NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS77

Particle Size Component 2020/21

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APEM

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BENCHMARK DATA

Table 1. Summary data for the benchmark replicates distributed as PS77.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis)
PSA_2630 BM REP 1	NMBAQC	63.86	33.71	2.43	Sandy Gravel
PSA_2631 BM REP 2	NMBAQC	64.04	33.07	2.88	Sandy Gravel
PSA_2632 BM REP 3	NMBAQC	63.83	33.80	2.37	Sandy Gravel
PSA_2633 BM REP 4	NMBAQC	64.15	33.26	2.58	Sandy Gravel
PSA_2634 BM REP 5	NMBAQC	64.01	33.73	2.25	Sandy Gravel
BM REP AVERAGE	NMBAQC	63.98	33.52	2.50	Sandy Gravel

Table 2. Summary of sieve data for the benchmark replicates distributed as PS77.

		PSA_2730 BM REP 1	PSA_2731 BM REP 2	PSA_2732 BM REP 3	PSA_2733 BM REP 4	PSA_2734 BM REP 5	BM Average
Sieves used		Yes	Yes	Yes	Yes	Yes	Yes
Phi interval; mm		**Weight in grams**					
-6.50 to -6.00; 63 mm		0.00	0.00	0.00	0.00	0.00	0.00
-6.00 to -5.50; 45 mm		0.00	0.00	0.00	0.00	0.00	0.00
-5.50 to -5.00; 31.5 mm		0.00	0.00	0.00	0.00	0.00	0.00
-5.00 to -4.50; 22.4 mm		0.00	0.00	0.00	0.00	0.00	0.00
-4.50 to -4.00; 16 mm		0.00	0.00	0.00	0.00	0.00	0.00
-4.00 to -3.50; 11.2 mm		0.00	0.00	0.00	0.00	0.00	0.00
-3.50 to -3.00; 8 mm		25.81	18.99	24.31	15.24	16.11	20.09
-3.00 to -2.50; 5.6 mm		165.89	172.31	171.38	171.87	176.89	171.67
-2.50 to -2.00; 4 mm		164.47	161.49	160.70	170.47	164.66	164.36
-2.00 to -1.50; 2.8 mm		107.61	109.33	107.18	106.38	103.83	106.87
-1.50 to -1.00; 2 mm		73.90	74.93	73.98	74.06	73.92	74.16
-1.00 to -0.50; 1.4 mm		19.46	18.21	19.37	18.19	19.35	18.92
-0.50 to 0.00; 1.0 mm		1.04	0.91	1.15	1.19	0.97	1.05
>1.0 mm		558.18	556.17	558.07	557.40	555.73	557.11
<1.0 mm	Base Pan	0.40	0.43	0.36	0.40	0.38	0.39
	Oven Dried	283.41	281.97	283.74	280.87	280.28	282.05
Total Weight (g)		841.99	838.57	842.17	838.67	836.39	839.56

BENCHMARK DATA

Table 3. Summary of final laser data for the benchmark replicates distributed as PS77.

	PSA_2730 BM REP 1	PSA_2731 BM REP 2	PSA_2732 BM REP 3	PSA_2733 BM REP 4	PSA_2734 BM REP 5	BM AVERAGE
0.00 to 0.50; (707 µm)	0.16	0.00	0.08	0.01	0.05	0.06
0.50 to 1.00; (500 µm)	2.70	1.97	2.29	2.12	2.74	2.36
1.00 to 1.50; (353.6 µm)	8.42	7.42	8.09	8.43	8.97	8.27
1.50 to 2.00; (250 µm)	14.99	13.43	14.88	14.52	15.63	14.69
2.00 to 2.50; (176.8 µm)	22.10	21.47	22.53	21.68	22.55	22.07
2.50 to 3.00; (125 µm)	21.79	22.36	22.41	22.03	21.69	22.06
3.00 to 3.50; (88.39 µm)	14.75	15.96	14.95	15.29	14.29	15.05
3.50 to 4.00; (62.5 µm)	7.87	8.83	7.73	8.21	7.38	8.00
4.00 to 4.50; (44.19 µm)	3.21	3.76	3.11	3.39	3.02	3.30
4.50 to 5.00; (31.25 µm)	1.13	1.38	1.09	1.20	1.03	1.16
5.00 to 5.50; (22.097 µm)	0.45	0.56	0.42	0.48	0.42	0.46
5.50 to 6.00; (15.625 µm)	0.24	0.31	0.22	0.26	0.22	0.25
6.00 to 6.50; (11.049 µm)	0.18	0.23	0.16	0.19	0.15	0.18
6.50 to 7.00; (7.813 µm)	0.15	0.19	0.14	0.16	0.13	0.15
7.00 to 7.50; (5.524 µm)	0.15	0.20	0.14	0.17	0.13	0.16
7.50 to 8.00; (3.906 µm)	0.16	0.21	0.15	0.17	0.14	0.17
8.00 to 8.50; (2.762 µm)	0.17	0.21	0.16	0.18	0.15	0.17
8.50 to 9.00; (1.953 µm)	0.21	0.26	0.21	0.23	0.19	0.22
9.00 to 9.50; (1.381 µm)	0.28	0.33	0.28	0.30	0.25	0.29
9.50 to 10.00; (0.977 µm)	0.29	0.34	0.29	0.31	0.27	0.30
10.00 to 10.50; (0.691 µm)	0.23	0.26	0.24	0.25	0.22	0.24
10.50 to 11.00; (0.488 µm)	0.16	0.17	0.17	0.18	0.16	0.17
11.00 to 11.50; (0.345 µm)	0.10	0.10	0.11	0.11	0.10	0.11
11.50 to 12.00; (0.244 µm)	0.06	0.05	0.07	0.07	0.06	0.06
12.00 to 12.50; (0.173 µm)	0.03	0.02	0.04	0.03	0.04	0.03
12.50 to 13.00; (0.122 µm)	0.02	0.01	0.02	0.02	0.02	0.02
13.00 to 13.50; (0.086 µm)	0.01	0.00	0.01	0.01	0.01	0.01
13.50 to 14.00; (0.061 µm)	0.00	0.00	0.00	0.00	0.00	0.00
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00
>14.50; (0.01 µm)	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00
MEAN:	Fine Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand
SORTING:	Moderately Sorted	Moderately Sorted	Moderately Sorted	Moderately Sorted	Moderately Sorted	Moderately Sorted
SKEWNESS:	Symmetrical	Symmetrical	Symmetrical	Symmetrical	Symmetrical	Symmetrical
KURTOSIS:	Mesokurtic	Mesokurtic	Mesokurtic	Mesokurtic	Mesokurtic	Mesokurtic
MODE:	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal
MODE 1 (µm):	213.4	150.9	213.4	150.9	213.4	213.4
MODE 2 (µm):	-	-	-	-	-	-
MODE 3 (µm):	-	-	-	-	-	-

BENCHMARK DATA

Table 4. Summary of Coefficient of Variation for Benchmark laser replicates for PS77.

		PSA_2730 BM REP 1	PSA_2731 BM REP 2	PSA_2732 BM REP 3	PSA_2733 BM REP 4	PSA_2734 BM REP 5
D_{10}	Subsample 1	0.68	0.57	0.47	0.73	0.16
	Subsample 2	0.24	0.18	1.22	0.41	0.30
	Subsample 3	1.22	0.66	0.30	0.20	0.72
					n	
D_{50}	Subsample 1	0.35	0.35	0.26	0.36	0.19
	Subsample 2	0.27	0.28	0.12	0.17	0.16
	Subsample 3	0.35	0.36	0.20	0.32	0.17
D_{90}	Subsample 1	0.17	0.15	0.23	0.18	0.12
	Subsample 2	0.11	0.11	0.05	0.10	0.11
	Subsample 3	0.18	0.15	0.12	0.13	0.15

$$COV = \left(\frac{StDev}{Mean}\right) * 100$$

ISO 133020 defines good reproducibility when: COV is <3% for D50
COV is <5% for D10 and D90

All limits double when the D50 is <10microns.

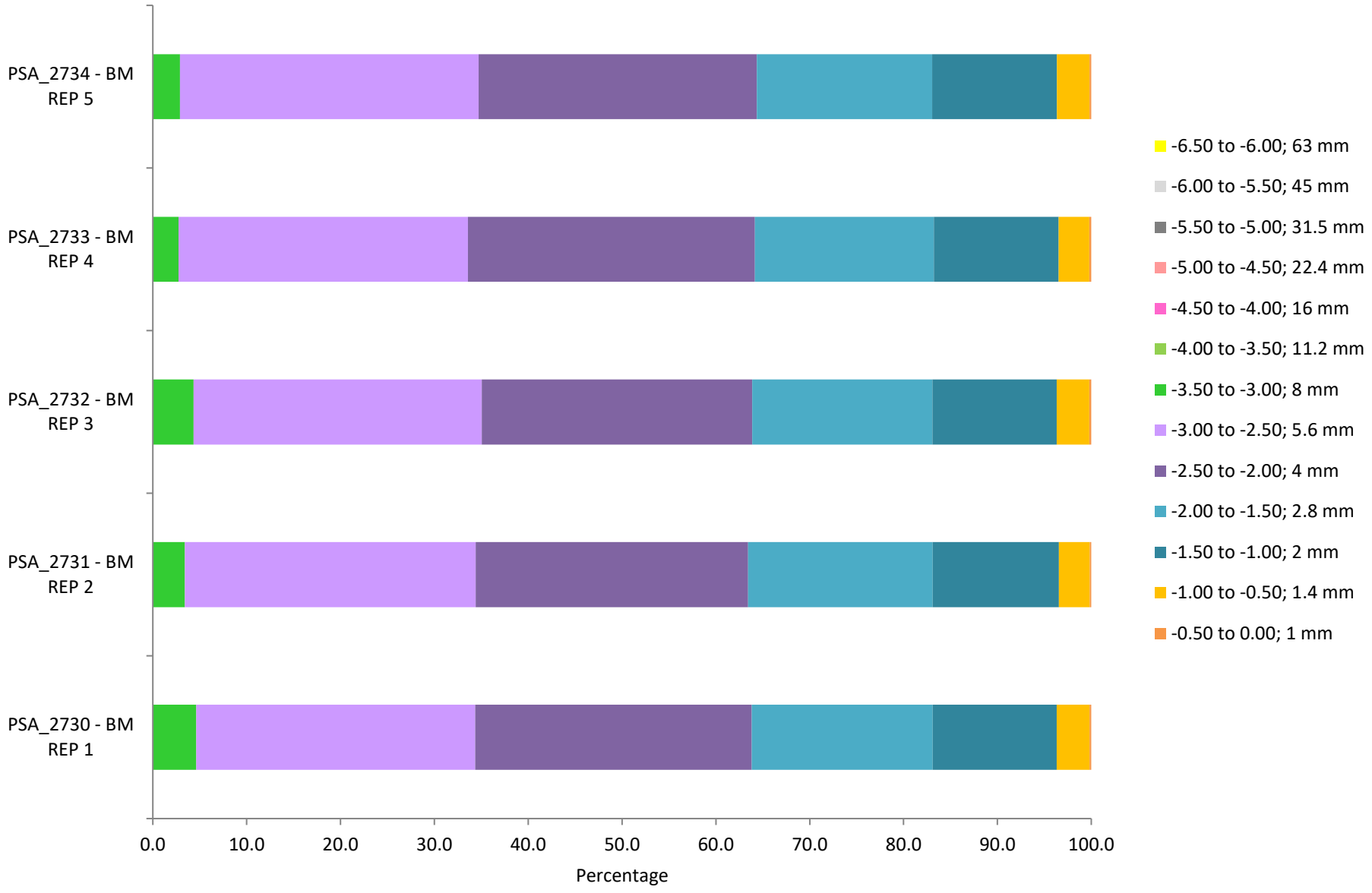
In reality 3% and 5% are low and greater variability is expected for natural sediment samples therefore a maximum of 20% (based on three replicates being measured) will be used as a guide.

The Benchmark replicates show good reproducibility

Table 5. Laser metadata for Benchmark replicates for PS77.

If laser used, provide manufacturer/model:	Beckman Coulter LS 13320
Dispersion unit:	Universal liquid module
Analysis model:	Mie
Dispersant used:	Water (RI - 1.33)
Particle Refractive Index:	1.55
Particle Absorption Index:	0.1
Fines extension	PIDS system
Obscuration (average):	10%
Pump speed (% or rpm)	50%
Stirrer speed (% or rpm)	n/a
Ultrasonic duration (seconds)	30
Ultrasonic level (eg %, unit as described by instrument manual)	2

Figure 1a. Percentage bar charts resulting from final sieve analysis of 5 replicate samples of sediment distibuted as PS77 (Benchmark Data).



NMBAQC Particle Size Analysis
2020/21 - PS77

Figure 1b. Particle size distribution curves resulting from final laser analysis of 5 replicate samples of sediment distibuted as PS77 (Benchmark Data).

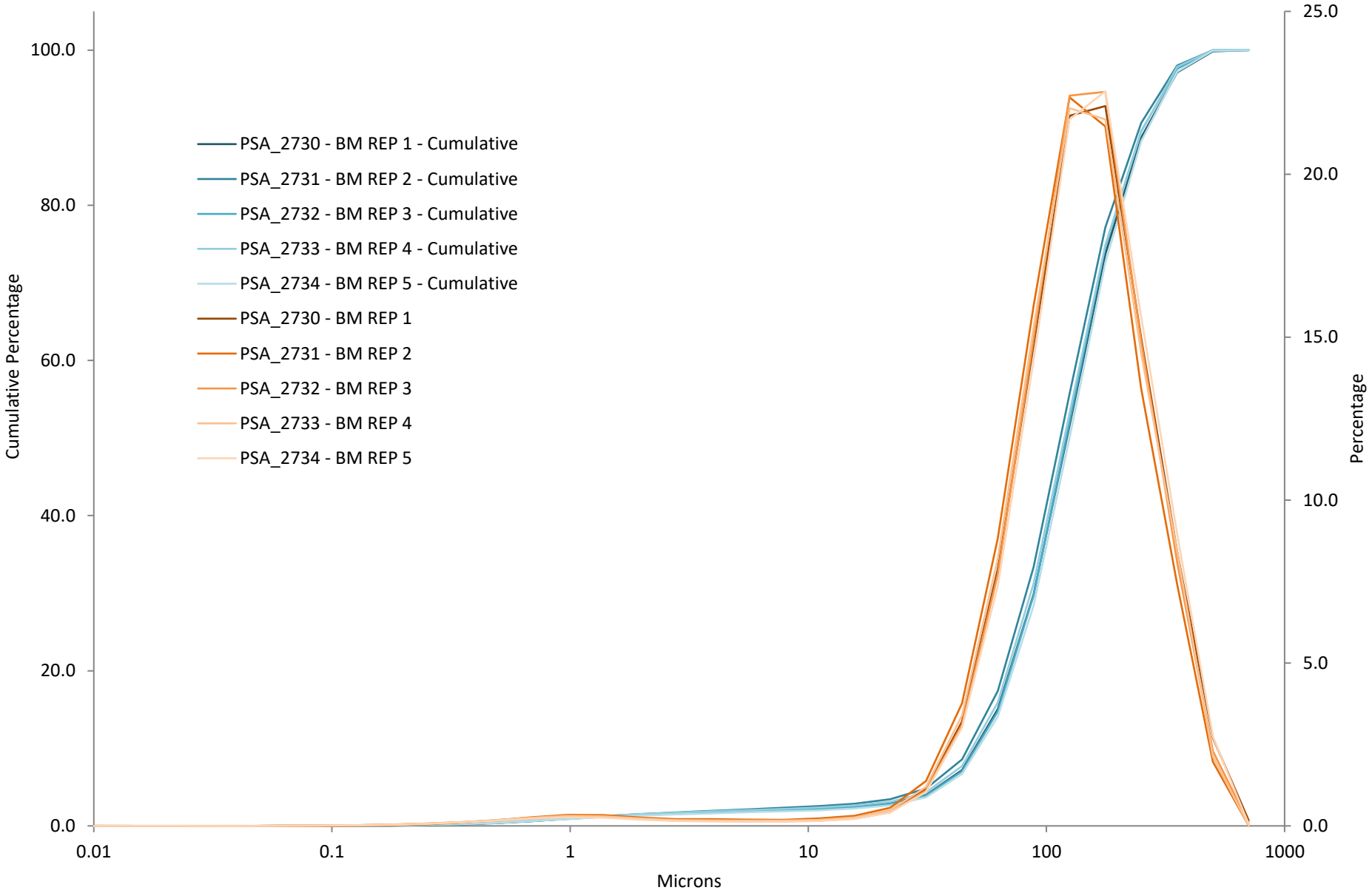
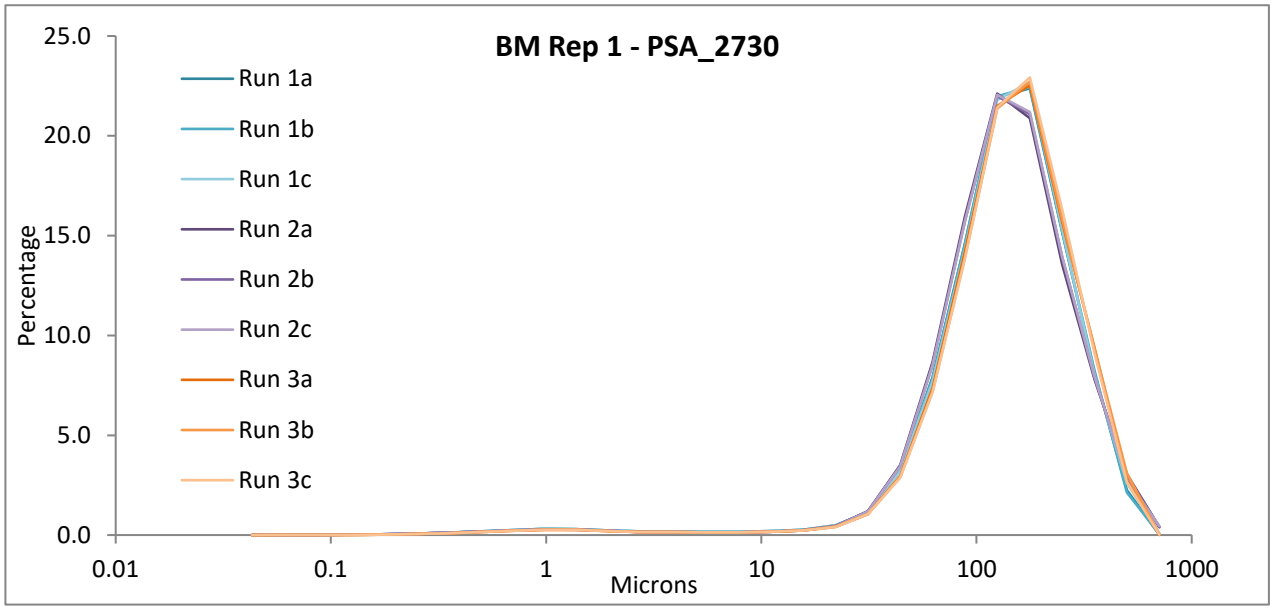
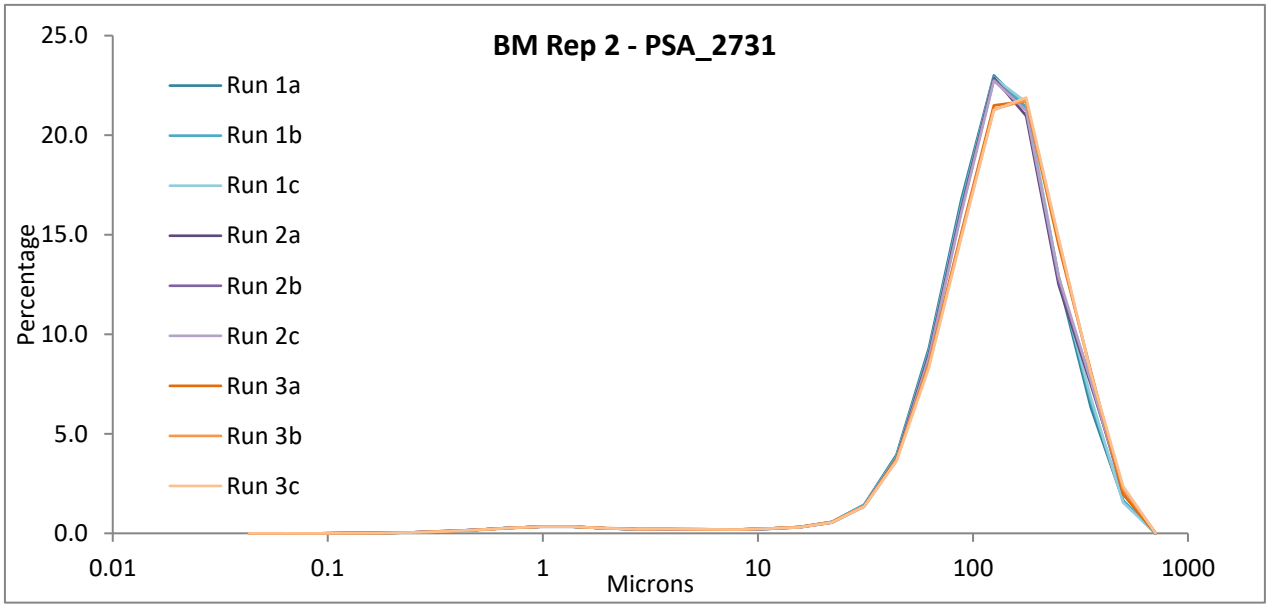
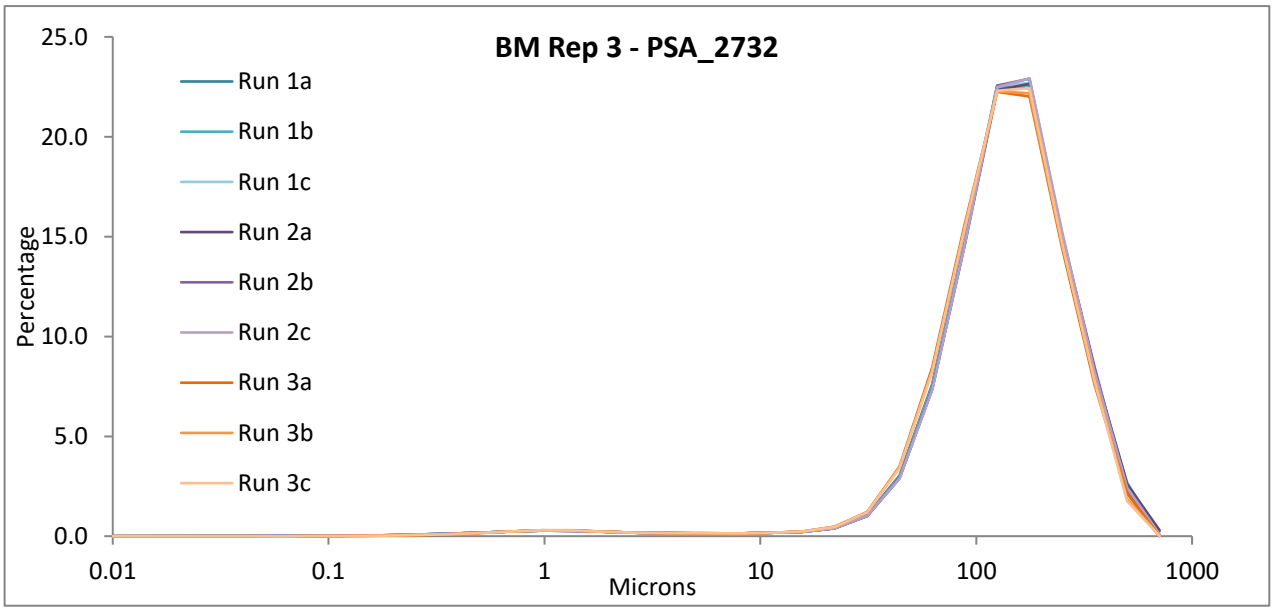


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS77.

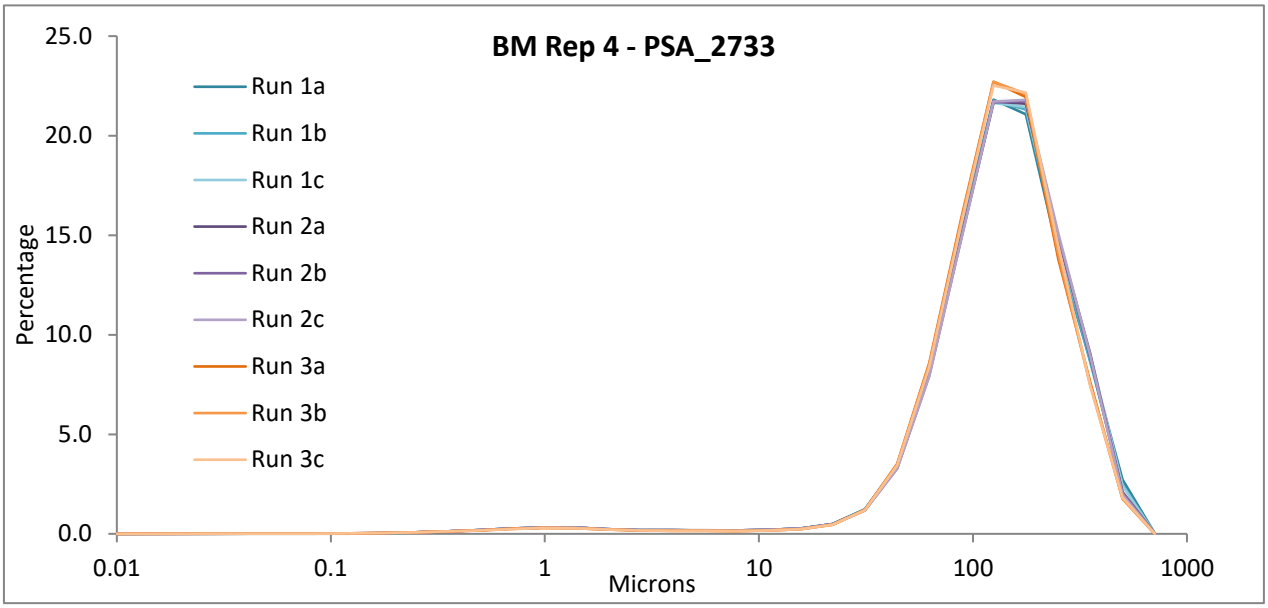






NMBAQC Particle Size Analysis
2020/21 - PS77

Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS77.



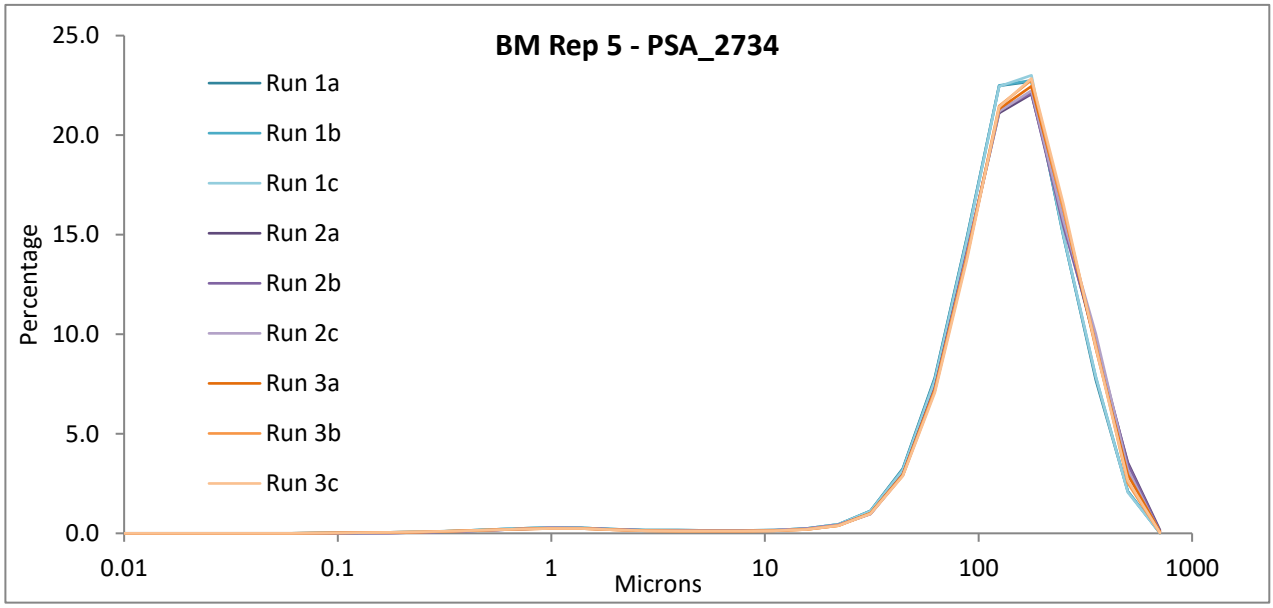
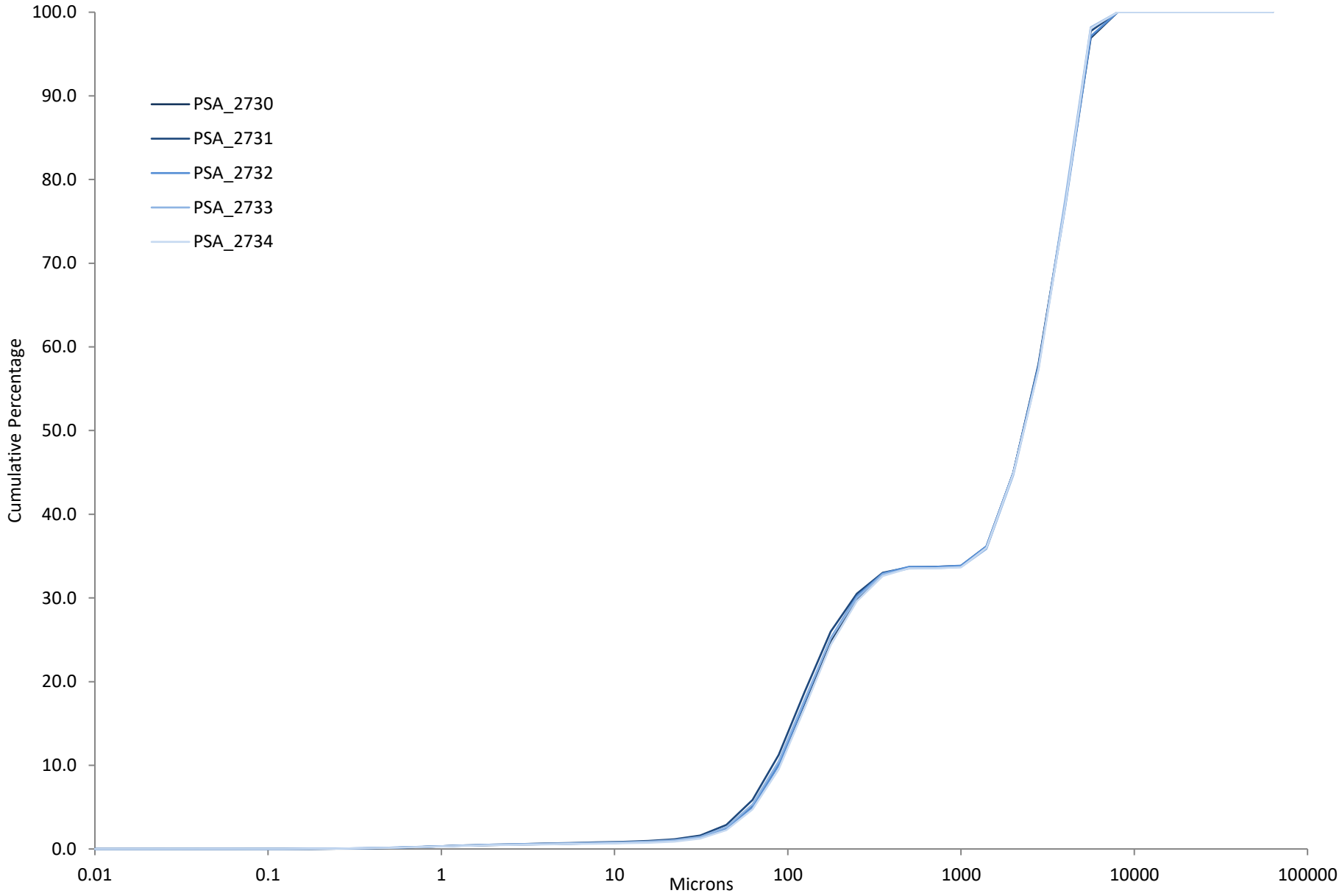


Figure 3. Particle size distribution curves resulting from analysis of 5 replicate samples of sediment distibuted as PS77 (Benchmark Data).



PARTICIPANT DATA

Table 6. Summary of equipment and methods used by participants and sample summary data provided by participants for sediment distributed as PS77.

Lab	Equipment Used		Method Used	Chemical Dispersant Used	Peroxide pre-treatment Used	Summary Data			Sediment Description (Post Analysis)	Sediment Description* Gradistat Textural Group
	Sieves	Laser				% Gravel	% Sand	% Mud		
Benchmark Average	Yes	Yes	NMBAQC	No	No	63.98	33.52	2.50	Sandy Gravel	Sandy Gravel
PSA_2701	Yes	Yes	NMBAQC	No	No	65.34	32.66	1.99	Sandy Gravel	Sandy Gravel
PSA_2702	Yes	Yes	NMBAQC	No	No	63.8	33.0	3.2	Sandy Gravel	Sandy Gravel
PSA_2703	n/s	Yes	OTHER	No	No	72.35	25.84	1.81	-	-
PSA_2704	Yes	Yes	NMBAQC	No	No	64.10	33.77	2.13	Sandy Gravel	Sandy Gravel
PSA_2705_v2	Yes	Yes	NMBAQC	No	No	64.14	32.94	2.92	Sandy silty Gravel	Sandy Gravel
PSA_2706	Yes	Yes	NMBAQC	No	No	63.91	29.20	6.89	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2707	Yes	Yes	NMBAQC	No	No	60.50	35.45	4.05	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2708	Yes	Yes	OTHER	No	No	64.26	32.59	3.15	Sandy Gravel	Sandy Gravel
PSA_2709	Yes	Yes	NMBAQC	No	No	63.96	33.42	2.62	Sandy Gravel	Sandy Gravel
PSA_2710	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p
PSA_2711	Yes	Yes	NMBAQC	No	No	64.05	32.39	3.56	Sandy Gravel	Sandy Gravel
PSA_2712	Yes	Yes	NMBAQC	No	No	64.68	33.87	1.46	Sandy Gravel	Sandy Gravel
PSA_2713	Yes	Yes	NMBAQC	No	No	61.41	34.87	3.72	Sandy Gravel	Sandy Gravel
PSA_2714	Yes	Yes	NMBAQC	No	No	64.0	30.4	5.6	Sandy Gravel	Muddy Sandy Gravel
PSA_2715	Yes	Yes	NMBAQC	No	No	64.10	33.52	2.38	Sandy Gravel	Sandy Gravel
PSA_2716	Yes	Yes	NMBAQC	No	No	65.06	30.64	4.30	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2717	Yes	Yes	NMBAQC	No	No	64.56	32.60	2.84	Sandy Gravel	Sandy Gravel

NB: Decimal places as supplied by participant.

* Sediment description from Gradistat textural group based on final data supplied by participant.

n/p - not participating in this exercise at current time.

n/s - not subscribed to this part of the exercise.

PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS77.

		Participant									
Phi interval (explicit) + sieve mesh		Benchmark Average	PSA_2701	PSA_2702	PSA_2703	PSA_2704	PSA_2705_v2	PSA_2706	PSA_2707	PSA_2708	PSA_2709
-6.50 to -6.00; 63 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	0.00	0.00
-6.00 to -5.50; 45 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	0.00	0.00
-5.50 to -5.00; 31.5 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	0.00	0.00
-5.00 to -4.50; 22.4 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	0.00	0.00
-4.50 to -4.00; 16 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	0.00	0.00
-4.00 to -3.50; 11.2 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	0.00	0.00
-3.50 to -3.00; 8 mm		20.09	16.41	30.08	n/s	20.98	14.30	13.17	14.15	8.07	22.10
-3.00 to -2.50; 5.6 mm		171.67	184.41	159.77	n/s	167.48	164.33	169.28	162.66	185.20	169.13
-2.50 to -2.00; 4 mm		164.36	140.41	142.46	n/s	144.38	123.93	134.59	125.89	137.73	165.50
-2.00 to -1.50; 2.8 mm		106.87	114.04	98.14	n/s	100.37	101.65	110.83	92.49	130.23	106.52
-1.50 to -1.00; 2 mm		74.16	77.60	63.37	n/s	69.99	64.21	74.08	68.12	76.60	72.45
-1.00 to -0.50; 1.4 mm		18.92	21.45	16.41	n/s	18.16	17.16	19.34	19.45	21.27	18.12
-0.50 to 0.00; 1 mm		1.05	1.21	0.83	n/s	0.81	1.65	1.20	2.08	0.87	0.55
*Total **		557.11	555.53	511.06	n/s	522.17	487.23	522.49	484.84	559.97	554.37
Summary Data											
< 0.00; >1 mm		557.11	555.53	511.06	n/s	522.17	487.23	522.49	484.84	559.97	554.37
> 0.00; <1 mm	Base pan	0.39	0.40	0.09	n/s	0.53	-	0.22	0.75	-	0.31
	Oven dried	282.05	259.66	263.10	n/s	262.27	243.10	262.72	280.25	277.00	282.81
Total Sample Weight		839.56	815.59	774.25	n/s	784.97	730.33	785.43	766.35	836.97	837.49

- No data provided.

n/p - not participating in this exercise at current time.

n/s - not subscribed to this part of the exercise.

PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS77.

		Participant								
Phi interval (explicit) + sieve mesh		Benchmark Average	PSA_2710	PSA_2711	PSA_2712	PSA_2713	PSA_2714	PSA_2715	PSA_2716	PSA_2717
-6.50 to -6.00; 63 mm		0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-6.00 to -5.50; 45 mm		0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5.50 to -5.00; 31.5 mm		0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5.00 to -4.50; 22.4 mm		0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-4.50 to -4.00; 16 mm		0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-4.00 to -3.50; 11.2 mm		0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-3.50 to -3.00; 8 mm		20.09	n/p	15.55	27.28	9.02	7.34	15.33	21.81	18.65
-3.00 to -2.50; 5.6 mm		171.67	n/p	166.97	161.55	142.61	189.04	170.19	154.40	181.86
-2.50 to -2.00; 4 mm		164.36	n/p	157.96	135.05	118.01	149.69	171.08	133.52	140.24
-2.00 to -1.50; 2.8 mm		106.87	n/p	113.46	105.28	100.20	103.30	107.62	99.86	127.16
-1.50 to -1.00; 2 mm		74.16	n/p	83.69	78.25	68.33	87.97	73.59	70.49	74.69
-1.00 to -0.50; 1.4 mm		18.92	n/p	21.27	18.12	19.21	20.13	18.91	17.65	18.18
-0.50 to 0.00; 1 mm		1.05	n/p	1.35	0.76	0.95	1.85	1.14	2.24	1.27
*Total**		557.11	n/p	560.24	526.29	458.33	559.32	557.86	499.97	562.05
Summary Data										
< 0.00; >1 mm		557.11	n/p	560.24	526.29	458.33	559.32	557.86	499.97	562.05
> 0.00; <1 mm	Base pan	0.39	n/p	0.48	0.13	0.30	0.39	0.37	0.18	1.24
	Oven dried	282.05	n/p	278.64	258.13	254.88	280.65	280.78	237.78	277.15
Total Sample Weight		839.56	n/p	839.36	784.55	713.51	840.36	839.01	737.93	840.44

- No data provided.

n/p - not participating in this exercise at current time.

n/s - not subscribed to this part of the exercise.

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS77 with Gradistat output.

Microns	Benchmark Average	PSA_2701	PSA_2702	PSA_2703	PSA_2704	PSA_2705_v2	PSA_2706
707	0.06	0.23	0.77	0.89	0.91	0.24	0.11
500	2.36	2.14	5.33	3.27	4.31	2.46	1.93
353.6	8.27	7.17	11.90	8.74	10.68	6.86	6.63
250	14.69	14.91	17.97	16.00	16.23	13.62	12.72
176.8	22.07	21.08	20.03	21.02	23.00	17.83	17.01
125	22.06	21.98	16.99	20.49	19.86	21.47	17.20
88.39	15.05	16.82	11.30	14.94	12.20	16.16	13.99
62.5	8.00	9.41	6.20	8.11	6.45	11.30	9.80
44.19	3.30	3.86	3.10	3.24	2.81	5.23	6.23
31.25	1.16	1.18	1.61	1.04	0.98	2.08	3.64
22.097	0.46	0.44	0.93	0.47	0.44	0.70	1.99
15.625	0.25	0.33	0.58	0.37	0.21	0.43	1.16
11.049	0.18	0.24	0.43	0.27	0.18	0.33	0.87
7.813	0.15	0.06	0.40	0.19	0.14	0.24	0.83
5.524	0.16	0.01	0.42	0.13	0.11	0.21	0.87
3.906	0.17	0.01	0.43	0.16	0.11	0.22	0.91
2.762	0.17	0.05	0.41	0.16	0.13	0.24	0.91
1.953	0.22	0.07	0.37	0.16	0.17	0.23	0.84
1.381	0.29	0.00	0.32	0.18	0.22	0.14	0.74
0.977	0.30	0.00	0.27	0.17	0.23	0.00	0.64
0.691	0.24	0.00	0.19	0.02	0.20	0.00	0.54
0.488	0.17	0.00	0.04	0.00	0.15	0.00	0.36
0.345	0.11	0.00	0.00	0.00	0.11	0.00	0.06
0.244	0.06	0.00	0.00	0.00	0.07	0.00	0.00
0.173	0.03	0.00	0.00	0.00	0.05	0.00	0.00
0.122	0.02	0.00	0.00	0.00	0.03	0.00	0.00
0.086	0.01	0.00	0.00	0.00	0.02	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.01	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	99.98	100.00
GRADISTAT OUTPUTS							
MEAN:	Fine Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand
SORTING:	Moderately Sorted	Moderately Sorted	Poorly Sorted	Moderately Sorted	Moderately Sorted	Poorly Sorted	Poorly Sorted
SKEWNESS:	Symmetrical	Symmetrical	Fine Skewed	Symmetrical	Symmetrical	Symmetrical	Very Fine Skewed
KURTOSIS:	Mesokurtic	Mesokurtic	Leptokurtic	Mesokurtic	Mesokurtic	Mesokurtic	Very Leptokurtic
MODE:	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal
MODE 1 (µm):	213.4	150.9	213.4	213.4	213.4	150.9	150.9
MODE 2 (µm):	-	-	-	-	-	-	-
MODE 3 (µm):	-	-	-	-	-	-	-

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS77 with Gradistat output.

Microns	BM Average	PSA_2707	PSA_2708	PSA_2709	PSA_2710	PSA_2711	PSA_2712
707	0.06	0.82	0.37	0.04	n/p	0.00	0.11
500	2.36	9.71	2.06	1.92	n/p	1.30	1.69
353.6	8.27	14.40	6.35	8.18	n/p	6.75	6.77
250	14.69	12.05	13.43	14.87	n/p	13.21	15.46
176.8	22.07	16.88	18.34	21.88	n/p	18.80	22.16
125	22.06	13.49	22.15	21.87	n/p	20.54	22.91
88.39	15.05	13.75	16.52	15.26	n/p	17.40	16.70
62.5	8.00	7.83	11.26	8.24	n/p	11.29	8.73
44.19	3.30	3.89	5.05	3.53	n/p	5.40	3.28
31.25	1.16	2.13	1.51	1.21	n/p	1.85	0.98
22.097	0.46	1.15	0.50	0.52	n/p	0.59	0.44
15.625	0.25	0.52	0.36	0.27	n/p	0.42	0.30
11.049	0.18	0.18	0.35	0.19	n/p	0.39	0.12
7.813	0.15	0.17	0.25	0.16	n/p	0.29	0.00
5.524	0.16	0.18	0.17	0.16	n/p	0.21	0.00
3.906	0.17	0.21	0.15	0.17	n/p	0.21	0.03
2.762	0.17	0.25	0.16	0.17	n/p	0.26	0.06
1.953	0.22	0.29	0.19	0.22	n/p	0.29	0.10
1.381	0.29	0.30	0.22	0.29	n/p	0.29	0.12
0.977	0.30	0.26	0.23	0.29	n/p	0.26	0.05
0.691	0.24	0.17	0.24	0.23	n/p	0.20	0.00
0.488	0.17	0.20	0.12	0.16	n/p	0.02	0.00
0.345	0.11	0.21	0.00	0.09	n/p	0.00	0.00
0.244	0.06	0.24	0.00	0.05	n/p	0.00	0.00
0.173	0.03	0.28	0.00	0.02	n/p	0.00	0.00
0.122	0.02	0.26	0.00	0.01	n/p	0.00	0.00
0.086	0.01	0.17	0.00	0.00	n/p	0.00	0.00
0.061	0.00	0.00	0.00	0.00	n/p	0.00	0.00
0.043	0.00	0.00	0.00	0.00	n/p	0.00	0.00
0.01	0.00	0.00	0.00	0.00	n/p	0.00	0.00
Total	100.00	99.98	100.00	100.00	n/p	100.00	100.00
GRADISTAT OUTPUTS							
MEAN:	Fine Sand	Fine Sand	Fine Sand	Fine Sand	n/p	Fine Sand	Fine Sand
SORTING:	Moderately Sorted	Poorly Sorted	Moderately Sorted	Moderately Sorted	n/p	Moderately Sorted	Moderately Sorted
SKEWNESS:	Symmetrical	Fine Skewed	Symmetrical	Symmetrical	n/p	Symmetrical	Symmetrical
KURTOSIS:	Mesokurtic	Mesokurtic	Mesokurtic	Mesokurtic	n/p	Mesokurtic	Mesokurtic
MODE:	Unimodal	Trimodal	Unimodal	Unimodal	n/p	Unimodal	Unimodal
MODE 1 (µm):	213.4	213.4	150.9	213.4	n/p	150.9	150.9
MODE 2 (µm):	-	426.8	-	-	n/p	-	-
MODE 3 (µm):	-	106.695	-	-	n/p	-	-

n/p - not participating in this exercise at current time.

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS77 with Gradistat output.

Microns	BM Average	PSA_2713	PSA_2714	PSA_2715	PSA_2716	PSA_2717
707	0.06	2.57	0.01	0.26	0.04	0.34
500	2.36	2.99	2.13	2.88	1.06	1.99
353.6	8.27	5.59	7.54	8.44	4.51	6.19
250	14.69	11.55	12.74	14.81	10.85	13.47
176.8	22.07	19.07	16.51	22.06	16.19	19.83
125	22.06	21.35	17.58	21.86	21.70	21.76
88.39	15.05	16.72	15.49	14.85	18.26	17.45
62.5	8.00	9.75	11.08	7.75	14.05	10.42
44.19	3.30	4.16	6.19	3.21	6.57	4.63
31.25	1.16	1.43	2.69	1.08	2.74	1.54
22.097	0.46	0.58	1.14	0.45	0.88	0.55
15.625	0.25	0.29	0.84	0.24	0.57	0.36
11.049	0.18	0.22	0.88	0.16	0.51	0.26
7.813	0.15	0.23	0.85	0.13	0.42	0.13
5.524	0.16	0.24	0.75	0.14	0.37	0.05
3.906	0.17	0.26	0.67	0.15	0.39	0.18
2.762	0.17	0.29	0.62	0.16	0.38	0.21
1.953	0.22	0.32	0.58	0.21	0.33	0.22
1.381	0.29	0.35	0.51	0.27	0.19	0.20
0.977	0.30	0.36	0.46	0.28	0.00	0.18
0.691	0.24	0.35	0.41	0.23	0.00	0.06
0.488	0.17	0.32	0.29	0.16	0.00	0.00
0.345	0.11	0.29	0.05	0.10	0.00	0.00
0.244	0.06	0.24	0.00	0.06	0.00	0.00
0.173	0.03	0.20	0.00	0.03	0.00	0.00
0.122	0.02	0.15	0.00	0.02	0.00	0.00
0.086	0.01	0.10	0.00	0.01	0.00	0.00
0.061	0.00	0.04	0.00	0.00	0.00	0.00
0.043	0.00	0.01	0.00	0.00	0.00	0.00
0.01	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00
GRADISTAT OUTPUTS						
MEAN:	Fine Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand
SORTING:	Moderately Sorted	Poorly Sorted	Poorly Sorted	Moderately Sorted	Moderately Sorted	Moderately Sorted
SKEWNESS:	Symmetrical	Symmetrical	Fine Skewed	Symmetrical	Symmetrical	Symmetrical
KURTOSIS:	Mesokurtic	Leptokurtic	Leptokurtic	Mesokurtic	Mesokurtic	Mesokurtic
MODE:	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal
MODE 1 (µm):	213.4	150.9	150.9	213.4	150.9	150.9
MODE 2 (µm):	-	-	-	-	-	-
MODE 3 (µm):	-	-	-	-	-	-

Figure 4. Final sieve data (in percentages) provided by each participant for sediment distributed as PS77.

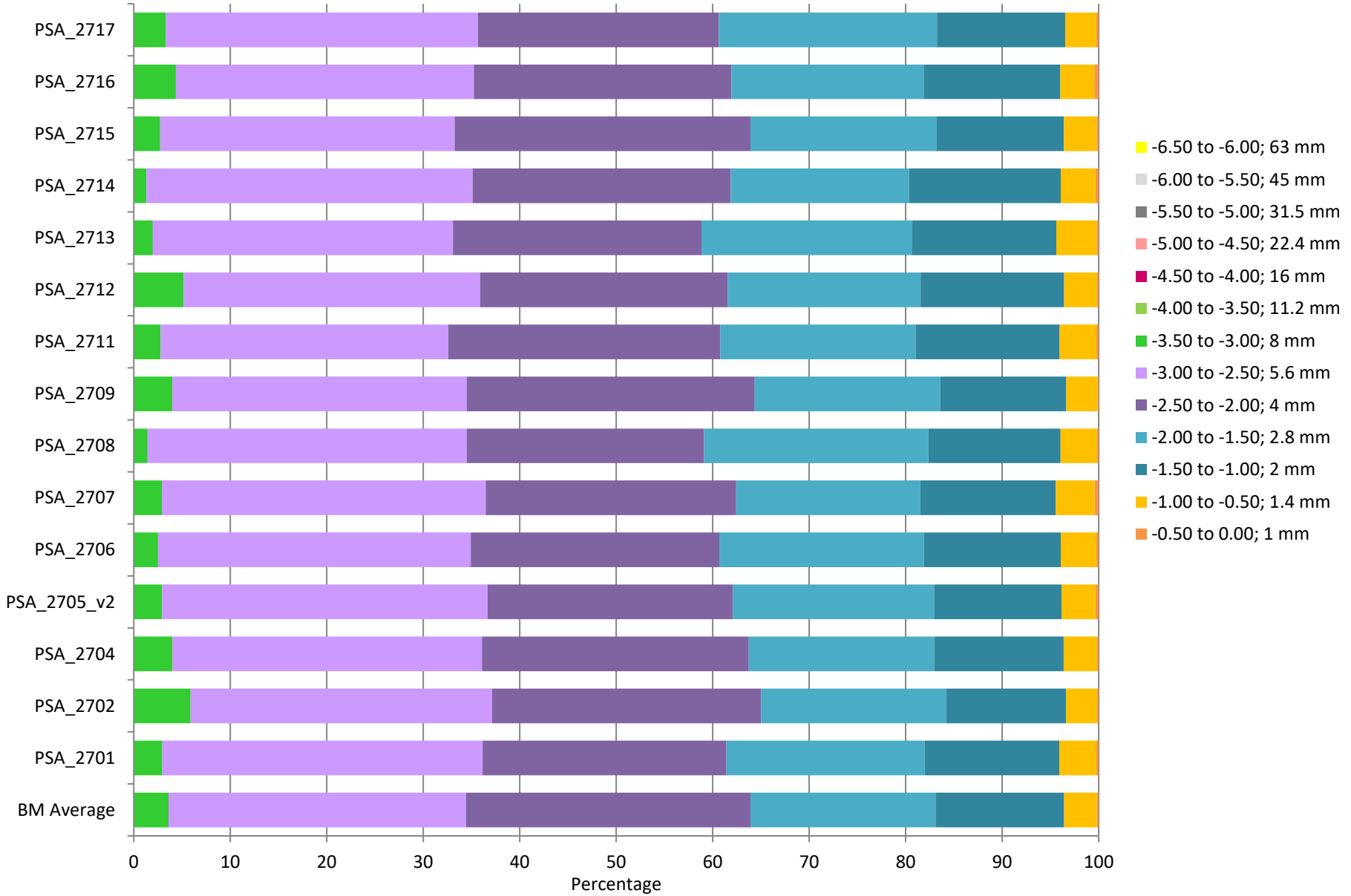


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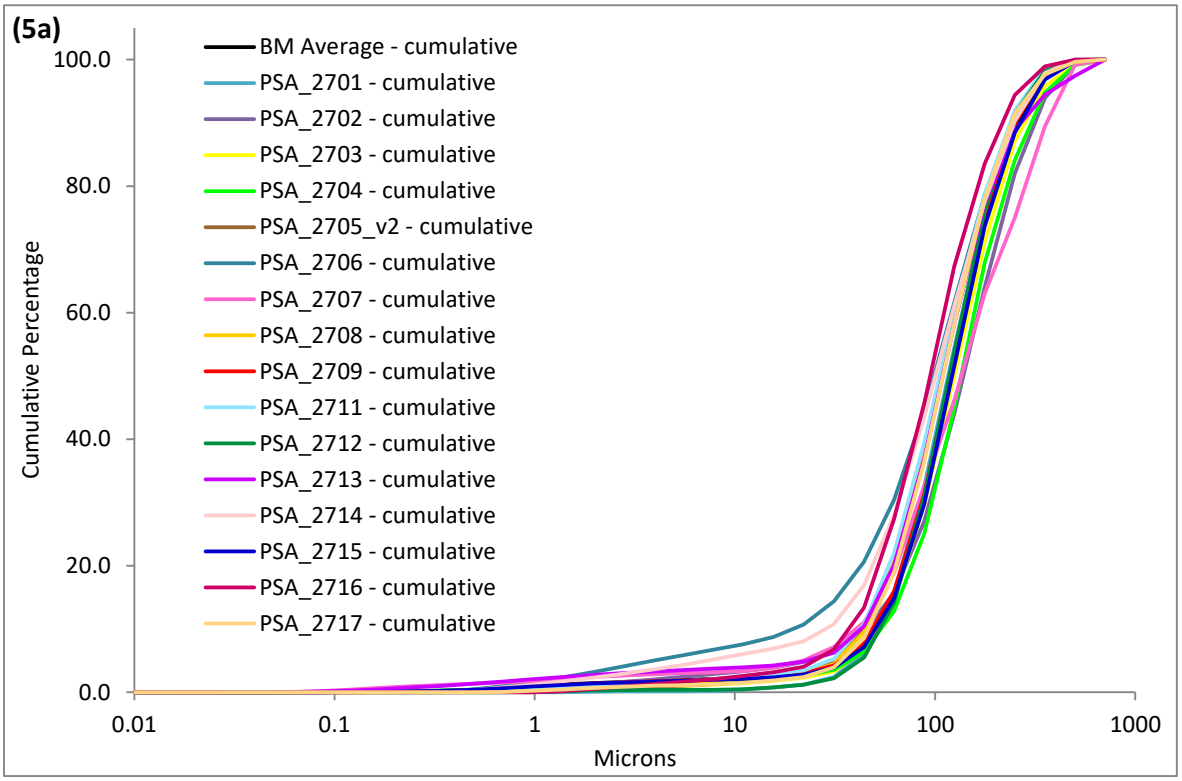
Figure 5. (a) Cumulative and (b) Differential final laser data provided by the participants and Benchmark average for sediment distributed as PS77.



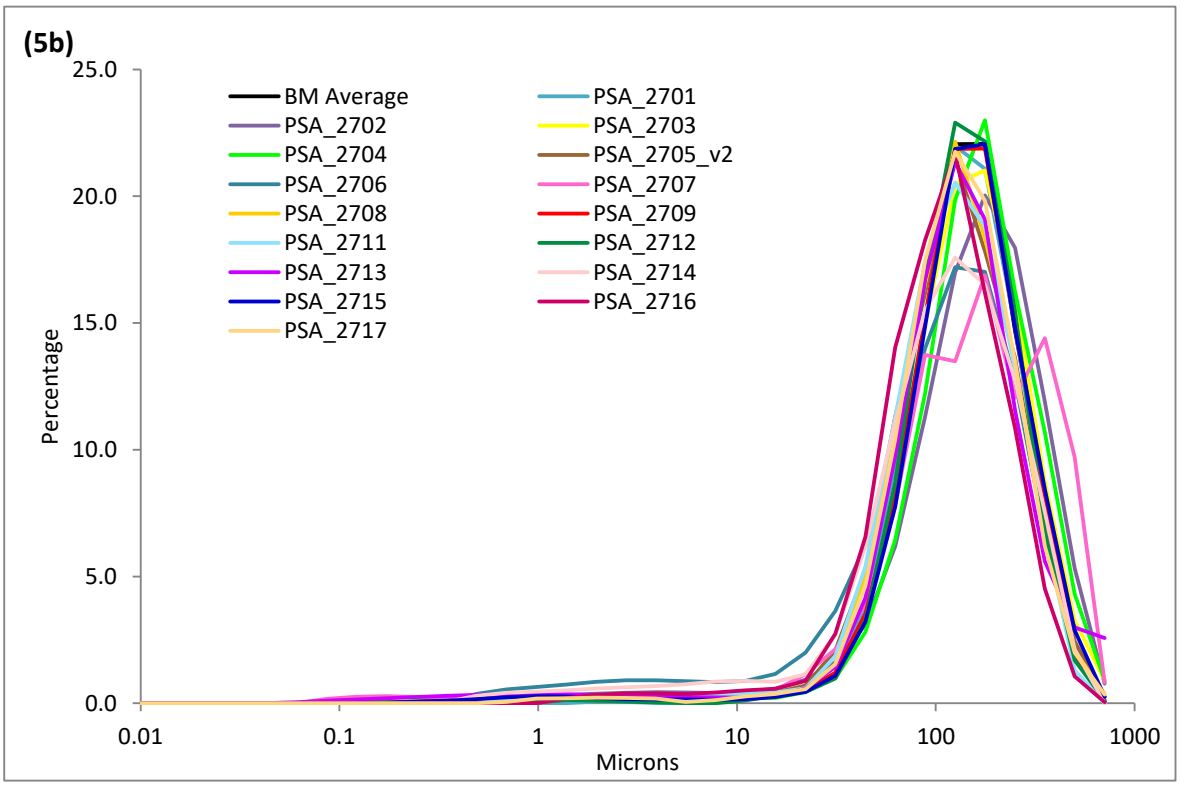


Figure 5c. Comparison of participant laser subsample data with the Benchmark Average for sediment distributed as PS77.

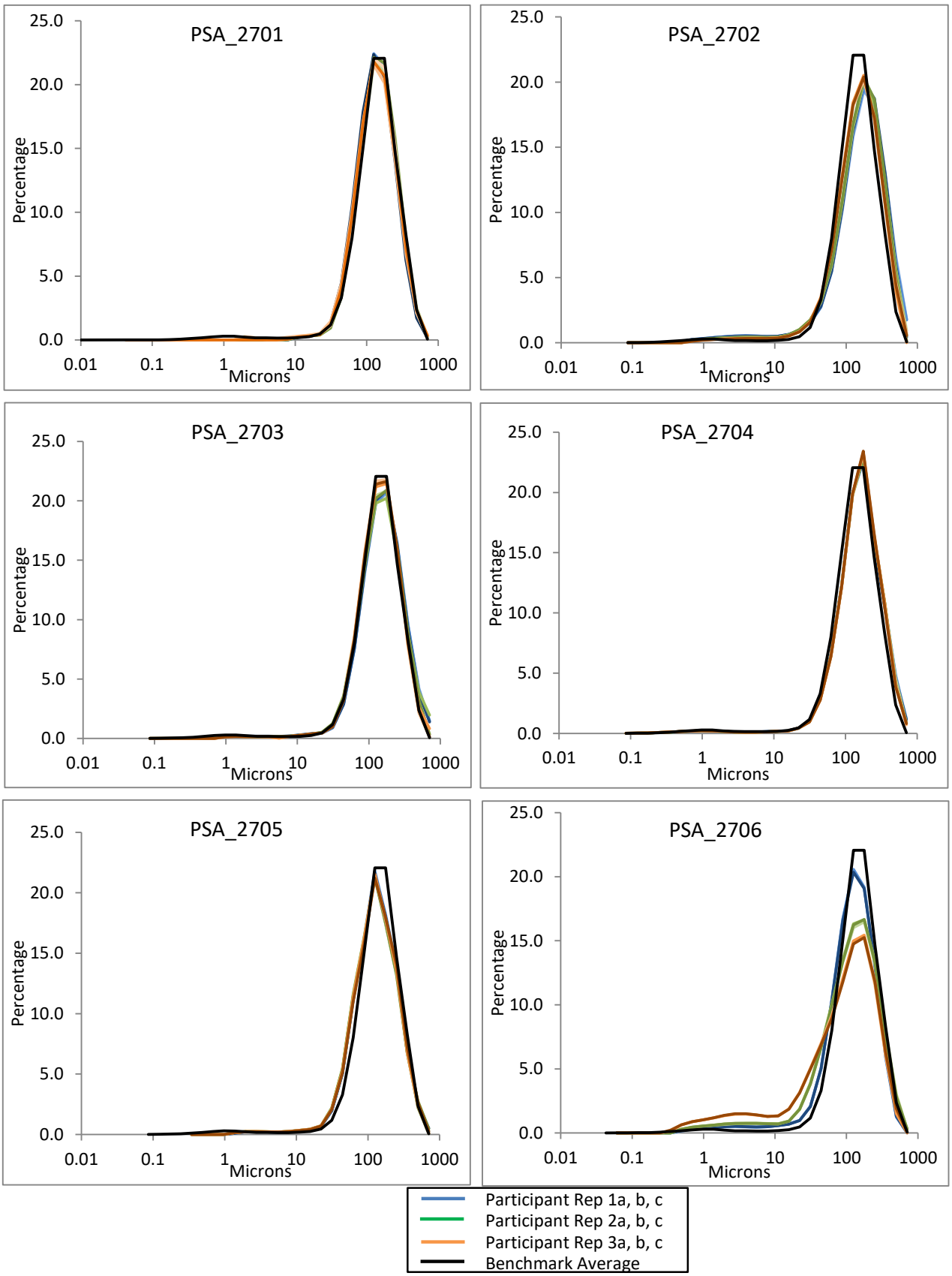


Figure 5c. Comparison of participant laser subsample data with the Benchmark Average for sediment distributed as PS77.

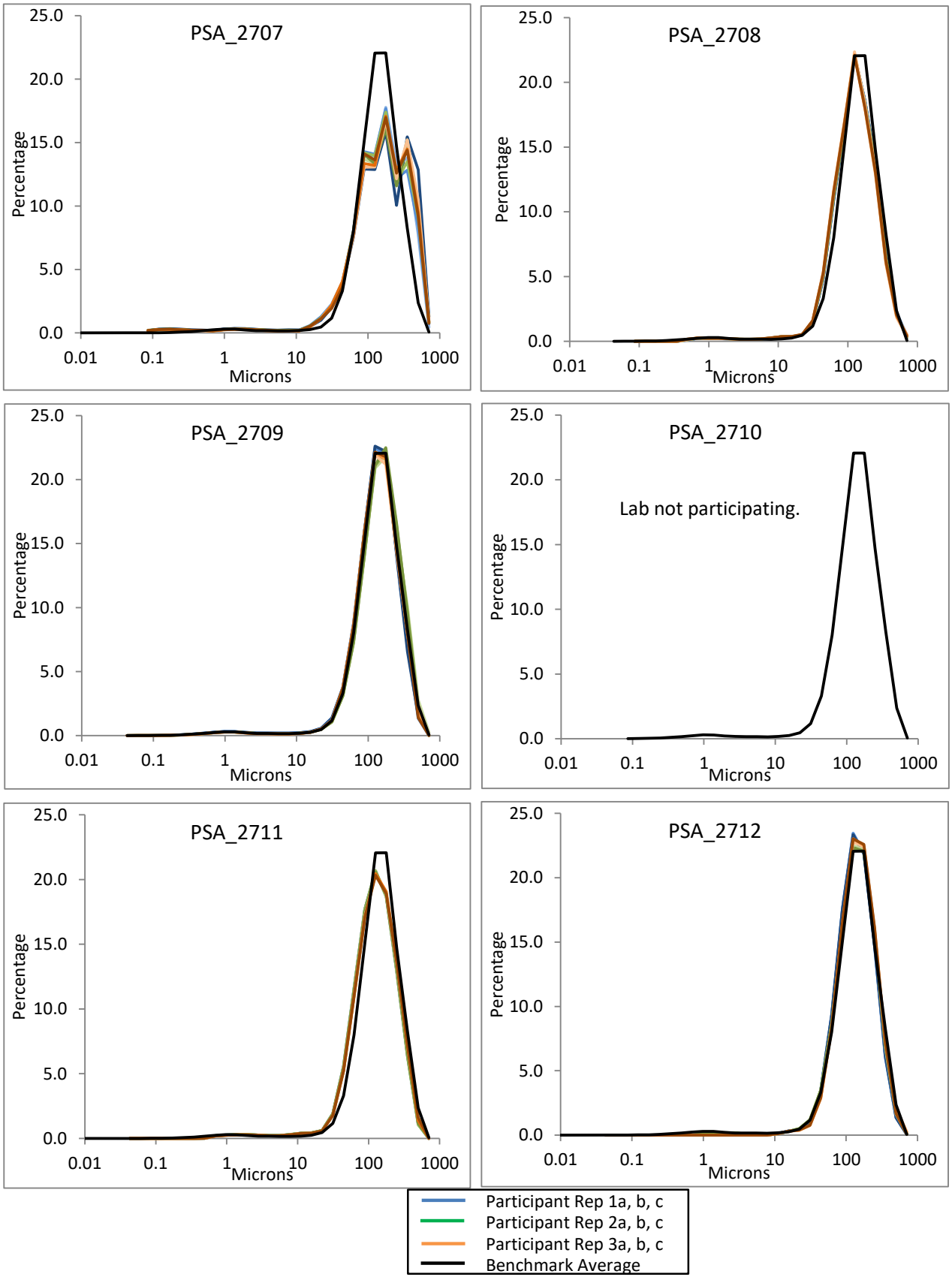


Figure 5c. Comparison of participant laser subsample data with the Benchmark Average for sediment distributed as PS77.

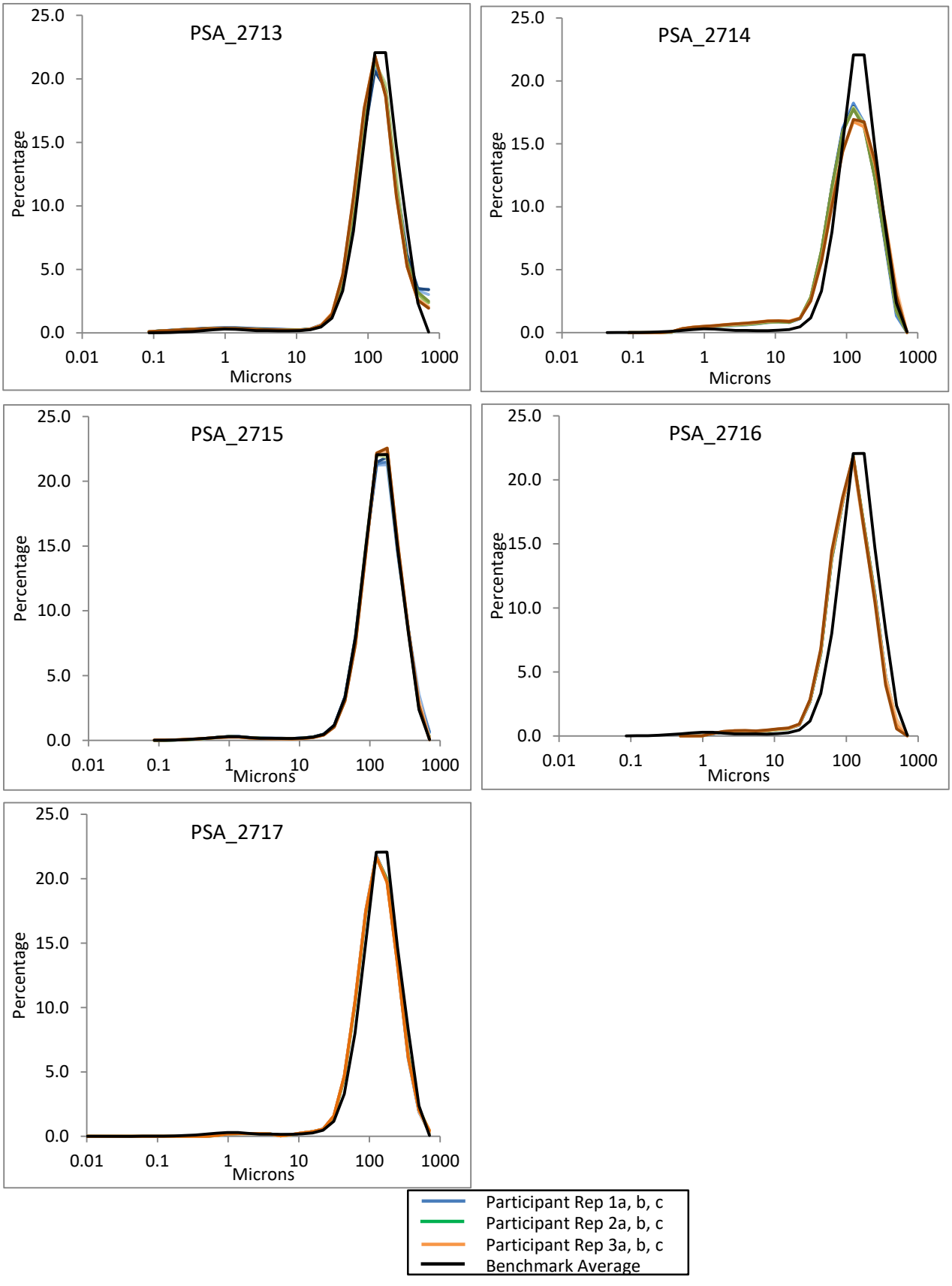


Figure 6. Particle size distribution curves from all participating laboratories and the Benchmark Average for sediment distributed as PS77.

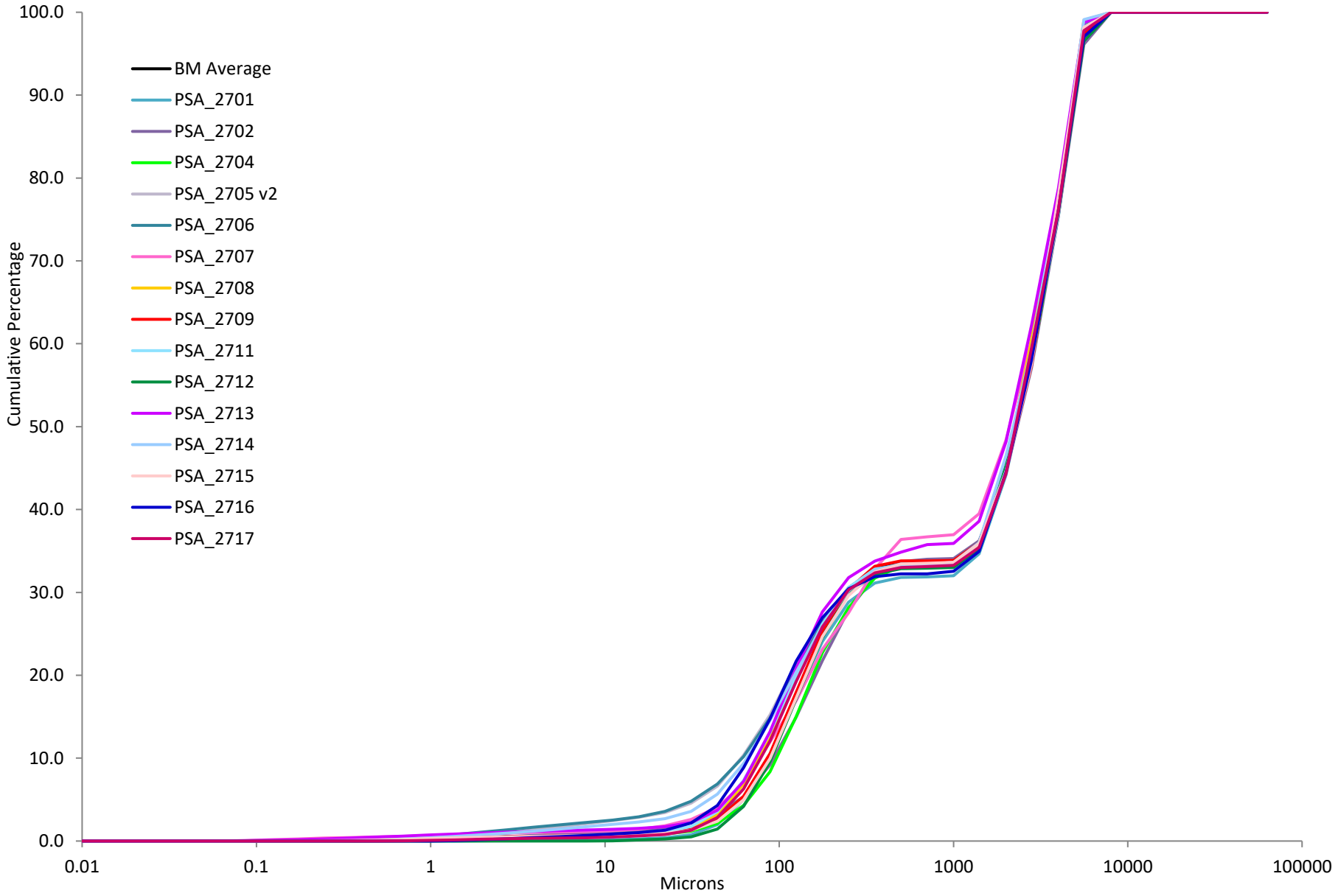
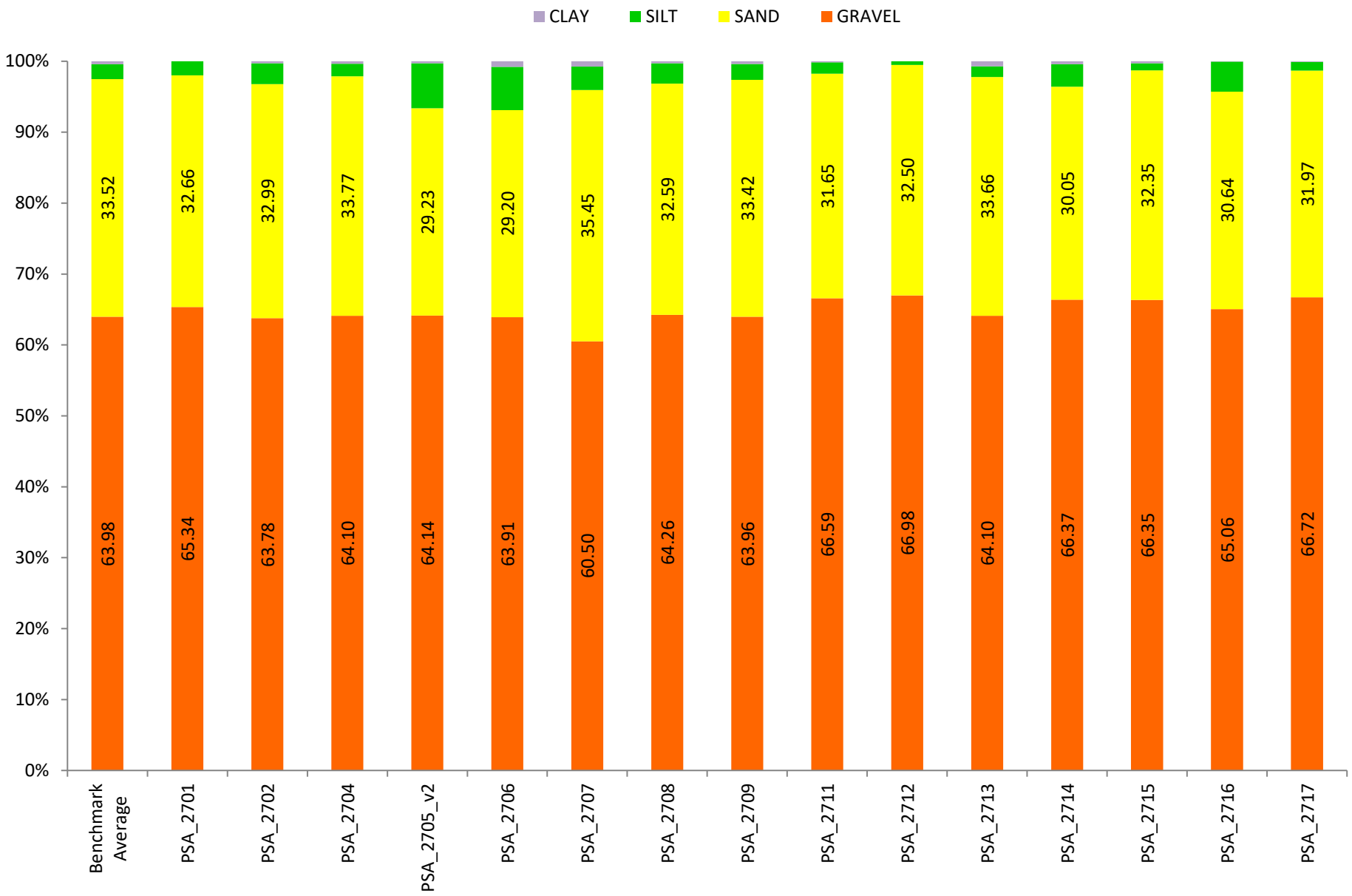


Figure 7. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the Benchmark Average for PS77.



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APPENDICES

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS77.

	Replicate Sample 1								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.02	0.06	0.09	0.41	0.39	0.45	0.01	0.03	0.02
0.50 to 1.00; (500 µm)	2.26	2.14	2.60	3.06	2.97	2.79	2.73	3.10	2.67
1.00 to 1.50; (353.6 µm)	8.13	8.24	8.00	7.81	7.88	7.94	9.36	9.33	9.10
1.50 to 2.00; (250 µm)	15.17	15.21	15.33	13.56	13.92	13.92	15.67	15.82	16.30
2.00 to 2.50; (176.8 µm)	22.38	22.44	22.69	20.89	21.10	21.19	22.54	22.71	22.92
2.50 to 3.00; (125 µm)	21.95	21.98	21.80	22.11	21.98	22.05	21.49	21.37	21.41
3.00 to 3.50; (88.39 µm)	14.60	14.54	14.33	15.95	15.74	15.70	14.19	13.89	13.85
3.50 to 4.00; (62.5 µm)	7.91	7.84	7.70	8.67	8.54	8.50	7.37	7.18	7.16
4.00 to 4.50; (44.19 µm)	3.28	3.25	3.20	3.51	3.45	3.43	2.96	2.90	2.88
4.50 to 5.00; (31.25 µm)	1.15	1.15	1.14	1.20	1.19	1.18	1.05	1.04	1.04
5.00 to 5.50; (22.097 µm)	0.48	0.48	0.48	0.45	0.44	0.44	0.42	0.41	0.41
5.50 to 6.00; (15.625 µm)	0.26	0.26	0.27	0.24	0.24	0.24	0.23	0.23	0.23
6.00 to 6.50; (11.049 µm)	0.19	0.20	0.20	0.17	0.17	0.17	0.16	0.16	0.17
6.50 to 7.00; (7.813 µm)	0.17	0.17	0.17	0.14	0.14	0.14	0.13	0.13	0.13
7.00 to 7.50; (5.524 µm)	0.17	0.17	0.17	0.14	0.13	0.14	0.14	0.14	0.14
7.50 to 8.00; (3.906 µm)	0.18	0.18	0.19	0.14	0.14	0.14	0.15	0.15	0.15
8.00 to 8.50; (2.762 µm)	0.19	0.19	0.19	0.16	0.16	0.16	0.15	0.15	0.15
8.50 to 9.00; (1.953 µm)	0.23	0.23	0.23	0.21	0.21	0.21	0.20	0.20	0.20
9.00 to 9.50; (1.381 µm)	0.29	0.30	0.30	0.27	0.27	0.27	0.26	0.26	0.26
9.50 to 10.00; (0.977 µm)	0.30	0.31	0.31	0.28	0.28	0.28	0.27	0.27	0.27
10.00 to 10.50; (0.691 µm)	0.25	0.25	0.25	0.23	0.23	0.23	0.22	0.21	0.22
10.50 to 11.00; (0.488 µm)	0.18	0.18	0.17	0.17	0.17	0.17	0.15	0.15	0.15
11.00 to 11.50; (0.345 µm)	0.12	0.12	0.10	0.11	0.11	0.11	0.09	0.09	0.09
11.50 to 12.00; (0.244 µm)	0.07	0.07	0.06	0.07	0.07	0.07	0.05	0.05	0.05
12.00 to 12.50; (0.173 µm)	0.04	0.04	0.02	0.04	0.04	0.04	0.02	0.02	0.02
12.50 to 13.00; (0.122 µm)	0.02	0.02	0.01	0.02	0.02	0.02	0.01	0.01	0.01
13.00 to 13.50; (0.086 µm)	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.00
13.50 to 14.00; (0.061 µm)	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	1.47	1.47	1.46	1.42	1.42	1.43	1.39	1.37	1.40
d50	2.55	2.54	2.53	2.60	2.59	2.58	2.49	2.48	2.48
d90	3.85	3.84	3.83	3.86	3.85	3.85	3.77	3.76	3.76

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	1.47	0.01	0.68	1.42	0.00	0.24	1.39	0.02	1.22
d50	2.54	0.01	0.35	2.59	0.01	0.27	2.48	0.01	0.35
d90	3.84	0.01	0.17	3.85	0.00	0.11	3.76	0.01	0.18

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS77.

	Replicate Sample 2								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01
0.50 to 1.00; (500 µm)	1.63	1.63	1.53	2.26	1.98	2.13	1.96	2.23	2.36
1.00 to 1.50; (353.6 µm)	6.32	6.62	6.83	7.47	7.66	7.65	8.14	8.01	8.05
1.50 to 2.00; (250 µm)	12.75	12.94	12.93	12.51	12.71	12.92	14.50	14.77	14.85
2.00 to 2.50; (176.8 µm)	21.34	21.42	21.65	20.96	21.24	21.23	21.71	21.75	21.89
2.50 to 3.00; (125 µm)	23.00	22.92	22.88	22.87	22.80	22.73	21.50	21.30	21.26
3.00 to 3.50; (88.39 µm)	16.81	16.57	16.48	16.37	16.25	16.12	15.14	14.99	14.89
3.50 to 4.00; (62.5 µm)	9.31	9.16	9.05	9.01	8.89	8.81	8.52	8.42	8.31
4.00 to 4.50; (44.19 µm)	3.96	3.88	3.82	3.77	3.72	3.67	3.73	3.69	3.63
4.50 to 5.00; (31.25 µm)	1.44	1.42	1.41	1.38	1.36	1.35	1.36	1.36	1.34
5.00 to 5.50; (22.097 µm)	0.58	0.57	0.56	0.55	0.54	0.54	0.56	0.57	0.55
5.50 to 6.00; (15.625 µm)	0.31	0.32	0.31	0.31	0.30	0.31	0.31	0.32	0.31
6.00 to 6.50; (11.049 µm)	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.24	0.23
6.50 to 7.00; (7.813 µm)	0.19	0.19	0.19	0.18	0.18	0.19	0.19	0.19	0.19
7.00 to 7.50; (5.524 µm)	0.20	0.20	0.20	0.19	0.19	0.19	0.20	0.20	0.20
7.50 to 8.00; (3.906 µm)	0.21	0.21	0.21	0.20	0.20	0.20	0.21	0.22	0.21
8.00 to 8.50; (2.762 µm)	0.21	0.21	0.21	0.20	0.20	0.20	0.21	0.22	0.21
8.50 to 9.00; (1.953 µm)	0.26	0.26	0.26	0.25	0.25	0.25	0.26	0.26	0.26
9.00 to 9.50; (1.381 µm)	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.34	0.33
9.50 to 10.00; (0.977 µm)	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34
10.00 to 10.50; (0.691 µm)	0.26	0.26	0.26	0.27	0.27	0.27	0.26	0.26	0.26
10.50 to 11.00; (0.488 µm)	0.17	0.17	0.17	0.18	0.18	0.18	0.17	0.16	0.17
11.00 to 11.50; (0.345 µm)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.10
11.50 to 12.00; (0.244 µm)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.05
12.00 to 12.50; (0.173 µm)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02
12.50 to 13.00; (0.122 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01
13.00 to 13.50; (0.086 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13.50 to 14.00; (0.061 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	1.58	1.57	1.56	1.51	1.51	1.51	1.49	1.48	1.47
d50	2.67	2.66	2.65	2.65	2.64	2.63	2.59	2.58	2.57
d90	3.94	3.93	3.93	3.92	3.91	3.91	3.91	3.91	3.90

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	1.57	0.01	0.57	1.51	0.00	0.18	1.48	0.01	0.66
d50	2.66	0.01	0.35	2.64	0.01	0.28	2.58	0.01	0.36
d90	3.93	0.01	0.15	3.91	0.00	0.11	3.91	0.01	0.15

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS77.

	Replicate Sample 3								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.24	0.03	0.06	0.30	0.01	0.08	0.02	0.00	0.00
0.50 to 1.00; (500 µm)	2.39	2.69	2.51	2.60	2.27	2.43	2.14	1.87	1.76
1.00 to 1.50; (353.6 µm)	8.07	8.21	8.19	8.37	8.50	8.24	7.61	7.87	7.76
1.50 to 2.00; (250 µm)	14.84	14.94	15.07	15.08	15.05	15.25	14.43	14.60	14.68
2.00 to 2.50; (176.8 µm)	22.43	22.57	22.69	22.65	22.91	22.92	22.01	22.18	22.43
2.50 to 3.00; (125 µm)	22.53	22.41	22.56	22.33	22.56	22.48	22.25	22.27	22.31
3.00 to 3.50; (88.39 µm)	14.94	14.80	14.74	14.53	14.60	14.55	15.57	15.43	15.36
3.50 to 4.00; (62.5 µm)	7.61	7.50	7.41	7.36	7.36	7.32	8.44	8.28	8.25
4.00 to 4.50; (44.19 µm)	3.04	2.97	2.93	2.93	2.89	2.89	3.49	3.44	3.40
4.50 to 5.00; (31.25 µm)	1.06	1.04	1.02	1.01	1.00	1.01	1.22	1.21	1.20
5.00 to 5.50; (22.097 µm)	0.41	0.40	0.39	0.39	0.39	0.39	0.47	0.47	0.46
5.50 to 6.00; (15.625 µm)	0.22	0.22	0.22	0.21	0.21	0.21	0.24	0.24	0.24
6.00 to 6.50; (11.049 µm)	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17
6.50 to 7.00; (7.813 µm)	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.14
7.00 to 7.50; (5.524 µm)	0.14	0.14	0.14	0.14	0.15	0.15	0.14	0.14	0.15
7.50 to 8.00; (3.906 µm)	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16
8.00 to 8.50; (2.762 µm)	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
8.50 to 9.00; (1.953 µm)	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22
9.00 to 9.50; (1.381 µm)	0.27	0.27	0.27	0.27	0.27	0.27	0.29	0.29	0.29
9.50 to 10.00; (0.977 µm)	0.28	0.28	0.28	0.28	0.28	0.28	0.30	0.30	0.30
10.00 to 10.50; (0.691 µm)	0.24	0.24	0.23	0.23	0.24	0.23	0.24	0.24	0.24
10.50 to 11.00; (0.488 µm)	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
11.00 to 11.50; (0.345 µm)	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.09	0.09
11.50 to 12.00; (0.244 µm)	0.08	0.08	0.08	0.08	0.08	0.08	0.05	0.05	0.05
12.00 to 12.50; (0.173 µm)	0.04	0.05	0.05	0.05	0.05	0.05	0.02	0.02	0.02
12.50 to 13.00; (0.122 µm)	0.03	0.03	0.03	0.03	0.03	0.03	0.01	0.01	0.01
13.00 to 13.50; (0.086 µm)	0.01	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.00
13.50 to 14.00; (0.061 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	1.46	1.44	1.45	1.42	1.45	1.45	1.51	1.51	1.52
d50	2.54	2.53	2.53	2.52	2.53	2.52	2.59	2.58	2.58
d90	3.80	3.79	3.78	3.78	3.78	3.78	3.85	3.85	3.85

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	1.45	0.01	0.47	1.44	0.02	1.22	1.51	0.00	0.30
d50	2.54	0.01	0.26	2.52	0.00	0.12	2.58	0.01	0.20
d90	3.79	0.01	0.23	3.78	0.00	0.05	3.85	0.00	0.12

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS77.

	Replicate Sample 4								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01
0.50 to 1.00; (500 µm)	2.72	2.47	2.42	2.09	2.08	1.97	1.78	1.76	1.83
1.00 to 1.50; (353.6 µm)	8.74	8.64	9.02	8.89	9.07	8.95	7.63	7.46	7.47
1.50 to 2.00; (250 µm)	14.13	14.52	14.62	14.93	14.95	15.13	13.84	14.07	14.47
2.00 to 2.50; (176.8 µm)	21.08	21.31	21.44	21.60	21.74	21.80	21.94	22.10	22.17
2.50 to 3.00; (125 µm)	21.81	21.75	21.64	21.72	21.67	21.72	22.70	22.71	22.52
3.00 to 3.50; (88.39 µm)	15.30	15.23	15.04	15.00	14.89	14.87	15.89	15.78	15.62
3.50 to 4.00; (62.5 µm)	8.30	8.21	8.07	8.02	7.94	7.91	8.57	8.50	8.37
4.00 to 4.50; (44.19 µm)	3.45	3.41	3.34	3.33	3.29	3.27	3.52	3.48	3.44
4.50 to 5.00; (31.25 µm)	1.24	1.23	1.20	1.19	1.18	1.17	1.20	1.19	1.18
5.00 to 5.50; (22.097 µm)	0.50	0.49	0.48	0.49	0.48	0.48	0.46	0.46	0.45
5.50 to 6.00; (15.625 µm)	0.27	0.27	0.27	0.27	0.27	0.27	0.24	0.24	0.23
6.00 to 6.50; (11.049 µm)	0.20	0.20	0.20	0.20	0.20	0.20	0.16	0.16	0.17
6.50 to 7.00; (7.813 µm)	0.17	0.17	0.17	0.17	0.17	0.17	0.14	0.14	0.14
7.00 to 7.50; (5.524 µm)	0.17	0.17	0.17	0.17	0.18	0.18	0.15	0.15	0.15
7.50 to 8.00; (3.906 µm)	0.18	0.18	0.18	0.18	0.18	0.18	0.16	0.16	0.16
8.00 to 8.50; (2.762 µm)	0.19	0.19	0.19	0.19	0.19	0.19	0.17	0.17	0.17
8.50 to 9.00; (1.953 µm)	0.24	0.24	0.24	0.24	0.24	0.24	0.22	0.22	0.22
9.00 to 9.50; (1.381 µm)	0.31	0.31	0.31	0.31	0.31	0.31	0.28	0.28	0.28
9.50 to 10.00; (0.977 µm)	0.32	0.32	0.32	0.32	0.32	0.32	0.29	0.29	0.29
10.00 to 10.50; (0.691 µm)	0.26	0.26	0.26	0.26	0.26	0.26	0.24	0.24	0.24
10.50 to 11.00; (0.488 µm)	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17
11.00 to 11.50; (0.345 µm)	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.11
11.50 to 12.00; (0.244 µm)	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07
12.00 to 12.50; (0.173 µm)	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
12.50 to 13.00; (0.122 µm)	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02
13.00 to 13.50; (0.086 µm)	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
13.50 to 14.00; (0.061 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	1.41	1.43	1.42	1.44	1.44	1.45	1.52	1.53	1.52
d50	2.58	2.57	2.56	2.56	2.55	2.55	2.61	2.60	2.59
d90	3.87	3.87	3.86	3.86	3.85	3.85	3.86	3.86	3.85

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	1.42	0.01	0.73	1.44	0.01	0.41	1.52	0.00	0.20
d50	2.57	0.01	0.36	2.55	0.00	0.17	2.60	0.01	0.32
d90	3.87	0.01	0.18	3.85	0.00	0.10	3.86	0.01	0.13

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS77.

	Replicate Sample 5								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.02	0.02	0.01	0.15	0.10	0.03	0.08	0.01	0.03
0.50 to 1.00; (500 µm)	2.11	2.11	2.05	3.55	3.48	3.20	2.94	2.52	2.66
1.00 to 1.50; (353.6 µm)	7.70	7.85	7.86	9.48	9.72	10.01	9.29	9.48	9.33
1.50 to 2.00; (250 µm)	14.94	14.89	14.97	15.69	15.42	15.70	16.31	16.27	16.53
2.00 to 2.50; (176.8 µm)	22.70	22.75	23.01	22.06	22.11	22.24	22.46	22.76	22.85
2.50 to 3.00; (125 µm)	22.49	22.50	22.45	21.12	21.26	21.20	21.32	21.46	21.41
3.00 to 3.50; (88.39 µm)	14.92	14.87	14.78	14.16	14.15	14.02	13.96	13.93	13.78
3.50 to 4.00; (62.5 µm)	7.82	7.75	7.67	7.28	7.27	7.16	7.22	7.17	7.06
4.00 to 4.50; (44.19 µm)	3.25	3.22	3.17	2.95	2.94	2.91	2.94	2.92	2.88
4.50 to 5.00; (31.25 µm)	1.13	1.12	1.12	0.99	0.99	0.97	1.00	1.00	0.98
5.00 to 5.50; (22.097 µm)	0.46	0.45	0.45	0.41	0.41	0.41	0.39	0.39	0.39
5.50 to 6.00; (15.625 µm)	0.24	0.24	0.24	0.22	0.22	0.22	0.20	0.20	0.20
6.00 to 6.50; (11.049 µm)	0.17	0.17	0.17	0.15	0.15	0.15	0.13	0.13	0.13
6.50 to 7.00; (7.813 µm)	0.14	0.14	0.14	0.12	0.13	0.13	0.11	0.11	0.11
7.00 to 7.50; (5.524 µm)	0.15	0.15	0.15	0.13	0.13	0.13	0.11	0.11	0.11
7.50 to 8.00; (3.906 µm)	0.15	0.16	0.16	0.14	0.14	0.14	0.12	0.12	0.12
8.00 to 8.50; (2.762 µm)	0.16	0.17	0.17	0.14	0.15	0.15	0.13	0.13	0.13
8.50 to 9.00; (1.953 µm)	0.21	0.21	0.21	0.19	0.19	0.19	0.18	0.18	0.18
9.00 to 9.50; (1.381 µm)	0.27	0.27	0.27	0.25	0.26	0.26	0.23	0.24	0.23
9.50 to 10.00; (0.977 µm)	0.28	0.28	0.28	0.26	0.27	0.27	0.25	0.25	0.25
10.00 to 10.50; (0.691 µm)	0.24	0.24	0.24	0.21	0.21	0.21	0.21	0.21	0.21
10.50 to 11.00; (0.488 µm)	0.17	0.17	0.17	0.15	0.15	0.15	0.16	0.16	0.16
11.00 to 11.50; (0.345 µm)	0.11	0.11	0.12	0.09	0.09	0.09	0.11	0.11	0.11
11.50 to 12.00; (0.244 µm)	0.07	0.07	0.07	0.05	0.05	0.05	0.07	0.07	0.07
12.00 to 12.50; (0.173 µm)	0.04	0.04	0.04	0.02	0.02	0.02	0.04	0.04	0.05
12.50 to 13.00; (0.122 µm)	0.02	0.02	0.02	0.01	0.01	0.01	0.03	0.03	0.03
13.00 to 13.50; (0.086 µm)	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.02	0.02
13.50 to 14.00; (0.061 µm)	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	1.51	1.50	1.50	1.33	1.33	1.34	1.38	1.39	1.39
d50	2.56	2.55	2.55	2.48	2.48	2.47	2.48	2.48	2.47
d90	3.83	3.82	3.82	3.76	3.76	3.75	3.75	3.75	3.74

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	1.50	0.00	0.16	1.33	0.00	0.30	1.39	0.01	0.72
d50	2.55	0.00	0.19	2.48	0.00	0.16	2.47	0.00	0.17
d90	3.82	0.00	0.12	3.76	0.00	0.11	3.75	0.01	0.15

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS77 (used to create Figure 7).

	BM Average	PSA_2701	PSA_2702	PSA_2703	PSA_2704	PSA_2705_v2	PSA_2706	PSA_2707	PSA_2708	PSA_2709
VERY COARSE GRAVEL	0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	0.00	0.00
COARSE GRAVEL	0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM GRAVEL	2.39	2.01	3.89	n/s	2.67	1.96	1.68	1.85	0.96	2.64
FINE GRAVEL	40.03	39.83	39.04	n/s	39.73	39.47	38.69	37.68	38.58	39.96
VERY FINE GRAVEL	21.56	23.50	20.86	n/s	21.70	22.71	23.54	20.97	24.71	21.37
VERY COARSE SAND	2.38	2.78	2.23	n/s	2.42	2.58	2.61	2.81	2.64	2.23
COARSE SAND	0.82	0.76	2.07	n/s	1.75	0.70	0.68	3.86	0.80	0.66
MEDIUM SAND	7.72	7.04	10.15	n/s	9.01	5.97	6.48	9.71	6.55	7.79
FINE SAND	14.84	13.73	12.59	n/s	14.35	11.38	11.45	11.15	13.40	14.79
VERY FINE SAND	7.75	8.36	5.95	n/s	6.24	8.60	7.97	7.92	9.20	7.94
VERY COARSE SILT	1.50	1.61	1.60	n/s	1.27	3.18	3.30	2.21	2.17	1.60
COARSE SILT	0.24	0.25	0.51	n/s	0.22	0.98	1.05	0.61	0.28	0.27
MEDIUM SILT	0.11	0.10	0.28	n/s	0.11	0.73	0.57	0.13	0.20	0.12
FINE SILT	0.11	0.01	0.29	n/s	0.07	0.77	0.59	0.14	0.11	0.11
VERY FINE SILT	0.13	0.04	0.27	n/s	0.10	0.69	0.59	0.20	0.12	0.13
CLAY	0.41	0.00	0.28	n/s	0.36	0.28	0.78	0.76	0.27	0.38

GRAVEL	63.98	65.34	63.78	n/s	64.10	64.14	63.91	60.50	64.26	63.96
SAND	33.52	32.66	32.99	n/s	33.77	29.23	29.20	35.45	32.59	33.42
SILT	2.09	1.99	2.95	n/s	1.76	6.35	6.11	3.29	2.88	2.23
CLAY	0.41	0.00	0.28	n/s	0.36	0.28	0.78	0.76	0.27	0.38

n/s - not subscribed to this part of the exercise.

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS77 (used to create Figure 7).

	BM Average	PSA_2710	PSA_2711	PSA_2712	PSA_2713	PSA_2714	PSA_2715	PSA_2716	PSA_2717
VERY COARSE GRAVEL	0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COARSE GRAVEL	0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM GRAVEL	2.39	n/p	21.75	24.07	21.25	23.38	22.11	2.96	23.86
FINE GRAVEL	40.03	n/p	32.34	30.63	30.58	30.12	33.22	39.02	31.82
VERY FINE GRAVEL	21.56	n/p	12.50	12.28	12.27	12.87	11.02	23.08	11.05
VERY COARSE SAND	2.38	n/p	0.16	0.16	1.05	0.22	0.22	2.70	0.26
COARSE SAND	0.82	n/p	2.68	3.04	3.07	3.23	3.79	0.35	2.71
MEDIUM SAND	7.72	n/p	10.64	12.67	10.95	9.77	12.35	4.95	11.03
FINE SAND	14.84	n/p	12.62	12.96	13.61	11.05	12.30	12.22	12.99
VERY FINE SAND	7.75	n/p	5.55	3.68	4.97	5.77	3.67	10.42	4.98
VERY COARSE SILT	1.50	n/p	0.81	0.38	0.72	1.28	0.51	3.00	0.69
COARSE SILT	0.24	n/p	0.27	0.13	0.18	0.58	0.13	0.47	0.21
MEDIUM SILT	0.11	n/p	0.17	0.00	0.17	0.53	0.09	0.30	0.06
FINE SILT	0.11	n/p	0.16	0.00	0.20	0.43	0.10	0.24	0.13
VERY FINE SILT	0.13	n/p	0.19	0.00	0.24	0.36	0.16	0.23	0.14
CLAY	0.41	n/p	0.16	0.00	0.73	0.40	0.30	0.06	0.08

GRAVEL	63.98	n/p	66.59	66.98	64.10	66.37	66.35	65.06	66.72
SAND	33.52	n/p	31.65	32.50	33.66	30.05	32.35	30.64	31.97
SILT	2.09	n/p	1.60	0.51	1.50	3.19	1.00	4.24	1.22
CLAY	0.41	n/p	0.16	0.00	0.73	0.40	0.30	0.06	0.08

n/p - not participating in this exercise at current time.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2701
Sample Code:	PS772701

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	2.01	16.41
-3.00 to -2.50; 5.6 mm	22.61	184.41
-2.50 to -2.00; 4 mm	17.22	140.41
-2.00 to -1.50; 2.8 mm	13.98	114.04
-1.50 to -1.00; 2 mm	9.51	77.60
-1.00 to -0.50; 1.4 mm	2.63	21.45
-0.50 to 0.00; 1 mm	0.15	1.21
0.00 to 0.50; (707 µm)	0.07	0.56
0.50 to 1.00; (500 µm)	0.68	5.50
1.00 to 1.50; (353.6 µm)	2.29	18.65
1.50 to 2.00; (250 µm)	4.75	38.86
2.00 to 2.50; (176.8 µm)	6.72	54.96
2.50 to 3.00; (125 µm)	7.01	57.23
3.00 to 3.50; (88.39 µm)	5.36	43.68
3.50 to 4.00; (62.5 µm)	3.00	24.37
4.00 to 4.50; (44.19 µm)	1.23	9.97
4.50 to 5.00; (31.25 µm)	0.38	3.06
5.00 to 5.50; (22.097 µm)	0.14	1.16
5.50 to 6.00; (15.625 µm)	0.11	0.86
6.00 to 6.50; (11.049 µm)	0.08	0.63
6.50 to 7.00; (7.813 µm)	0.02	0.15
7.00 to 7.50; (5.524 µm)	0.00	0.03
7.50 to 8.00; (3.906 µm)	0.00	0.03
8.00 to 8.50; (2.762 µm)	0.02	0.15
8.50 to 9.00; (1.953 µm)	0.02	0.20
9.00 to 9.50; (1.381 µm)	0.00	0.00
9.50 to 10.00; (0.977 µm)	0.00	0.00
10.00 to 10.50; (0.691 µm)	0.00	0.00
10.50 to 11.00; (0.488 µm)	0.00	0.00
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)	0.00	0.00
14.00 to 14.50; (0.043µm)	0.00	0.00
> 14.50; (0.01 µm)		
TOTAL	100.00	815.59

Notes:
Data re-submitted after the issue of the interim report.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2702
Sample Code:	PS772702

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	3.89	30.08
-3.00 to -2.50; 5.6 mm	20.64	159.77
-2.50 to -2.00; 4 mm	18.40	142.46
-2.00 to -1.50; 2.8 mm	12.68	98.14
-1.50 to -1.00; 2 mm	8.18	63.37
-1.00 to -0.50; 1.4 mm	2.12	16.41
-0.50 to 0.00; 1 mm	0.11	0.83
0.00 to 0.50; (707 µm)	0.26	2.02
0.50 to 1.00; (500 µm)	1.81	14.02
1.00 to 1.50; (353.6 µm)	4.04	31.32
1.50 to 2.00; (250 µm)	6.11	47.30
2.00 to 2.50; (176.8 µm)	6.81	52.73
2.50 to 3.00; (125 µm)	5.78	44.72
3.00 to 3.50; (88.39 µm)	3.84	29.74
3.50 to 4.00; (62.5 µm)	2.11	16.32
4.00 to 4.50; (44.19 µm)	1.05	8.16
4.50 to 5.00; (31.25 µm)	0.55	4.25
5.00 to 5.50; (22.097 µm)	0.32	2.45
5.50 to 6.00; (15.625 µm)	0.20	1.54
6.00 to 6.50; (11.049 µm)	0.15	1.13
6.50 to 7.00; (7.813 µm)	0.14	1.06
7.00 to 7.50; (5.524 µm)	0.14	1.11
7.50 to 8.00; (3.906 µm)	0.15	1.13
8.00 to 8.50; (2.762 µm)	0.14	1.07
8.50 to 9.00; (1.953 µm)	0.13	0.98
9.00 to 9.50; (1.381 µm)	0.11	0.85
9.50 to 10.00; (0.977 µm)	0.09	0.70
10.00 to 10.50; (0.691 µm)	0.06	0.50
10.50 to 11.00; (0.488 µm)	0.01	0.10
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	774.25

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2703
Sample Code:	PS772703

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Original (%) (mark as "0" for no material & leave blank for not analysed)	Re-submitted (%) (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm		
-3.50 to -3.00; 8 mm		
-3.00 to -2.50; 5.6 mm		
-2.50 to -2.00; 4 mm		
-2.00 to -1.50; 2.8 mm		
-1.50 to -1.00; 2 mm		
-1.00 to -0.50; 1.4 mm		
-0.50 to 0.00; 1 mm		
0.00 to 0.50; (707 µm)	0.88	0.89
0.50 to 1.00; (500 µm)	3.24	3.27
1.00 to 1.50; (353.6 µm)	8.68	8.74
1.50 to 2.00; (250 µm)	15.88	16.00
2.00 to 2.50; (176.8 µm)	20.87	21.02
2.50 to 3.00; (125 µm)	20.35	20.49
3.00 to 3.50; (88.39 µm)	14.83	14.94
3.50 to 4.00; (62.5 µm)	8.05	8.11
4.00 to 4.50; (44.19 µm)	3.22	3.24
4.50 to 5.00; (31.25 µm)	1.04	1.04
5.00 to 5.50; (22.097 µm)	0.47	0.47
5.50 to 6.00; (15.625 µm)	0.36	0.37
6.00 to 6.50; (11.049 µm)	0.27	0.27
6.50 to 7.00; (7.813 µm)	0.18	0.19
7.00 to 7.50; (5.524 µm)	0.13	0.13
7.50 to 8.00; (3.906 µm)	0.16	0.16
8.00 to 8.50; (2.762 µm)	0.16	0.16
8.50 to 9.00; (1.953 µm)	0.16	0.16
9.00 to 9.50; (1.381 µm)	0.18	0.18
9.50 to 10.00; (0.977 µm)	0.17	0.17
10.00 to 10.50; (0.691 µm)	0.02	0.02
10.50 to 11.00; (0.488 µm)	0.00	0.00
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)	0.00	0.00
14.00 to 14.50; (0.043µm)	0.00	0.00
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	99.30	100.00

Notes: Participant does not participate in the >1mm sieve componant.
Data re-submitted after the isuue of the Interim Report.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2704
Sample Code:	PS772704

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	2.67	
-3.00 to -2.50; 5.6 mm	21.34	
-2.50 to -2.00; 4 mm	18.39	
-2.00 to -1.50; 2.8 mm	12.79	
-1.50 to -1.00; 2 mm	8.92	
-1.00 to -0.50; 1.4 mm	2.31	
-0.50 to 0.00; 1 mm	0.10	
0.00 to 0.50; (707 µm)	0.30	
0.50 to 1.00; (500 µm)	1.44	
1.00 to 1.50; (353.6 µm)	3.58	
1.50 to 2.00; (250 µm)	5.43	
2.00 to 2.50; (176.8 µm)	7.70	
2.50 to 3.00; (125 µm)	6.65	
3.00 to 3.50; (88.39 µm)	4.09	
3.50 to 4.00; (62.5 µm)	2.16	
4.00 to 4.50; (44.19 µm)	0.94	
4.50 to 5.00; (31.25 µm)	0.33	
5.00 to 5.50; (22.097 µm)	0.15	
5.50 to 6.00; (15.625 µm)	0.07	
6.00 to 6.50; (11.049 µm)	0.06	
6.50 to 7.00; (7.813 µm)	0.05	
7.00 to 7.50; (5.524 µm)	0.04	
7.50 to 8.00; (3.906 µm)	0.04	
8.00 to 8.50; (2.762 µm)	0.04	
8.50 to 9.00; (1.953 µm)	0.06	
9.00 to 9.50; (1.381 µm)	0.07	
9.50 to 10.00; (0.977 µm)	0.08	
10.00 to 10.50; (0.691 µm)	0.07	
10.50 to 11.00; (0.488 µm)	0.05	
11.00 to 11.50; (0.345 µm)	0.04	
11.50 to 12.00; (0.244 µm)	0.02	
12.00 to 12.50; (0.173 µm)	0.02	
12.50 to 13.00; (0.122 µm)	0.01	
13.00 to 13.50; (0.086 µm)	0.01	
13.50 to 14.00; (0.061µm)	0.00	
14.00 to 14.50; (0.043µm)	0.00	
> 14.50; (0.01 µm)	0.00	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2705_v2
Sample Code:	PS775_v2

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Original (%) (mark as "0" for no material & leave blank for not analysed)	Re-submitted (%) (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	1.96	1.96
-3.00 to -2.50; 5.6 mm	22.50	22.50
-2.50 to -2.00; 4 mm	16.97	16.97
-2.00 to -1.50; 2.8 mm	13.92	13.92
-1.50 to -1.00; 2 mm	8.79	8.79
-1.00 to -0.50; 1.4 mm	2.35	2.35
-0.50 to 0.00; 1 mm	0.23	0.23
0.00 to 0.50; (707 µm)	0.00	0.05
0.50 to 1.00; (500 µm)	0.00	0.65
1.00 to 1.50; (353.6 µm)	0.00	2.00
1.50 to 2.00; (250 µm)	0.05	3.97
2.00 to 2.50; (176.8 µm)	0.08	5.15
2.50 to 3.00; (125 µm)	0.08	6.23
3.00 to 3.50; (88.39 µm)	0.07	4.87
3.50 to 4.00; (62.5 µm)	0.07	3.73
4.00 to 4.50; (44.19 µm)	0.08	2.05
4.50 to 5.00; (31.25 µm)	0.11	1.13
5.00 to 5.50; (22.097 µm)	0.14	0.57
5.50 to 6.00; (15.625 µm)	0.23	0.41
6.00 to 6.50; (11.049 µm)	0.69	0.37
6.50 to 7.00; (7.813 µm)	1.74	0.36
7.00 to 7.50; (5.524 µm)	3.77	0.38
7.50 to 8.00; (3.906 µm)	5.38	0.39
8.00 to 8.50; (2.762 µm)	7.15	0.38
8.50 to 9.00; (1.953 µm)	5.94	0.31
9.00 to 9.50; (1.381 µm)	4.53	0.19
9.50 to 10.00; (0.977 µm)	2.28	0.08
10.00 to 10.50; (0.691 µm)	0.82	0.01
10.50 to 11.00; (0.488 µm)	0.08	0.00
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.01	100.00

Notes: Data re-submitted on 28/01/2021 following the issue of the Interim report.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2706
Sample Code:	PS772706

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	1.68	13.17
-3.00 to -2.50; 5.6 mm	21.55	169.28
-2.50 to -2.00; 4 mm	17.14	134.59
-2.00 to -1.50; 2.8 mm	14.11	110.83
-1.50 to -1.00; 2 mm	9.43	74.08
-1.00 to -0.50; 1.4 mm	2.46	19.34
-0.50 to 0.00; 1 mm	0.15	1.20
0.00 to 0.50; (707 µm)	0.04	0.29
0.50 to 1.00; (500 µm)	0.65	5.09
1.00 to 1.50; (353.6 µm)	2.22	17.43
1.50 to 2.00; (250 µm)	4.26	33.44
2.00 to 2.50; (176.8 µm)	5.70	44.73
2.50 to 3.00; (125 µm)	5.76	45.23
3.00 to 3.50; (88.39 µm)	4.68	36.80
3.50 to 4.00; (62.5 µm)	3.28	25.78
4.00 to 4.50; (44.19 µm)	2.09	16.39
4.50 to 5.00; (31.25 µm)	1.22	9.57
5.00 to 5.50; (22.097 µm)	0.67	5.23
5.50 to 6.00; (15.625 µm)	0.39	3.05
6.00 to 6.50; (11.049 µm)	0.29	2.30
6.50 to 7.00; (7.813 µm)	0.28	2.19
7.00 to 7.50; (5.524 µm)	0.29	2.28
7.50 to 8.00; (3.906 µm)	0.30	2.39
8.00 to 8.50; (2.762 µm)	0.30	2.38
8.50 to 9.00; (1.953 µm)	0.28	2.22
9.00 to 9.50; (1.381 µm)	0.25	1.94
9.50 to 10.00; (0.977 µm)	0.21	1.68
10.00 to 10.50; (0.691 µm)	0.18	1.42
10.50 to 11.00; (0.488 µm)	0.12	0.95
11.00 to 11.50; (0.345 µm)	0.02	0.16
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)	0.00	0.00
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	785.43

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2707
Sample Code:	PS772707

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	1.85	
-3.00 to -2.50; 5.6 mm	21.24	
-2.50 to -2.00; 4 mm	16.44	
-2.00 to -1.50; 2.8 mm	12.08	
-1.50 to -1.00; 2 mm	8.89	
-1.00 to -0.50; 1.4 mm	2.54	
-0.50 to 0.00; 1 mm	0.27	
0.00 to 0.50; (707 µm)	0.30	
0.50 to 1.00; (500 µm)	3.56	
1.00 to 1.50; (353.6 µm)	5.29	
1.50 to 2.00; (250 µm)	4.42	
2.00 to 2.50; (176.8 µm)	6.20	
2.50 to 3.00; (125 µm)	4.95	
3.00 to 3.50; (88.39 µm)	5.04	
3.50 to 4.00; (62.5 µm)	2.87	
4.00 to 4.50; (44.19 µm)	1.43	
4.50 to 5.00; (31.25 µm)	0.78	
5.00 to 5.50; (22.097 µm)	0.42	
5.50 to 6.00; (15.625 µm)	0.19	
6.00 to 6.50; (11.049 µm)	0.07	
6.50 to 7.00; (7.813 µm)	0.06	
7.00 to 7.50; (5.524 µm)	0.06	
7.50 to 8.00; (3.906 µm)	0.08	
8.00 to 8.50; (2.762 µm)	0.09	
8.50 to 9.00; (1.953 µm)	0.11	
9.00 to 9.50; (1.381 µm)	0.11	
9.50 to 10.00; (0.977 µm)	0.10	
10.00 to 10.50; (0.691 µm)	0.06	
10.50 to 11.00; (0.488 µm)	0.07	
11.00 to 11.50; (0.345 µm)	0.08	
11.50 to 12.00; (0.244 µm)	0.09	
12.00 to 12.50; (0.173 µm)	0.10	
12.50 to 13.00; (0.122 µm)	0.09	
13.00 to 13.50; (0.086 µm)	0.06	
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2708
Sample Code:	PS772708

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.96	8.07
-3.00 to -2.50; 5.6 mm	22.13	185.20
-2.50 to -2.00; 4 mm	16.46	137.73
-2.00 to -1.50; 2.8 mm	15.56	130.23
-1.50 to -1.00; 2 mm	9.15	76.60
-1.00 to -0.50; 1.4 mm	2.54	21.27
-0.50 to 0.00; 1 mm	0.10	0.87
0.00 to 0.50; (707 µm)	0.12	1.02
0.50 to 1.00; (500 µm)	0.68	5.71
1.00 to 1.50; (353.6 µm)	2.10	17.58
1.50 to 2.00; (250 µm)	4.45	37.20
2.00 to 2.50; (176.8 µm)	6.07	50.80
2.50 to 3.00; (125 µm)	7.33	61.36
3.00 to 3.50; (88.39 µm)	5.47	45.77
3.50 to 4.00; (62.5 µm)	3.73	31.20
4.00 to 4.50; (44.19 µm)	1.67	14.00
4.50 to 5.00; (31.25 µm)	0.50	4.19
5.00 to 5.50; (22.097 µm)	0.17	1.40
5.50 to 6.00; (15.625 µm)	0.12	0.98
6.00 to 6.50; (11.049 µm)	0.11	0.96
6.50 to 7.00; (7.813 µm)	0.08	0.69
7.00 to 7.50; (5.524 µm)	0.06	0.47
7.50 to 8.00; (3.906 µm)	0.05	0.42
8.00 to 8.50; (2.762 µm)	0.05	0.46
8.50 to 9.00; (1.953 µm)	0.06	0.53
9.00 to 9.50; (1.381 µm)	0.07	0.62
9.50 to 10.00; (0.977 µm)	0.08	0.63
10.00 to 10.50; (0.691 µm)	0.08	0.67
10.50 to 11.00; (0.488 µm)	0.04	0.33
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	836.97

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2709
Sample Code:	PS772709

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm		
-3.50 to -3.00; 8 mm	2.64	22.10
-3.00 to -2.50; 5.6 mm	20.19	169.13
-2.50 to -2.00; 4 mm	19.76	165.50
-2.00 to -1.50; 2.8 mm	12.72	106.52
-1.50 to -1.00; 2 mm	8.65	72.45
-1.00 to -0.50; 1.4 mm	2.16	18.12
-0.50 to 0.00; 1 mm	0.07	0.55
0.00 to 0.50; (707 µm)	0.01	0.10
0.50 to 1.00; (500 µm)	0.65	5.44
1.00 to 1.50; (353.6 µm)	2.77	23.17
1.50 to 2.00; (250 µm)	5.03	42.09
2.00 to 2.50; (176.8 µm)	7.40	61.95
2.50 to 3.00; (125 µm)	7.39	61.91
3.00 to 3.50; (88.39 µm)	5.16	43.21
3.50 to 4.00; (62.5 µm)	2.79	23.33
4.00 to 4.50; (44.19 µm)	1.19	10.01
4.50 to 5.00; (31.25 µm)	0.41	3.42
5.00 to 5.50; (22.097 µm)	0.17	1.46
5.50 to 6.00; (15.625 µm)	0.09	0.78
6.00 to 6.50; (11.049 µm)	0.06	0.52
6.50 to 7.00; (7.813 µm)	0.05	0.44
7.00 to 7.50; (5.524 µm)	0.05	0.46
7.50 to 8.00; (3.906 µm)	0.06	0.48
8.00 to 8.50; (2.762 µm)	0.06	0.49
8.50 to 9.00; (1.953 µm)	0.08	0.63
9.00 to 9.50; (1.381 µm)	0.10	0.81
9.50 to 10.00; (0.977 µm)	0.10	0.83
10.00 to 10.50; (0.691 µm)	0.08	0.66
10.50 to 11.00; (0.488 µm)	0.05	0.44
11.00 to 11.50; (0.345 µm)	0.03	0.26
11.50 to 12.00; (0.244 µm)	0.02	0.14
12.00 to 12.50; (0.173 µm)	0.01	0.06
12.50 to 13.00; (0.122 µm)	0.00	0.02
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)	0.00	0.00
14.00 to 14.50; (0.043µm)	0.00	0.00
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	837.49

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2711
Sample Code:	PS772711

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	1.85	
-3.00 to -2.50; 5.6 mm	19.89	
-2.50 to -2.00; 4 mm	18.82	
-2.00 to -1.50; 2.8 mm	13.52	
-1.50 to -1.00; 2 mm	9.97	
-1.00 to -0.50; 1.4 mm	2.53	
-0.50 to 0.00; 1 mm	0.16	
0.00 to 0.50; (707 µm)	0.00	
0.50 to 1.00; (500 µm)	0.43	
1.00 to 1.50; (353.6 µm)	2.25	
1.50 to 2.00; (250 µm)	4.39	
2.00 to 2.50; (176.8 µm)	6.25	
2.50 to 3.00; (125 µm)	6.83	
3.00 to 3.50; (88.39 µm)	5.79	
3.50 to 4.00; (62.5 µm)	3.76	
4.00 to 4.50; (44.19 µm)	1.80	
4.50 to 5.00; (31.25 µm)	0.62	
5.00 to 5.50; (22.097 µm)	0.20	
5.50 to 6.00; (15.625 µm)	0.14	
6.00 to 6.50; (11.049 µm)	0.13	
6.50 to 7.00; (7.813 µm)	0.10	
7.00 to 7.50; (5.524 µm)	0.07	
7.50 to 8.00; (3.906 µm)	0.07	
8.00 to 8.50; (2.762 µm)	0.09	
8.50 to 9.00; (1.953 µm)	0.10	
9.00 to 9.50; (1.381 µm)	0.10	
9.50 to 10.00; (0.977 µm)	0.09	
10.00 to 10.50; (0.691 µm)	0.07	
10.50 to 11.00; (0.488 µm)	0.01	
11.00 to 11.50; (0.345 µm)	0.00	
11.50 to 12.00; (0.244 µm)	0.00	
12.00 to 12.50; (0.173 µm)	0.00	
12.50 to 13.00; (0.122 µm)	0.00	
13.00 to 13.50; (0.086 µm)	0.00	
13.50 to 14.00; (0.061µm)	0.00	
14.00 to 14.50; (0.043µm)	0.00	
> 14.50; (0.01 µm)	0.00	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2712
Sample Code:	PS772712

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	3.48	
-3.00 to -2.50; 5.6 mm	20.59	
-2.50 to -2.00; 4 mm	17.21	
-2.00 to -1.50; 2.8 mm	13.42	
-1.50 to -1.00; 2 mm	9.97	
-1.00 to -0.50; 1.4 mm	2.31	
-0.50 to 0.00; 1 mm	0.10	
0.00 to 0.50; (707 µm)	0.06	
0.50 to 1.00; (500 µm)	0.64	
1.00 to 1.50; (353.6 µm)	2.40	
1.50 to 2.00; (250 µm)	5.27	
2.00 to 2.50; (176.8 µm)	7.40	
2.50 to 3.00; (125 µm)	7.55	
3.00 to 3.50; (88.39 µm)	5.41	
3.50 to 4.00; (62.5 µm)	2.73	
4.00 to 4.50; (44.19 µm)	0.95	
4.50 to 5.00; (31.25 µm)	0.25	
5.00 to 5.50; (22.097 µm)	0.13	
5.50 to 6.00; (15.625 µm)	0.10	
6.00 to 6.50; (11.049 µm)	0.04	
6.50 to 7.00; (7.813 µm)	0.00	
7.00 to 7.50; (5.524 µm)	0.00	
7.50 to 8.00; (3.906 µm)	0.00	
8.00 to 8.50; (2.762 µm)	0.00	
8.50 to 9.00; (1.953 µm)	0.00	
9.00 to 9.50; (1.381 µm)	0.00	
9.50 to 10.00; (0.977 µm)	0.00	
10.00 to 10.50; (0.691 µm)	0.00	
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2713
Sample Code:	PS772713

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	1.26	9.02
-3.00 to -2.50; 5.6 mm	19.99	142.61
-2.50 to -2.00; 4 mm	16.54	118.01
-2.00 to -1.50; 2.8 mm	14.04	100.20
-1.50 to -1.00; 2 mm	9.58	68.33
-1.00 to -0.50; 1.4 mm	2.69	19.21
-0.50 to 0.00; 1 mm	0.13	0.95
0.00 to 0.50; (707 µm)	0.92	6.55
0.50 to 1.00; (500 µm)	1.07	7.63
1.00 to 1.50; (353.6 µm)	2.00	14.27
1.50 to 2.00; (250 µm)	4.13	29.48
2.00 to 2.50; (176.8 µm)	6.82	48.67
2.50 to 3.00; (125 µm)	7.64	54.48
3.00 to 3.50; (88.39 µm)	5.98	42.66
3.50 to 4.00; (62.5 µm)	3.49	24.88
4.00 to 4.50; (44.19 µm)	1.49	10.61
4.50 to 5.00; (31.25 µm)	0.51	3.64
5.00 to 5.50; (22.097 µm)	0.21	1.48
5.50 to 6.00; (15.625 µm)	0.10	0.74
6.00 to 6.50; (11.049 µm)	0.08	0.56
6.50 to 7.00; (7.813 µm)	0.08	0.58
7.00 to 7.50; (5.524 µm)	0.09	0.62
7.50 to 8.00; (3.906 µm)	0.09	0.67
8.00 to 8.50; (2.762 µm)	0.10	0.73
8.50 to 9.00; (1.953 µm)	0.11	0.82
9.00 to 9.50; (1.381 µm)	0.12	0.88
9.50 to 10.00; (0.977 µm)	0.13	0.91
10.00 to 10.50; (0.691 µm)	0.12	0.88
10.50 to 11.00; (0.488 µm)	0.11	0.82
11.00 to 11.50; (0.345 µm)	0.10	0.73
11.50 to 12.00; (0.244 µm)	0.09	0.62
12.00 to 12.50; (0.173 µm)	0.07	0.50
12.50 to 13.00; (0.122 µm)	0.05	0.38
13.00 to 13.50; (0.086 µm)	0.03	0.25
13.50 to 14.00; (0.061µm)	0.01	0.11
14.00 to 14.50; (0.043µm)	0.00	0.01
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	713.51

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2714
Sample Code:	PS772714

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.87	7.34
-3.00 to -2.50; 5.6 mm	22.51	189.04
-2.50 to -2.00; 4 mm	17.82	149.69
-2.00 to -1.50; 2.8 mm	12.30	103.30
-1.50 to -1.00; 2 mm	10.47	87.97
-1.00 to -0.50; 1.4 mm	2.40	20.13
-0.50 to 0.00; 1 mm	0.22	1.85
0.00 to 0.50; (707 µm)	0.00	0.02
0.50 to 1.00; (500 µm)	0.71	5.97
1.00 to 1.50; (353.6 µm)	2.52	21.15
1.50 to 2.00; (250 µm)	4.26	35.75
2.00 to 2.50; (176.8 µm)	5.52	46.34
2.50 to 3.00; (125 µm)	5.87	49.34
3.00 to 3.50; (88.39 µm)	5.18	43.49
3.50 to 4.00; (62.5 µm)	3.70	31.08
4.00 to 4.50; (44.19 µm)	2.07	17.38
4.50 to 5.00; (31.25 µm)	0.90	7.54
5.00 to 5.50; (22.097 µm)	0.38	3.21
5.50 to 6.00; (15.625 µm)	0.28	2.36
6.00 to 6.50; (11.049 µm)	0.30	2.48
6.50 to 7.00; (7.813 µm)	0.28	2.39
7.00 to 7.50; (5.524 µm)	0.25	2.10
7.50 to 8.00; (3.906 µm)	0.22	1.88
8.00 to 8.50; (2.762 µm)	0.21	1.75
8.50 to 9.00; (1.953 µm)	0.19	1.62
9.00 to 9.50; (1.381 µm)	0.17	1.43
9.50 to 10.00; (0.977 µm)	0.15	1.28
10.00 to 10.50; (0.691 µm)	0.14	1.14
10.50 to 11.00; (0.488 µm)	0.10	0.81
11.00 to 11.50; (0.345 µm)	0.02	0.13
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	839.97

Notes:
APEM Note: The total weight is not consistant with the Sieve data.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2715
Sample Code:	PS772715

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm		
-3.50 to -3.00; 8 mm	1.83	15.33
-3.00 to -2.50; 5.6 mm	20.28	170.19
-2.50 to -2.00; 4 mm	20.39	171.08
-2.00 to -1.50; 2.8 mm	12.83	107.62
-1.50 to -1.00; 2 mm	8.77	73.59
-1.00 to -0.50; 1.4 mm	2.25	18.91
-0.50 to 0.00; 1 mm	0.14	1.14
0.00 to 0.50; (707 µm)	0.09	0.73
0.50 to 1.00; (500 µm)	0.97	8.11
1.00 to 1.50; (353.6 µm)	2.83	23.73
1.50 to 2.00; (250 µm)	4.96	41.63
2.00 to 2.50; (176.8 µm)	7.39	62.01
2.50 to 3.00; (125 µm)	7.33	61.46
3.00 to 3.50; (88.39 µm)	4.98	41.75
3.50 to 4.00; (62.5 µm)	2.60	21.80
4.00 to 4.50; (44.19 µm)	1.08	9.02
4.50 to 5.00; (31.25 µm)	0.36	3.05
5.00 to 5.50; (22.097 µm)	0.15	1.25
5.50 to 6.00; (15.625 µm)	0.08	0.67
6.00 to 6.50; (11.049 µm)	0.05	0.45
6.50 to 7.00; (7.813 µm)	0.04	0.38
7.00 to 7.50; (5.524 µm)	0.05	0.40
7.50 to 8.00; (3.906 µm)	0.05	0.42
8.00 to 8.50; (2.762 µm)	0.05	0.45
8.50 to 9.00; (1.953 µm)	0.07	0.58
9.00 to 9.50; (1.381 µm)	0.09	0.76
9.50 to 10.00; (0.977 µm)	0.09	0.79
10.00 to 10.50; (0.691 µm)	0.08	0.64
10.50 to 11.00; (0.488 µm)	0.05	0.45
11.00 to 11.50; (0.345 µm)	0.03	0.29
11.50 to 12.00; (0.244 µm)	0.02	0.17
12.00 to 12.50; (0.173 µm)	0.01	0.09
12.50 to 13.00; (0.122 µm)	0.01	0.04
13.00 to 13.50; (0.086 µm)	0.00	0.02
13.50 to 14.00; (0.061µm)	0.00	0.01
14.00 to 14.50; (0.043µm)	0.00	0.00
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	839.01

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2716
Sample Code:	PS772716

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	2.96	21.81
-3.00 to -2.50; 5.6 mm	20.92	154.40
-2.50 to -2.00; 4 mm	18.09	133.52
-2.00 to -1.50; 2.8 mm	13.53	99.86
-1.50 to -1.00; 2 mm	9.55	70.49
-1.00 to -0.50; 1.4 mm	2.39	17.65
-0.50 to 0.00; 1 mm	0.30	2.24
0.00 to 0.50; (707 µm)	0.01	0.10
0.50 to 1.00; (500 µm)	0.34	2.51
1.00 to 1.50; (353.6 µm)	1.45	10.73
1.50 to 2.00; (250 µm)	3.50	25.82
2.00 to 2.50; (176.8 µm)	5.22	38.53
2.50 to 3.00; (125 µm)	7.00	51.63
3.00 to 3.50; (88.39 µm)	5.89	43.45
3.50 to 4.00; (62.5 µm)	4.53	33.42
4.00 to 4.50; (44.19 µm)	2.12	15.63
4.50 to 5.00; (31.25 µm)	0.88	6.51
5.00 to 5.50; (22.097 µm)	0.28	2.10
5.50 to 6.00; (15.625 µm)	0.18	1.36
6.00 to 6.50; (11.049 µm)	0.16	1.22
6.50 to 7.00; (7.813 µm)	0.13	0.99
7.00 to 7.50; (5.524 µm)	0.12	0.87
7.50 to 8.00; (3.906 µm)	0.12	0.92
8.00 to 8.50; (2.762 µm)	0.12	0.91
8.50 to 9.00; (1.953 µm)	0.11	0.78
9.00 to 9.50; (1.381 µm)	0.06	0.46
9.50 to 10.00; (0.977 µm)	0.00	0.00
10.00 to 10.50; (0.691 µm)	0.00	0.00
10.50 to 11.00; (0.488 µm)	0.00	0.00
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	737.93

Notes: Red text calculated by APEM.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2717
Sample Code:	PS772717

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	2.22	18.65
-3.00 to -2.50; 5.6 mm	21.64	181.86
-2.50 to -2.00; 4 mm	16.69	140.24
-2.00 to -1.50; 2.8 mm	15.13	127.16
-1.50 to -1.00; 2 mm	8.89	74.69
-1.00 to -0.50; 1.4 mm	2.16	18.18
-0.50 to 0.00; 1 mm	0.15	1.27
0.00 to 0.50; (707 µm)	0.11	0.94
0.50 to 1.00; (500 µm)	0.66	5.55
1.00 to 1.50; (353.6 µm)	2.05	17.23
1.50 to 2.00; (250 µm)	4.46	37.50
2.00 to 2.50; (176.8 µm)	6.57	55.19
2.50 to 3.00; (125 µm)	7.21	60.57
3.00 to 3.50; (88.39 µm)	5.78	48.57
3.50 to 4.00; (62.5 µm)	3.45	29.00
4.00 to 4.50; (44.19 µm)	1.53	12.89
4.50 to 5.00; (31.25 µm)	0.51	4.29
5.00 to 5.50; (22.097 µm)	0.18	1.54
5.50 to 6.00; (15.625 µm)	0.12	1.01
6.00 to 6.50; (11.049 µm)	0.09	0.73
6.50 to 7.00; (7.813 µm)	0.04	0.35
7.00 to 7.50; (5.524 µm)	0.02	0.14
7.50 to 8.00; (3.906 µm)	0.06	0.51
8.00 to 8.50; (2.762 µm)	0.07	0.58
8.50 to 9.00; (1.953 µm)	0.07	0.60
9.00 to 9.50; (1.381 µm)	0.07	0.56
9.50 to 10.00; (0.977 µm)	0.06	0.50
10.00 to 10.50; (0.691 µm)	0.02	0.16
10.50 to 11.00; (0.488 µm)	0.00	0.00
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)	0.00	0.00
14.00 to 14.50; (0.043µm)	0.00	0.00
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	840.44

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2730
Sample Code:	Benchmark Replicate 1

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	3.07	25.81
-3.00 to -2.50; 5.6 mm	19.70	165.89
-2.50 to -2.00; 4 mm	19.53	164.47
-2.00 to -1.50; 2.8 mm	12.78	107.61
-1.50 to -1.00; 2 mm	8.78	73.90
-1.00 to -0.50; 1.4 mm	2.31	19.46
-0.50 to 0.00; 1 mm	0.12	1.04
0.00 to 0.50; (707 µm)	0.06	0.46
0.50 to 1.00; (500 µm)	0.91	7.67
1.00 to 1.50; (353.6 µm)	2.84	23.90
1.50 to 2.00; (250 µm)	5.05	42.54
2.00 to 2.50; (176.8 µm)	7.45	62.71
2.50 to 3.00; (125 µm)	7.35	61.85
3.00 to 3.50; (88.39 µm)	4.97	41.87
3.50 to 4.00; (62.5 µm)	2.65	22.35
4.00 to 4.50; (44.19 µm)	1.08	9.10
4.50 to 5.00; (31.25 µm)	0.38	3.20
5.00 to 5.50; (22.097 µm)	0.15	1.27
5.50 to 6.00; (15.625 µm)	0.08	0.69
6.00 to 6.50; (11.049 µm)	0.06	0.50
6.50 to 7.00; (7.813 µm)	0.05	0.41
7.00 to 7.50; (5.524 µm)	0.05	0.42
7.50 to 8.00; (3.906 µm)	0.05	0.45
8.00 to 8.50; (2.762 µm)	0.06	0.47
8.50 to 9.00; (1.953 µm)	0.07	0.61
9.00 to 9.50; (1.381 µm)	0.09	0.78
9.50 to 10.00; (0.977 µm)	0.10	0.81
10.00 to 10.50; (0.691 µm)	0.08	0.66
10.50 to 11.00; (0.488 µm)	0.06	0.47
11.00 to 11.50; (0.345 µm)	0.03	0.29
11.50 to 12.00; (0.244 µm)	0.02	0.17
12.00 to 12.50; (0.173 µm)	0.01	0.09
12.50 to 13.00; (0.122 µm)	0.01	0.04
13.00 to 13.50; (0.086 µm)	0.00	0.02
13.50 to 14.00; (0.061µm)	0.00	0.01
14.00 to 14.50; (0.043µm)	0.00	0.00
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	841.99

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2731
Sample Code:	Benchmark Replicate 2

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	2.26	18.99
-3.00 to -2.50; 5.6 mm	20.55	172.31
-2.50 to -2.00; 4 mm	19.26	161.49
-2.00 to -1.50; 2.8 mm	13.04	109.33
-1.50 to -1.00; 2 mm	8.94	74.93
-1.00 to -0.50; 1.4 mm	2.17	18.21
-0.50 to 0.00; 1 mm	0.11	0.91
0.00 to 0.50; (707 µm)	0.00	0.01
0.50 to 1.00; (500 µm)	0.66	5.56
1.00 to 1.50; (353.6 µm)	2.50	20.94
1.50 to 2.00; (250 µm)	4.52	37.93
2.00 to 2.50; (176.8 µm)	7.23	60.62
2.50 to 3.00; (125 µm)	7.53	63.15
3.00 to 3.50; (88.39 µm)	5.37	45.07
3.50 to 4.00; (62.5 µm)	2.97	24.93
4.00 to 4.50; (44.19 µm)	1.27	10.62
4.50 to 5.00; (31.25 µm)	0.46	3.89
5.00 to 5.50; (22.097 µm)	0.19	1.57
5.50 to 6.00; (15.625 µm)	0.10	0.88
6.00 to 6.50; (11.049 µm)	0.08	0.65
6.50 to 7.00; (7.813 µm)	0.06	0.53
7.00 to 7.50; (5.524 µm)	0.07	0.55
7.50 to 8.00; (3.906 µm)	0.07	0.59
8.00 to 8.50; (2.762 µm)	0.07	0.58
8.50 to 9.00; (1.953 µm)	0.09	0.72
9.00 to 9.50; (1.381 µm)	0.11	0.93
9.50 to 10.00; (0.977 µm)	0.11	0.95
10.00 to 10.50; (0.691 µm)	0.09	0.74
10.50 to 11.00; (0.488 µm)	0.06	0.49
11.00 to 11.50; (0.345 µm)	0.03	0.27
11.50 to 12.00; (0.244 µm)	0.02	0.13
12.00 to 12.50; (0.173 µm)	0.01	0.05
12.50 to 13.00; (0.122 µm)	0.00	0.01
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)	0.00	0.00
14.00 to 14.50; (0.043µm)	0.00	0.00
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	838.57

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2732
Sample Code:	Benchmark Replicate 3

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	2.89	24.31
-3.00 to -2.50; 5.6 mm	20.35	171.38
-2.50 to -2.00; 4 mm	19.08	160.70
-2.00 to -1.50; 2.8 mm	12.73	107.18
-1.50 to -1.00; 2 mm	8.78	73.98
-1.00 to -0.50; 1.4 mm	2.30	19.37
-0.50 to 0.00; 1 mm	0.14	1.15
0.00 to 0.50; (707 µm)	0.03	0.24
0.50 to 1.00; (500 µm)	0.77	6.52
1.00 to 1.50; (353.6 µm)	2.73	22.99
1.50 to 2.00; (250 µm)	5.02	42.28
2.00 to 2.50; (176.8 µm)	7.60	64.02
2.50 to 3.00; (125 µm)	7.56	63.67
3.00 to 3.50; (88.39 µm)	5.04	42.46
3.50 to 4.00; (62.5 µm)	2.61	21.95
4.00 to 4.50; (44.19 µm)	1.05	8.83
4.50 to 5.00; (31.25 µm)	0.37	3.08
5.00 to 5.50; (22.097 µm)	0.14	1.19
5.50 to 6.00; (15.625 µm)	0.08	0.63
6.00 to 6.50; (11.049 µm)	0.05	0.46
6.50 to 7.00; (7.813 µm)	0.05	0.40
7.00 to 7.50; (5.524 µm)	0.05	0.41
7.50 to 8.00; (3.906 µm)	0.05	0.43
8.00 to 8.50; (2.762 µm)	0.05	0.46
8.50 to 9.00; (1.953 µm)	0.07	0.61
9.00 to 9.50; (1.381 µm)	0.09	0.79
9.50 to 10.00; (0.977 µm)	0.10	0.81
10.00 to 10.50; (0.691 µm)	0.08	0.67
10.50 to 11.00; (0.488 µm)	0.06	0.48
11.00 to 11.50; (0.345 µm)	0.04	0.31
11.50 to 12.00; (0.244 µm)	0.02	0.19
12.00 to 12.50; (0.173 µm)	0.01	0.11
12.50 to 13.00; (0.122 µm)	0.01	0.06
13.00 to 13.50; (0.086 µm)	0.00	0.03
13.50 to 14.00; (0.061µm)	0.00	0.01
14.00 to 14.50; (0.043µm)	0.00	0.00
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	842.17

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2733
Sample Code:	Benchmark Replicate 4

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	1.82	15.24
-3.00 to -2.50; 5.6 mm	20.49	171.87
-2.50 to -2.00; 4 mm	20.33	170.47
-2.00 to -1.50; 2.8 mm	12.68	106.38
-1.50 to -1.00; 2 mm	8.83	74.06
-1.00 to -0.50; 1.4 mm	2.17	18.19
-0.50 to 0.00; 1 mm	0.14	1.19
0.00 to 0.50; (707 µm)	0.00	0.02
0.50 to 1.00; (500 µm)	0.71	5.98
1.00 to 1.50; (353.6 µm)	2.83	23.71
1.50 to 2.00; (250 µm)	4.87	40.84
2.00 to 2.50; (176.8 µm)	7.27	60.99
2.50 to 3.00; (125 µm)	7.39	61.96
3.00 to 3.50; (88.39 µm)	5.13	43.01
3.50 to 4.00; (62.5 µm)	2.75	23.09
4.00 to 4.50; (44.19 µm)	1.14	9.55
4.50 to 5.00; (31.25 µm)	0.40	3.37
5.00 to 5.50; (22.097 µm)	0.16	1.34
5.50 to 6.00; (15.625 µm)	0.09	0.72
6.00 to 6.50; (11.049 µm)	0.06	0.53
6.50 to 7.00; (7.813 µm)	0.05	0.45
7.00 to 7.50; (5.524 µm)	0.06	0.47
7.50 to 8.00; (3.906 µm)	0.06	0.49
8.00 to 8.50; (2.762 µm)	0.06	0.51
8.50 to 9.00; (1.953 µm)	0.08	0.65
9.00 to 9.50; (1.381 µm)	0.10	0.84
9.50 to 10.00; (0.977 µm)	0.10	0.87
10.00 to 10.50; (0.691 µm)	0.08	0.71
10.50 to 11.00; (0.488 µm)	0.06	0.50
11.00 to 11.50; (0.345 µm)	0.04	0.32
11.50 to 12.00; (0.244 µm)	0.02	0.19
12.00 to 12.50; (0.173 µm)	0.01	0.10
12.50 to 13.00; (0.122 µm)	0.01	0.05
13.00 to 13.50; (0.086 µm)	0.00	0.02
13.50 to 14.00; (0.061µm)	0.00	0.01
14.00 to 14.50; (0.043µm)	0.00	0.00
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	838.67

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS77.

Exercise Code:	PS77
LabCode:	PSA_2734
Sample Code:	Benchmark Replicate 5

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	1.93	16.11
-3.00 to -2.50; 5.6 mm	21.15	176.89
-2.50 to -2.00; 4 mm	19.69	164.66
-2.00 to -1.50; 2.8 mm	12.41	103.83
-1.50 to -1.00; 2 mm	8.84	73.92
-1.00 to -0.50; 1.4 mm	2.31	19.35
-0.50 to 0.00; 1 mm	0.12	0.97
0.00 to 0.50; (707 µm)	0.02	0.14
0.50 to 1.00; (500 µm)	0.92	7.68
1.00 to 1.50; (353.6 µm)	3.01	25.18
1.50 to 2.00; (250 µm)	5.25	43.88
2.00 to 2.50; (176.8 µm)	7.57	63.29
2.50 to 3.00; (125 µm)	7.28	60.87
3.00 to 3.50; (88.39 µm)	4.79	40.10
3.50 to 4.00; (62.5 µm)	2.48	20.70
4.00 to 4.50; (44.19 µm)	1.01	8.48
4.50 to 5.00; (31.25 µm)	0.35	2.90
5.00 to 5.50; (22.097 µm)	0.14	1.17
5.50 to 6.00; (15.625 µm)	0.07	0.61
6.00 to 6.50; (11.049 µm)	0.05	0.42
6.50 to 7.00; (7.813 µm)	0.04	0.35
7.00 to 7.50; (5.524 µm)	0.04	0.36
7.50 to 8.00; (3.906 µm)	0.05	0.38
8.00 to 8.50; (2.762 µm)	0.05	0.41
8.50 to 9.00; (1.953 µm)	0.07	0.55
9.00 to 9.50; (1.381 µm)	0.09	0.71
9.50 to 10.00; (0.977 µm)	0.09	0.75
10.00 to 10.50; (0.691 µm)	0.07	0.62
10.50 to 11.00; (0.488 µm)	0.05	0.44
11.00 to 11.50; (0.345 µm)	0.03	0.29
11.50 to 12.00; (0.244 µm)	0.02	0.18
12.00 to 12.50; (0.173 µm)	0.01	0.10
12.50 to 13.00; (0.122 µm)	0.01	0.06
13.00 to 13.50; (0.086 µm)	0.00	0.03
13.50 to 14.00; (0.061µm)	0.00	0.01
14.00 to 14.50; (0.043µm)	0.00	0.00
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	836.39

Notes:

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2701 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.19	0.18	0.15	0.30	0.17	0.25	0.18	0.32	0.35
500	2.04	1.85	1.73	2.58	2.16	2.33	2.12	2.13	2.33
353.6	7.09	6.85	6.27	8.10	7.32	7.66	7.33	6.76	7.21
250	15.03	14.92	13.87	15.91	14.97	15.63	15.20	14.00	14.62
176.8	21.41	21.46	20.56	21.49	20.98	21.71	21.33	20.12	20.67
125	22.26	22.43	22.36	21.47	21.85	22.12	22.03	21.54	21.80
88.39	16.84	17.05	17.85	15.70	16.80	16.37	16.62	17.12	16.98
62.5	9.26	9.42	10.45	8.38	9.50	8.74	9.13	10.09	9.71
44.19	3.73	3.79	4.47	3.31	3.95	3.35	3.65	4.43	4.05
31.25	1.15	1.13	1.36	1.06	1.22	0.94	1.10	1.46	1.23
22.097	0.45	0.41	0.42	0.49	0.45	0.38	0.45	0.52	0.43
15.625	0.33	0.30	0.29	0.38	0.33	0.31	0.35	0.37	0.32
11.049	0.22	0.21	0.22	0.27	0.25	0.22	0.26	0.31	0.25
7.813	0.00	0.00	0.00	0.13	0.06	0.00	0.06	0.22	0.06
5.524	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00
3.906	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.07	0.00
2.762	0.00	0.00	0.00	0.14	0.00	0.00	0.14	0.18	0.00
1.953	0.00	0.00	0.00	0.28	0.00	0.00	0.07	0.26	0.00
1.381	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.977	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.691	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.488	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	72.93	72.86	69.59	73.52	71.66	75.62	72.55	67.14	71.25
d50	165.50	164.33	157.58	172.22	164.86	170.21	166.41	158.80	163.76
d90	348.05	344.55	337.61	368.60	350.66	357.43	350.60	346.74	352.66

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	71.79	1.91	2.66	73.60	1.98	2.69	70.31	2.83	4.02
d50	162.47	4.27	2.63	169.10	3.80	2.25	162.99	3.86	2.37
d90	343.41	5.31	1.55	358.90	9.06	2.52	350.00	3.01	0.86

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2702 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	1.80	1.75	0.43	0.92	0.58	0.13	0.75	0.00	0.55
500	6.59	6.21	5.93	5.59	5.57	5.05	4.64	3.93	4.43
353.6	12.92	12.47	12.98	12.26	12.22	12.39	10.64	10.58	10.64
250	18.20	18.00	18.74	18.32	18.30	18.66	17.02	17.28	17.22
176.8	19.33	19.51	19.99	20.01	20.06	20.35	20.15	20.52	20.39
125	15.77	16.14	16.22	16.53	16.65	16.78	18.13	18.44	18.25
88.39	10.13	10.44	10.32	10.74	10.88	10.92	12.68	12.90	12.68
62.5	5.42	5.56	5.48	5.90	6.00	6.02	7.09	7.26	7.07
44.19	2.71	2.76	2.77	3.09	3.14	3.16	3.38	3.50	3.38
31.25	1.49	1.51	1.55	1.72	1.74	1.75	1.57	1.63	1.58
22.097	0.92	0.95	0.97	1.00	1.01	1.01	0.83	0.85	0.83
15.625	0.63	0.65	0.64	0.60	0.60	0.60	0.51	0.52	0.51
11.049	0.50	0.50	0.50	0.43	0.43	0.42	0.37	0.38	0.36
7.813	0.49	0.49	0.48	0.41	0.40	0.39	0.33	0.33	0.32
5.524	0.53	0.52	0.51	0.43	0.42	0.41	0.34	0.34	0.32
3.906	0.54	0.53	0.52	0.44	0.42	0.41	0.34	0.34	0.32
2.762	0.51	0.51	0.50	0.41	0.40	0.39	0.32	0.32	0.30
1.953	0.47	0.46	0.45	0.38	0.37	0.36	0.30	0.29	0.28
1.381	0.40	0.40	0.39	0.33	0.32	0.32	0.26	0.26	0.25
0.977	0.33	0.32	0.31	0.27	0.27	0.26	0.22	0.22	0.21
0.691	0.25	0.25	0.24	0.21	0.21	0.20	0.13	0.12	0.12
0.488	0.10	0.10	0.09	0.02	0.02	0.02	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	63.11	62.76	62.86	63.47	63.48	63.58	65.95	65.27	66.38
d50	207.17	203.56	203.33	199.92	198.61	197.75	186.77	183.81	186.76
d90	478.95	472.43	453.71	453.03	448.34	437.00	430.24	409.82	424.56

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	62.91	0.18	0.29	63.51	0.06	0.10	65.87	0.56	0.85
d50	204.69	2.15	1.05	198.76	1.09	0.55	185.78	1.70	0.92
d90	468.36	13.10	2.80	446.12	8.24	1.85	421.54	10.54	2.50

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2703 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	1.42	1.50	1.39	0.37	1.96	0.32	0.13	0.82	0.12
500	4.23	4.09	3.81	3.02	3.92	3.25	2.13	2.60	2.38
353.6	9.59	9.58	9.26	8.61	8.80	8.94	7.74	7.98	8.14
250	16.24	16.44	16.28	15.86	15.50	16.09	15.80	15.79	15.95
176.8	20.63	20.80	20.91	20.85	20.22	20.86	21.79	21.45	21.63
125	19.83	19.78	20.04	20.44	19.80	20.22	21.68	21.18	21.41
88.39	14.31	14.13	14.33	15.18	14.65	14.84	15.88	15.49	15.62
62.5	7.62	7.49	7.55	8.55	8.20	8.29	8.53	8.37	8.34
44.19	2.92	2.88	2.89	3.63	3.47	3.54	3.31	3.28	3.22
31.25	0.89	0.91	0.92	1.23	1.19	1.25	1.01	1.02	1.00
22.097	0.43	0.45	0.48	0.49	0.50	0.53	0.45	0.45	0.47
15.625	0.36	0.38	0.41	0.34	0.35	0.36	0.36	0.36	0.38
11.049	0.28	0.28	0.30	0.26	0.26	0.27	0.26	0.27	0.27
7.813	0.19	0.19	0.21	0.18	0.19	0.19	0.17	0.18	0.17
5.524	0.16	0.17	0.18	0.15	0.15	0.16	0.02	0.02	0.14
3.906	0.17	0.17	0.19	0.14	0.15	0.16	0.14	0.14	0.15
2.762	0.17	0.18	0.20	0.15	0.15	0.16	0.15	0.15	0.15
1.953	0.17	0.18	0.19	0.16	0.16	0.17	0.15	0.15	0.16
1.381	0.18	0.18	0.20	0.17	0.18	0.19	0.16	0.16	0.17
0.977	0.18	0.18	0.20	0.18	0.18	0.19	0.14	0.14	0.14
0.691	0.03	0.04	0.04	0.03	0.03	0.04	0.00	0.00	0.00
0.488	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	74.54	74.55	73.65	70.25	71.11	70.30	72.60	72.78	72.55
d50	183.20	184.05	181.69	172.98	178.02	175.18	170.12	172.92	171.76
d90	427.36	426.25	417.77	383.30	425.03	389.77	353.61	375.87	363.27

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	74.25	0.52	0.70	70.55	0.48	0.69	72.64	0.12	0.17
d50	182.98	1.20	0.65	175.39	2.52	1.44	171.60	1.40	0.82
d90	423.79	5.25	1.24	399.37	22.46	5.62	364.25	11.16	3.06

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2704 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.98	1.22	1.12	0.87	0.86	0.82	0.71	0.78	0.81
500	4.86	4.72	4.55	4.56	4.14	4.09	4.02	4.00	3.86
353.6	10.53	10.67	10.51	10.84	10.82	10.86	10.64	10.81	10.46
250	15.73	15.74	15.79	16.33	16.36	16.41	16.61	16.46	16.66
176.8	22.91	22.61	22.73	22.88	22.96	22.90	23.27	23.31	23.43
125	19.94	19.84	19.95	19.70	19.85	19.85	19.82	19.86	19.90
88.39	12.21	12.22	12.28	12.14	12.22	12.25	12.19	12.13	12.18
62.5	6.49	6.53	6.54	6.41	6.45	6.46	6.40	6.37	6.38
44.19	2.83	2.86	2.87	2.79	2.81	2.82	2.77	2.75	2.77
31.25	1.01	1.02	1.03	0.97	0.98	0.98	0.96	0.95	0.96
22.097	0.43	0.44	0.45	0.44	0.44	0.45	0.44	0.44	0.44
15.625	0.20	0.21	0.22	0.20	0.21	0.21	0.20	0.20	0.21
11.049	0.18	0.19	0.20	0.17	0.17	0.18	0.17	0.17	0.17
7.813	0.14	0.15	0.15	0.13	0.14	0.14	0.14	0.14	0.14
5.524	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.11
3.906	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
2.762	0.12	0.12	0.13	0.12	0.12	0.12	0.13	0.13	0.13
1.953	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
1.381	0.21	0.22	0.22	0.21	0.22	0.22	0.23	0.22	0.22
0.977	0.22	0.23	0.23	0.23	0.23	0.23	0.24	0.24	0.24
0.691	0.19	0.20	0.20	0.19	0.20	0.20	0.20	0.20	0.20
0.488	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16
0.345	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
0.244	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08
0.173	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.122	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.086	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.061	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	75.94	75.44	75.17	76.47	76.11	75.95	76.21	76.50	76.35
d50	190.71	190.76	189.95	192.09	191.07	190.92	191.16	191.44	191.00
d90	436.03	438.23	433.50	432.03	426.05	424.99	421.10	423.02	419.17

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	75.52	0.39	0.51	76.18	0.27	0.35	76.35	0.14	0.19
d50	190.47	0.46	0.24	191.36	0.64	0.33	191.20	0.22	0.12
d90	435.92	2.37	0.54	427.69	3.80	0.89	421.10	1.93	0.46

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2705 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.22	0.09	0.51	0.29	0.08	0.48	0.12	0.10	0.27
500	2.38	2.25	2.57	2.54	2.22	2.76	2.47	2.30	2.62
353.6	6.71	6.92	6.82	6.69	6.78	6.77	7.05	6.77	7.19
250	13.60	13.97	13.69	13.18	13.53	13.23	13.76	13.58	14.03
176.8	18.04	18.22	18.02	17.44	17.67	17.45	17.80	17.87	17.97
125	21.84	21.72	21.62	21.33	21.38	21.24	21.35	21.55	21.22
88.39	16.34	16.14	16.09	16.33	16.30	16.19	16.08	16.22	15.78
62.5	11.25	11.13	11.10	11.64	11.59	11.49	11.27	11.36	11.01
44.19	5.07	5.04	5.04	5.48	5.45	5.40	5.22	5.28	5.12
31.25	1.96	1.96	1.97	2.21	2.18	2.18	2.08	2.12	2.06
22.097	0.67	0.66	0.67	0.73	0.72	0.72	0.71	0.72	0.70
15.625	0.42	0.41	0.41	0.44	0.43	0.43	0.43	0.44	0.42
11.049	0.32	0.32	0.32	0.34	0.34	0.34	0.34	0.34	0.32
7.813	0.23	0.23	0.23	0.26	0.26	0.25	0.25	0.25	0.24
5.524	0.19	0.19	0.19	0.22	0.21	0.21	0.21	0.21	0.20
3.906	0.21	0.21	0.21	0.23	0.22	0.22	0.22	0.22	0.21
2.762	0.23	0.23	0.23	0.25	0.25	0.24	0.25	0.25	0.24
1.953	0.23	0.22	0.22	0.24	0.24	0.24	0.24	0.24	0.23
1.381	0.09	0.09	0.09	0.16	0.16	0.16	0.16	0.16	0.16
0.977	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.691	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.488	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	63.23	63.33	63.29	60.32	60.73	60.96	62.10	61.54	62.68
d50	153.14	154.22	154.52	150.61	151.02	151.87	153.27	152.05	155.35
d90	347.45	347.11	352.68	349.13	345.32	353.71	350.44	346.22	354.88

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	63.28	0.05	0.08	60.67	0.32	0.53	62.11	0.57	0.92
d50	153.96	0.72	0.47	151.17	0.64	0.43	153.56	1.67	1.09
d90	349.08	3.12	0.89	349.39	4.20	1.20	350.51	4.33	1.24

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2706 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.00	0.00	0.00	0.29	0.33	0.28	0.00	0.00	0.07
500	1.33	1.23	1.30	3.01	2.64	2.85	1.70	1.50	1.89
353.6	5.90	5.88	6.15	8.05	7.50	7.78	6.02	6.07	6.32
250	13.04	13.01	13.20	13.47	13.22	13.39	11.54	11.81	11.80
176.8	19.18	19.16	19.08	16.47	16.65	16.67	15.22	15.44	15.25
125	20.56	20.57	20.35	16.03	16.33	16.24	14.98	15.00	14.75
88.39	16.67	16.68	16.53	13.33	13.51	13.38	12.10	11.98	11.77
62.5	10.38	10.38	10.33	9.99	10.07	9.93	9.18	9.05	8.92
44.19	5.04	5.05	5.02	6.71	6.77	6.65	7.02	6.94	6.89
31.25	2.07	2.08	2.05	3.82	3.89	3.80	5.04	5.00	4.99
22.097	0.98	0.98	0.96	1.84	1.88	1.83	3.16	3.14	3.13
15.625	0.70	0.70	0.69	0.92	0.94	0.92	1.87	1.86	1.85
11.049	0.58	0.58	0.58	0.70	0.72	0.70	1.34	1.34	1.33
7.813	0.48	0.49	0.49	0.71	0.73	0.72	1.29	1.29	1.30
5.524	0.45	0.46	0.46	0.73	0.76	0.75	1.39	1.40	1.41
3.906	0.47	0.49	0.49	0.73	0.76	0.76	1.47	1.48	1.51
2.762	0.49	0.51	0.52	0.71	0.74	0.75	1.46	1.47	1.50
1.953	0.47	0.48	0.49	0.67	0.70	0.70	1.35	1.35	1.37
1.381	0.42	0.43	0.44	0.59	0.62	0.62	1.17	1.18	1.19
0.977	0.36	0.37	0.38	0.51	0.53	0.54	1.02	1.02	1.03
0.691	0.29	0.30	0.30	0.43	0.44	0.44	0.88	0.88	0.89
0.488	0.12	0.19	0.19	0.28	0.29	0.30	0.63	0.63	0.63
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.22
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	51.10	50.55	50.57	34.75	33.81	34.12	8.85	8.77	8.36
d50	147.99	147.58	148.41	146.43	143.95	145.79	123.08	124.38	125.21
d90	328.52	327.42	330.70	374.73	361.14	368.24	330.21	329.32	336.06

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	50.74	0.31	0.61	34.22	0.48	1.40	8.66	0.26	3.04
d50	147.99	0.42	0.28	145.39	1.29	0.89	124.22	1.08	0.87
d90	328.88	1.67	0.51	368.04	6.79	1.85	331.86	3.66	1.10

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2707 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.44	0.71	1.28	0.78	0.77	0.89	0.90	0.83	0.75
500	7.73	8.37	12.85	10.01	9.08	10.16	10.50	9.52	9.20
353.6	13.79	12.82	15.44	15.21	13.50	14.80	15.21	14.47	14.39
250	13.27	12.19	10.05	11.90	11.95	11.58	12.14	12.78	12.59
176.8	17.78	17.67	15.85	16.38	17.40	16.08	16.74	17.08	16.97
125	13.93	14.08	12.87	13.34	13.98	13.34	13.06	13.19	13.63
88.39	14.07	14.27	12.91	13.68	14.18	14.07	13.05	13.35	14.12
62.5	7.96	8.04	7.50	7.82	7.96	8.00	7.56	7.82	7.83
44.19	3.96	3.99	3.85	3.91	3.93	3.78	3.98	4.05	3.59
31.25	2.22	2.25	1.99	2.14	2.17	2.05	2.20	2.19	1.93
22.097	1.21	1.27	0.99	1.16	1.15	1.18	1.14	1.11	1.12
15.625	0.50	0.59	0.50	0.53	0.51	0.56	0.48	0.47	0.52
11.049	0.13	0.22	0.23	0.18	0.20	0.18	0.15	0.16	0.17
7.813	0.12	0.23	0.23	0.16	0.21	0.16	0.14	0.15	0.16
5.524	0.15	0.22	0.20	0.17	0.19	0.19	0.16	0.14	0.18
3.906	0.19	0.24	0.22	0.20	0.21	0.23	0.19	0.17	0.21
2.762	0.23	0.28	0.28	0.25	0.26	0.26	0.23	0.23	0.25
1.953	0.28	0.33	0.34	0.28	0.30	0.29	0.26	0.28	0.29
1.381	0.29	0.33	0.34	0.28	0.29	0.29	0.26	0.28	0.30
0.977	0.25	0.29	0.30	0.24	0.26	0.27	0.24	0.25	0.27
0.691	0.16	0.18	0.18	0.16	0.16	0.18	0.15	0.16	0.17
0.488	0.19	0.21	0.22	0.19	0.20	0.20	0.18	0.19	0.20
0.345	0.20	0.22	0.24	0.19	0.20	0.21	0.18	0.20	0.20
0.244	0.24	0.26	0.29	0.22	0.24	0.25	0.22	0.25	0.24
0.173	0.28	0.30	0.32	0.24	0.26	0.29	0.25	0.28	0.28
0.122	0.26	0.27	0.29	0.22	0.24	0.28	0.24	0.26	0.26
0.086	0.18	0.18	0.18	0.14	0.16	0.20	0.17	0.17	0.18
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	99.99	99.96	99.98	99.97	99.96	99.98	100.00	99.99

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	57.07	53.21	56.07	57.90	56.50	56.72	58.18	57.57	59.50
d50	187.46	182.99	199.36	193.60	186.64	190.73	198.08	194.41	191.48
d90	477.51	487.75	558.88	513.83	498.15	518.25	523.64	506.41	499.33

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	55.45	2.01	3.62	57.04	0.76	1.32	58.42	0.98	1.68
d50	189.94	8.46	4.46	190.32	3.50	1.84	194.65	3.31	1.70
d90	508.05	44.32	8.72	510.08	10.57	2.07	509.80	12.50	2.45

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2708 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.46	0.30	0.27	0.36	0.28	0.38	0.36	0.50	0.40
500	2.27	2.13	2.17	2.02	2.00	2.09	1.84	1.99	2.04
353.6	6.64	6.61	6.68	6.36	6.28	6.43	6.01	5.98	6.14
250	13.75	13.78	13.83	13.52	13.37	13.53	13.18	12.88	13.04
176.8	18.53	18.55	18.55	18.42	18.34	18.37	18.34	17.95	18.01
125	22.09	22.13	22.09	22.17	22.22	22.08	22.36	22.14	22.08
88.39	16.26	16.32	16.27	16.51	16.62	16.41	16.77	16.84	16.71
62.5	10.95	11.01	10.96	11.24	11.35	11.17	11.48	11.69	11.55
44.19	4.86	4.88	4.84	5.04	5.09	5.01	5.18	5.33	5.26
31.25	1.45	1.45	1.43	1.50	1.51	1.50	1.57	1.61	1.60
22.097	0.49	0.49	0.49	0.49	0.50	0.51	0.52	0.53	0.54
15.625	0.34	0.35	0.36	0.34	0.36	0.36	0.35	0.36	0.38
11.049	0.32	0.34	0.35	0.34	0.35	0.36	0.34	0.36	0.37
7.813	0.23	0.24	0.25	0.24	0.25	0.26	0.24	0.26	0.27
5.524	0.16	0.17	0.17	0.16	0.17	0.18	0.16	0.18	0.18
3.906	0.14	0.15	0.15	0.15	0.15	0.16	0.15	0.15	0.16
2.762	0.15	0.16	0.17	0.16	0.17	0.17	0.16	0.17	0.17
1.953	0.18	0.19	0.19	0.19	0.20	0.20	0.19	0.20	0.20
1.381	0.21	0.22	0.22	0.22	0.23	0.23	0.22	0.23	0.24
0.977	0.22	0.22	0.22	0.23	0.23	0.23	0.23	0.24	0.24
0.691	0.23	0.23	0.24	0.24	0.25	0.25	0.25	0.26	0.26
0.488	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.17	0.17
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	64.40	64.14	64.12	63.68	63.35	63.43	63.13	62.33	62.40
d50	155.09	154.45	154.70	152.83	151.87	153.05	150.77	149.51	150.24
d90	348.05	345.16	345.82	342.36	340.54	343.86	337.34	339.34	340.53

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	64.22	0.16	0.25	63.49	0.17	0.26	62.62	0.44	0.71
d50	154.75	0.32	0.21	152.58	0.63	0.41	150.17	0.63	0.42
d90	346.34	1.51	0.44	342.25	1.66	0.48	339.07	1.61	0.48

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2709 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.00	0.00	0.01	0.25	0.01	0.00	0.05	0.00	0.00
500	1.55	1.34	1.58	2.79	2.29	2.13	2.36	1.88	1.39
353.6	6.89	7.05	6.55	10.06	9.69	9.49	7.97	8.01	7.94
250	13.94	14.09	13.98	15.75	16.30	16.47	14.36	14.29	14.61
176.8	21.94	21.84	22.19	21.80	22.13	22.50	21.19	21.57	21.78
125	22.43	22.51	22.61	20.90	21.08	21.11	21.92	22.10	22.15
88.39	15.91	15.92	15.87	14.05	14.10	13.99	15.81	15.85	15.86
62.5	8.82	8.75	8.72	7.36	7.35	7.26	8.69	8.63	8.58
44.19	3.79	3.78	3.74	3.11	3.11	3.11	3.72	3.72	3.74
31.25	1.37	1.38	1.37	1.08	1.07	1.05	1.20	1.18	1.16
22.097	0.56	0.58	0.56	0.47	0.48	0.49	0.50	0.51	0.51
15.625	0.30	0.31	0.31	0.25	0.26	0.26	0.25	0.26	0.26
11.049	0.22	0.22	0.22	0.17	0.18	0.18	0.16	0.16	0.16
7.813	0.18	0.20	0.19	0.15	0.15	0.15	0.13	0.13	0.13
5.524	0.18	0.20	0.19	0.15	0.16	0.16	0.14	0.14	0.14
3.906	0.19	0.19	0.19	0.16	0.17	0.17	0.14	0.15	0.15
2.762	0.20	0.19	0.20	0.17	0.17	0.17	0.15	0.15	0.16
1.953	0.25	0.25	0.25	0.21	0.22	0.22	0.20	0.21	0.21
1.381	0.31	0.32	0.31	0.28	0.28	0.28	0.27	0.27	0.27
0.977	0.31	0.32	0.32	0.28	0.28	0.28	0.28	0.28	0.28
0.691	0.25	0.25	0.25	0.22	0.22	0.22	0.22	0.22	0.22
0.488	0.18	0.16	0.18	0.15	0.15	0.15	0.15	0.15	0.15
0.345	0.11	0.09	0.11	0.09	0.09	0.09	0.08	0.08	0.09
0.244	0.06	0.05	0.06	0.05	0.05	0.05	0.04	0.04	0.04
0.173	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02
0.122	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	66.27	66.32	66.37	71.88	71.81	71.96	68.63	68.62	68.62
d50	161.95	161.98	162.04	178.66	177.97	178.43	165.76	165.39	165.34
d90	340.15	339.85	337.63	393.45	379.70	375.26	359.47	352.63	348.00

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	66.32	0.05	0.07	71.88	0.07	0.10	68.62	0.01	0.01
d50	161.99	0.05	0.03	178.35	0.35	0.20	165.50	0.23	0.14
d90	339.21	1.38	0.41	382.81	9.49	2.48	353.37	5.77	1.63

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2711 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500	1.27	1.29	1.10	1.21	1.06	1.18	1.61	1.37	1.62
353.6	6.75	6.71	6.36	6.52	6.33	6.60	7.14	7.11	7.24
250	13.21	13.11	12.87	12.92	12.90	13.11	13.49	13.66	13.60
176.8	18.82	18.73	18.66	18.64	18.73	18.76	18.91	19.05	18.90
125	20.56	20.57	20.66	20.61	20.69	20.57	20.44	20.45	20.33
88.39	17.41	17.48	17.70	17.64	17.67	17.48	17.14	17.09	17.04
62.5	11.28	11.35	11.60	11.53	11.54	11.38	11.00	10.98	10.97
44.19	5.40	5.43	5.60	5.54	5.56	5.47	5.21	5.21	5.22
31.25	1.85	1.86	1.92	1.89	1.92	1.88	1.78	1.78	1.79
22.097	0.59	0.59	0.61	0.60	0.62	0.61	0.58	0.58	0.58
15.625	0.41	0.41	0.42	0.42	0.43	0.43	0.41	0.41	0.41
11.049	0.39	0.40	0.41	0.41	0.41	0.41	0.38	0.38	0.38
7.813	0.30	0.30	0.30	0.30	0.31	0.31	0.28	0.28	0.28
5.524	0.22	0.22	0.22	0.22	0.23	0.22	0.20	0.20	0.20
3.906	0.22	0.22	0.22	0.22	0.23	0.22	0.20	0.20	0.20
2.762	0.26	0.26	0.26	0.26	0.27	0.27	0.24	0.24	0.24
1.953	0.29	0.30	0.30	0.30	0.31	0.30	0.27	0.27	0.28
1.381	0.29	0.30	0.30	0.30	0.30	0.30	0.27	0.28	0.28
0.977	0.26	0.26	0.26	0.26	0.27	0.26	0.24	0.24	0.25
0.691	0.20	0.20	0.20	0.20	0.21	0.20	0.19	0.19	0.19
0.488	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	59.76	59.54	58.58	58.97	58.45	58.98	61.37	61.35	61.23
d50	149.49	148.98	146.98	147.65	147.09	148.50	152.14	152.30	152.58
d90	335.71	335.40	330.21	332.68	329.61	333.45	342.42	340.27	343.49

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	59.29	0.63	1.06	58.80	0.30	0.51	61.32	0.07	0.12
d50	148.48	1.33	0.89	147.75	0.71	0.48	152.34	0.22	0.14
d90	333.77	3.09	0.93	331.91	2.03	0.61	342.06	1.64	0.48

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2712 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.06	0.06	0.05	0.07	0.10	0.10	0.25	0.22	0.06
500	1.38	1.38	1.35	1.62	1.84	1.82	2.16	2.00	1.68
353.6	6.07	6.02	6.16	6.80	7.07	7.00	7.42	7.21	7.22
250	14.70	14.63	14.72	15.68	15.71	15.71	16.01	15.91	16.11
176.8	21.94	21.93	21.84	22.20	22.01	22.07	22.40	22.51	22.58
125	23.42	23.46	23.34	22.49	22.29	22.34	22.78	23.03	23.01
88.39	17.52	17.57	17.54	16.19	16.09	16.11	16.31	16.48	16.51
62.5	9.28	9.32	9.34	8.61	8.58	8.57	8.25	8.27	8.35
44.19	3.46	3.47	3.48	3.49	3.48	3.47	2.88	2.85	2.91
31.25	0.97	0.97	0.97	1.20	1.19	1.19	0.77	0.75	0.77
22.097	0.43	0.43	0.43	0.51	0.51	0.51	0.38	0.38	0.39
15.625	0.32	0.32	0.32	0.29	0.29	0.29	0.29	0.30	0.30
11.049	0.13	0.13	0.13	0.11	0.11	0.11	0.11	0.11	0.11
7.813	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.524	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.906	0.00	0.00	0.00	0.08	0.08	0.08	0.00	0.00	0.00
2.762	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.00	0.00
1.953	0.11	0.11	0.11	0.18	0.18	0.18	0.00	0.00	0.00
1.381	0.17	0.17	0.17	0.19	0.19	0.19	0.00	0.00	0.00
0.977	0.04	0.04	0.04	0.10	0.10	0.10	0.00	0.00	0.00
0.691	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.488	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	73.58	73.50	73.45	72.45	72.55	72.59	78.98	79.07	78.59
d50	162.13	161.83	162.02	167.19	168.03	167.95	172.11	171.14	170.65
d90	333.43	332.94	333.86	342.00	345.96	345.26	352.29	349.22	345.77

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	73.51	0.07	0.09	72.53	0.07	0.10	78.88	0.25	0.32
d50	162.00	0.15	0.09	167.72	0.46	0.28	171.30	0.75	0.43
d90	333.41	0.46	0.14	344.40	2.11	0.61	349.10	3.26	0.93

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2713 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	3.02	3.43	3.39	2.39	2.37	2.49	2.08	1.98	1.94
500	3.34	3.41	3.50	2.64	3.01	3.21	2.66	2.58	2.57
353.6	5.93	5.93	6.15	5.36	5.61	5.67	5.22	5.21	5.25
250	12.07	11.99	12.09	12.46	11.53	11.38	10.92	10.74	10.78
176.8	19.34	19.34	19.22	19.64	19.05	19.05	18.78	18.61	18.63
125	20.97	20.81	20.61	21.27	21.61	21.51	21.75	21.82	21.82
88.39	15.91	15.68	15.55	16.64	16.97	16.81	17.54	17.72	17.64
62.5	9.11	8.97	8.90	9.67	9.74	9.67	10.46	10.57	10.69
44.19	3.92	3.85	3.84	4.05	4.08	4.05	4.51	4.54	4.58
31.25	1.40	1.38	1.39	1.37	1.39	1.38	1.53	1.54	1.46
22.097	0.58	0.61	0.62	0.54	0.55	0.56	0.59	0.60	0.56
15.625	0.30	0.30	0.31	0.27	0.29	0.30	0.28	0.30	0.28
11.049	0.23	0.23	0.24	0.20	0.22	0.24	0.19	0.22	0.21
7.813	0.24	0.25	0.26	0.21	0.22	0.24	0.20	0.22	0.21
5.524	0.27	0.28	0.29	0.21	0.23	0.25	0.21	0.23	0.23
3.906	0.29	0.30	0.32	0.23	0.25	0.26	0.23	0.24	0.24
2.762	0.32	0.33	0.34	0.26	0.27	0.28	0.26	0.27	0.27
1.953	0.34	0.36	0.38	0.29	0.30	0.31	0.30	0.30	0.30
1.381	0.36	0.38	0.40	0.32	0.32	0.34	0.33	0.33	0.33
0.977	0.37	0.39	0.40	0.34	0.34	0.35	0.34	0.34	0.35
0.691	0.35	0.37	0.38	0.33	0.33	0.34	0.33	0.33	0.34
0.488	0.33	0.34	0.35	0.31	0.31	0.32	0.31	0.31	0.32
0.345	0.29	0.30	0.31	0.28	0.28	0.28	0.28	0.28	0.28
0.244	0.25	0.26	0.26	0.24	0.24	0.24	0.24	0.24	0.24
0.173	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.19	0.19
0.122	0.15	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15
0.086	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.10
0.061	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
0.043	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	60.80	60.08	59.20	62.67	61.89	61.32	59.74	58.95	59.30
d50	159.31	160.27	160.73	156.44	154.43	154.89	149.93	148.73	148.83
d90	404.25	415.95	419.46	362.79	375.81	384.36	353.14	350.95	350.83

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	60.03	0.80	1.34	61.96	0.68	1.09	59.33	0.40	0.67
d50	160.10	0.73	0.45	155.25	1.05	0.68	149.17	0.67	0.45
d90	413.22	7.97	1.93	374.32	10.86	2.90	351.64	1.30	0.37

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2714 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
500	1.56	1.33	1.63	1.68	1.67	1.79	3.56	2.99	2.95
353.6	7.11	6.77	6.94	7.14	7.03	7.04	8.73	8.54	8.53
250	12.60	12.29	12.24	12.55	12.32	12.23	13.42	13.39	13.62
176.8	16.70	16.67	16.44	16.61	16.36	16.28	16.44	16.35	16.74
125	18.04	18.24	17.98	17.91	17.80	17.75	16.80	16.75	16.94
88.39	16.04	16.26	16.11	15.89	15.97	15.97	14.35	14.49	14.37
62.5	11.47	11.62	11.60	11.39	11.57	11.59	10.04	10.32	10.08
44.19	6.36	6.43	6.47	6.39	6.52	6.53	5.59	5.80	5.64
31.25	2.69	2.73	2.75	2.78	2.82	2.81	2.50	2.58	2.52
22.097	1.11	1.12	1.12	1.16	1.16	1.15	1.17	1.16	1.14
15.625	0.81	0.82	0.81	0.82	0.82	0.81	0.91	0.91	0.87
11.049	0.84	0.86	0.86	0.84	0.86	0.86	0.94	0.96	0.93
7.813	0.79	0.81	0.83	0.80	0.83	0.84	0.90	0.94	0.92
5.524	0.68	0.70	0.72	0.70	0.73	0.74	0.80	0.84	0.83
3.906	0.60	0.63	0.64	0.62	0.65	0.66	0.72	0.75	0.75
2.762	0.56	0.59	0.60	0.58	0.61	0.62	0.67	0.70	0.69
1.953	0.52	0.54	0.56	0.54	0.57	0.58	0.60	0.64	0.63
1.381	0.46	0.48	0.50	0.49	0.51	0.52	0.53	0.56	0.55
0.977	0.42	0.44	0.45	0.44	0.46	0.46	0.47	0.49	0.49
0.691	0.37	0.39	0.40	0.39	0.40	0.41	0.42	0.44	0.43
0.488	0.27	0.28	0.28	0.28	0.28	0.29	0.30	0.32	0.31
0.345	0.00	0.00	0.07	0.00	0.06	0.07	0.07	0.08	0.07
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	43.51	42.06	41.02	41.83	40.25	39.94	38.47	36.76	37.83
d50	140.30	138.25	138.26	140.10	138.27	138.07	150.58	147.57	149.61
d90	340.89	335.15	339.56	342.26	340.90	342.06	388.32	376.24	375.51

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	42.20	1.25	2.96	40.67	1.01	2.49	37.69	0.86	2.29
d50	138.94	1.18	0.85	138.81	1.12	0.81	149.25	1.53	1.03
d90	338.53	3.01	0.89	341.74	0.74	0.22	380.02	7.19	1.89

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2715 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.58	0.67	0.22	0.11	0.29	0.18	0.19	0.06	0.05
500	3.56	3.08	2.85	2.91	2.50	2.45	3.15	2.71	2.73
353.6	8.56	8.47	8.54	8.27	8.43	8.41	8.37	8.36	8.55
250	14.33	14.50	14.66	14.72	14.87	14.86	14.84	15.25	15.22
176.8	21.28	21.50	21.87	21.84	22.17	22.43	22.30	22.57	22.56
125	21.23	21.34	21.47	22.02	22.10	22.08	22.16	22.19	22.17
88.39	14.94	14.93	14.92	15.15	14.96	14.90	14.67	14.62	14.55
62.5	8.06	8.03	7.98	7.92	7.71	7.67	7.54	7.45	7.41
44.19	3.37	3.37	3.35	3.25	3.17	3.17	3.09	3.06	3.04
31.25	1.16	1.16	1.15	1.08	1.05	1.06	1.04	1.03	1.02
22.097	0.48	0.48	0.48	0.44	0.45	0.45	0.41	0.41	0.41
15.625	0.26	0.26	0.27	0.24	0.24	0.24	0.21	0.21	0.21
11.049	0.18	0.18	0.18	0.16	0.16	0.16	0.14	0.14	0.14
7.813	0.15	0.15	0.15	0.13	0.13	0.14	0.12	0.12	0.12
5.524	0.16	0.16	0.16	0.14	0.14	0.14	0.12	0.12	0.12
3.906	0.17	0.17	0.17	0.15	0.15	0.15	0.13	0.13	0.13
2.762	0.17	0.17	0.18	0.16	0.16	0.16	0.14	0.14	0.14
1.953	0.22	0.22	0.22	0.21	0.21	0.21	0.19	0.19	0.19
1.381	0.29	0.29	0.29	0.27	0.27	0.27	0.25	0.25	0.25
0.977	0.29	0.30	0.30	0.28	0.28	0.28	0.26	0.26	0.26
0.691	0.23	0.23	0.24	0.23	0.23	0.23	0.22	0.22	0.22
0.488	0.16	0.16	0.16	0.15	0.15	0.16	0.16	0.17	0.17
0.345	0.09	0.09	0.10	0.09	0.09	0.10	0.11	0.12	0.12
0.244	0.05	0.05	0.05	0.05	0.05	0.06	0.07	0.08	0.08
0.173	0.02	0.02	0.02	0.02	0.02	0.03	0.05	0.05	0.05
0.122	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03	0.03
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	69.74	69.71	69.68	71.08	71.61	71.48	72.50	72.60	72.71
d50	172.01	171.78	171.54	170.91	172.05	172.20	173.66	173.94	174.36
d90	394.56	387.22	377.40	373.15	371.86	369.00	379.53	370.63	373.17

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	69.71	0.03	0.05	71.39	0.28	0.39	72.60	0.11	0.15
d50	171.78	0.23	0.13	171.72	0.71	0.41	173.99	0.35	0.20
d90	386.39	8.61	2.23	371.34	2.12	0.57	374.44	4.59	1.22

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

PSA_2716 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.05	0.04	0.04	0.08	0.04	0.05	0.07	0.00	0.00
500	1.17	1.09	1.12	1.30	1.02	1.14	1.26	0.82	0.57
353.6	4.69	4.67	4.68	4.68	4.44	4.58	4.60	4.26	3.98
250	10.88	11.05	11.10	10.84	10.94	10.98	10.68	10.76	10.43
176.8	16.04	16.30	16.37	16.07	16.42	16.37	15.88	16.22	16.04
125	21.55	21.69	21.72	21.54	21.90	21.80	21.46	21.78	21.85
88.39	18.27	18.16	18.10	18.18	18.24	18.16	18.28	18.35	18.61
62.5	14.13	13.91	13.81	14.04	13.90	13.83	14.19	14.14	14.45
44.19	6.61	6.48	6.41	6.61	6.47	6.44	6.66	6.64	6.81
31.25	2.72	2.67	2.66	2.77	2.71	2.70	2.76	2.78	2.86
22.097	0.84	0.85	0.86	0.88	0.89	0.89	0.88	0.91	0.94
15.625	0.54	0.56	0.57	0.55	0.56	0.58	0.57	0.60	0.62
11.049	0.50	0.50	0.52	0.48	0.49	0.50	0.52	0.53	0.56
7.813	0.41	0.41	0.42	0.39	0.39	0.40	0.43	0.44	0.46
5.524	0.36	0.36	0.37	0.34	0.34	0.34	0.39	0.39	0.41
3.906	0.38	0.38	0.38	0.36	0.36	0.36	0.41	0.42	0.43
2.762	0.37	0.37	0.37	0.37	0.37	0.36	0.41	0.41	0.42
1.953	0.31	0.31	0.31	0.32	0.32	0.32	0.34	0.35	0.36
1.381	0.18	0.18	0.18	0.19	0.19	0.19	0.20	0.20	0.21
0.977	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.691	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.488	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	52.77	53.00	52.99	52.65	52.95	52.94	51.88	51.60	50.81
d50	134.13	135.07	135.46	134.40	134.78	135.19	133.25	132.88	130.82
d90	310.40	309.94	310.58	311.72	306.59	309.44	309.84	301.77	295.02

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	52.92	0.13	0.25	52.85	0.17	0.32	51.43	0.55	1.08
d50	134.89	0.68	0.51	134.79	0.39	0.29	132.32	1.31	0.99
d90	310.31	0.33	0.11	309.25	2.57	0.83	302.21	7.42	2.45

APPENDIX 4. Participant laser replicate data for sediment distributed as PS77.

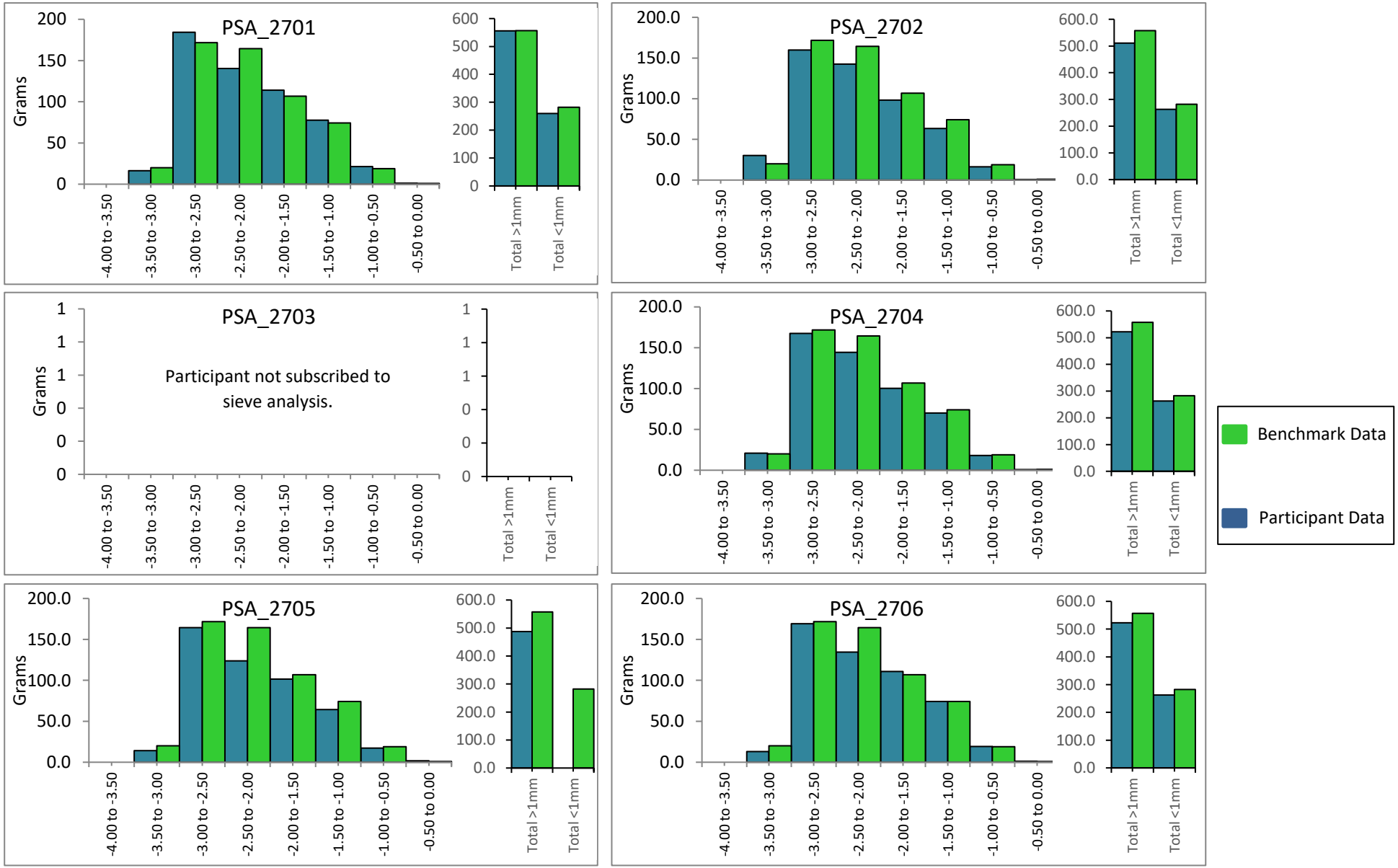
PSA_2717 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.37	0.29	0.29	0.30	0.43	0.23	0.27	0.40	0.46
500	1.86	1.91	1.95	2.06	2.18	1.97	1.93	2.03	2.04
353.6	6.00	6.04	6.15	6.34	6.40	6.40	6.09	6.17	6.11
250	13.37	13.38	13.48	13.60	13.61	13.78	13.32	13.37	13.33
176.8	19.84	19.85	19.85	19.89	19.84	20.01	19.74	19.71	19.71
125	21.83	21.86	21.78	21.74	21.66	21.74	21.80	21.70	21.71
88.39	17.53	17.55	17.47	17.36	17.29	17.29	17.58	17.48	17.48
62.5	10.49	10.47	10.44	10.31	10.26	10.24	10.56	10.49	10.50
44.19	4.68	4.65	4.65	4.55	4.52	4.51	4.73	4.69	4.71
31.25	1.56	1.55	1.55	1.50	1.49	1.49	1.58	1.57	1.58
22.097	0.56	0.56	0.56	0.54	0.54	0.54	0.56	0.56	0.56
15.625	0.36	0.36	0.36	0.36	0.36	0.36	0.37	0.36	0.36
11.049	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.26	0.26
7.813	0.13	0.13	0.12	0.12	0.12	0.12	0.13	0.13	0.13
5.524	0.10	0.10	0.04	0.04	0.03	0.03	0.04	0.03	0.03
3.906	0.19	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.18
2.762	0.21	0.21	0.21	0.21	0.21	0.20	0.21	0.20	0.20
1.953	0.22	0.22	0.22	0.22	0.21	0.21	0.22	0.21	0.21
1.381	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
0.977	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
0.691	0.06	0.06	0.06	0.05	0.05	0.05	0.06	0.06	0.06
0.488	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	65.22	65.32	65.48	65.91	66.09	66.13	65.16	65.39	65.33
d50	154.32	154.40	154.95	156.07	156.67	156.61	154.05	154.82	154.73
d90	337.73	337.82	339.25	342.06	344.78	341.37	338.19	341.01	341.04

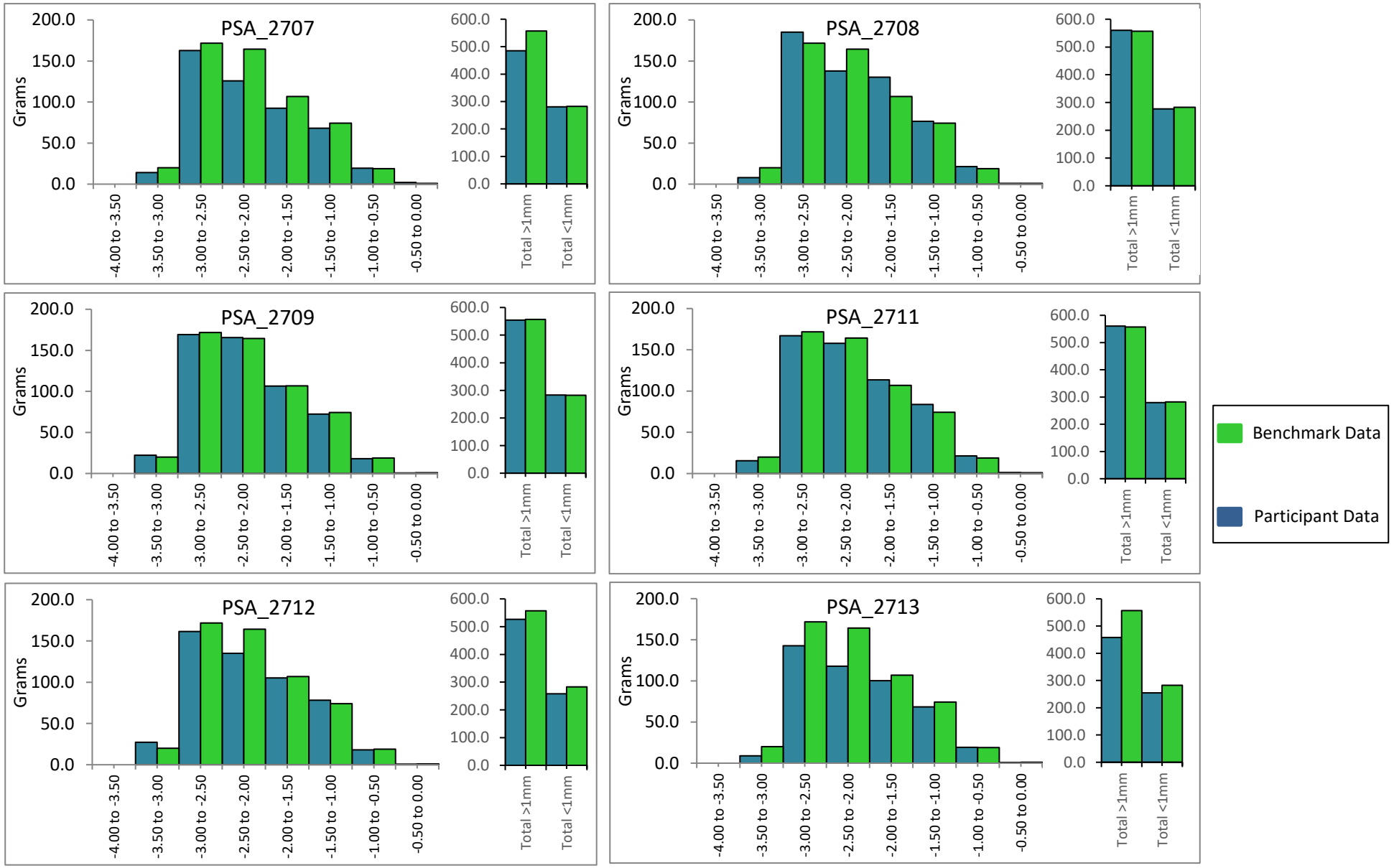
	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	65.34	0.13	0.20	66.04	0.12	0.17	65.29	0.12	0.18
d50	154.56	0.34	0.22	156.45	0.33	0.21	154.53	0.42	0.27
d90	338.27	0.85	0.25	342.73	1.80	0.53	340.08	1.64	0.48

APPENDIX 5. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS77.



NMBAQC Particle Size Analysis
2020/21 - PS77

APPENDIX 5. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS77.



NMBAQC Particle Size Analysis
2020/21 - PS77

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