NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS68

Particle Size Component 2018/19

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APEM

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BENCHMARK DATA– OVERVIEW

Table 1. Summary data for the benchmark replicates distributed as PS68.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis)(Folk (1954))
BM REP 1 (PSA_2530)	NMBAQC	0.00	20.18	79.82	Sandy Mud
BM REP 2 (PSA_2531)	NMBAQC	0.00	20.35	79.65	Sandy Mud
BM REP 3 (PSA_2532)	NMBAQC	0.00	20.72	79.28	Sandy Mud
BM REP 4 (PSA_2533)	NMBAQC	0.00	20.95	79.05	Sandy Mud
BM REP 5 (PSA_2534)	NMBAQC	0.00	20.61	79.39	Sandy Mud

BENCHMARK DATA – SIEVE

Table 2. Summary of sieve data for the benchmark replicates distributed as PS68.

	BM REP 1 (PSA_2530)	BM REP 2 (PSA_2531)	BM REP 3 (PSA_2532)	BM REP 4 (PSA_2533)	BM REP 5 (PSA_2534)
Sieves used	☒	☒	☒	☒	☒
Phi interval; mm	**Weight in grams**				
-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			No sediment greater than 1 mm present therefore no sieve analysis undertaken.		
-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					
Weight (g) < 0.00; >1 mm					
Weight (g) > 0.00; <1 mm					
Total Weight (g)					

BENCHMARK DATA – LASER

Table 3. Summary of final laser data for the benchmark replicates distributed as PS68.

	BM REP 1 (PSA_2530)	BM REP 2 (PSA_2531)	BM REP 3 (PSA_2532)	BM REP 4 (PSA_2533)	BM REP 5 (PSA_2534)
Laser used	☑	☑	☑	☑	☑
0.00 to 0.50; (707 µm)	0.04	0.05	0.01	0.01	0.04
0.50 to 1.00; (500 µm)	0.36	0.49	0.28	0.36	0.57
1.00 to 1.50; (353.6 µm)	0.89	0.98	0.98	0.94	0.97
1.50 to 2.00; (250 µm)	1.05	0.94	1.16	1.04	1.05
2.00 to 2.50; (176.8 µm)	2.01	2.07	2.12	2.18	2.07
2.50 to 3.00; (125 µm)	3.50	3.50	3.69	3.77	3.55
3.00 to 3.50; (88.39 µm)	5.58	5.64	5.67	5.80	5.66
3.50 to 4.00; (62.5 µm)	6.76	6.67	6.81	6.85	6.68
4.00 to 4.50; (44.19 µm)	8.51	8.40	8.48	8.57	8.44
4.50 to 5.00; (31.25 µm)	10.36	10.18	10.23	10.23	10.16
5.00 to 5.50; (22.097 µm)	10.18	10.01	10.09	10.04	10.03
5.50 to 6.00; (15.625 µm)	9.76	9.62	9.68	9.64	9.65
6.00 to 6.50; (11.049 µm)	9.07	8.93	9.03	9.00	9.02
6.50 to 7.00; (7.813 µm)	7.79	7.74	7.81	7.80	7.85
7.00 to 7.50; (5.524 µm)	6.32	6.39	6.36	6.37	6.45
7.50 to 8.00; (3.906 µm)	4.78	4.91	4.80	4.81	4.90
8.00 to 8.50; (2.762 µm)	3.28	3.41	3.28	3.27	3.35
8.50 to 9.00; (1.953 µm)	2.10	2.20	2.08	2.05	2.11
9.00 to 9.50; (1.381 µm)	1.37	1.42	1.33	1.30	1.34
9.50 to 10.00; (0.977 µm)	0.99	1.02	0.95	0.93	0.95
10.00 to 10.50; (0.691 µm)	0.87	0.89	0.83	0.82	0.84
10.50 to 11.00; (0.488 µm)	0.88	0.91	0.85	0.84	0.85
11.00 to 11.50; (0.345 µm)	0.90	0.94	0.87	0.86	0.87
11.50 to 12.00; (0.244 µm)	0.86	0.88	0.83	0.81	0.83
12.00 to 12.50; (0.173 µm)	0.71	0.72	0.70	0.68	0.69
12.50 to 13.00; (0.122 µm)	0.55	0.55	0.55	0.53	0.54
13.00 to 13.50; (0.086 µm)	0.35	0.35	0.36	0.34	0.35
13.50 to 14.00; (0.061 µm)	0.15	0.14	0.15	0.14	0.14
14.00 to 14.50; (0.043 µm)	0.02	0.02	0.02	0.02	0.02
Total	100.00	100.00	100.00	100.00	100.00

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

	Mean	Standard Deviation	Coefficient Of Variation
Benchmark Replicate 1 (PSA_2530)			
d10	2.82	0.18	6.20
d50	21.50	0.49	2.27
d90	109.34	2.31	2.11
Benchmark Replicate 2 (PSA_2531)			
d10	2.73	0.09	3.27
d50	21.27	0.23	1.10
d90	110.80	1.91	1.72
Benchmark Replicate 3 (PSA_2532)			
d10	2.90	0.06	2.16
d50	21.72	0.16	0.74
d90	112.26	1.14	1.02
Benchmark Replicate 4 (PSA_2533)			
d10	2.97	0.10	3.40
d50	21.92	0.28	1.29
d90	112.85	2.97	2.63
Benchmark Replicate 5 (PSA_2534)			
d10	2.90	0.12	4.19
d50	21.52	0.57	2.65
d90	112.37	4.02	3.57

NB. See appendix 1 for full dataset.

Table 5. Laser metadata for Benchmark replicates for PS68.

If laser used, provide manufacturer/model:	Beckman Coulter LS 13320
Dispersion Unit:	Aqueous Liquid Module (ALM)
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)	80
Stirrer speed (% or rpm)	n/a
Ultrasonic duration (seconds)	20 plus during run
Ultrasonic level (eg %, unit as described by instrument manual)	2

Figure 1. Graphical presentations of (a) sieve data and (b) laser data produced by the benchmark lab for sediment distributed as PS68.
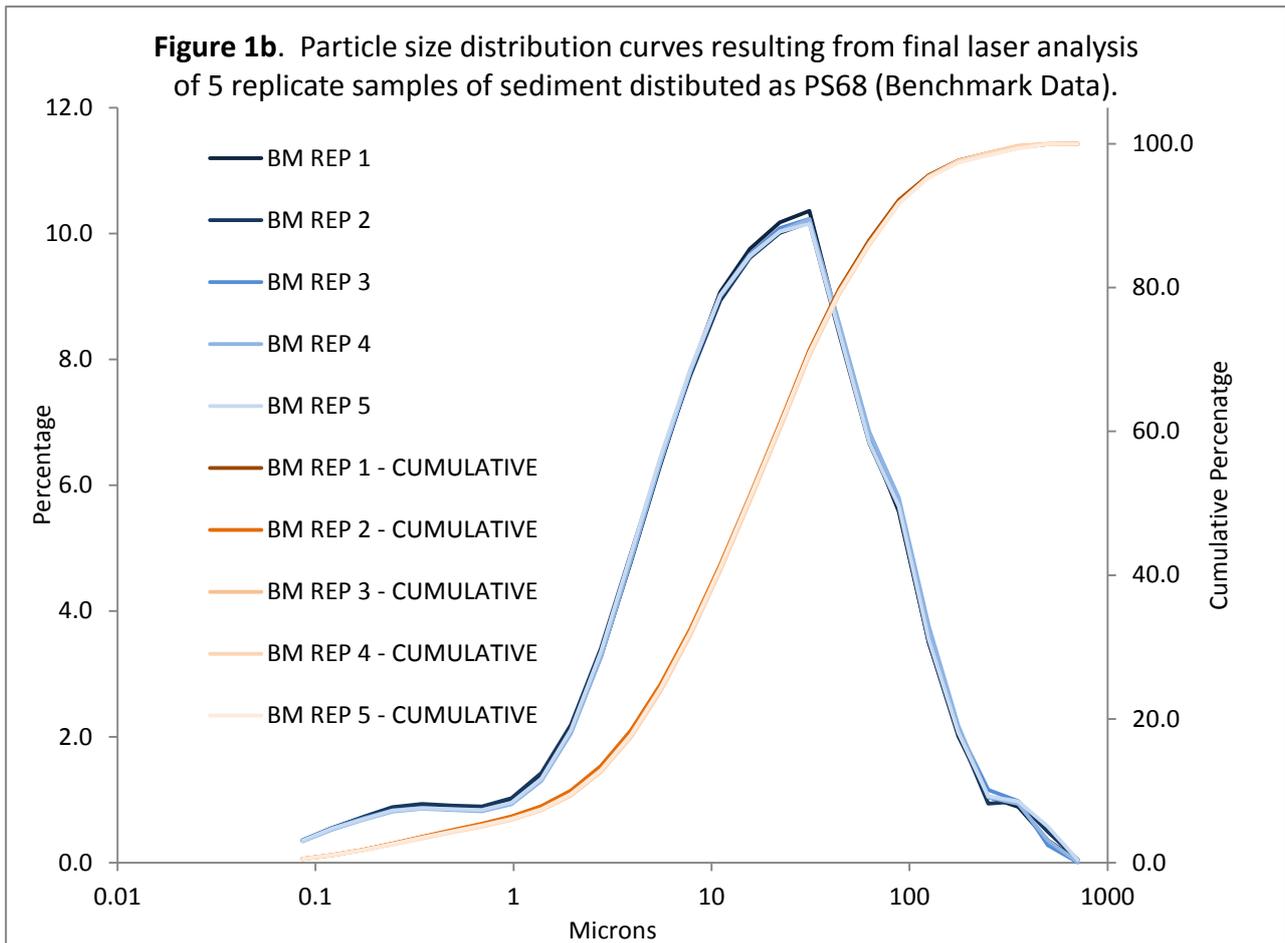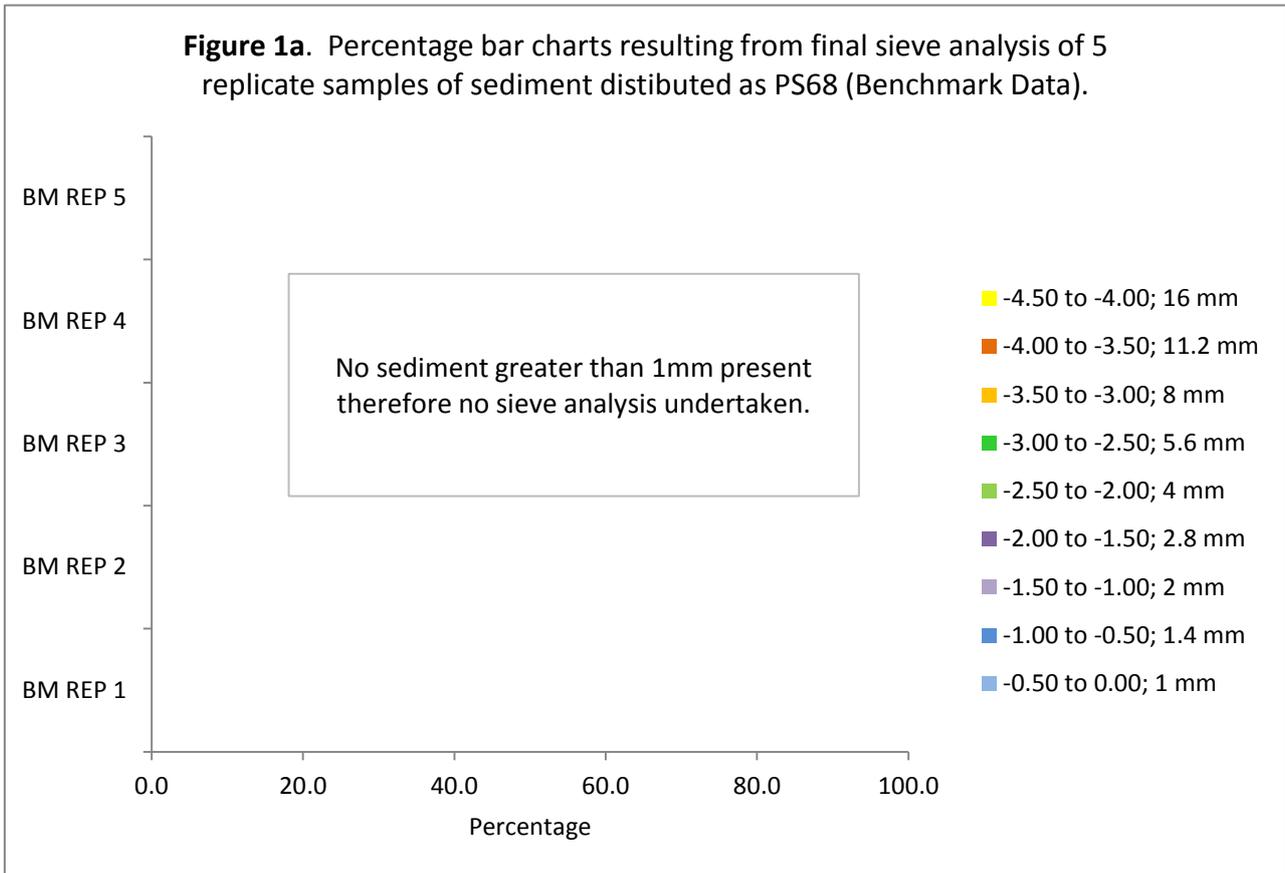
Figure 1a. Percentage bar charts resulting from final sieve analysis of 5 replicate samples of sediment distibuted as PS68 (Benchmark Data).

Figure 1b. Particle size distribution curves resulting from final laser analysis of 5 replicate samples of sediment distibuted as PS68 (Benchmark Data).

NMBAQC Particle Size Analysis
2018/19 - PS68

Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS68 along with sample statistics and Coefficient of Variance.

BM Rep 1 (PSA_2530)

	Mean	StDev	COV
d10	2.82	0.18	6.20
d50	21.50	0.49	2.27
d90	109.34	2.31	2.11

BM Rep 2 (PSA_2531)

	Mean	StDev	COV
d10	2.73	0.09	3.27
d50	21.27	0.23	1.10
d90	110.80	1.91	1.72

BM Rep 3 (PSA_2532)

	Mean	StDev	COV
d10	2.90	0.06	2.16
d50	21.72	0.16	0.74
d90	112.26	1.14	1.02

NMBAQC Particle Size Analysis
2018/19 - PS68

Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS68 along with sample statistics and Coefficient of Variance.

BM Rep 4 (PSA_2533)

	Mean	StDev	COV
d10	2.97	0.10	3.40
d50	21.92	0.28	1.29
d90	112.85	2.97	2.63

BM Rep 5 (PSA_2534)

	Mean	StDev	COV
d10	2.90	0.12	4.19
d50	21.52	0.57	2.65
d90	112.37	4.02	3.57
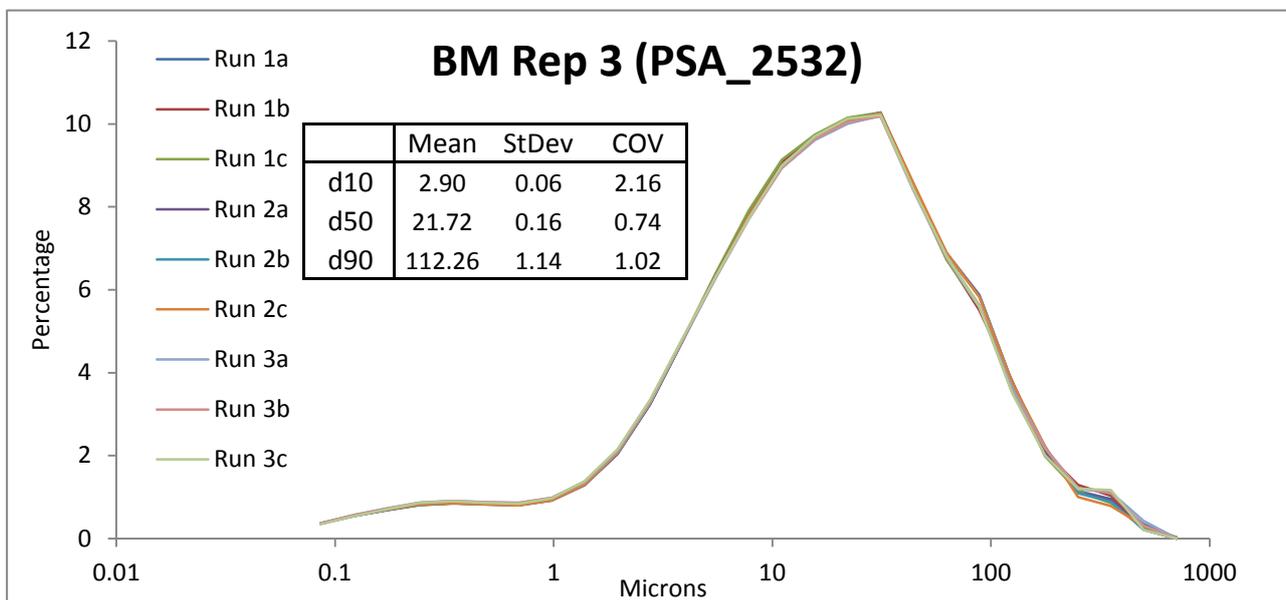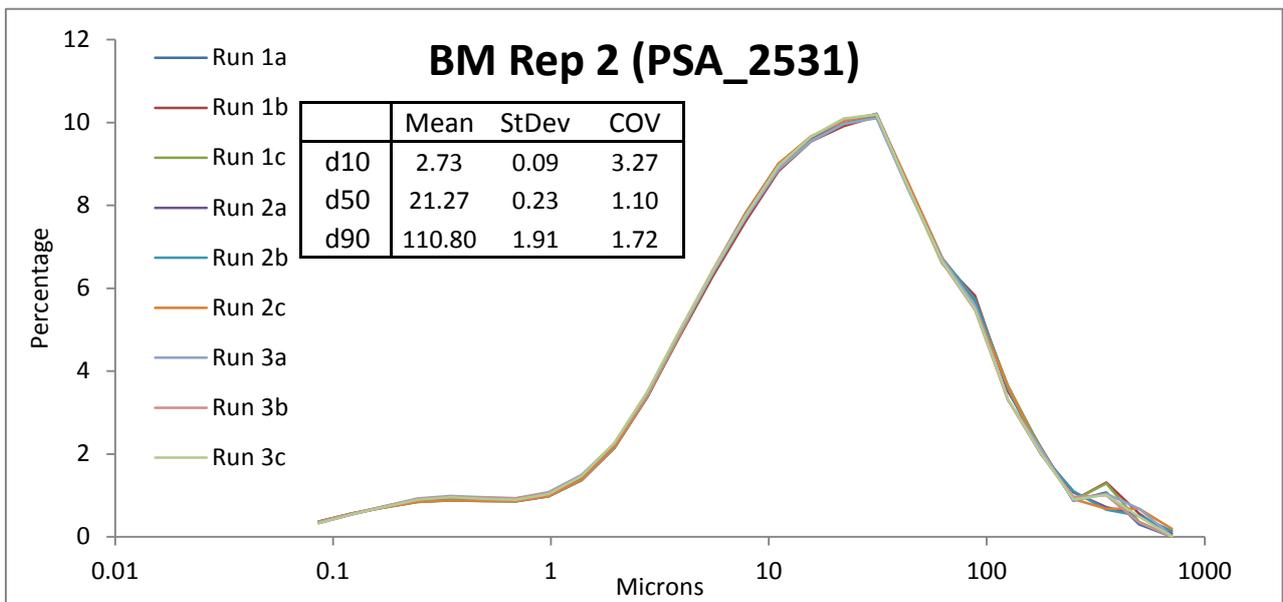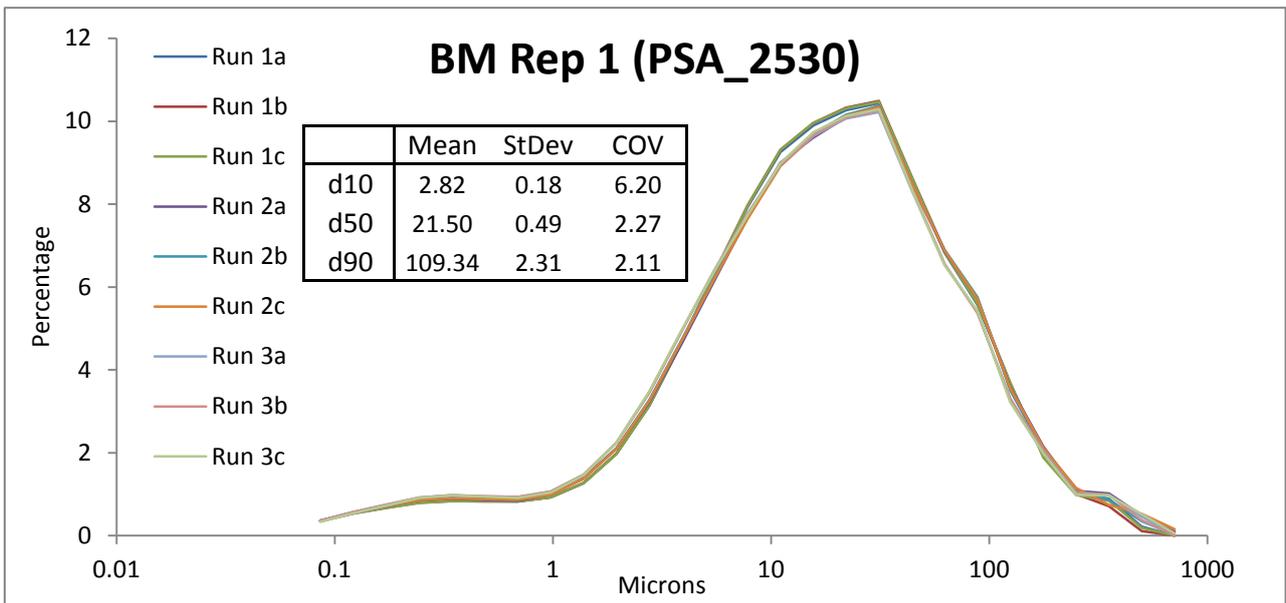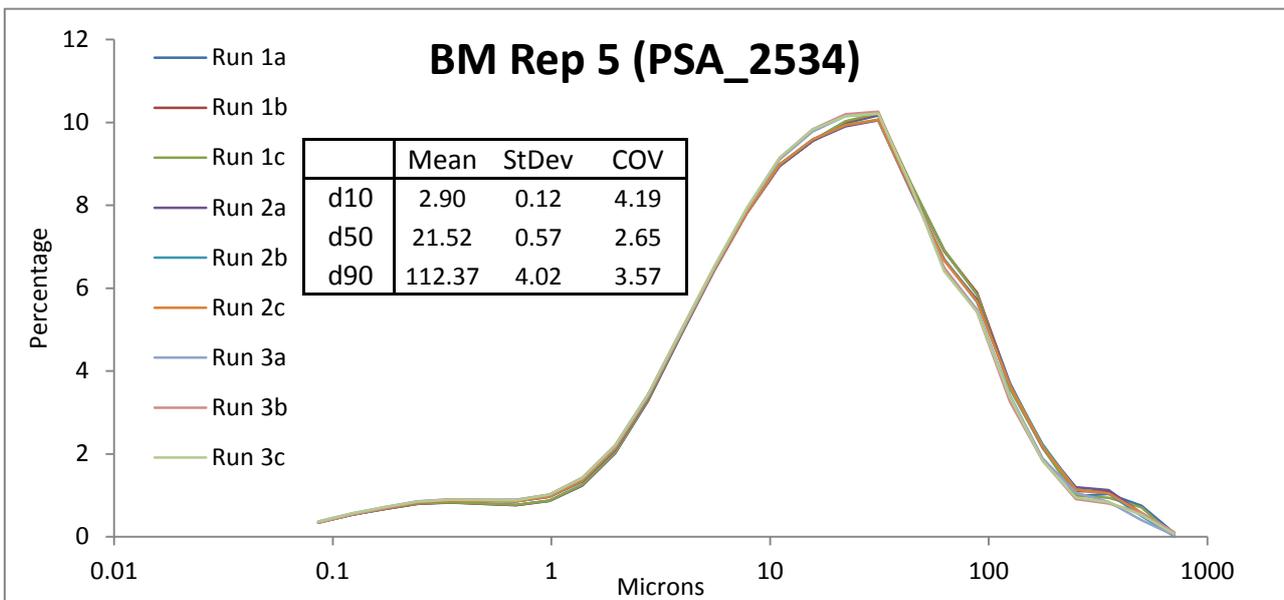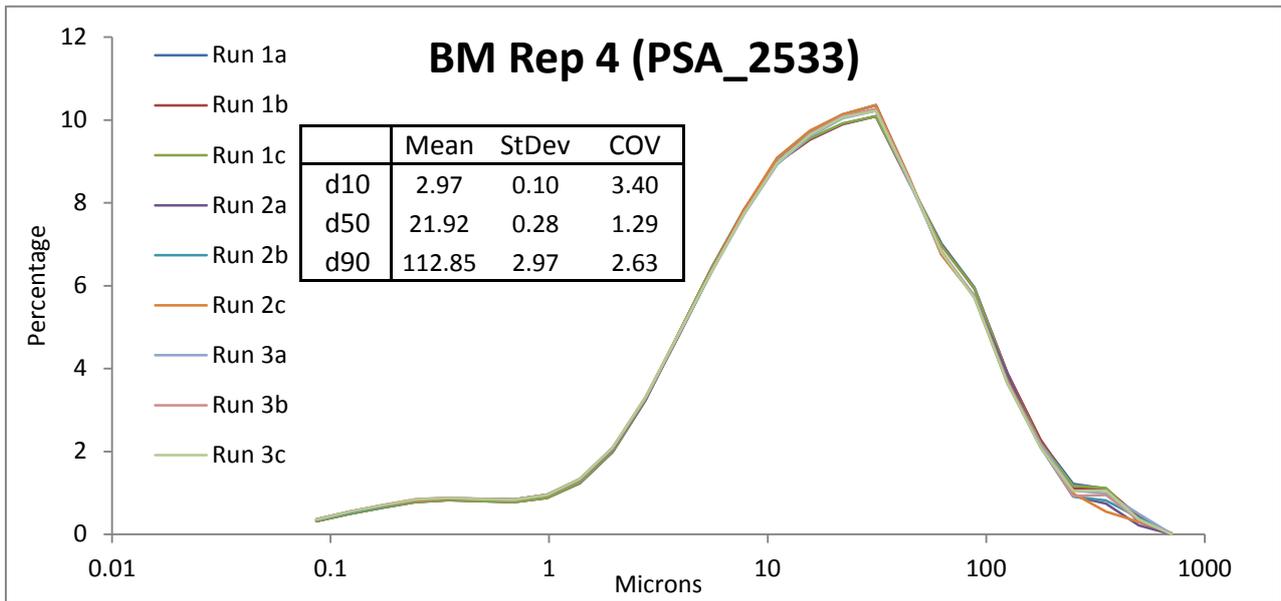
$$COV = \left(\frac{StDev}{Mean}\right) * 100$$

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 laser replicates show good reproducibility.

Figure 3. Particle size distribution curves resulting from analysis of 5 replicate samples of sediment distibuted as PS68 (Benchmark Data).
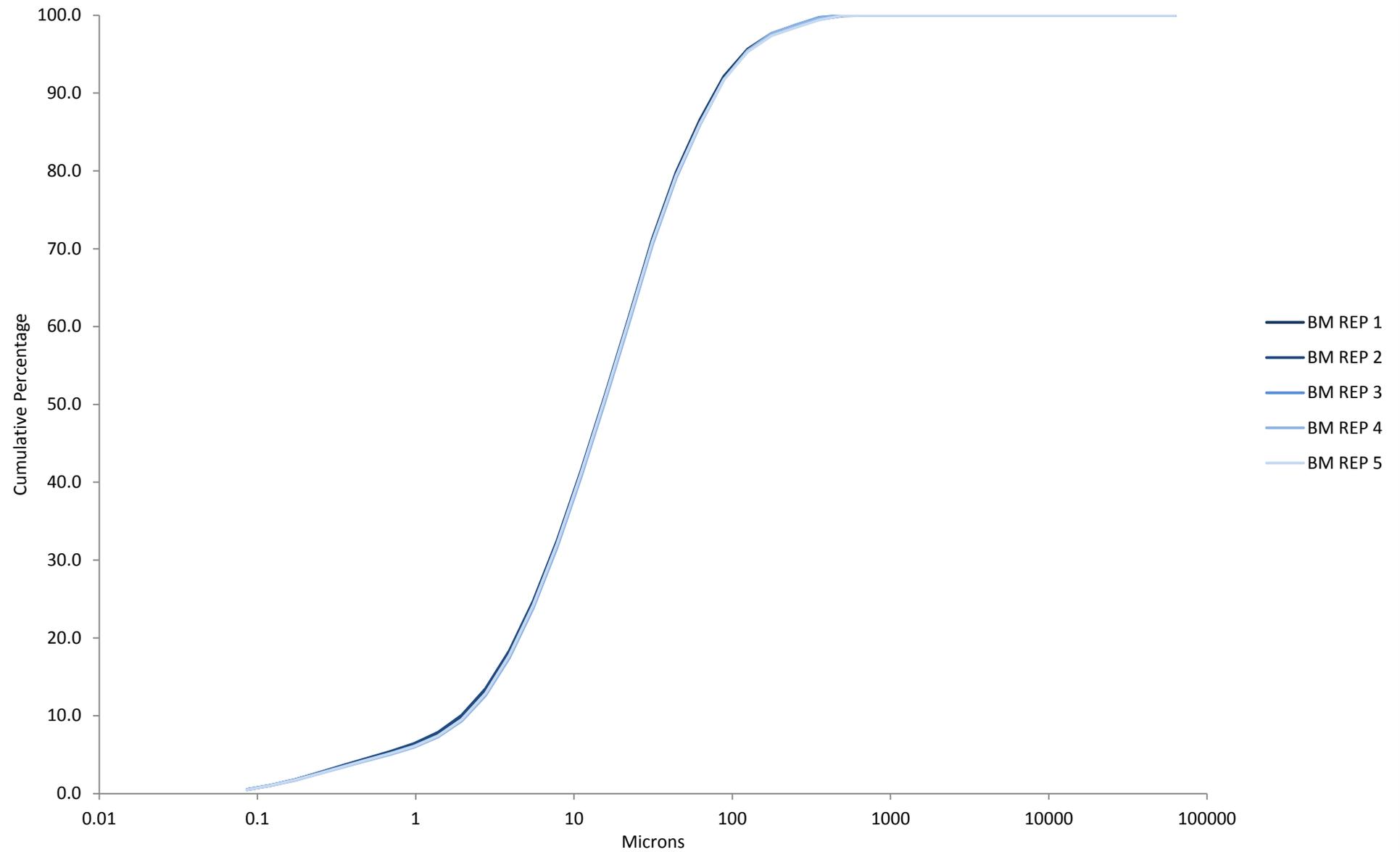
PARTICIPANT DATA

Table 6. Summary of equipment and methods used by participants and sample summary data for sediment distributed as PS68.

Lab	Equipment Used Sieves	Equipment Used Laser	Method Used	Chemical Dispersant Used	Peroxide pre-treatment Used	% Gravel	% Sand	% Mud	Sediment Description (Post Analysis)
Benchmark Average	NO	YES	NMBAQC	NO	NO	0.00	20.56	79.44	Sandy Mud
PSA_2501	YES	NO	OTHER	YES	NO	0.0	9.2	90.8	Mud
PSA_2502	NO	YES	NMBAQC	YES	NO	0.00	22.43	77.57	Sandy Mud
PSA_2503	NO	YES	OTHER	NO	NO	0.00	17.35	82.65	Sandy Mud
PSA_2504	NO	YES	NMBAQC	NO	NO	0	27	73	Sandy Mud
PSA_2505	NO	YES	NMBAQC	NO	NO	0.00	24.19	75.81	Sandy Mud
PSA_2506	YES	YES	NMBAQC	NO	NO	0.50	21.28	78.22	Slightly Gravelly Sandy Mud
PSA_2507	NO	YES	NMBAQC	NO	NO	0.00	13.40	86.60	Sandy Mud
PSA_2508	YES	YES	NMBAQC	NO	NO	0.03	23.49	76.48	Sandy Mud
PSA_2509	NO	YES	NMBAQC	NO	NO	0.0	45.9	54.1	Sandy Mud
PSA_2510	NO	YES	NMBAQC	NO	NO	0.00	14.97	85.03	Sandy Mud
PSA_2511	YES	YES	NMBAQC	NO	NO	0.04	21.54	78.42	Slightly sandy mud
PSA_2512	YES	YES	NMBAQC	NO	NO	0.03	25.53	74.44	Slightly Gravelly Sandy Mud
PSA_2513	NO	YES	NMBAQC	NO	NO	0.00	21.29	78.71	Sandy Mud
PSA_2514	NO	YES	NMBAQC	NO	NO	0.00	20.43	79.57	Sandy Mud
PSA_2515	NO	YES	NMBAQC	NO	NO	0.00	17.10	82.90	Sandy Mud
PSA_2516	YES	YES	NMBAQC	NO	NO	0.00	34.63	65.37	-

NB: Decimal places as supplied by participant.

- Data not provided.

PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS68.

Phi interval (explicit) + sieve mesh	Benchmark Average	PSA_2501	PSA_2502	PSA_2503	PSA_2504	PSA_2505	PSA_2506	PSA_2507	PSA_2508	PSA_2509	PSA_2510	PSA_2511	PSA_2512	PSA_2513	PSA_2514	PSA_2515	PSA_2516
-6.50 to -6.00; 63 mm	-	-	-	-	-	-	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
-5.50 to -5.00; 31.5 mm	-	-	-	-	-	-	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
-4.50 to -4.00; 16 mm	-	-	-	-	-	-	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
-3.50 to -3.00; 8 mm	-	-	-	-	-	-	0.00	-	0.00	-	-	0.00	0.00	-	-	-	0.00
-3.00 to -2.50; 5.6 mm	-	-	-	-	-	-	0.00	-	0.00	-	-	0.00	0.00	-	-	-	0.00
-2.50 to -2.00; 4 mm	-	-	-	-	-	-	0.05	-	0.00	-	-	0.00	0.00	-	-	-	0.00
-2.00 to -1.50; 2.8 mm	-	-	-	-	-	-	0.15	-	0.01	-	-	0.01	0.00	-	-	-	0.00
-1.50 to -1.00; 2 mm	-	-	-	-	-	-	0.10	-	0.01	-	-	0.02	0.02	-	-	-	0.00
-1.00 to -0.50; 1.4 mm	-	-	-	-	-	-	0.07	-	0.08	-	-	0.03	0.07	-	-	-	0.03
-0.50 to 0.00; 1 mm	-	-	-	-	-	-	0.04	-	0.08	-	-	0.04	0.07	-	-	-	0.01
Total	-	-	-	-	-	-	0.41	-	0.18	-	-	0.10	0.16	-	-	-	0.04

Summary Data

< 0.00; >1 mm		-	-	-	-	-	-	0.41	-	0.18	-	-	0.10	0.16	-	-	-	0.04
> 0.00;	Base pan	-	-	-	-	-	-	0.01	-	0.04	-	-	0.01	0.01	-	-	-	0.02
<1 mm	Oven dried	-	-	-	-	-	-	59.54	-	60.87	-	-	70.02	72.29	-	-	-	92.38
Total Sample Weight		-	-	-	-	-	-	59.96	-	61.09	-	-	70.13	72.46	-	-	-	92.43

- No sieve analysis undertaken.

Figure 4. Final sieve data (in percentages) provided by each participant and the Benchmark Average for sediment distributed as PS68.
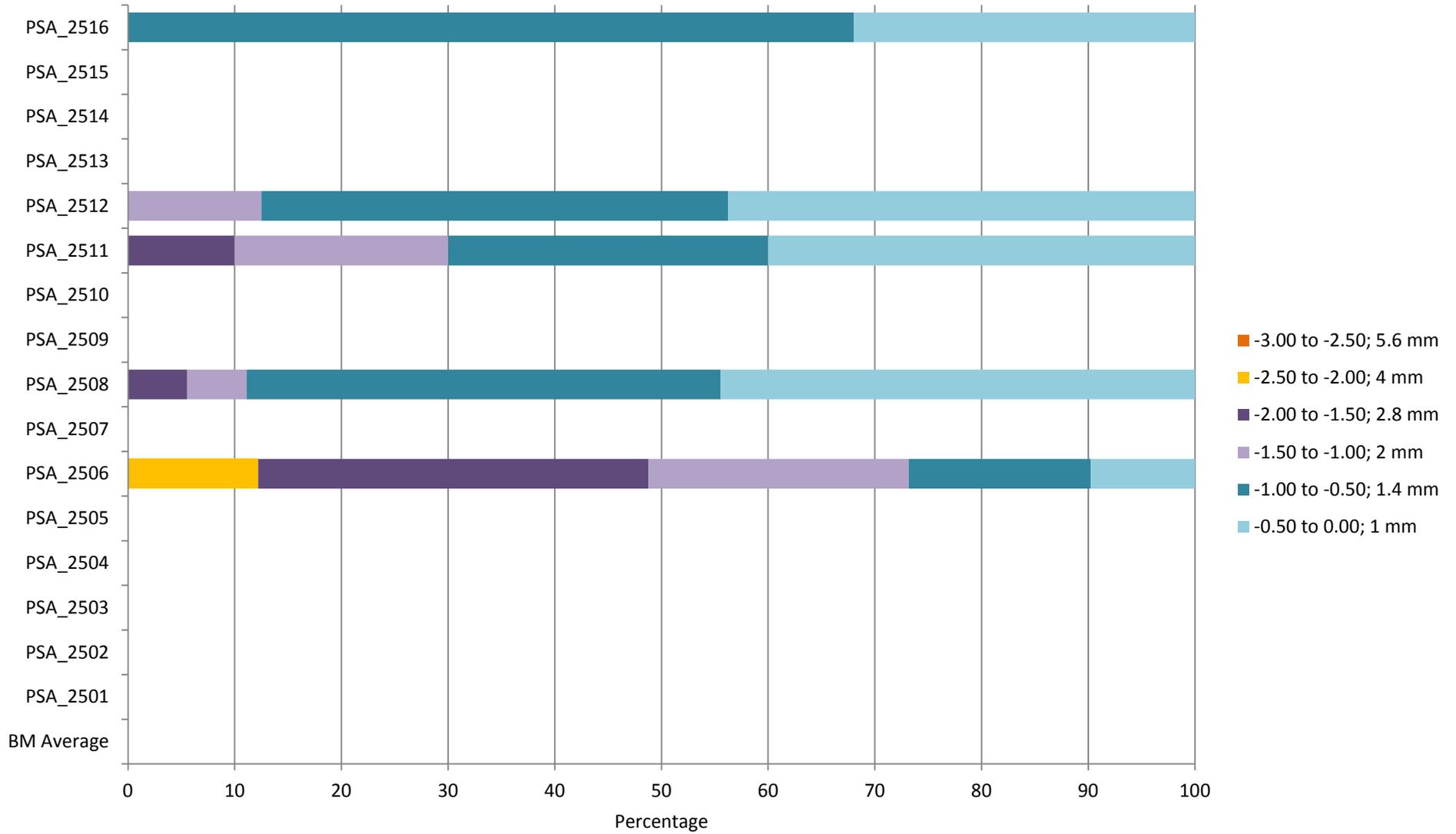
PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS68.

Phi interval (explicit) + sieve mesh	BM Average	PSA_2501 *	PSA_2502	PSA_2503	PSA_2504	PSA_2505	PSA_2506	PSA_2507	PSA_2508
0.00 to 0.50; (707 µm)	0.03	0.00	0.55	0.00	0.00	0.01	0.02	0.00	0.00
0.50 to 1.00; (500 µm)	0.41	0.00	0.63	0.00	0.30	0.21	0.33	0.01	0.04
1.00 to 1.50; (353.6 µm)	0.95	0.91	0.90	0.06	1.35	0.90	0.89	0.04	0.52
1.50 to 2.00; (250 µm)	1.05	1.71	1.45	0.40	2.27	1.75	1.34	0.02	1.74
2.00 to 2.50; (176.8 µm)	2.09	2.02	2.39	1.28	3.44	2.75	1.96	0.20	2.96
2.50 to 3.00; (125 µm)	3.60	1.91	3.74	3.16	5.04	4.20	3.76	1.89	4.31
3.00 to 3.50; (88.39 µm)	5.67	1.18	5.42	4.87	6.59	6.15	5.25	3.61	5.98
3.50 to 4.00; (62.5 µm)	6.75	1.30	7.34	7.58	7.82	8.22	7.69	7.61	7.75
4.00 to 4.50; (44.19 µm)	8.48	19.75	9.18	9.68	8.70	9.85	8.43	8.44	9.39
4.50 to 5.00; (31.25 µm)	10.23	5.99	10.36	10.11	9.17	10.76	10.56	14.75	10.56
5.00 to 5.50; (22.097 µm)	10.07	11.77	10.57	11.11	9.25	10.80	10.60	11.45	10.78
5.50 to 6.00; (15.625 µm)	9.67	9.58	10.04	10.20	9.13	10.15	10.45	12.43	10.05
6.00 to 6.50; (11.049 µm)	9.01	11.47	9.12	9.56	8.80	9.20	9.76	7.02	8.94
6.50 to 7.00; (7.813 µm)	7.80	5.79	7.93	8.38	8.03	8.08	8.96	7.46	7.84
7.00 to 7.50; (5.524 µm)	6.38	4.19	6.50	7.21	6.65	6.68	8.02	4.95	6.76
7.50 to 8.00; (3.906 µm)	4.84	1.60	4.92	5.57	4.94	4.89	6.51	6.12	5.40
8.00 to 8.50; (2.762 µm)	3.32	2.59	3.36	3.83	3.40	3.27	3.96	4.07	3.75
8.50 to 9.00; (1.953 µm)	2.11	1.50	2.07	2.49	2.20	1.73	1.32	3.33	2.27
9.00 to 9.50; (1.381 µm)	1.35	16.75	1.22	1.54	1.38	0.38	0.18	3.02	0.90
9.50 to 10.00; (0.977 µm)	0.97		0.87	1.01	0.86	0.00	0.00	1.35	0.06
10.00 to 10.50; (0.691 µm)	0.85		0.77	1.03	0.47	0.00	0.00	1.00	0.00
10.50 to 11.00; (0.488 µm)	0.87		0.56	0.75	0.20	0.00	0.00	0.44	0.00
11.00 to 11.50; (0.345 µm)	0.89		0.11	0.18	0.00	0.00		0.41	0.00
11.50 to 12.00; (0.244 µm)	0.84		0.00	0.00	0.00	0.00		0.21	0.00
12.00 to 12.50; (0.173 µm)	0.70		0.00	0.00	0.00	0.00		0.15	0.00
12.50 to 13.00; (0.122 µm)	0.55		0.00	0.00	0.00	0.00		0.03	0.00
13.00 to 13.50; (0.086 µm)	0.35		0.00	0.00	0.00	0.00		0.01	0.00
13.50 to 14.00; (0.061 µm)	0.14		0.00		0.00	0.00			0.00
14.00 to 14.50; (0.043 µm)	0.02		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

* Participant does not have a laser; sieve weights have been converted to percentages for comparison.

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS68.

Phi interval (explicit) + sieve mesh	BM Average	PSA_2509	PSA_2510	PSA_2511	PSA_2512	PSA_2513	PSA_2514	PSA_2515	PSA_2516
0.00 to 0.50; (707 µm)	0.03	0.12	0.00	0.01	0.08	0.05	0.01	0.00	0.01
0.50 to 1.00; (500 µm)	0.41	2.00	0.00	0.39	0.64	0.57	0.43	0.44	0.69
1.00 to 1.50; (353.6 µm)	0.95	3.71	0.00	0.49	1.41	1.05	1.05	0.91	2.34
1.50 to 2.00; (250 µm)	1.05	4.47	0.00	0.67	2.05	1.24	1.08	0.93	3.98
2.00 to 2.50; (176.8 µm)	2.09	5.48	1.08	2.77	2.87	2.25	2.09	1.20	5.28
2.50 to 3.00; (125 µm)	3.60	7.57	6.07	4.19	4.32	3.68	3.51	2.30	6.40
3.00 to 3.50; (88.39 µm)	5.67	10.22	2.61	5.69	6.07	5.73	5.57	4.36	7.41
3.50 to 4.00; (62.5 µm)	6.75	12.02	5.21	7.26	7.75	6.73	6.69	6.94	8.49
4.00 to 4.50; (44.19 µm)	8.48	12.03	10.17	8.93	9.13	8.26	8.48	9.28	9.48
4.50 to 5.00; (31.25 µm)	10.23	10.46	11.16	10.15	9.90	9.98	10.24	10.68	9.99
5.00 to 5.50; (22.097 µm)	10.07	8.30	10.98	10.20	10.09	9.78	10.07	10.89	9.75
5.50 to 6.00; (15.625 µm)	9.67	6.32	10.05	9.49	9.54	9.37	9.63	10.20	8.79
6.00 to 6.50; (11.049 µm)	9.01	4.74	9.77	8.87	8.31	8.87	8.95	9.13	7.42
6.50 to 7.00; (7.813 µm)	7.80	3.51	8.60	7.66	7.37	7.91	7.77	8.05	5.97
7.00 to 7.50; (5.524 µm)	6.38	2.56	6.92	6.10	6.17	6.67	6.39	6.98	4.73
7.50 to 8.00; (3.906 µm)	4.84	1.87	5.14	4.52	4.98	5.19	4.88	5.80	3.60
8.00 to 8.50; (2.762 µm)	3.32	1.40	3.50	3.16	3.73	3.60	3.35	4.44	2.30
8.50 to 9.00; (1.953 µm)	2.11	1.01	2.28	2.18	2.33	2.24	2.14	3.01	0.94
9.00 to 9.50; (1.381 µm)	1.35	0.69	1.55	1.51	1.16	1.35	1.37	1.81	0.17
9.50 to 10.00; (0.977 µm)	0.97	0.53	1.18	1.08	0.89	0.89	0.99	1.11	0.37
10.00 to 10.50; (0.691 µm)	0.85	0.51	0.99	0.88	1.00	0.74	0.87	0.85	0.93
10.50 to 11.00; (0.488 µm)	0.87	0.39	0.85	0.84	0.22	0.74	0.88	0.58	0.77
11.00 to 11.50; (0.345 µm)	0.89	0.09	0.68	0.83	0.00	0.76	0.90	0.10	0.17
11.50 to 12.00; (0.244 µm)	0.84	0.00	0.51	0.75	0.00	0.74	0.86	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.70	0.00	0.33	0.59	0.00	0.63	0.71	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.55	0.00	0.21	0.42	0.00	0.51	0.55	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.35	0.00	0.12	0.26	0.00	0.33	0.36	0.00	0.00
13.50 to 14.00; (0.061 µm)	0.14		0.04	0.10	0.00	0.14	0.15	0.00	0.00
14.00 to 14.50; (0.043 µm)	0.02		0.01	0.01	0.00	0.02	0.02	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.98

Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS68, shown as (a) cumulative and (b) differential.

(a) Cumulative Final Laser data provided by each participant and the Benchmark Average for sediment distributed as PS68.

NMBAQC Particle Size Analysis
2018/19 - PS68

Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS68, shown as (a) cumulative and (b) differential.

(b) Differential Final Laser data provided by each participant and the Benchmark Average for sediment distributed as PS68.

NMBAQC Particle Size Analysis
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Figure 6. Particle size distribution curves from all participating laboratories and the Benchmark Average for sediment distributed as PS68.
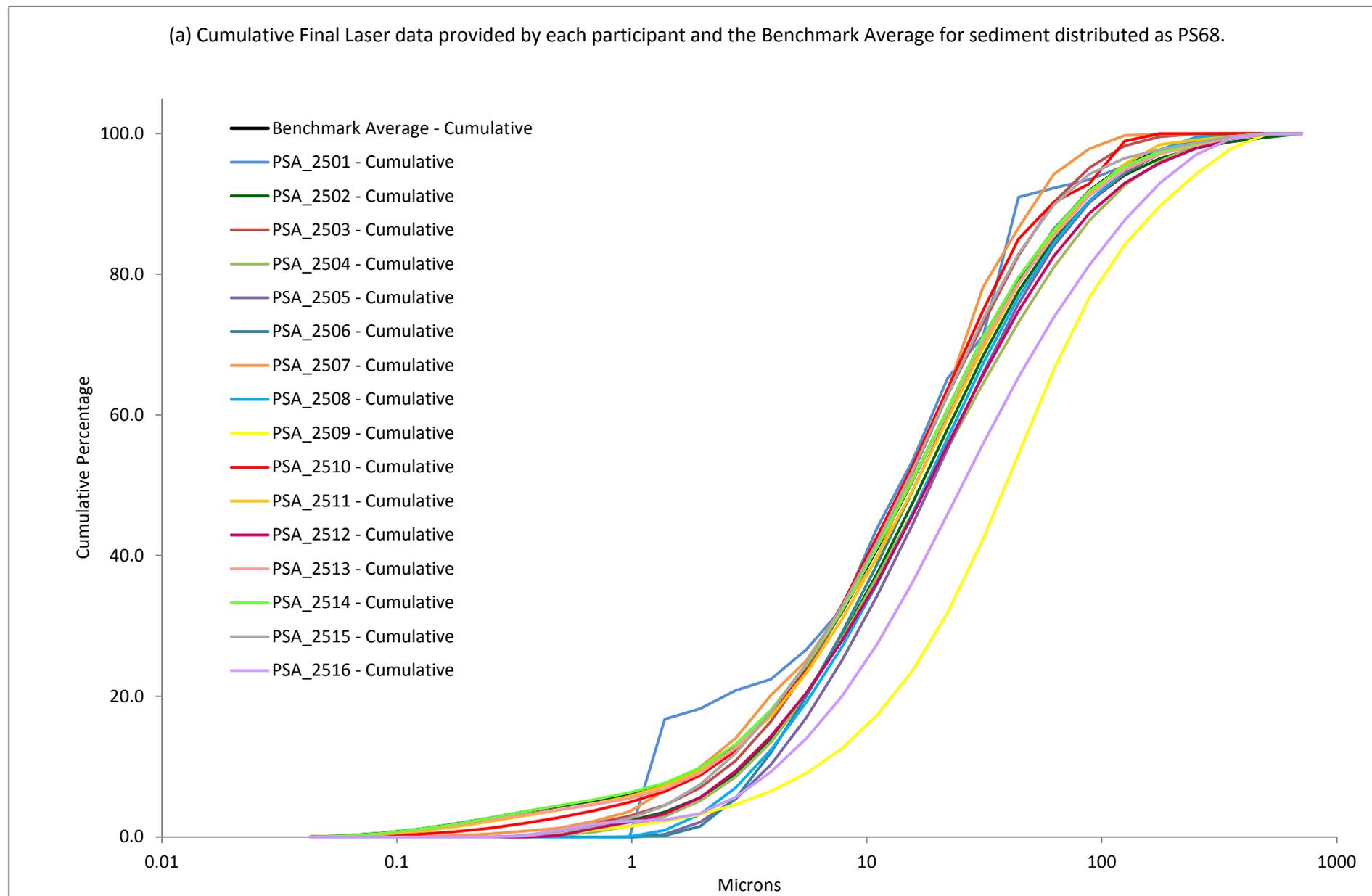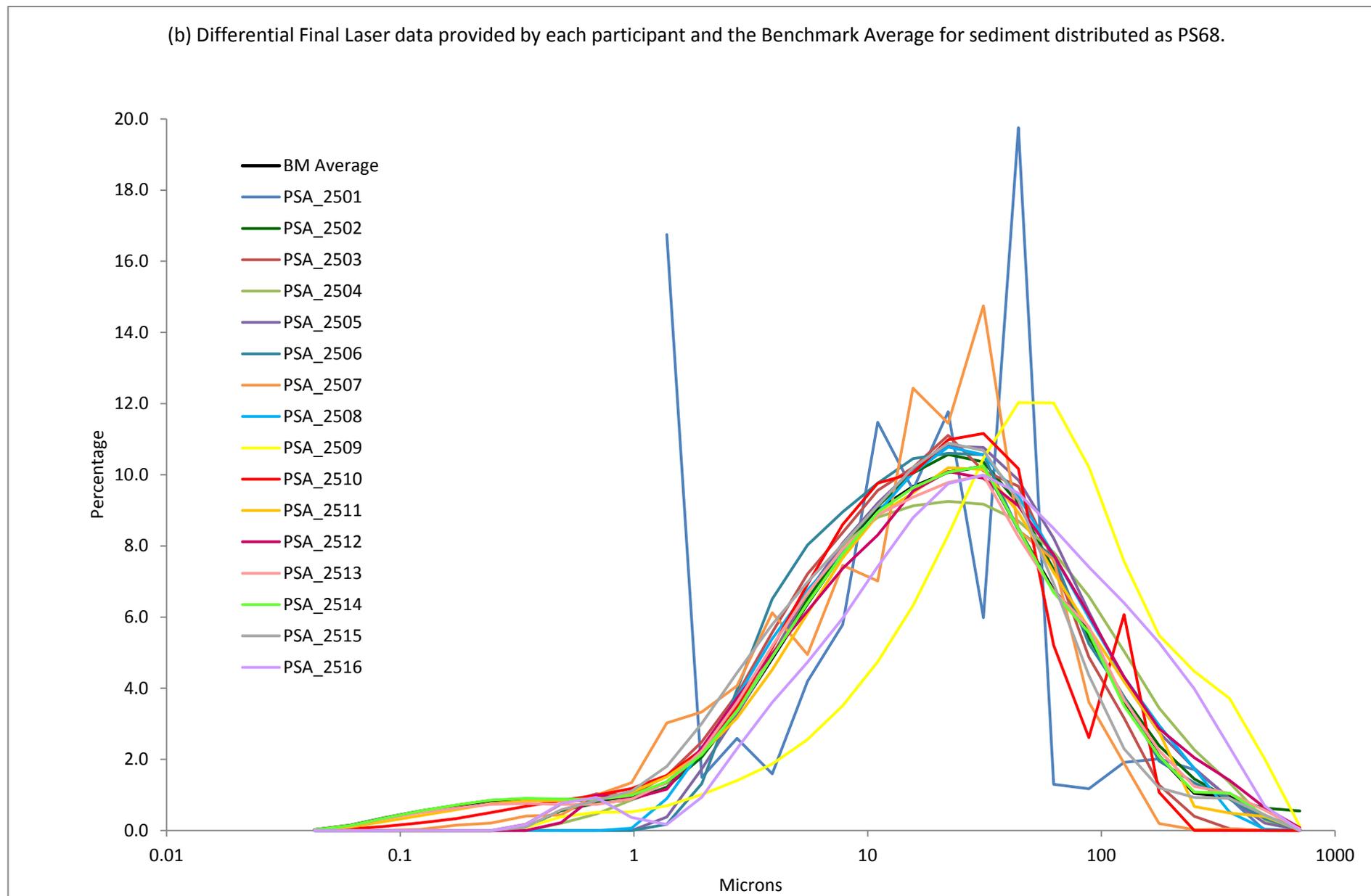
Figure 7. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the Benchmark Average for PS68.
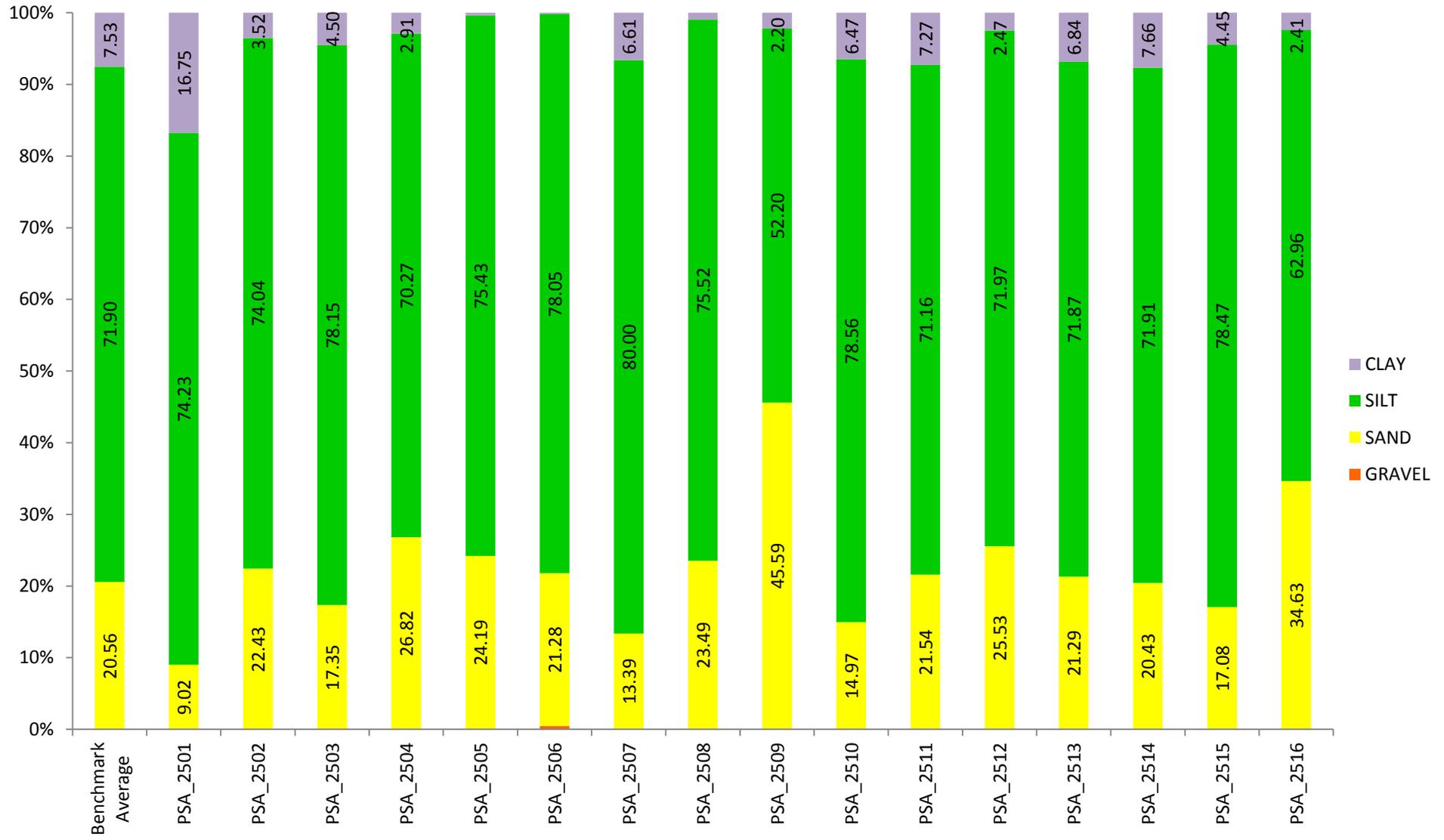
APPENDICES

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS68.

|	Replicate Sample 1								
	Rep 1			Rep 2			Rep 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)	0.001	0.000	0.001	0.095	0.026	0.155	0.018	0.008	0.056
0.50 to 1.00; (500 μm)	0.218	0.105	0.187	0.489	0.349	0.524	0.452	0.374	0.514
1.00 to 1.50; (353.6 μm)	0.889	0.713	0.845	1.022	0.863	0.743	0.984	0.980	0.967
1.50 to 2.00; (250 μm)	1.068	1.004	0.979	1.080	1.060	1.149	1.040	1.038	0.987
2.00 to 2.50; (176.8 μm)	1.967	1.918	1.883	2.153	2.049	2.118	2.041	2.001	1.979
2.50 to 3.00; (125 μm)	3.667	3.676	3.692	3.582	3.511	3.563	3.285	3.316	3.226
3.00 to 3.50; (88.39 μm)	5.575	5.617	5.608	5.728	5.761	5.723	5.406	5.372	5.427
3.50 to 4.00; (62.5 μm)	6.828	6.875	6.842	6.865	6.900	6.880	6.544	6.560	6.531
4.00 to 4.50; (44.19 μm)	8.635	8.657	8.655	8.485	8.533	8.514	8.339	8.383	8.363
4.50 to 5.00; (31.25 μm)	10.439	10.487	10.470	10.375	10.371	10.340	10.222	10.258	10.288
5.00 to 5.50; (22.097 μm)	10.268	10.331	10.311	10.099	10.162	10.136	10.068	10.093	10.126
5.50 to 6.00; (15.625 μm)	9.899	9.956	9.961	9.603	9.692	9.645	9.653	9.674	9.731
6.00 to 6.50; (11.049 μm)	9.254	9.310	9.311	9.006	8.962	8.917	8.954	8.969	8.988
6.50 to 7.00; (7.813 μm)	7.928	7.973	7.963	7.685	7.685	7.649	7.769	7.763	7.733
7.00 to 7.50; (5.524 μm)	6.326	6.356	6.342	6.172	6.249	6.220	6.425	6.411	6.400
7.50 to 8.00; (3.906 μm)	4.669	4.687	4.672	4.649	4.744	4.718	4.955	4.948	4.974
8.00 to 8.50; (2.762 μm)	3.132	3.140	3.128	3.214	3.265	3.244	3.447	3.450	3.476
8.50 to 9.00; (1.953 μm)	1.970	1.974	1.966	2.107	2.104	2.091	2.234	2.243	2.247
9.00 to 9.50; (1.381 μm)	1.267	1.270	1.265	1.392	1.376	1.369	1.466	1.474	1.460
9.50 to 10.00; (0.977 μm)	0.927	0.930	0.928	0.988	0.996	0.991	1.064	1.067	1.044
10.00 to 10.50; (0.691 μm	0.824	0.825	0.823	0.844	0.871	0.867	0.934	0.933	0.913
10.50 to 11.00; (0.488 μm	0.831	0.829	0.825	0.860	0.885	0.880	0.952	0.949	0.938
11.00 to 11.50; (0.345 μm	0.842	0.836	0.831	0.897	0.910	0.904	0.978	0.974	0.970
11.50 to 12.00; (0.244 μm	0.804	0.794	0.788	0.857	0.865	0.860	0.921	0.917	0.908
12.00 to 12.50; (0.173 μm	0.686	0.675	0.669	0.708	0.721	0.716	0.752	0.750	0.728
12.50 to 13.00; (0.122 μm	0.549	0.538	0.533	0.542	0.560	0.556	0.572	0.571	0.542
13.00 to 13.50; (0.086 μm	0.363	0.355	0.351	0.345	0.361	0.358	0.361	0.360	0.336
13.50 to 14.00; (0.061 μm	0.153	0.149	0.147	0.141	0.149	0.147	0.144	0.144	0.132
14.00 to 14.50; (0.043 μm	0.021	0.020	0.020	0.019	0.020	0.020	0.019	0.019	0.017

	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
d10	3.005	3.019	3.035	2.853	2.816	2.834	2.597	2.596	2.664
d50	21.756	21.628	21.695	22.075	21.772	21.976	20.863	20.854	20.920
d90	109.092	106.583	107.686	113.608	109.893	112.455	108.693	107.889	108.120

	Mean	StDev	COV
d10	2.824	0.175	6.200
d50	21.504	0.489	2.273
d90	109.336	2.309	2.111

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS68.

	Replicate Sample 2								
	Rep 1			Rep 2			Rep 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)	0.001	0.004	0.001	0.078	0.139	0.194	0.018	0.002	0.011
0.50 to 1.00; (500 µm)	0.303	0.564	0.364	0.508	0.511	0.682	0.679	0.350	0.483
1.00 to 1.50; (353.6 µm)	1.076	1.310	1.289	0.717	0.654	0.678	1.042	1.003	1.012
1.50 to 2.00; (250 µm)	0.872	0.878	0.880	1.075	1.101	0.913	0.882	0.968	0.905
2.00 to 2.50; (176.8 µm)	2.132	2.168	2.132	2.043	2.007	2.027	2.125	2.009	2.024
2.50 to 3.00; (125 µm)	3.619	3.518	3.653	3.578	3.576	3.642	3.307	3.311	3.321
3.00 to 3.50; (88.39 µm)	5.701	5.822	5.686	5.726	5.735	5.559	5.584	5.475	5.499
3.50 to 4.00; (62.5 µm)	6.660	6.644	6.602	6.718	6.721	6.728	6.709	6.620	6.641
4.00 to 4.50; (44.19 µm)	8.425	8.366	8.364	8.429	8.454	8.479	8.318	8.383	8.368
4.50 to 5.00; (31.25 µm)	10.212	10.142	10.185	10.188	10.194	10.192	10.108	10.199	10.192
5.00 to 5.50; (22.097 µm)	9.976	9.909	9.966	10.025	10.035	10.035	9.964	10.077	10.097
5.50 to 6.00; (15.625 µm)	9.592	9.545	9.598	9.637	9.653	9.664	9.545	9.652	9.659
6.00 to 6.50; (11.049 µm)	8.918	8.822	8.903	8.996	8.997	9.007	8.863	8.946	8.952
6.50 to 7.00; (7.813 µm)	7.746	7.617	7.707	7.820	7.804	7.804	7.694	7.768	7.744
7.00 to 7.50; (5.524 µm)	6.393	6.288	6.358	6.417	6.398	6.396	6.378	6.440	6.422
7.50 to 8.00; (3.906 µm)	4.902	4.847	4.888	4.893	4.883	4.883	4.932	4.986	4.993
8.00 to 8.50; (2.762 µm)	3.377	3.375	3.382	3.369	3.371	3.372	3.441	3.479	3.499
8.50 to 9.00; (1.953 µm)	2.162	2.207	2.172	2.144	2.152	2.152	2.253	2.252	2.267
9.00 to 9.50; (1.381 µm)	1.407	1.464	1.411	1.368	1.374	1.373	1.495	1.468	1.465
9.50 to 10.00; (0.977 µm)	1.026	1.055	1.022	0.980	0.980	0.978	1.079	1.056	1.033
10.00 to 10.50; (0.691 µm	0.910	0.914	0.901	0.862	0.857	0.854	0.937	0.922	0.895
10.50 to 11.00; (0.488 µm	0.931	0.933	0.919	0.872	0.865	0.862	0.958	0.939	0.920
11.00 to 11.50; (0.345 µm	0.954	0.963	0.942	0.890	0.883	0.880	0.990	0.965	0.955
11.50 to 12.00; (0.244 µm	0.897	0.901	0.886	0.848	0.842	0.839	0.926	0.909	0.898
12.00 to 12.50; (0.173 µm	0.733	0.723	0.725	0.715	0.712	0.709	0.739	0.741	0.722
12.50 to 13.00; (0.122 µm	0.559	0.538	0.554	0.564	0.562	0.560	0.547	0.564	0.539
13.00 to 13.50; (0.086 µm	0.354	0.334	0.351	0.368	0.367	0.366	0.337	0.355	0.334
13.50 to 14.00; (0.061 µm	0.142	0.132	0.141	0.152	0.152	0.152	0.132	0.141	0.131
14.00 to 14.50; (0.043 µm	0.019	0.017	0.019	0.020	0.020	0.020	0.017	0.018	0.017

	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
d10	2.721	2.685	2.744	2.825	2.829	2.835	2.593	2.625	2.688
d50	21.296	21.562	21.409	21.382	21.415	21.418	21.106	20.861	20.980
d90	110.715	113.924	112.830	110.743	110.693	111.288	110.772	107.673	108.519

	Mean	StDev	COV
d10	2.727	0.089	3.273
d50	21.270	0.234	1.102
d90	110.795	1.908	1.722

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS68.

	Replicate Sample 3								
	Rep 1			Rep 2			Rep 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)	0.009	0.004	0.036	0.001	0.001	0.002	0.007	0.002	0.000
0.50 to 1.00; (500 µm)	0.349	0.217	0.275	0.216	0.223	0.300	0.426	0.314	0.206
1.00 to 1.50; (353.6 µm)	0.959	1.031	0.853	0.932	0.885	0.784	1.116	1.094	1.170
1.50 to 2.00; (250 µm)	1.150	1.293	1.143	1.104	1.091	1.002	1.192	1.227	1.201
2.00 to 2.50; (176.8 µm)	2.069	2.091	1.991	2.145	2.191	2.231	2.199	2.180	2.014
2.50 to 3.00; (125 µm)	3.718	3.796	3.734	3.777	3.749	3.757	3.629	3.540	3.516
3.00 to 3.50; (88.39 µm)	5.603	5.504	5.587	5.881	5.850	5.827	5.584	5.628	5.604
3.50 to 4.00; (62.5 µm)	6.767	6.755	6.722	6.891	6.857	6.894	6.775	6.793	6.814
4.00 to 4.50; (44.19 µm)	8.454	8.487	8.471	8.526	8.547	8.581	8.408	8.417	8.431
4.50 to 5.00; (31.25 µm)	10.224	10.203	10.275	10.275	10.276	10.262	10.196	10.181	10.218
5.00 to 5.50; (22.097 µm)	10.101	10.098	10.150	10.074	10.089	10.095	10.010	10.043	10.127
5.50 to 6.00; (15.625 µm)	9.703	9.703	9.748	9.645	9.667	9.663	9.611	9.646	9.706
6.00 to 6.50; (11.049 µm)	9.107	9.091	9.137	9.009	9.006	9.007	8.935	8.946	8.989
6.50 to 7.00; (7.813 µm)	7.897	7.882	7.921	7.806	7.792	7.792	7.716	7.719	7.728
7.00 to 7.50; (5.524 µm)	6.392	6.385	6.414	6.361	6.353	6.352	6.304	6.316	6.333
7.50 to 8.00; (3.906 µm)	4.782	4.785	4.807	4.793	4.798	4.804	4.789	4.814	4.852
8.00 to 8.50; (2.762 µm)	3.242	3.249	3.267	3.245	3.261	3.272	3.287	3.315	3.352
8.50 to 9.00; (1.953 µm)	2.049	2.057	2.071	2.033	2.054	2.062	2.101	2.124	2.152
9.00 to 9.50; (1.381 µm)	1.313	1.317	1.326	1.286	1.302	1.304	1.359	1.372	1.385
9.50 to 10.00; (0.977 µm)	0.951	0.951	0.955	0.914	0.922	0.921	0.980	0.983	0.974
10.00 to 10.50; (0.691 µm	0.839	0.837	0.838	0.804	0.806	0.804	0.863	0.860	0.839
10.50 to 11.00; (0.488 µm	0.846	0.840	0.840	0.825	0.824	0.823	0.882	0.877	0.864
11.00 to 11.50; (0.345 µm	0.859	0.850	0.851	0.855	0.853	0.853	0.910	0.906	0.903
11.50 to 12.00; (0.244 µm	0.819	0.809	0.811	0.821	0.820	0.821	0.869	0.866	0.861
12.00 to 12.50; (0.173 µm	0.698	0.688	0.690	0.696	0.697	0.698	0.731	0.727	0.710
12.50 to 13.00; (0.122 µm	0.556	0.547	0.550	0.550	0.551	0.552	0.572	0.568	0.543
13.00 to 13.50; (0.086 µm	0.367	0.360	0.362	0.360	0.362	0.363	0.372	0.369	0.346
13.50 to 14.00; (0.061 µm	0.154	0.151	0.152	0.153	0.153	0.154	0.156	0.154	0.142
14.00 to 14.50; (0.043 µm	0.021	0.020	0.021	0.021	0.021	0.021	0.021	0.021	0.019

	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
d10	2.922	2.936	2.922	2.970	2.955	2.951	2.816	2.812	2.838
d50	21.633	21.689	21.506	21.957	21.906	21.888	21.735	21.640	21.553
d90	112.212	113.239	110.640	112.259	111.955	111.485	114.382	112.965	111.198

	Mean	StDev	COV
d10	2.903	0.063	2.156
d50	21.723	0.161	0.742
d90	112.259	1.141	1.016

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS68.

	Replicate Sample 4								
	Rep 1			Rep 2			Rep 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)	0.002	0.005	0.002	0.001	0.013	0.033	0.012	0.002	0.002
0.50 to 1.00; (500 µm)	0.300	0.430	0.358	0.217	0.398	0.305	0.492	0.346	0.360
1.00 to 1.50; (353.6 µm)	1.107	1.102	1.117	0.739	0.818	0.547	0.986	0.953	1.060
1.50 to 2.00; (250 µm)	1.221	1.113	1.176	0.926	0.910	0.986	1.056	0.926	1.048
2.00 to 2.50; (176.8 µm)	2.268	2.297	2.209	2.133	2.110	2.189	2.191	2.123	2.101
2.50 to 3.00; (125 µm)	3.903	3.901	3.845	3.869	3.714	3.707	3.654	3.656	3.657
3.00 to 3.50; (88.39 µm)	5.960	5.928	5.936	5.733	5.760	5.746	5.753	5.717	5.707
3.50 to 4.00; (62.5 µm)	7.014	6.977	6.957	6.749	6.767	6.747	6.825	6.826	6.805
4.00 to 4.50; (44.19 µm)	8.524	8.516	8.559	8.626	8.578	8.630	8.528	8.593	8.572
4.50 to 5.00; (31.25 µm)	10.091	10.091	10.093	10.360	10.355	10.356	10.221	10.268	10.224
5.00 to 5.50; (22.097 µm)	9.896	9.902	9.922	10.125	10.138	10.139	10.046	10.092	10.067
5.50 to 6.00; (15.625 µm)	9.525	9.527	9.558	9.725	9.734	9.742	9.605	9.666	9.644
6.00 to 6.50; (11.049 µm)	8.965	8.963	8.978	9.081	9.065	9.089	8.928	8.974	8.959
6.50 to 7.00; (7.813 µm)	7.845	7.836	7.839	7.839	7.803	7.844	7.731	7.761	7.745
7.00 to 7.50; (5.524 µm)	6.426	6.418	6.420	6.351	6.336	6.360	6.325	6.352	6.339
7.50 to 8.00; (3.906 µm)	4.833	4.834	4.841	4.773	4.787	4.791	4.808	4.834	4.828
8.00 to 8.50; (2.762 µm)	3.235	3.243	3.255	3.251	3.269	3.274	3.290	3.312	3.311
8.50 to 9.00; (1.953 µm)	1.987	1.999	2.008	2.060	2.076	2.080	2.084	2.100	2.101
9.00 to 9.50; (1.381 µm)	1.234	1.243	1.248	1.320	1.332	1.330	1.329	1.339	1.340
9.50 to 10.00; (0.977 µm)	0.877	0.881	0.883	0.955	0.956	0.957	0.948	0.953	0.952
10.00 to 10.50; (0.691 µm	0.779	0.780	0.781	0.845	0.838	0.842	0.834	0.836	0.832
10.50 to 11.00; (0.488 µm	0.802	0.802	0.803	0.853	0.848	0.849	0.855	0.857	0.852
11.00 to 11.50; (0.345 µm	0.825	0.825	0.825	0.867	0.866	0.862	0.883	0.887	0.881
11.50 to 12.00; (0.244 µm	0.779	0.781	0.781	0.824	0.819	0.820	0.842	0.846	0.841
12.00 to 12.50; (0.173 µm	0.644	0.645	0.645	0.697	0.681	0.694	0.704	0.707	0.704
12.50 to 13.00; (0.122 µm	0.496	0.497	0.498	0.551	0.529	0.550	0.548	0.550	0.548
13.00 to 13.50; (0.086 µm	0.317	0.318	0.318	0.360	0.341	0.360	0.355	0.355	0.354
13.50 to 14.00; (0.061 µm	0.128	0.129	0.129	0.150	0.140	0.150	0.147	0.147	0.147
14.00 to 14.50; (0.043 µm	0.017	0.017	0.017	0.020	0.019	0.020	0.020	0.020	0.020

d10	3.112	3.101	3.094	2.913	2.929	2.908	2.896	2.880	2.889
d50	22.319	22.301	22.232	21.690	21.755	21.620	21.909	21.706	21.784
d90	116.580	116.865	115.913	110.002	110.589	109.252	113.445	110.769	112.248

	Mean	StDev	COV
d10	2.969	0.101	3.399
d50	21.924	0.282	1.287
d90	112.851	2.971	2.633

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS68.

	Replicate Sample 5								
	Rep 1			Rep 2			Rep 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)	0.088	0.006	0.009	0.029	0.015	0.033	0.033	0.110	0.072
0.50 to 1.00; (500 μm)	0.750	0.562	0.709	0.561	0.500	0.579	0.404	0.582	0.525
1.00 to 1.50; (353.6 μm)	1.033	1.089	0.944	1.129	1.040	1.050	0.842	0.803	0.835
1.50 to 2.00; (250 μm)	0.976	1.106	0.995	1.194	1.151	1.137	1.068	0.908	0.947
2.00 to 2.50; (176.8 μm)	2.178	2.152	2.147	2.170	2.231	2.175	1.890	1.835	1.824
2.50 to 3.00; (125 μm)	3.710	3.645	3.568	3.678	3.662	3.652	3.412	3.261	3.370
3.00 to 3.50; (88.39 μm)	5.854	5.892	5.839	5.720	5.668	5.671	5.481	5.428	5.427
3.50 to 4.00; (62.5 μm)	6.915	6.892	6.907	6.686	6.700	6.668	6.482	6.481	6.405
4.00 to 4.50; (44.19 μm)	8.498	8.507	8.520	8.336	8.376	8.374	8.456	8.437	8.458
4.50 to 5.00; (31.25 μm)	10.165	10.199	10.217	10.051	10.060	10.068	10.216	10.256	10.209
5.00 to 5.50; (22.097 μm)	9.983	10.009	10.026	9.905	9.936	9.932	10.148	10.195	10.150
5.50 to 6.00; (15.625 μm)	9.551	9.559	9.567	9.561	9.589	9.591	9.784	9.838	9.831
6.00 to 6.50; (11.049 μm)	8.938	8.953	8.984	8.964	8.977	8.977	9.105	9.137	9.149
6.50 to 7.00; (7.813 μm)	7.806	7.812	7.840	7.822	7.822	7.817	7.896	7.904	7.931
7.00 to 7.50; (5.524 μm)	6.412	6.415	6.438	6.426	6.429	6.425	6.468	6.491	6.502
7.50 to 8.00; (3.906 μm)	4.855	4.862	4.882	4.881	4.897	4.897	4.927	4.966	4.964
8.00 to 8.50; (2.762 μm)	3.274	3.285	3.301	3.328	3.354	3.358	3.401	3.430	3.434
8.50 to 9.00; (1.953 μm)	2.014	2.026	2.039	2.096	2.118	2.126	2.184	2.204	2.203
9.00 to 9.50; (1.381 μm)	1.237	1.248	1.257	1.335	1.348	1.355	1.412	1.427	1.418
9.50 to 10.00; (0.977 μm)	0.865	0.870	0.875	0.967	0.971	0.973	1.019	1.022	1.015
10.00 to 10.50; (0.691 μm	0.766	0.767	0.770	0.858	0.858	0.856	0.892	0.885	0.883
10.50 to 11.00; (0.488 μm	0.795	0.796	0.799	0.869	0.867	0.864	0.894	0.889	0.884
11.00 to 11.50; (0.345 μm	0.828	0.830	0.835	0.881	0.879	0.876	0.906	0.905	0.896
11.50 to 12.00; (0.244 μm	0.795	0.798	0.803	0.829	0.829	0.826	0.858	0.852	0.850
12.00 to 12.50; (0.173 μm	0.672	0.675	0.679	0.688	0.688	0.686	0.720	0.703	0.715
12.50 to 13.00; (0.122 μm	0.529	0.532	0.534	0.535	0.535	0.534	0.565	0.542	0.563
13.00 to 13.50; (0.086 μm	0.346	0.348	0.348	0.344	0.344	0.343	0.367	0.347	0.366
13.50 to 14.00; (0.061 μm	0.146	0.147	0.147	0.139	0.139	0.139	0.151	0.141	0.151
14.00 to 14.50; (0.043 μm	0.020	0.020	0.020	0.018	0.018	0.018	0.020	0.019	0.020

	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
d10	3.066	3.051	3.034	2.892	2.880	2.880	2.765	2.780	2.771
d50	22.213	22.141	22.003	21.668	21.575	21.576	20.902	20.810	20.755
d90	115.980	114.843	113.495	115.968	114.735	114.932	107.735	106.557	107.054

	Mean	StDev	COV
d10	2.902	0.122	4.188
d50	21.516	0.570	2.648
d90	112.367	4.016	3.574

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS68 (used to create Figure 7).

	BM Average	PSA_2501	PSA_2502	PSA_2503	PSA_2504	PSA_2505	PSA_2506	PSA_2507	PSA_2508	PSA_2509	PSA_2510	PSA_2511	PSA_2512	PSA_2513	PSA_2514	PSA_2515	PSA_2516
VERY COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FINE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VERY FINE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.03	0.00	0.00	0.04	0.03	0.00	0.00	0.00	0.00
VERY COARSE SAND	0.00	0.00	0.02	0.00	0.00	0.00	0.18	0.00	0.26	0.00	0.00	0.10	0.19	0.00	0.00	0.00	0.04
COARSE SAND	0.44	0.00	1.18	0.00	0.31	0.22	0.36	0.01	0.04	2.12	0.00	0.40	0.72	0.62	0.44	0.44	0.70
MEDIUM SAND	2.00	2.62	2.35	0.45	3.61	2.65	2.21	0.07	2.24	8.18	0.00	1.16	3.48	2.29	2.13	1.84	6.32
FINE SAND	5.69	3.93	6.13	4.44	8.49	6.95	5.68	2.09	7.25	13.05	7.15	6.95	7.23	5.93	5.60	3.50	11.68
VERY FINE SAND	12.43	2.47	12.76	12.46	14.41	14.37	12.85	11.22	13.69	22.24	7.82	12.92	13.90	12.46	12.27	11.30	15.90
VERY COARSE SILT	18.71	25.74	19.54	19.79	17.87	20.61	18.86	23.18	19.90	22.49	21.33	19.06	19.14	18.24	18.72	19.97	19.47
COARSE SILT	19.74	21.35	20.61	21.31	18.38	20.96	20.91	23.88	20.77	14.62	21.03	19.66	19.75	19.15	19.70	21.10	18.54
MEDIUM SILT	16.81	17.26	17.04	17.94	16.83	17.29	18.59	14.47	16.73	8.26	18.37	16.51	15.77	16.78	16.72	17.18	13.39
FINE SILT	11.22	5.79	11.42	12.78	11.59	11.57	14.43	11.07	12.12	4.43	12.06	10.60	11.21	11.86	11.27	12.78	8.33
VERY FINE SILT	5.43	4.09	5.43	6.33	5.61	5.01	5.25	7.40	6.00	2.41	5.78	5.33	6.10	5.84	5.49	7.45	3.24
CLAY	7.53	16.75	3.52	4.50	2.91	0.38	0.18	6.61	0.96	2.20	6.47	7.27	2.47	6.84	7.66	4.45	2.41
GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.03	0.00	0.00	0.04	0.03	0.00	0.00	0.00	0.00
SAND	20.56	9.02	22.43	17.35	26.82	24.19	21.28	13.39	23.49	45.59	14.97	21.54	25.53	21.29	20.43	17.08	34.63
SILT	66.48	74.23	74.04	78.15	70.27	75.43	78.05	80.00	75.52	52.20	78.56	71.16	71.97	71.87	71.91	78.47	62.96
CLAY	5.43	16.75	3.52	4.50	2.91	0.38	0.18	6.61	0.96	2.20	6.47	7.27	2.47	6.84	7.66	4.45	2.41

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2501
Sample Code:	PS682501

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	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	0.0000	0.0000
-3.00 to -2.50; 5.6 mm	0.0000	0.0000
-2.50 to -2.00; 4 mm	0.0000	0.0000
-2.00 to -1.50; 2.8 mm	0.0000	0.0000
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0000	0.0000
0.00 to 0.50; (707 µm)	0.0000	0.0000
0.50 to 1.00; (500 µm)	0.0000	0.0000
1.00 to 1.50; (353.6 µm)	0.9102	0.7390
1.50 to 2.00; (250 µm)	1.7120	1.3900
2.00 to 2.50; (176.8 µm)	2.0163	1.6370
2.50 to 3.00; (125 µm)	1.9140	1.5540
3.00 to 3.50; (88.39 µm)	1.1750	0.9540
3.50 to 4.00; (62.5 µm)	1.2970	1.0530
4.00 to 4.50; (44.19 µm)	19.7537	16.0380
4.50 to 5.00; (31.25 µm)	5.9860	4.8600
5.00 to 5.50; (22.097 µm)	11.7724	9.5580
5.50 to 6.00; (15.625 µm)	9.5776	7.7760
6.00 to 6.50; (11.049 µm)	11.4731	9.3150
6.50 to 7.00; (7.813 µm)	5.7864	4.6980
7.00 to 7.50; (5.524 µm)	4.1902	3.4020
7.50 to 8.00; (3.906 µm)	1.5963	1.2960
8.00 to 8.50; (2.762 µm)	2.5939	2.1060
8.50 to 9.00; (1.953 µm)	1.4965	1.2150
9.00 to 9.50; (1.381 µm)	16.7493	13.5987
9.50 to 10.00; (0.977 µm)		0.0000
10.00 to 10.50; (0.691 µm)		0.0000
10.50 to 11.00; (0.488 µm)		0.0000
11.00 to 11.50; (0.345 µm)		0.0000
11.50 to 12.00; (0.244 µm)		0.0000
12.00 to 12.50; (0.173 µm)		0.0000
12.50 to 13.00; (0.122 µm)		0.0000
13.00 to 13.50; (0.086 µm)		0.0000
13.50 to 14.00; (0.061µm)		0.0000
14.00 to 14.50; (0.043µm)		0.0000
TOTAL	100.0000	81.1897

Notes: Red text calculated by APEM.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2502
Sample Code:	PS682502

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage	Grams
	(mark as "0" for no material & leave blank for not analysed)	
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	0.0000	0.0000
-3.00 to -2.50; 5.6 mm	0.0000	0.0000
-2.50 to -2.00; 4 mm	0.0000	0.0000
-2.00 to -1.50; 2.8 mm	0.0000	0.0000
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0040	0.0030
-0.50 to 0.00; 1 mm	0.0147	0.0110
0.00 to 0.50; (707 µm)	0.5486	0.4106
0.50 to 1.00; (500 µm)	0.6295	0.4711
1.00 to 1.50; (353.6 µm)	0.8987	0.6726
1.50 to 2.00; (250 µm)	1.4515	1.0863
2.00 to 2.50; (176.8 µm)	2.3866	1.7861
2.50 to 3.00; (125 µm)	3.7441	2.8021
3.00 to 3.50; (88.39 µm)	5.4210	4.0571
3.50 to 4.00; (62.5 µm)	7.3352	5.4896
4.00 to 4.50; (44.19 µm)	9.1830	6.8726
4.50 to 5.00; (31.25 µm)	10.3597	7.7532
5.00 to 5.50; (22.097 µm)	10.5686	7.9095
5.50 to 6.00; (15.625 µm)	10.0411	7.5148
6.00 to 6.50; (11.049 µm)	9.1141	6.8210
6.50 to 7.00; (7.813 µm)	7.9254	5.9313
7.00 to 7.50; (5.524 µm)	6.4996	4.8643
7.50 to 8.00; (3.906 µm)	4.9230	3.6843
8.00 to 8.50; (2.762 µm)	3.3634	2.5172
8.50 to 9.00; (1.953 µm)	2.0652	1.5456
9.00 to 9.50; (1.381 µm)	1.2207	0.9136
9.50 to 10.00; (0.977 µm)	0.8652	0.6475
10.00 to 10.50; (0.691 µm)	0.7705	0.5766
10.50 to 11.00; (0.488 µm)	0.5602	0.4192
11.00 to 11.50; (0.345 µm)	0.1067	0.0799
11.50 to 12.00; (0.244 µm)	0.0000	0.0000
12.00 to 12.50; (0.173 µm)	0.0000	0.0000
12.50 to 13.00; (0.122 µm)	0.0000	0.0000
13.00 to 13.50; (0.086 µm)	0.0000	0.0000
13.50 to 14.00; (0.061µm)	0.0000	0.0000
14.00 to 14.50; (0.043µm)	0.0000	0.0000
TOTAL	100.0000	74.8400

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2503
Sample Code:	PS682503

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	0.0000	
-6.00 to -5.50; 45 mm	0.0000	
-5.50 to -5.00; 31.5 mm	0.0000	
-5.00 to -4.50; 22.4 mm	0.0000	
-4.50 to -4.00; 16 mm	0.0000	
-4.00 to -3.50; 11.2 mm	0.0000	
-3.50 to -3.00; 8 mm	0.0000	
-3.00 to -2.50; 5.6 mm	0.0000	
-2.50 to -2.00; 4 mm	0.0000	
-2.00 to -1.50; 2.8 mm	0.0000	
-1.50 to -1.00; 2 mm	0.0000	
-1.00 to -0.50; 1.4 mm	0.0000	
-0.50 to 0.00; 1 mm	0.0000	
0.00 to 0.50; (707 µm)	0.0000	
0.50 to 1.00; (500 µm)	0.0008	
1.00 to 1.50; (353.6 µm)	0.0558	
1.50 to 2.00; (250 µm)	0.3977	
2.00 to 2.50; (176.8 µm)	1.2781	
2.50 to 3.00; (125 µm)	3.1622	
3.00 to 3.50; (88.39 µm)	4.8731	
3.50 to 4.00; (62.5 µm)	7.5831	
4.00 to 4.50; (44.19 µm)	9.6761	
4.50 to 5.00; (31.25 µm)	10.1123	
5.00 to 5.50; (22.097 µm)	11.1057	
5.50 to 6.00; (15.625 µm)	10.2019	
6.00 to 6.50; (11.049 µm)	9.5607	
6.50 to 7.00; (7.813 µm)	8.3802	
7.00 to 7.50; (5.524 µm)	7.2132	
7.50 to 8.00; (3.906 µm)	5.5687	
8.00 to 8.50; (2.762 µm)	3.8346	
8.50 to 9.00; (1.953 µm)	2.4933	
9.00 to 9.50; (1.381 µm)	1.5436	
9.50 to 10.00; (0.977 µm)	1.0052	
10.00 to 10.50; (0.691 µm)	1.0278	
10.50 to 11.00; (0.488 µm)	0.7464	
11.00 to 11.50; (0.345 µm)	0.1796	
11.50 to 12.00; (0.244 µm)	0.0000	
12.00 to 12.50; (0.173 µm)	0.0000	
12.50 to 13.00; (0.122 µm)	0.0000	
13.00 to 13.50; (0.086 µm)	0.0000	
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	100.0000	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2504
Sample Code:	PS682504

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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.00	
0.50 to 1.00; (500 µm)	0.30	
1.00 to 1.50; (353.6 µm)	1.35	
1.50 to 2.00; (250 µm)	2.27	
2.00 to 2.50; (176.8 µm)	3.44	
2.50 to 3.00; (125 µm)	5.04	
3.00 to 3.50; (88.39 µm)	6.59	
3.50 to 4.00; (62.5 µm)	7.82	
4.00 to 4.50; (44.19 µm)	8.70	
4.50 to 5.00; (31.25 µm)	9.17	
5.00 to 5.50; (22.097 µm)	9.25	
5.50 to 6.00; (15.625 µm)	9.13	
6.00 to 6.50; (11.049 µm)	8.80	
6.50 to 7.00; (7.813 µm)	8.03	
7.00 to 7.50; (5.524 µm)	6.65	
7.50 to 8.00; (3.906 µm)	4.94	
8.00 to 8.50; (2.762 µm)	3.40	
8.50 to 9.00; (1.953 µm)	2.20	
9.00 to 9.50; (1.381 µm)	1.38	
9.50 to 10.00; (0.977 µm)	0.86	
10.00 to 10.50; (0.691 µm)	0.47	
10.50 to 11.00; (0.488 µm)	0.20	
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	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2505
Sample Code:	PS682505

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	0.000	
-6.00 to -5.50; 45 mm	0.000	
-5.50 to -5.00; 31.5 mm	0.000	
-5.00 to -4.50; 22.4 mm	0.000	
-4.50 to -4.00; 16 mm	0.000	
-4.00 to -3.50; 11.2 mm	0.000	
-3.50 to -3.00; 8 mm	0.000	
-3.00 to -2.50; 5.6 mm	0.000	
-2.50 to -2.00; 4 mm	0.000	
-2.00 to -1.50; 2.8 mm	0.000	
-1.50 to -1.00; 2 mm	0.000	
-1.00 to -0.50; 1.4 mm	0.000	
-0.50 to 0.00; 1 mm	0.000	
0.00 to 0.50; (707 µm)	0.012	
0.50 to 1.00; (500 µm)	0.207	
1.00 to 1.50; (353.6 µm)	0.900	
1.50 to 2.00; (250 µm)	1.753	
2.00 to 2.50; (176.8 µm)	2.753	
2.50 to 3.00; (125 µm)	4.196	
3.00 to 3.50; (88.39 µm)	6.149	
3.50 to 4.00; (62.5 µm)	8.216	
4.00 to 4.50; (44.19 µm)	9.850	
4.50 to 5.00; (31.25 µm)	10.765	
5.00 to 5.50; (22.097 µm)	10.804	
5.50 to 6.00; (15.625 µm)	10.153	
6.00 to 6.50; (11.049 µm)	9.205	
6.50 to 7.00; (7.813 µm)	8.083	
7.00 to 7.50; (5.524 µm)	6.677	
7.50 to 8.00; (3.906 µm)	4.893	
8.00 to 8.50; (2.762 µm)	3.272	
8.50 to 9.00; (1.953 µm)	1.734	
9.00 to 9.50; (1.381 µm)	0.379	
9.50 to 10.00; (0.977 µm)	0.000	
10.00 to 10.50; (0.691 µm)	0.000	
10.50 to 11.00; (0.488 µm)	0.000	
11.00 to 11.50; (0.345 µm)	0.000	
11.50 to 12.00; (0.244 µm)	0.000	
12.00 to 12.50; (0.173 µm)	0.000	
12.50 to 13.00; (0.122 µm)	0.000	
13.00 to 13.50; (0.086 µm)	0.000	
13.50 to 14.00; (0.061µm)	0.000	
14.00 to 14.50; (0.043µm)	0.000	
TOTAL	100.001	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2506
Sample Code:	PS682506

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	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	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.08	0.05
-2.00 to -1.50; 2.8 mm	0.25	0.15
-1.50 to -1.00; 2 mm	0.17	0.10
-1.00 to -0.50; 1.4 mm	0.12	0.07
-0.50 to 0.00; 1 mm	0.07	0.04
0.00 to 0.50; (707 µm)	0.02	0.01
0.50 to 1.00; (500 µm)	0.33	0.20
1.00 to 1.50; (353.6 µm)	0.88	0.53
1.50 to 2.00; (250 µm)	1.33	0.80
2.00 to 2.50; (176.8 µm)	1.95	1.17
2.50 to 3.00; (125 µm)	3.73	2.24
3.00 to 3.50; (88.39 µm)	5.22	3.13
3.50 to 4.00; (62.5 µm)	7.64	4.58
4.00 to 4.50; (44.19 µm)	8.38	5.02
4.50 to 5.00; (31.25 µm)	10.49	6.29
5.00 to 5.50; (22.097 µm)	10.53	6.32
5.50 to 6.00; (15.625 µm)	10.38	6.22
6.00 to 6.50; (11.049 µm)	9.69	5.81
6.50 to 7.00; (7.813 µm)	8.90	5.33
7.00 to 7.50; (5.524 µm)	7.97	4.78
7.50 to 8.00; (3.906 µm)	6.47	3.88
8.00 to 8.50; (2.762 µm)	3.93	2.36
8.50 to 9.00; (1.953 µm)	1.31	0.79
9.00 to 9.50; (1.381 µm)	0.18	0.11
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)	0.000	0.0000
14.00 to 14.50; (0.043µm)	0.000	0.0000
TOTAL	100.0000	59.9600

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2507
Sample Code:	PS682507

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage	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		
-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	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.00	
0.50 to 1.00; (500 µm)	0.01	
1.00 to 1.50; (353.6 µm)	0.04	
1.50 to 2.00; (250 µm)	0.02	
2.00 to 2.50; (176.8 µm)	0.20	
2.50 to 3.00; (125 µm)	1.89	
3.00 to 3.50; (88.39 µm)	3.61	
3.50 to 4.00; (62.5 µm)	7.61	
4.00 to 4.50; (44.19 µm)	8.44	
4.50 to 5.00; (31.25 µm)	14.75	
5.00 to 5.50; (22.097 µm)	11.45	
5.50 to 6.00; (15.625 µm)	12.43	
6.00 to 6.50; (11.049 µm)	7.02	
6.50 to 7.00; (7.813 µm)	7.46	
7.00 to 7.50; (5.524 µm)	4.95	
7.50 to 8.00; (3.906 µm)	6.12	
8.00 to 8.50; (2.762 µm)	4.07	
8.50 to 9.00; (1.953 µm)	3.33	
9.00 to 9.50; (1.381 µm)	3.02	
9.50 to 10.00; (0.977 µm)	1.35	
10.00 to 10.50; (0.691 µm)	1.00	
10.50 to 11.00; (0.488 µm)	0.44	
11.00 to 11.50; (0.345 µm)	0.41	
11.50 to 12.00; (0.244 µm)	0.21	
12.00 to 12.50; (0.173 µm)	0.15	
12.50 to 13.00; (0.122 µm)	0.03	
13.00 to 13.50; (0.086 µm)	0.01	
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	100.0000	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2508
Sample Code:	PS682508

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage	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	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.02	0.01
-1.50 to -1.00; 2 mm	0.02	0.01
-1.00 to -0.50; 1.4 mm	0.13	0.08
-0.50 to 0.00; 1 mm	0.13	0.08
0.00 to 0.50; (707 µm)	0.00	0.00
0.50 to 1.00; (500 µm)	0.04	0.02
1.00 to 1.50; (353.6 µm)	0.51	0.31
1.50 to 2.00; (250 µm)	1.73	1.06
2.00 to 2.50; (176.8 µm)	2.95	1.80
2.50 to 3.00; (125 µm)	4.30	2.62
3.00 to 3.50; (88.39 µm)	5.97	3.65
3.50 to 4.00; (62.5 µm)	7.73	4.72
4.00 to 4.50; (44.19 µm)	9.36	5.72
4.50 to 5.00; (31.25 µm)	10.53	6.43
5.00 to 5.50; (22.097 µm)	10.75	6.57
5.50 to 6.00; (15.625 µm)	10.02	6.12
6.00 to 6.50; (11.049 µm)	8.91	5.45
6.50 to 7.00; (7.813 µm)	7.82	4.78
7.00 to 7.50; (5.524 µm)	6.74	4.12
7.50 to 8.00; (3.906 µm)	5.38	3.29
8.00 to 8.50; (2.762 µm)	3.74	2.28
8.50 to 9.00; (1.953 µm)	2.26	1.38
9.00 to 9.50; (1.381 µm)	0.89	0.55
9.50 to 10.00; (0.977 µm)	0.06	0.04
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
TOTAL	100.00	61.09

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2509
Sample Code:	PS682509

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		
-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)	0.1178	
0.50 to 1.00; (500 µm)	2.0045	
1.00 to 1.50; (353.6 µm)	3.7112	
1.50 to 2.00; (250 µm)	4.4723	
2.00 to 2.50; (176.8 µm)	5.4835	
2.50 to 3.00; (125 µm)	7.5669	
3.00 to 3.50; (88.39 µm)	10.2181	
3.50 to 4.00; (62.5 µm)	12.0193	
4.00 to 4.50; (44.19 µm)	12.0282	
4.50 to 5.00; (31.25 µm)	10.4637	
5.00 to 5.50; (22.097 µm)	8.3036	
5.50 to 6.00; (15.625 µm)	6.3158	
6.00 to 6.50; (11.049 µm)	4.7446	
6.50 to 7.00; (7.813 µm)	3.5112	
7.00 to 7.50; (5.524 µm)	2.5612	
7.50 to 8.00; (3.906 µm)	1.8678	
8.00 to 8.50; (2.762 µm)	1.4012	
8.50 to 9.00; (1.953 µm)	1.0078	
9.00 to 9.50; (1.381 µm)	0.6922	
9.50 to 10.00; (0.977 µm)	0.5267	
10.00 to 10.50; (0.691 µm)	0.5089	
10.50 to 11.00; (0.488 µm)	0.3867	
11.00 to 11.50; (0.345 µm)	0.0867	
11.50 to 12.00; (0.244 µm)	0.0000	
12.00 to 12.50; (0.173 µm)	0.0000	
12.50 to 13.00; (0.122 µm)	0.0000	
13.00 to 13.50; (0.086 µm)	0.0000	
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	100.0000	0.0000

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2510
Sample Code:	PS682510

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		
-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)	0.00	
0.50 to 1.00; (500 µm)	0.00	
1.00 to 1.50; (353.6 µm)	0.00	
1.50 to 2.00; (250 µm)	0.00	
2.00 to 2.50; (176.8 µm)	1.08	
2.50 to 3.00; (125 µm)	6.07	
3.00 to 3.50; (88.39 µm)	2.61	
3.50 to 4.00; (62.5 µm)	5.21	
4.00 to 4.50; (44.19 µm)	10.17	
4.50 to 5.00; (31.25 µm)	11.16	
5.00 to 5.50; (22.097 µm)	10.98	
5.50 to 6.00; (15.625 µm)	10.05	
6.00 to 6.50; (11.049 µm)	9.77	
6.50 to 7.00; (7.813 µm)	8.60	
7.00 to 7.50; (5.524 µm)	6.92	
7.50 to 8.00; (3.906 µm)	5.14	
8.00 to 8.50; (2.762 µm)	3.50	
8.50 to 9.00; (1.953 µm)	2.28	
9.00 to 9.50; (1.381 µm)	1.55	
9.50 to 10.00; (0.977 µm)	1.18	
10.00 to 10.50; (0.691 µm)	0.99	
10.50 to 11.00; (0.488 µm)	0.85	
11.00 to 11.50; (0.345 µm)	0.68	
11.50 to 12.00; (0.244 µm)	0.51	
12.00 to 12.50; (0.173 µm)	0.33	
12.50 to 13.00; (0.122 µm)	0.21	
13.00 to 13.50; (0.086 µm)	0.12	
13.50 to 14.00; (0.061µm)	0.04	
14.00 to 14.50; (0.043µm)	0.01	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2511
Sample Code:	PS682511

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage	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	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.01	0.01
-1.50 to -1.00; 2 mm	0.03	0.02
-1.00 to -0.50; 1.4 mm	0.04	0.03
-0.50 to 0.00; 1 mm	0.06	0.04
0.00 to 0.50; (707 µm)	0.01	0.01
0.50 to 1.00; (500 µm)	0.39	0.27
1.00 to 1.50; (353.6 µm)	0.49	0.34
1.50 to 2.00; (250 µm)	0.67	0.47
2.00 to 2.50; (176.8 µm)	2.77	1.94
2.50 to 3.00; (125 µm)	4.18	2.93
3.00 to 3.50; (88.39 µm)	5.68	3.98
3.50 to 4.00; (62.5 µm)	7.25	5.08
4.00 to 4.50; (44.19 µm)	8.92	6.26
4.50 to 5.00; (31.25 µm)	10.14	7.11
5.00 to 5.50; (22.097 µm)	10.18	7.14
5.50 to 6.00; (15.625 µm)	9.47	6.64
6.00 to 6.50; (11.049 µm)	8.85	6.21
6.50 to 7.00; (7.813 µm)	7.65	5.37
7.00 to 7.50; (5.524 µm)	6.09	4.27
7.50 to 8.00; (3.906 µm)	4.51	3.17
8.00 to 8.50; (2.762 µm)	3.16	2.21
8.50 to 9.00; (1.953 µm)	2.18	1.53
9.00 to 9.50; (1.381 µm)	1.51	1.06
9.50 to 10.00; (0.977 µm)	1.08	0.76
10.00 to 10.50; (0.691 µm)	0.88	0.62
10.50 to 11.00; (0.488 µm)	0.84	0.59
11.00 to 11.50; (0.345 µm)	0.83	0.58
11.50 to 12.00; (0.244 µm)	0.75	0.53
12.00 to 12.50; (0.173 µm)	0.58	0.41
12.50 to 13.00; (0.122 µm)	0.42	0.30
13.00 to 13.50; (0.086 µm)	0.26	0.18
13.50 to 14.00; (0.061µm)	0.10	0.07
14.00 to 14.50; (0.043µm)	0.01	0.01
TOTAL	100.00	70.13

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2512
Sample Code:	PS682512

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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.03	
-1.00 to -0.50; 1.4 mm	0.10	
-0.50 to 0.00; 1 mm	0.10	
0.00 to 0.50; (707 µm)	0.08	
0.50 to 1.00; (500 µm)	0.64	
1.00 to 1.50; (353.6 µm)	1.42	
1.50 to 2.00; (250 µm)	2.06	
2.00 to 2.50; (176.8 µm)	2.89	
2.50 to 3.00; (125 µm)	4.35	
3.00 to 3.50; (88.39 µm)	6.11	
3.50 to 4.00; (62.5 µm)	7.80	
4.00 to 4.50; (44.19 µm)	9.18	
4.50 to 5.00; (31.25 µm)	9.96	
5.00 to 5.50; (22.097 µm)	10.15	
5.50 to 6.00; (15.625 µm)	9.60	
6.00 to 6.50; (11.049 µm)	8.36	
6.50 to 7.00; (7.813 µm)	7.41	
7.00 to 7.50; (5.524 µm)	6.21	
7.50 to 8.00; (3.906 µm)	5.01	
8.00 to 8.50; (2.762 µm)	3.75	
8.50 to 9.00; (1.953 µm)	2.34	
9.00 to 9.50; (1.381 µm)	1.17	
9.50 to 10.00; (0.977 µm)	0.90	
10.00 to 10.50; (0.691 µm)	0.41	
10.50 to 11.00; (0.488 µm)	0.00	
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	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2513
Sample Code:	PS682513

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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 μm)	0.05	
0.50 to 1.00; (500 μm)	0.57	
1.00 to 1.50; (353.6 μm)	1.05	
1.50 to 2.00; (250 μm)	1.24	
2.00 to 2.50; (176.8 μm)	2.25	
2.50 to 3.00; (125 μm)	3.68	
3.00 to 3.50; (88.39 μm)	5.73	
3.50 to 4.00; (62.5 μm)	6.73	
4.00 to 4.50; (44.19 μm)	8.26	
4.50 to 5.00; (31.25 μm)	9.98	
5.00 to 5.50; (22.097 μm)	9.78	
5.50 to 6.00; (15.625 μm)	9.37	
6.00 to 6.50; (11.049 μm)	8.87	
6.50 to 7.00; (7.813 μm)	7.91	
7.00 to 7.50; (5.524 μm)	6.67	
7.50 to 8.00; (3.906 μm)	5.19	
8.00 to 8.50; (2.762 μm)	3.60	
8.50 to 9.00; (1.953 μm)	2.24	
9.00 to 9.50; (1.381 μm)	1.35	
9.50 to 10.00; (0.977 μm)	0.89	
10.00 to 10.50; (0.691 μm)	0.74	
10.50 to 11.00; (0.488 μm)	0.74	
11.00 to 11.50; (0.345 μm)	0.76	
11.50 to 12.00; (0.244 μm)	0.74	
12.00 to 12.50; (0.173 μm)	0.63	
12.50 to 13.00; (0.122 μm)	0.51	
13.00 to 13.50; (0.086 μm)	0.33	
13.50 to 14.00; (0.061μm)	0.14	
14.00 to 14.50; (0.043μm)	0.02	
TOTAL	100.0000	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2514
Sample Code:	PS682514

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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.01	
0.50 to 1.00; (500 µm)	0.43	
1.00 to 1.50; (353.6 µm)	1.05	
1.50 to 2.00; (250 µm)	1.08	
2.00 to 2.50; (176.8 µm)	2.09	
2.50 to 3.00; (125 µm)	3.51	
3.00 to 3.50; (88.39 µm)	5.57	
3.50 to 4.00; (62.5 µm)	6.69	
4.00 to 4.50; (44.19 µm)	8.48	
4.50 to 5.00; (31.25 µm)	10.24	
5.00 to 5.50; (22.097 µm)	10.07	
5.50 to 6.00; (15.625 µm)	9.63	
6.00 to 6.50; (11.049 µm)	8.95	
6.50 to 7.00; (7.813 µm)	7.77	
7.00 to 7.50; (5.524 µm)	6.39	
7.50 to 8.00; (3.906 µm)	4.88	
8.00 to 8.50; (2.762 µm)	3.35	
8.50 to 9.00; (1.953 µm)	2.14	
9.00 to 9.50; (1.381 µm)	1.37	
9.50 to 10.00; (0.977 µm)	0.99	
10.00 to 10.50; (0.691 µm)	0.87	
10.50 to 11.00; (0.488 µm)	0.88	
11.00 to 11.50; (0.345 µm)	0.90	
11.50 to 12.00; (0.244 µm)	0.86	
12.00 to 12.50; (0.173 µm)	0.71	
12.50 to 13.00; (0.122 µm)	0.55	
13.00 to 13.50; (0.086 µm)	0.36	
13.50 to 14.00; (0.061µm)	0.15	
14.00 to 14.50; (0.043µm)	0.02	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2515
Sample Code:	PS682515

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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.00	
0.50 to 1.00; (500 µm)	0.44	
1.00 to 1.50; (353.6 µm)	0.91	
1.50 to 2.00; (250 µm)	0.93	
2.00 to 2.50; (176.8 µm)	1.20	
2.50 to 3.00; (125 µm)	2.30	
3.00 to 3.50; (88.39 µm)	4.36	
3.50 to 4.00; (62.5 µm)	6.94	
4.00 to 4.50; (44.19 µm)	9.28	
4.50 to 5.00; (31.25 µm)	10.68	
5.00 to 5.50; (22.097 µm)	10.89	
5.50 to 6.00; (15.625 µm)	10.20	
6.00 to 6.50; (11.049 µm)	9.13	
6.50 to 7.00; (7.813 µm)	8.05	
7.00 to 7.50; (5.524 µm)	6.98	
7.50 to 8.00; (3.906 µm)	5.80	
8.00 to 8.50; (2.762 µm)	4.44	
8.50 to 9.00; (1.953 µm)	3.01	
9.00 to 9.50; (1.381 µm)	1.81	
9.50 to 10.00; (0.977 µm)	1.11	
10.00 to 10.50; (0.691 µm)	0.85	
10.50 to 11.00; (0.488 µm)	0.58	
11.00 to 11.50; (0.345 µm)	0.10	
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	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2516
Sample Code:	PS682516

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		
-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	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.03	
-0.50 to 0.00; 1 mm	0.01	
0.00 to 0.50; (707 µm)	0.01	
0.50 to 1.00; (500 µm)	0.69	
1.00 to 1.50; (353.6 µm)	2.34	
1.50 to 2.00; (250 µm)	3.98	
2.00 to 2.50; (176.8 µm)	5.28	
2.50 to 3.00; (125 µm)	6.40	
3.00 to 3.50; (88.39 µm)	7.41	
3.50 to 4.00; (62.5 µm)	8.49	
4.00 to 4.50; (44.19 µm)	9.48	
4.50 to 5.00; (31.25 µm)	9.99	
5.00 to 5.50; (22.097 µm)	9.75	
5.50 to 6.00; (15.625 µm)	8.79	
6.00 to 6.50; (11.049 µm)	7.42	
6.50 to 7.00; (7.813 µm)	5.97	
7.00 to 7.50; (5.524 µm)	4.73	
7.50 to 8.00; (3.906 µm)	3.60	
8.00 to 8.50; (2.762 µm)	2.30	
8.50 to 9.00; (1.953 µm)	0.94	
9.00 to 9.50; (1.381 µm)	0.17	
9.50 to 10.00; (0.977 µm)	0.37	
10.00 to 10.50; (0.691 µm)	0.93	
10.50 to 11.00; (0.488 µm)	0.77	
11.00 to 11.50; (0.345 µm)	0.17	
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	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2530
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
-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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.04	
0.50 to 1.00; (500 µm)	0.36	
1.00 to 1.50; (353.6 µm)	0.89	
1.50 to 2.00; (250 µm)	1.05	
2.00 to 2.50; (176.8 µm)	2.01	
2.50 to 3.00; (125 µm)	3.50	
3.00 to 3.50; (88.39 µm)	5.58	
3.50 to 4.00; (62.5 µm)	6.76	
4.00 to 4.50; (44.19 µm)	8.51	
4.50 to 5.00; (31.25 µm)	10.36	
5.00 to 5.50; (22.097 µm)	10.18	
5.50 to 6.00; (15.625 µm)	9.76	
6.00 to 6.50; (11.049 µm)	9.07	
6.50 to 7.00; (7.813 µm)	7.79	
7.00 to 7.50; (5.524 µm)	6.32	
7.50 to 8.00; (3.906 µm)	4.78	
8.00 to 8.50; (2.762 µm)	3.28	
8.50 to 9.00; (1.953 µm)	2.10	
9.00 to 9.50; (1.381 µm)	1.37	
9.50 to 10.00; (0.977 µm)	0.99	
10.00 to 10.50; (0.691 µm)	0.87	
10.50 to 11.00; (0.488 µm)	0.88	
11.00 to 11.50; (0.345 µm)	0.90	
11.50 to 12.00; (0.244 µm)	0.86	
12.00 to 12.50; (0.173 µm)	0.71	
12.50 to 13.00; (0.122 µm)	0.55	
13.00 to 13.50; (0.086 µm)	0.35	
13.50 to 14.00; (0.061µm)	0.15	
14.00 to 14.50; (0.043µm)	0.02	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2531
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
-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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.05	
0.50 to 1.00; (500 µm)	0.49	
1.00 to 1.50; (353.6 µm)	0.98	
1.50 to 2.00; (250 µm)	0.94	
2.00 to 2.50; (176.8 µm)	2.07	
2.50 to 3.00; (125 µm)	3.50	
3.00 to 3.50; (88.39 µm)	5.64	
3.50 to 4.00; (62.5 µm)	6.67	
4.00 to 4.50; (44.19 µm)	8.40	
4.50 to 5.00; (31.25 µm)	10.18	
5.00 to 5.50; (22.097 µm)	10.01	
5.50 to 6.00; (15.625 µm)	9.62	
6.00 to 6.50; (11.049 µm)	8.93	
6.50 to 7.00; (7.813 µm)	7.74	
7.00 to 7.50; (5.524 µm)	6.39	
7.50 to 8.00; (3.906 µm)	4.91	
8.00 to 8.50; (2.762 µm)	3.41	
8.50 to 9.00; (1.953 µm)	2.20	
9.00 to 9.50; (1.381 µm)	1.42	
9.50 to 10.00; (0.977 µm)	1.02	
10.00 to 10.50; (0.691 µm)	0.89	
10.50 to 11.00; (0.488 µm)	0.91	
11.00 to 11.50; (0.345 µm)	0.94	
11.50 to 12.00; (0.244 µm)	0.88	
12.00 to 12.50; (0.173 µm)	0.72	
12.50 to 13.00; (0.122 µm)	0.55	
13.00 to 13.50; (0.086 µm)	0.35	
13.50 to 14.00; (0.061µm)	0.14	
14.00 to 14.50; (0.043µm)	0.02	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2532
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
-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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.01	
0.50 to 1.00; (500 µm)	0.28	
1.00 to 1.50; (353.6 µm)	0.98	
1.50 to 2.00; (250 µm)	1.16	
2.00 to 2.50; (176.8 µm)	2.12	
2.50 to 3.00; (125 µm)	3.69	
3.00 to 3.50; (88.39 µm)	5.67	
3.50 to 4.00; (62.5 µm)	6.81	
4.00 to 4.50; (44.19 µm)	8.48	
4.50 to 5.00; (31.25 µm)	10.23	
5.00 to 5.50; (22.097 µm)	10.09	
5.50 to 6.00; (15.625 µm)	9.68	
6.00 to 6.50; (11.049 µm)	9.03	
6.50 to 7.00; (7.813 µm)	7.81	
7.00 to 7.50; (5.524 µm)	6.36	
7.50 to 8.00; (3.906 µm)	4.80	
8.00 to 8.50; (2.762 µm)	3.28	
8.50 to 9.00; (1.953 µm)	2.08	
9.00 to 9.50; (1.381 µm)	1.33	
9.50 to 10.00; (0.977 µm)	0.95	
10.00 to 10.50; (0.691 µm)	0.83	
10.50 to 11.00; (0.488 µm)	0.85	
11.00 to 11.50; (0.345 µm)	0.87	
11.50 to 12.00; (0.244 µm)	0.83	
12.00 to 12.50; (0.173 µm)	0.70	
12.50 to 13.00; (0.122 µm)	0.55	
13.00 to 13.50; (0.086 µm)	0.36	
13.50 to 14.00; (0.061µm)	0.15	
14.00 to 14.50; (0.043µm)	0.02	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2533
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
-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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.01	
0.50 to 1.00; (500 µm)	0.36	
1.00 to 1.50; (353.6 µm)	0.94	
1.50 to 2.00; (250 µm)	1.04	
2.00 to 2.50; (176.8 µm)	2.18	
2.50 to 3.00; (125 µm)	3.77	
3.00 to 3.50; (88.39 µm)	5.80	
3.50 to 4.00; (62.5 µm)	6.85	
4.00 to 4.50; (44.19 µm)	8.57	
4.50 to 5.00; (31.25 µm)	10.23	
5.00 to 5.50; (22.097 µm)	10.04	
5.50 to 6.00; (15.625 µm)	9.64	
6.00 to 6.50; (11.049 µm)	9.00	
6.50 to 7.00; (7.813 µm)	7.80	
7.00 to 7.50; (5.524 µm)	6.37	
7.50 to 8.00; (3.906 µm)	4.81	
8.00 to 8.50; (2.762 µm)	3.27	
8.50 to 9.00; (1.953 µm)	2.05	
9.00 to 9.50; (1.381 µm)	1.30	
9.50 to 10.00; (0.977 µm)	0.93	
10.00 to 10.50; (0.691 µm)	0.82	
10.50 to 11.00; (0.488 µm)	0.84	
11.00 to 11.50; (0.345 µm)	0.86	
11.50 to 12.00; (0.244 µm)	0.81	
12.00 to 12.50; (0.173 µm)	0.68	
12.50 to 13.00; (0.122 µm)	0.53	
13.00 to 13.50; (0.086 µm)	0.34	
13.50 to 14.00; (0.061µm)	0.14	
14.00 to 14.50; (0.043µm)	0.02	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS68.

Exercise Code:	PS68
LabCode:	PSA_2534
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
-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	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.04	
0.50 to 1.00; (500 µm)	0.57	
1.00 to 1.50; (353.6 µm)	0.97	
1.50 to 2.00; (250 µm)	1.05	
2.00 to 2.50; (176.8 µm)	2.07	
2.50 to 3.00; (125 µm)	3.55	
3.00 to 3.50; (88.39 µm)	5.66	
3.50 to 4.00; (62.5 µm)	6.68	
4.00 to 4.50; (44.19 µm)	8.44	
4.50 to 5.00; (31.25 µm)	10.16	
5.00 to 5.50; (22.097 µm)	10.03	
5.50 to 6.00; (15.625 µm)	9.65	
6.00 to 6.50; (11.049 µm)	9.02	
6.50 to 7.00; (7.813 µm)	7.85	
7.00 to 7.50; (5.524 µm)	6.45	
7.50 to 8.00; (3.906 µm)	4.90	
8.00 to 8.50; (2.762 µm)	3.35	
8.50 to 9.00; (1.953 µm)	2.11	
9.00 to 9.50; (1.381 µm)	1.34	
9.50 to 10.00; (0.977 µm)	0.95	
10.00 to 10.50; (0.691 µm)	0.84	
10.50 to 11.00; (0.488 µm)	0.85	
11.00 to 11.50; (0.345 µm)	0.87	
11.50 to 12.00; (0.244 µm)	0.83	
12.00 to 12.50; (0.173 µm)	0.69	
12.50 to 13.00; (0.122 µm)	0.54	
13.00 to 13.50; (0.086 µm)	0.35	
13.50 to 14.00; (0.061µm)	0.14	
14.00 to 14.50; (0.043µm)	0.02	
TOTAL	100.00	

Notes: