NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS70

Particle Size Component 2018/19

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APEM

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APPENDICES

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BENCHMARK DATA– OVERVIEW

Table 1. Summary data for the benchmark replicates distributed as PS70.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis) (Folk (1954))
BM REP 1 (PSA_2530)	NMBAQC	0.00	89.23	10.77	Muddy Sand
BM REP 2 (PSA_2531)	NMBAQC	0.00	89.63	10.37	Muddy Sand
BM REP 3 (PSA_2532)	NMBAQC	0.00	90.15	9.85	Sand
BM REP 4 (PSA_2533)	NMBAQC	0.00	90.68	9.32	Sand
BM REP 5 (PSA_2534)	NMBAQC	0.00	90.80	9.20	Sand

BENCHMARK DATA – SIEVE

Table 2. Summary of sieve data for the benchmark replicates distributed as PS70.

		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		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		0.00	0.00	0.00	0.00	0.00
-2.00 to -1.50; 2.8 mm		0.00	0.00	0.00	0.00	0.00
-1.50 to -1.00; 2 mm		0.00	0.00	0.00	0.00	0.00
-1.00 to -0.50; 1.4 mm		0.00	0.00	0.00	0.00	0.00
-0.50 to 0.00; 1 mm		0.03	0.03	0.03	0.03	0.03
Weight (g) < 0.00; >1 mm		0.03	0.03	0.03	0.03	0.03
Weight (g) 0.00; <1 mm	Base Pan	0.08	0.05	0.06	0.10	0.11
	Oven Dried	362.23	359.27	367.27	364.61	362.74
Total Weight (g)		362.34	359.35	367.36	364.74	362.88

BENCHMARK DATA – LASER

Table 3. Summary of final laser data for the benchmark replicates distributed as PS70.

	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)	2.26	1.88	1.99	1.98	2.05
0.50 to 1.00; (500 µm)	10.93	10.26	10.50	10.96	10.31
1.00 to 1.50; (353.6 µm)	29.99	29.59	29.73	30.78	29.80
1.50 to 2.00; (250 µm)	29.19	29.73	29.76	29.82	30.09
2.00 to 2.50; (176.8 µm)	12.33	13.12	13.23	12.57	13.41
2.50 to 3.00; (125 µm)	3.30	3.65	3.60	3.37	3.67
3.00 to 3.50; (88.39 µm)	0.80	1.00	0.99	0.84	1.07
3.50 to 4.00; (62.5 µm)	0.43	0.41	0.35	0.36	0.40
4.00 to 4.50; (44.19 µm)	0.20	0.24	0.22	0.19	0.24
4.50 to 5.00; (31.25 µm)	0.34	0.32	0.28	0.27	0.29
5.00 to 5.50; (22.097 µm)	0.31	0.25	0.22	0.20	0.22
5.50 to 6.00; (15.625 µm)	0.35	0.29	0.25	0.24	0.24
6.00 to 6.50; (11.049 µm)	0.53	0.45	0.41	0.38	0.39
6.50 to 7.00; (7.813 µm)	0.45	0.39	0.36	0.34	0.35
7.00 to 7.50; (5.524 µm)	0.62	0.57	0.53	0.51	0.52
7.50 to 8.00; (3.906 µm)	0.87	0.82	0.74	0.71	0.74
8.00 to 8.50; (2.762 µm)	0.65	0.63	0.59	0.56	0.59
8.50 to 9.00; (1.953 µm)	0.72	0.70	0.66	0.62	0.63
9.00 to 9.50; (1.381 µm)	1.01	0.98	0.91	0.87	0.85
9.50 to 10.00; (0.977 µm)	0.89	0.87	0.84	0.79	0.77
10.00 to 10.50; (0.691 µm)	0.63	0.63	0.63	0.60	0.56
10.50 to 11.00; (0.488 µm)	0.64	0.64	0.64	0.61	0.54
11.00 to 11.50; (0.345 µm)	0.80	0.80	0.77	0.74	0.64
11.50 to 12.00; (0.244 µm)	0.80	0.80	0.77	0.73	0.64
12.00 to 12.50; (0.173 µm)	0.54	0.55	0.54	0.51	0.47
12.50 to 13.00; (0.122 µm)	0.29	0.30	0.31	0.29	0.29
13.00 to 13.50; (0.086 µm)	0.11	0.12	0.14	0.12	0.14
13.50 to 14.00; (0.061 µm)	0.02	0.03	0.04	0.03	0.05
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.01	0.00	0.01
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	26.84	8.45	31.48
d50	327.08	0.95	0.29
d90	553.86	5.89	1.06
	Benchmark Replicate 2 (PSA_2531)		
d10	42.32	20.48	48.40
d50	322.03	1.38	0.43
d90	537.92	8.02	1.49
	Benchmark Replicate 3 (PSA_2532)		
d10	70.96	21.83	30.76
d50	323.92	1.87	0.58
d90	543.32	6.04	1.11
	Benchmark Replicate 4 (PSA_2533)		
d10	102.23	8.12	7.94
d50	329.73	1.83	0.56
d90	549.07	8.99	1.64
	Benchmark Replicate 5 (PSA_2534)		
d10	102.62	8.47	8.25
d50	324.04	1.67	0.51
d90	541.65	9.85	1.82

NB. See appendix 1 for full dataset..

Table 5. Laser metadata for Benchmark replicates for PS70.

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):	8-12%
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)	Level 2

Figure 1. Graphical presentations of (a) sieve data and (b) laser data produced by the benchmark lab for sediment distributed as PS70.

Figure 1a. Percentage bar charts resulting from final sieve analysis of 5 replicate samples of sediment distibuted as PS70 (Benchmark data).

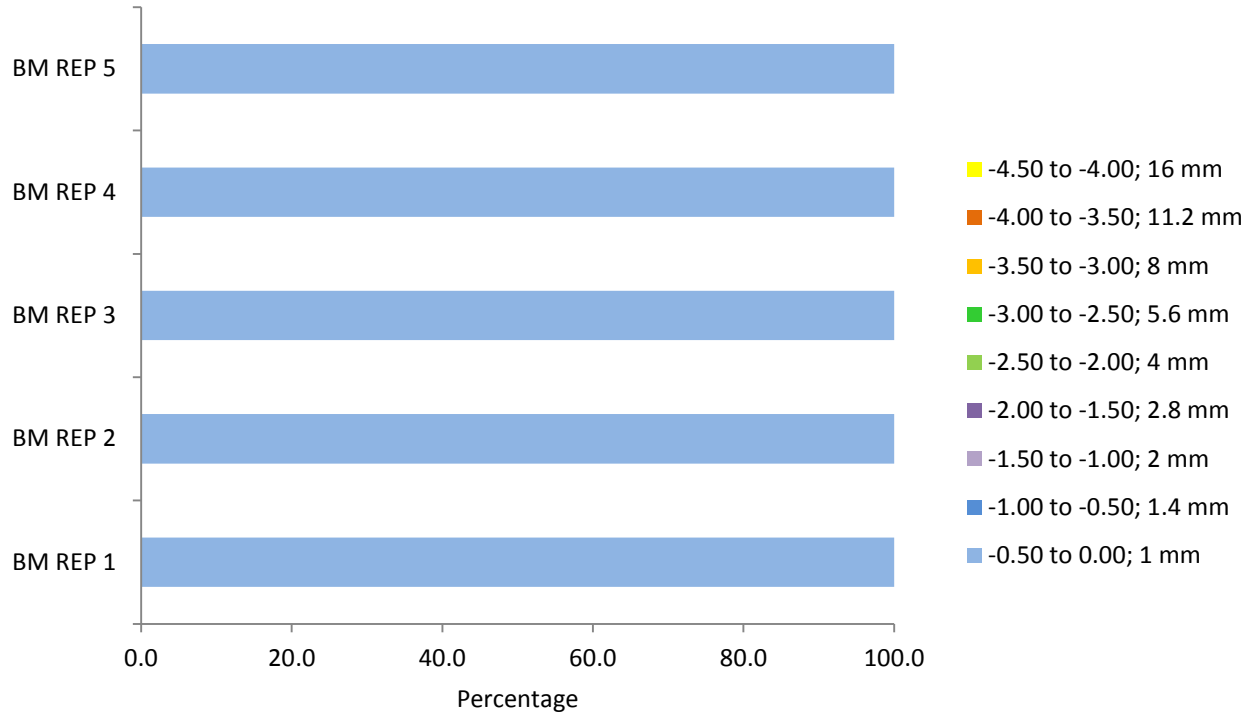


Figure 1b. Particle size distribution curves resulting from final laser analysis of 5 replicate samples of sediment distibuted as PS70 (Benchmark data).

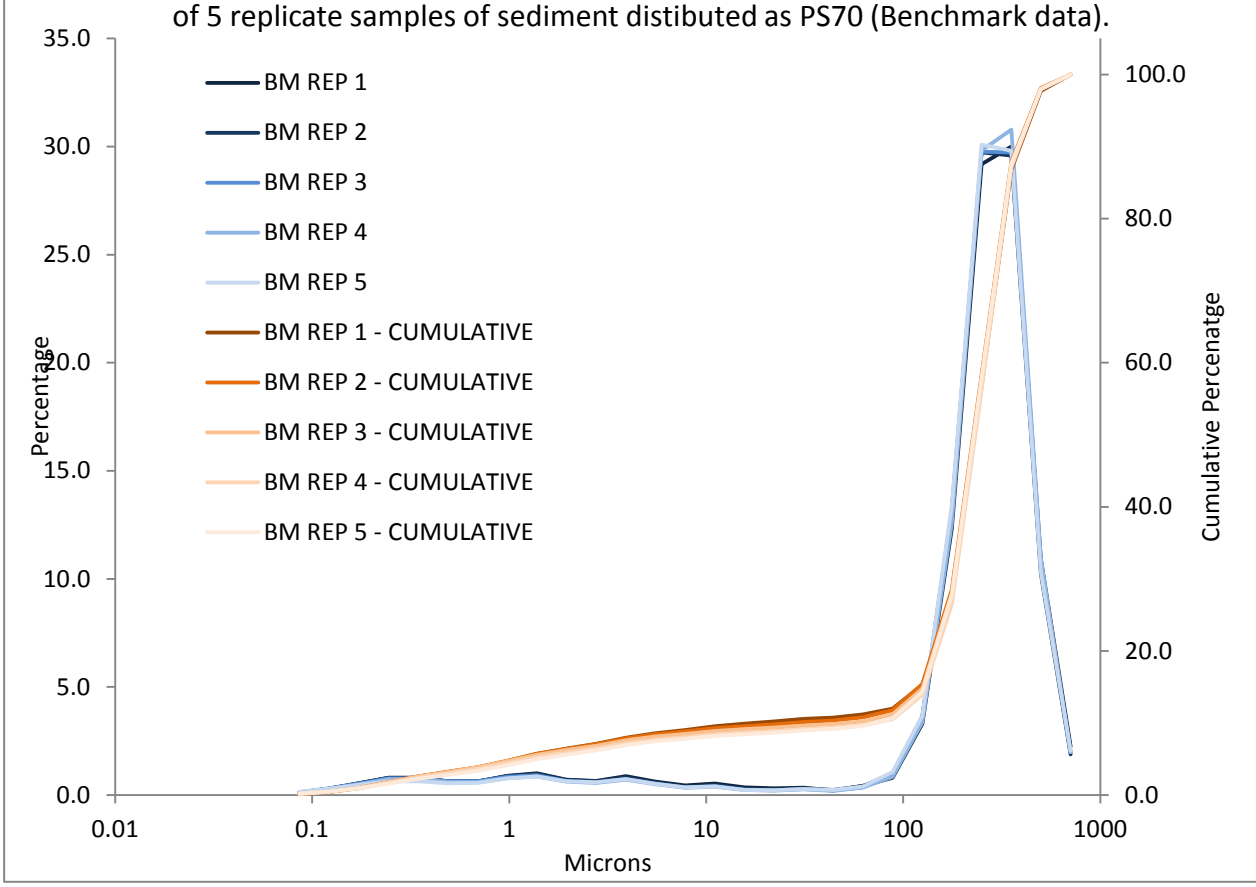
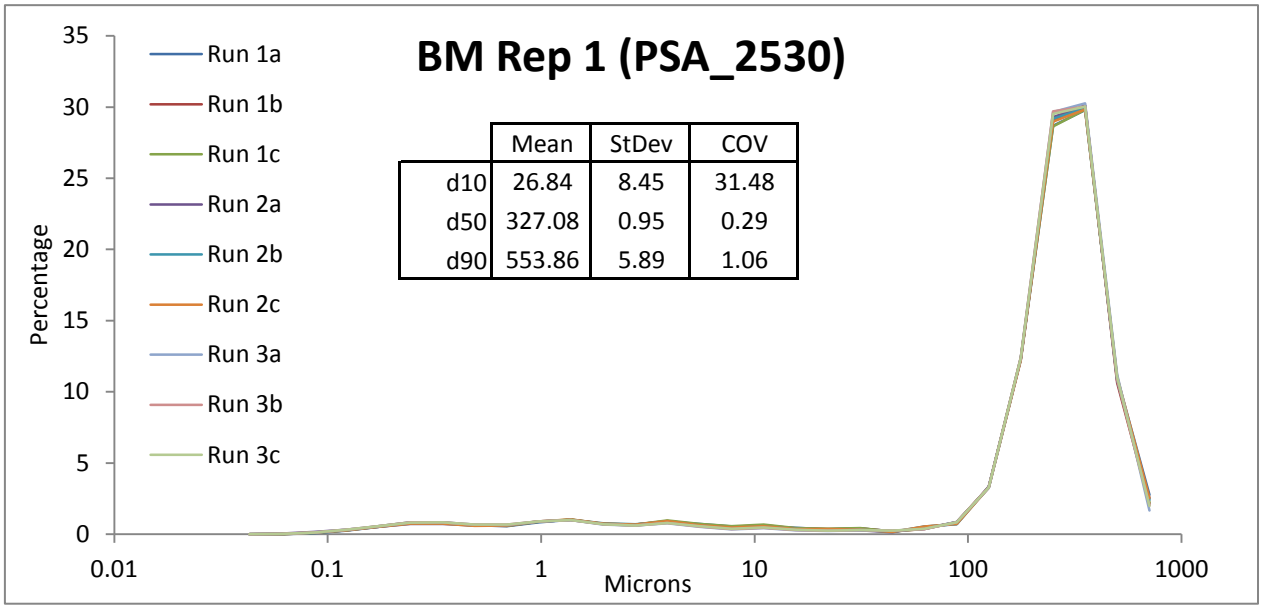
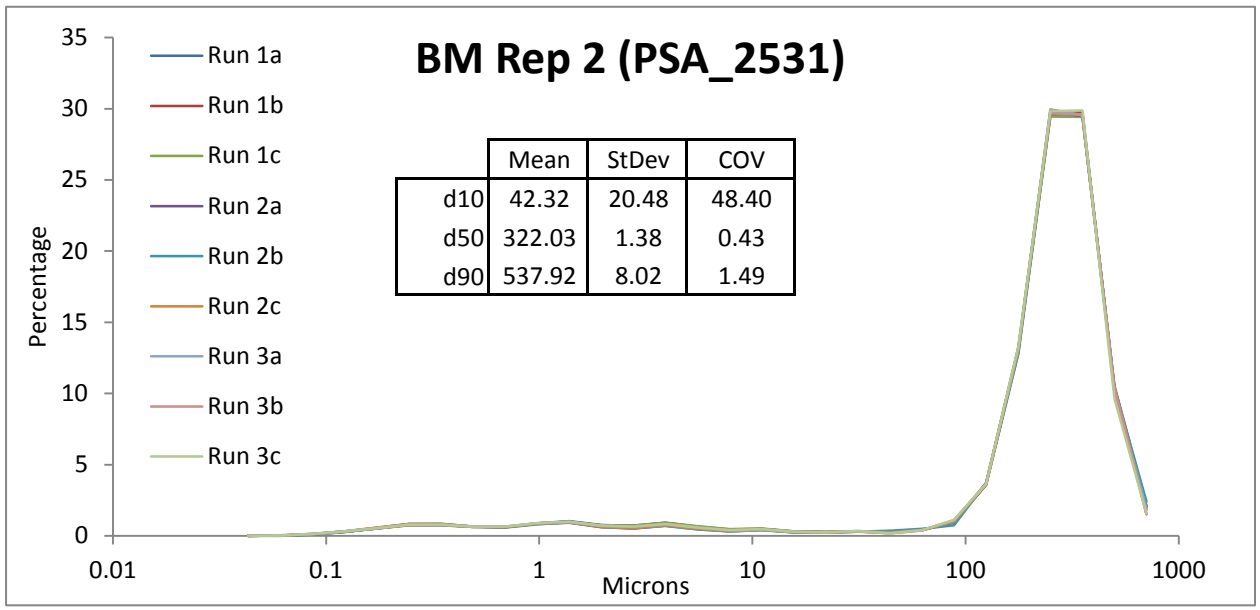


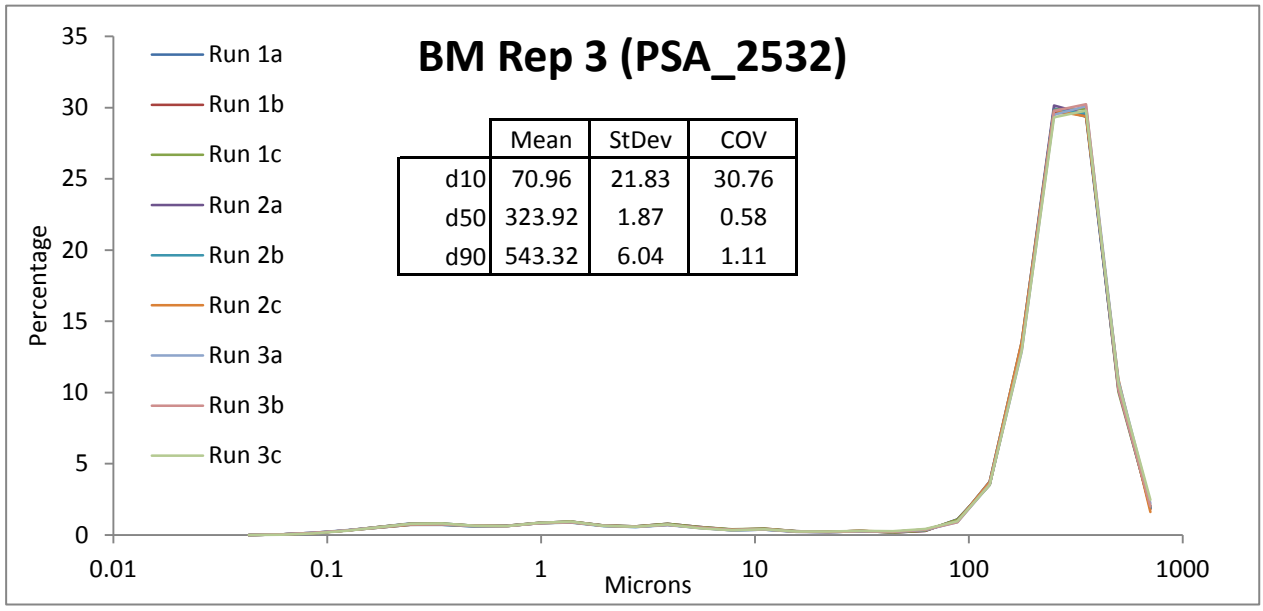
Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS70 along with sample statistics and Coefficient of Variance.



	Mean	StDev	COV
d10	26.84	8.45	31.48
d50	327.08	0.95	0.29
d90	553.86	5.89	1.06

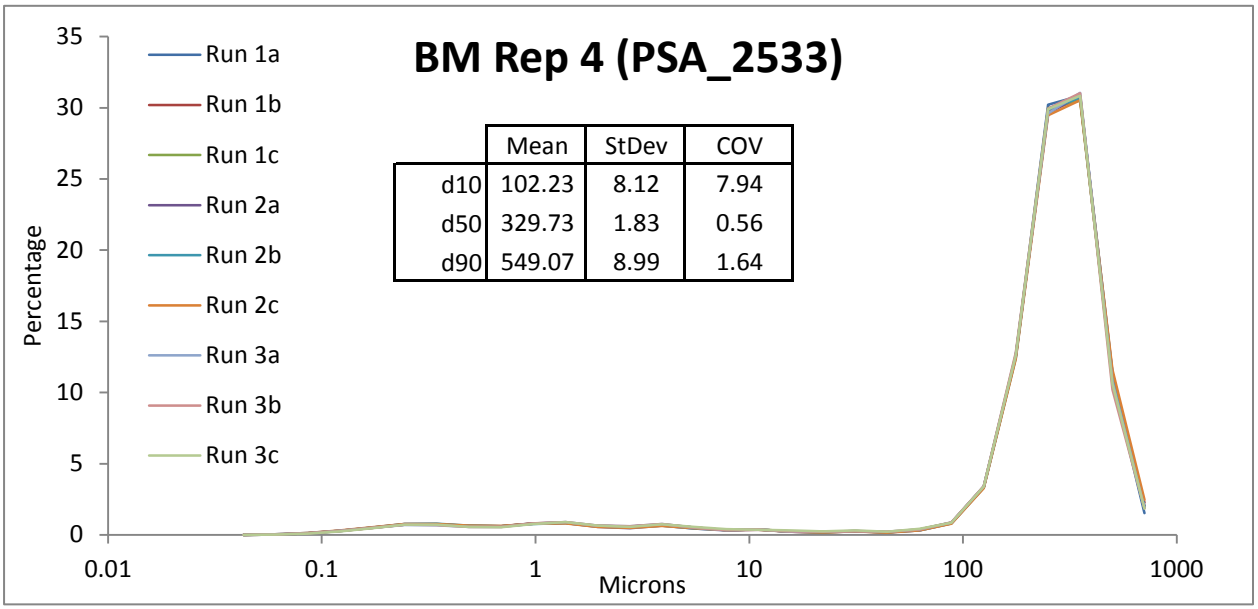


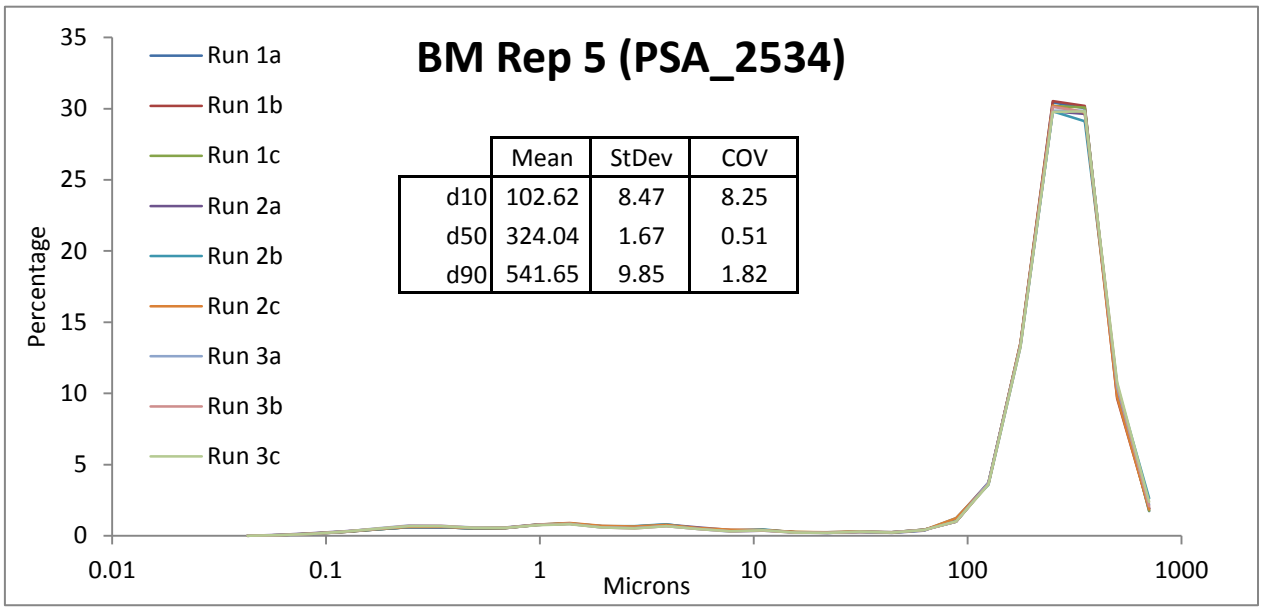
	Mean	StDev	COV
d10	42.32	20.48	48.40
d50	322.03	1.38	0.43
d90	537.92	8.02	1.49



	Mean	StDev	COV
d10	70.96	21.83	30.76
d50	323.92	1.87	0.58
d90	543.32	6.04	1.11

Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS70 along with sample statistics and Coefficient of Variance.





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

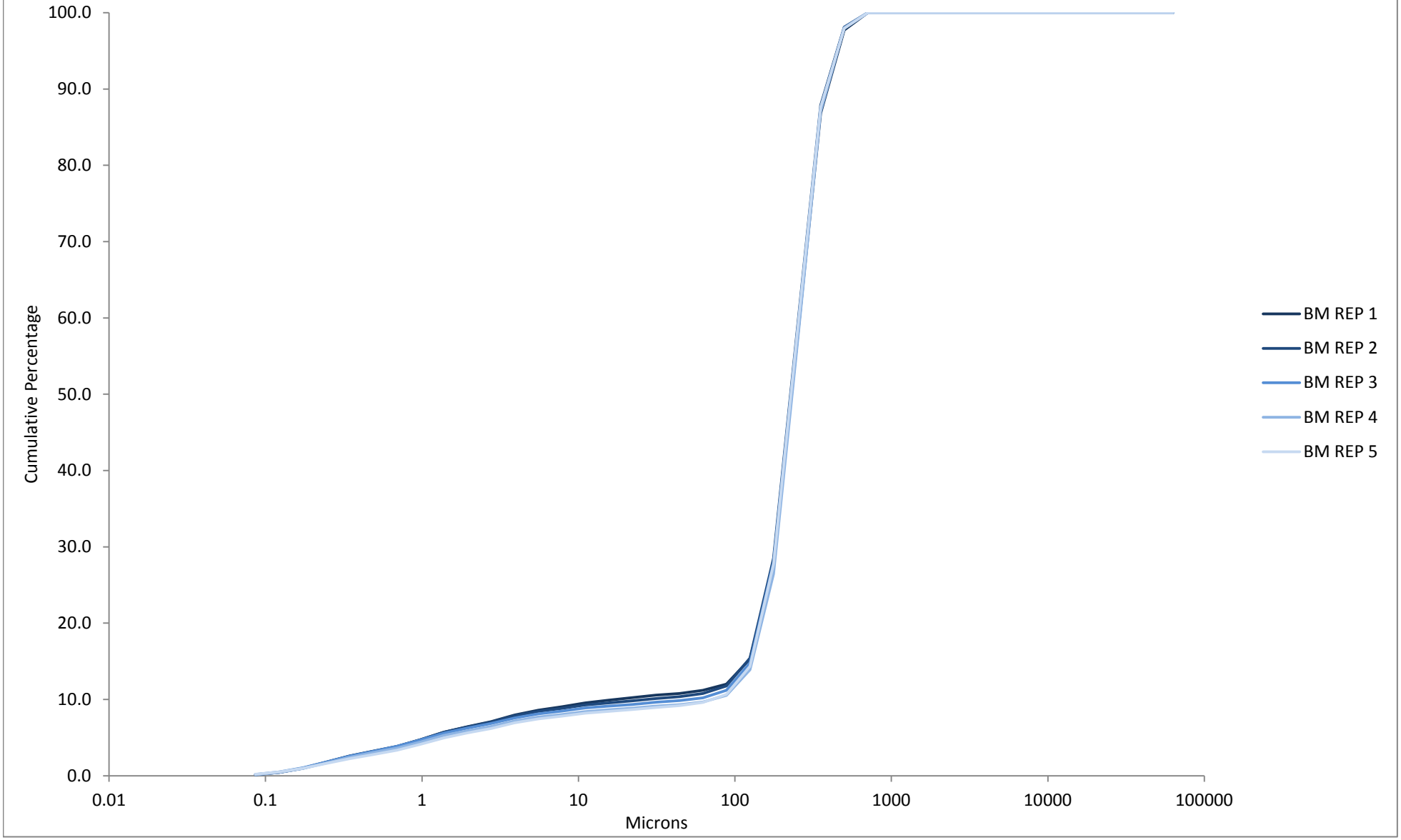
ISO 133020 defines good reproducibility when: COV is <3% for D50
COV is <5% for D10 and D90

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 PS70 (Benchmark data).



PARTICIPANT DATA

Table 6. Summary of equipment and methods used by participants and sample summary data for sediment distributed as PS70.

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	0.00	90.10	9.90	Sand	Sand
PSA_2501	YES	NO	OTHER	NO	NO	0.0	96.1	3.9	Sand	Sand
PSA_2502	YES	YES	NMBAQC	NO	NO	0.00	95.85	4.15	Sand	Sand
PSA_2503	NO	YES	OTHER	NO	NO	0.00	90.89	9.11	Sand	Sand
PSA_2504	NO	YES	NMBAQC	NO	NO	0.00	92.25	7.75	Sand	Sand
PSA_2505	NO	YES	NMBAQC	NO	NO	0.00	93.40	6.60	Muddy Sand	Sand
PSA_2506	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p
PSA_2507	NO	YES	NMBAQC	NO	NO	0.00	96.40	3.60	Coarse Sand	Sand
PSA_2508	YES	YES	NMBAQC	NO	NO	0.00	93.91	6.09	Sand	Sand
PSA_2509	NO	YES	NMBAQC	NO	NO	0.0	81.5	18.5	Muddy Sand	Muddy Sand
PSA_2510	NO	YES	NMBAQC	NO	NO	0.0	97.3	2.7	Sand	Sand
PSA_2511	YES	YES	NMBAQC	NO	NO	0.00	95.14	4.86	Sand	Sand
PSA_2512	NO	YES	NMBAQC	NO	NO	0.00	95.04	4.96	Sand	Sand
PSA_2513	YES	YES	NMBAQC	NO	NO	0.00	90.07	9.93	Sand	Sand
PSA_2514	YES	YES	NMBAQC	NO	NO	0.00	90.08	9.92	Sand	Sand
PSA_2515	NO	YES	NMBAQC	NO	NO	0.0	87.2	12.8	Muddy Sand	Muddy Sand
PSA_2516	YES	YES	NMBAQC	NO	NO	0.00	90.42	9.58	Silty Sand	Sand

NB: Decimal places as supplied by participant.
n/p - not participating in this exercise.
* Sediment description from Gradistat textural group based on final data supplied by participant.

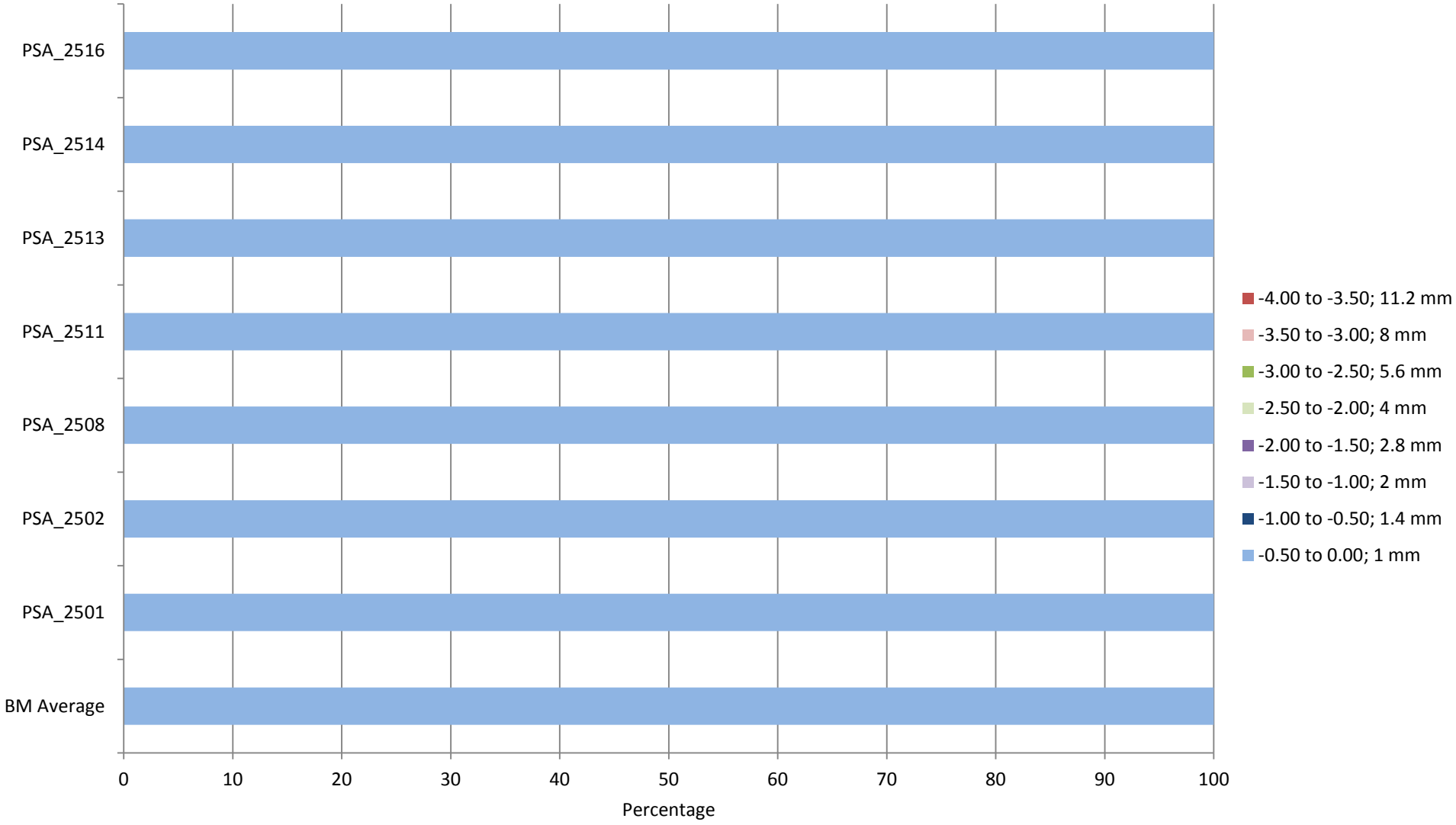
PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS70.

		Participant															
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	-	-	-	n/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-6.00 to -5.50; 45 mm		0.00	0.00	0.00	-	-	-	n/p	-	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/p	-	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/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-4.50 to -4.00; 16 mm		0.00	0.00	0.00	-	-	-	n/p	-	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/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-3.50 to -3.00; 8 mm		0.00	0.00	0.00	-	-	-	n/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-3.00 to -2.50; 5.6 mm		0.00	0.00	0.00	-	-	-	n/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-2.50 to -2.00; 4 mm		0.00	0.00	0.00	-	-	-	n/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-2.00 to -1.50; 2.8 mm		0.00	0.00	0.00	-	-	-	n/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-1.50 to -1.00; 2 mm		0.00	0.00	0.00	-	-	-	n/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-1.00 to -0.50; 1.4 mm		0.00	0.00	0.00	-	-	-	n/p	-	0.00	-	-	0.00	-	0.00	0.00	-	0.00
-0.50 to 0.00; 1 mm		0.03	0.04	0.035	-	-	-	n/p	-	0.03	-	-	0.04	-	0.01	0.03	-	0.11
Total		0.03	0.04	0.035	-	-	-	n/p	-	0.03	-	-	0.04	-	0.01	0.03	-	0.11
Summary Data																		
< 0.00; >1 mm		0.03	0.04	0.04	-	-	-	n/p	-	0.03	-	-	0.04	-	0.01	0.03	-	0.11
> 0.00; <1 mm	Base pan	0.08	0.25	0.24	-	-	-	n/p	-	0.02	-	-	0.25	-	0.03	0.07	-	0.83
	Oven dried	363.22	397.09	325.83	-	-	-	n/p	-	318.84	-	-	310.13	-	372.90	353.18	-	366.21
Total Sample Weight		363.33	397.38	326.11	-	-	-	n/p	-	318.9	-	-	310.42	-	372.94	353.28	-	367.15

- No sieve analysis undertaken.
n/p - not participating in this exercise.

Figure 4. Final sieve data (in percentages) provided by each participant and the Benchmark Average for sediment distributed as PS70.



PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS70.

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)	2.03	0.98	3.42	1.55	16.18	1.54		21.19	0.69
0.50 to 1.00; (500 µm)	10.59	3.07	16.32	12.52	32.77	14.59		27.06	12.43
1.00 to 1.50; (353.6 µm)	29.98	16.57	29.68	27.63	29.66	30.17		20.66	28.36
1.50 to 2.00; (250 µm)	29.72	41.60	28.73	30.24	11.85	29.72		15.13	30.80
2.00 to 2.50; (176.8 µm)	12.93	24.44	14.81	15.26	1.21	14.57		2.78	17.22
2.50 to 3.00; (125 µm)	3.52	7.56	2.88	3.64	0.00	2.75		0.08	4.27
3.00 to 3.50; (88.39 µm)	0.94	1.56	0.00	0.05	0.09	0.04		0.24	0.13
3.50 to 4.00; (62.5 µm)	0.39	0.34	0.00	0.00	0.49	0.03		0.18	0.02
4.00 to 4.50; (44.19 µm)	0.22	3.88	0.00	0.51	0.44	0.38		0.07	0.26
4.50 to 5.00; (31.25 µm)	0.30		0.00	0.67	0.35	0.49		0.13	0.36
5.00 to 5.50; (22.097 µm)	0.24		0.00	0.36	0.47	0.34		0.17	0.28
5.50 to 6.00; (15.625 µm)	0.28		0.00	0.16	0.71	0.24		0.15	0.22
6.00 to 6.50; (11.049 µm)	0.43		0.12	0.25	0.83	0.26		0.10	0.31
6.50 to 7.00; (7.813 µm)	0.38		0.32	0.39	0.85	0.36		0.12	0.49
7.00 to 7.50; (5.524 µm)	0.55		0.44	0.50	0.83	0.47		0.14	0.71
7.50 to 8.00; (3.906 µm)	0.78		0.52	0.58	0.80	0.54		0.13	0.87
8.00 to 8.50; (2.762 µm)	0.60		0.57	0.66	0.77	0.55		0.24	0.91
8.50 to 9.00; (1.953 µm)	0.67		0.57	0.78	0.71	0.48		0.27	0.80
9.00 to 9.50; (1.381 µm)	0.92		0.51	0.92	0.58	0.35		0.19	0.55
9.50 to 10.00; (0.977 µm)	0.83		0.43	0.92	0.36	0.25		0.21	0.25
10.00 to 10.50; (0.691 µm)	0.61		0.35	1.01	0.07	0.23		0.17	0.07
10.50 to 11.00; (0.488 µm)	0.61		0.24	0.78	0.00	0.23		0.13	0.00
11.00 to 11.50; (0.345 µm)	0.75		0.06	0.50	0.00	0.27		0.21	0.00
11.50 to 12.00; (0.244 µm)	0.75		0.00	0.13	0.00	0.27		0.26	0.00
12.00 to 12.50; (0.173 µm)	0.52		0.00	0.00	0.00	0.26		0.21	0.00
12.50 to 13.00; (0.122 µm)	0.30		0.00	0.00	0.00	0.23		0.25	0.00
13.00 to 13.50; (0.086 µm)	0.13		0.00	0.00	0.00	0.15		0.14	0.00
13.50 to 14.00; (0.061 µm)	0.04		0.00		0.00	0.16			0.00
14.00 to 14.50; (0.043 µm)	0.00		0.00		0.00	0.12			0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	0.00	90.62	100.00

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

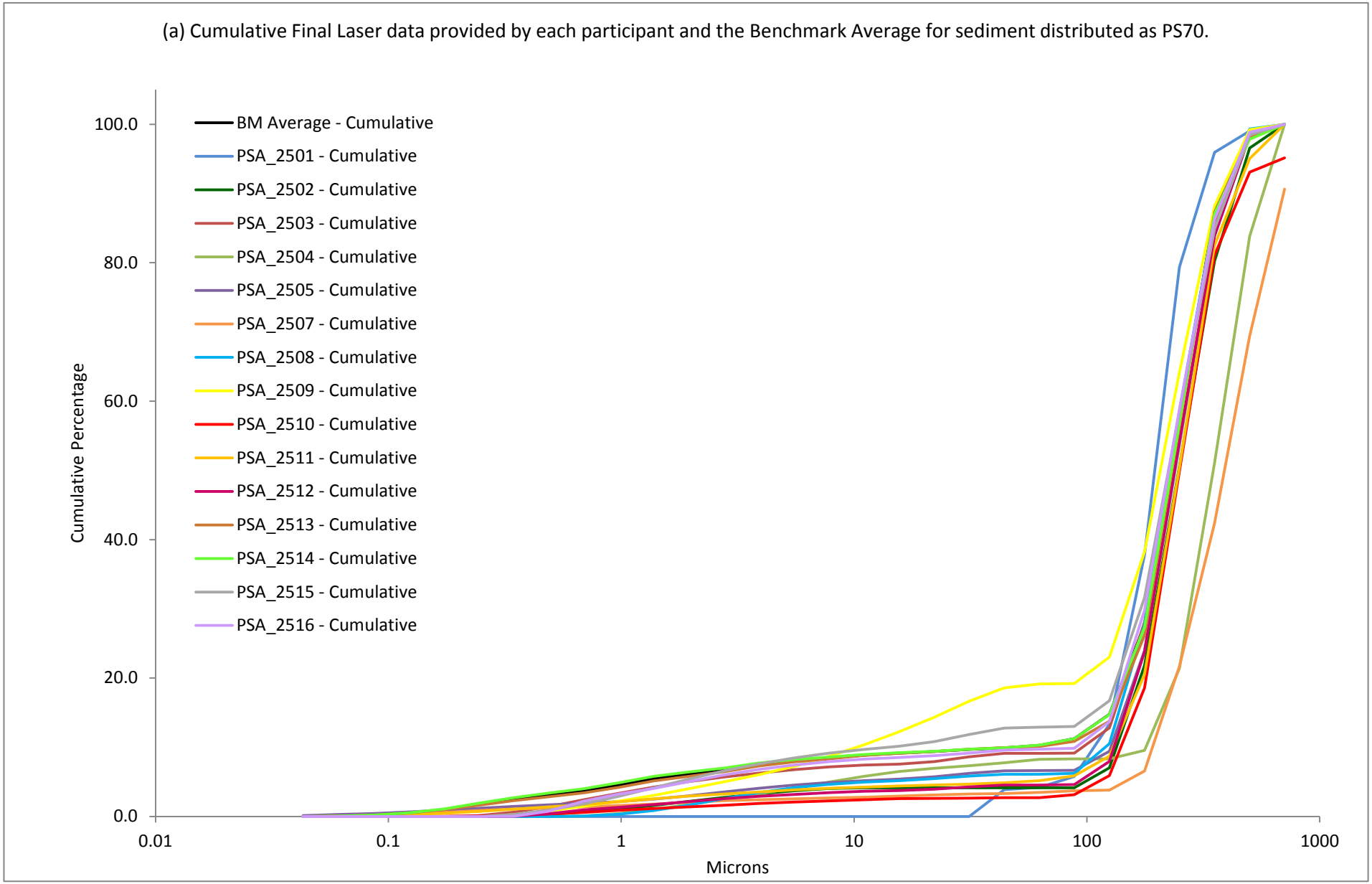
PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS70.

Phi interval (explicit) + sieve mesh	BM Average	PSA_2509	PSA_2510*1	PSA_2511	PSA_2512	PSA_2513	PSA_2514	PSA_2515	PSA_2516
-1.00 to -0.50; 1.4 mm	-	-	2.37	-	-	-	-	-	-
-0.50 to 0.00; 1 mm	-	-	2.47	-	-	-	-	-	-
0.00 to 0.50; (707 µm)	2.03	0.77	2.06	4.95	1.66	1.84	2.17	1.53	1.13
0.50 to 1.00; (500 µm)	10.59	11.07	12.03	12.52	14.39	10.85	10.79	13.61	12.62
1.00 to 1.50; (353.6 µm)	29.98	24.00	31.21	32.07	29.72	30.87	30.20	26.42	27.42
1.50 to 2.00; (250 µm)	29.72	25.92	31.29	29.93	30.46	30.27	29.53	26.81	29.04
2.00 to 2.50; (176.8 µm)	12.93	15.21	12.66	11.79	15.81	12.40	12.58	14.90	16.08
2.50 to 3.00; (125 µm)	3.52	3.83	2.77	2.86	3.36	2.93	3.47	3.72	3.87
3.00 to 3.50; (88.39 µm)	0.94	0.08	0.43	0.70	0.06	0.72	0.94	0.10	0.11
3.50 to 4.00; (62.5 µm)	0.39	0.56	0.01	0.30	0.02	0.19	0.39	0.13	0.15
4.00 to 4.50; (44.19 µm)	0.22	1.92	0.05	0.18	0.27	0.21	0.22	0.94	0.43
4.50 to 5.00; (31.25 µm)	0.30	2.31	0.03	0.15	0.31	0.33	0.29	1.03	0.38
5.00 to 5.50; (22.097 µm)	0.24	2.10	0.04	0.13	0.19	0.26	0.21	0.64	0.24
5.50 to 6.00; (15.625 µm)	0.28	1.88	0.18	0.15	0.12	0.30	0.24	0.45	0.25
6.00 to 6.50; (11.049 µm)	0.43	1.69	0.18	0.19	0.19	0.49	0.40	0.54	0.35
6.50 to 7.00; (7.813 µm)	0.38	1.43	0.14	0.23	0.25	0.44	0.33	0.71	0.49
7.00 to 7.50; (5.524 µm)	0.55	1.19	0.20	0.29	0.28	0.61	0.50	0.86	0.64
7.50 to 8.00; (3.906 µm)	0.78	1.05	0.27	0.30	0.33	0.83	0.73	1.01	0.81
8.00 to 8.50; (2.762 µm)	0.60	1.01	0.25	0.30	0.42	0.65	0.57	1.17	0.97
8.50 to 9.00; (1.953 µm)	0.67	0.95	0.23	0.38	0.45	0.68	0.65	1.27	0.98
9.00 to 9.50; (1.381 µm)	0.92	0.83	0.26	0.44	0.37	0.90	0.93	1.24	0.80
9.50 to 10.00; (0.977 µm)	0.83	0.73	0.28	0.40	0.38	0.81	0.85	1.09	1.02
10.00 to 10.50; (0.691 µm)	0.61	0.68	0.24	0.34	0.55	0.58	0.64	0.89	1.48
10.50 to 11.00; (0.488 µm)	0.61	0.53	0.18	0.32	0.37	0.55	0.66	0.63	0.72
11.00 to 11.50; (0.345 µm)	0.75	0.26	0.11	0.32	0.03	0.65	0.81	0.29	0.02
11.50 to 12.00; (0.244 µm)	0.75	0.00	0.05	0.29	0.00	0.66	0.81	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.52	0.00	0.02	0.21	0.00	0.48	0.57	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.30		0.00	0.14	0.00	0.30	0.33	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.13		0.00	0.07	0.00	0.15	0.15	0.00	0.00
13.50 to 14.00; (0.061 µm)	0.04		0.00	0.03	0.00	0.05	0.05	0.00	0.00
14.00 to 14.50; (0.043 µm)	0.00		0.00	0.00	0.00	0.01	0.01	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

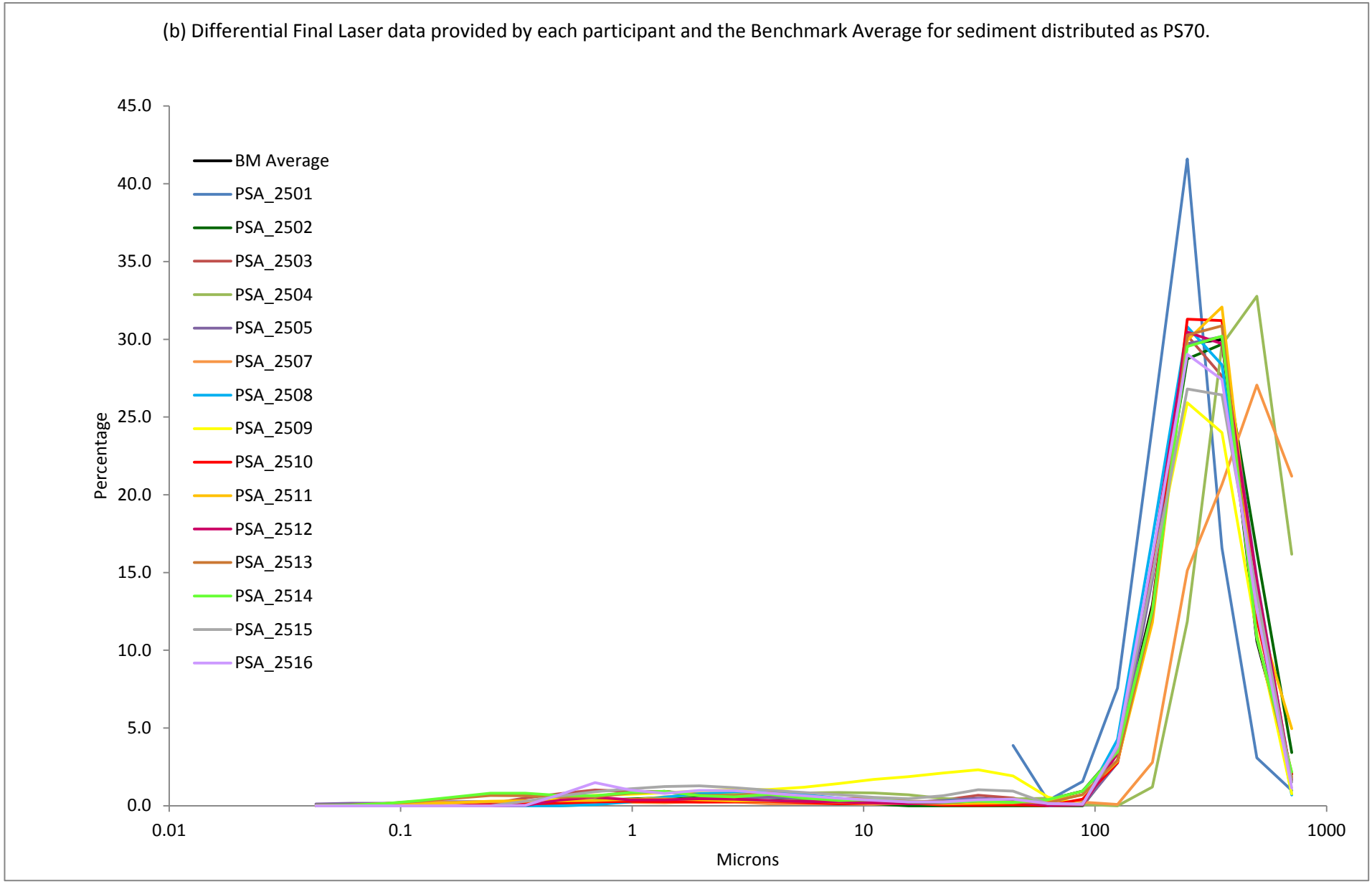
*[1] Small amount of >1 <2mm sediment present but not sufficient to warrant dry sieving >1mm fraction; as Beckman Coulter LS 13320 can analyse up to 2mm without issue the laser data includes non-normalised data >707um.

Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS70, shown as (a) cumulative and (b) differential.



NMBAQC Particle Size Analysis
2018/19 - PS70

Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS70, shown as (a) cumulative and (b) differential.



NMBAQC Particle Size Analysis
2018/19 - PS70

Figure 6. Particle size distribution curves from all participating laboratories and the Benchmark Average for sediment distributed as PS70.

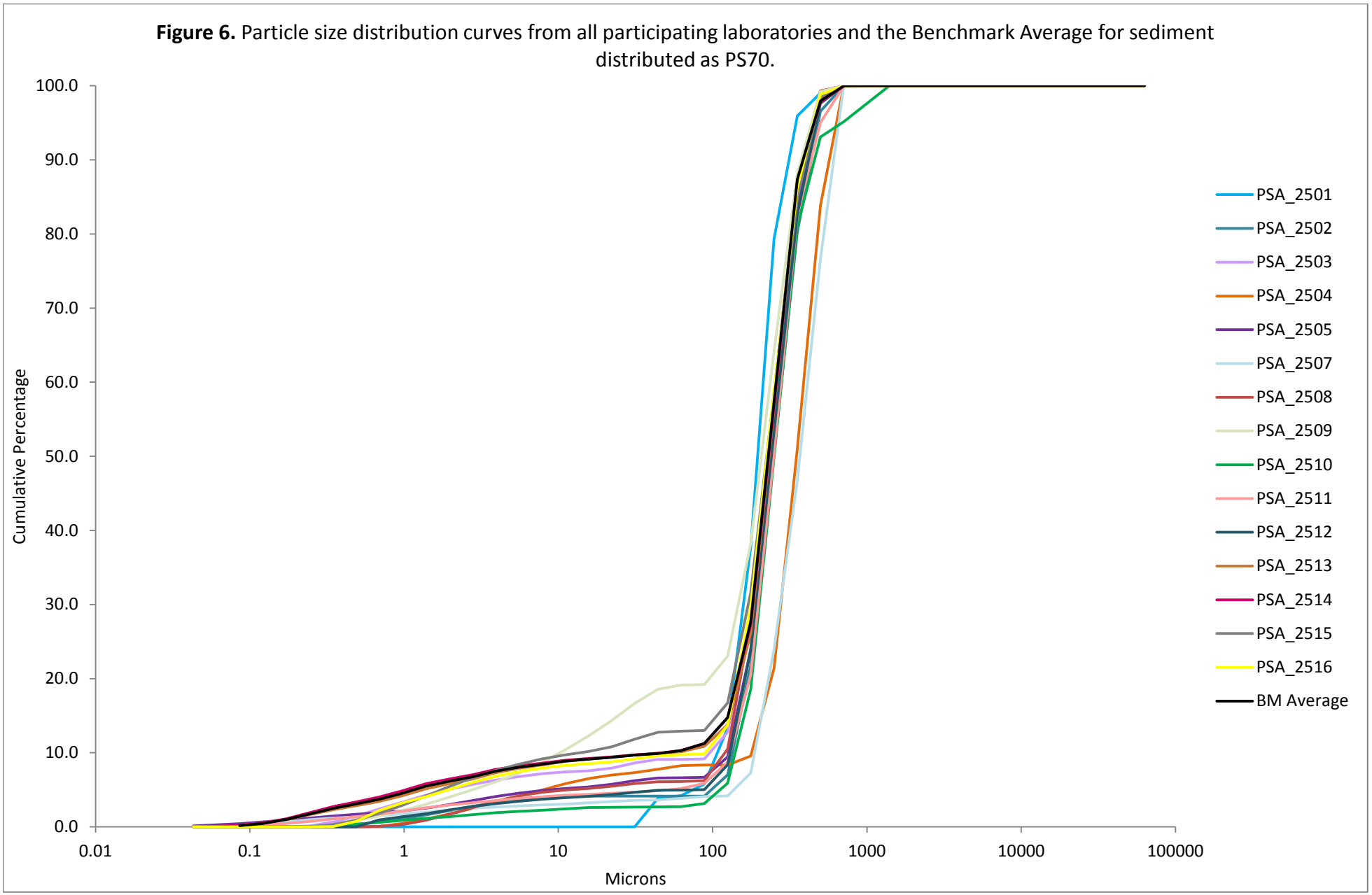
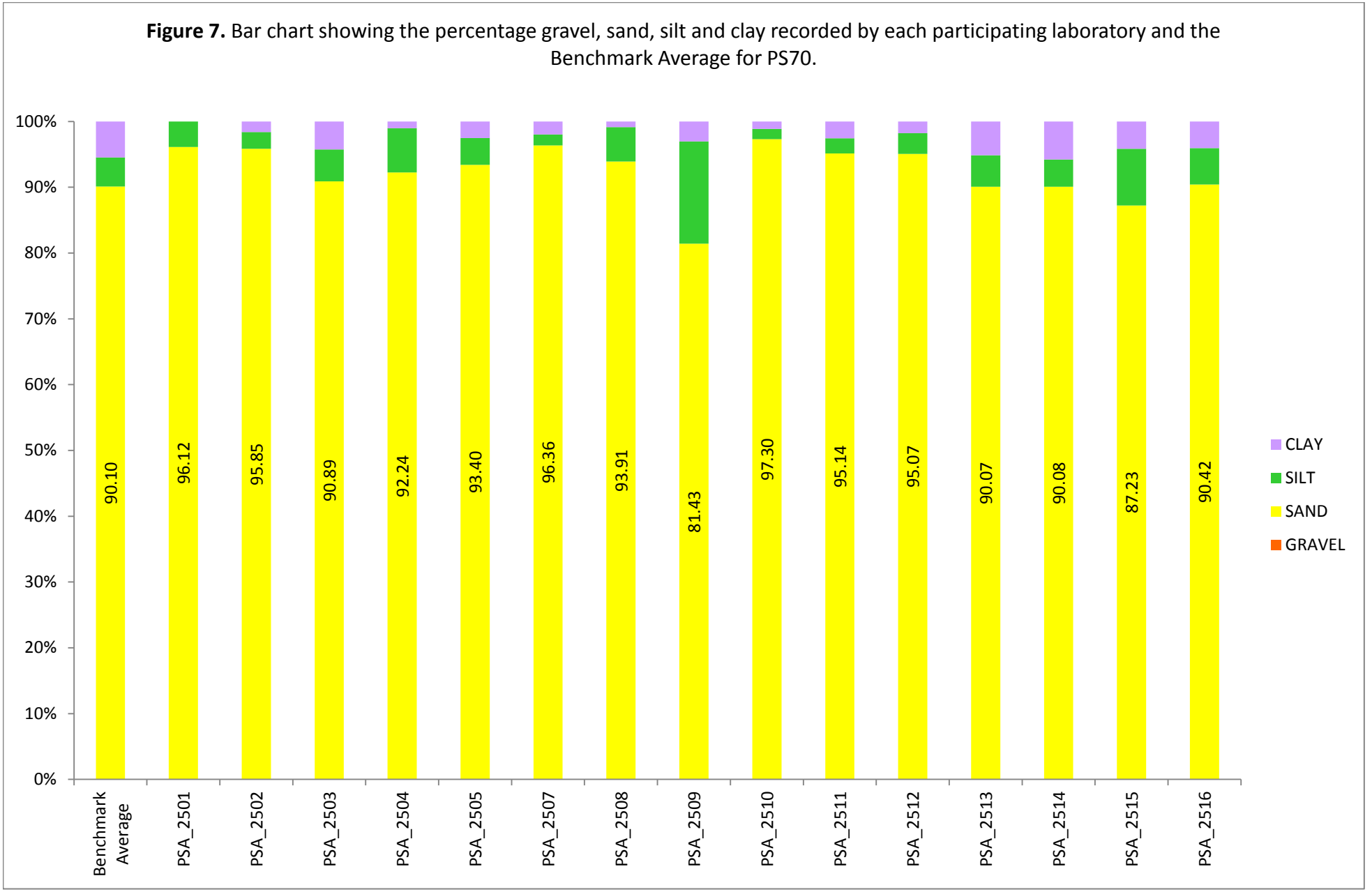


Figure 7. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the Benchmark Average for PS70.



APPENDICES

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS70.

	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)	2.77	2.14	2.23	2.53	2.42	2.55	1.67	2.02	1.99
0.50 to 1.00; (500 µm)	10.99	10.63	10.87	10.79	10.90	11.07	11.23	10.87	11.04
1.00 to 1.50; (353.6 µm)	29.78	30.14	29.82	30.11	29.92	29.84	30.27	30.03	30.04
1.50 to 2.00; (250 µm)	28.69	29.06	28.65	29.29	29.18	28.99	29.66	29.70	29.51
2.00 to 2.50; (176.8 µm)	12.26	12.32	12.39	12.27	12.33	12.21	12.40	12.42	12.36
2.50 to 3.00; (125 µm)	3.27	3.32	3.31	3.36	3.31	3.27	3.27	3.30	3.28
3.00 to 3.50; (88.39 µm)	0.85	0.85	0.84	0.72	0.70	0.72	0.86	0.83	0.82
3.50 to 4.00; (62.5 µm)	0.40	0.36	0.38	0.53	0.54	0.55	0.35	0.37	0.40
4.00 to 4.50; (44.19 µm)	0.21	0.20	0.18	0.14	0.17	0.17	0.25	0.25	0.24
4.50 to 5.00; (31.25 µm)	0.41	0.41	0.44	0.28	0.32	0.33	0.28	0.29	0.30
5.00 to 5.50; (22.097 µm)	0.35	0.36	0.38	0.27	0.33	0.35	0.23	0.24	0.25
5.50 to 6.00; (15.625 µm)	0.44	0.40	0.44	0.32	0.35	0.37	0.26	0.28	0.31
6.00 to 6.50; (11.049 µm)	0.54	0.63	0.68	0.48	0.55	0.58	0.42	0.45	0.47
6.50 to 7.00; (7.813 µm)	0.53	0.53	0.57	0.41	0.45	0.47	0.34	0.37	0.38
7.00 to 7.50; (5.524 µm)	0.72	0.68	0.72	0.60	0.62	0.64	0.52	0.54	0.56
7.50 to 8.00; (3.906 µm)	0.89	0.94	0.97	0.85	0.89	0.92	0.76	0.79	0.80
8.00 to 8.50; (2.762 µm)	0.61	0.67	0.68	0.67	0.70	0.68	0.60	0.61	0.61
8.50 to 9.00; (1.953 µm)	0.72	0.71	0.73	0.73	0.76	0.74	0.69	0.69	0.69
9.00 to 9.50; (1.381 µm)	1.01	1.01	1.03	1.00	1.01	1.04	0.98	0.99	0.99
9.50 to 10.00; (0.977 µm)	0.84	0.87	0.88	0.89	0.88	0.90	0.90	0.91	0.91
10.00 to 10.50; (0.691 µm)	0.57	0.59	0.59	0.64	0.61	0.61	0.66	0.68	0.68
10.50 to 11.00; (0.488 µm)	0.62	0.62	0.62	0.61	0.62	0.60	0.68	0.68	0.68
11.00 to 11.50; (0.345 µm)	0.83	0.82	0.82	0.72	0.77	0.75	0.84	0.83	0.83
11.50 to 12.00; (0.244 µm)	0.82	0.82	0.83	0.73	0.76	0.75	0.83	0.83	0.82
12.00 to 12.50; (0.173 µm)	0.53	0.55	0.56	0.53	0.52	0.51	0.57	0.57	0.56
12.50 to 13.00; (0.122 µm)	0.26	0.28	0.28	0.32	0.28	0.28	0.31	0.31	0.31
13.00 to 13.50; (0.086 µm)	0.08	0.09	0.09	0.15	0.10	0.10	0.12	0.12	0.12
13.50 to 14.00; (0.061 µm)	0.01	0.01	0.01	0.05	0.02	0.02	0.03	0.03	0.03
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
d10	21.88	18.28	15.02	31.80	24.72	23.31	41.90	33.92	30.72
d50	328.06	325.87	325.53	328.11	327.29	327.99	327.45	326.52	326.94
d90	563.76	547.84	552.62	556.86	556.27	560.74	547.35	548.83	550.44

	Mean	StDev	COV
d10	26.84	8.45	31.48
d50	327.08	0.95	0.29
d90	553.86	5.89	1.06

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS70.

	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)	2.04	1.54	2.00	2.10	2.42	1.82	1.91	1.52	1.58
0.50 to 1.00; (500 µm)	10.28	10.31	10.29	10.55	10.41	10.42	10.07	10.37	9.65
1.00 to 1.50; (353.6 µm)	29.60	29.76	29.43	29.46	29.51	29.56	29.53	29.58	29.89
1.50 to 2.00; (250 µm)	29.58	29.58	29.46	29.82	29.73	29.95	29.92	29.68	29.83
2.00 to 2.50; (176.8 µm)	12.81	13.06	12.92	13.22	13.12	13.14	13.15	13.29	13.32
2.50 to 3.00; (125 µm)	3.60	3.58	3.61	3.72	3.71	3.62	3.67	3.65	3.65
3.00 to 3.50; (88.39 µm)	1.02	0.97	0.99	0.95	0.75	0.99	1.09	1.12	1.12
3.50 to 4.00; (62.5 µm)	0.41	0.40	0.42	0.41	0.50	0.41	0.38	0.39	0.40
4.00 to 4.50; (44.19 µm)	0.28	0.26	0.25	0.24	0.36	0.24	0.19	0.18	0.18
4.50 to 5.00; (31.25 µm)	0.32	0.33	0.33	0.28	0.31	0.31	0.31	0.32	0.33
5.00 to 5.50; (22.097 µm)	0.27	0.27	0.28	0.22	0.24	0.24	0.24	0.24	0.25
5.50 to 6.00; (15.625 µm)	0.29	0.31	0.33	0.25	0.25	0.28	0.27	0.29	0.31
6.00 to 6.50; (11.049 µm)	0.47	0.49	0.52	0.40	0.41	0.44	0.43	0.45	0.47
6.50 to 7.00; (7.813 µm)	0.43	0.45	0.47	0.31	0.31	0.34	0.38	0.39	0.41
7.00 to 7.50; (5.524 µm)	0.64	0.66	0.67	0.48	0.46	0.50	0.56	0.58	0.59
7.50 to 8.00; (3.906 µm)	0.89	0.92	0.93	0.72	0.71	0.75	0.80	0.82	0.83
8.00 to 8.50; (2.762 µm)	0.69	0.73	0.73	0.53	0.52	0.54	0.64	0.65	0.65
8.50 to 9.00; (1.953 µm)	0.77	0.75	0.76	0.62	0.63	0.63	0.70	0.71	0.72
9.00 to 9.50; (1.381 µm)	1.03	0.99	1.00	0.93	0.94	0.95	0.97	0.98	0.99
9.50 to 10.00; (0.977 µm)	0.88	0.88	0.89	0.84	0.82	0.86	0.88	0.89	0.90
10.00 to 10.50; (0.691 µm)	0.61	0.63	0.63	0.61	0.59	0.62	0.65	0.65	0.66
10.50 to 11.00; (0.488 µm)	0.63	0.62	0.63	0.65	0.66	0.66	0.64	0.66	0.66
11.00 to 11.50; (0.345 µm)	0.79	0.75	0.76	0.82	0.85	0.84	0.78	0.80	0.80
11.50 to 12.00; (0.244 µm)	0.79	0.75	0.76	0.83	0.84	0.84	0.78	0.80	0.79
12.00 to 12.50; (0.173 µm)	0.52	0.52	0.52	0.57	0.55	0.58	0.55	0.55	0.55
12.50 to 13.00; (0.122 µm)	0.27	0.30	0.29	0.32	0.28	0.32	0.31	0.30	0.31
13.00 to 13.50; (0.086 µm)	0.09	0.12	0.12	0.13	0.10	0.12	0.13	0.12	0.13
13.50 to 14.00; (0.061 µm)	0.01	0.03	0.03	0.03	0.02	0.03	0.04	0.03	0.03
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	28.68	24.05	21.37	76.40	70.34	56.55	40.36	34.17	28.95
d50	322.59	321.42	321.66	323.55	324.35	322.51	321.41	320.94	319.81
d90	541.30	532.55	540.58	546.03	550.01	539.16	535.77	532.94	522.92

	Mean	StDev	COV
d10	42.32	20.48	48.40
d50	322.03	1.38	0.43
d90	537.92	8.02	1.49

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS70.

	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)	1.88	1.82	2.00	1.99	1.91	1.63	2.22	2.00	2.48
0.50 to 1.00; (500 µm)	10.32	10.71	10.06	10.22	10.53	10.94	10.85	10.22	10.67
1.00 to 1.50; (353.6 µm)	29.38	29.60	29.89	29.55	29.59	29.38	30.11	30.25	29.80
1.50 to 2.00; (250 µm)	29.94	29.63	29.86	30.15	29.86	29.79	29.50	29.78	29.31
2.00 to 2.50; (176.8 µm)	13.32	13.20	13.07	13.51	13.52	13.57	12.88	13.05	12.91
2.50 to 3.00; (125 µm)	3.54	3.53	3.52	3.75	3.73	3.73	3.53	3.59	3.53
3.00 to 3.50; (88.39 µm)	1.10	1.07	1.08	0.95	0.97	0.96	0.89	0.90	0.97
3.50 to 4.00; (62.5 µm)	0.30	0.30	0.31	0.36	0.37	0.37	0.35	0.37	0.44
4.00 to 4.50; (44.19 µm)	0.19	0.19	0.19	0.22	0.22	0.22	0.23	0.23	0.27
4.50 to 5.00; (31.25 µm)	0.29	0.29	0.30	0.27	0.28	0.28	0.26	0.27	0.29
5.00 to 5.50; (22.097 µm)	0.22	0.23	0.23	0.20	0.21	0.22	0.20	0.21	0.25
5.50 to 6.00; (15.625 µm)	0.27	0.27	0.28	0.23	0.24	0.25	0.24	0.25	0.25
6.00 to 6.50; (11.049 µm)	0.43	0.44	0.45	0.37	0.38	0.40	0.38	0.40	0.41
6.50 to 7.00; (7.813 µm)	0.38	0.39	0.39	0.34	0.34	0.35	0.34	0.35	0.34
7.00 to 7.50; (5.524 µm)	0.57	0.56	0.57	0.50	0.51	0.52	0.51	0.52	0.48
7.50 to 8.00; (3.906 µm)	0.79	0.79	0.80	0.71	0.71	0.72	0.71	0.72	0.74
8.00 to 8.50; (2.762 µm)	0.62	0.61	0.61	0.58	0.57	0.58	0.57	0.58	0.59
8.50 to 9.00; (1.953 µm)	0.68	0.67	0.67	0.65	0.64	0.64	0.64	0.65	0.66
9.00 to 9.50; (1.381 µm)	0.95	0.93	0.94	0.89	0.88	0.89	0.89	0.91	0.94
9.50 to 10.00; (0.977 µm)	0.86	0.86	0.86	0.82	0.82	0.83	0.83	0.84	0.84
10.00 to 10.50; (0.691 µm)	0.65	0.64	0.64	0.62	0.63	0.63	0.63	0.64	0.62
10.50 to 11.00; (0.488 µm)	0.66	0.65	0.66	0.62	0.62	0.62	0.63	0.65	0.65
11.00 to 11.50; (0.345 µm)	0.81	0.79	0.80	0.73	0.72	0.73	0.76	0.78	0.81
11.50 to 12.00; (0.244 µm)	0.81	0.79	0.80	0.72	0.71	0.73	0.76	0.77	0.80
12.00 to 12.50; (0.173 µm)	0.57	0.55	0.55	0.52	0.52	0.52	0.55	0.55	0.54
12.50 to 13.00; (0.122 µm)	0.32	0.31	0.31	0.31	0.31	0.31	0.33	0.32	0.29
13.00 to 13.50; (0.086 µm)	0.14	0.13	0.13	0.15	0.15	0.14	0.16	0.15	0.10
13.50 to 14.00; (0.061 µm)	0.04	0.04	0.03	0.05	0.05	0.05	0.05	0.05	0.02
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00
d10	41.84	48.32	42.58	93.75	93.46	89.45	87.27	73.36	68.58
d50	321.63	323.41	322.98	322.53	323.30	322.89	327.34	324.89	326.28
d90	538.73	543.12	537.20	539.33	542.39	542.89	552.17	539.62	554.47

	Mean	StDev	COV
d10	70.96	21.83	30.76
d50	323.92	1.87	0.58
d90	543.32	6.04	1.11

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS70.

	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)	1.54	2.28	1.92	2.06	1.97	2.46	1.88	1.88	1.84
0.50 to 1.00; (500 µm)	10.84	10.79	11.02	11.40	11.37	11.61	10.77	10.21	10.61
1.00 to 1.50; (353.6 µm)	30.83	30.69	30.51	30.82	30.71	30.53	31.05	31.03	30.85
1.50 to 2.00; (250 µm)	30.21	29.69	29.97	29.63	29.89	29.48	29.62	29.95	29.90
2.00 to 2.50; (176.8 µm)	12.59	12.53	12.56	12.57	12.41	12.37	12.68	12.79	12.62
2.50 to 3.00; (125 µm)	3.39	3.40	3.35	3.32	3.33	3.29	3.41	3.42	3.40
3.00 to 3.50; (88.39 µm)	0.87	0.86	0.85	0.80	0.82	0.79	0.87	0.87	0.85
3.50 to 4.00; (62.5 µm)	0.36	0.37	0.38	0.32	0.33	0.31	0.38	0.39	0.42
4.00 to 4.50; (44.19 µm)	0.19	0.18	0.18	0.18	0.18	0.17	0.23	0.23	0.23
4.50 to 5.00; (31.25 µm)	0.25	0.26	0.27	0.27	0.28	0.26	0.27	0.28	0.32
5.00 to 5.50; (22.097 µm)	0.18	0.19	0.19	0.21	0.21	0.18	0.22	0.22	0.24
5.50 to 6.00; (15.625 µm)	0.23	0.24	0.24	0.23	0.24	0.23	0.23	0.24	0.31
6.00 to 6.50; (11.049 µm)	0.37	0.38	0.39	0.37	0.38	0.37	0.39	0.40	0.35
6.50 to 7.00; (7.813 µm)	0.34	0.34	0.35	0.32	0.33	0.33	0.33	0.34	0.42
7.00 to 7.50; (5.524 µm)	0.51	0.52	0.53	0.46	0.46	0.47	0.52	0.53	0.58
7.50 to 8.00; (3.906 µm)	0.73	0.73	0.73	0.65	0.65	0.63	0.77	0.78	0.75
8.00 to 8.50; (2.762 µm)	0.59	0.58	0.58	0.49	0.51	0.50	0.60	0.60	0.57
8.50 to 9.00; (1.953 µm)	0.64	0.63	0.63	0.57	0.58	0.57	0.65	0.65	0.66
9.00 to 9.50; (1.381 µm)	0.87	0.87	0.87	0.84	0.82	0.82	0.90	0.90	0.90
9.50 to 10.00; (0.977 µm)	0.80	0.80	0.80	0.79	0.77	0.78	0.80	0.80	0.78
10.00 to 10.50; (0.691 µm)	0.61	0.61	0.61	0.60	0.60	0.63	0.56	0.57	0.55
10.50 to 11.00; (0.488 µm)	0.62	0.62	0.63	0.63	0.65	0.65	0.56	0.57	0.58
11.00 to 11.50; (0.345 µm)	0.74	0.73	0.75	0.77	0.79	0.77	0.69	0.71	0.72
11.50 to 12.00; (0.244 µm)	0.73	0.72	0.74	0.76	0.77	0.76	0.70	0.71	0.71
12.00 to 12.50; (0.173 µm)	0.51	0.51	0.51	0.52	0.52	0.53	0.49	0.50	0.48
12.50 to 13.00; (0.122 µm)	0.30	0.29	0.28	0.29	0.28	0.31	0.29	0.28	0.25
13.00 to 13.50; (0.086 µm)	0.13	0.13	0.11	0.12	0.11	0.14	0.13	0.12	0.09
13.50 to 14.00; (0.061 µm)	0.04	0.04	0.03	0.03	0.03	0.04	0.04	0.03	0.02
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00

d10	99.56	99.21	96.64	115.00	109.92	112.46	99.70	95.17	92.41
d50	328.08	329.80	328.83	331.74	331.08	332.91	329.48	327.52	328.17
d90	539.91	552.50	549.06	556.11	554.35	565.44	544.97	537.20	542.13

	Mean	StDev	COV
d10	102.23	8.12	7.94
d50	329.73	1.83	0.56
d90	549.07	8.99	1.64

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS70.

	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)	1.74	1.91	1.77	1.91	2.63	1.85	2.19	2.07	2.39
0.50 to 1.00; (500 µm)	10.25	9.65	10.27	10.45	10.54	9.76	10.45	10.65	10.80
1.00 to 1.50; (353.6 µm)	30.04	30.20	30.07	29.63	29.12	29.72	29.86	29.77	29.82
1.50 to 2.00; (250 µm)	30.45	30.54	30.18	29.81	29.82	30.22	29.85	30.13	29.77
2.00 to 2.50; (176.8 µm)	13.44	13.53	13.48	13.41	13.26	13.53	13.43	13.31	13.27
2.50 to 3.00; (125 µm)	3.67	3.68	3.71	3.73	3.57	3.65	3.74	3.64	3.60
3.00 to 3.50; (88.39 µm)	0.99	1.01	1.00	1.18	1.23	1.24	1.00	1.00	1.00
3.50 to 4.00; (62.5 µm)	0.42	0.42	0.43	0.36	0.38	0.40	0.40	0.40	0.40
4.00 to 4.50; (44.19 µm)	0.25	0.25	0.24	0.20	0.22	0.22	0.25	0.25	0.23
4.50 to 5.00; (31.25 µm)	0.27	0.27	0.27	0.30	0.31	0.32	0.27	0.28	0.29
5.00 to 5.50; (22.097 µm)	0.21	0.22	0.22	0.22	0.24	0.24	0.21	0.21	0.22
5.50 to 6.00; (15.625 µm)	0.24	0.26	0.26	0.26	0.22	0.26	0.22	0.23	0.24
6.00 to 6.50; (11.049 µm)	0.38	0.39	0.40	0.40	0.45	0.41	0.36	0.37	0.37
6.50 to 7.00; (7.813 µm)	0.34	0.34	0.35	0.40	0.36	0.42	0.30	0.31	0.31
7.00 to 7.50; (5.524 µm)	0.53	0.53	0.54	0.59	0.51	0.55	0.47	0.47	0.47
7.50 to 8.00; (3.906 µm)	0.75	0.75	0.75	0.79	0.80	0.78	0.69	0.68	0.67
8.00 to 8.50; (2.762 µm)	0.59	0.59	0.59	0.66	0.68	0.66	0.53	0.53	0.52
8.50 to 9.00; (1.953 µm)	0.63	0.63	0.63	0.68	0.68	0.70	0.60	0.59	0.58
9.00 to 9.50; (1.381 µm)	0.85	0.85	0.85	0.85	0.88	0.89	0.84	0.83	0.82
9.50 to 10.00; (0.977 µm)	0.76	0.76	0.77	0.78	0.79	0.80	0.77	0.76	0.76
10.00 to 10.50; (0.691 µm)	0.54	0.55	0.55	0.59	0.57	0.58	0.57	0.57	0.56
10.50 to 11.00; (0.488 µm)	0.51	0.52	0.52	0.54	0.53	0.54	0.58	0.57	0.57
11.00 to 11.50; (0.345 µm)	0.61	0.61	0.61	0.60	0.61	0.63	0.71	0.69	0.69
11.50 to 12.00; (0.244 µm)	0.62	0.62	0.61	0.60	0.61	0.63	0.71	0.70	0.69
12.00 to 12.50; (0.173 µm)	0.45	0.45	0.45	0.47	0.46	0.47	0.51	0.50	0.49
12.50 to 13.00; (0.122 µm)	0.28	0.27	0.27	0.32	0.30	0.30	0.30	0.30	0.29
13.00 to 13.50; (0.086 µm)	0.13	0.13	0.13	0.18	0.16	0.15	0.14	0.14	0.13
13.50 to 14.00; (0.061 µm)	0.05	0.05	0.05	0.08	0.06	0.06	0.05	0.05	0.04
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
d10	108.92	106.84	105.61	93.32	94.32	87.83	106.49	108.62	111.67
d50	323.87	322.98	323.91	323.08	324.21	321.04	325.06	325.28	326.96
d90	535.30	529.27	536.03	541.19	555.61	529.80	546.27	546.80	554.58

	Mean	StDev	COV
d10	102.62	8.47	8.25
d50	324.04	1.67	0.51
d90	541.65	9.85	1.82

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS70 (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	n/p	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	n/p	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	n/p	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	n/p	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	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VERY COARSE SAND	0.01	0.01	0.01	0.00	0.00	0.00	n/p	0.00	0.01	0.00	4.84	0.01	0.00	0.00	0.01	0.00	0.03
COARSE SAND	12.62	4.06	19.75	14.07	48.95	16.13	n/p	53.25	13.11	11.84	14.09	17.47	17.35	12.69	12.96	15.15	13.75
MEDIUM SAND	59.69	58.16	58.41	57.87	41.51	59.88	n/p	39.49	59.16	49.91	62.50	62.00	58.86	61.14	59.73	53.23	56.43
FINE SAND	16.44	32.00	17.69	18.90	1.21	17.32	n/p	3.16	21.49	19.04	15.43	14.65	18.76	15.33	16.05	18.61	19.95
VERY FINE SAND	1.34	1.90	0.00	0.05	0.57	0.07	n/p	0.46	0.15	0.64	0.43	1.01	0.10	0.91	1.33	0.23	0.26
VERY COARSE SILT	0.51	3.88	0.00	1.18	0.78	0.87	n/p	0.22	0.62	4.23	0.08	0.33	0.59	0.54	0.50	1.98	0.81
COARSE SILT	0.52	0.00	0.00	0.52	1.18	0.57	n/p	0.36	0.50	3.98	0.21	0.28	0.41	0.56	0.45	1.10	0.49
MEDIUM SILT	0.81	0.00	0.44	0.64	1.68	0.62	n/p	0.24	0.80	3.12	0.31	0.42	0.50	0.93	0.73	1.25	0.84
FINE SILT	1.33	0.00	0.96	1.07	1.62	1.00	n/p	0.30	1.59	2.24	0.48	0.59	0.69	1.44	1.23	1.86	1.45
VERY FINE SILT	1.27	0.00	1.14	1.45	1.48	1.03	n/p	0.56	1.71	1.96	0.48	0.69	0.98	1.33	1.22	2.44	1.95
CLAY	5.46	0.00	1.60	4.25	1.02	2.51	n/p	1.96	0.87	3.04	1.14	2.56	1.76	5.12	5.79	4.14	4.04

GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SAND	90.10	96.12	95.85	90.89	92.24	93.40	n/p	96.36	93.91	81.43	97.30	95.14	95.07	90.07	90.08	87.23	90.42
SILT	4.43	3.88	2.55	4.86	6.74	4.09	n/p	1.68	5.22	15.53	1.56	2.31	3.17	4.81	4.13	8.63	5.54
CLAY	5.46	0.00	1.60	4.25	1.02	2.51	n/p	1.96	0.87	3.04	1.14	2.56	1.76	5.12	5.79	4.14	4.04

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS70.

Exercise Code:	PS70
LabCode:	PSA_2501
Sample Code:	PS702501

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	0.00	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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.04
0.00 to 0.50; (707 µm)	0.98	3.90
0.50 to 1.00; (500 µm)	3.07	12.22
1.00 to 1.50; (353.6 µm)	16.57	65.83
1.50 to 2.00; (250 µm)	41.59	165.28
2.00 to 2.50; (176.8 µm)	24.44	97.13
2.50 to 3.00; (125 µm)	7.56	30.05
3.00 to 3.50; (88.39 µm)	1.56	6.19
3.50 to 4.00; (62.5 µm)	0.34	1.35
4.00 to 4.50; (44.19 µm)	3.88	15.40
4.50 to 5.00; (31.25 µm)		
5.00 to 5.50; (22.097 µm)		
5.50 to 6.00; (15.625 µm)		
6.00 to 6.50; (11.049 µm)		
6.50 to 7.00; (7.813 µm)		
7.00 to 7.50; (5.524 µm)		
7.50 to 8.00; (3.906 µm)		
8.00 to 8.50; (2.762 µm)		
8.50 to 9.00; (1.953 µm)		
9.00 to 9.50; (1.381 µm)		
9.50 to 10.00; (0.977 µm)		
10.00 to 10.50; (0.691 µm)		
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)		
TOTAL	100.00	397.38

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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2502
Sample Code:	PS702502

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	0.00	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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.04
0.00 to 0.50; (707 µm)	3.42	11.17
0.50 to 1.00; (500 µm)	16.32	53.22
1.00 to 1.50; (353.6 µm)	29.68	96.78
1.50 to 2.00; (250 µm)	28.73	93.69
2.00 to 2.50; (176.8 µm)	14.81	48.30
2.50 to 3.00; (125 µm)	2.88	9.39
3.00 to 3.50; (88.39 µm)	0.00	0.00
3.50 to 4.00; (62.5 µm)	0.00	0.00
4.00 to 4.50; (44.19 µm)	0.00	0.00
4.50 to 5.00; (31.25 µm)	0.00	0.00
5.00 to 5.50; (22.097 µm)	0.00	0.00
5.50 to 6.00; (15.625 µm)	0.00	0.00
6.00 to 6.50; (11.049 µm)	0.12	0.38
6.50 to 7.00; (7.813 µm)	0.32	1.06
7.00 to 7.50; (5.524 µm)	0.44	1.44
7.50 to 8.00; (3.906 µm)	0.52	1.71
8.00 to 8.50; (2.762 µm)	0.57	1.87
8.50 to 9.00; (1.953 µm)	0.57	1.85
9.00 to 9.50; (1.381 µm)	0.51	1.67
9.50 to 10.00; (0.977 µm)	0.43	1.42
10.00 to 10.50; (0.691 µm)	0.35	1.13
10.50 to 11.00; (0.488 µm)	0.24	0.78
11.00 to 11.50; (0.345 µm)	0.06	0.20
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	326.11

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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2503
Sample Code:	PS702503

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)	1.55	
0.50 to 1.00; (500 µm)	12.52	
1.00 to 1.50; (353.6 µm)	27.63	
1.50 to 2.00; (250 µm)	30.24	
2.00 to 2.50; (176.8 µm)	15.26	
2.50 to 3.00; (125 µm)	3.64	
3.00 to 3.50; (88.39 µm)	0.05	
3.50 to 4.00; (62.5 µm)	0.00	
4.00 to 4.50; (44.19 µm)	0.51	
4.50 to 5.00; (31.25 µm)	0.67	
5.00 to 5.50; (22.097 µm)	0.36	
5.50 to 6.00; (15.625 µm)	0.16	
6.00 to 6.50; (11.049 µm)	0.25	
6.50 to 7.00; (7.813 µm)	0.39	
7.00 to 7.50; (5.524 µm)	0.50	
7.50 to 8.00; (3.906 µm)	0.58	
8.00 to 8.50; (2.762 µm)	0.66	
8.50 to 9.00; (1.953 µm)	0.78	
9.00 to 9.50; (1.381 µm)	0.92	
9.50 to 10.00; (0.977 µm)	0.92	
10.00 to 10.50; (0.691 µm)	1.01	
10.50 to 11.00; (0.488 µm)	0.78	
11.00 to 11.50; (0.345 µm)	0.50	
11.50 to 12.00; (0.244 µm)	0.13	
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)		
14.00 to 14.50; (0.043µm)		
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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2504
Sample Code:	PS702504

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)	16.18	
0.50 to 1.00; (500 µm)	32.77	
1.00 to 1.50; (353.6 µm)	29.66	
1.50 to 2.00; (250 µm)	11.85	
2.00 to 2.50; (176.8 µm)	1.21	
2.50 to 3.00; (125 µm)	0.00	
3.00 to 3.50; (88.39 µm)	0.09	
3.50 to 4.00; (62.5 µm)	0.49	
4.00 to 4.50; (44.19 µm)	0.44	
4.50 to 5.00; (31.25 µm)	0.35	
5.00 to 5.50; (22.097 µm)	0.47	
5.50 to 6.00; (15.625 µm)	0.71	
6.00 to 6.50; (11.049 µm)	0.83	
6.50 to 7.00; (7.813 µm)	0.85	
7.00 to 7.50; (5.524 µm)	0.83	
7.50 to 8.00; (3.906 µm)	0.80	
8.00 to 8.50; (2.762 µm)	0.77	
8.50 to 9.00; (1.953 µm)	0.71	
9.00 to 9.50; (1.381 µm)	0.58	
9.50 to 10.00; (0.977 µm)	0.36	
10.00 to 10.50; (0.691 µm)	0.07	
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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2505
Sample Code:	PS702505

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)	1.54	
0.50 to 1.00; (500 µm)	14.59	
1.00 to 1.50; (353.6 µm)	30.17	
1.50 to 2.00; (250 µm)	29.72	
2.00 to 2.50; (176.8 µm)	14.57	
2.50 to 3.00; (125 µm)	2.75	
3.00 to 3.50; (88.39 µm)	0.04	
3.50 to 4.00; (62.5 µm)	0.03	
4.00 to 4.50; (44.19 µm)	0.38	
4.50 to 5.00; (31.25 µm)	0.49	
5.00 to 5.50; (22.097 µm)	0.34	
5.50 to 6.00; (15.625 µm)	0.24	
6.00 to 6.50; (11.049 µm)	0.26	
6.50 to 7.00; (7.813 µm)	0.36	
7.00 to 7.50; (5.524 µm)	0.47	
7.50 to 8.00; (3.906 µm)	0.54	
8.00 to 8.50; (2.762 µm)	0.55	
8.50 to 9.00; (1.953 µm)	0.48	
9.00 to 9.50; (1.381 µm)	0.35	
9.50 to 10.00; (0.977 µm)	0.25	
10.00 to 10.50; (0.691 µm)	0.23	
10.50 to 11.00; (0.488 µm)	0.23	
11.00 to 11.50; (0.345 µm)	0.27	
11.50 to 12.00; (0.244 µm)	0.27	
12.00 to 12.50; (0.173 µm)	0.26	
12.50 to 13.00; (0.122 µm)	0.23	
13.00 to 13.50; (0.086 µm)	0.15	
13.50 to 14.00; (0.061µm)	0.16	
14.00 to 14.50; (0.043µm)	0.12	
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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2507
Sample Code:	PS702507

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)	23.39	
0.50 to 1.00; (500 µm)	29.86	
1.00 to 1.50; (353.6 µm)	22.80	
1.50 to 2.00; (250 µm)	16.69	
2.00 to 2.50; (176.8 µm)	3.07	
2.50 to 3.00; (125 µm)	0.09	
3.00 to 3.50; (88.39 µm)	0.26	
3.50 to 4.00; (62.5 µm)	0.20	
4.00 to 4.50; (44.19 µm)	0.07	
4.50 to 5.00; (31.25 µm)	0.14	
5.00 to 5.50; (22.097 µm)	0.19	
5.50 to 6.00; (15.625 µm)	0.17	
6.00 to 6.50; (11.049 µm)	0.11	
6.50 to 7.00; (7.813 µm)	0.13	
7.00 to 7.50; (5.524 µm)	0.15	
7.50 to 8.00; (3.906 µm)	0.15	
8.00 to 8.50; (2.762 µm)	0.26	
8.50 to 9.00; (1.953 µm)	0.30	
9.00 to 9.50; (1.381 µm)	0.21	
9.50 to 10.00; (0.977 µm)	0.23	
10.00 to 10.50; (0.691 µm)	0.19	
10.50 to 11.00; (0.488 µm)	0.14	
11.00 to 11.50; (0.345 µm)	0.23	
11.50 to 12.00; (0.244 µm)	0.29	
12.00 to 12.50; (0.173 µm)	0.23	
12.50 to 13.00; (0.122 µm)	0.27	
13.00 to 13.50; (0.086 µm)	0.16	
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2508
Sample Code:	PS702508

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	0.00	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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.03
0.00 to 0.50; (707 µm)	0.69	2.19
0.50 to 1.00; (500 µm)	12.42	39.62
1.00 to 1.50; (353.6 µm)	28.36	90.43
1.50 to 2.00; (250 µm)	30.80	98.21
2.00 to 2.50; (176.8 µm)	17.22	54.92
2.50 to 3.00; (125 µm)	4.27	13.61
3.00 to 3.50; (88.39 µm)	0.13	0.42
3.50 to 4.00; (62.5 µm)	0.02	0.05
4.00 to 4.50; (44.19 µm)	0.26	0.83
4.50 to 5.00; (31.25 µm)	0.36	1.16
5.00 to 5.50; (22.097 µm)	0.28	0.90
5.50 to 6.00; (15.625 µm)	0.22	0.69
6.00 to 6.50; (11.049 µm)	0.31	0.98
6.50 to 7.00; (7.813 µm)	0.49	1.55
7.00 to 7.50; (5.524 µm)	0.71	2.28
7.50 to 8.00; (3.906 µm)	0.87	2.79
8.00 to 8.50; (2.762 µm)	0.91	2.92
8.50 to 9.00; (1.953 µm)	0.80	2.55
9.00 to 9.50; (1.381 µm)	0.55	1.75
9.50 to 10.00; (0.977 µm)	0.25	0.79
10.00 to 10.50; (0.691 µm)	0.07	0.22
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	318.89

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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2509
Sample Code:	PS702509

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)	0.77	
0.50 to 1.00; (500 µm)	11.07	
1.00 to 1.50; (353.6 µm)	24.00	
1.50 to 2.00; (250 µm)	25.92	
2.00 to 2.50; (176.8 µm)	15.21	
2.50 to 3.00; (125 µm)	3.83	
3.00 to 3.50; (88.39 µm)	0.08	
3.50 to 4.00; (62.5 µm)	0.56	
4.00 to 4.50; (44.19 µm)	1.92	
4.50 to 5.00; (31.25 µm)	2.31	
5.00 to 5.50; (22.097 µm)	2.10	
5.50 to 6.00; (15.625 µm)	1.88	
6.00 to 6.50; (11.049 µm)	1.69	
6.50 to 7.00; (7.813 µm)	1.43	
7.00 to 7.50; (5.524 µm)	1.19	
7.50 to 8.00; (3.906 µm)	1.05	
8.00 to 8.50; (2.762 µm)	1.01	
8.50 to 9.00; (1.953 µm)	0.95	
9.00 to 9.50; (1.381 µm)	0.83	
9.50 to 10.00; (0.977 µm)	0.73	
10.00 to 10.50; (0.691 µm)	0.68	
10.50 to 11.00; (0.488 µm)	0.53	
11.00 to 11.50; (0.345 µm)	0.26	
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)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	100.00	

Notes: A very small amount of >1mm material was present in this sample. I have treated this fraction as insignificant and reported laser only data.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmerk Replicates for sediment distributed as PS70.

Exercise Code:	PS70
LabCode:	PSA_2510
Sample Code:	PS702510

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	2.37	
-0.50 to 0.00; 1 mm	2.47	
0.00 to 0.50; (707 µm)	2.06	
0.50 to 1.00; (500 µm)	12.03	
1.00 to 1.50; (353.6 µm)	31.21	
1.50 to 2.00; (250 µm)	31.29	
2.00 to 2.50; (176.8 µm)	12.66	
2.50 to 3.00; (125 µm)	2.77	
3.00 to 3.50; (88.39 µm)	0.43	
3.50 to 4.00; (62.5 µm)	0.01	
4.00 to 4.50; (44.19 µm)	0.05	
4.50 to 5.00; (31.25 µm)	0.03	
5.00 to 5.50; (22.097 µm)	0.04	
5.50 to 6.00; (15.625 µm)	0.18	
6.00 to 6.50; (11.049 µm)	0.18	
6.50 to 7.00; (7.813 µm)	0.14	
7.00 to 7.50; (5.524 µm)	0.20	
7.50 to 8.00; (3.906 µm)	0.27	
8.00 to 8.50; (2.762 µm)	0.25	
8.50 to 9.00; (1.953 µm)	0.23	
9.00 to 9.50; (1.381 µm)	0.26	
9.50 to 10.00; (0.977 µm)	0.28	
10.00 to 10.50; (0.691 µm)	0.24	
10.50 to 11.00; (0.488 µm)	0.18	
11.00 to 11.50; (0.345 µm)	0.11	
11.50 to 12.00; (0.244 µm)	0.05	
12.00 to 12.50; (0.173 µm)	0.02	
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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2511
Sample Code:	PS702511

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	0.00	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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.04
0.00 to 0.50; (707 µm)	4.95	15.37
0.50 to 1.00; (500 µm)	12.52	38.87
1.00 to 1.50; (353.6 µm)	32.07	99.54
1.50 to 2.00; (250 µm)	29.93	92.91
2.00 to 2.50; (176.8 µm)	11.79	36.60
2.50 to 3.00; (125 µm)	2.86	8.87
3.00 to 3.50; (88.39 µm)	0.70	2.18
3.50 to 4.00; (62.5 µm)	0.30	0.94
4.00 to 4.50; (44.19 µm)	0.18	0.57
4.50 to 5.00; (31.25 µm)	0.15	0.47
5.00 to 5.50; (22.097 µm)	0.13	0.41
5.50 to 6.00; (15.625 µm)	0.15	0.45
6.00 to 6.50; (11.049 µm)	0.19	0.58
6.50 to 7.00; (7.813 µm)	0.23	0.71
7.00 to 7.50; (5.524 µm)	0.29	0.89
7.50 to 8.00; (3.906 µm)	0.30	0.94
8.00 to 8.50; (2.762 µm)	0.30	0.94
8.50 to 9.00; (1.953 µm)	0.38	1.18
9.00 to 9.50; (1.381 µm)	0.44	1.37
9.50 to 10.00; (0.977 µm)	0.40	1.25
10.00 to 10.50; (0.691 µm)	0.34	1.06
10.50 to 11.00; (0.488 µm)	0.32	0.99
11.00 to 11.50; (0.345 µm)	0.32	0.98
11.50 to 12.00; (0.244 µm)	0.29	0.89
12.00 to 12.50; (0.173 µm)	0.21	0.64
12.50 to 13.00; (0.122 µm)	0.14	0.42
13.00 to 13.50; (0.086 µm)	0.07	0.23
13.50 to 14.00; (0.061µm)	0.03	0.09
14.00 to 14.50; (0.043µm)	0.00	0.02
TOTAL	100.00	310.42

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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2512
Sample Code:	PS702512

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)	2.38	
0.50 to 1.00; (500 µm)	14.97	
1.00 to 1.50; (353.6 µm)	29.28	
1.50 to 2.00; (250 µm)	29.58	
2.00 to 2.50; (176.8 µm)	15.41	
2.50 to 3.00; (125 µm)	3.35	
3.00 to 3.50; (88.39 µm)	0.06	
3.50 to 4.00; (62.5 µm)	0.04	
4.00 to 4.50; (44.19 µm)	0.28	
4.50 to 5.00; (31.25 µm)	0.31	
5.00 to 5.50; (22.097 µm)	0.22	
5.50 to 6.00; (15.625 µm)	0.19	
6.00 to 6.50; (11.049 µm)	0.22	
6.50 to 7.00; (7.813 µm)	0.28	
7.00 to 7.50; (5.524 µm)	0.31	
7.50 to 8.00; (3.906 µm)	0.38	
8.00 to 8.50; (2.762 µm)	0.47	
8.50 to 9.00; (1.953 µm)	0.50	
9.00 to 9.50; (1.381 µm)	0.41	
9.50 to 10.00; (0.977 µm)	0.40	
10.00 to 10.50; (0.691 µm)	0.95	
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)		
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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2513
Sample Code:	PS702513

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	0.00	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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.00	0.01
0.00 to 0.50; (707 µm)	1.84	6.86
0.50 to 1.00; (500 µm)	10.85	40.47
1.00 to 1.50; (353.6 µm)	30.87	115.13
1.50 to 2.00; (250 µm)	30.27	112.88
2.00 to 2.50; (176.8 µm)	12.40	46.23
2.50 to 3.00; (125 µm)	2.93	10.93
3.00 to 3.50; (88.39 µm)	0.72	2.69
3.50 to 4.00; (62.5 µm)	0.19	0.70
4.00 to 4.50; (44.19 µm)	0.21	0.80
4.50 to 5.00; (31.25 µm)	0.33	1.23
5.00 to 5.50; (22.097 µm)	0.26	0.97
5.50 to 6.00; (15.625 µm)	0.30	1.11
6.00 to 6.50; (11.049 µm)	0.49	1.84
6.50 to 7.00; (7.813 µm)	0.44	1.65
7.00 to 7.50; (5.524 µm)	0.61	2.28
7.50 to 8.00; (3.906 µm)	0.83	3.10
8.00 to 8.50; (2.762 µm)	0.65	2.42
8.50 to 9.00; (1.953 µm)	0.68	2.54
9.00 to 9.50; (1.381 µm)	0.90	3.37
9.50 to 10.00; (0.977 µm)	0.81	3.01
10.00 to 10.50; (0.691 µm)	0.58	2.15
10.50 to 11.00; (0.488 µm)	0.55	2.05
11.00 to 11.50; (0.345 µm)	0.65	2.43
11.50 to 12.00; (0.244 µm)	0.66	2.44
12.00 to 12.50; (0.173 µm)	0.48	1.78
12.50 to 13.00; (0.122 µm)	0.30	1.10
13.00 to 13.50; (0.086 µm)	0.15	0.54
13.50 to 14.00; (0.061µm)	0.05	0.19
14.00 to 14.50; (0.043µm)	0.01	0.03
TOTAL	100.0000	372.94

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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2514
Sample Code:	PS702514

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	0.00	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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.03
0.00 to 0.50; (707 µm)	2.17	7.66
0.50 to 1.00; (500 µm)	10.79	38.11
1.00 to 1.50; (353.6 µm)	30.20	106.68
1.50 to 2.00; (250 µm)	29.53	104.33
2.00 to 2.50; (176.8 µm)	12.58	44.45
2.50 to 3.00; (125 µm)	3.47	12.26
3.00 to 3.50; (88.39 µm)	0.94	3.32
3.50 to 4.00; (62.5 µm)	0.39	1.38
4.00 to 4.50; (44.19 µm)	0.22	0.77
4.50 to 5.00; (31.25 µm)	0.29	1.01
5.00 to 5.50; (22.097 µm)	0.21	0.75
5.50 to 6.00; (15.625 µm)	0.24	0.86
6.00 to 6.50; (11.049 µm)	0.40	1.40
6.50 to 7.00; (7.813 µm)	0.33	1.18
7.00 to 7.50; (5.524 µm)	0.50	1.77
7.50 to 8.00; (3.906 µm)	0.73	2.58
8.00 to 8.50; (2.762 µm)	0.57	2.00
8.50 to 9.00; (1.953 µm)	0.65	2.29
9.00 to 9.50; (1.381 µm)	0.93	3.29
9.50 to 10.00; (0.977 µm)	0.85	3.01
10.00 to 10.50; (0.691 µm)	0.64	2.26
10.50 to 11.00; (0.488 µm)	0.66	2.33
11.00 to 11.50; (0.345 µm)	0.81	2.85
11.50 to 12.00; (0.244 µm)	0.81	2.85
12.00 to 12.50; (0.173 µm)	0.57	2.01
12.50 to 13.00; (0.122 µm)	0.33	1.17
13.00 to 13.50; (0.086 µm)	0.15	0.52
13.50 to 14.00; (0.061µm)	0.05	0.16
14.00 to 14.50; (0.043µm)	0.01	0.02
TOTAL	100.00	353.28

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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2515
Sample Code:	PS702515

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)	1.53	
0.50 to 1.00; (500 µm)	13.61	
1.00 to 1.50; (353.6 µm)	26.42	
1.50 to 2.00; (250 µm)	26.81	
2.00 to 2.50; (176.8 µm)	14.90	
2.50 to 3.00; (125 µm)	3.72	
3.00 to 3.50; (88.39 µm)	0.10	
3.50 to 4.00; (62.5 µm)	0.13	
4.00 to 4.50; (44.19 µm)	0.94	
4.50 to 5.00; (31.25 µm)	1.03	
5.00 to 5.50; (22.097 µm)	0.64	
5.50 to 6.00; (15.625 µm)	0.45	
6.00 to 6.50; (11.049 µm)	0.54	
6.50 to 7.00; (7.813 µm)	0.71	
7.00 to 7.50; (5.524 µm)	0.86	
7.50 to 8.00; (3.906 µm)	1.01	
8.00 to 8.50; (2.762 µm)	1.17	
8.50 to 9.00; (1.953 µm)	1.27	
9.00 to 9.50; (1.381 µm)	1.24	
9.50 to 10.00; (0.977 µm)	1.09	
10.00 to 10.50; (0.691 µm)	0.89	
10.50 to 11.00; (0.488 µm)	0.63	
11.00 to 11.50; (0.345 µm)	0.29	
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 PS70.

Exercise Code:	PS70
LabCode:	PSA_2516
Sample Code:	PS702516

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		
-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	0.00	0.00
-0.50 to 0.00; 1 mm	0.03	0.11
0.00 to 0.50; (707 µm)	1.13	4.15
0.50 to 1.00; (500 µm)	12.62	46.33
1.00 to 1.50; (353.6 µm)	27.41	100.63
1.50 to 2.00; (250 µm)	29.03	106.57
2.00 to 2.50; (176.8 µm)	16.08	59.03
2.50 to 3.00; (125 µm)	3.87	14.21
3.00 to 3.50; (88.39 µm)	0.11	0.40
3.50 to 4.00; (62.5 µm)	0.15	0.55
4.00 to 4.50; (44.19 µm)	0.43	1.58
4.50 to 5.00; (31.25 µm)	0.38	1.40
5.00 to 5.50; (22.097 µm)	0.24	0.88
5.50 to 6.00; (15.625 µm)	0.25	0.92
6.00 to 6.50; (11.049 µm)	0.35	1.28
6.50 to 7.00; (7.813 µm)	0.49	1.80
7.00 to 7.50; (5.524 µm)	0.64	2.35
7.50 to 8.00; (3.906 µm)	0.81	2.97
8.00 to 8.50; (2.762 µm)	0.97	3.56
8.50 to 9.00; (1.953 µm)	0.98	3.60
9.00 to 9.50; (1.381 µm)	0.80	2.94
9.50 to 10.00; (0.977 µm)	1.02	3.74
10.00 to 10.50; (0.691 µm)	1.48	5.43
10.50 to 11.00; (0.488 µm)	0.72	2.64
11.00 to 11.50; (0.345 µm)	0.02	0.07
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	367.15

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 PS70.

Exercise Code:	PS70
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 (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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.03
0.00 to 0.50; (707 µm)	2.26	8.17
0.50 to 1.00; (500 µm)	10.93	39.61
1.00 to 1.50; (353.6 µm)	29.99	108.67
1.50 to 2.00; (250 µm)	29.19	105.76
2.00 to 2.50; (176.8 µm)	12.33	44.67
2.50 to 3.00; (125 µm)	3.30	11.95
3.00 to 3.50; (88.39 µm)	0.80	2.90
3.50 to 4.00; (62.5 µm)	0.43	1.56
4.00 to 4.50; (44.19 µm)	0.20	0.73
4.50 to 5.00; (31.25 µm)	0.34	1.23
5.00 to 5.50; (22.097 µm)	0.31	1.12
5.50 to 6.00; (15.625 µm)	0.35	1.28
6.00 to 6.50; (11.049 µm)	0.53	1.93
6.50 to 7.00; (7.813 µm)	0.45	1.63
7.00 to 7.50; (5.524 µm)	0.62	2.25
7.50 to 8.00; (3.906 µm)	0.87	3.14
8.00 to 8.50; (2.762 µm)	0.65	2.35
8.50 to 9.00; (1.953 µm)	0.72	2.60
9.00 to 9.50; (1.381 µm)	1.01	3.65
9.50 to 10.00; (0.977 µm)	0.89	3.21
10.00 to 10.50; (0.691 µm)	0.63	2.26
10.50 to 11.00; (0.488 µm)	0.64	2.31
11.00 to 11.50; (0.345 µm)	0.80	2.90
11.50 to 12.00; (0.244 µm)	0.80	2.90
12.00 to 12.50; (0.173 µm)	0.54	1.97
12.50 to 13.00; (0.122 µm)	0.29	1.06
13.00 to 13.50; (0.086 µm)	0.11	0.40
13.50 to 14.00; (0.061µm)	0.02	0.09
14.00 to 14.50; (0.043µm)	0.00	0.01
TOTAL	100.00	362.34

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 PS70.

Exercise Code:	PS70
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	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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.03
0.00 to 0.50; (707 µm)	1.88	6.76
0.50 to 1.00; (500 µm)	10.26	36.87
1.00 to 1.50; (353.6 µm)	29.59	106.33
1.50 to 2.00; (250 µm)	29.72	106.81
2.00 to 2.50; (176.8 µm)	13.11	47.13
2.50 to 3.00; (125 µm)	3.65	13.10
3.00 to 3.50; (88.39 µm)	1.00	3.59
3.50 to 4.00; (62.5 µm)	0.41	1.48
4.00 to 4.50; (44.19 µm)	0.24	0.87
4.50 to 5.00; (31.25 µm)	0.32	1.13
5.00 to 5.50; (22.097 µm)	0.25	0.89
5.50 to 6.00; (15.625 µm)	0.29	1.02
6.00 to 6.50; (11.049 µm)	0.45	1.63
6.50 to 7.00; (7.813 µm)	0.39	1.39
7.00 to 7.50; (5.524 µm)	0.57	2.06
7.50 to 8.00; (3.906 µm)	0.82	2.95
8.00 to 8.50; (2.762 µm)	0.63	2.27
8.50 to 9.00; (1.953 µm)	0.70	2.51
9.00 to 9.50; (1.381 µm)	0.98	3.51
9.50 to 10.00; (0.977 µm)	0.87	3.13
10.00 to 10.50; (0.691 µm)	0.63	2.26
10.50 to 11.00; (0.488 µm)	0.64	2.31
11.00 to 11.50; (0.345 µm)	0.80	2.87
11.50 to 12.00; (0.244 µm)	0.80	2.86
12.00 to 12.50; (0.173 µm)	0.55	1.96
12.50 to 13.00; (0.122 µm)	0.30	1.08
13.00 to 13.50; (0.086 µm)	0.12	0.42
13.50 to 14.00; (0.061µm)	0.03	0.11
14.00 to 14.50; (0.043µm)	0.00	0.01
TOTAL	100.00	359.35

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 PS70.

Exercise Code:	PS70
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	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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.03
0.00 to 0.50; (707 µm)	1.99	7.32
0.50 to 1.00; (500 µm)	10.50	38.58
1.00 to 1.50; (353.6 µm)	29.72	109.19
1.50 to 2.00; (250 µm)	29.75	109.31
2.00 to 2.50; (176.8 µm)	13.22	48.58
2.50 to 3.00; (125 µm)	3.60	13.24
3.00 to 3.50; (88.39 µm)	0.99	3.63
3.50 to 4.00; (62.5 µm)	0.35	1.30
4.00 to 4.50; (44.19 µm)	0.22	0.80
4.50 to 5.00; (31.25 µm)	0.28	1.03
5.00 to 5.50; (22.097 µm)	0.22	0.81
5.50 to 6.00; (15.625 µm)	0.25	0.92
6.00 to 6.50; (11.049 µm)	0.41	1.50
6.50 to 7.00; (7.813 µm)	0.36	1.32
7.00 to 7.50; (5.524 µm)	0.53	1.94
7.50 to 8.00; (3.906 µm)	0.74	2.73
8.00 to 8.50; (2.762 µm)	0.59	2.17
8.50 to 9.00; (1.953 µm)	0.66	2.41
9.00 to 9.50; (1.381 µm)	0.91	3.35
9.50 to 10.00; (0.977 µm)	0.84	3.09
10.00 to 10.50; (0.691 µm)	0.63	2.33
10.50 to 11.00; (0.488 µm)	0.64	2.35
11.00 to 11.50; (0.345 µm)	0.77	2.82
11.50 to 12.00; (0.244 µm)	0.77	2.81
12.00 to 12.50; (0.173 µm)	0.54	1.98
12.50 to 13.00; (0.122 µm)	0.31	1.15
13.00 to 13.50; (0.086 µm)	0.14	0.51
13.50 to 14.00; (0.061µm)	0.04	0.15
14.00 to 14.50; (0.043µm)	0.01	0.02
TOTAL	100.00	367.36

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 PS70.

Exercise Code:	PS70
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 (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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.03
0.00 to 0.50; (707 µm)	1.98	7.23
0.50 to 1.00; (500 µm)	10.96	39.96
1.00 to 1.50; (353.6 µm)	30.78	112.26
1.50 to 2.00; (250 µm)	29.81	108.74
2.00 to 2.50; (176.8 µm)	12.57	45.84
2.50 to 3.00; (125 µm)	3.37	12.29
3.00 to 3.50; (88.39 µm)	0.84	3.07
3.50 to 4.00; (62.5 µm)	0.36	1.32
4.00 to 4.50; (44.19 µm)	0.19	0.71
4.50 to 5.00; (31.25 µm)	0.27	1.00
5.00 to 5.50; (22.097 µm)	0.20	0.75
5.50 to 6.00; (15.625 µm)	0.24	0.88
6.00 to 6.50; (11.049 µm)	0.38	1.38
6.50 to 7.00; (7.813 µm)	0.34	1.25
7.00 to 7.50; (5.524 µm)	0.51	1.85
7.50 to 8.00; (3.906 µm)	0.71	2.60
8.00 to 8.50; (2.762 µm)	0.56	2.04
8.50 to 9.00; (1.953 µm)	0.62	2.26
9.00 to 9.50; (1.381 µm)	0.87	3.16
9.50 to 10.00; (0.977 µm)	0.79	2.89
10.00 to 10.50; (0.691 µm)	0.60	2.17
10.50 to 11.00; (0.488 µm)	0.61	2.23
11.00 to 11.50; (0.345 µm)	0.74	2.70
11.50 to 12.00; (0.244 µm)	0.73	2.68
12.00 to 12.50; (0.173 µm)	0.51	1.85
12.50 to 13.00; (0.122 µm)	0.29	1.04
13.00 to 13.50; (0.086 µm)	0.12	0.43
13.50 to 14.00; (0.061µm)	0.03	0.12
14.00 to 14.50; (0.043µm)	0.00	0.01
TOTAL	100.00	364.74

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 PS70.

Exercise Code:	PS70
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 (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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.01	0.03
0.00 to 0.50; (707 µm)	2.05	7.44
0.50 to 1.00; (500 µm)	10.31	37.43
1.00 to 1.50; (353.6 µm)	29.80	108.14
1.50 to 2.00; (250 µm)	30.08	109.17
2.00 to 2.50; (176.8 µm)	13.41	48.65
2.50 to 3.00; (125 µm)	3.67	13.30
3.00 to 3.50; (88.39 µm)	1.07	3.89
3.50 to 4.00; (62.5 µm)	0.40	1.46
4.00 to 4.50; (44.19 µm)	0.24	0.86
4.50 to 5.00; (31.25 µm)	0.29	1.04
5.00 to 5.50; (22.097 µm)	0.22	0.80
5.50 to 6.00; (15.625 µm)	0.24	0.89
6.00 to 6.50; (11.049 µm)	0.39	1.43
6.50 to 7.00; (7.813 µm)	0.35	1.27
7.00 to 7.50; (5.524 µm)	0.52	1.88
7.50 to 8.00; (3.906 µm)	0.74	2.69
8.00 to 8.50; (2.762 µm)	0.59	2.16
8.50 to 9.00; (1.953 µm)	0.63	2.30
9.00 to 9.50; (1.381 µm)	0.85	3.09
9.50 to 10.00; (0.977 µm)	0.77	2.80
10.00 to 10.50; (0.691 µm)	0.56	2.04
10.50 to 11.00; (0.488 µm)	0.54	1.96
11.00 to 11.50; (0.345 µm)	0.64	2.32
11.50 to 12.00; (0.244 µm)	0.64	2.33
12.00 to 12.50; (0.173 µm)	0.47	1.71
12.50 to 13.00; (0.122 µm)	0.29	1.06
13.00 to 13.50; (0.086 µm)	0.14	0.52
13.50 to 14.00; (0.061µm)	0.05	0.19
14.00 to 14.50; (0.043µm)	0.01	0.03
TOTAL	100.00	362.88

Notes: