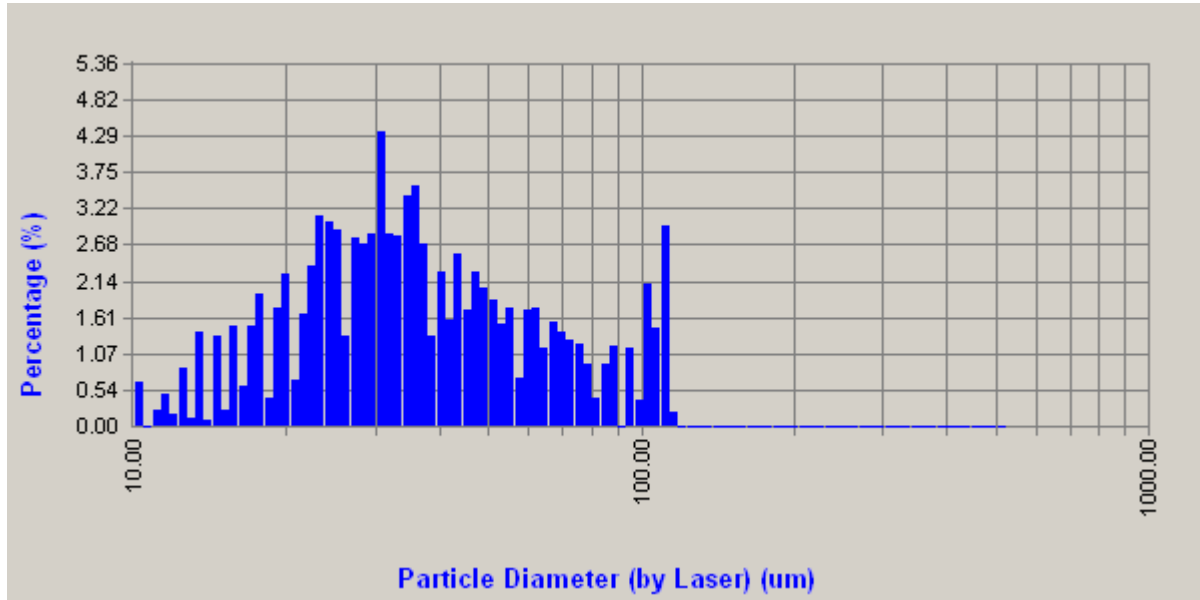
Volume Ranges Table : OA154/64

Range	Local(%)	Under(%)
10.0-15.6	6.06	6.23
15.6-31.2	37.94	44.17
31.2-62.5	43.11	87.28
62.5-125.0	12.72	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/65

Volume Histogram : OA154/65

Mean: 41.96 um STD: 25.52 um Conf.: 99.99 %
 D10 : 17.41 um D50: 33.73 um D90: 83.77 um



Area Ranges Table : OA154/65

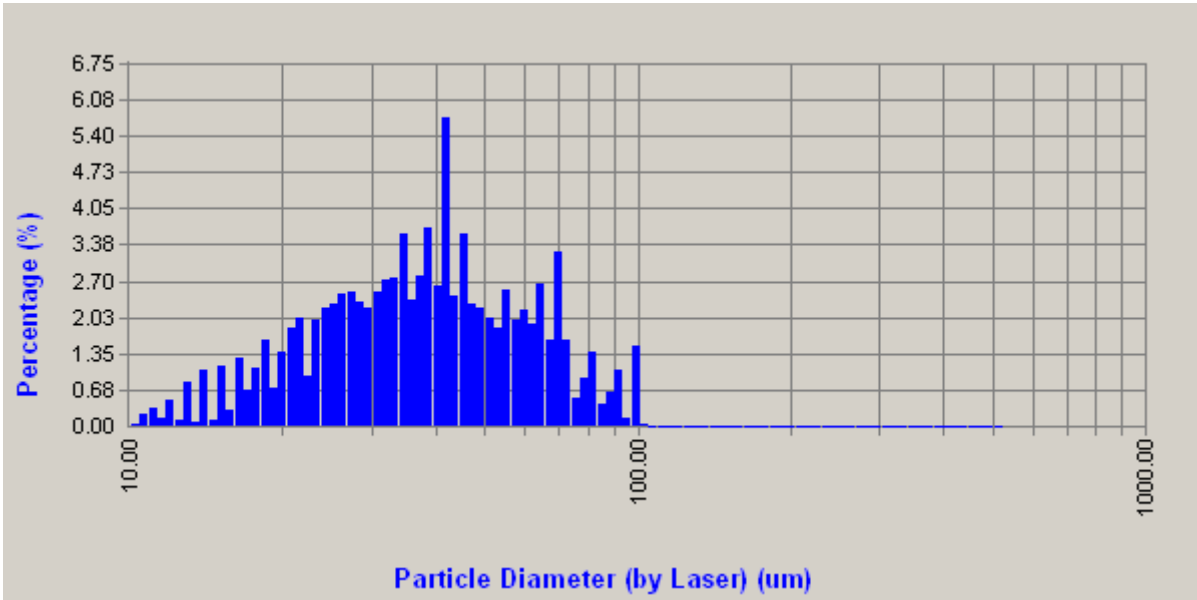
Range	Local(%)	Under(%)
10.0-15.6	14.42	14.90
15.6-31.2	49.91	64.81
31.2-62.5	28.38	93.19
62.5-125.0	6.81	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/65

Range	Local(%)	Under(%)
10.0-15.6	5.92	6.08
15.6-31.2	37.26	43.34
31.2-62.5	37.93	81.27
62.5-125.0	18.73	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/66**Volume Histogram : OA154/66**

Mean: 40.81 um STD: 19.56 um Conf.: 100.00 %
 D10 : 19.04 um D50: 37.54 um D90: 68.00 um

**Area Ranges Table : OA154/66**

Range	Local(%)	Under(%)
10.0-15.6	11.44	12.90
15.6-31.2	42.97	55.86
31.2-62.5	37.27	93.13
62.5-125.0	6.87	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

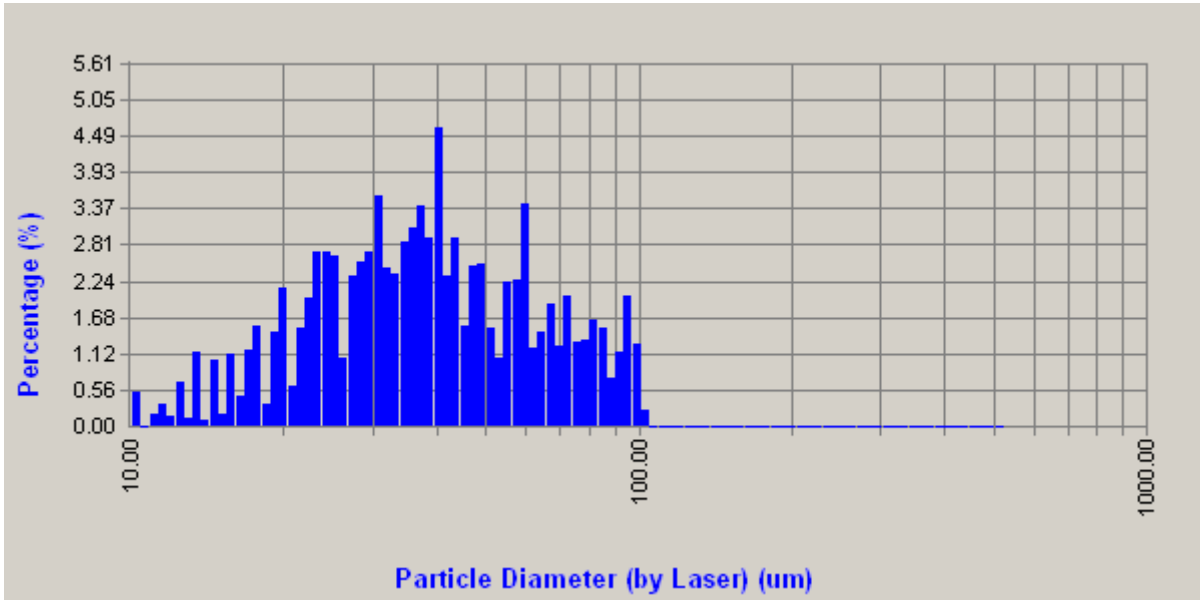
Volume Ranges Table : OA154/66

Range	Local(%)	Under(%)
10.0-15.6	4.57	4.99
15.6-31.2	30.46	35.45
31.2-62.5	48.69	84.14
62.5-125.0	15.86	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/67

Volume Histogram : OA154/67

Mean: 42.03 um STD: 21.55 um Conf.: 100.00 %
 D10 : 18.49 um D50: 36.99 um D90: 76.16 um



Area Ranges Table : OA154/67

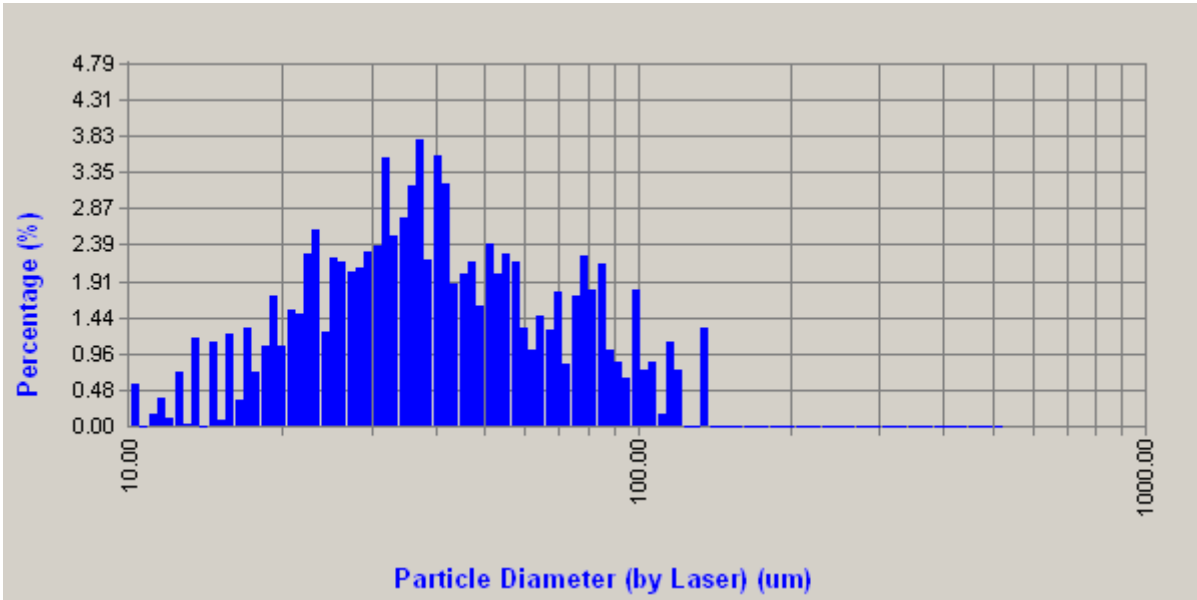
Range	Local(%)	Under(%)
10.0-15.6	12.02	12.43
15.6-31.2	45.45	57.88
31.2-62.5	34.63	92.51
62.5-125.0	7.49	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/67

Range	Local(%)	Under(%)
10.0-15.6	4.67	4.79
15.6-31.2	32.28	37.07
31.2-62.5	44.87	81.94
62.5-125.0	18.06	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/68**Volume Histogram : OA154/68**

Mean: 45.55 um STD: 26.64 um Conf.: 99.99 %
 D10 : 18.59 um D50: 38.27 um D90: 84.20 um

**Area Ranges Table : OA154/68**

Range	Local(%)	Under(%)
10.0-15.6	11.97	12.28
15.6-31.2	44.88	57.16
31.2-62.5	33.74	90.90
62.5-125.0	8.78	99.68
125.0-250.0	0.32	100.00
250.0-500.0	0.00	100.00

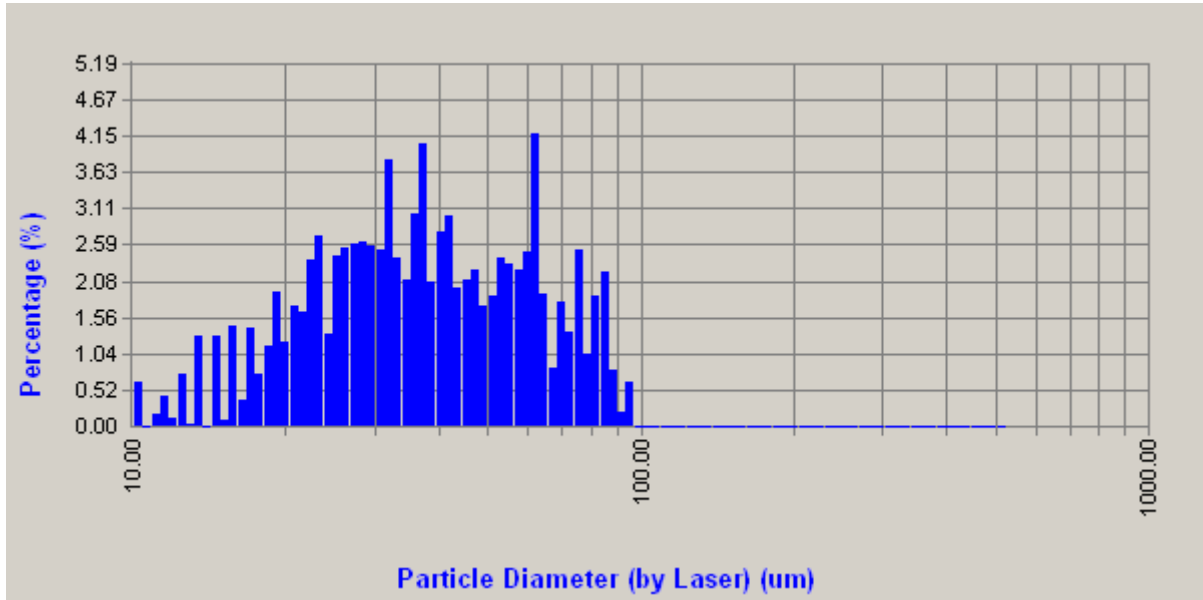
Volume Ranges Table : OA154/68

Range	Local(%)	Under(%)
10.0-15.6	4.51	4.60
15.6-31.2	30.67	35.27
31.2-62.5	41.87	77.14
62.5-125.0	21.56	98.70
125.0-250.0	1.30	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/69

Volume Histogram : OA154/69

Mean: 40.57 um STD: 19.85 um Conf.: 100.00 %
 D10 : 18.59 um D50: 36.08 um D90: 72.17 um



Area Ranges Table : OA154/69

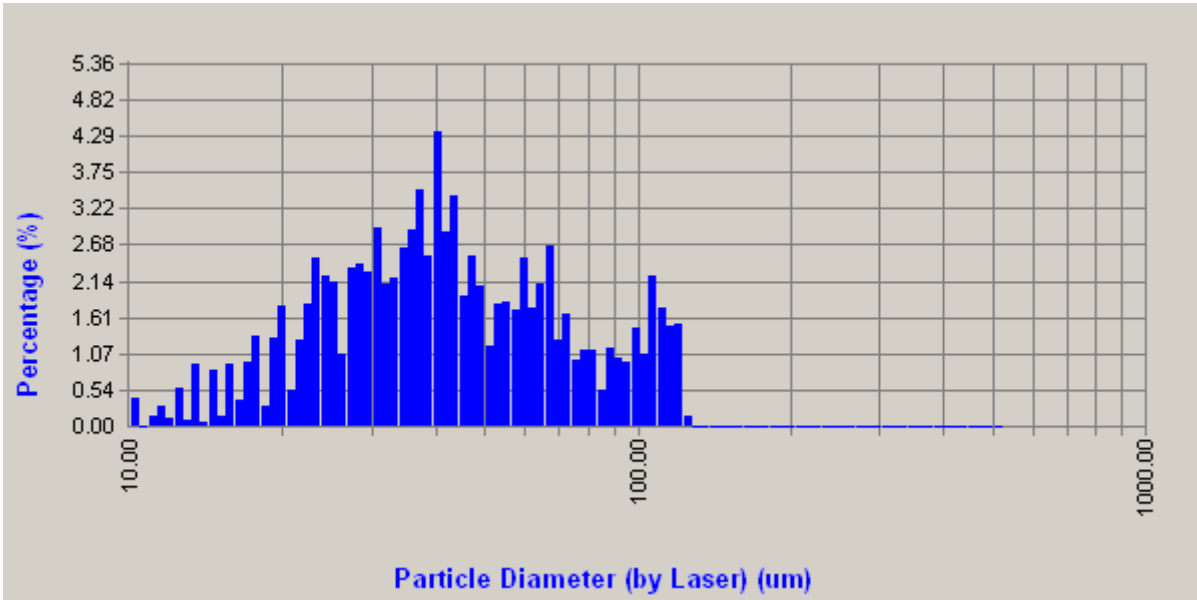
Range	Local(%)	Under(%)
10.0-15.6	12.80	13.15
15.6-31.2	47.27	60.42
31.2-62.5	32.73	93.15
62.5-125.0	6.85	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/69

Range	Local(%)	Under(%)
10.0-15.6	5.10	5.21
15.6-31.2	34.25	39.46
31.2-62.5	44.38	83.84
62.5-125.0	16.16	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/70**Volume Histogram : OA154/70**

Mean: 47.57 um STD: 27.23 um Conf.: 100.00 %
 D10 : 19.58 um D50: 40.25 um D90: 95.74 um

**Area Ranges Table : OA154/70**

Range	Local(%)	Under(%)
10.0-15.6	10.63	10.97
15.6-31.2	42.70	53.67
31.2-62.5	36.15	89.81
62.5-125.0	10.19	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

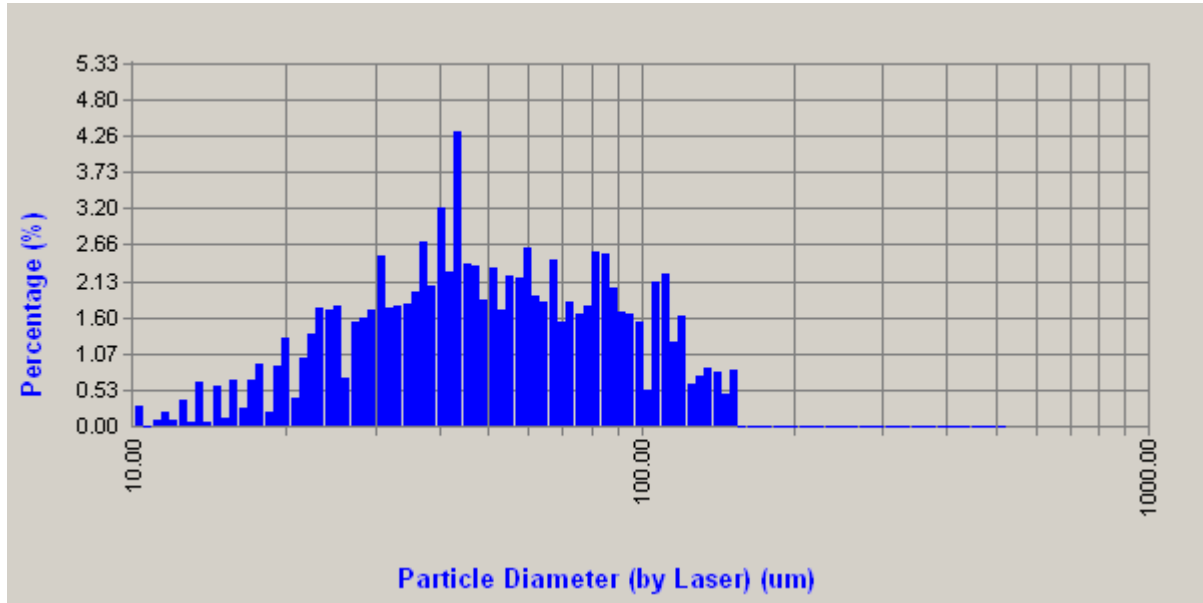
Volume Ranges Table : OA154/70

Range	Local(%)	Under(%)
10.0-15.6	3.83	3.92
15.6-31.2	28.15	32.07
31.2-62.5	43.31	75.38
62.5-125.0	24.62	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/71

Volume Histogram : OA154/71

Mean: 56.67 um STD: 32.05 um Conf.: 100.00 %
 D10 : 21.76 um D50: 46.78 um D90: 107.71 um



Area Ranges Table : OA154/71

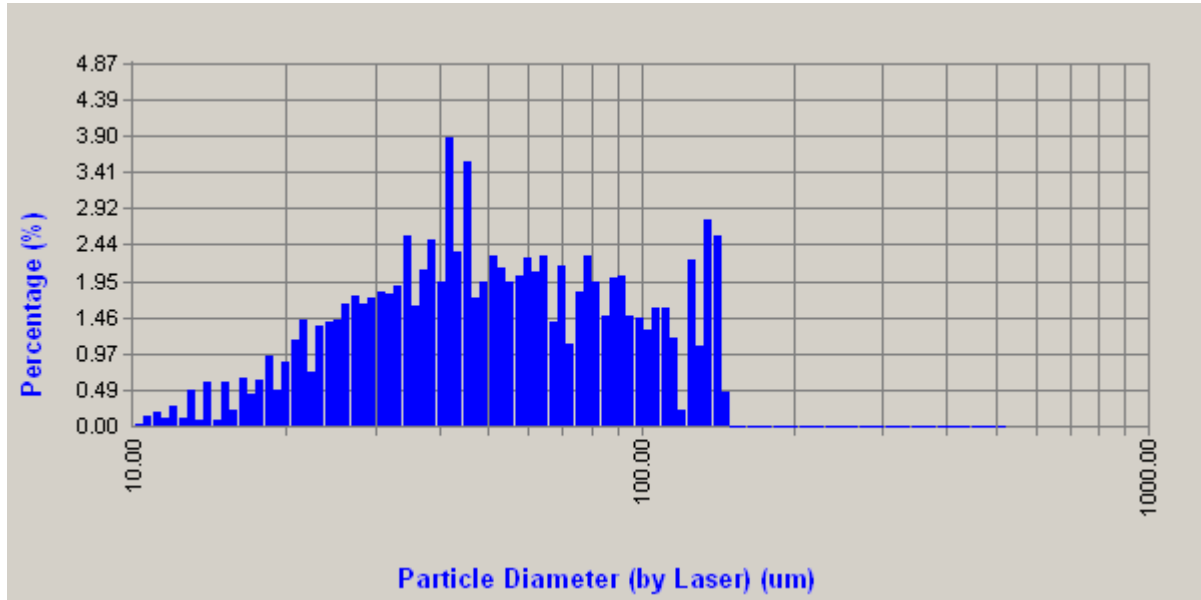
Range	Local(%)	Under(%)
10.0-15.6	8.64	8.92
15.6-31.2	36.40	45.32
31.2-62.5	38.36	83.68
62.5-125.0	15.25	98.93
125.0-250.0	1.07	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/71

Range	Local(%)	Under(%)
10.0-15.6	2.68	2.75
15.6-31.2	20.76	23.51
31.2-62.5	40.91	64.43
62.5-125.0	31.89	96.32
125.0-250.0	3.68	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/72**Volume Histogram : OA154/72**

Mean: 58.73 um STD: 34.60 um Conf.: 100.00 %
 D10 : 22.26 um D50: 48.37 um D90: 113.65 um

**Area Ranges Table : OA154/72**

Range	Local(%)	Under(%)
10.0-15.6	8.54	9.57
15.6-31.2	36.14	45.70
31.2-62.5	37.99	83.69
62.5-125.0	13.68	97.38
125.0-250.0	2.62	100.00
250.0-500.0	0.00	100.00

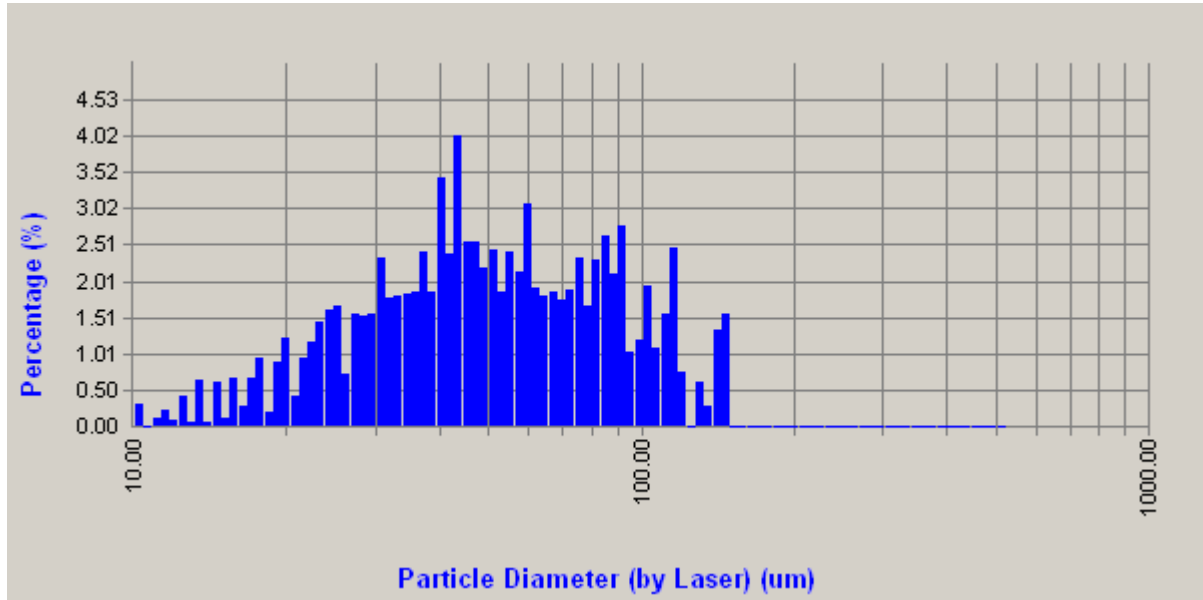
Volume Ranges Table : OA154/72

Range	Local(%)	Under(%)
10.0-15.6	2.66	2.90
15.6-31.2	20.38	23.28
31.2-62.5	40.09	63.37
62.5-125.0	28.01	91.39
125.0-250.0	8.61	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/73

Volume Histogram : OA154/73

Mean: 56.78 um STD: 31.55 um Conf: 99.99 %
 D10 : 21.76 um D50: 48.96 um D90: 103.35 um



Area Ranges Table : OA154/73

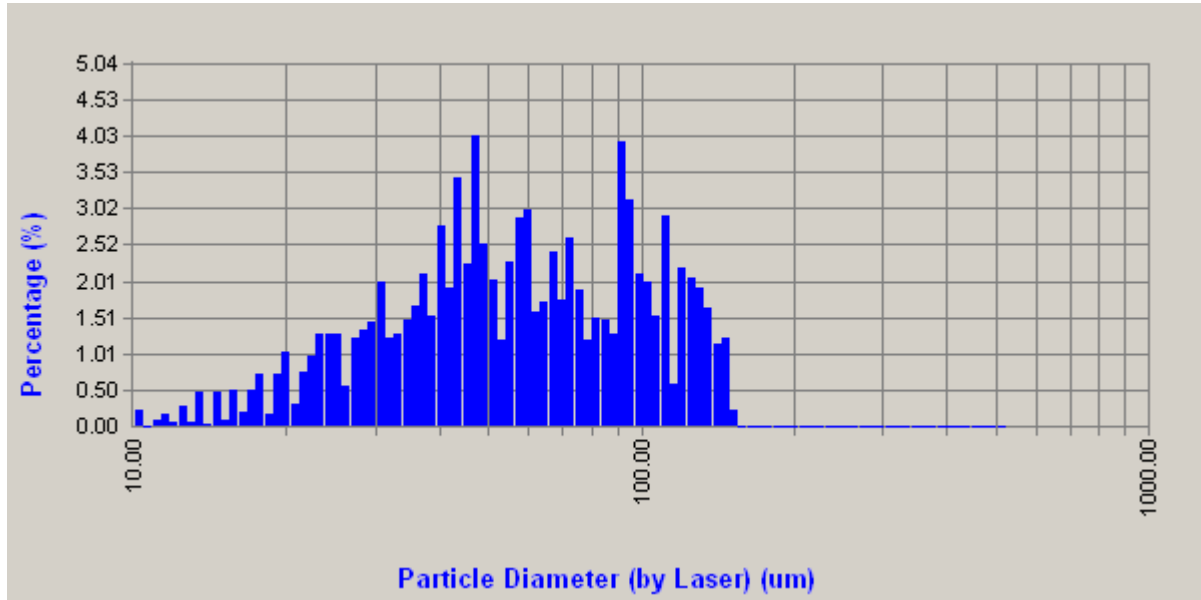
Range	Local(%)	Under(%)
10.0-15.6	8.87	9.16
15.6-31.2	34.86	44.01
31.2-62.5	39.41	83.43
62.5-125.0	15.47	98.90
125.0-250.0	1.10	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/73

Range	Local(%)	Under(%)
10.0-15.6	2.72	2.79
15.6-31.2	19.65	22.45
31.2-62.5	41.95	64.40
62.5-125.0	31.83	96.22
125.0-250.0	3.78	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/74**Volume Histogram : OA154/74**

Mean: 63.59 um STD: 34.40 um Conf.: 100.00 %
 D10 : 23.93 um D50: 55.48 um D90: 117.50 um

**Area Ranges Table : OA154/74**

Range	Local(%)	Under(%)
10.0-15.6	7.31	7.55
15.6-31.2	31.60	39.15
31.2-62.5	39.78	78.93
62.5-125.0	18.52	97.45
125.0-250.0	2.55	100.00
250.0-500.0	0.00	100.00

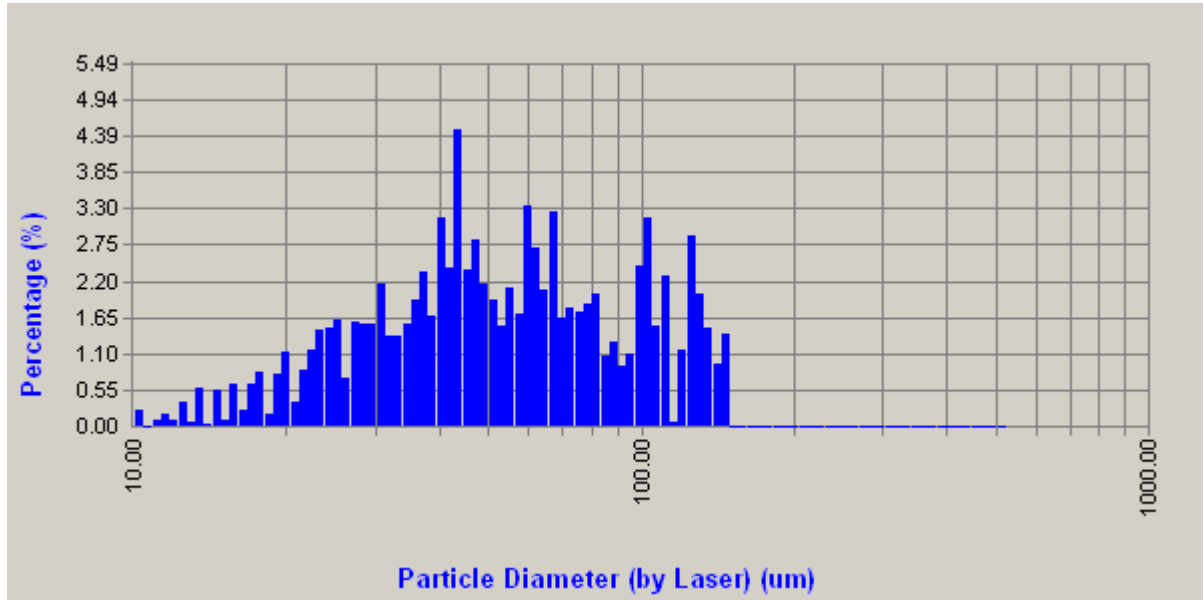
Volume Ranges Table : OA154/74

Range	Local(%)	Under(%)
10.0-15.6	2.03	2.08
15.6-31.2	16.18	18.26
31.2-62.5	38.91	57.17
62.5-125.0	35.27	92.44
125.0-250.0	7.56	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/75

Volume Histogram : OA154/75

Mean: 60.20 um STD: 34.09 um Conf.: 100.00 %
 D10 : 22.85 um D50: 51.13 um D90: 112.06 um



Area Ranges Table : OA154/75

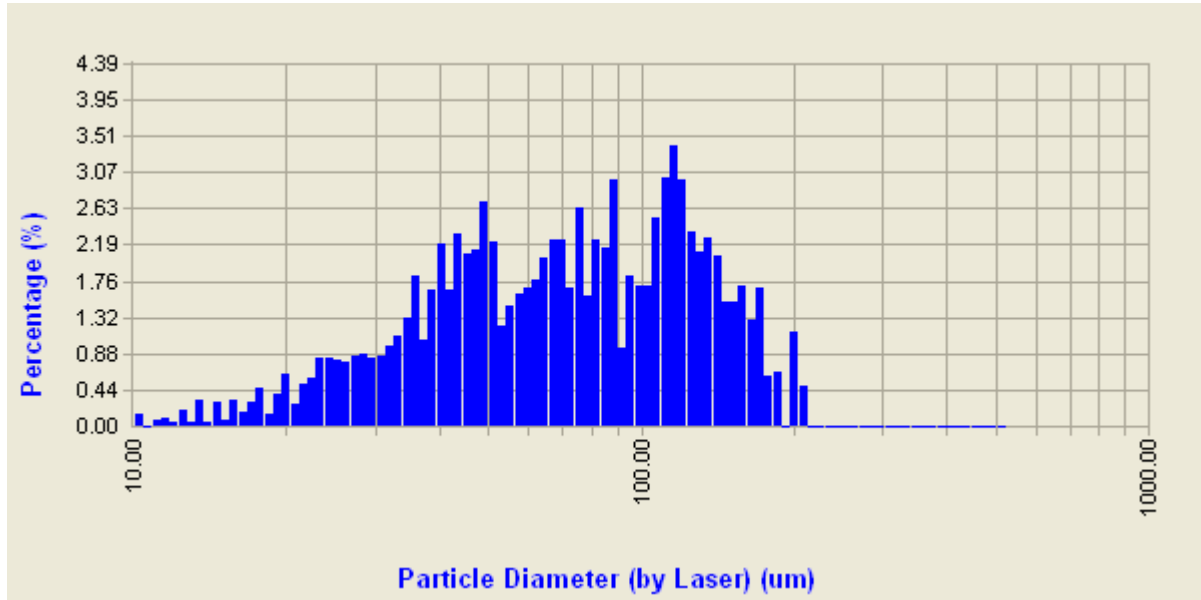
Range	Local(%)	Under(%)
10.0-15.6	8.11	8.36
15.6-31.2	34.47	42.83
31.2-62.5	38.94	81.77
62.5-125.0	15.98	97.75
125.0-250.0	2.25	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/75

Range	Local(%)	Under(%)
10.0-15.6	2.39	2.45
15.6-31.2	18.73	21.19
31.2-62.5	40.14	61.32
62.5-125.0	31.59	92.92
125.0-250.0	7.08	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/76**Volume Histogram : OA154/76**

Mean: 80.36 um STD: 45.07 um Conf.: 100.00 %
 D10 : 28.14 um D50: 71.44 um D90: 146.13 um

**Area Ranges Table : OA154/76**

Range	Local(%)	Under(%)
10.0-15.6	6.27	6.53
15.6-31.2	24.33	30.86
31.2-62.5	38.31	69.17
62.5-125.0	24.58	93.75
125.0-250.0	6.25	100.00
250.0-500.0	0.00	100.00

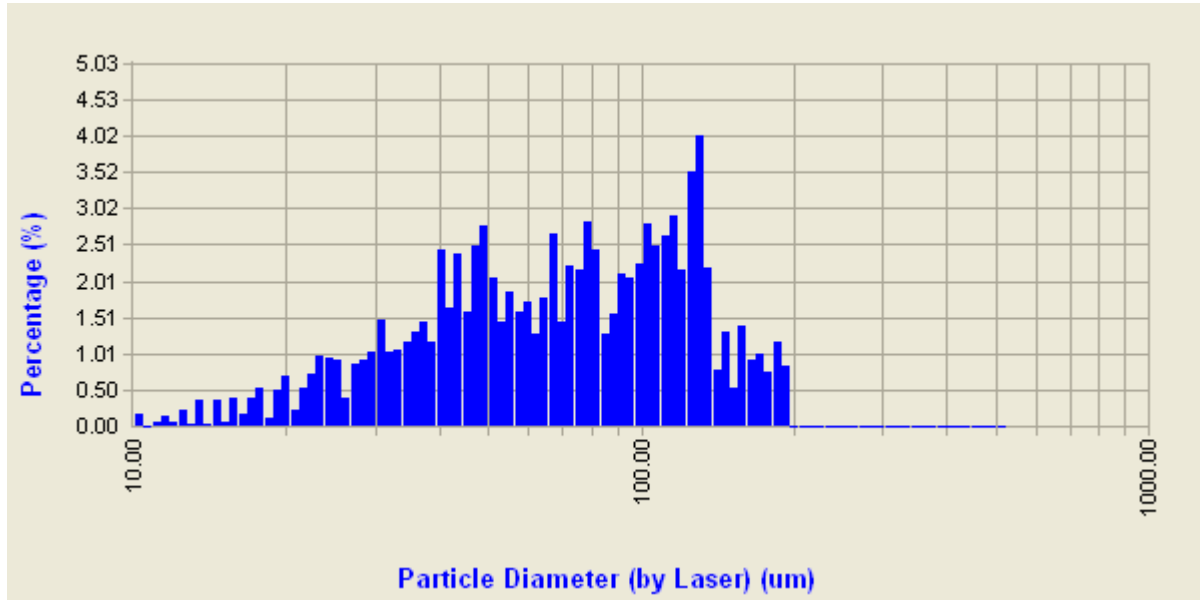
Volume Ranges Table : OA154/76

Range	Local(%)	Under(%)
10.0-15.6	1.44	1.49
15.6-31.2	10.29	11.78
31.2-62.5	30.91	42.69
62.5-125.0	39.91	82.60
125.0-250.0	17.40	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/77

Volume Histogram : OA154/77

Mean: 77.81 um STD: 42.90 um Conf.: 100.00 %
 D10 : 27.20 um D50: 70.72 um D90: 133.82 um



Area Ranges Table : OA154/77

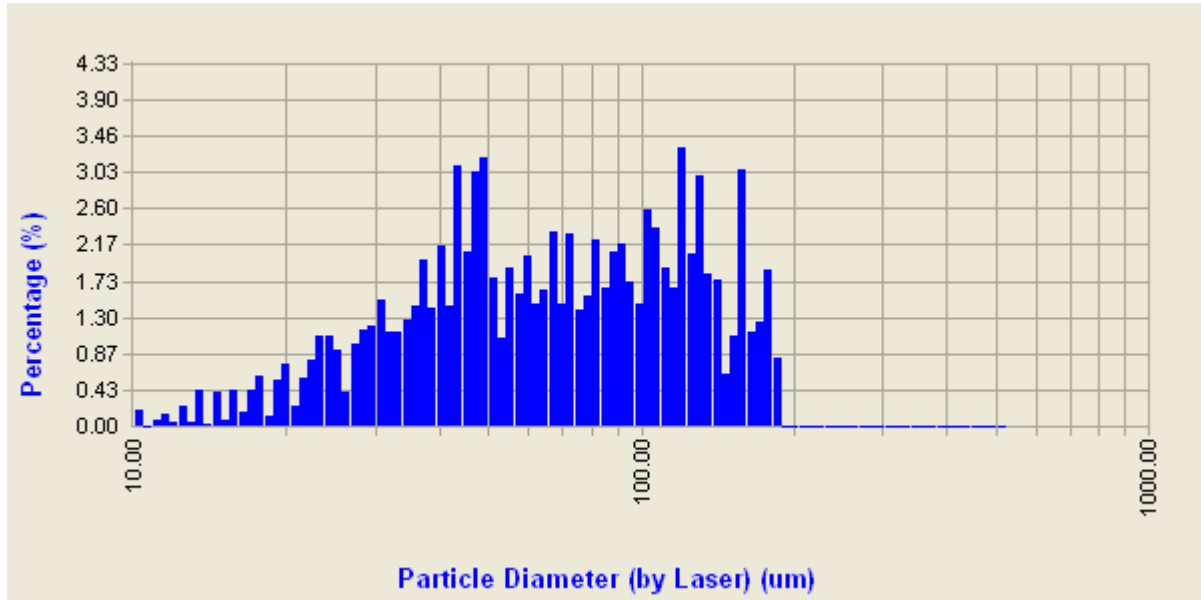
Range	Local(%)	Under(%)
10.0-15.6	6.65	6.88
15.6-31.2	26.73	33.61
31.2-62.5	36.21	69.82
62.5-125.0	24.10	93.92
125.0-250.0	6.08	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/77

Range	Local(%)	Under(%)
10.0-15.6	1.57	1.61
15.6-31.2	11.66	13.27
31.2-62.5	30.09	43.36
62.5-125.0	39.97	83.33
125.0-250.0	16.67	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/78**Volume Histogram : OA154/78**

Mean: 76.34 um STD: 44.38 um Conf.: 99.99 %
 D10 : 26.11 um D50: 65.28 um D90: 139.26 um

**Area Ranges Table : OA154/78**

Range	Local(%)	Under(%)
10.0-15.6	7.20	7.44
15.6-31.2	28.23	35.67
31.2-62.5	37.92	73.60
62.5-125.0	20.78	94.38
125.0-250.0	5.62	100.00
250.0-500.0	0.00	100.00

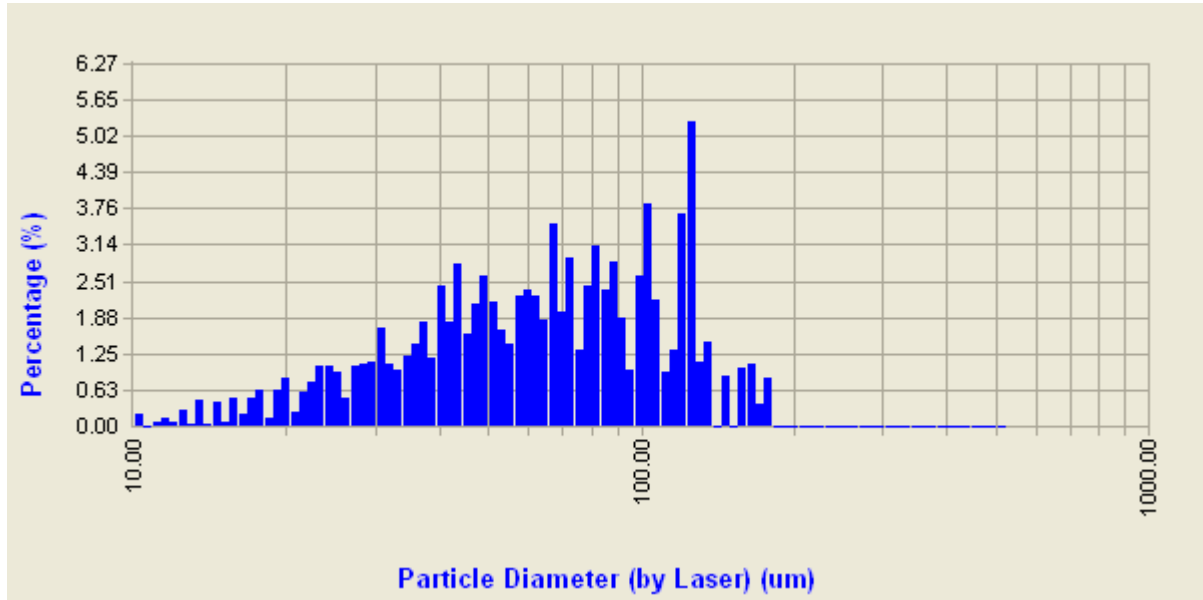
Volume Ranges Table : OA154/78

Range	Local(%)	Under(%)
10.0-15.6	1.78	1.82
15.6-31.2	12.84	14.67
31.2-62.5	32.70	47.37
62.5-125.0	36.05	83.42
125.0-250.0	16.58	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/79

Volume Histogram : OA154/79

Mean: 70.54 um STD: 37.76 um Conf.: 99.98 %
 D10 : 26.11 um D50: 64.19 um D90: 124.02 um



Area Ranges Table : OA154/79

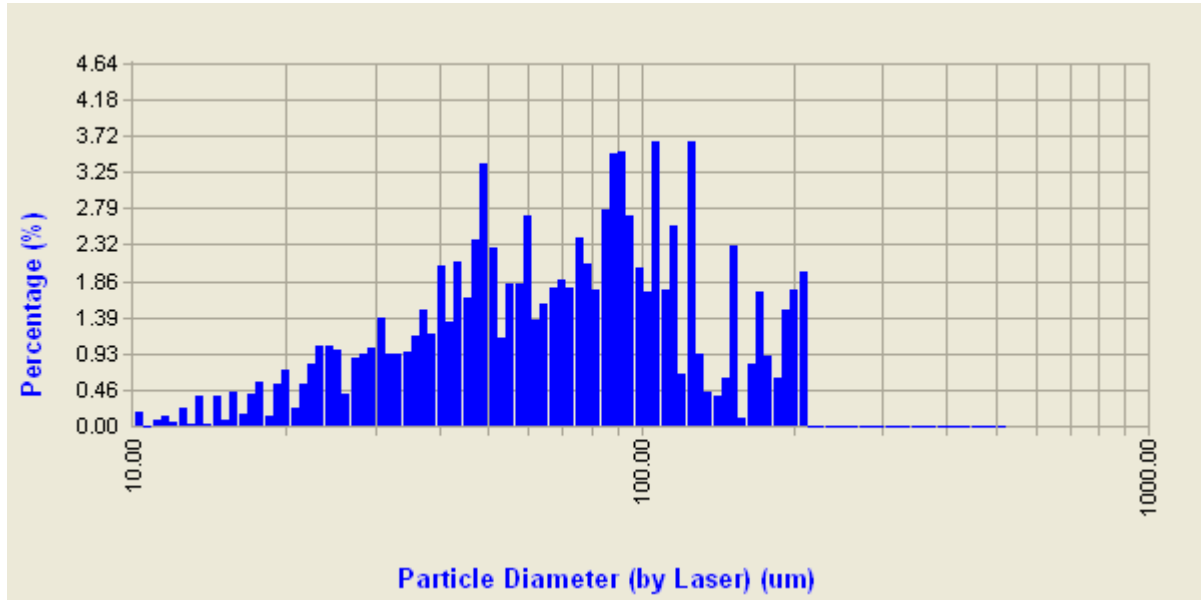
Range	Local(%)	Under(%)
10.0-15.6	7.57	7.83
15.6-31.2	28.41	36.25
31.2-62.5	36.08	72.32
62.5-125.0	24.19	96.51
125.0-250.0	3.49	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/79

Range	Local(%)	Under(%)
10.0-15.6	1.92	1.97
15.6-31.2	13.26	15.23
31.2-62.5	32.53	47.76
62.5-125.0	42.30	90.06
125.0-250.0	9.94	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/80**Volume Histogram : OA154/80**

Mean: 79.92 um STD: 47.98 um Conf.: 99.98 %
 D10 : 26.11 um D50: 70.72 um D90: 152.31 um

**Area Ranges Table : OA154/80**

Range	Local(%)	Under(%)
10.0-15.6	7.12	7.36
15.6-31.2	27.67	35.03
31.2-62.5	35.60	70.64
62.5-125.0	24.15	94.78
125.0-250.0	5.22	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/80

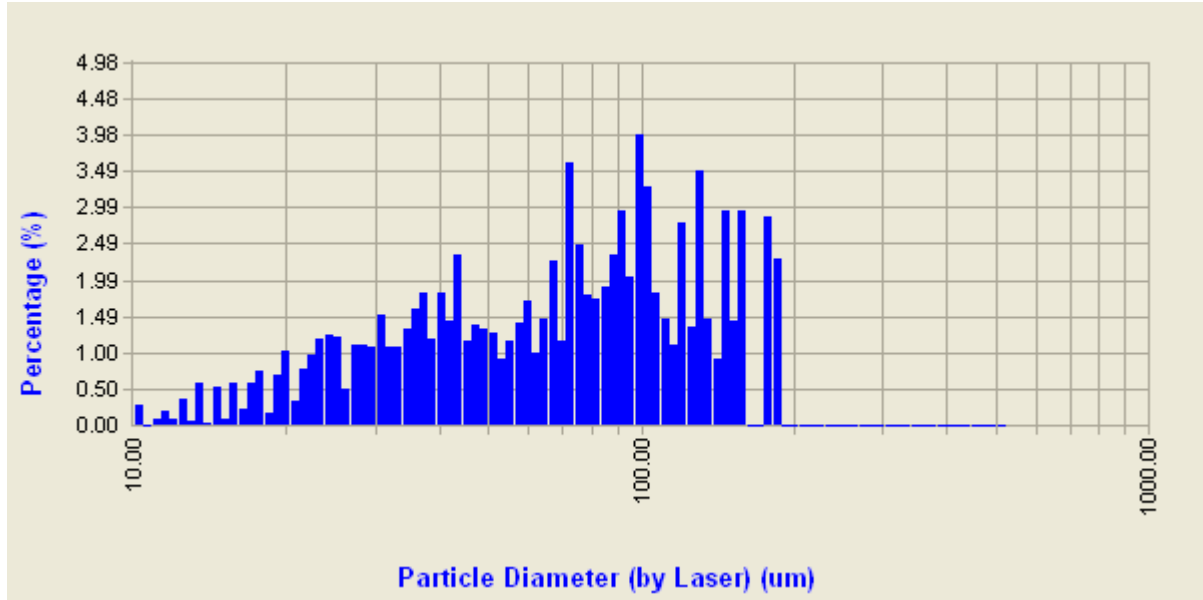
Range	Local(%)	Under(%)
10.0-15.6	1.69	1.73
15.6-31.2	12.02	13.76
31.2-62.5	30.27	44.03
62.5-125.0	39.94	83.97
125.0-250.0	16.03	100.00
250.0-500.0	0.00	100.00

Benthic collection sites

Volume Distribution: OA154/81

Volume Histogram : OA154/81

Mean: 78.69 um STD: 46.18 um Conf.: 99.97 %
 D10 : 23.93 um D50: 72.89 um D90: 147.96 um



Area Ranges Table : OA154/81

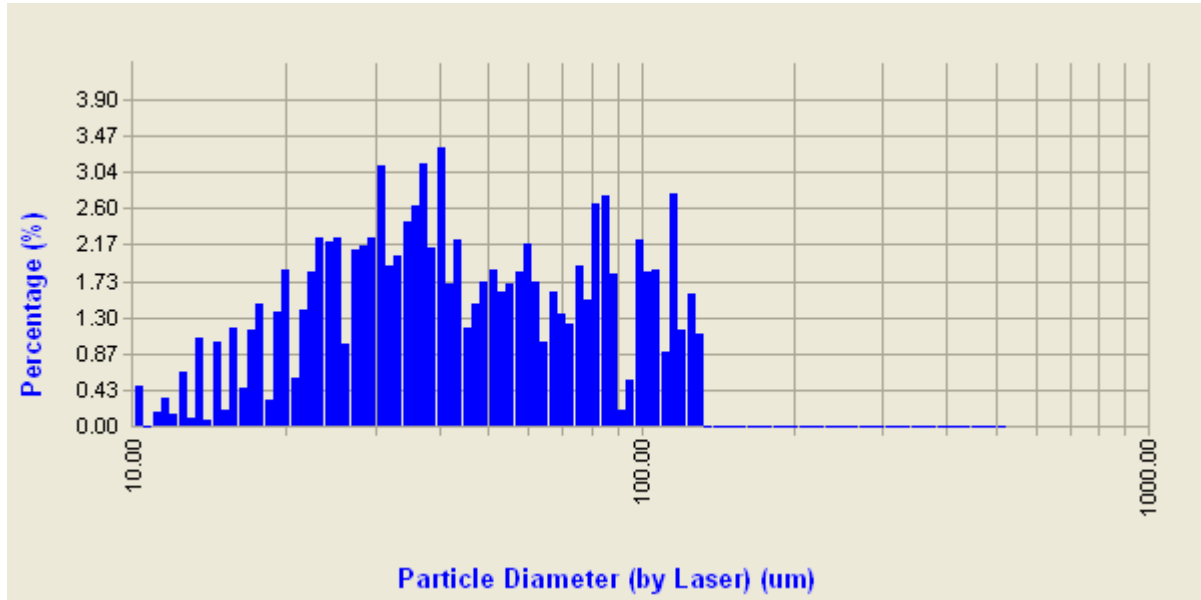
Range	Local(%)	Under(%)
10.0-15.6	9.51	9.83
15.6-31.2	32.50	42.33
31.2-62.5	28.85	71.19
62.5-125.0	22.48	93.66
125.0-250.0	6.34	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/81

Range	Local(%)	Under(%)
10.0-15.6	2.39	2.45
15.6-31.2	14.77	17.22
31.2-62.5	24.67	41.89
62.5-125.0	39.04	80.93
125.0-250.0	19.07	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/82**Volume Histogram : OA154/82**

Mean: 51.24 um STD: 31.14 um Conf.: 99.99 %
 D10 : 18.49 um D50: 40.25 um D90: 103.35 um

**Area Ranges Table : OA154/82**

Range	Local(%)	Under(%)
10.0-15.6	12.39	12.80
15.6-31.2	44.39	57.19
31.2-62.5	30.64	87.83
62.5-125.0	11.83	99.65
125.0-250.0	0.35	100.00
250.0-500.0	0.00	100.00

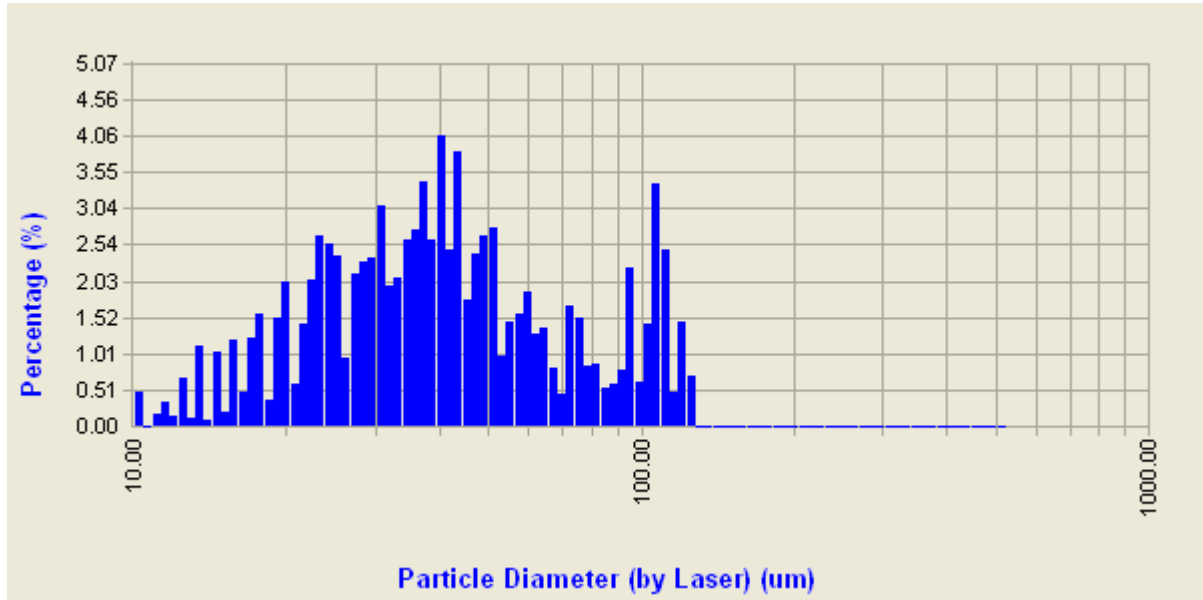
Volume Ranges Table : OA154/82

Range	Local(%)	Under(%)
10.0-15.6	4.42	4.53
15.6-31.2	28.59	33.13
31.2-62.5	36.36	69.49
62.5-125.0	29.24	98.72
125.0-250.0	1.28	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/83

Volume Histogram : OA154/83

Mean: 46.86 um STD: 28.54 um Conf.: 99.96 %
 D10 : 18.49 um D50: 38.08 um D90: 100.09 um



Area Ranges Table : OA154/83

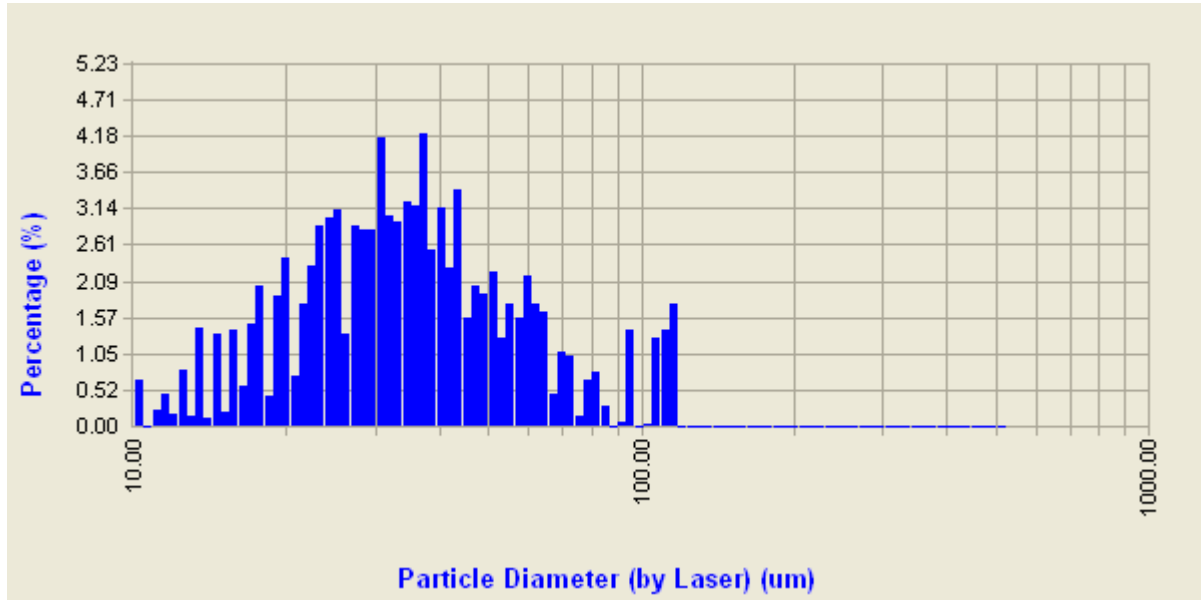
Range	Local(%)	Under(%)
10.0-15.6	12.21	12.59
15.6-31.2	45.09	57.68
31.2-62.5	33.89	91.57
62.5-125.0	8.43	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/83

Range	Local(%)	Under(%)
10.0-15.6	4.59	4.71
15.6-31.2	30.53	35.24
31.2-62.5	42.22	77.47
62.5-125.0	22.53	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/84**Volume Histogram : OA154/84**

Mean: 39.14 um STD: 22.76 um Conf.: 99.99 %
 D10 : 17.41 um D50: 33.73 um D90: 65.28 um

**Area Ranges Table : OA154/84**

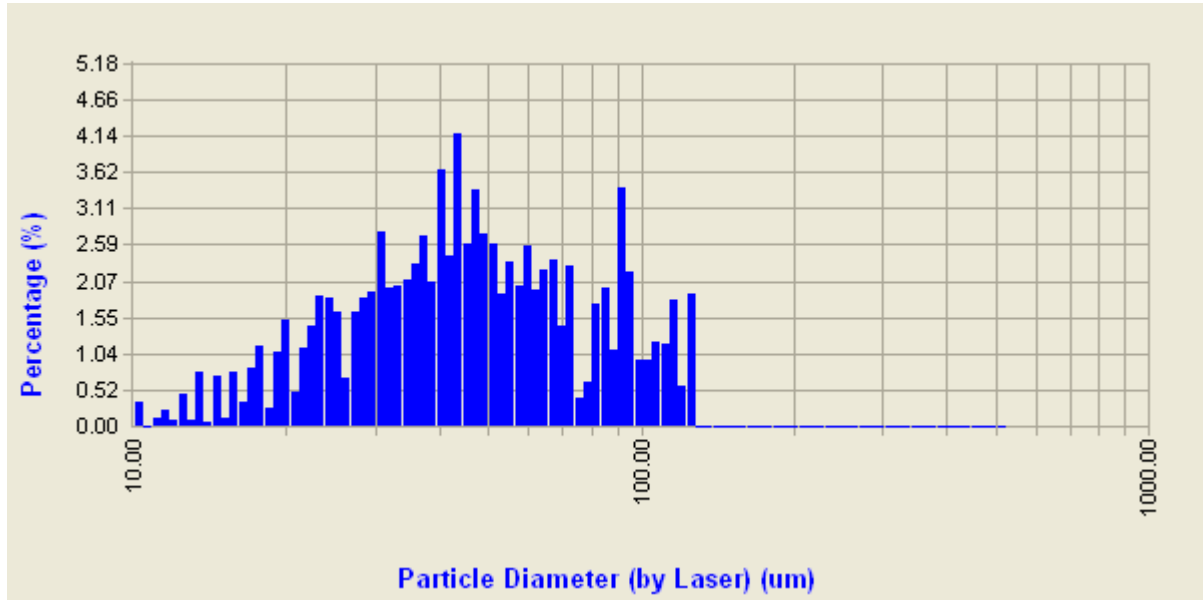
Range	Local(%)	Under(%)
10.0-15.6	13.94	14.41
15.6-31.2	49.31	63.72
31.2-62.5	31.88	95.60
62.5-125.0	4.40	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/84

Range	Local(%)	Under(%)
10.0-15.6	5.87	6.03
15.6-31.2	37.72	43.75
31.2-62.5	43.88	87.63
62.5-125.0	12.37	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/85

Volume Histogram : OA154/85
 Mean: 51.30 um STD: 27.78 um Conf.: 99.96 %
 D10 : 20.67 um D50: 44.61 um D90: 93.56 um



Area Ranges Table : OA154/85

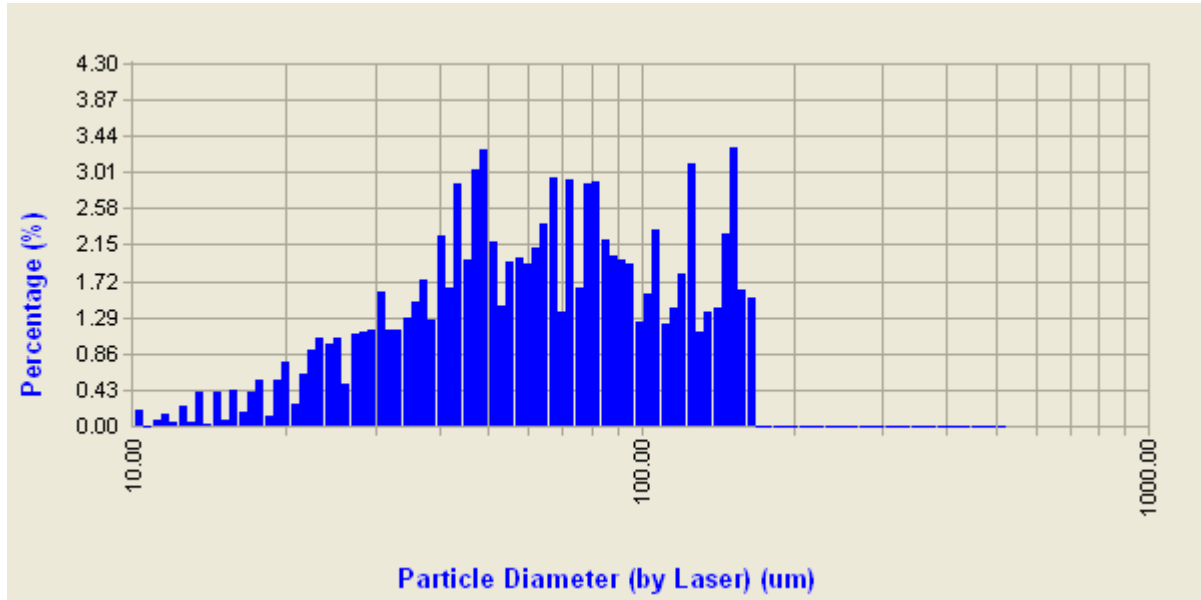
Range	Local(%)	Under(%)
10.0-15.6	9.58	9.91
15.6-31.2	37.76	47.67
31.2-62.5	39.47	87.14
62.5-125.0	12.79	99.93
125.0-250.0	0.07	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/85

Range	Local(%)	Under(%)
10.0-15.6	3.18	3.27
15.6-31.2	22.91	26.18
31.2-62.5	44.95	71.13
62.5-125.0	28.65	99.78
125.0-250.0	0.22	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/86**Volume Histogram : OA154/86**

Mean: 71.67 um STD: 40.06 um Conf.: 100.00 %
 D10 : 26.11 um D50: 63.10 um D90: 138.17 um

**Area Ranges Table : OA154/86**

Range	Local(%)	Under(%)
10.0-15.6	6.84	7.07
15.6-31.2	28.11	35.18
31.2-62.5	38.21	73.39
62.5-125.0	21.82	95.21
125.0-250.0	4.79	100.00
250.0-500.0	0.00	100.00

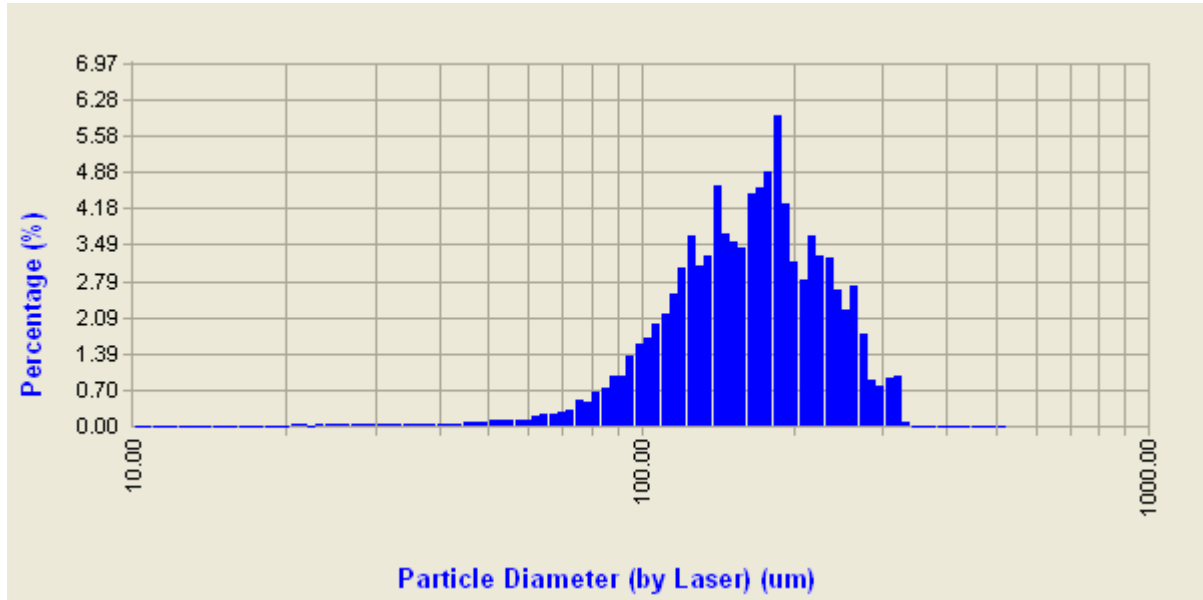
Volume Ranges Table : OA154/86

Range	Local(%)	Under(%)
10.0-15.6	1.73	1.77
15.6-31.2	13.14	14.91
31.2-62.5	34.12	49.03
62.5-125.0	37.02	86.06
125.0-250.0	13.94	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/87

Volume Histogram : OA154/87

Mean: 168.71 um STD: 57.19 um Conf.: 100.00 %
 D10 : 99.91 um D50: 165.52 um D90: 247.52 um



Area Ranges Table : OA154/87

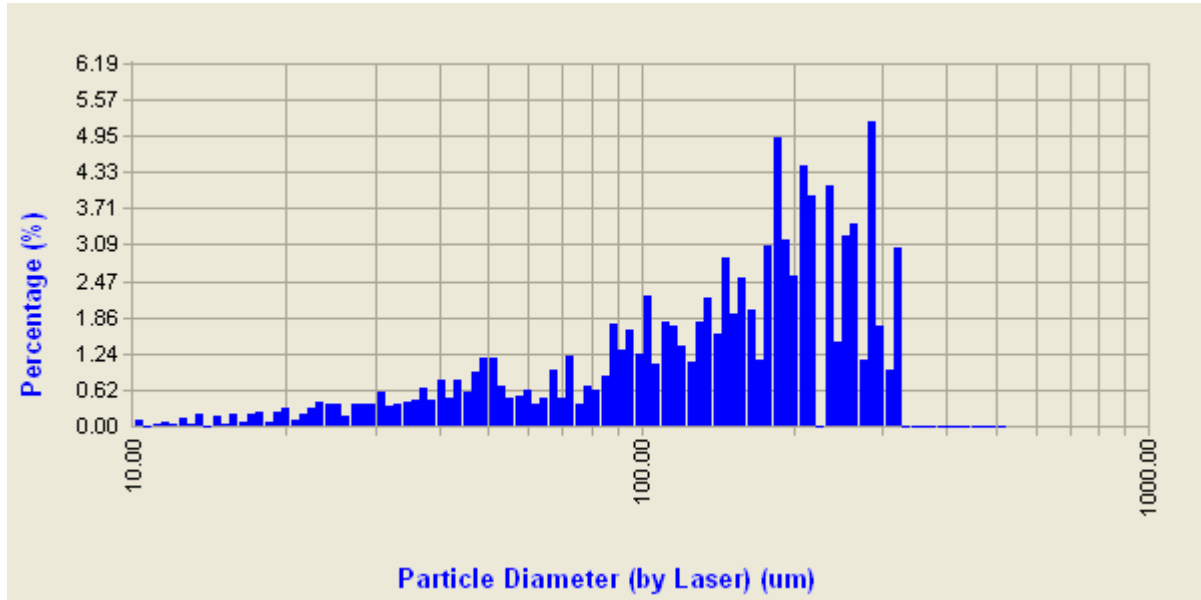
Range	Local(%)	Under(%)
10.0-15.6	0.77	0.88
15.6-31.2	2.39	3.27
31.2-62.5	4.16	7.43
62.5-125.0	31.46	38.89
125.0-250.0	56.13	95.02
250.0-500.0	4.98	100.00

Volume Ranges Table : OA154/87

Range	Local(%)	Under(%)
10.0-15.6	0.07	0.07
15.6-31.2	0.37	0.45
31.2-62.5	1.38	1.82
62.5-125.0	21.90	23.72
125.0-250.0	66.75	90.48
250.0-500.0	9.52	100.00

Volume Distribution: OA154/88**Volume Histogram : OA154/88**

Mean: 158.99 um STD: 83.70 um Conf.: 100.00 %
 D10 : 43.52 um D50: 159.93 um D90: 280.69 um

**Area Ranges Table : OA154/88**

Range	Local(%)	Under(%)
10.0-15.6	6.17	6.39
15.6-31.2	19.88	26.27
31.2-62.5	23.42	49.69
62.5-125.0	20.72	70.41
125.0-250.0	23.45	93.86
250.0-500.0	6.14	100.00

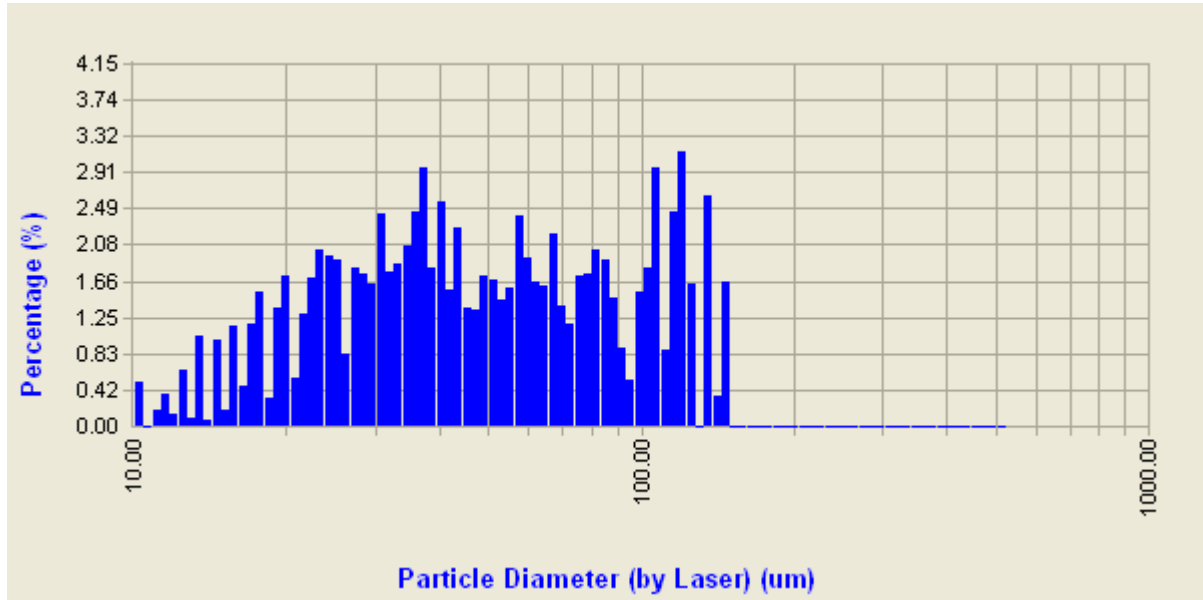
Volume Ranges Table : OA154/88

Range	Local(%)	Under(%)
10.0-15.6	0.83	0.85
15.6-31.2	4.85	5.69
31.2-62.5	11.06	16.76
62.5-125.0	20.32	37.08
125.0-250.0	44.52	81.60
250.0-500.0	18.40	100.00

Volume Distribution: OA154/89

Volume Histogram : OA154/89

Mean: 56.80 um STD: 35.97 um Conf.: 99.89 %
 D10 : 18.49 um D50: 44.61 um D90: 116.41 um



Area Ranges Table : OA154/89

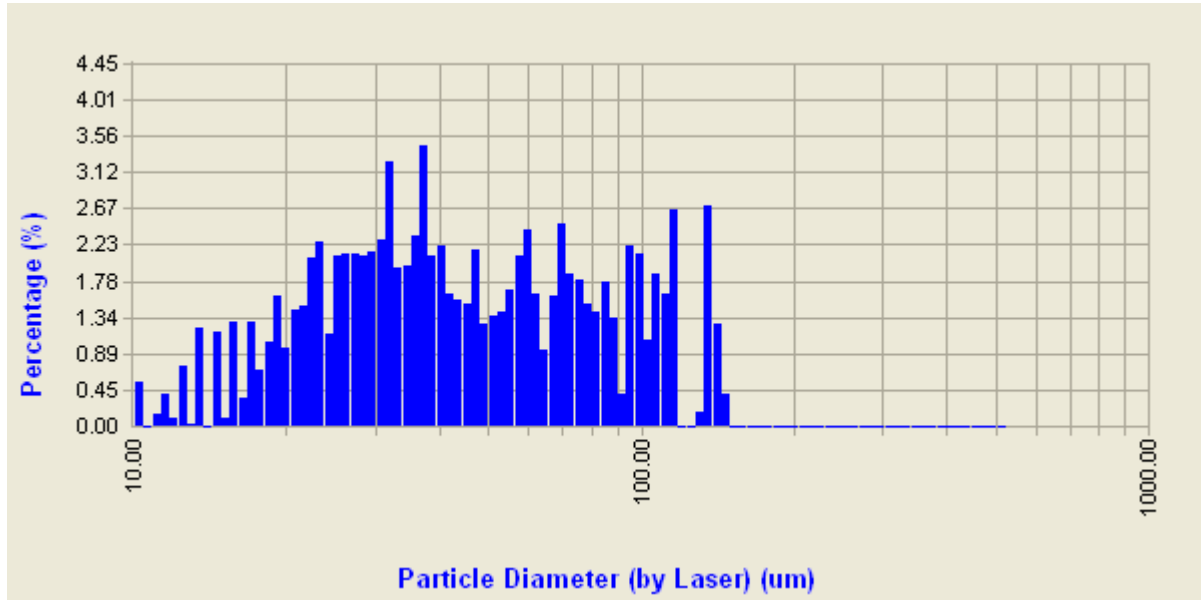
Range	Local(%)	Under(%)
10.0-15.6	13.19	13.65
15.6-31.2	42.06	55.72
31.2-62.5	29.79	85.51
62.5-125.0	13.26	98.76
125.0-250.0	1.24	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/89

Range	Local(%)	Under(%)
10.0-15.6	4.46	4.58
15.6-31.2	25.32	29.90
31.2-62.5	33.92	63.82
62.5-125.0	31.53	95.36
125.0-250.0	4.64	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/90**Volume Histogram : OA154/90**

Mean: 52.37 um STD: 33.29 um Conf.: 99.99 %
 D10 : 18.59 um D50: 40.46 um D90: 106.06 um

**Area Ranges Table : OA154/90**

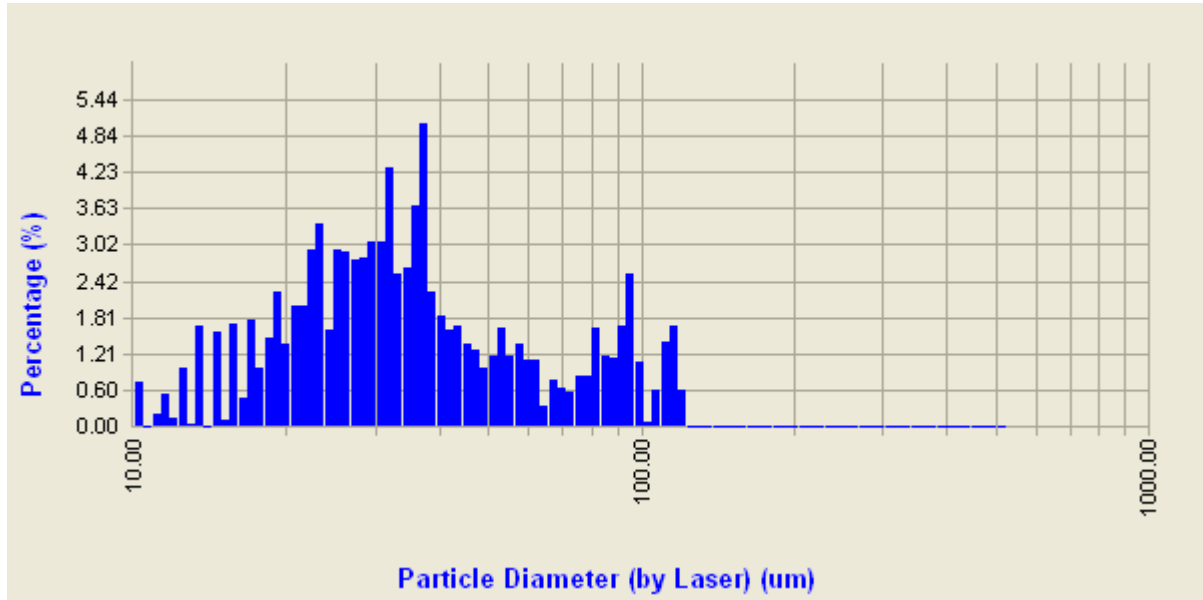
Range	Local(%)	Under(%)
10.0-15.6	13.14	13.46
15.6-31.2	45.49	58.95
31.2-62.5	28.57	87.52
62.5-125.0	11.32	98.84
125.0-250.0	1.16	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/90

Range	Local(%)	Under(%)
10.0-15.6	4.69	4.78
15.6-31.2	29.39	34.17
31.2-62.5	34.10	68.28
62.5-125.0	27.20	95.48
125.0-250.0	4.52	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/91

Volume Histogram : OA154/91
 Mean: 41.05 um STD: 26.42 um Conf.: 99.99 %
 D10 : 16.40 um D50: 32.80 um D90: 88.57 um



Area Ranges Table : OA154/91

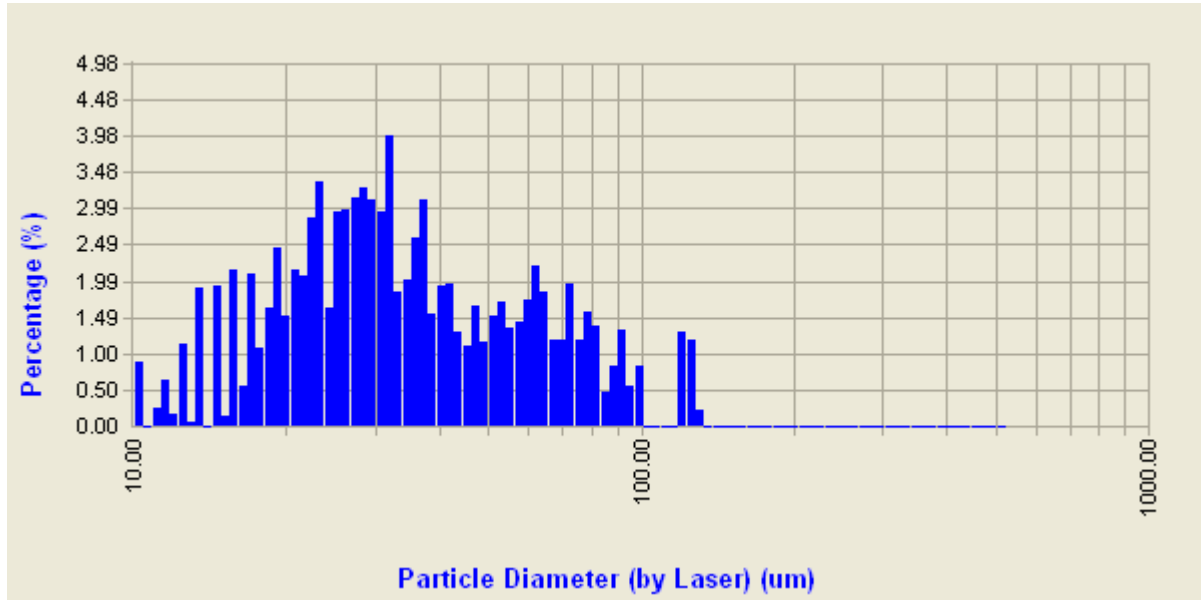
Range	Local(%)	Under(%)
10.0-15.6	14.96	15.34
15.6-31.2	52.81	68.15
31.2-62.5	25.84	93.98
62.5-125.0	6.02	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/91

Range	Local(%)	Under(%)
10.0-15.6	6.37	6.50
15.6-31.2	40.63	47.13
31.2-62.5	34.87	82.01
62.5-125.0	17.99	100.00
125.0-250.0	0.00	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/92**Volume Histogram : OA154/92**

Mean: 39.46 um STD: 24.76 um Conf.: 99.99 %
 D10 : 16.40 um D50: 30.62 um D90: 74.35 um

**Area Ranges Table : OA154/92**

Range	Local(%)	Under(%)
10.0-15.6	17.09	17.52
15.6-31.2	54.34	71.86
31.2-62.5	21.93	93.79
62.5-125.0	5.92	99.71
125.0-250.0	0.29	100.00
250.0-500.0	0.00	100.00

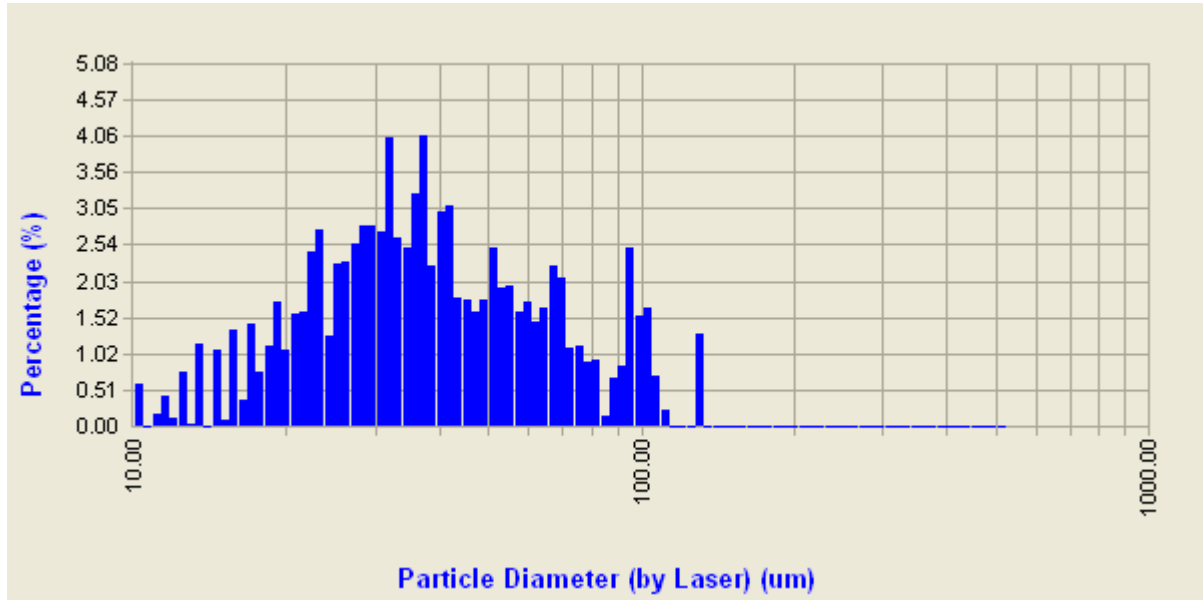
Volume Ranges Table : OA154/92

Range	Local(%)	Under(%)
10.0-15.6	7.53	7.68
15.6-31.2	42.86	50.55
31.2-62.5	32.00	82.54
62.5-125.0	16.18	98.72
125.0-250.0	1.28	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/93

Volume Histogram : OA154/93

Mean: 43.24 um STD: 25.02 um Conf.: 99.99 %
 D10 : 18.59 um D50: 36.08 um D90: 80.92 um



Area Ranges Table : OA154/93

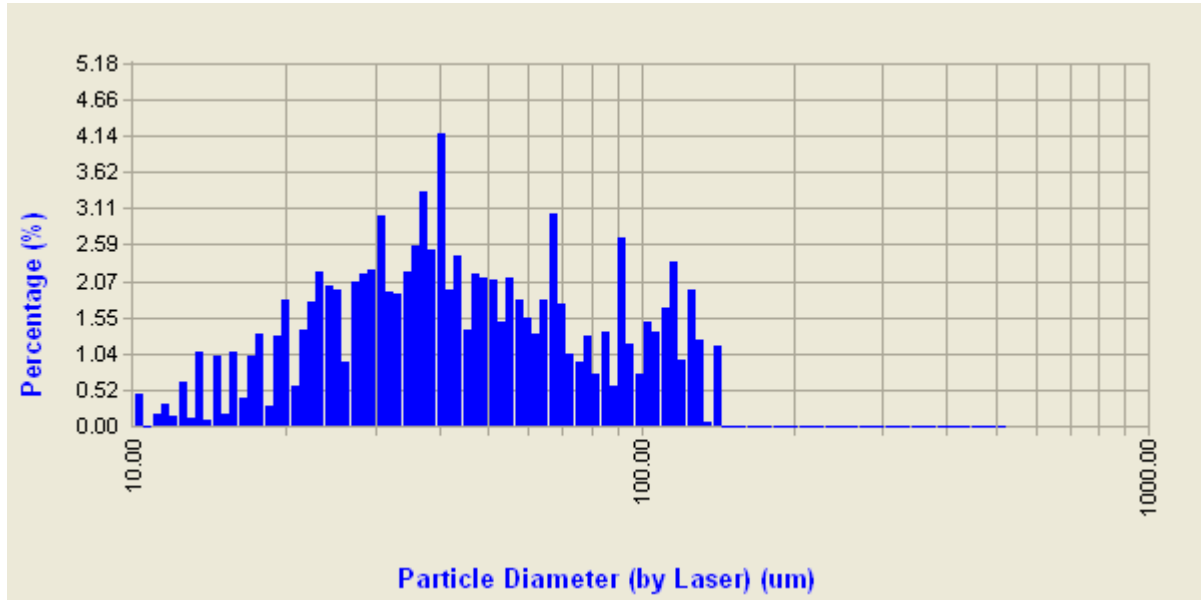
Range	Local(%)	Under(%)
10.0-15.6	12.07	12.40
15.6-31.2	47.64	60.04
31.2-62.5	32.16	92.20
62.5-125.0	7.49	99.68
125.0-250.0	0.32	100.00
250.0-500.0	0.00	100.00

Volume Ranges Table : OA154/93

Range	Local(%)	Under(%)
10.0-15.6	4.69	4.79
15.6-31.2	34.03	38.82
31.2-62.5	41.30	80.12
62.5-125.0	18.59	98.72
125.0-250.0	1.28	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/94**Volume Histogram : OA154/94**

Mean: 51.57 um STD: 32.01 um Conf.: 99.98 %
 D10 : 19.58 um D50: 40.25 um D90: 107.71 um

**Area Ranges Table : OA154/94**

Range	Local(%)	Under(%)
10.0-15.6	12.39	12.79
15.6-31.2	42.44	55.23
31.2-62.5	32.90	88.13
62.5-125.0	10.82	98.95
125.0-250.0	1.05	100.00
250.0-500.0	0.00	100.00

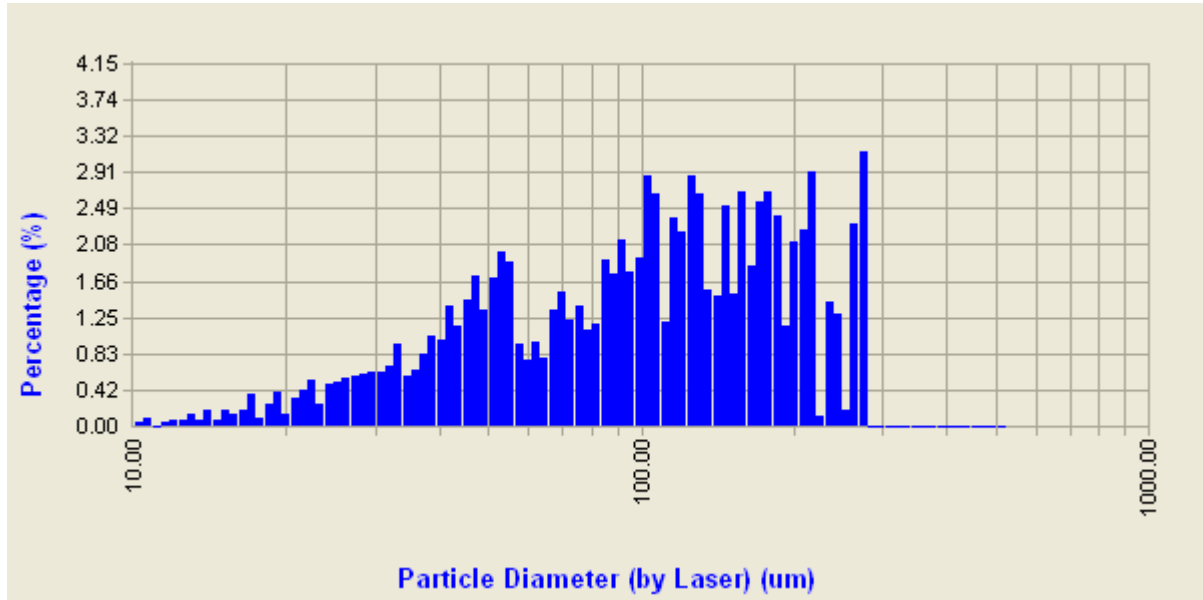
Volume Ranges Table : OA154/94

Range	Local(%)	Under(%)
10.0-15.6	4.38	4.49
15.6-31.2	27.21	31.69
31.2-62.5	38.67	70.36
62.5-125.0	25.76	96.12
125.0-250.0	3.88	100.00
250.0-500.0	0.00	100.00

Volume Distribution: OA154/95

Volume Histogram : OA154/95

Mean: 115.73 um STD: 69.33 um Conf.: 100.00 %
 D10 : 34.03 um D50: 104.75 um D90: 216.80 um



Area Ranges Table : OA154/95

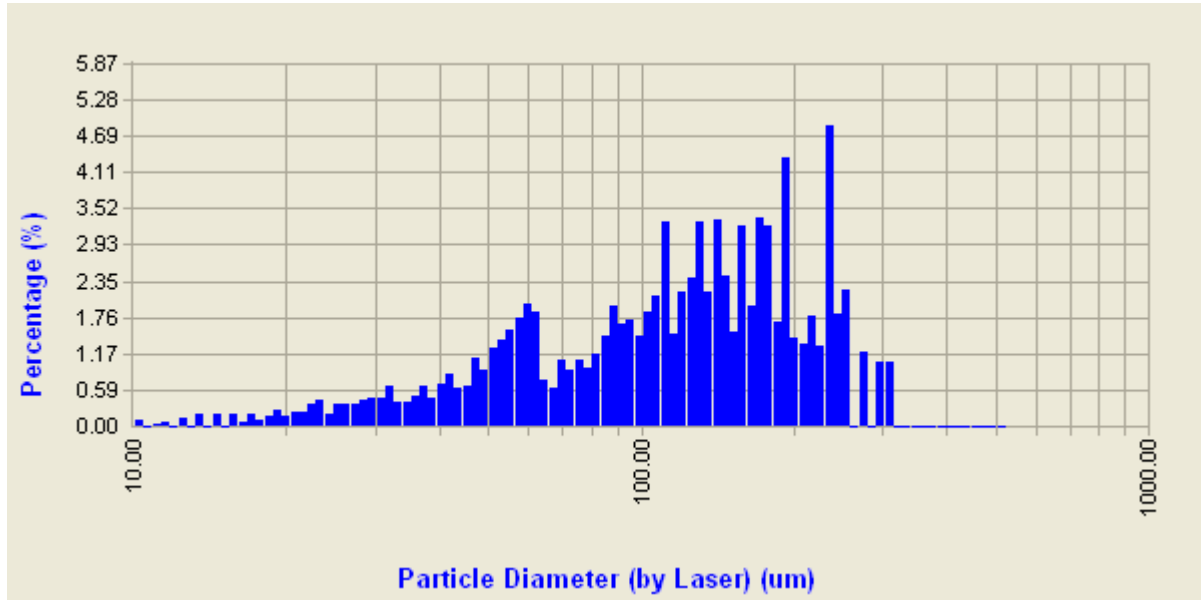
Range	Local(%)	Under(%)
10.0-15.6	5.66	6.29
15.6-31.2	21.59	27.89
31.2-62.5	32.29	60.17
62.5-125.0	24.14	84.31
125.0-250.0	14.25	98.56
250.0-500.0	1.44	100.00

Volume Ranges Table : OA154/95

Range	Local(%)	Under(%)
10.0-15.6	1.02	1.10
15.6-31.2	7.06	8.15
31.2-62.5	20.55	28.71
62.5-125.0	31.40	60.10
125.0-250.0	34.42	94.52
250.0-500.0	5.48	100.00

Volume Distribution: OA154/96**Volume Histogram : OA154/96**

Mean: 129.06 um STD: 70.03 um Conf.: 100.00 %
 D10 : 41.55 um D50: 123.56 um D90: 231.81 um

**Area Ranges Table : OA154/96**

Range	Local(%)	Under(%)
10.0-15.6	5.12	5.25
15.6-31.2	18.55	23.81
31.2-62.5	29.21	53.02
62.5-125.0	24.27	77.30
125.0-250.0	21.60	98.90
250.0-500.0	1.10	100.00

Volume Ranges Table : OA154/96

Range	Local(%)	Under(%)
10.0-15.6	0.78	0.80
15.6-31.2	5.21	6.01
31.2-62.5	17.00	23.01
62.5-125.0	27.52	50.53
125.0-250.0	45.65	96.18
250.0-500.0	3.82	100.00

Appendix 3: Sediment chemistry results

Table A3.1: Total organic carbon, metals, organochlorine pesticides and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site EB1 in 2011

Site Replicate (GWRC Code)	EB1				
	EB1/1	EB 1/2	EB 1/3	EB 1/4	EB 1/5
<u>Total Organic Carbon (% , < 500 µm):</u>	0.37	0.38	0.35	0.35	0.39
<u>Total Organic Carbon (% , < 63 µm):</u>	1.77	1.77	1.77	1.77	1.77
<u>Metals (mg/kg, weak acid, < 63 µm):</u>					
Copper	22	19.50	21	19.50	21
Lead	78	72	77	73	74
Zinc	122	116	121	127	122
EB 1/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 µm):</u>					
Silver			0.11		
Mercury			4.90		
Arsenic			0.02		
Cadmium			12.40		
Chromium			4.90		
Copper			0.21		
Nickel			5.30		
Lead			27		
Zinc			47		

Table A3.1 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site EB1 in 2011

Site Replicate (GWRC Code)	EB1				
	EB 1/1	EB 1/2	EB 1/3	EB 1/4	EB 1/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.10	0.10	0.10	0.10	0.10
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	0.29	0.32	0.33	0.32	0.33
4,4'-DDD	0.29	0.35	0.29	0.29	0.27
4,4'-DDT	0.05	0.19	0.18	0.05	0.15
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	0.83	1.06	1.0	0.86	0.95
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	12.0	10.1	9.7	8.8	10.4
Acenaphthylene	1.5	1.2	1.4	1.1	1.4
Acenaphthene	8.2	8.7	8.2	7.0	7.4
Fluorene	5.0	5.2	4.6	3.9	4.9
Phenanthrene	35.6	36.1	33.5	30.2	34.7
Anthracene	12.6	14.6	13.1	10.3	12.3
Fluoranthene	77.6	79.5	79.0	62.3	73.4
Pyrene	87.8	90.3	89.5	70.1	83.4
Benzo[a]anthracene	41.9	42.5	43.0	33.9	40.2
Chrysene	45.8	45.9	45.7	37.7	43.1
Benzo[b]fluoranthene	66.5	65.4	65.8	60.5	61.5
Benzo[k]fluoranthene	26.2	25.7	25.3	23.1	24.5

Table A3.1 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site EB1 in 2011

Site	EB1					
	Replicate (GWRC Code)	EB 1/1	EB 1/2	EB 1/3	EB 1/4	EB 1/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>						
Benzo[a]pyrene		47.2	53.0	51.9	45.9	47.8
Indeno[1,2,3-c,d]pyrene		48.9	50.4	48.1	42.9	46.2
Dibenzo[a,h]anthracene		7.1	7.7	7.3	6.2	6.8
Benzo[g,h,i]perylene		49.7	49.6	47.6	42.0	45.4
Total PAH (<D.L. = 0)		574	586	573	486	543

Table A3.2: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH1 in 2011

Site	WH1					
	Replicate (GWRC Code)	WH1/1	WH1/2	WH1/3	WH1/4	WH1/5
<u>Total Organic Carbon (% , < 500 μm):</u>						
		1.68	1.67	1.65	1.62	1.63
<u>Total Organic Carbon (% , < 63 μm):</u>						
		1.51	1.51	1.51	1.51	1.51
<u>Metals (mg/kg, weak acid, < 63 μm):</u>						
Copper		21	22	22	21	22
Lead		71	71	70	71	71
Zinc		116	116	119	119	123
WH 1/1–5 composite						
<u>Metals (mg/kg, strong acid, < 500 μm):</u>						
Silver				0.65		
Mercury				6.20		
Arsenic				0.08		
Cadmium				24		
Chromium				22		
Copper				0.69		
Nickel				15.20		
Lead				68		
Zinc				121		

Table A3.2 continued: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH1 in 2011

Site Replicate (GWRC Code)	WH1				
	WH1/1	WH1/2	WH1/3	WH1/4	WH1/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.65	0.70	0.74	0.76	0.74
2,4'-DDT	0.05	0.17	0.15	0.05	0.05
4,4'-DDE	2.44	2.72	2.56	2.95	2.75
4,4'-DDD	2.63	3.06	3.09	3.18	2.96
4,4'-DDT	3.90	4.21	4.21	4.17	4.08
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT (< D.L. = 0)	9.72	10.92	10.80	11.15	10.63
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Naphthalene	94.1	80.5	89.3	101	81.9
Acenaphthylene	14.9	17.6	14.2	161	14.3
Acenaphthene	91.2	94.7	92.2	100	84.4
Fluorene	51.6	51.6	46.6	53.4	45.6
Phenanthrene	373	366	344	359	350
Anthracene	166	163	130	146	134
Fluoranthene	852	880	820	905	843
Pyrene	939	921	880	946	902
Benzo[a]anthracene	429	435	411	450	403
Chrysene	465	468	446	497	460
Benzo[b]fluoranthene	591	543	575	586	575
Benzo[k]fluoranthene	287	287	316	310	271

Table A3.2 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH1 in 2011

Site Replicate (GWRC Code)	WH1				
	WH1/1	WH1/2	WH1/3	WH1/4	WH1/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	544	551	550	579	555
Indeno[1,2,3-c,d]pyrene	444	451	454	462	435
Dibenzo[a,h]anthracene	60.1	59.0	59.1	62.3	54.2
Benzo[g,h,i]perylene	435	426	432	445	422
Total PAH (<D.L. = 0)	5836	5794	5659	6017	5630

Table A3.3: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH2 in 2011

Site Replicate (GWRC Code)	WH2				
	WH2/1	WH2/2	WH2/3	WH2/4	WH2/5
<u>Total Organic Carbon (% , < 500 μm):</u>	1.39	1.38	1.36	1.34	1.36
<u>Total Organic Carbon (% , < 63 μm):</u>	1.30	1.30	1.30	1.30	1.30
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	13.3	13.3	13.9	13.7	14.7
Lead	50.0	49.0	49.0	49.0	47.0
Zinc	96.0	97.0	96.0	98.0	96.0
WH2/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>	0.4				
Silver	5.7				
Mercury	0.1				
Arsenic	24.0				
Cadmium	15.9				
Chromium	0.6				
Copper	15.4				
Nickel	51.0				
Lead	104.0				
Zinc	0.4				

Table A3.3 continued: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH2 in 2011

Site Replicate (GWRC Code)	WH2				
	WH2/1	WH2/2	WH2/3	WH2/4	WH2/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.39	0.36	0.33	0.39	0.38
2,4'-DDT	0.05	0.13	0.13	0.11	0.10
4,4'-DDE	1	1.25	1.11	1.04	1.13
4,4'-DDD	1.20	1.28	1.15	1.17	1.17
4,4'-DDT	2.07	2.23	2.04	2.10	1.94
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	4.77	5.31	4.81	4.86	4.77
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	34	34	34	33	33
Acenaphthylene	30	28	29	28	29
Acenaphthene	5.6	5.5	5.5	5.4	5.7
Fluorene	19	18	19	19	20
Phenanthrene	166	162	162	155	166
Anthracene	50	51	46	46	49
Fluoranthene	396	401	391	384	398
Pyrene	407	409	400	384	406
Benzo[a]anthracene	191	190	182	185	190
Chrysene	198	205	201	202	206
Benzo[b]fluoranthene	252	241	254	250	241
Benzo[k]fluoranthene	180	188	181	194	177

Table A3.3 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH2 in 2011

Site Replicate (GWRC Code)	WH2				
	WH2/1	WH2/2	WH2/3	WH2/4	WH2/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Benzo[a]pyrene	222	223	225	233	231
Indeno[1,2,3-c,d]pyrene	213	216	196	200	209
Dibenzo[a,h]anthracene	27	27	25	26	26
Benzo[g,h,i]perylene	213	216	204	205	209
Total PAH (<D.L. = 0)	2604	2617	2556	2550	2595

Table A3.4: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site LB1 in 2011

Site Replicate (GWRC Code)	LB1				
	LB1/1	LB1/2	LB1/3	LB1/4	LB1/5
<u>Total Organic Carbon (% , $< 500 \mu\text{m}$):</u>					
	1.30	1.29	1.24	1.30	1.27
<u>Total Organic Carbon (% , $< 63 \mu\text{m}$):</u>					
	1.62	1.62	1.62	1.62	1.62
<u>Metals (mg/kg, weak acid, $< 63 \mu\text{m}$):</u>					
Copper	49	50	48	48	50
Lead	81	83	78	80	78
Zinc	132	137	130	140	135
LB1/1–5 composite					
<u>Metals (mg/kg, strong acid, $< 500 \mu\text{m}$):</u>					
Silver	0.6				
Mercury	5.8				
Arsenic	0.1				
Cadmium	21.0				
Chromium	39.0				
Copper	0.6				
Nickel	12.5				
Lead	62.0				
Zinc	114.0				

Table A3.4 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site LB1 in 2011

Site Replicate (GWRC Code)	LB1				
	LB1/1	LB1/2	LB1/3	LB1/4	LB1/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.15	0.05	0.14	0.15	0.14
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.24	0.10	0.10	0.21	0.22
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.10
2,4'-DDD	1.87	1.76	1.92	1.69	1.83
2,4'-DDT	0.21	0.14	0.41	0.31	0.28
4,4'-DDE	1.77	1.76	3.19	3.12	1.82
4,4'-DDD	5.66	5.56	9.27	8.69	5.46
4,4'-DDT	7.67	7.65	7.93	7.50	7.25
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	17.24	16.93	22.77	21.35	16.75
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	61	58	61	60	65
Acenaphthylene	34	33	34	39	36
Acenaphthene	23	18	22	19	16
Fluorene	47	43	40	38	36
Phenanthrene	375	350	358	329	331
Anthracene	95	74	97	90	89
Fluoranthene	743	677	739	689	712
Pyrene	778	711	761	721	736
Benzo[a]anthracene	302	271	312	312	299
Chrysene	334	321	339	323	343
Benzo[b]fluoranthene	375	371	392	375	390
Benzo[k]fluoranthene	269	237	279	260	289

Table A3.4 continued: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site LB1 in 2011

Site Replicate (GWRC Code)	LB1				
	LB1/1	LB1/2	LB1/3	LB1/4	LB1/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Benzo[a]pyrene	401	267	405	407	401
Indeno[1,2,3-c,d]pyrene	340	319	343	341	336
Dibenzo[a,h]anthracene	47	43	44	45	46
Benzo[g,h,i]perylene	360	336	357	358	372
Total PAH ($< \text{D.L.} = 0$)	4585	4130	4583	4405	4496

Table A3.5: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site LB2 in 2011

Site Replicate (GWRC Code)	LB2				
	LB2/1	LB2/2	LB2/3	LB2/4	LB2/5
<u>Total Organic Carbon (% , $< 500 \mu\text{m}$):</u>	1.63	1.58	1.63	1.68	1.65
<u>Total Organic Carbon (% , $< 63 \mu\text{m}$):</u>	1.73	1.73	1.73	1.73	1.73
<u>Metals (mg/kg, weak acid, $< 63 \mu\text{m}$):</u>					
Copper	39	39	39	39	40
Lead	78	76	76	71	73
Zinc	134	134	132	132	131
LB2/1–5 composite					
<u>Metals (mg/kg, strong acid, $< 500 \mu\text{m}$):</u>					
Silver	0.6				
Mercury	6.2				
Arsenic	0.1				
Cadmium	26.0				
Chromium	38.0				
Copper	0.6				
Nickel	15.3				
Lead	67.0				
Zinc	133.0				

Table A3.5 continued: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site LB2 in 2011

Site Replicate (GWRC Code)	LB2				
	LB2/1	LB2/2	LB2/3	LB2/4	LB2/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Hexachlorobenzene	0.23	0.26	1.14	1.35	0.24
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	1.14	1.40	1.25	1.35	1.27
2,4'-DDT	0.05	0.26	0.24	0.23	0.21
4,4'-DDE	1.61	1.91	1.84	1.71	1.62
4,4'-DDD	3.75	4.64	4.50	4.43	3.99
4,4'-DDT	4.96	5.47	6.08	5.84	4.52
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT (< D.L. = 0)	11.57	13.73	13.96	13.61	11.66
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Naphthalene	62	64	66	63	65
Acenaphthylene	41	45	43	45	43
Acenaphthene	13	15	15	12	13
Fluorene	37	37	35	35	35
Phenanthrene	323	354	334	314	321
Anthracene	80	99	97	90	87
Fluoranthene	746	801	766	749	755
Pyrene	775	832	796	768	768
Benzo[a]anthracene	316	349	317	327	321
Chrysene	340	389	350	350	343
Benzo[b]fluoranthene	404	451	403	398	377
Benzo[k]fluoranthene	299	319	307	337	327

Table A3.5 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site LB2 in 2011

Site Replicate (GWRC Code)	LB2				
	LB2/1	LB2/2	LB2/3	LB2/4	LB2/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	415	457	439	465	435
Indeno[1,2,3-c,d]pyrene	355	416	406	385	380
Dibenzo[a,h]anthracene	45	51	53	50	51
Benzo[g,h,i]perylene	383	435	409	411	397
Total PAH (<D.L. = 0)	4633	5113	4836	4799	4718

Table A3.6: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH3 in 2011

Site Replicate (GWRC Code)	WH3				
	WH3/1	WH3/2	WH3/3	WH3/4	WH3/5
<u>Total Organic Carbon (% , < 500 μm):</u>	1.68	1.67	1.65	1.66	1.62
<u>Total Organic Carbon (% , < 63 μm):</u>	1.48	1.48	1.48	1.48	1.48
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	23.0	23.0	24.0	24.0	25.0
Lead	62.0	60.0	62.0	60.0	61.0
Zinc	115.0	112.0	114.0	119.0	117.0
WH3/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>	0.5				
Silver	6.2				
Mercury	0.1				
Arsenic	26.0				
Cadmium	26.0				
Chromium	0.6				
Copper	15.7				
Nickel	60.0				
Lead	122.0				
Zinc	0.5				

Table A3.6 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH3 in 2011

Site Replicate (GWRC Code)	WH3				
	WH3/1	WH3/2	WH3/3	WH3/4	WH3/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.61	1.04	1.23	0.75	0.75
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.92	0.86	0.83	1.06	1.04
2,4'-DDT	0.31	0.27	0.20	0.46	0.70
4,4'-DDE	1.57	1.48	1.41	5.94	1.82
4,4'-DDD	2.98	3.13	2.84	9.42	11.92
4,4'-DDT	6.50	6.32	5.37	27.45	44.94
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	12.33	12.12	10.70	44.39	60.48
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	69	71	64	65	64
Acenaphthylene	41	43	40	41	38
Acenaphthene	14	14	13	13	12
Fluorene	35	34	32	33	31
Phenanthrene	314	315	299	304	288
Anthracene	90	94	86	87	83
Fluoranthene	713	726	676	695	671
Pyrene	726	746	696	707	679
Benzo[a]anthracene	301	318	283	294	289
Chrysene	328	335	323	315	320
Benzo[b]fluoranthene	393	405	387	386	400
Benzo[k]fluoranthene	257	271	238	253	249

Table A3.6 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH3 in 2011

Site Replicate (GWRC Code)	WH3				
	WH3/1	WH3/2	WH3/3	WH3/4	WH3/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Benzo[a]pyrene	434	422	378	400	388
Indeno[1,2,3-c,d]pyrene	365	377	354	362	354
Dibenzo[a,h]anthracene	48	46	46	43	42
Benzo[g,h,i]perylene	362	362	354	356	336
Total PAH ($< \text{D.L.} = 0$)	4490	4578	4270	4354	4243

Table A3.7: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH4 in 2011

Site Replicate (GWRC Code)	WH4				
	WH4/1	WH4/2	WH4/3	WH4/4	WH4/5
<u>Total Organic Carbon (% , $< 500 \mu\text{m}$):</u>	1.55	1.58	1.55	1.64	1.56
<u>Total Organic Carbon (% , $< 63 \mu\text{m}$):</u>	1.52	1.52	1.52	1.52	1.52
<u>Metals (mg/kg, weak acid, $< 63 \mu\text{m}$):</u>					
Copper	16.6	16.2	16.1	16.0	15.8
Lead	49.0	48.0	49.0	45.0	48.0
Zinc	101.0	100.0	100.0	96.0	99.0
WH4/1–5 composite					
<u>Metals (mg/kg, strong acid, $< 500 \mu\text{m}$):</u>					
Silver	0.3				
Mercury	6.5				
Arsenic	0.0				
Cadmium	26.0				
Chromium	18.8				
Copper	0.5				
Nickel	16.9				
Lead	49.0				
Zinc	111.0				

Table A3.7 continued: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH4 in 2011

Site Replicate (GWRC Code)	WH4				
	WH4/1	WH4/2	WH4/3	WH4/4	WH4/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.42	0.32	0.41	0.49	0.38
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	1.13	1.11	1.15	1.22	1.20
4,4'-DDD	1.68	1.58	1.63	1.75	1.59
4,4'-DDT	3.11	2.82	2.80	2.97	2.77
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	6.44	5.93	6.09	6.52	6.04
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	30	30	31	31	34
Acenaphthylene	23	23	21	22	22
Acenaphthene	5	5	6	6	6
Fluorene	17	17	17	17	18
Phenanthrene	143	144	144	141	151
Anthracene	39	40	38	40	42
Fluoranthene	338	330	334	325	340
Pyrene	354	343	341	333	351
Benzo[a]anthracene	156	154	161	157	161
Chrysene	173	172	167	161	165
Benzo[b]fluoranthene	225	221	226	230	230
Benzo[k]fluoranthene	143	138	143	141	136

Table A3.7 continued: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH4 in 2011

Site Replicate (GWRC Code)	WH4				
	WH4/1	WH4/2	WH4/3	WH4/4	WH4/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	188	198	198	209	202
Indeno[1,2,3-c,d]pyrene	182	186	195	195	200
Dibenzo[a,h]anthracene	23	24	26	25	25
Benzo[g,h,i]perylene	188	186	193	191	193
Total PAH (<D.L. = 0)	2228	2213	2241	2224	2277

Table A3.8: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site AQ1 in 2011

Site Replicate (GWRC Code)	AQ1				
	AQ1/1	AQ1/2	AQ1/3	AQ1/4	AQ1/5
<u>Total Organic Carbon (% , < 500 μm):</u>	1.56	1.51	1.52	1.50	1.50
<u>Total Organic Carbon (% , < 63 μm):</u>	1.42	1.42	1.42	1.42	1.42
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	17.3	15.9	16.3	15.4	16.5
Lead	48.0	50.0	48.0	49.0	49.0
Zinc	97.0	99.0	102.0	103.0	101.0
AQ1/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>					
Silver	0.3				
Mercury	6.1				
Arsenic	0.1				
Cadmium	24.0				
Chromium	18.6				
Copper	0.5				
Nickel	16.2				
Lead	47.0				
Zinc	105.0				

Table A3.8 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site AQ1 in 2011

Site Replicate (GWRC Code)	AQ1				
	AQ1/1	AQ1/2	AQ1/3	AQ1/4	AQ1/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.59	0.65	0.68	0.67	0.70
2,4'-DDT	0.18	0.17	0.18	0.18	0.18
4,4'-DDE	1.29	1.32	1.51	1.60	1.33
4,4'-DDD	2.46	2.15	2.21	2.77	2.05
4,4'-DDT	5.94	5.01	5	5.30	4.77
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	10.50	9.36	9.62	10.57	9.08
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	39	40	41	47	45
Acenaphthylene	24	25	26	26	27
Acenaphthene	7	7	6	7	7
Fluorene	23	24	22	22	23
Phenanthrene	192	195	175	192	197
Anthracene	42	47	41	56	51
Fluoranthene	411	418	374	423	419
Pyrene	422	425	381	434	435
Benzo[a]anthracene	186	197	177	196	189
Chrysene	206	205	184	204	206
Benzo[b]fluoranthene	235	237	224	247	251
Benzo[k]fluoranthene	189	209	200	193	201

Table A3.8 continued: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site AQ1 in 2011

Site Replicate (GWRC Code)	AQ1				
	AQ1/1	AQ1/2	AQ1/3	AQ1/4	AQ1/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Benzo[a]pyrene	215	248	224	267	249
Indeno[1,2,3-c,d]pyrene	203	221	205	219	214
Dibenzo[a,h]anthracene	28	31	28	29	30
Benzo[g,h,i]perylene	229	232	215	230	229
Total PAH ($< \text{D.L.} = 0$)	2651	2759	2521	2795	2774

Table A3.9: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site AQ2 in 2011

Site Replicate (GWRC Code)	AQ2				
	AQ2/1	AQ2/2	AQ2/3	AQ2/4	AQ2/5
<u>Total Organic Carbon (% , $< 500 \mu\text{m}$):</u>	1.40	1.38	1.42	1.26	1.47
<u>Total Organic Carbon (% , $< 63 \mu\text{m}$):</u>	1.40	1.40	1.40	1.40	1.40
<u>Metals (mg/kg, weak acid, $< 63 \mu\text{m}$):</u>					
Copper	17.0	15.8	16.7	16.7	17.4
Lead	53.0	52.0	55.0	54.0	55.0
Zinc	103.0	101.0	104.0	102.0	108.0
AQ2/1–5 composite					
<u>Metals (mg/kg, strong acid, $< 500 \mu\text{m}$):</u>					
Silver	0.3				
Mercury	6.5				
Arsenic	0.1				
Cadmium	22.0				
Chromium	17.4				
Copper	0.4				
Nickel	14.1				
Lead	65.0				
Zinc	104.0				

Table A3.9 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site AQ2 in 2011

Site Replicate (GWRC Code)	AQ2				
	AQ2/1	AQ2/2	AQ2/3	AQ2/4	AQ2/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.39	0.39	0.39	0.40	0.43
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	1.16	1.17	1.33	1.19	1.35
4,4'-DDD	1.94	1.85	2.10	1.97	2
4,4'-DDT	4.09	3.77	5.49	4.26	4.42
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	7.68	7.27	9.40	7.92	8.30
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	46	42	46	40	42
Acenaphthylene	23	23	24	26	24
Acenaphthene	9	7	8	8	9
Fluorene	23	23	24	26	25
Phenanthrene	183	181	193	205	203
Anthracene	55	55	62	56	57
Fluoranthene	382	377	408	396	400
Pyrene	395	381	417	413	418
Benzo[a]anthracene	177	171	181	176	178
Chrysene	186	183	188	191	188
Benzo[b]fluoranthene	224	209	227	229	233
Benzo[k]fluoranthene	172	177	168	163	170

Table A3.9 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site AQ2 in 2011

Site Replicate (GWRC Code)	AQ2				
	AQ2/1	AQ2/2	AQ2/3	AQ2/4	AQ2/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	245	241	246	243	250
Indeno[1,2,3-c,d]pyrene	182	170	181	184	178
Dibenzo[a,h]anthracene	24	23	23	23	25
Benzo[g,h,i]perylene	194	186	191	189	190
Total PAH (<D.L. = 0)	2518	2447	2588	2567	2590

Table A3.10: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH5 in 2011

Site Replicate (GWRC Code)	WH5				
	WH5/1	WH5/2	WH5/3	WH5/4	WH5/5
<u>Total Organic Carbon (% , < 500 μm):</u>					
	1.35	1.33	1.33	1.35	1.33
<u>Total Organic Carbon (% , < 63 μm):</u>					
	1.28	1.28	1.28	1.28	1.28
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	10.4	10.6	10.9	10.7	10.7
Lead	35.0	36.0	35.0	34.0	35.0
Zinc	80.0	80.0	78.0	82.0	82.0
WH5/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>					
Silver			0.2		
Mercury			6.4		
Arsenic			0.0		
Cadmium			23.0		
Chromium			12.9		
Copper			0.3		
Nickel			15.6		
Lead			37.0		
Zinc			90.0		

Table A3.10 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH5 in 2011

Site Replicate (GWRC Code)	WH5				
	WH5/1	WH5/2	WH5/3	WH5/4	WH5/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.20	0.10	0.10	0.10	0.10
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	0.91	0.81	0.83	0.87	0.90
4,4'-DDD	1.05	0.96	1.01	1.02	1.01
4,4'-DDT	1.49	1.31	1.40	1.29	1.26
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT (< D.L. = 0)	3.76	3.28	3.44	3.39	3.37
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Naphthalene	15	17	20	18	17
Acenaphthylene	12	13	11	13	10
Acenaphthene	3	2	3	3	3
Fluorene	10	11	10	12	9
Phenanthrene	75	75	74	71	74
Anthracene	19	21	19	19	20
Fluoranthene	164	168	157	158	159
Pyrene	178	178	171	168	172
Benzo[a]anthracene	83	84	81	80	82
Chrysene	89	93	88	87	87
Benzo[b]fluoranthene	150	152	151	151	147
Benzo[k]fluoranthene	61	62	59	59	56

Table A3.10 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH5 in 2011

Site Replicate (GWRC Code)	WH5				
	WH5/1	WH5/2	WH5/3	WH5/4	WH5/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	95	104	97	97	94
Indeno[1,2,3-c,d]pyrene	109	108	108	105	106
Dibenzo[a,h]anthracene	15	15	15	15	15
Benzo[g,h,i]perylene	113	111	113	111	109
Total PAH (<D.L. = 0)	1192	1214	1179	1165	1161

Table A3.11: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH9 in 2011

Site Replicate (GWRC Code)	WH9				
	WH9/1	WH9/2	WH9/3	WH9/4	WH9/5
<u>Total Organic Carbon (% , < 500 μm):</u>					
	1.45	1.49	1.45	1.44	1.45
<u>Total Organic Carbon (% , < 63 μm):</u>					
	1.38	1.38	1.38	1.38	1.38
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	9.3	9.5	9.5	9.9	10.0
Lead	38.0	37.0	37.0	36.0	35.0
Zinc	81.0	83.0	83.0	85.0	84.0
WH9/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>					
Silver	0.3				
Mercury	6.4				
Arsenic	0.0				
Cadmium	25.0				
Chromium	13.5				
Copper	0.2				
Nickel	17.4				
Lead	36.0				
Zinc	96.0				

Table A3.11 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH9 in 2011

Site Replicate (GWRC Code)	WH9				
	WH9/1	WH9/2	WH9/3	WH9/4	WH9/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.27	0.21	0.24	0.24	0.26
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	0.88	0.80	0.85	0.88	0.93
4,4'-DDD	0.96	0.86	0.85	0.87	0.96
4,4'-DDT	0.76	0.68	0.61	0.64	0.70
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT (< D.L. = 0)	2.98	2.65	2.64	2.74	2.95
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Naphthalene	14	14	13	15	15
Acenaphthylene	9	9	8	10	10
Acenaphthene	2	2	2	2	2
Fluorene	9	10	8	11	10
Phenanthrene	59	59	57	60	59
Anthracene	14	11	14	14	14
Fluoranthene	123	122	119	126	125
Pyrene	137	135	131	137	137
Benzo[a]anthracene	65	64	63	65	64
Chrysene	73	73	67	71	70
Benzo[b]fluoranthene	131	132	120	130	130
Benzo[k]fluoranthene	51	50	45	49	50

Table A3.11 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH9 in 2011

Site Replicate (GWRC Code)	WH9				
	WH9/1	WH9/2	WH9/3	WH9/4	WH9/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	76	82	76	82	85
Indeno[1,2,3-c,d]pyrene	90	89	88	91	91
Dibenzo[a,h]anthracene	13	13	12	13	13
Benzo[g,h,i]perylene	98	96	96	99	98
Total PAH (<D.L. = 0)	961	961	920	977	973

Table A3.12: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH10 in 2011

Site Replicate (GWRC Code)	WH10				
	WH10/1	WH10/2	WH10/3	WH10/4	WH10/5
<u>Total Organic Carbon (% , < 500 μm):</u>	1.56	1.59	1.58	1.57	1.56
<u>Total Organic Carbon (% , < 63 μm):</u>	1.50	1.50	1.50	1.50	1.50
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	12.3	12.0	12.2	12.5	12.6
Lead	43.0	43.0	43.0	42.0	43.0
Zinc	95.0	89.0	93.0	95.0	96.0
WH10/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>					
Silver	0.3				
Mercury	6.7				
Arsenic	0.1				
Cadmium	26.0				
Chromium	16.2				
Copper	0.3				
Nickel	18.1				
Lead	45.0				
Zinc	109.0				

Table A3.12 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH10 in 2011

Site Replicate (GWRC Code)	WH10				
	WH10/1	WH10/2	WH10/3	WH10/4	WH10/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.35	0.32	0.30	0.30	0.35
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	1.10	1.09	1.05	1.03	1.06
4,4'-DDD	1.34	1.31	1.33	1.46	1.43
4,4'-DDT	2.20	1.65	1.71	1.64	1.80
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	5.09	4.47	4.49	4.54	4.74
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	18	17	17	18	18
Acenaphthylene	11	12	11	11	11
Acenaphthene	3	3	3	2	2
Fluorene	11	11	10	11	10
Phenanthrene	84	87	81	80	80
Anthracene	23	23	23	23	22
Fluoranthene	193	186	178	176	180
Pyrene	201	198	191	192	189
Benzo[a]anthracene	101	96	92	91	94
Chrysene	112	109	100	100	102
Benzo[b]fluoranthene	177	172	163	171	163
Benzo[k]fluoranthene	76	79	72	76	77

Table A3.12 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH10 in 2011

Site Replicate (GWRC Code)	WH10				
	WH10/1	WH10/2	WH10/3	WH10/4	WH10/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	132	127	121	128	123
Indeno[1,2,3-c,d]pyrene	117	118	116	115	117
Dibenzo[a,h]anthracene	17	16	15	15	16
Benzo[g,h,i]perylene	129	124	125	122	123
Total PAH (<D.L. = 0)	1406	1378	1318	1333	1328

Table A3.13: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH13 in 2011

Site Replicate (GWRC Code)	WH13				
	WH13/1	WH13/2	WH13/3	WH13/4	WH13/5
<u>Total Organic Carbon (% , < 500 μm):</u>					
	1.75	1.73	1.74	1.73	1.74
<u>Total Organic Carbon (% , < 63 μm):</u>					
	1.62	1.62	1.62	1.62	1.62
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	13.3	13.0	12.6	12.8	12.7
Lead	37.0	38.0	37.0	38.0	38.0
Zinc	91.0	90.0	88.0	89.0	89.0
WH13/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>					
Silver	0.3				
Mercury	7.9				
Arsenic	0.1				
Cadmium	24.0				
Chromium	15.2				
Copper	0.2				
Nickel	17.3				
Lead	39.0				
Zinc	102.0				

Table A3.13 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH13 in 2011

Site Replicate (GWRC Code)	WH13				
	WH13/1	WH13/2	WH13/3	WH13/4	WH13/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.27	0.10	0.10	0.23	0.26
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	1.28	1.30	1.25	1.38	1.30
4,4'-DDD	0.88	0.91	0.87	0.86	0.88
4,4'-DDT	0.54	0.51	0.48	0.51	0.57
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	3.07	2.92	2.80	3.08	3.11
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	12	12	12	11	15
Acenaphthylene	9	7	9	7	11
Acenaphthene	2	1	1	1	3
Fluorene	11	10	10	10	11
Phenanthrene	58	52	57	55	76
Anthracene	13	12	13	12	20
Fluoranthene	107	95	103	100	160
Pyrene	126	107	116	112	172
Benzo[a]anthracene	54	49	52	51	81
Chrysene	62	55	58	57	86
Benzo[b]fluoranthene	114	100	108	103	145
Benzo[k]fluoranthene	38	34	38	36	55

Table A3.13 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH13 in 2011

Site Replicate (GWRC Code)	WH13				
	WH13/1	WH13/2	WH13/3	WH13/4	WH13/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	75	65	73	68	93
Indeno[1,2,3-c,d]pyrene	78	71	75	73	104
Dibenzo[a,h]anthracene	12	11	11	11	14
Benzo[g,h,i]perylene	92	84	88	88	108
Total PAH (<D.L. = 0)	861	767	824	794	1155

Table A3.14: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH15 in 2011

Site Replicate (GWRC Code)	WH15				
	WH15/1	WH15/2	WH15/3	WH15/4	WH15/5
<u>Total Organic Carbon (% , < 500 μm):</u>					
	1.92	1.94	1.95	1.95	1.95
<u>Total Organic Carbon (% , < 63 μm):</u>					
	1.70	1.70	1.70	1.70	1.70
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	12.4	13.2	12.1	12.9	13.1
Lead	29.0	29.0	29.0	29.0	29.0
Zinc	77.0	77.0	75.0	79.0	78.0
WH15/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>					
Silver	0.2				
Mercury	8.3				
Arsenic	0.1				
Cadmium	21.0				
Chromium	14.7				
Copper	0.2				
Nickel	15.6				
Lead	31.0				
Zinc	90.0				

Table A3.14 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH15 in 2011

Site Replicate (GWRC Code)	WH15				
	WH15/1	WH15/2	WH15/3	WH15/4	WH15/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.21	0.10	0.22	0.10	0.10
2,4'-DDT	0.05	0.05	0.05	0.15	0.05
4,4'-DDE	1.86	1.92	1.87	2.02	1.91
4,4'-DDD	1.05	0.91	0.95	0.92	0.91
4,4'-DDT	0.26	0.25	0.20	0.24	0.27
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT (< D.L. = 0)	3.49	3.28	3.34	3.48	3.30
<u>Polycyclic Aromatic Hydrocarbons</u> ($\mu\text{g}/\text{kg}$, < 500 μm):					
Naphthalene	8	7	7	9	7
Acenaphthylene	4	4	5	5	6
Acenaphthene	1	1	1	1	1
Fluorene	9	10	10	11	12
Phenanthrene	44	43	43	48	53
Anthracene	7	7	8	8	9
Fluoranthene	70	65	66	67	78
Pyrene	88	84	84	88	101
Benzo[a]anthracene	29	28	28	28	31
Chrysene	39	37	37	37	40
Benzo[b]fluoranthene	62	60	60	62	67
Benzo[k]fluoranthene	21	20	19	19	21

Table A3.14 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH15 in 2011

Site Replicate (GWRC Code)	WH15				
	WH15/1	WH15/2	WH15/3	WH15/4	WH15/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	39	37	37	36	39
Indeno[1,2,3-c,d]pyrene	41	39	39	39	41
Dibenzo[a,h]anthracene	7	7	6	7	7
Benzo[g,h,i]perylene	58	58	57	59	65
Total PAH (<D.L. = 0)	529	506	508	522	579

Table A3.15: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH17 in 2011

Site Replicate (GWRC Code)	WH17				
	WH17/1	WH17/2	WH17/3	WH17/4	WH17/5
<u>Total Organic Carbon (% , < 500 μm):</u>	1.15	1.17	1.18	1.15	1.14
<u>Total Organic Carbon (% , < 63 μm):</u>	1.19	1.19	1.19	1.19	1.19
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	9.5	9.6	9.7	9.5	9.9
Lead	29.0	29.0	29.0	30.0	29.0
Zinc	75.0	75.0	75.0	74.0	76.0
WH17/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>					
Silver	0.2				
Mercury	6.0				
Arsenic	0.0				
Cadmium	21.0				
Chromium	11.0				
Copper	0.1				
Nickel	15.6				
Lead	29.0				
Zinc	80.0				

Table A3.15 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH17 in 2011

Site Replicate (GWRC Code)	WH17				
	WH17/1	WH17/2	WH17/3	WH17/4	WH17/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.10	0.10	0.10	0.10	0.10
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	0.70	0.68	0.72	0.75	0.71
4,4'-DDD	0.54	0.44	0.52	0.56	0.53
4,4'-DDT	0.26	0.21	0.16	0.16	0.05
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT (< D.L. = 0)	1.70	1.53	1.61	1.67	1.49
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Naphthalene	10	10	10	10	10
Acenaphthylene	7	6	7	6	6
Acenaphthene	1	1	1	1	1
Fluorene	9	8	8	7	7
Phenanthrene	43	42	41	38	38
Anthracene	10	9	10	9	10
Fluoranthene	75	72	74	67	67
Pyrene	92	84	87	81	82
Benzo[a]anthracene	35	33	35	33	33
Chrysene	37	37	39	36	37
Benzo[b]fluoranthene	70	71	74	71	70
Benzo[k]fluoranthene	24	24	26	24	24

Table A3.15 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH17 in 2011

Site Replicate (GWRC Code)	WH17				
	WH17/1	WH17/2	WH17/3	WH17/4	WH17/5
<u>Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, < 500 μm):</u>					
Benzo[a]pyrene	46	41	49	45	45
Indeno[1,2,3-c,d]pyrene	49	50	51	48	48
Dibenzo[a,h]anthracene	8	8	8	7	7
Benzo[g,h,i]perylene	57	57	58	57	56
Total PAH (<D.L. = 0)	574	555	578	541	543

Table A3.16: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH18 in 2011

Site Replicate (GWRC Code)	WH18				
	WH18/1	WH18/2	WH18/3	WH18/4	WH18/5
<u>Total Organic Carbon (% , < 500 μm):</u>	1.76	1.77	1.73	1.75	1.75
<u>Total Organic Carbon (% , < 63 μm):</u>	1.58	1.58	1.58	1.58	1.58
<u>Metals (mg/kg, weak acid, < 63 μm):</u>					
Copper	12.7	12.3	11.6	11.4	11.8
Lead	34.0	34.0	34.0	33.0	34.0
Zinc	83.0	83.0	82.0	81.0	83.0
WH18/1–5 composite					
<u>Metals (mg/kg, strong acid, < 500 μm):</u>					
Silver	0.3				
Mercury	8.1				
Arsenic	0.1				
Cadmium	23.0				
Chromium	14.7				
Copper	0.2				
Nickel	16.3				
Lead	35.0				
Zinc	95.0				

Table A3.16 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH18 in 2011

Site Replicate (GWRC Code)	WH18				
	WH18/1	WH18/2	WH18/3	WH18/4	WH18/5
<u>Organochlorine Pesticides ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Hexachlorobenzene	0.05	0.05	0.05	0.05	0.05
gamma-BHC (lindane)	0.10	0.10	0.10	0.10	0.10
Heptachlor	0.10	0.10	0.10	0.10	0.10
Aldrin	0.05	0.05	0.05	0.05	0.05
Dieldrin	0.10	0.10	0.10	0.10	0.10
Endrin	0.05	0.05	0.05	0.05	0.05
2,4'-DDE	0.05	0.05	0.05	0.05	0.05
2,4'-DDD	0.10	0.10	0.10	0.10	0.10
2,4'-DDT	0.05	0.05	0.05	0.05	0.05
4,4'-DDE	1.68	1.50	1.53	1.51	1.46
4,4'-DDD	0.96	0.96	1	0.96	0.95
4,4'-DDT	0.86	0.82	0.73	0.56	0.60
cis-Chlordane	0.05	0.05	0.05	0.05	0.05
trans-Chlordane	0.05	0.05	0.05	0.05	0.05
Total DDT ($< \text{D.L.} = 0$)	3.70	3.48	3.45	3.23	3.21
<u>Polycyclic Aromatic Hydrocarbons</u> <u>($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):</u>					
Naphthalene	9	8	9	8	8
Acenaphthylene	5	4	5	5	5
Acenaphthene	1	1	1	1	1
Fluorene	8	8	8	8	7
Phenanthrene	48	47	47	45	46
Anthracene	9	9	9	9	9
Fluoranthene	78	76	78	74	74
Pyrene	90	89	90	86	90
Benzo[a]anthracene	40	39	41	38	44
Chrysene	49	48	50	47	46
Benzo[b]fluoranthene	88	84	85	83	88
Benzo[k]fluoranthene	33	31	35	34	37

Table A3.16 *continued*: Total organic carbon, metals, organochlorine pesticides, and polycyclic aromatic hydrocarbons in replicate composite sediment samples collected at site WH18 in 2011

Site Replicate (GWRC Code)	WH18				
	WH18/1	WH18/2	WH18/3	WH18/4	WH18/5
Polycyclic Aromatic Hydrocarbons ($\mu\text{g}/\text{kg}$, $< 500 \mu\text{m}$):					
Benzo[a]pyrene	58	48	55	54	56
Indeno[1,2,3-c,d]pyrene	56	51	53	54	49
Dibenzo[a,h]anthracene	8	7	8	8	6
Benzo[g,h,i]perylene	69	65	69	67	64
Total PAH (<D.L. = 0)	648	615	643	621	630

Appendix 4: Analytical quality assurance results

Table A4.1: Summary of QA particle size data for replicates of 16 sites sampled in Wellington Harbour, 2011

NIWA code OA154/*	GWRC code	Mean (μm)	Standard deviation (μm)	Maximum (μm)	10-62.5 μm % mud
OA154/10(a)	WH 2/10	49.89	27.25	125.81	71.03
OA154/10(b)	WH 2/10	59.90	35.12	141.43	59.75
OA154/20(a)	WH 4/10	50.05	34.55	140.70	71.69
OA154/20(b)	WH 4/10	50.91	31.77	139.26	68.30
OA154/30(a)	EB 1/5	169.52	61.48	360.84	1.79
OA154/30(b)	EB 1/5	177.05	63.88	331.57	1.45
OA154/40(a)	LB 2/5	129.64	79.91	278.86	28.02
OA154/40(b)	LB 2/5	128.53	80.24	276.33	27.69
OA154/40(c)	LB 2/5	135.26	77.75	308.24	24.22
OA154/41(a)	WH 9/6	44.79	30.77	131.64	79.61
OA154/41(b)	WH 9/6	36.27	18.84	94.65	88.87
OA154/50(a)	WH 10/10	37.83	22.03	106.62	87.44
OA154/50(b)	WH 10/10	41.27	27.05	124.02	81.80
OA154/53(a)	AQ 1/3	80.95	51.75	204.53	45.40
OA154/53(b)	AQ 1/3	87.78	61.66	214.32	47.06
OA154/54(a)	AQ 1/4	62.88	41.51	165.37	60.17
OA154/54(b)	AQ 1/4	57.12	34.33	134.90	61.55
OA154/70(a)	WH 18/5	47.57	27.23	121.85	75.38
OA154/70(b)	WH 18/5	50.48	31.60	133.82	73.67
OA154/80(a)	WH 17/10	79.92	47.98	205.62	44.03
OA154/80(b)	WH 17/10	79.40	46.09	199.40	43.19
OA154/84(a)	WH 13B	39.14	22.76	116.41	87.63
OA154/84(b)	WH 13B	44.14	28.48	124.02	77.91
OA154/87(a)	EB 1B	168.71	57.19	325.16	1.82
OA154/87(b)	EB 1B	166.59	57.69	339.74	2.23
OA154/88(a)	LB 2B	158.99	83.70	322.03	16.76
OA154/88(b)	LB 2B	167.18	86.04	375.14	14.41
OA154/95(a)	AQ 2B	115.73	69.33	272.29	28.71
OA154/95(b)	AQ 2B	132.69	83.34	342.70	29.13
OA154/96(a)	LB 1B	129.06	70.03	303.98	23.01
OA154/96(b)	LB 1B	136.88	73.30	326.38	20.01

Table A4.2: Within-batch analysis for weak acid extractable metals in <63 µm fraction. Concentrations in mg/kg dry weight

Site	WH3/6			WH5/8		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Copper	23	24	4.3	11.6	11.8	1.7
Lead	62	60	-3.3	35	36	2.8
Zinc	115	118	2.6	78	83	6.2

Site	WH15/6			WH9/8		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Copper	11.8	12.2	3.3	9.5	9.9	4.1
Lead	29	30	3.4	37	36	-2.7
Zinc	77	78	1.3	83	85	2.4

Site	AQ1/1		
Result No.	1	2	Diff (%)
Copper	14.9	15.6	4.6
Lead	48	47	-2.1
Zinc	97	100	3.0

Table A4.3: Between-batch analysis for weak acid extractable metals in <63 µm fraction. Concentrations in mg/kg dry weight

Site	WH1/5			WH10/2		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Copper	20	19.7	-1.5	13	11.3	-14
Lead	67.1	70	4.2	45.2	43	-5.0
Zinc	122	129	5.6	93	95	2.1

Site	17/4		
Result No.	1	2	Diff (%)
Copper	10	9.9	-1.0
Lead	33.6	31.0	-8.0
Zinc	78	78	0.0

Table A4.4: Within-batch comparisons for total metals in <500 µm fraction. Concentrations in mg/kg dry weight

Site	WH3/6-10			WH9/6-10		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Arsenic	6.2	6.5	4.7	6.4	6.6	3.1
Cadmium	0.061	0.058	-5.0	0.047	0.045	-4.3
Chromium	26	26	0.0	25	25	0.0
Copper	26	28	7.4	13.5	13.5	0.0
Lead	60	63	4.9	36	38	5.4
Mercury	0.63	0.62	-1.6	0.24	0.22	-8.7
Nickel	15.7	16.6	5.6	17.4	17.5	0.6
Silver	0.52	0.54	3.8	0.25	0.25	0.0
Zinc	122	125	2.4	96	95	-1.0

Table A4.5: Between-batch comparisons for total metals in <500 µm fraction. Concentrations in mg/kg dry weight

Site	WH15/1-5		
Result No.	1	2	Diff (%)
Arsenic	8.0	8.0	0.0
Cadmium	0.07	0.067	-4.4
Chromium	18.3	18.5	1.1
Copper	15.4	15.0	-2.6
Lead	24.9	27	8.1
Mercury	0.15	0.143	-4.8
Nickel	15.1	14.8	-2.0
Silver	<0.4	0.17	
Zinc	84.5	84	-0.6

Table A4.6: Within-batch comparisons for total organic carbon in <63 µm fraction

Site	WH5/7			WH15/7		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total Organic Carbon (%)	1.28	1.28	0.0	1.69	1.70	0.6

Site	WH9/7		
Result No.	1	2	Diff (%)
Total Organic Carbon (%)	1.39	1.40	0.7

Table A4.7: Between-batch comparisons for total organic carbon in <63 µm fraction

Site	WH3/1			WH5/3		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total Organic Carbon (%)	1.72	1.68	-2.4	1.34	1.33	-0.7

Site	WH15/1		
Result No.	1	2	Diff (%)
Total Organic Carbon (%)	1.99	1.84	-7.8

Table A4.8: Within-batch comparisons for total organic carbon in <500 µm fraction

Site	WH1/8			WH15/9		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total Organic Carbon (%)	1.65	1.65	0.0	1.95	1.96	0.5

Site	WH17/8			LB1/3		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total Organic Carbon (%)	1.18	1.19	0.8	1.24	1.35	8.5

Site	AQ2/4		
Result No.	1	2	Diff (%)
Total Organic Carbon (%)	1.25	1.33	6.2

Table A4.9: Between-batch comparisons for total organic carbon in <500 µm fraction

Site	WH9/3			WH15/2		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total Organic Carbon (%)	1.52	1.49	- 2.0	2.19	2.10	- 4.2

Site	WH17/5		
Result No.	1	2	Diff (%)
Total Organic Carbon (%)	1.23	1.13	- 8.5

Table A4.10: Within-batch comparisons for polycyclic aromatic hydrocarbons in <500 µm fraction. Concentrations in µg/kg dry weight. Total PAH calculated using values < DL = 0

Site	WH17/7			EB1/2		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total PAH	555	540	2.7	586	549	6.5

Site	WH9/7			AQ1/3		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total PAH	961	977	1.7	2521	2540	0.8

Site	WH3/8		
Result No.	1	2	Diff (%)
Total PAH	4270	4497	5.2

Table A4.11: Between-batch comparisons for polycyclic aromatic hydrocarbons in <500 µm fraction. Concentrations in µg/kg dry weight. Total PAH calculated using values < DL = 0

Site	WH15/1			WH10/4		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total PAH	425	416	2.2	1395	1246	11.2

Site	WH2/3			WH3/3		
Result No.	1	2	Diff (%)	1	2	Diff (%)
Total PAH	2468	2186	12.1	4351	3578	19.5

Table A4.12: Polycyclic aromatic hydrocarbons in standard reference material (SRM 1941b) sourced from the National Institute of Standards and Technology, Gaithersburg, MD, USA. Concentrations are µg/kg dry weight. Highlighted cells indicate where the difference between the certified value of the standard and the result exceeds the acceptable margin of error

USEPA PAHs	Certified	Result	% difference	Error
Napthalene	848	797	-6.2	±95
Acenaphthene	(38) ^a	31	-20.3	±5.2
Acenaphthylene	(53) ^a	58	9.0	±6.4
Fluorene	85	70	-19.4	±15
Phenanthrene	406	428	5.3	±44
Anthracene	184	171	-7.3	±18
Fluoranthene	651	669	2.7	±50
Pyrene	581	537	-7.9	±39
Benz[a]anthracene	335	326	-2.7	±25
Chrysene	399	448	11.6	±36
Benzo[b+j]fluoranthene	670	663	-1.1	27
Benzo[k]fluoranthene	225	228	1.3	±18
Benzo[a]pyrene	358	227	-44.8	17
Indeno[123-cd]pyrene	341	378	10.3	±57
Dibenz[ah]anthracene	53	66	21.8	±10
Benzo[ghi]perylene	307	332	7.8	±45
Total PAH	5535	5431	-1.9	

^a Values in brackets represent data which has not been certified by two separate methods, but may be used for comparison only

Table A4.13: Within-batch comparisons for the major organochlorine pesticides in <500 µm fraction. Concentrations in µg/kg dry weight. Total DDT calculated using values < DL = 0

Site	WH17-7	WH17-7	EB1-2	EB1-2
Mass extracted (g)	15.0	15.0	15.0	15.0
DDTs				
o,p-DDE	< 0.1	< 0.1	< 0.1	< 0.1
p,p'-DDE	0.7	0.7	0.3	0.3
o,p-DDD	< 0.2	< 0.2	< 0.2	< 0.2
p,p-DDD	0.5	0.5	0.4	0.4
o,p-DDT	< 0.1	< 0.1	< 0.1	< 0.1
p,p'-DDT	0.2	0.2	0.2	0.2
Total DDT	1.4	1.4	0.9	0.9
Chlordanes				
heptachlor	< 0.2	< 0.2	< 0.2	< 0.2
heptachlor epox	< 0.1	< 0.1	< 0.1	< 0.1
trans-chlordane	< 0.1	< 0.1	< 0.1	< 0.1
cis-chlordane	< 0.1	< 0.1	< 0.1	< 0.1
trans-nonachlor	< 0.1	< 0.1	< 0.1	< 0.1
cis-nonachlor	< 0.1	< 0.1	< 0.1	< 0.1
Total Chlordane	0.0	0.0	0.0	0.0
Other OCPs				
hexachlorobenzene	< 0.1	< 0.1	< 0.1	< 0.1
lindane	< 0.2	< 0.2	< 0.2	< 0.2
dieldrin	< 0.2	< 0.2	< 0.2	< 0.2
aldrin	< 0.1	< 0.1	< 0.1	< 0.1
endrin	< 0.1	< 0.1	< 0.1	< 0.1

Table A4.13 *continued*: Within-batch comparisons for the major organochlorine pesticides in <500 µm fraction. Concentrations in µg/kg dry weight. Total DDT calculated using values < DL = 0

Site	WH9-7	WH9-7	AQ1-3	AQ1-3	WH3-8	WH3-8
Mass extracted (g)	15.0	15.0	15.0	15.0	15.0	15.0
DDTs						
o,p-DDE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
p,p'-DDE	0.8	0.9	1.5	1.5	5.9	2.8
o,p-DDD	0.2	0.3	0.7	0.7	1.1	1.3
p,p-DDD	0.8	0.9	2.2	2.3	9.4	7.6
o,p-DDT	< 0.1	< 0.1	0.2	0.2	0.5	0.5
p,p'-DDT	0.6	0.7	5.0	4.9	27	20
Total DDT	2.5	2.7	9.6	9.5	44	32
Chlordanes						
heptachlor	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
heptachlor epox	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-chlordane	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
cis-chlordane	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-nonachlor	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
cis-nonachlor	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Chlordane	0.0	0.0	0.0	0.0	0.0	0.0
Other OCPs						
hexachlorobenzene	< 0.1	< 0.1	< 0.1	< 0.1	0.75	0.77
lindane	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
dieldrin	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
aldrin	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
endrin	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Table A4.14: Between-batch comparisons for the major organochlorine pesticides in <500 µm fraction. Concentrations in µg/kg dry weight. Total DDT calculated using values < DL = 0

GWRC Replicate	WH 15/1	WH 15/1	WH 10/4	WH 10/4
Hexachlorobenzene	< 0.1	<0.8	< 0.1	<0.8
Lindane (gamma BHC)	< 0.2	<0.2	< 0.2	<0.2
Heptachlor	< 0.2	<0.2	< 0.2	<0.2
Heptachlor epoxide	< 0.1	<0.2	< 0.1	<0.2
Aldrin	< 0.1	<0.2	< 0.1	<0.2
Dieldrin	< 0.2	<0.2	< 0.2	<0.2
Endrin	< 0.1	<0.2	< 0.1	<0.2
DDTs				
o,p-DDE	< 0.1	<0.2	< 0.1	<0.2
p,p'-DDE	2.7	2.4	1.0	0.7
o,p-DDD	0.2	0.2	0.3	0.3
p,p-DDD	1.2	0.8	1.3	0.8
o,p-DDT	0.2	<0.2	< 0.1	<0.2
p,p'-DDT	0.6	0.5	1.4	1.2
Total DDT (<DL=0)	4.9	3.9	4.0	3.0
Chlordanes				
trans-Chlordane	< 0.1	<0.2	< 0.1	<0.2
cis-Chlordane	< 0.1	<0.2	< 0.1	<0.2
trans-Nonachlor	< 0.1	< 0.1	< 0.1	< 0.1
cis-Nonachlor	< 0.1	< 0.1	< 0.1	< 0.1
Total Chlordane (cis+trans)*100/42	<0.5	<0.5	<0.5	<0.5

Table A4.14 *continued*: Between-batch comparisons for the major organochlorine pesticides in <500 µm fraction. Concentrations in µg/kg dry weight. Total DDT calculated using values < DL = 0

GWRC Replicate	WH 2/3	WH 2/3	WH 3/3	WH 3/3
Hexachlorobenzene	< 0.1	<0.8	0.3	<0.8
Lindane (gamma BHC)	< 0.2	<0.2	< 0.2	<0.2
Heptachlor	< 0.2	<0.2	< 0.2	<0.2
Heptachlor epoxide	< 0.1	<0.2	< 0.1	<0.2
Aldrin	< 0.1	<0.2	< 0.1	<0.2
Dieldrin	< 0.2	<0.2	< 0.2	<0.2
Endrin	< 0.1	<0.2	< 0.1	<0.2
DDTs				
o,p-DDE	< 0.1	<0.2	< 0.1	<0.2
p,p'-DDE	1.2	0.9	1.8	3.7
o,p-DDD	0.4	0.5	1.0	0.9
p,p-DDD	1.2	1.2	4.1	3.7
o,p-DDT	0.1	<0.2	0.3	<0.2
p,p'-DDT	1.4	1.2	14.1	14.0
Total DDT (<DL=0)	4.3	3.8	21.3	22.3
Chlordanes				
trans-Chlordane	< 0.1	<0.2	< 0.1	<0.2
cis-Chlordane	< 0.1	<0.2	< 0.1	<0.2
trans-Nonachlor	< 0.1	< 0.1	< 0.1	< 0.1
cis-Nonachlor	< 0.1	< 0.1	< 0.1	< 0.1
Total Chlordane (cis+trans)*100/42	<0.5	<0.5	<0.5	<0.5

Table A4.15: Results from the analysis of National Institute of Standards & Technology (NIST) Standard Reference Material 1941b (marine sediment). Concentrations in µg/kg. Highlighted cells indicate where the difference between the certified value of the standard and the result exceeds the acceptable margin of error

Analyte	Certified values	Result	% difference	Error (%)
Hexachlorobenzene	5.83	6.2	6.2	±0.38
Dieldrin	(1.0) ^a	1.1	9.5	
2,4'-DDE	(0.4) ^a	0.6	40	±0.12
2,4'-DDD				
2,4'-DDT				
4,4'-DDE	3.2	3.7	14.5	±0.28
4,4'-DDD	4.7	4.7	0	±0.46
4,4'-DDT	(1.1) ^a	1.1	0	±0.42
Total DDE + 4,4'-DDD + 4,4'-DDT	9.3	10.1	8.2	
trans-Chlordane	0.6	0.6	0	±0.09
cis-Chlordane	0.9	0.8	-11.8	±0.11
trans-Nonachlor	0.4	0.3	-28.6	±0.07
cis-Nonachlor	0.4	0.2	-66.7	±0.05
Total Chlordane ((cis+trans)*100/42)	3.4	3.3	-3.0	

^a Values in brackets represent data which has not been certified by two separate methods, but may be used for comparison only

Appendix 5: Sediment profiles

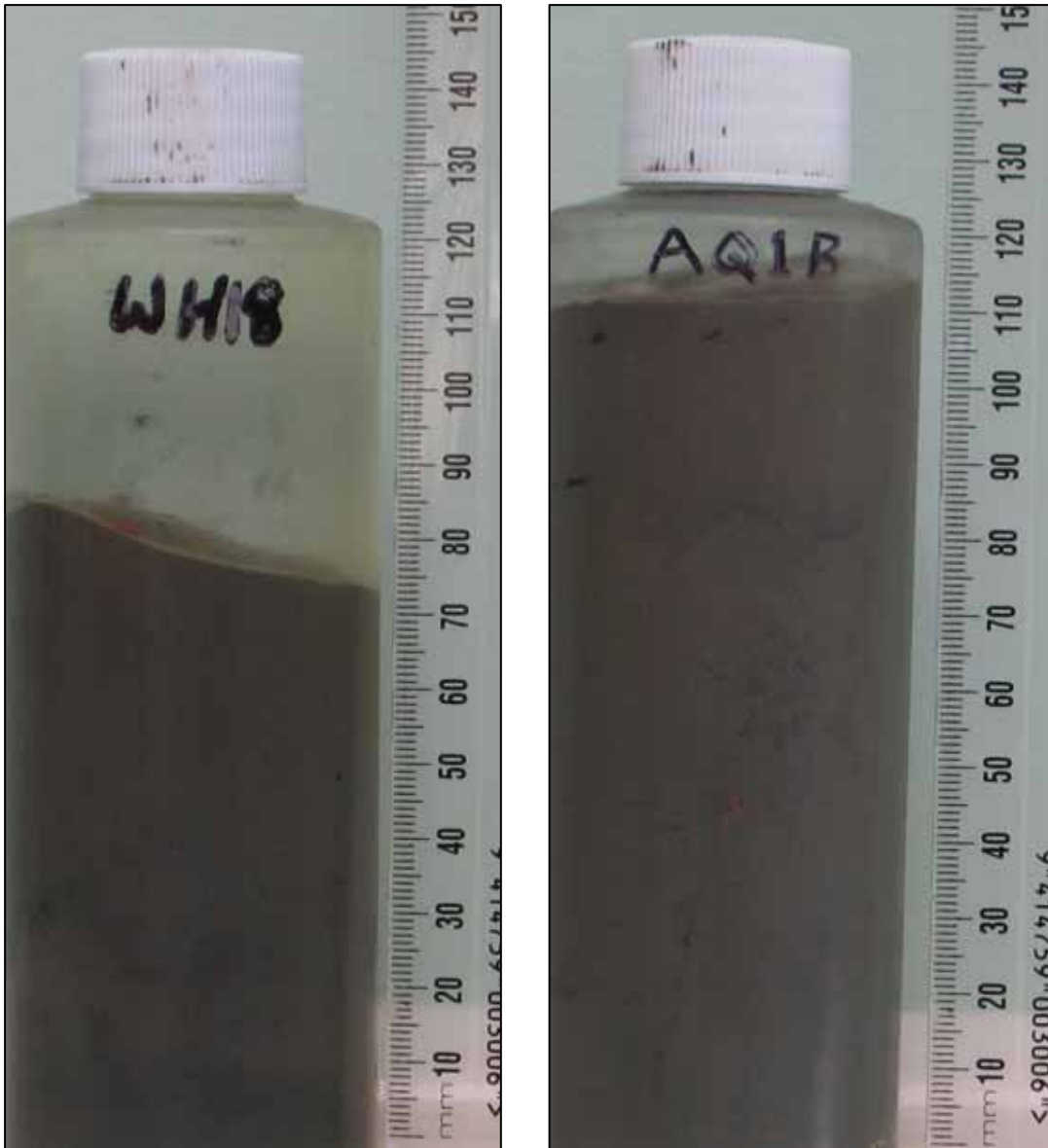


Figure A5.1: Sediment profiles at sites WH18 (left) and AQ1B (right) in Wellington Harbour in 2011

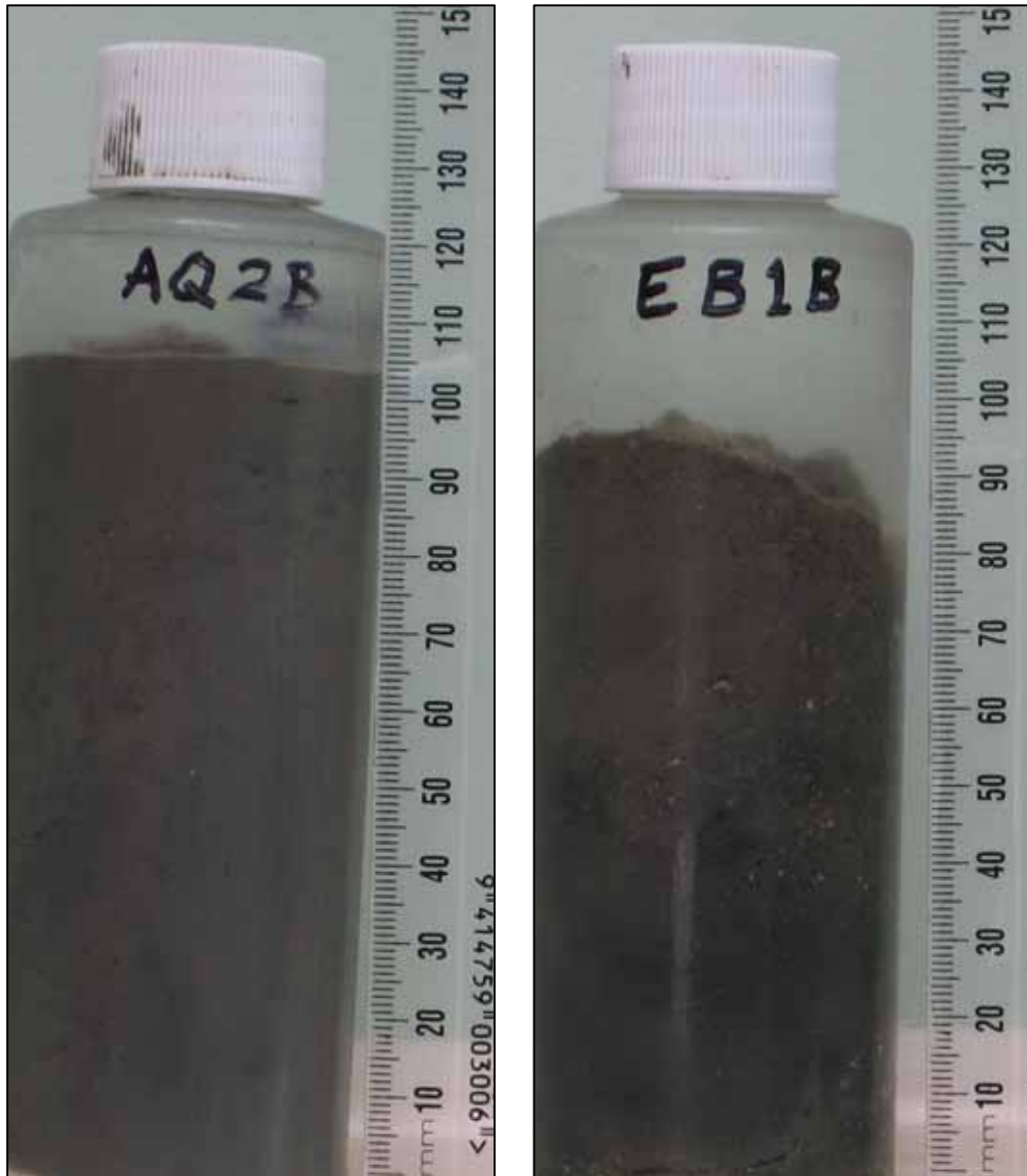


Figure A5.2: Sediment profiles at sites AQ2B (left) and EB1B (right) in Wellington Harbour in 2011

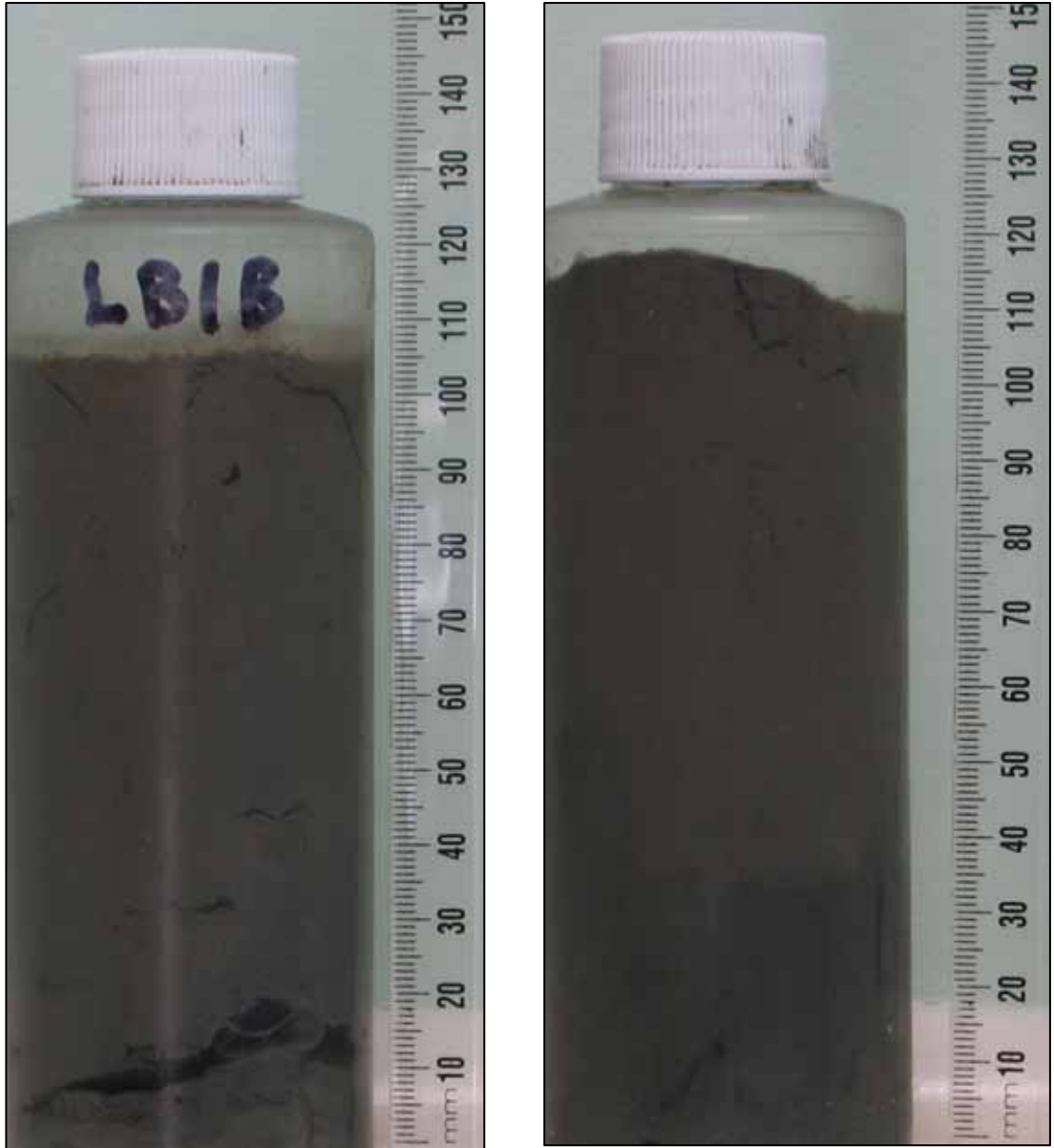


Figure A5.3: Sediment profiles at sites LB1B (left) and LB2B (right) in Wellington Harbour in 2011

Appendix 6: Species lists, abundance, feeding modes and measurements

Table A6.1: Total abundance and feeding mode of species recorded in the subtidal sediments from Wellington Harbour, 2011

Species	EB1	WH1	WH2	LB1	LB2	WH3	WH4	AQ1	AQ2	WH5	WH9	WH10	WH13	WH18	WH15	WH17	Feeding mode ¹
Phylum NEMERTEA																	
Nemertea sp.#1	3	2	0	0	0	0	0	0	0	0	1	0	0	1	0	2	P
Nemertea sp.#2	0	1	2	2	1	2	3	4	1	2	2	2	2	1	4	4	P
Nemertea sp.#3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	P
Nemertea sp.#5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	P
Nemertea sp.#7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	P
Nemertea sp.#10	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	P
Nemertea sp.#12	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	P
Phylum ASCHELMINTHES																	
<i>Priapulopsis australis</i>	0	11	3	0	8	7	4	7	20	3	0	5	3	1	0	3	P
Phylum ANNELIDA																	
Class POLYCHAETA																	
<i>Abyssoninoe galathea</i>	0	2	0	1	3	3	1	1	8	3	1	4	1	6	2	3	SSDF
<i>Aglaophamus verrilli</i>	9	30	23	16	32	26	26	38	36	36	33	26	43	51	56	40	P
<i>Ampharete kerguelensis</i>	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	SDF
<i>Aphelochaeta</i> sp.#1	16	6	11	16	12	3	11	18	32	7	11	2	11	38	2	20	SDF
<i>Aphrodita talpa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	P
<i>Aricidea</i> sp.#1	0	9	13	3	4	3	11	3	21	7	12	12	2	3	2	20	SDF
<i>Armandia maculata</i>	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SSDF
<i>Asychis</i> sp.#1	0	6	7	5	2	0	1	1	3	3	7	9	3	4	4	4	SSDF
<i>Asychis trifilosus</i>	0	13	3	9	1	2	8	7	6	5	5	8	15	14	8	17	SSDF

¹ For feeding mode: P = predator, Sc = scavenger, SDF = surface deposit feeder, SSDF = subsurface deposit feeder, SF = suspension feeder, U = unknown.

Table A6.1 continued: Total abundance and feeding mode of species recorded in the subtidal sediments from Wellington Harbour, 2011

Species	EB1	WH1	WH2	LB1	LB2	WH3	WH4	AQ1	AQ2	WH5	WH9	WH10	WH13	WH18	WH15	WH17	Feeding mode ¹
<i>Axiothella</i> sp.#1	0	3	0	10	2	0	0	2	2	0	4	1	3	4	11	1	SSDF
<i>Boccardia (Paraboccardia) syrtis</i>	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF, SDF
<i>Carazziella phillipensis</i>	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF, SDF
<i>Cossura consimilis</i>	0	45	17	32	84	94	8	25	30	17	16	30	48	77	82	28	SSDF
<i>Drilonereis</i> sp.#1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	P
<i>Glycera lamelliformis</i>	13	2	0	1	0	0	0	0	1	1	0	0	0	0	0	0	P
<i>Glycinde trifida</i>	42	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	P
<i>Goniada echinulata</i>	0	1	0	1	2	0	1	2	3	0	0	0	0	0	0	0	P
<i>Heteromastus filliformis</i>	191	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	SSDF
<i>Labiothenolepis laevis</i>	0	55	32	63	48	74	51	65	53	28	41	45	32	25	23	38	P
<i>Lepidonotus</i> sp.#1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	P
<i>Lumbricalus aotearoae</i>	2	0	0	1	1	0	0	0	0	0	0	1	1	3	0	0	SSDF
<i>Macroclymenella stewartensis</i>	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SSDF
<i>Maldane theodori</i>	0	0	1	4	0	1	2	1	2	0	0	0	0	0	6	4	SSDF
Nereidae sp.#2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Sc, SDF
<i>Notomastus</i> sp.#1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SSDF
<i>Onuphis aucklandensis</i>	1	13	36	9	5	12	14	19	6	9	12	14	5	9	47	7	Sc, SDF
<i>Ophiodromus angustifrons</i>	6	5	12	6	6	14	8	6	16	5	2	7	6	9	6	6	P
<i>Owenia petersenae</i>	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	SDF
<i>Paradoneis</i> sp.#1	11	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	SDF
<i>Paralepidonotus ampulliferus</i>	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	P
<i>Paraprionospio</i> sp.#1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	SF, SDF
Phyllodocidae sp.#2	1	0	0	0	2	1	0	0	1	1	0	0	0	0	0	0	P
Phyllodocidae sp.#3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P
<i>Phylo novaezealandiae</i>	1	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	SSDF
<i>Pilargis</i> sp.#1	0	0	0	0	4	2	0	0	0	1	0	0	1	1	0	0	U

Table A6.1 continued: Total abundance and feeding mode of species recorded in the subtidal sediments from Wellington Harbour, 2011

Species	EB1	WH1	WH2	LB1	LB2	WH3	WH4	AQ1	AQ2	WH5	WH9	WH10	WH13	WH18	WH15	WH17	Feeding mode ¹
<i>Polychaeta</i> sp.#2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	U
Polynoidae sp.#1	0	5	3	0	8	6	10	22	19	7	9	18	5	4	1	0	P
Polynoidae sp.#2	0	0	0	1	0	0	0	0	2	4	3	1	0	0	2	3	P
<i>Prionospio aucklandica</i>	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF, SDF
<i>Prionospio multicristata</i>	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF, SDF
<i>Prionospio yuriei</i>	4	11	10	2	3	1	0	6	3	1	3	4	1	2	5	1	SF, SDF
<i>Pseudopolydora paucibranchiata</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF, SDF
Sabellidae sp.#1	0	1	4	3	3	3	2	4	1	0	0	1	1	0	0	2	SF
<i>Schistomeringos</i> sp.#1	13	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	P
Syllidae sp.#1	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	P, Sc
Syllidae sp.#2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P, Sc
Terebellidae sp.#1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SDF
<i>Terebellides narribri</i>	1	0	0	0	0	0	0	0	0	0	0	1	0	3	2	0	SDF
Phylum MOLLUSCA																	
Class GASTROPODA																	
<i>Maoricolpus roseus</i>	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SDF
<i>Nozeba emarginata</i>	0	1	3	3	17	0	4	0	9	0	2	22	0	1	34	0	SDF
<i>Philine auriformis</i>	0	7	6	11	5	8	11	14	3	6	7	12	6	7	6	18	P
<i>Sigapatella novaezelandiae</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF
<i>Xymene plebeius</i>	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P
Class BIVALVIA																	
<i>Arthritica</i> sp.#1	1	10	14	2	7	3	2	0	1	5	3	7	41	4	10	4	SF
<i>Corbula zelandica</i>	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF
<i>Diplodonta globus</i>	0	0	0	3	0	1	0	0	0	1	0	0	0	0	0	0	SF
<i>Dosina zelandica</i>	0	0	0	1	2	1	1	0	2	2	2	0	1	1	2	0	SF

Table A6.1 continued: Total abundance and feeding mode of species recorded in the subtidal sediments from Wellington Harbour, 2011

Species	EB1	WH1	WH2	LB1	LB2	WH3	WH4	AQ1	AQ2	WH5	WH9	WH10	WH13	WH18	WH15	WH17	Feeding mode ¹
<i>Ennucula strangei</i>	0	17	15	15	14	4	6	2	16	31	18	23	14	10	9	48	SDF
<i>Lasaea</i> sp.#1	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	U
<i>Leptomys retiaris</i>	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF
<i>Neilo australis</i>	0	5	2	0	6	2	7	0	6	7	2	0	2	0	2	5	SF
<i>Nucula hartvigiana</i>	9	15	31	8	19	6	17	14	11	34	19	18	6	15	11	34	SDF
<i>Ruditapes largillierti</i>	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF
<i>Scintillona zelandica</i>	12	2	0	0	0	0	0	0	0	0	0	0	0	2	0	1	SF
<i>Theora lubrica</i>	5	79	47	34	132	87	26	45	40	33	38	27	30	39	50	41	SF
<i>Thracia vitrea</i>	0	6	6	11	4	4	3	5	13	3	5	3	1	2	4	11	SF
<i>Zenatia acinaces</i>	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	SF
Phylum ARTHROPODA																	
Class CRUSTACEA																	
Ampeliscidae sp.#1	0	3	1	4	5	1	5	7	5	2	0	2	3	2	6	4	U
Amphipoda sp.#2	20	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	U
Amphipoda sp.#3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	U
Amphipoda sp.#4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
Amphipoda sp.#5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U
Amphipoda sp.#6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	U
Amphipoda sp.#7	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	U
Amphipoda sp.#8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	U
Axiidae sp.#1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	P
Cephalocarida sp.#1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	U
Copepoda sp.#1	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	U
Copepoda sp.#3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	U
Corophiidae sp.#1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF, SDF

Table A6.1 continued: Total abundance and feeding mode of species recorded in the subtidal sediments from Wellington Harbour, 2011

Species	EB1	WH1	WH2	LB1	LB2	WH3	WH4	AQ1	AQ2	WH5	WH9	WH10	WH13	WH18	WH15	WH17	Feeding mode ¹
Cumacea sp.#1	0	19	4	25	32	28	9	18	7	5	15	2	6	9	1	4	SF
<i>Diastylis insularum</i>	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	SF
Gnathiidae sp.#1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	U
<i>Halicarcinus</i> sp.#1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P, Sc
<i>Jaxea novaezealandiae</i>	0	2	1	1	0	0	2	1	2	1	1	0	1	1	2	1	P, Sc
<i>Macrophthalmus hirtipes</i>	20	5	11	39	6	1	1	4	6	5	6	2	5	6	7	1	SDF
<i>Natatolana</i> sp.#1	0	0	64	0	0	0	0	0	1	0	0	0	0	0	0	0	P, Sc
<i>Natatolana</i> sp.#2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P, Sc
<i>Neommatocarcinus huttoni</i>	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	1	P, Sc
Ostracoda sp.#1	0	40	16	2	11	17	3	14	3	6	18	18	23	20	4	6	SF, SDF
Ostracoda sp.#2	0	5	3	0	5	11	0	2	3	0	0	1	0	0	3	0	SF, SDF
Ostracoda sp.#3	0	0	0	0	0	6	2	0	0	0	0	0	0	0	0	1	SF, SDF
Ostracoda sp.#4	0	0	0	1	0	1	0	0	0	1	0	0	0	0	2	0	SF, SDF
Ostracoda sp.#5	0	7	0	19	10	4	0	4	19	0	1	0	1	7	19	0	SF, SDF
Ostracoda sp.#6	0	2	1	0	0	0	0	3	0	0	0	0	0	0	0	0	SF, SDF
Ostracoda sp.#7	1	1	0	17	3	1	0	3	5	0	1	1	0	5	24	1	SF, SDF
Ostracoda sp.#9	0	0	0	1	2	0	0	0	1	0	0	0	0	0	1	0	SF, SDF
Ostracoda sp.#10	0	2	1	1	6	3	2	0	2	0	2	0	1	0	4	0	SF, SDF
Ostracoda sp.#11	2	7	0	1	3	2	0	0	0	0	0	0	1	3	0	0	SF, SDF
Ostracoda sp.#12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	SF, SDF
Phoxocephalidae sp.#1	26	58	81	32	54	26	25	35	34	91	33	33	7	72	59	21	P, Sc
<i>Pterygosquilla schizodontia</i>	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	P
Tanaidacea sp.#1	0	61	13	0	58	28	50	201	16	28	214	1	27	77	209	177	P
<i>Upogebia hirtifrons</i>	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SF

Table A6.1 *continued*: Total abundance and feeding mode of species recorded in the subtidal sediments from Wellington Harbour, 2011

Species	EB1	WH1	WH2	LB1	LB2	WH3	WH4	AQ1	AQ2	WH5	WH9	WH10	WH13	WH18	WH15	WH17	Feeding mode ¹
Phylum SIPUNCULIDA																	
<i>Sipunculida</i> sp.#1	13	224	80	115	173	112	93	85	55	83	224	45	227	160	61	90	SSDF
<i>Sipunculida</i> sp.#2	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	SDF
<i>Sipunculida</i> sp.#3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	SDF
Phylum ECHIURIDA																	
<i>Echiurida</i> sp.#1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	SDF
Phylum ECHINODERMATA																	
Class OPHIUROIDEA																	
<i>Amphiura rosea</i>	0	16	32	4	31	20	63	77	54	85	52	69	23	33	13	39	SDF
Class ECHINOIDEA																	
<i>Echinocardium cordatum</i>	0	5	3	5	6	19	3	7	0	9	6	6	3	3	4	7	SSDF
Class HOLOTHUROIDEA																	
<i>Chirodota nigra</i>	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SSDF
<i>Heterothyone alba</i>	0	0	1	0	0	1	0	1	0	2	2	1	0	0	0	3	SF
<i>Neocucumella bicolumnata</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	U
<i>Paracaudina chilensis</i>	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SSDF
<i>Pentadactyla longidentis</i>	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	SSDF
<i>Rynkatorpa uncinata</i>	0	3	0	0	0	0	0	0	1	0	0	0	0	3	3	0	SSDF

¹ For feeding mode: P = predator, Sc = scavenger, SDF = surface deposit feeder, SSDF = subsurface deposit feeder, SF = suspension feeder, U = unknown.

Table A6.2: List of epifauna counts and body/shell measurements in the benthic fauna samples collected from Wellington Harbour, 2011

Species	EB1		WH1		WH2		LB1		LB2		WH3		WH4		AQ1	
	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)
<i>Corbula zelandica</i>	45	9.8–13.3	0		0		0		0		0		0		0	
<i>Diplodonta globus</i>	0		0		0		3	2.8–24.9	0		1	22.6	0		0	
<i>Dosina zelandica</i>	0		0		0		1		2	15.5–57.3	1	15.5	1	41.9	0	
<i>Ennucula strangei</i>	0		17	1.0–10.9	15	1.0–11.4	15	1.4–6.7	14	0.9–10.2	4	1.1–8.4	6	1.0–10.5	2	1.1–2.5
<i>Neilo australis</i>	0		5	3.8–7.1	2	1.5–3.6	0		6	2.1–9.1	2		7		0	
<i>Nucula hartvigiana</i>	9	2.9–9.6	15	1.1–4.0	31	1.0–4.1	8	1.3–4.0	19	1.0–3.9	6	2.3–4.0	17	0.9–4.4	14	0.9–4.6
<i>Thracia vitrea</i>	0		6	2.2–20.9	6	2.2–15.6	11	2.8–18.7	4	1.2–12.8	4	3.4–10.4	3	9.6–13.1	5	5.3–15.2
<i>Amphiura rosea</i>	0		16		32		4		31		20		63		77	
<i>Echinocardium cordatum</i>	0		5	20.4–29.1	3	11.4–18.4	5	8.6–31.4	6	11.2–29.8	19	10.5–24.7	3	18.9–20.2	7	10.4–20.7

Species	AQ2		WH5		WH9		WH10		WH13		WH18		WH15		WH17	
	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)	#	Length (mm)
<i>Corbula zelandica</i>	0		0		0		0		0		0		0		0	
<i>Diplodonta globus</i>	0		1	24.6	0		0		0		0		0		0	
<i>Dosina zelandica</i>	2	9.3–14.4	2	2.7–41.8	2	23.3–40.7	0		1	42.5	1	34.9	2	34.6–40.8	0	
<i>Ennucula strangei</i>	16	2.3–10.2	31	1.9–11.5	18	1.8–11.9	23	2.4–10.6	14	0.9–13.7	10	0.9–10.9	9	2.9–6.4	48	1.0–12.0
<i>Neilo australis</i>	6	3.3–15.6	7		2		0		2		0		2		5	
<i>Nucula hartvigiana</i>	11	1.3–3.4	34	1.0–5.7	19	1.3–4.8	18	1.0–5.3	6	1.2–4.6	15	1.0–4.7	11	1.2–2.5	34	1.1–3.6
<i>Thracia vitrea</i>	13	5.0–15.7	3	3.6–14.1	5	3.4–21.5	3	10.2–16.2	1	10.6	2	6.7–9.1	4	2.3–6.3	11	5.1–15
<i>Amphiura rosea</i>	54		85		52		69		23		33		13		39	
<i>Echinocardium cordatum</i>	0		9	10.3–22.4	6	18.4–25.3	6	9.5–26.8	3	22.0–30.3	3	21.8–31.0	4	20.4–33.8	7	8.5–24.9