NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS71

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 PS71.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis) (Folk (1954))
BM REP 1 (PSA_2530)	NMBAQC	35.47	57.20	7.33	Muddy sandy gravel
BM REP 2 (PSA_2531)	NMBAQC	35.34	57.04	7.62	Muddy sandy gravel
BM REP 3 (PSA_2532)	NMBAQC	35.13	57.44	7.43	Muddy sandy gravel
BM REP 4 (PSA_2533)	NMBAQC	34.90	57.52	7.59	Muddy sandy gravel
BM REP 5 (PSA_2534)	NMBAQC	35.13	57.40	7.47	Muddy sandy gravel

BENCHMARK DATA – SIEVE

Table 2. Summary of sieve data for the benchmark replicates distributed as PS71.

		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		134.89	132.90	126.08	124.80	120.16
-3.00 to -2.50; 5.6 mm		146.88	146.62	139.65	142.50	152.24
-2.50 to -2.00; 4 mm		39.33	38.98	46.01	43.45	45.43
-2.00 to -1.50; 2.8 mm		0.10	0.13	0.30	0.18	0.00
-1.50 to -1.00; 2 mm		0.04	0.03	0.01	0.00	0.00
-1.00 to -0.50; 1.4 mm		0.00	0.01	0.00	0.00	0.00
-0.50 to 0.00; 1 mm		0.01	0.02	0.02	0.01	0.02
Weight (g) < 0.00; >1 mm		321.25	318.69	312.07	310.94	317.85
Weight (g) > 0.00; <1 mm	Base Pan	0.03	0.03	0.04	0.03	0.04
	Oven Dried	584.3	583.06	576.22	579.99	586.82
Total Weight (g)		905.58	901.78	888.33	890.96	904.71

BENCHMARK DATA – LASER

Table 3. Summary of final laser data for the benchmark replicates distributed as PS71.

	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)	7.26	7.20	7.58	6.57	8.74
0.50 to 1.00; (500 µm)	17.60	17.15	17.87	16.53	18.54
1.00 to 1.50; (353.6 µm)	25.81	25.61	26.08	25.58	25.98
1.50 to 2.00; (250 µm)	21.07	21.19	20.82	21.66	20.01
2.00 to 2.50; (176.8 µm)	10.46	10.45	10.05	10.99	9.37
2.50 to 3.00; (125 µm)	3.76	3.83	3.60	4.12	3.34
3.00 to 3.50; (88.39 µm)	1.65	1.72	1.57	1.82	1.53
3.50 to 4.00; (62.5 µm)	1.04	1.06	0.96	1.08	0.97
4.00 to 4.50; (44.19 µm)	1.07	1.11	1.02	1.06	1.02
4.50 to 5.00; (31.25 µm)	1.30	1.34	1.25	1.28	1.28
5.00 to 5.50; (22.097 µm)	1.34	1.35	1.29	1.30	1.29
5.50 to 6.00; (15.625 µm)	1.37	1.36	1.33	1.36	1.33
6.00 to 6.50; (11.049 µm)	1.35	1.33	1.31	1.34	1.30
6.50 to 7.00; (7.813 µm)	1.20	1.17	1.15	1.18	1.15
7.00 to 7.50; (5.524 µm)	0.99	1.02	1.00	1.02	1.01
7.50 to 8.00; (3.906 µm)	0.76	0.84	0.83	0.83	0.83
8.00 to 8.50; (2.762 µm)	0.52	0.56	0.56	0.56	0.56
8.50 to 9.00; (1.953 µm)	0.33	0.36	0.36	0.37	0.37
9.00 to 9.50; (1.381 µm)	0.23	0.28	0.28	0.28	0.29
9.50 to 10.00; (0.977 µm)	0.18	0.22	0.23	0.23	0.23
10.00 to 10.50; (0.691 µm)	0.15	0.17	0.18	0.18	0.18
10.50 to 11.00; (0.488 µm)	0.13	0.14	0.15	0.15	0.15
11.00 to 11.50; (0.345 µm)	0.11	0.13	0.13	0.13	0.13
11.50 to 12.00; (0.244 µm)	0.10	0.12	0.12	0.11	0.12
12.00 to 12.50; (0.173 µm)	0.08	0.10	0.10	0.10	0.10
12.50 to 13.00; (0.122 µm)	0.06	0.08	0.08	0.08	0.09
13.00 to 13.50; (0.086 µm)	0.04	0.06	0.06	0.05	0.06
13.50 to 14.00; (0.061 µm)	0.02	0.03	0.03	0.03	0.03
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	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 for PS71.

	Mean	Standard Deviation	Coefficient Of Variation
	Benchmark Replicate 1 (PSA_2530)		
d10	41.24	3.24	7.87
d50	358.16	2.18	0.61
d90	672.32	3.80	0.57
	Benchmark Replicate 2 (PSA_2531)		
d10	37.46	3.41	9.11
d50	354.55	3.28	0.93
d90	670.53	2.88	0.43
	Benchmark Replicate 3 (PSA_2532)		
d10	40.79	8.06	19.75
d50	362.17	4.02	1.11
d90	677.04	4.55	0.67
	Benchmark Replicate 4 (PSA_2533)		
d10	38.16	4.84	12.68
d50	347.49	2.65	0.76
d90	660.13	2.38	0.36
	Benchmark Replicate 5 (PSA_2534)		
d10	38.80	2.08	5.35
d50	370.60	2.36	0.64
d90	693.32	4.33	0.62

NB. See appendix 1 for full dataset.

Table 5. Laser metadata for Benchmark replicates for PS71.

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)	2

Figure 1. Graphical presentations of (a) sieve data and (b) laser data produced by the benchmark lab for sediment distributed as PS71.

Figure 1a. Percentage bar charts resulting from final sieve analysis of 5 replicate samples of sediment distibuted as PS71 (Benchmark Data).

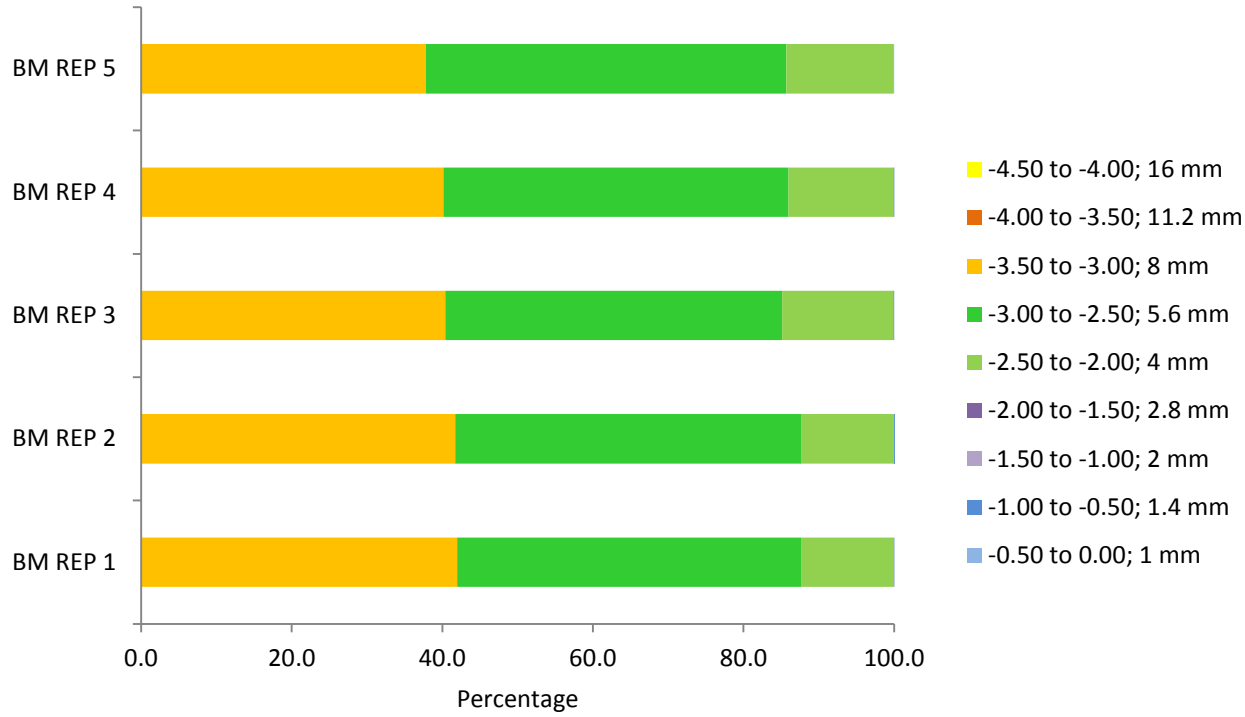


Figure 1b. Particle size distribution curves resulting from final laser analysis of 5 replicate samples of sediment distibuted as PS71 (Benchmark Data).

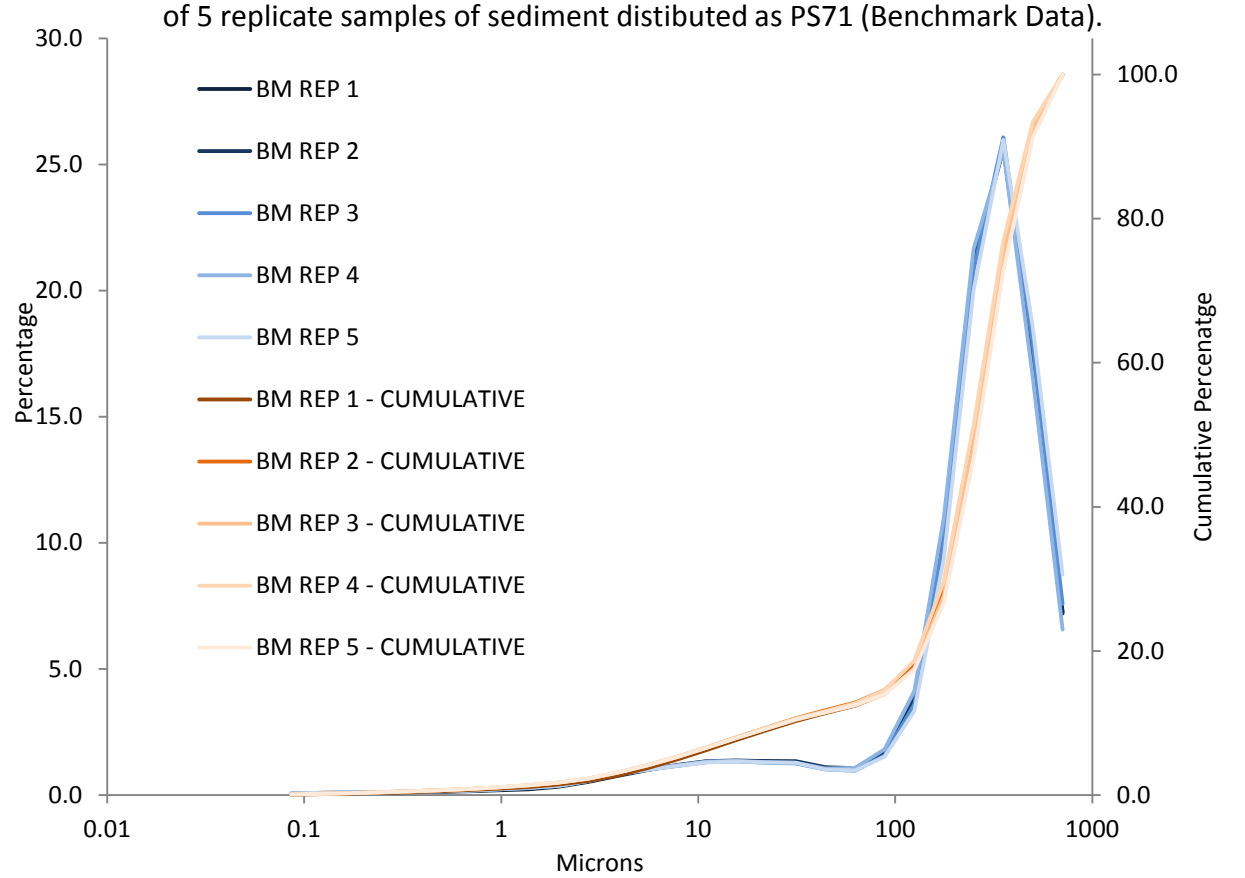
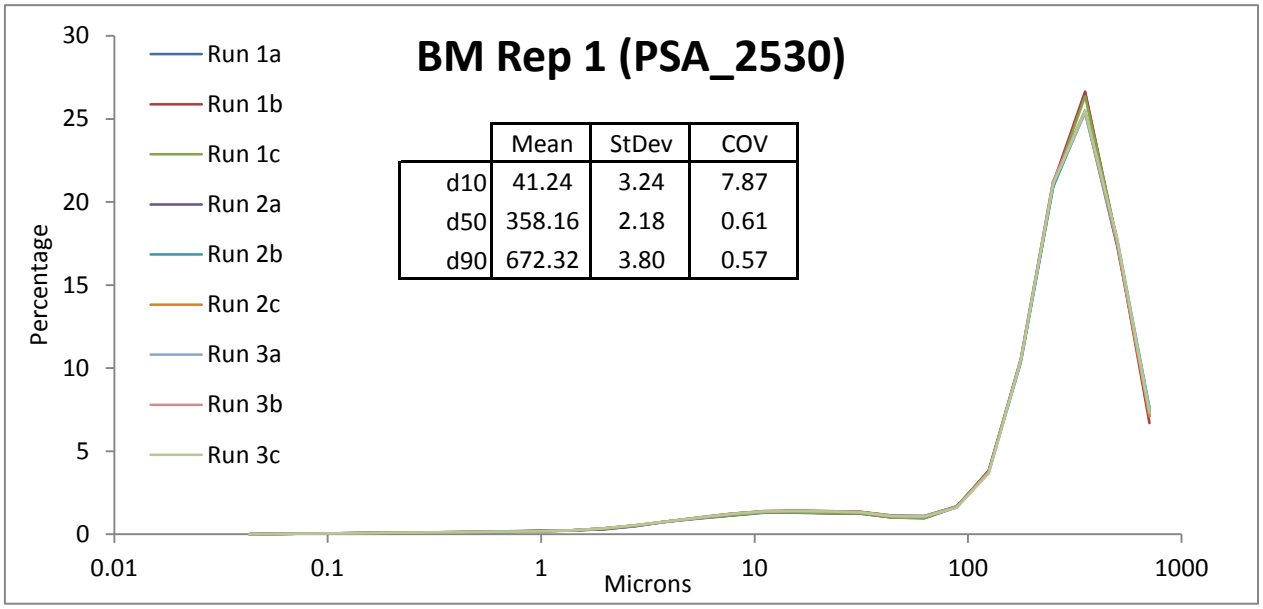
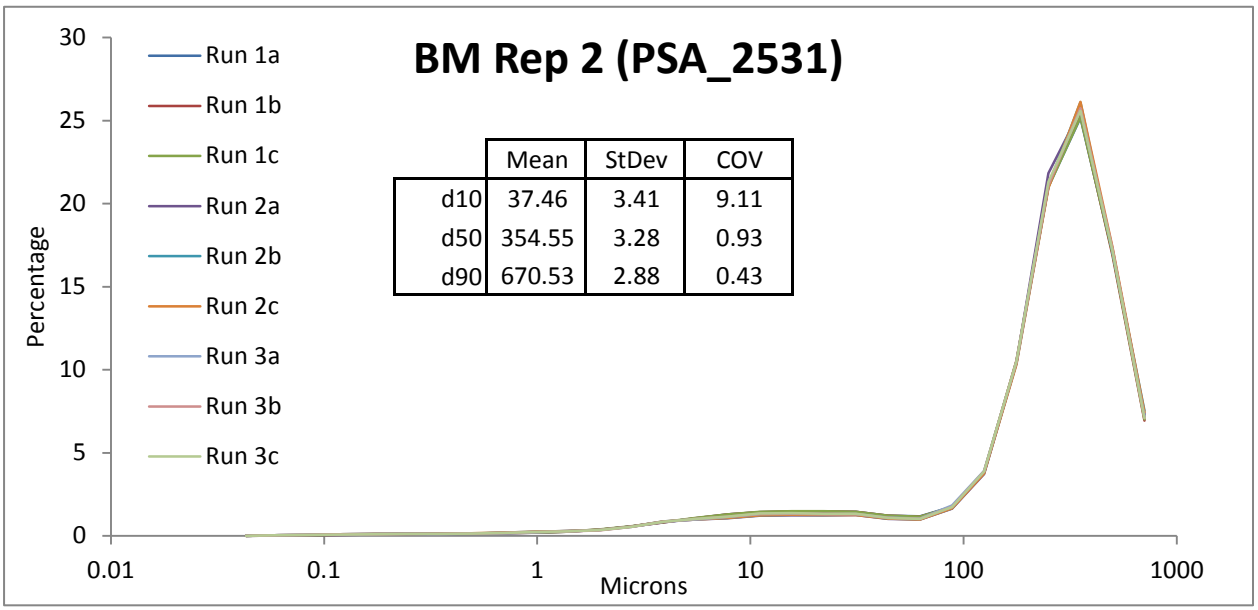


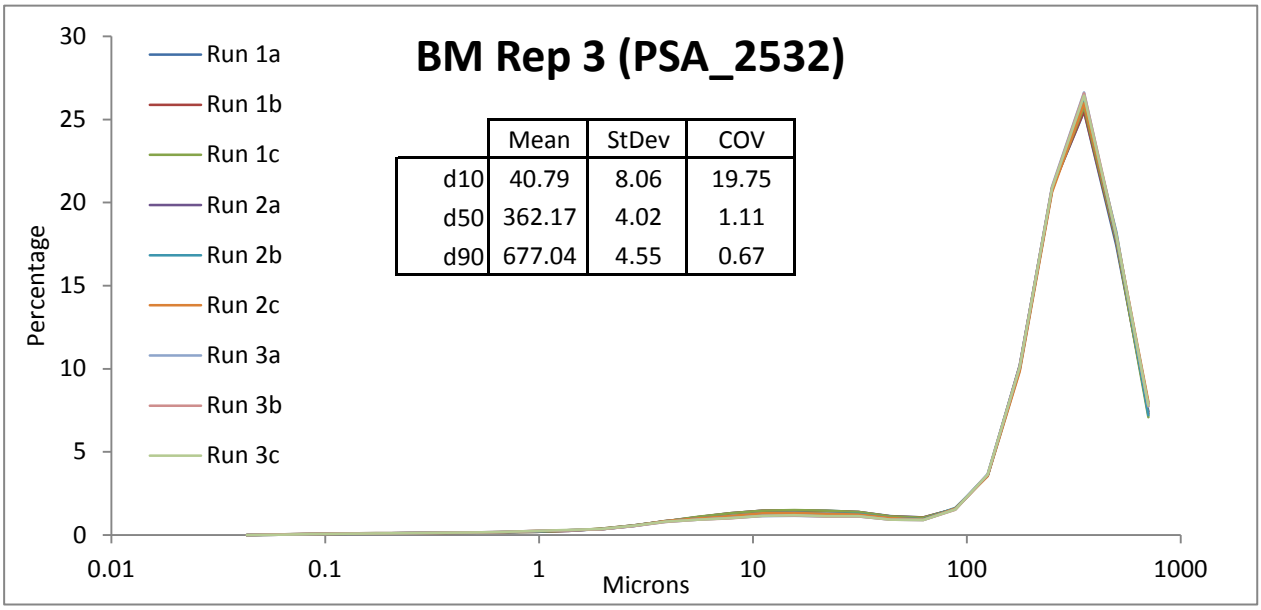
Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS71 along with sample statistics and Coefficient of Variance.



	Mean	StDev	COV
d10	41.24	3.24	7.87
d50	358.16	2.18	0.61
d90	672.32	3.80	0.57

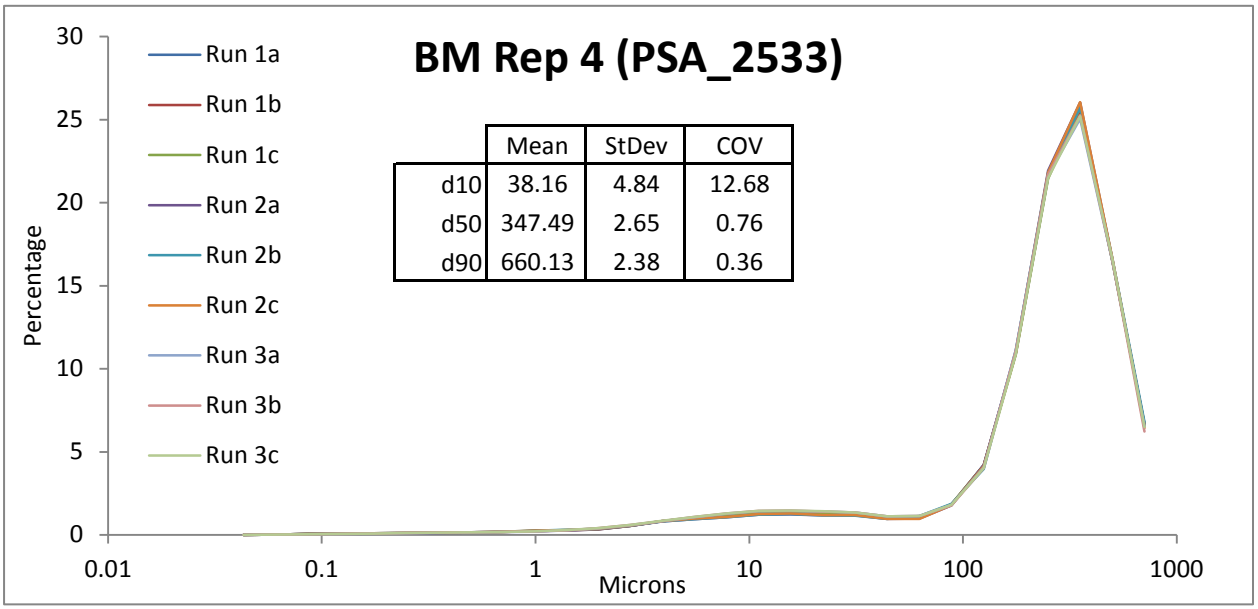


	Mean	StDev	COV
d10	37.46	3.41	9.11
d50	354.55	3.28	0.93
d90	670.53	2.88	0.43

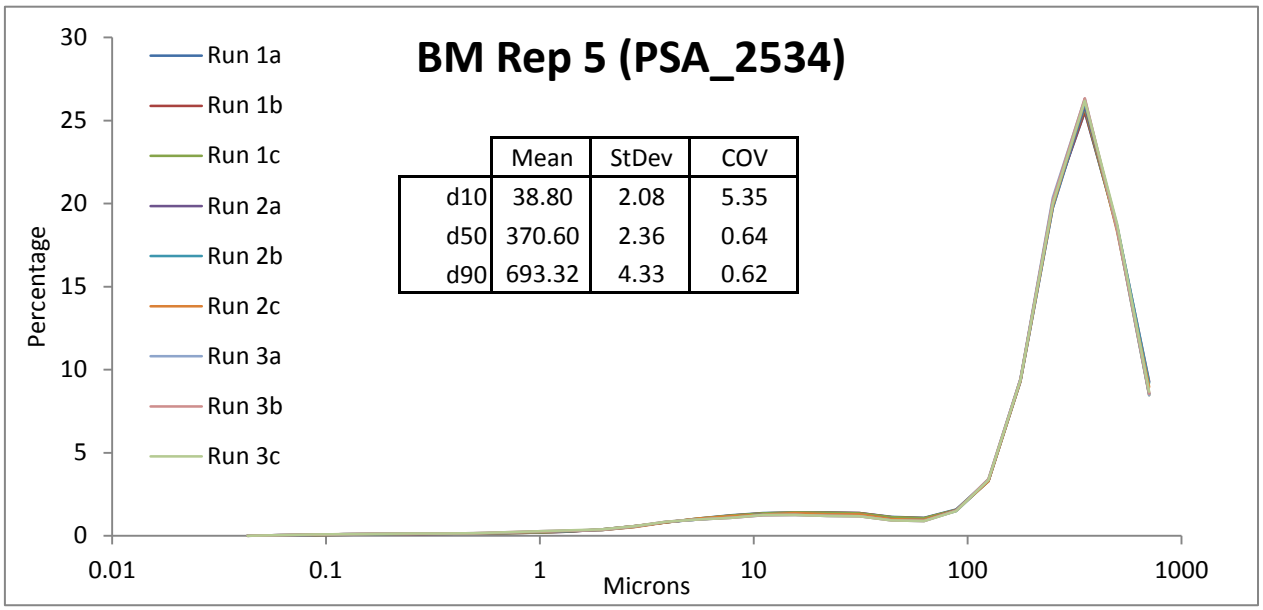


	Mean	StDev	COV
d10	40.79	8.06	19.75
d50	362.17	4.02	1.11
d90	677.04	4.55	0.67

Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS71 along with sample statistics and Coefficient of Variance.



	Mean	StDev	COV
d10	38.16	4.84	12.68
d50	347.49	2.65	0.76
d90	660.13	2.38	0.36



	Mean	StDev	COV
d10	38.80	2.08	5.35
d50	370.60	2.36	0.64
d90	693.32	4.33	0.62

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

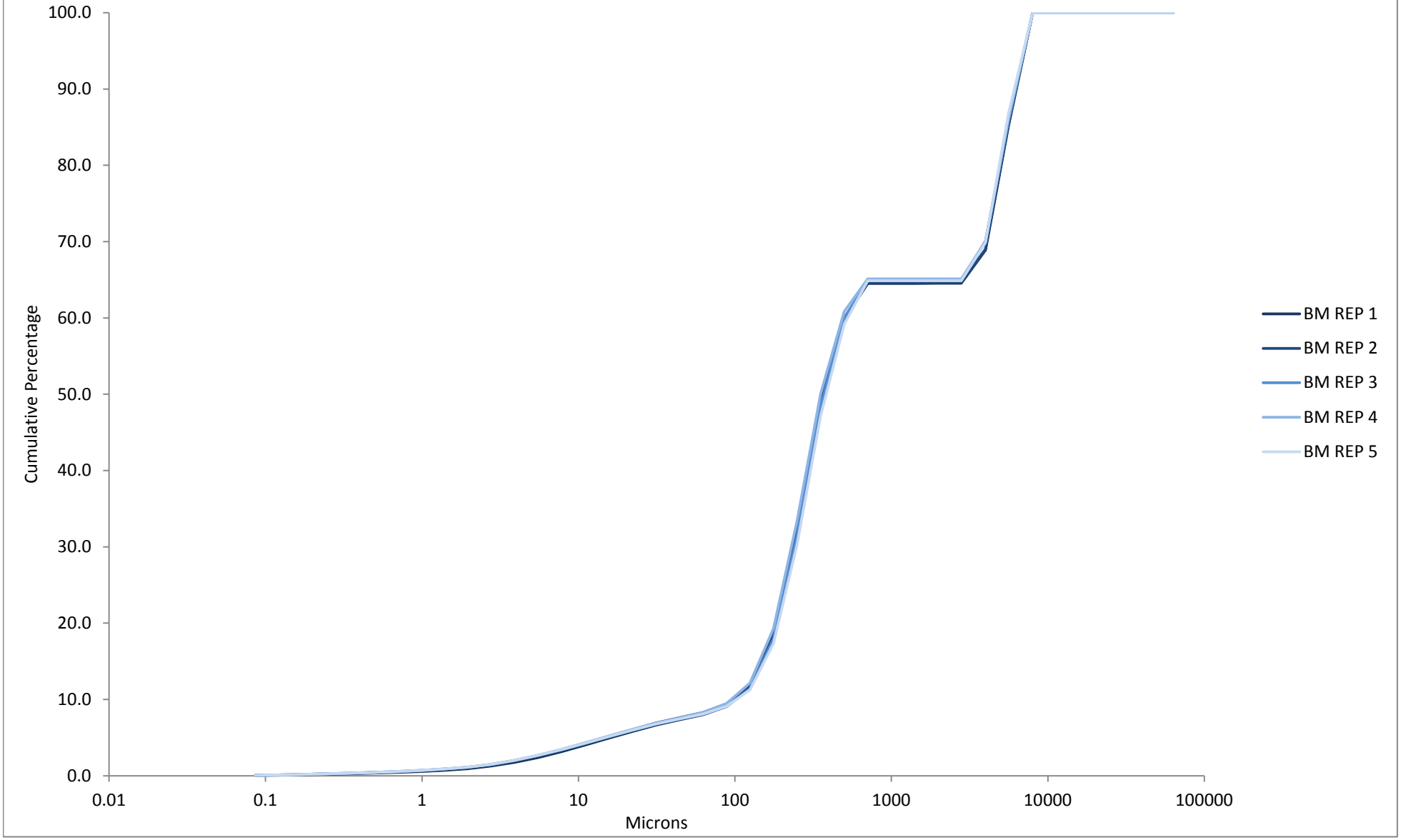
ISO 133020 defines good reproducibility when: COV is <3% for D50
COV is <5% for D10 and D90

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 PS71 (Benchmark Data).



PARTICIPANT DATA

Table 6. Summary of equipment and methods used by participants and sample summary data for sediment distributed as PS71.

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	35.19	57.32	7.49	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2501	YES	NO	OTHER	YES	NO	35.7	61.8	2.5	Gravelly Sand	Sandy Gravel
PSA_2502	YES	YES	NMBAQC	NO	NO	34.89	59.39	5.72	Sandy Gravel	Sandy Gravel
PSA_2503	YES	YES	OTHER	NO	NO	36.54	59.69	3.78	Sandy Gravel	Sandy Gravel
PSA_2504	YES	YES	NMBAQC	NO	NO	36.63	59.89	3.48	Sandy Gravel	Sandy Gravel
PSA_2505	YES	YES	NMBAQC	NO	NO	35.34	57.39	6.79	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2506	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p
PSA_2507	YES	YES	NMBAQC	NO	NO	35.9	60.6	3.6	Sandy Gravel	Sandy Gravel
PSA_2508	YES	YES	NMBAQC	NO	NO	36.23	58.2	5.57	Muddy Gravel	Sandy Gravel
PSA_2509	YES	YES	NMBAQC	NO	NO	35.4	58.0	6.6	Sandy Gravel	Muddy Sandy Gravel
PSA_2510	YES	YES	NMBAQC	NO	NO	36.1	58.5	5.4	Sandy Gravel	Sandy Gravel
PSA_2511	YES	YES	NMBAQC	NO	NO	35.41	57.24	7.36	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2512	YES	YES	NMBAQC	NO	NO	36.4	57.7	5.9	Sandy Gravel	Sandy Gravel
PSA_2513	YES	YES	NMBAQC	NO	NO	35.11	57.09	7.81	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2514	YES	YES	NMBAQC	NO	NO	35.32	57.49	7.19	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2515	YES	YES	NMBAQC	NO	NO	35.7	54.9	9.4	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2516	YES	YES	NMBAQC	NO	NO	35.53	57.18	7.29	Silty Gravelly Sand	Muddy Sandy Gravel

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 PS71.

		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	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
-6.00 to -5.50; 45 mm		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
-5.50 to -5.00; 31.5 mm		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
-5.00 to -4.50; 22.4 mm		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
-4.50 to -4.00; 16 mm		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
-4.00 to -3.50; 11.2 mm		0.00	0.00	0.00	0.00	11.17	3.63	n/p	4.84	2.64	0.00	2.12	0.00	2.76	0.00	0.00	0.00	2.28
-3.50 to -3.00; 8 mm		127.77	148.45	119.43	119.40	137.26	132.67	n/p	121.03	142.54	120.56	111.98	109.62	116.78	131.27	125.30	132.87	131.29
-3.00 to -2.50; 5.6 mm		145.58	159.58	149.87	179.13	151.41	149.50	n/p	152.27	165.37	176.69	150.42	136.02	162.32	140.15	148.31	151.52	166.43
-2.50 to -2.00; 4 mm		42.64	34.60	37.53	40.03	43.4	26.42	n/p	33.15	29.13	41.38	38.73	36.25	40.95	48.22	45.92	56.82	38.52
-2.00 to -1.50; 2.8 mm		0.14	0.08	0.11	2.33	0.14	0.00	n/p	0.03	0.20	0.00	0.08	0.23	0.13	0.20	0.39	0.06	0.21
-1.50 to -1.00; 2 mm		0.02	0.00	0.00	1.57	0.08	0.00	n/p	0.12	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.05	0.00
-1.00 to -0.50; 1.4 mm		0.00	0.00	0.00	1.73	0.06	0.00	n/p	0.03	0.00	0.00	0.01	0.00	0.01	0.03	0.00	0.02	0.00
-0.50 to 0.00; 1 mm		0.02	0.00	0.02	1.53	0.05	0.65	n/p	0.01	0.03	0.00	0.03	0.01	0.00	0.02	0.00	0.05	0.03
Total		316.16	342.71	306.97	345.73	343.57	312.87	n/p	311.48	339.91	338.63	303.38	282.13	322.95	319.94	319.92	341.40	338.76
Summary Data																		
< 0.00; >1 mm		316.16	342.71	306.97	345.73	343.57	312.87	n/p	311.48	339.91	338.63	303.38	282.13	322.95	319.94	319.92	341.40	338.76
> 0.00; <1 mm	Base pan	0.03	1.20	0.12	-	0.63	2.48	n/p	0.00	0.71	0.28	1.20	0.25	-	0.07	0.02	0.21	1.36
	Oven dried	582.08	615.72	572.73	591.60	593.40	568.22	n/p	557.03	597.59	618.48	536.53	514.45	-	591.17	585.89	615.31	613.24
Total Sample Weight		898.27	959.64	879.82	937.33	937.60	883.57	n/p	868.51	938.21	957.39	841.11	796.83	322.95	911.18	905.83	956.92	953.36

- No data provided.
n/p - not participating in this exercise.

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS71.

	Participant								
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)	7.47	1.05	9.85	8.55	24.56	8.57	n/p	31.77	8.27
0.50 to 1.00; (500 µm)	17.54	4.85	19.44	17.88	30.14	17.29	n/p	25.53	18.58
1.00 to 1.50; (353.6 µm)	25.81	19.35	24.72	24.04	23.73	23.65	n/p	16.88	24.81
1.50 to 2.00; (250 µm)	20.95	35.54	20.94	22.88	11.54	21.02	n/p	14.09	21.55
2.00 to 2.50; (176.8 µm)	10.26	23.18	11.51	13.41	2.75	12.39	n/p	4.27	12.07
2.50 to 3.00; (125 µm)	3.73	9.19	3.63	5.67	0.11	4.63	n/p	0.79	4.24
3.00 to 3.50; (88.39 µm)	1.66	2.30	0.56	0.98	0.57	1.19	n/p	0.62	0.98
3.50 to 4.00; (62.5 µm)	1.02	0.66	0.56	0.61	1.08	0.97	n/p	0.50	0.76
4.00 to 4.50; (44.19 µm)	1.06	0.13	1.06	1.25	1.01	1.36	n/p	0.51	1.00
4.50 to 5.00; (31.25 µm)	1.29	0.03	1.10	1.27	0.87	1.44	n/p	0.97	1.01
5.00 to 5.50; (22.097 µm)	1.31	0.07	0.97	1.02	0.87	1.34	n/p	0.96	0.98
5.50 to 6.00; (15.625 µm)	1.35	0.07	0.92	0.66	0.85	1.29	n/p	0.64	0.98
6.00 to 6.50; (11.049 µm)	1.32	0.09	0.95	0.52	0.71	1.28	n/p	0.34	0.98
6.50 to 7.00; (7.813 µm)	1.17	0.04	0.95	0.43	0.50	1.21	n/p	0.40	0.91
7.00 to 7.50; (5.524 µm)	1.01	0.04	0.87	0.35	0.31	1.04	n/p	0.37	0.85
7.50 to 8.00; (3.906 µm)	0.82	0.02	0.74	0.26	0.20	0.74	n/p	0.24	0.76
8.00 to 8.50; (2.762 µm)	0.55	0.04	0.56	0.17	0.15	0.44	n/p	0.27	0.63
8.50 to 9.00; (1.953 µm)	0.36	0.03	0.38	0.04	0.04	0.16	n/p	0.18	0.42
9.00 to 9.50; (1.381 µm)	0.27	3.31	0.23	0.00	0.00	0.00	n/p	0.09	0.20
9.50 to 10.00; (0.977 µm)	0.22		0.06	0.00	0.00	0.00	n/p	0.07	0.00
10.00 to 10.50; (0.691 µm)	0.17		0.00	0.00	0.00	0.00	n/p	0.05	0.00
10.50 to 11.00; (0.488 µm)	0.14		0.00	0.00	0.00	0.00	n/p	0.04	0.00
11.00 to 11.50; (0.345 µm)	0.12		0.00	0.00	0.00	0.00	n/p	0.07	0.00
11.50 to 12.00; (0.244 µm)	0.11		0.00	0.00	0.00	0.00	n/p	0.09	0.00
12.00 to 12.50; (0.173 µm)	0.10		0.00	0.00	0.00	0.00	n/p	0.08	0.00
12.50 to 13.00; (0.122 µm)	0.08		0.00	0.00	0.00	0.00	n/p	0.11	0.00
13.00 to 13.50; (0.086 µm)	0.05		0.00	0.00	0.00	0.00	n/p	0.08	0.00
13.50 to 14.00; (0.061 µm)	0.03		0.00		0.00	0.00	n/p		0.00
14.00 to 14.50; (0.043 µm)	0.00		0.00		0.00	0.00	n/p		0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	n/p	100.00	100.00

* Participant does not have a laser; sieve weights have been converted to percentages for comparison.
n/p - not participating in this exercise.

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS71.

	Participant								
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)	7.47	6.92	7.55	8.34	8.12	6.64	6.99	7.54	6.22
0.50 to 1.00; (500 µm)	17.54	18.23	18.32	16.72	18.17	16.62	17.11	17.34	15.64
1.00 to 1.50; (353.6 µm)	25.81	24.42	28.02	24.89	24.23	25.24	26.19	22.90	22.87
1.50 to 2.00; (250 µm)	20.95	20.90	21.60	20.75	21.15	21.62	21.40	19.96	21.58
2.00 to 2.50; (176.8 µm)	10.26	11.57	10.59	10.98	12.08	10.90	10.64	11.44	13.56
2.50 to 3.00; (125 µm)	3.73	4.07	4.00	4.09	4.58	3.98	3.90	4.05	5.72
3.00 to 3.50; (88.39 µm)	1.66	1.57	0.86	1.72	1.35	1.81	1.68	1.03	1.86
3.50 to 4.00; (62.5 µm)	1.02	1.94	0.60	1.13	1.01	1.16	0.96	1.01	1.26
4.00 to 4.50; (44.19 µm)	1.06	2.38	0.83	1.14	1.15	1.18	1.02	1.58	1.43
4.50 to 5.00; (31.25 µm)	1.29	2.08	0.90	1.26	1.10	1.40	1.21	1.76	1.46
5.00 to 5.50; (22.097 µm)	1.31	1.54	0.96	1.33	1.06	1.44	1.23	1.71	1.43
5.50 to 6.00; (15.625 µm)	1.35	1.17	0.89	1.31	1.08	1.49	1.29	1.70	1.46
6.00 to 6.50; (11.049 µm)	1.32	0.95	0.98	1.31	1.04	1.49	1.27	1.71	1.46
6.50 to 7.00; (7.813 µm)	1.17	0.77	0.94	1.19	1.00	1.32	1.11	1.64	1.34
7.00 to 7.50; (5.524 µm)	1.01	0.58	0.82	0.99	0.91	1.07	0.97	1.46	1.10
7.50 to 8.00; (3.906 µm)	0.82	0.41	0.64	0.74	0.81	0.80	0.80	1.19	0.78
8.00 to 8.50; (2.762 µm)	0.55	0.29	0.41	0.50	0.65	0.54	0.53	0.87	0.47
8.50 to 9.00; (1.953 µm)	0.36	0.18	0.24	0.35	0.41	0.34	0.34	0.56	0.16
9.00 to 9.50; (1.381 µm)	0.27	0.02	0.16	0.27	0.11	0.22	0.28	0.32	0.00
9.50 to 10.00; (0.977 µm)	0.22	0.00	0.14	0.21	0.00	0.15	0.24	0.17	0.01
10.00 to 10.50; (0.691 µm)	0.17	0.00	0.13	0.17	0.00	0.13	0.19	0.06	0.21
10.50 to 11.00; (0.488 µm)	0.14	0.00	0.12	0.15	0.00	0.11	0.14	0.01	0.01
11.00 to 11.50; (0.345 µm)	0.12		0.10	0.13	0.00	0.10	0.12	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.11		0.08	0.11	0.00	0.09	0.11	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.10		0.06	0.09	0.00	0.07	0.10	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.08		0.04	0.07	0.00	0.05	0.08	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.05		0.03	0.04	0.00	0.03	0.06	0.00	0.00
13.50 to 14.00; (0.061 µm)	0.03		0.01	0.02	0.00	0.01	0.03	0.00	0.00
14.00 to 14.50; (0.043 µm)	0.00		0.00	0.00	0.00	0.00	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

Figure 4. Final sieve data (in percentages) provided by each participant and the Benchmark Average for sediment distributed as PS71.

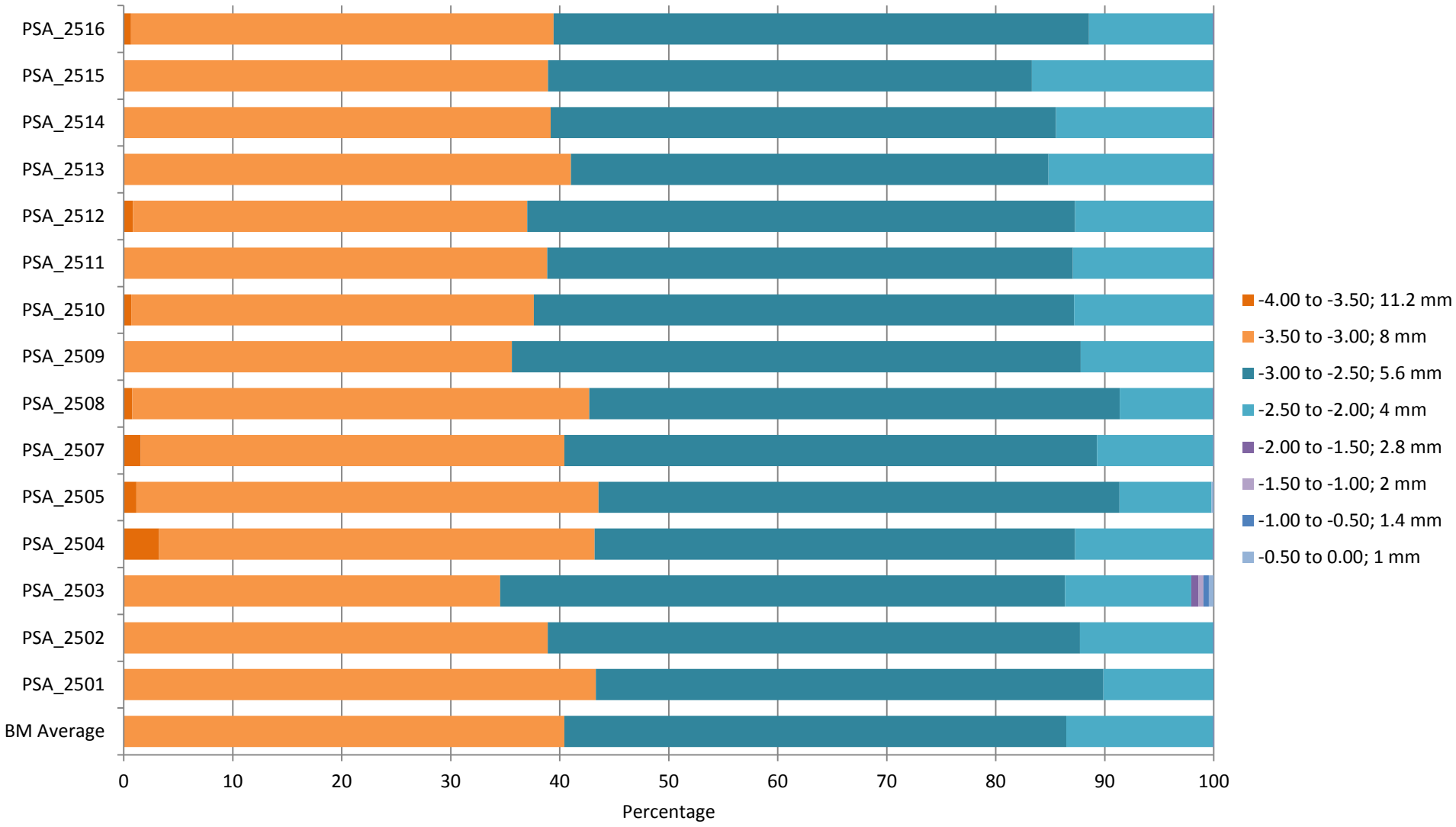


Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS71, shown as (a) cumulative and (b) differential.

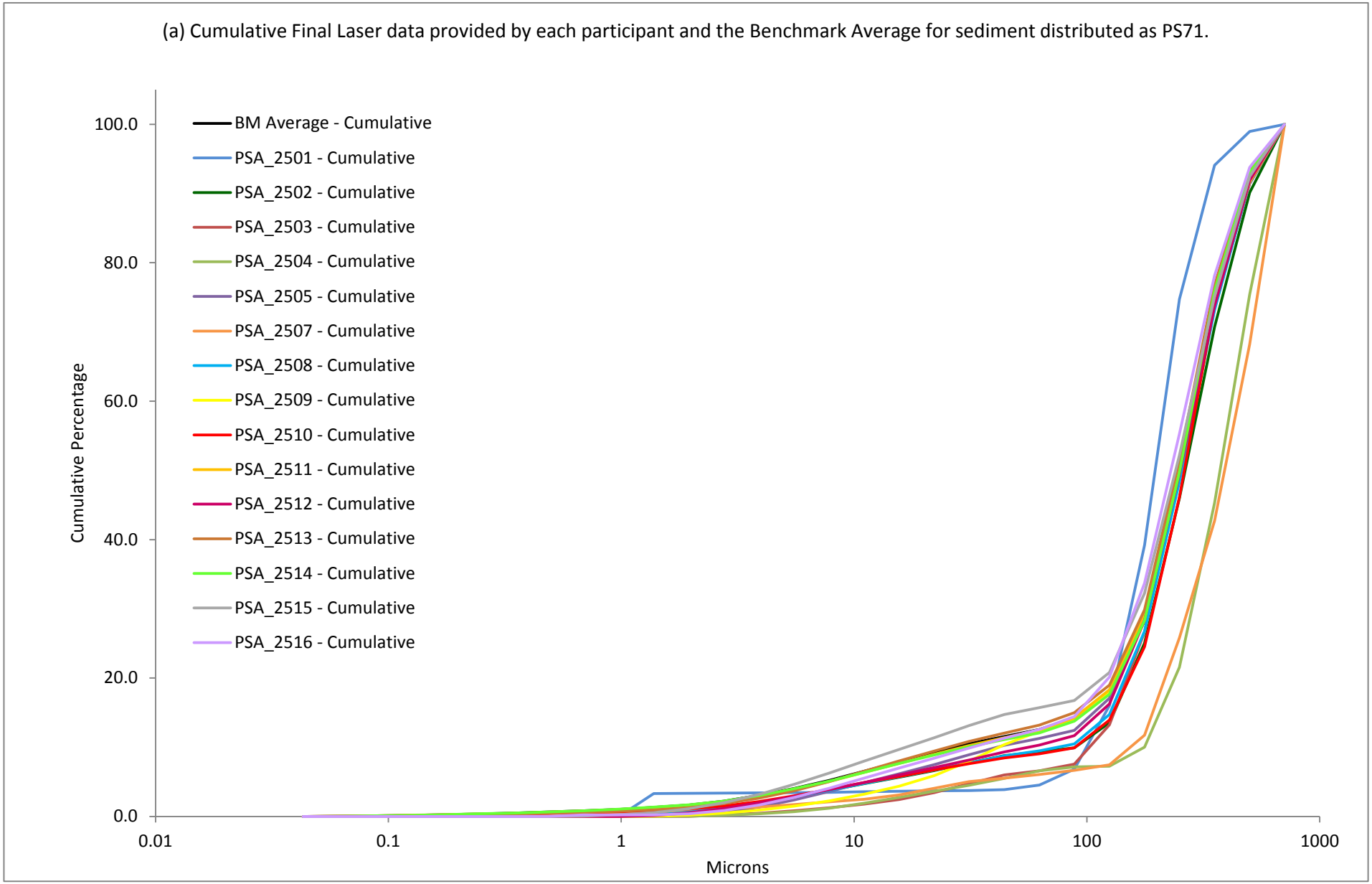
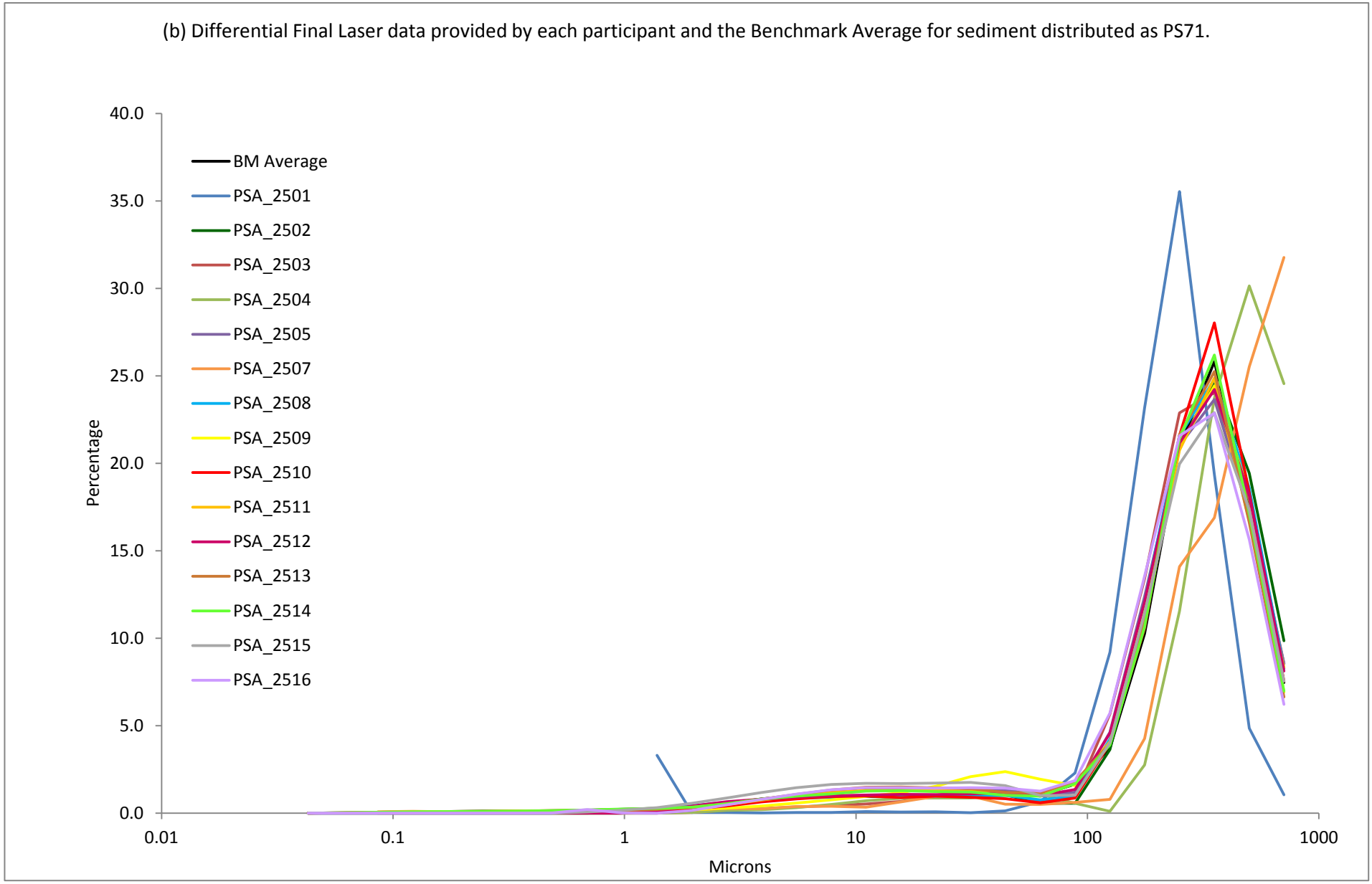


Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS71, shown as (a) cumulative and (b) differential.



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 PS71.

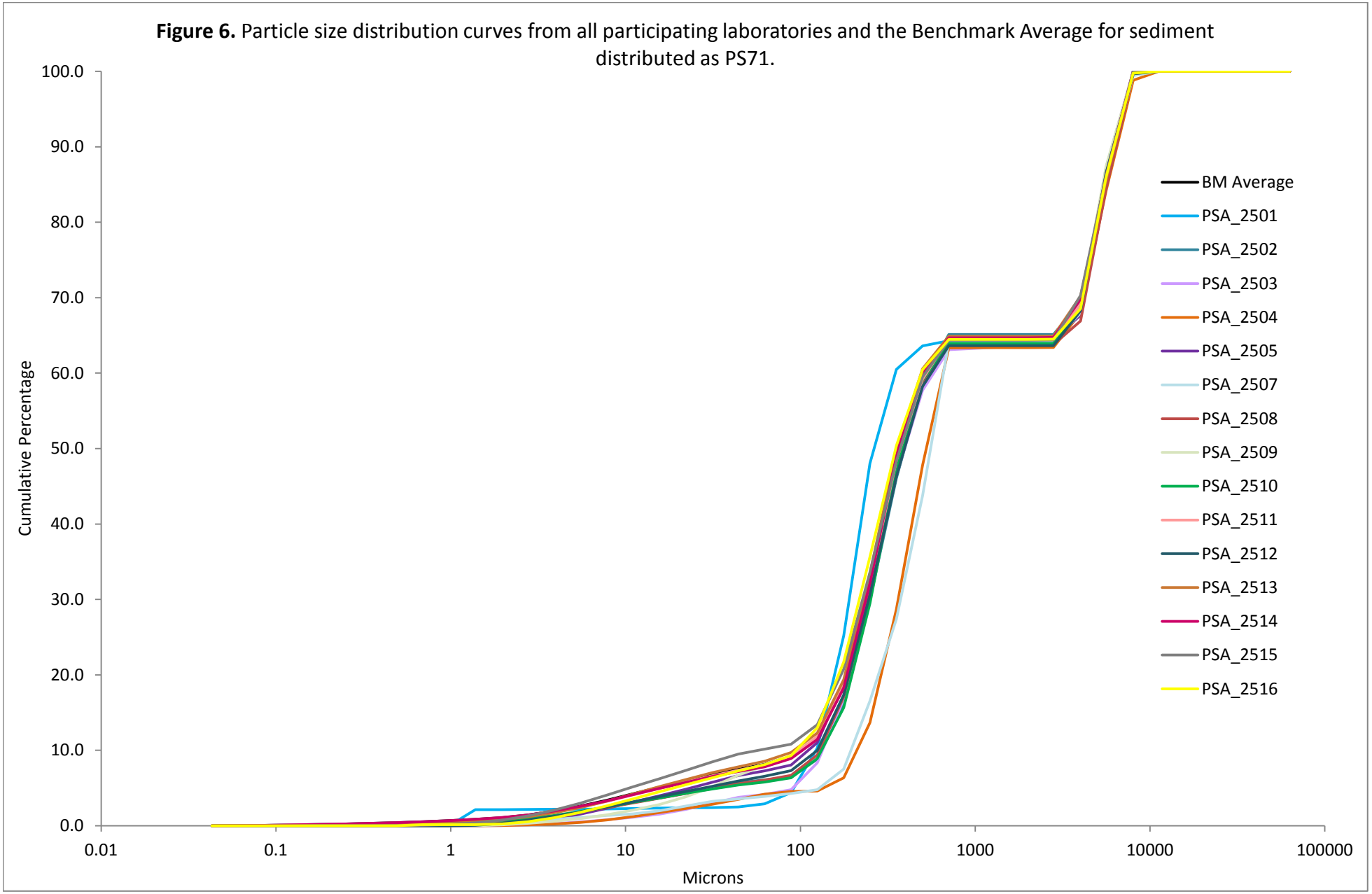
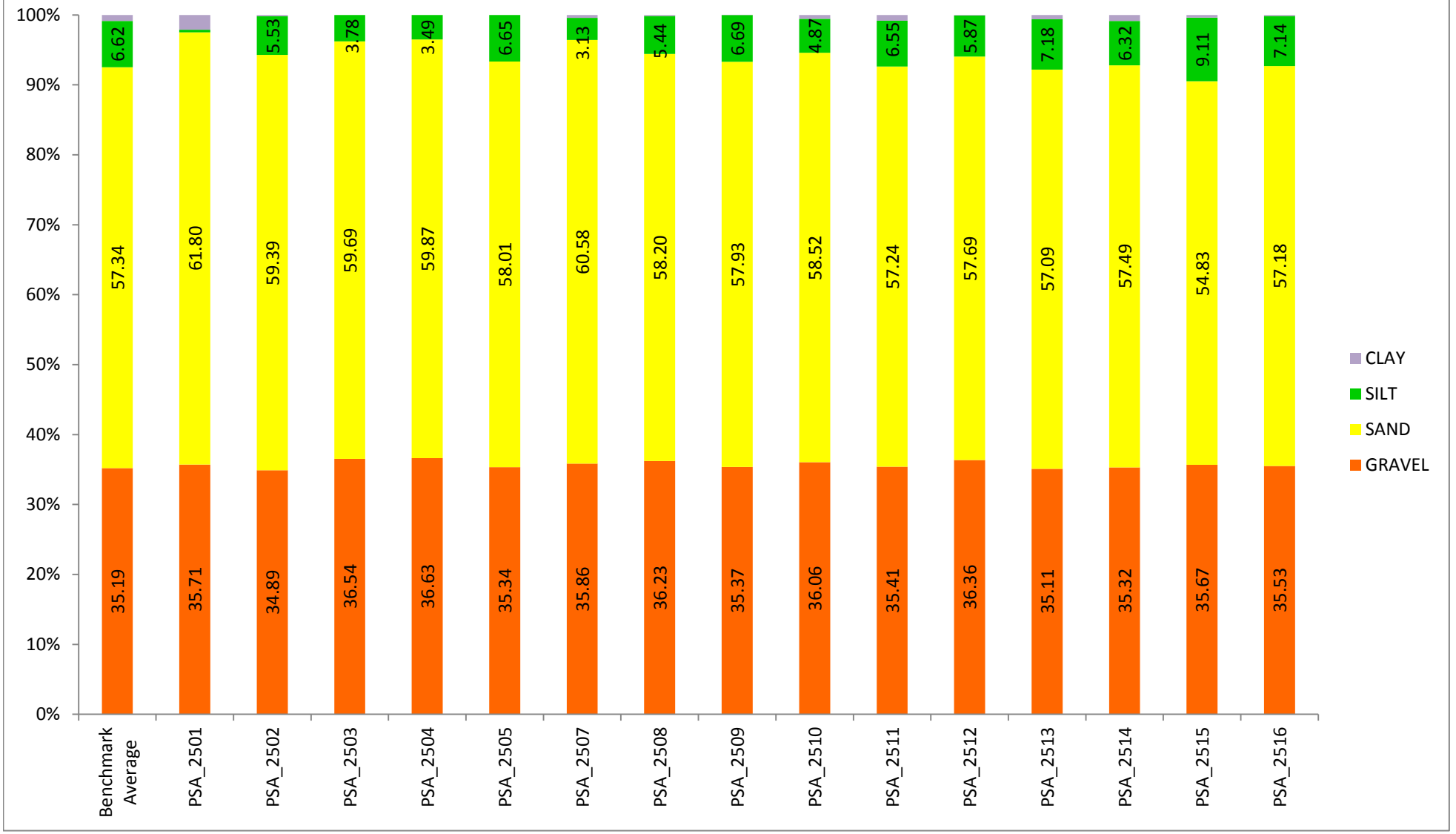


Figure 7. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the Benchmark Average for PS71.



APPENDICES

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS71.

	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)	7.36	6.69	7.09	7.35	7.59	7.11	7.61	7.22	7.35
0.50 to 1.00; (500 µm)	17.54	17.58	17.70	17.34	17.79	17.51	17.60	17.55	17.80
1.00 to 1.50; (353.6 µm)	26.57	26.65	26.37	25.42	25.46	25.45	25.34	25.53	25.50
1.50 to 2.00; (250 µm)	20.93	21.12	20.94	21.20	20.88	21.11	21.13	21.26	21.05
2.00 to 2.50; (176.8 µm)	10.39	10.47	10.45	10.54	10.32	10.49	10.49	10.51	10.44
2.50 to 3.00; (125 µm)	3.82	3.84	3.78	3.79	3.74	3.78	3.72	3.70	3.67
3.00 to 3.50; (88.39 µm)	1.63	1.66	1.66	1.68	1.66	1.67	1.63	1.62	1.60
3.50 to 4.00; (62.5 µm)	0.97	0.98	0.96	1.10	1.07	1.09	1.08	1.06	1.05
4.00 to 4.50; (44.19 µm)	1.00	1.01	1.01	1.13	1.10	1.13	1.10	1.09	1.08
4.50 to 5.00; (31.25 µm)	1.24	1.26	1.26	1.35	1.33	1.36	1.32	1.31	1.31
5.00 to 5.50; (22.097 µm)	1.26	1.27	1.28	1.39	1.37	1.40	1.36	1.37	1.37
5.50 to 6.00; (15.625 µm)	1.30	1.32	1.32	1.41	1.39	1.42	1.39	1.40	1.40
6.00 to 6.50; (11.049 µm)	1.28	1.31	1.31	1.38	1.37	1.39	1.36	1.38	1.37
6.50 to 7.00; (7.813 µm)	1.12	1.14	1.14	1.23	1.22	1.24	1.21	1.23	1.22
7.00 to 7.50; (5.524 µm)	0.95	0.97	0.96	1.01	1.00	1.03	0.99	1.01	1.01
7.50 to 8.00; (3.906 µm)	0.75	0.76	0.77	0.76	0.76	0.78	0.75	0.77	0.77
8.00 to 8.50; (2.762 µm)	0.48	0.49	0.50	0.52	0.52	0.54	0.52	0.54	0.54
8.50 to 9.00; (1.953 µm)	0.29	0.30	0.31	0.34	0.34	0.35	0.34	0.35	0.36
9.00 to 9.50; (1.381 µm)	0.23	0.24	0.24	0.22	0.23	0.24	0.23	0.24	0.24
9.50 to 10.00; (0.977 µm)	0.20	0.21	0.21	0.17	0.17	0.18	0.17	0.18	0.18
10.00 to 10.50; (0.691 µm)	0.16	0.17	0.16	0.14	0.14	0.15	0.14	0.15	0.15
10.50 to 11.00; (0.488 µm)	0.13	0.13	0.13	0.13	0.13	0.14	0.12	0.13	0.13
11.00 to 11.50; (0.345 µm)	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.12	0.12
11.50 to 12.00; (0.244 µm)	0.09	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.10
12.00 to 12.50; (0.173 µm)	0.07	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08
12.50 to 13.00; (0.122 µm)	0.06	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06
13.00 to 13.50; (0.086 µm)	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04
13.50 to 14.00; (0.061 µm)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
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	47.47	44.27	43.83	39.15	40.01	37.48	40.81	39.10	39.06
d50	361.76	359.23	360.40	355.48	359.02	355.35	357.63	356.44	358.09
d90	673.46	664.68	670.23	672.90	677.00	670.11	676.97	671.65	673.85

	Mean	StDev	COV
d10	41.24	3.24	7.87
d50	358.16	2.18	0.61
d90	672.32	3.80	0.57

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS71.

	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)	7.21	6.95	7.02	7.32	7.54	7.43	7.17	7.09	7.09
0.50 to 1.00; (500 µm)	17.05	16.91	17.02	17.26	17.10	17.39	17.18	17.32	17.16
1.00 to 1.50; (353.6 µm)	25.17	25.32	25.20	25.60	26.08	26.13	25.68	25.74	25.58
1.50 to 2.00; (250 µm)	21.03	21.21	21.01	21.84	21.06	20.94	21.17	21.11	21.31
2.00 to 2.50; (176.8 µm)	10.44	10.54	10.50	10.43	10.36	10.32	10.46	10.49	10.50
2.50 to 3.00; (125 µm)	3.82	3.82	3.87	3.72	3.79	3.76	3.91	3.88	3.88
3.00 to 3.50; (88.39 µm)	1.76	1.73	1.74	1.64	1.66	1.66	1.83	1.74	1.73
3.50 to 4.00; (62.5 µm)	1.18	1.15	1.15	0.99	1.00	0.99	1.05	1.02	1.02
4.00 to 4.50; (44.19 µm)	1.22	1.21	1.21	1.02	1.04	1.04	1.10	1.08	1.08
4.50 to 5.00; (31.25 µm)	1.45	1.44	1.45	1.25	1.27	1.26	1.31	1.31	1.33
5.00 to 5.50; (22.097 µm)	1.48	1.47	1.48	1.23	1.25	1.25	1.31	1.31	1.32
5.50 to 6.00; (15.625 µm)	1.47	1.48	1.49	1.24	1.27	1.27	1.33	1.35	1.37
6.00 to 6.50; (11.049 µm)	1.44	1.44	1.45	1.21	1.24	1.24	1.32	1.33	1.34
6.50 to 7.00; (7.813 µm)	1.29	1.29	1.29	1.07	1.08	1.08	1.13	1.16	1.16
7.00 to 7.50; (5.524 µm)	1.07	1.07	1.08	0.98	1.00	0.99	0.99	1.02	1.03
7.50 to 8.00; (3.906 µm)	0.81	0.82	0.83	0.84	0.86	0.86	0.84	0.84	0.85
8.00 to 8.50; (2.762 µm)	0.56	0.57	0.58	0.55	0.57	0.57	0.55	0.54	0.55
8.50 to 9.00; (1.953 µm)	0.37	0.37	0.38	0.36	0.36	0.36	0.34	0.33	0.34
9.00 to 9.50; (1.381 µm)	0.25	0.25	0.26	0.30	0.30	0.30	0.27	0.27	0.28
9.50 to 10.00; (0.977 µm)	0.19	0.19	0.20	0.24	0.25	0.25	0.22	0.23	0.23
10.00 to 10.50; (0.691 µm)	0.16	0.16	0.17	0.18	0.19	0.19	0.16	0.17	0.17
10.50 to 11.00; (0.488 µm)	0.14	0.15	0.15	0.14	0.15	0.15	0.13	0.13	0.13
11.00 to 11.50; (0.345 µm)	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12
11.50 to 12.00; (0.244 µm)	0.11	0.11	0.11	0.13	0.13	0.12	0.11	0.11	0.11
12.00 to 12.50; (0.173 µm)	0.09	0.09	0.09	0.11	0.11	0.11	0.10	0.10	0.10
12.50 to 13.00; (0.122 µm)	0.07	0.07	0.07	0.10	0.10	0.09	0.09	0.09	0.09
13.00 to 13.50; (0.086 µm)	0.04	0.04	0.05	0.07	0.07	0.07	0.06	0.07	0.06
13.50 to 14.00; (0.061 µm)	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
d10	33.79	33.44	32.54	42.02	40.03	40.26	39.23	38.40	37.41
d50	351.63	350.23	350.51	355.87	358.39	359.48	355.12	355.73	354.03
d90	670.35	666.45	667.72	672.43	675.10	674.21	670.16	669.36	669.01

	Mean	StDev	COV
d10	37.46	3.41	9.11
d50	354.55	3.28	0.93
d90	670.53	2.88	0.43

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS71.

	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)	7.44	7.31	7.08	7.89	7.20	8.01	7.73	7.75	7.80
0.50 to 1.00; (500 µm)	17.41	17.60	17.68	17.87	18.22	18.01	17.93	18.10	18.03
1.00 to 1.50; (353.6 µm)	25.48	25.52	25.76	26.15	26.15	25.99	26.64	26.58	26.44
1.50 to 2.00; (250 µm)	20.85	20.88	20.80	20.72	20.78	20.62	20.97	20.89	20.85
2.00 to 2.50; (176.8 µm)	10.20	10.16	10.04	9.99	9.92	9.84	10.13	10.09	10.11
2.50 to 3.00; (125 µm)	3.62	3.58	3.58	3.61	3.57	3.54	3.67	3.63	3.65
3.00 to 3.50; (88.39 µm)	1.59	1.58	1.57	1.58	1.64	1.59	1.54	1.52	1.54
3.50 to 4.00; (62.5 µm)	1.07	1.05	1.05	0.94	0.95	0.93	0.91	0.90	0.90
4.00 to 4.50; (44.19 µm)	1.13	1.12	1.12	1.01	1.02	1.01	0.92	0.92	0.93
4.50 to 5.00; (31.25 µm)	1.39	1.38	1.39	1.24	1.27	1.24	1.12	1.12	1.14
5.00 to 5.50; (22.097 µm)	1.46	1.45	1.46	1.25	1.30	1.28	1.12	1.12	1.14
5.50 to 6.00; (15.625 µm)	1.49	1.49	1.50	1.30	1.34	1.33	1.16	1.17	1.19
6.00 to 6.50; (11.049 µm)	1.46	1.46	1.47	1.28	1.32	1.31	1.15	1.15	1.17
6.50 to 7.00; (7.813 µm)	1.31	1.31	1.32	1.12	1.14	1.13	1.01	1.01	1.02
7.00 to 7.50; (5.524 µm)	1.08	1.08	1.09	0.99	1.01	1.00	0.92	0.92	0.93
7.50 to 8.00; (3.906 µm)	0.82	0.83	0.84	0.83	0.86	0.85	0.80	0.80	0.81
8.00 to 8.50; (2.762 µm)	0.57	0.58	0.59	0.54	0.55	0.56	0.54	0.55	0.55
8.50 to 9.00; (1.953 µm)	0.37	0.38	0.39	0.34	0.36	0.35	0.35	0.36	0.36
9.00 to 9.50; (1.381 µm)	0.25	0.26	0.26	0.28	0.30	0.30	0.29	0.29	0.30
9.50 to 10.00; (0.977 µm)	0.19	0.20	0.20	0.23	0.24	0.25	0.25	0.25	0.26
10.00 to 10.50; (0.691 µm)	0.16	0.17	0.17	0.17	0.17	0.18	0.19	0.20	0.20
10.50 to 11.00; (0.488 µm)	0.15	0.15	0.16	0.13	0.13	0.14	0.15	0.15	0.15
11.00 to 11.50; (0.345 µm)	0.13	0.13	0.14	0.12	0.12	0.12	0.13	0.13	0.13
11.50 to 12.00; (0.244 µm)	0.11	0.12	0.12	0.11	0.12	0.12	0.11	0.12	0.11
12.00 to 12.50; (0.173 µm)	0.09	0.09	0.10	0.11	0.12	0.11	0.10	0.10	0.10
12.50 to 13.00; (0.122 µm)	0.07	0.07	0.07	0.09	0.10	0.09	0.08	0.09	0.08
13.00 to 13.50; (0.086 µm)	0.05	0.05	0.05	0.07	0.07	0.07	0.06	0.06	0.06
13.50 to 14.00; (0.061 µm)	0.02	0.02	0.02	0.03	0.04	0.03	0.03	0.03	0.03
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01

d10	32.81	32.62	31.73	41.25	38.09	38.77	52.24	50.89	48.67
d50	356.59	357.03	357.47	364.00	362.41	364.49	365.65	366.27	365.62
d90	674.34	672.90	670.05	681.22	672.80	682.96	679.12	679.75	680.27

	Mean	StDev	COV
d10	40.79	8.06	19.75
d50	362.17	4.02	1.11
d90	677.04	4.55	0.67

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS71.

	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)	6.67	6.69	6.65	6.58	6.80	6.45	6.55	6.22	6.49
0.50 to 1.00; (500 µm)	16.48	16.48	16.43	16.59	16.62	16.63	16.46	16.50	16.59
1.00 to 1.50; (353.6 µm)	25.65	25.54	25.70	26.04	25.72	26.06	25.05	25.25	25.21
1.50 to 2.00; (250 µm)	21.54	21.59	21.44	21.93	21.79	21.81	21.65	21.70	21.48
2.00 to 2.50; (176.8 µm)	10.93	10.93	10.86	11.03	11.11	10.94	11.13	11.09	10.87
2.50 to 3.00; (125 µm)	4.22	4.21	4.19	4.20	3.97	4.15	4.08	4.03	4.03
3.00 to 3.50; (88.39 µm)	1.82	1.83	1.85	1.78	1.87	1.79	1.81	1.78	1.81
3.50 to 4.00; (62.5 µm)	1.08	1.07	1.08	0.99	1.14	0.97	1.15	1.15	1.13
4.00 to 4.50; (44.19 µm)	1.08	1.08	1.09	0.96	0.97	0.97	1.12	1.13	1.13
4.50 to 5.00; (31.25 µm)	1.32	1.31	1.32	1.18	1.16	1.19	1.34	1.35	1.35
5.00 to 5.50; (22.097 µm)	1.31	1.31	1.33	1.17	1.18	1.20	1.40	1.41	1.42
5.50 to 6.00; (15.625 µm)	1.36	1.37	1.37	1.24	1.25	1.29	1.44	1.46	1.47
6.00 to 6.50; (11.049 µm)	1.34	1.34	1.35	1.22	1.22	1.25	1.42	1.44	1.45
6.50 to 7.00; (7.813 µm)	1.17	1.18	1.17	1.06	1.06	1.08	1.28	1.29	1.30
7.00 to 7.50; (5.524 µm)	1.02	1.03	1.02	0.95	0.95	0.98	1.07	1.08	1.09
7.50 to 8.00; (3.906 µm)	0.83	0.83	0.84	0.81	0.81	0.84	0.83	0.84	0.85
8.00 to 8.50; (2.762 µm)	0.54	0.54	0.55	0.54	0.55	0.56	0.59	0.60	0.61
8.50 to 9.00; (1.953 µm)	0.33	0.34	0.36	0.35	0.37	0.36	0.40	0.41	0.41
9.00 to 9.50; (1.381 µm)	0.27	0.28	0.29	0.28	0.31	0.30	0.27	0.28	0.28
9.50 to 10.00; (0.977 µm)	0.23	0.24	0.25	0.24	0.25	0.26	0.20	0.21	0.21
10.00 to 10.50; (0.691 µm)	0.18	0.18	0.18	0.19	0.19	0.20	0.17	0.17	0.18
10.50 to 11.00; (0.488 µm)	0.14	0.14	0.14	0.15	0.15	0.16	0.15	0.15	0.15
11.00 to 11.50; (0.345 µm)	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13
11.50 to 12.00; (0.244 µm)	0.11	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11
12.00 to 12.50; (0.173 µm)	0.09	0.09	0.10	0.10	0.11	0.11	0.08	0.09	0.09
12.50 to 13.00; (0.122 µm)	0.08	0.08	0.09	0.08	0.09	0.09	0.07	0.07	0.07
13.00 to 13.50; (0.086 µm)	0.06	0.05	0.06	0.06	0.06	0.06	0.04	0.04	0.04
13.50 to 14.00; (0.061 µm)	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
d10	38.51	37.94	36.68	45.82	44.06	41.37	34.12	32.88	32.06
d50	348.11	347.65	348.00	350.52	350.15	350.11	344.06	343.54	345.25
d90	661.38	661.76	660.97	660.47	663.69	658.75	659.70	655.15	659.31

	Mean	StDev	COV
d10	38.16	4.84	12.68
d50	347.49	2.65	0.76
d90	660.13	2.38	0.36

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS71.

	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)	8.51	8.58	8.46	9.29	9.21	8.96	8.46	8.54	8.67
0.50 to 1.00; (500 µm)	18.55	18.62	18.42	18.62	18.67	18.30	18.45	18.48	18.77
1.00 to 1.50; (353.6 µm)	25.51	25.55	25.76	25.87	26.05	26.21	26.31	26.34	26.20
1.50 to 2.00; (250 µm)	20.04	20.07	20.13	19.74	19.74	19.86	20.34	20.19	19.99
2.00 to 2.50; (176.8 µm)	9.42	9.39	9.35	9.29	9.32	9.32	9.45	9.43	9.37
2.50 to 3.00; (125 µm)	3.35	3.30	3.34	3.30	3.30	3.28	3.42	3.41	3.35
3.00 to 3.50; (88.39 µm)	1.59	1.55	1.57	1.55	1.49	1.52	1.51	1.50	1.49
3.50 to 4.00; (62.5 µm)	1.09	1.07	1.06	0.95	0.94	0.96	0.90	0.89	0.89
4.00 to 4.50; (44.19 µm)	1.14	1.13	1.13	1.01	0.98	1.00	0.93	0.93	0.92
4.50 to 5.00; (31.25 µm)	1.38	1.36	1.36	1.28	1.26	1.30	1.18	1.18	1.19
5.00 to 5.50; (22.097 µm)	1.41	1.39	1.40	1.28	1.26	1.29	1.19	1.19	1.19
5.50 to 6.00; (15.625 µm)	1.40	1.39	1.40	1.32	1.31	1.37	1.25	1.26	1.26
6.00 to 6.50; (11.049 µm)	1.37	1.35	1.36	1.30	1.29	1.27	1.24	1.24	1.25
6.50 to 7.00; (7.813 µm)	1.24	1.22	1.22	1.12	1.11	1.18	1.08	1.08	1.09
7.00 to 7.50; (5.524 µm)	1.04	1.03	1.03	0.99	0.98	1.03	0.98	0.98	0.99
7.50 to 8.00; (3.906 µm)	0.81	0.81	0.81	0.83	0.83	0.82	0.84	0.85	0.86
8.00 to 8.50; (2.762 µm)	0.57	0.57	0.58	0.54	0.54	0.53	0.57	0.57	0.58
8.50 to 9.00; (1.953 µm)	0.38	0.38	0.39	0.34	0.34	0.36	0.37	0.38	0.38
9.00 to 9.50; (1.381 µm)	0.26	0.26	0.26	0.28	0.28	0.30	0.31	0.32	0.32
9.50 to 10.00; (0.977 µm)	0.19	0.19	0.20	0.23	0.24	0.24	0.27	0.27	0.28
10.00 to 10.50; (0.691 µm)	0.16	0.16	0.17	0.17	0.18	0.17	0.20	0.21	0.21
10.50 to 11.00; (0.488 µm)	0.14	0.14	0.15	0.13	0.13	0.14	0.16	0.16	0.16
11.00 to 11.50; (0.345 µm)	0.13	0.13	0.13	0.12	0.12	0.13	0.14	0.14	0.14
11.50 to 12.00; (0.244 µm)	0.11	0.11	0.11	0.12	0.11	0.13	0.13	0.13	0.13
12.00 to 12.50; (0.173 µm)	0.09	0.09	0.09	0.11	0.10	0.12	0.11	0.11	0.12
12.50 to 13.00; (0.122 µm)	0.07	0.07	0.07	0.09	0.09	0.10	0.10	0.10	0.10
13.00 to 13.50; (0.086 µm)	0.04	0.04	0.04	0.07	0.07	0.07	0.07	0.07	0.07
13.50 to 14.00; (0.061 µm)	0.02	0.02	0.02	0.03	0.03	0.04	0.03	0.03	0.04
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
d10	36.15	36.73	36.20	39.96	40.74	37.79	41.29	40.56	39.81
d50	367.50	368.34	367.68	373.27	373.82	371.45	370.19	370.83	372.28
d90	690.30	691.22	689.52	700.60	699.59	695.96	689.53	690.61	692.56

	Mean	StDev	COV
d10	38.80	2.08	5.35
d50	370.60	2.36	0.64
d90	693.32	4.33	0.62

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS71 (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	0.01	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	0.01	0.00
MEDIUM GRAVEL	14.22	15.47	13.57	12.74	15.83	15.43	n/p	14.49	15.47	12.59	13.57	13.76	13.46	14.41	13.83	13.88	14.01
FINE GRAVEL	20.95	20.23	21.30	23.38	20.78	19.91	n/p	21.35	20.73	22.78	22.49	21.62	22.89	20.67	21.44	21.76	21.50
VERY FINE GRAVEL	0.02	0.01	0.01	0.42	0.02	0.00	n/p	0.02	0.02	0.00	0.01	0.03	0.01	0.03	0.04	0.01	0.02
VERY COARSE SAND	0.00	0.00	0.00	0.35	0.01	0.07	n/p	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00
COARSE SAND	16.21	3.80	19.07	16.68	34.66	16.70	n/p	36.75	17.12	16.25	16.54	16.19	17.35	15.09	15.59	16.00	14.09
MEDIUM SAND	30.30	35.29	29.73	29.61	22.35	28.85	n/p	19.86	29.57	29.29	31.72	29.48	28.93	30.41	30.78	27.56	28.65
FINE SAND	9.07	20.81	9.86	12.04	1.81	11.00	n/p	3.24	10.40	10.11	9.33	9.73	10.04	9.66	9.41	9.96	12.43
VERY FINE SAND	1.75	1.90	0.73	1.00	1.05	1.39	n/p	0.72	1.11	2.27	0.93	1.84	1.38	1.92	1.71	1.31	2.01
VERY COARSE SILT	1.51	0.10	1.41	1.59	1.19	1.81	n/p	0.95	1.29	2.88	1.11	1.55	1.41	1.67	1.44	2.15	1.86
COARSE SILT	1.73	0.09	1.23	1.06	1.09	1.70	n/p	1.03	1.25	1.75	1.18	1.71	1.36	1.90	1.63	2.19	1.86
MEDIUM SILT	1.62	0.08	1.24	0.60	0.77	1.61	n/p	0.47	1.20	1.11	1.23	1.62	1.32	1.82	1.54	2.15	1.80
FINE SILT	1.18	0.04	1.05	0.38	0.32	1.15	n/p	0.40	1.03	0.64	0.93	1.12	1.11	1.21	1.15	1.70	1.22
VERY FINE SILT	0.59	0.05	0.61	0.13	0.12	0.39	n/p	0.29	0.67	0.31	0.41	0.55	0.67	0.57	0.56	0.92	0.40
CLAY	0.85	2.13	0.19	0.00	0.00	0.00	n/p	0.43	0.13	0.01	0.55	0.81	0.07	0.63	0.87	0.38	0.15

GRAVEL	35.19	35.71	34.89	36.54	36.63	35.34	n/p	35.86	36.23	35.37	36.06	35.41	36.36	35.11	35.32	35.67	35.53
SAND	57.34	61.80	59.39	59.69	59.87	58.01	n/p	60.58	58.20	57.93	58.52	57.24	57.69	57.09	57.49	54.83	57.18
SILT	6.62	0.36	5.53	3.78	3.49	6.65	n/p	3.13	5.44	6.69	4.87	6.55	5.87	7.18	6.32	9.11	7.14
CLAY	0.85	2.13	0.19	0.00	0.00	0.00	n/p	0.43	0.13	0.01	0.55	0.81	0.07	0.63	0.87	0.38	0.15

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2501
Sample Code:	PS712501

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	15.47	148.45
-3.00 to -2.50; 5.6 mm	16.63	159.58
-2.50 to -2.00; 4 mm	3.61	34.60
-2.00 to -1.50; 2.8 mm	0.01	0.08
-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	0.00
0.00 to 0.50; (707 µm)	0.68	6.51
0.50 to 1.00; (500 µm)	3.12	29.92
1.00 to 1.50; (353.6 µm)	12.44	119.41
1.50 to 2.00; (250 µm)	22.85	219.26
2.00 to 2.50; (176.8 µm)	14.90	143.00
2.50 to 3.00; (125 µm)	5.91	56.71
3.00 to 3.50; (88.39 µm)	1.48	14.19
3.50 to 4.00; (62.5 µm)	0.42	4.04
4.00 to 4.50; (44.19 µm)	0.08	0.79
4.50 to 5.00; (31.25 µm)	0.02	0.19
5.00 to 5.50; (22.097 µm)	0.05	0.46
5.50 to 6.00; (15.625 µm)	0.04	0.41
6.00 to 6.50; (11.049 µm)	0.06	0.53
6.50 to 7.00; (7.813 µm)	0.03	0.28
7.00 to 7.50; (5.524 µm)	0.03	0.27
7.50 to 8.00; (3.906 µm)	0.01	0.12
8.00 to 8.50; (2.762 µm)	0.02	0.23
8.50 to 9.00; (1.953 µm)	0.02	0.21
9.00 to 9.50; (1.381 µm)	2.13	20.41
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	959.64

Notes: Red text calculated by APEM.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2502
Sample Code:	PS712502

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	13.57	119.43
-3.00 to -2.50; 5.6 mm	17.03	149.87
-2.50 to -2.00; 4 mm	4.27	37.53
-2.00 to -1.50; 2.8 mm	0.01	0.11
-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	0.02
0.00 to 0.50; (707 µm)	6.42	56.44
0.50 to 1.00; (500 µm)	12.66	111.35
1.00 to 1.50; (353.6 µm)	16.09	141.60
1.50 to 2.00; (250 µm)	13.63	119.96
2.00 to 2.50; (176.8 µm)	7.49	65.92
2.50 to 3.00; (125 µm)	2.37	20.81
3.00 to 3.50; (88.39 µm)	0.36	3.21
3.50 to 4.00; (62.5 µm)	0.37	3.23
4.00 to 4.50; (44.19 µm)	0.69	6.04
4.50 to 5.00; (31.25 µm)	0.72	6.33
5.00 to 5.50; (22.097 µm)	0.63	5.54
5.50 to 6.00; (15.625 µm)	0.60	5.29
6.00 to 6.50; (11.049 µm)	0.62	5.46
6.50 to 7.00; (7.813 µm)	0.62	5.42
7.00 to 7.50; (5.524 µm)	0.57	4.99
7.50 to 8.00; (3.906 µm)	0.48	4.22
8.00 to 8.50; (2.762 µm)	0.37	3.22
8.50 to 9.00; (1.953 µm)	0.25	2.16
9.00 to 9.50; (1.381 µm)	0.15	1.30
9.50 to 10.00; (0.977 µm)	0.04	0.35
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	879.82

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2503
Sample Code:	PS712503

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	12.74	119.40
-3.00 to -2.50; 5.6 mm	19.11	179.13
-2.50 to -2.00; 4 mm	4.27	40.03
-2.00 to -1.50; 2.8 mm	0.25	2.33
-1.50 to -1.00; 2 mm	0.17	1.57
-1.00 to -0.50; 1.4 mm	0.18	1.73
-0.50 to 0.00; 1 mm	0.16	1.53
0.00 to 0.50; (707 µm)	5.39	50.56
0.50 to 1.00; (500 µm)	11.29	105.79
1.00 to 1.50; (353.6 µm)	15.17	142.22
1.50 to 2.00; (250 µm)	14.44	135.36
2.00 to 2.50; (176.8 µm)	8.47	79.35
2.50 to 3.00; (125 µm)	3.58	33.52
3.00 to 3.50; (88.39 µm)	0.62	5.80
3.50 to 4.00; (62.5 µm)	0.38	3.59
4.00 to 4.50; (44.19 µm)	0.79	7.42
4.50 to 5.00; (31.25 µm)	0.80	7.52
5.00 to 5.50; (22.097 µm)	0.64	6.03
5.50 to 6.00; (15.625 µm)	0.42	3.93
6.00 to 6.50; (11.049 µm)	0.33	3.09
6.50 to 7.00; (7.813 µm)	0.27	2.55
7.00 to 7.50; (5.524 µm)	0.22	2.08
7.50 to 8.00; (3.906 µm)	0.16	1.53
8.00 to 8.50; (2.762 µm)	0.11	1.03
8.50 to 9.00; (1.953 µm)	0.02	0.21
9.00 to 9.50; (1.381 µm)	0.00	0.00
9.50 to 10.00; (0.977 µm)	0.00	0.00
10.00 to 10.50; (0.691 µm)	0.00	0.00
10.50 to 11.00; (0.488 µm)	0.00	0.00
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	100.0000	937.3333

Notes: Red text calculated by APEM.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2504
Sample Code:	PS712504

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	1.19	11.17
-3.50 to -3.00; 8 mm	14.64	137.26
-3.00 to -2.50; 5.6 mm	16.15	151.41
-2.50 to -2.00; 4 mm	4.63	43.40
-2.00 to -1.50; 2.8 mm	0.01	0.14
-1.50 to -1.00; 2 mm	0.01	0.08
-1.00 to -0.50; 1.4 mm	0.01	0.06
-0.50 to 0.00; 1 mm	0.01	0.05
0.00 to 0.50; (707 µm)	15.56	145.88
0.50 to 1.00; (500 µm)	19.10	179.06
1.00 to 1.50; (353.6 µm)	15.03	140.96
1.50 to 2.00; (250 µm)	7.31	68.57
2.00 to 2.50; (176.8 µm)	1.74	16.35
2.50 to 3.00; (125 µm)	0.07	0.63
3.00 to 3.50; (88.39 µm)	0.36	3.38
3.50 to 4.00; (62.5 µm)	0.69	6.45
4.00 to 4.50; (44.19 µm)	0.64	6.01
4.50 to 5.00; (31.25 µm)	0.55	5.18
5.00 to 5.50; (22.097 µm)	0.55	5.16
5.50 to 6.00; (15.625 µm)	0.54	5.05
6.00 to 6.50; (11.049 µm)	0.45	4.22
6.50 to 7.00; (7.813 µm)	0.32	2.96
7.00 to 7.50; (5.524 µm)	0.20	1.83
7.50 to 8.00; (3.906 µm)	0.13	1.20
8.00 to 8.50; (2.762 µm)	0.10	0.90
8.50 to 9.00; (1.953 µm)	0.03	0.24
9.00 to 9.50; (1.381 µm)	0.00	0.00
9.50 to 10.00; (0.977 µm)	0.00	0.00
10.00 to 10.50; (0.691 µm)	0.00	0.00
10.50 to 11.00; (0.488 µm)	0.00	0.00
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	100.00	937.60

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2505
Sample Code:	PS712505

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	0.41	3.63
-3.50 to -3.00; 8 mm	15.02	132.67
-3.00 to -2.50; 5.6 mm	16.92	149.50
-2.50 to -2.00; 4 mm	2.99	26.42
-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	0.07	0.65
0.00 to 0.50; (707 µm)	5.53	48.40
0.50 to 1.00; (500 µm)	11.16	98.57
1.00 to 1.50; (353.6 µm)	15.27	135.16
1.50 to 2.00; (250 µm)	13.58	120.28
2.00 to 2.50; (176.8 µm)	8.00	70.92
2.50 to 3.00; (125 µm)	2.99	26.51
3.00 to 3.50; (88.39 µm)	0.77	6.77
3.50 to 4.00; (62.5 µm)	0.62	5.49
4.00 to 4.50; (44.19 µm)	0.88	7.76
4.50 to 5.00; (31.25 µm)	0.93	8.20
5.00 to 5.50; (22.097 µm)	0.86	7.62
5.50 to 6.00; (15.625 µm)	0.83	7.33
6.00 to 6.50; (11.049 µm)	0.82	7.26
6.50 to 7.00; (7.813 µm)	0.78	6.91
7.00 to 7.50; (5.524 µm)	0.67	5.90
7.50 to 8.00; (3.906 µm)	0.48	4.19
8.00 to 8.50; (2.762 µm)	0.29	2.51
8.50 to 9.00; (1.953 µm)	0.11	0.92
9.00 to 9.50; (1.381 µm)	0.00	0.00
9.50 to 10.00; (0.977 µm)	0.00	0.00
10.00 to 10.50; (0.691 µm)	0.00	0.00
10.50 to 11.00; (0.488 µm)	0.00	0.00
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)	0.00	0.00
14.00 to 14.50; (0.043µm)	0.00	0.00
TOTAL	100.00	883.57

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2507
Sample Code:	PS712507

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	0.56	4.84
-3.50 to -3.00; 8 mm	13.94	121.03
-3.00 to -2.50; 5.6 mm	17.53	152.27
-2.50 to -2.00; 4 mm	3.82	33.15
-2.00 to -1.50; 2.8 mm	0.00	0.03
-1.50 to -1.00; 2 mm	0.01	0.12
-1.00 to -0.50; 1.4 mm	0.00	0.03
-0.50 to 0.00; 1 mm	0.00	0.01
0.00 to 0.50; (707 µm)	20.37	176.95
0.50 to 1.00; (500 µm)	16.37	142.20
1.00 to 1.50; (353.6 µm)	10.83	94.04
1.50 to 2.00; (250 µm)	9.04	78.48
2.00 to 2.50; (176.8 µm)	2.74	23.78
2.50 to 3.00; (125 µm)	0.51	4.40
3.00 to 3.50; (88.39 µm)	0.40	3.47
3.50 to 4.00; (62.5 µm)	0.32	2.80
4.00 to 4.50; (44.19 µm)	0.32	2.82
4.50 to 5.00; (31.25 µm)	0.62	5.41
5.00 to 5.50; (22.097 µm)	0.62	5.37
5.50 to 6.00; (15.625 µm)	0.41	3.56
6.00 to 6.50; (11.049 µm)	0.22	1.89
6.50 to 7.00; (7.813 µm)	0.25	2.21
7.00 to 7.50; (5.524 µm)	0.24	2.08
7.50 to 8.00; (3.906 µm)	0.16	1.36
8.00 to 8.50; (2.762 µm)	0.17	1.48
8.50 to 9.00; (1.953 µm)	0.12	1.00
9.00 to 9.50; (1.381 µm)	0.06	0.49
9.50 to 10.00; (0.977 µm)	0.05	0.41
10.00 to 10.50; (0.691 µm)	0.03	0.27
10.50 to 11.00; (0.488 µm)	0.02	0.20
11.00 to 11.50; (0.345 µm)	0.04	0.36
11.50 to 12.00; (0.244 µm)	0.06	0.52
12.00 to 12.50; (0.173 µm)	0.05	0.46
12.50 to 13.00; (0.122 µm)	0.07	0.60
13.00 to 13.50; (0.086 µm)	0.05	0.43
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	100.00	868.51

Notes: Red text calculated by APEM.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2508
Sample Code:	PS712508

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	0.28	2.64
-3.50 to -3.00; 8 mm	15.19	142.54
-3.00 to -2.50; 5.6 mm	17.63	165.37
-2.50 to -2.00; 4 mm	3.10	29.13
-2.00 to -1.50; 2.8 mm	0.02	0.20
-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	0.03
0.00 to 0.50; (707 µm)	5.27	49.48
0.50 to 1.00; (500 µm)	11.85	111.17
1.00 to 1.50; (353.6 µm)	15.82	148.45
1.50 to 2.00; (250 µm)	13.74	128.95
2.00 to 2.50; (176.8 µm)	7.70	72.21
2.50 to 3.00; (125 µm)	2.71	25.38
3.00 to 3.50; (88.39 µm)	0.62	5.84
3.50 to 4.00; (62.5 µm)	0.48	4.53
4.00 to 4.50; (44.19 µm)	0.64	6.01
4.50 to 5.00; (31.25 µm)	0.65	6.06
5.00 to 5.50; (22.097 µm)	0.62	5.85
5.50 to 6.00; (15.625 µm)	0.63	5.89
6.00 to 6.50; (11.049 µm)	0.62	5.86
6.50 to 7.00; (7.813 µm)	0.58	5.43
7.00 to 7.50; (5.524 µm)	0.54	5.10
7.50 to 8.00; (3.906 µm)	0.49	4.56
8.00 to 8.50; (2.762 µm)	0.40	3.77
8.50 to 9.00; (1.953 µm)	0.27	2.54
9.00 to 9.50; (1.381 µm)	0.13	1.20
9.50 to 10.00; (0.977 µm)	0.00	0.03
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	938.21

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2509
Sample Code:	PS712509

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	12.59	120.56
-3.00 to -2.50; 5.6 mm	18.46	176.69
-2.50 to -2.00; 4 mm	4.32	41.38
-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	0.00
0.00 to 0.50; (707 µm)	4.47	42.83
0.50 to 1.00; (500 µm)	11.78	112.77
1.00 to 1.50; (353.6 µm)	15.78	151.11
1.50 to 2.00; (250 µm)	13.51	129.34
2.00 to 2.50; (176.8 µm)	7.48	71.60
2.50 to 3.00; (125 µm)	2.63	25.21
3.00 to 3.50; (88.39 µm)	1.02	9.72
3.50 to 4.00; (62.5 µm)	1.25	12.00
4.00 to 4.50; (44.19 µm)	1.54	14.74
4.50 to 5.00; (31.25 µm)	1.34	12.87
5.00 to 5.50; (22.097 µm)	0.99	9.50
5.50 to 6.00; (15.625 µm)	0.75	7.22
6.00 to 6.50; (11.049 µm)	0.62	5.91
6.50 to 7.00; (7.813 µm)	0.50	4.75
7.00 to 7.50; (5.524 µm)	0.37	3.57
7.50 to 8.00; (3.906 µm)	0.27	2.55
8.00 to 8.50; (2.762 µm)	0.19	1.82
8.50 to 9.00; (1.953 µm)	0.12	1.14
9.00 to 9.50; (1.381 µm)	0.01	0.10
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)		
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	100.0000	957.3900

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2510
Sample Code:	PS712510

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	0.25	
-3.50 to -3.00; 8 mm	13.31	
-3.00 to -2.50; 5.6 mm	17.88	
-2.50 to -2.00; 4 mm	4.60	
-2.00 to -1.50; 2.8 mm	0.01	
-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)	4.83	
0.50 to 1.00; (500 µm)	11.71	
1.00 to 1.50; (353.6 µm)	17.92	
1.50 to 2.00; (250 µm)	13.81	
2.00 to 2.50; (176.8 µm)	6.77	
2.50 to 3.00; (125 µm)	2.55	
3.00 to 3.50; (88.39 µm)	0.55	
3.50 to 4.00; (62.5 µm)	0.38	
4.00 to 4.50; (44.19 µm)	0.53	
4.50 to 5.00; (31.25 µm)	0.58	
5.00 to 5.50; (22.097 µm)	0.62	
5.50 to 6.00; (15.625 µm)	0.57	
6.00 to 6.50; (11.049 µm)	0.63	
6.50 to 7.00; (7.813 µm)	0.60	
7.00 to 7.50; (5.524 µm)	0.52	
7.50 to 8.00; (3.906 µm)	0.41	
8.00 to 8.50; (2.762 µm)	0.26	
8.50 to 9.00; (1.953 µm)	0.15	
9.00 to 9.50; (1.381 µm)	0.10	
9.50 to 10.00; (0.977 µm)	0.09	
10.00 to 10.50; (0.691 µm)	0.08	
10.50 to 11.00; (0.488 µm)	0.07	
11.00 to 11.50; (0.345 µm)	0.06	
11.50 to 12.00; (0.244 µm)	0.05	
12.00 to 12.50; (0.173 µm)	0.04	
12.50 to 13.00; (0.122 µm)	0.03	
13.00 to 13.50; (0.086 µm)	0.02	
13.50 to 14.00; (0.061µm)	0.01	
14.00 to 14.50; (0.043µm)	0.00	
TOTAL	100.00	

Notes:
Participant notes - "One fragment of gravel was cracked in two when removing from higher sieve size class as it had become jammed. This was not thought to affect the distribution as it had already been weighed."

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2511
Sample Code:	PS712511

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	13.76	109.62
-3.00 to -2.50; 5.6 mm	17.07	136.02
-2.50 to -2.00; 4 mm	4.55	36.25
-2.00 to -1.50; 2.8 mm	0.03	0.23
-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)	5.39	42.92
0.50 to 1.00; (500 µm)	10.80	86.07
1.00 to 1.50; (353.6 µm)	16.07	128.08
1.50 to 2.00; (250 µm)	13.40	106.81
2.00 to 2.50; (176.8 µm)	7.09	56.50
2.50 to 3.00; (125 µm)	2.64	21.03
3.00 to 3.50; (88.39 µm)	1.11	8.86
3.50 to 4.00; (62.5 µm)	0.73	5.81
4.00 to 4.50; (44.19 µm)	0.74	5.87
4.50 to 5.00; (31.25 µm)	0.81	6.47
5.00 to 5.50; (22.097 µm)	0.86	6.85
5.50 to 6.00; (15.625 µm)	0.85	6.77
6.00 to 6.50; (11.049 µm)	0.85	6.77
6.50 to 7.00; (7.813 µm)	0.77	6.11
7.00 to 7.50; (5.524 µm)	0.64	5.08
7.50 to 8.00; (3.906 µm)	0.48	3.82
8.00 to 8.50; (2.762 µm)	0.33	2.60
8.50 to 9.00; (1.953 µm)	0.23	1.82
9.00 to 9.50; (1.381 µm)	0.17	1.38
9.50 to 10.00; (0.977 µm)	0.14	1.08
10.00 to 10.50; (0.691 µm)	0.11	0.88
10.50 to 11.00; (0.488 µm)	0.10	0.76
11.00 to 11.50; (0.345 µm)	0.08	0.66
11.50 to 12.00; (0.244 µm)	0.07	0.57
12.00 to 12.50; (0.173 µm)	0.06	0.45
12.50 to 13.00; (0.122 µm)	0.04	0.34
13.00 to 13.50; (0.086 µm)	0.03	0.23
13.50 to 14.00; (0.061µm)	0.01	0.10
14.00 to 14.50; (0.043µm)	0.00	0.02
TOTAL	100.00	796.83

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2512
Sample Code:	PS712512

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	0.31	
-3.50 to -3.00; 8 mm	13.15	
-3.00 to -2.50; 5.6 mm	18.28	
-2.50 to -2.00; 4 mm	4.61	
-2.00 to -1.50; 2.8 mm	0.01	
-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)	5.39	
0.50 to 1.00; (500 µm)	11.96	
1.00 to 1.50; (353.6 µm)	15.62	
1.50 to 2.00; (250 µm)	13.31	
2.00 to 2.50; (176.8 µm)	7.37	
2.50 to 3.00; (125 µm)	2.67	
3.00 to 3.50; (88.39 µm)	0.76	
3.50 to 4.00; (62.5 µm)	0.62	
4.00 to 4.50; (44.19 µm)	0.72	
4.50 to 5.00; (31.25 µm)	0.69	
5.00 to 5.50; (22.097 µm)	0.67	
5.50 to 6.00; (15.625 µm)	0.69	
6.00 to 6.50; (11.049 µm)	0.67	
6.50 to 7.00; (7.813 µm)	0.65	
7.00 to 7.50; (5.524 µm)	0.59	
7.50 to 8.00; (3.906 µm)	0.52	
8.00 to 8.50; (2.762 µm)	0.41	
8.50 to 9.00; (1.953 µm)	0.25	
9.00 to 9.50; (1.381 µm)	0.07	
9.50 to 10.00; (0.977 µm)	0.00	
10.00 to 10.50; (0.691 µm)	0.00	
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2513
Sample Code:	PS712513

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	14.41	131.27
-3.00 to -2.50; 5.6 mm	15.38	140.15
-2.50 to -2.00; 4 mm	5.29	48.22
-2.00 to -1.50; 2.8 mm	0.02	0.20
-1.50 to -1.00; 2 mm	0.01	0.05
-1.00 to -0.50; 1.4 mm	0.00	0.03
-0.50 to 0.00; 1 mm	0.00	0.02
0.00 to 0.50; (707 µm)	4.31	39.26
0.50 to 1.00; (500 µm)	10.78	98.24
1.00 to 1.50; (353.6 µm)	16.38	149.25
1.50 to 2.00; (250 µm)	14.03	127.85
2.00 to 2.50; (176.8 µm)	7.08	64.47
2.50 to 3.00; (125 µm)	2.58	23.52
3.00 to 3.50; (88.39 µm)	1.17	10.68
3.50 to 4.00; (62.5 µm)	0.75	6.83
4.00 to 4.50; (44.19 µm)	0.76	6.96
4.50 to 5.00; (31.25 µm)	0.91	8.27
5.00 to 5.50; (22.097 µm)	0.94	8.53
5.50 to 6.00; (15.625 µm)	0.97	8.82
6.00 to 6.50; (11.049 µm)	0.96	8.79
6.50 to 7.00; (7.813 µm)	0.86	7.83
7.00 to 7.50; (5.524 µm)	0.70	6.35
7.50 to 8.00; (3.906 µm)	0.52	4.71
8.00 to 8.50; (2.762 µm)	0.35	3.16
8.50 to 9.00; (1.953 µm)	0.22	1.99
9.00 to 9.50; (1.381 µm)	0.14	1.27
9.50 to 10.00; (0.977 µm)	0.10	0.92
10.00 to 10.50; (0.691 µm)	0.08	0.76
10.50 to 11.00; (0.488 µm)	0.07	0.67
11.00 to 11.50; (0.345 µm)	0.06	0.59
11.50 to 12.00; (0.244 µm)	0.06	0.50
12.00 to 12.50; (0.173 µm)	0.04	0.40
12.50 to 13.00; (0.122 µm)	0.03	0.31
13.00 to 13.50; (0.086 µm)	0.02	0.20
13.50 to 14.00; (0.061µm)	0.01	0.08
14.00 to 14.50; (0.043µm)	0.00	0.01
TOTAL	100.0000	911.18

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2514
Sample Code:	PS712514

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	13.83	125.30
-3.00 to -2.50; 5.6 mm	16.37	148.31
-2.50 to -2.00; 4 mm	5.07	45.92
-2.00 to -1.50; 2.8 mm	0.04	0.39
-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	0.00
0.00 to 0.50; (707 µm)	4.52	40.94
0.50 to 1.00; (500 µm)	11.07	100.27
1.00 to 1.50; (353.6 µm)	16.94	153.46
1.50 to 2.00; (250 µm)	13.84	125.38
2.00 to 2.50; (176.8 µm)	6.88	62.36
2.50 to 3.00; (125 µm)	2.52	22.85
3.00 to 3.50; (88.39 µm)	1.09	9.87
3.50 to 4.00; (62.5 µm)	0.62	5.65
4.00 to 4.50; (44.19 µm)	0.66	5.96
4.50 to 5.00; (31.25 µm)	0.78	7.09
5.00 to 5.50; (22.097 µm)	0.80	7.22
5.50 to 6.00; (15.625 µm)	0.83	7.54
6.00 to 6.50; (11.049 µm)	0.82	7.42
6.50 to 7.00; (7.813 µm)	0.72	6.49
7.00 to 7.50; (5.524 µm)	0.63	5.69
7.50 to 8.00; (3.906 µm)	0.52	4.70
8.00 to 8.50; (2.762 µm)	0.34	3.11
8.50 to 9.00; (1.953 µm)	0.22	2.00
9.00 to 9.50; (1.381 µm)	0.18	1.63
9.50 to 10.00; (0.977 µm)	0.15	1.40
10.00 to 10.50; (0.691 µm)	0.12	1.09
10.50 to 11.00; (0.488 µm)	0.09	0.85
11.00 to 11.50; (0.345 µm)	0.08	0.72
11.50 to 12.00; (0.244 µm)	0.07	0.64
12.00 to 12.50; (0.173 µm)	0.06	0.56
12.50 to 13.00; (0.122 µm)	0.05	0.47
13.00 to 13.50; (0.086 µm)	0.04	0.33
13.50 to 14.00; (0.061µm)	0.02	0.16
14.00 to 14.50; (0.043µm)	0.00	0.03
TOTAL	100.00	905.83

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2515
Sample Code:	PS712515

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	13.89	
-3.00 to -2.50; 5.6 mm	15.83	
-2.50 to -2.00; 4 mm	5.94	
-2.00 to -1.50; 2.8 mm	0.01	
-1.50 to -1.00; 2 mm	0.01	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.01	
0.00 to 0.50; (707 µm)	4.85	
0.50 to 1.00; (500 µm)	11.15	
1.00 to 1.50; (353.6 µm)	14.73	
1.50 to 2.00; (250 µm)	12.84	
2.00 to 2.50; (176.8 µm)	7.36	
2.50 to 3.00; (125 µm)	2.60	
3.00 to 3.50; (88.39 µm)	0.66	
3.50 to 4.00; (62.5 µm)	0.65	
4.00 to 4.50; (44.19 µm)	1.02	
4.50 to 5.00; (31.25 µm)	1.13	
5.00 to 5.50; (22.097 µm)	1.10	
5.50 to 6.00; (15.625 µm)	1.09	
6.00 to 6.50; (11.049 µm)	1.10	
6.50 to 7.00; (7.813 µm)	1.05	
7.00 to 7.50; (5.524 µm)	0.94	
7.50 to 8.00; (3.906 µm)	0.76	
8.00 to 8.50; (2.762 µm)	0.56	
8.50 to 9.00; (1.953 µm)	0.36	
9.00 to 9.50; (1.381 µm)	0.20	
9.50 to 10.00; (0.977 µm)	0.11	
10.00 to 10.50; (0.691 µm)	0.04	
10.50 to 11.00; (0.488 µm)	0.0036	
11.00 to 11.50; (0.345 µm)	0.0036	
11.50 to 12.00; (0.244 µm)	0.0036	
12.00 to 12.50; (0.173 µm)	0.0036	
12.50 to 13.00; (0.122 µm)	0.0036	
13.00 to 13.50; (0.086 µm)	0.0036	
13.50 to 14.00; (0.061µm)	0.0036	
14.00 to 14.50; (0.043µm)	0.0036	
TOTAL	100.05	

Notes: APEM -"10.50 to 14.50 phi have been expanded to 4 decimal places to show potential data entry error".

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
LabCode:	PSA_2516
Sample Code:	PS712516

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	0.24	2.29
-3.50 to -3.00; 8 mm	13.77	131.28
-3.00 to -2.50; 5.6 mm	17.46	166.46
-2.50 to -2.00; 4 mm	4.04	38.52
-2.00 to -1.50; 2.8 mm	0.02	0.19
-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	0.00
0.00 to 0.50; (707 µm)	4.01	38.23
0.50 to 1.00; (500 µm)	10.08	96.10
1.00 to 1.50; (353.6 µm)	14.74	140.53
1.50 to 2.00; (250 µm)	13.91	132.61
2.00 to 2.50; (176.8 µm)	8.74	83.32
2.50 to 3.00; (125 µm)	3.69	35.18
3.00 to 3.50; (88.39 µm)	1.20	11.44
3.50 to 4.00; (62.5 µm)	0.81	7.72
4.00 to 4.50; (44.19 µm)	0.92	8.77
4.50 to 5.00; (31.25 µm)	0.94	8.96
5.00 to 5.50; (22.097 µm)	0.92	8.77
5.50 to 6.00; (15.625 µm)	0.94	8.96
6.00 to 6.50; (11.049 µm)	0.94	8.96
6.50 to 7.00; (7.813 µm)	0.86	8.20
7.00 to 7.50; (5.524 µm)	0.71	6.77
7.50 to 8.00; (3.906 µm)	0.51	4.86
8.00 to 8.50; (2.762 µm)	0.30	2.86
8.50 to 9.00; (1.953 µm)	0.10	0.95
9.00 to 9.50; (1.381 µm)	0.00	0.00
9.50 to 10.00; (0.977 µm)	0.01	0.10
10.00 to 10.50; (0.691 µm)	0.14	1.33
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	953.36

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
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	14.90	134.89
-3.00 to -2.50; 5.6 mm	16.22	146.88
-2.50 to -2.00; 4 mm	4.34	39.33
-2.00 to -1.50; 2.8 mm	0.01	0.10
-1.50 to -1.00; 2 mm	0.00	0.04
-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)	4.69	42.44
0.50 to 1.00; (500 µm)	11.36	102.85
1.00 to 1.50; (353.6 µm)	16.65	150.81
1.50 to 2.00; (250 µm)	13.60	123.12
2.00 to 2.50; (176.8 µm)	6.75	61.10
2.50 to 3.00; (125 µm)	2.43	21.97
3.00 to 3.50; (88.39 µm)	1.06	9.62
3.50 to 4.00; (62.5 µm)	0.67	6.08
4.00 to 4.50; (44.19 µm)	0.69	6.26
4.50 to 5.00; (31.25 µm)	0.84	7.61
5.00 to 5.50; (22.097 µm)	0.86	7.83
5.50 to 6.00; (15.625 µm)	0.89	8.02
6.00 to 6.50; (11.049 µm)	0.87	7.89
6.50 to 7.00; (7.813 µm)	0.77	6.99
7.00 to 7.50; (5.524 µm)	0.64	5.80
7.50 to 8.00; (3.906 µm)	0.49	4.46
8.00 to 8.50; (2.762 µm)	0.33	3.01
8.50 to 9.00; (1.953 µm)	0.21	1.93
9.00 to 9.50; (1.381 µm)	0.15	1.37
9.50 to 10.00; (0.977 µm)	0.12	1.08
10.00 to 10.50; (0.691 µm)	0.10	0.89
10.50 to 11.00; (0.488 µm)	0.08	0.76
11.00 to 11.50; (0.345 µm)	0.07	0.66
11.50 to 12.00; (0.244 µm)	0.06	0.57
12.00 to 12.50; (0.173 µm)	0.05	0.46
12.50 to 13.00; (0.122 µm)	0.04	0.37
13.00 to 13.50; (0.086 µm)	0.03	0.24
13.50 to 14.00; (0.061µm)	0.01	0.11
14.00 to 14.50; (0.043µm)	0.00	0.02
TOTAL	100.00	905.58

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
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	14.74	132.90
-3.00 to -2.50; 5.6 mm	16.26	146.62
-2.50 to -2.00; 4 mm	4.32	38.98
-2.00 to -1.50; 2.8 mm	0.01	0.13
-1.50 to -1.00; 2 mm	0.00	0.03
-1.00 to -0.50; 1.4 mm	0.00	0.01
-0.50 to 0.00; 1 mm	0.00	0.02
0.00 to 0.50; (707 µm)	4.66	42.00
0.50 to 1.00; (500 µm)	11.09	100.03
1.00 to 1.50; (353.6 µm)	16.56	149.34
1.50 to 2.00; (250 µm)	13.70	123.54
2.00 to 2.50; (176.8 µm)	6.76	60.92
2.50 to 3.00; (125 µm)	2.48	22.33
3.00 to 3.50; (88.39 µm)	1.11	10.03
3.50 to 4.00; (62.5 µm)	0.69	6.20
4.00 to 4.50; (44.19 µm)	0.72	6.47
4.50 to 5.00; (31.25 µm)	0.87	7.82
5.00 to 5.50; (22.097 µm)	0.87	7.85
5.50 to 6.00; (15.625 µm)	0.88	7.96
6.00 to 6.50; (11.049 µm)	0.86	7.78
6.50 to 7.00; (7.813 µm)	0.76	6.83
7.00 to 7.50; (5.524 µm)	0.66	5.97
7.50 to 8.00; (3.906 µm)	0.54	4.90
8.00 to 8.50; (2.762 µm)	0.36	3.26
8.50 to 9.00; (1.953 µm)	0.23	2.09
9.00 to 9.50; (1.381 µm)	0.18	1.61
9.50 to 10.00; (0.977 µm)	0.14	1.30
10.00 to 10.50; (0.691 µm)	0.11	1.01
10.50 to 11.00; (0.488 µm)	0.09	0.82
11.00 to 11.50; (0.345 µm)	0.08	0.73
11.50 to 12.00; (0.244 µm)	0.08	0.68
12.00 to 12.50; (0.173 µm)	0.07	0.59
12.50 to 13.00; (0.122 µm)	0.05	0.49
13.00 to 13.50; (0.086 µm)	0.04	0.34
13.50 to 14.00; (0.061µm)	0.02	0.16
14.00 to 14.50; (0.043µm)	0.00	0.03
TOTAL	100.00	901.78

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
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	14.19	126.08
-3.00 to -2.50; 5.6 mm	15.72	139.65
-2.50 to -2.00; 4 mm	5.18	46.01
-2.00 to -1.50; 2.8 mm	0.03	0.30
-1.50 to -1.00; 2 mm	0.00	0.01
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.00	0.02
0.00 to 0.50; (707 µm)	4.92	43.67
0.50 to 1.00; (500 µm)	11.59	102.99
1.00 to 1.50; (353.6 µm)	16.92	150.28
1.50 to 2.00; (250 µm)	13.50	119.96
2.00 to 2.50; (176.8 µm)	6.52	57.94
2.50 to 3.00; (125 µm)	2.34	20.77
3.00 to 3.50; (88.39 µm)	1.02	9.05
3.50 to 4.00; (62.5 µm)	0.63	5.56
4.00 to 4.50; (44.19 µm)	0.66	5.88
4.50 to 5.00; (31.25 µm)	0.81	7.23
5.00 to 5.50; (22.097 µm)	0.83	7.41
5.50 to 6.00; (15.625 µm)	0.86	7.67
6.00 to 6.50; (11.049 µm)	0.85	7.53
6.50 to 7.00; (7.813 µm)	0.75	6.64
7.00 to 7.50; (5.524 µm)	0.65	5.79
7.50 to 8.00; (3.906 µm)	0.54	4.76
8.00 to 8.50; (2.762 µm)	0.36	3.21
8.50 to 9.00; (1.953 µm)	0.23	2.09
9.00 to 9.50; (1.381 µm)	0.18	1.62
9.50 to 10.00; (0.977 µm)	0.15	1.32
10.00 to 10.50; (0.691 µm)	0.12	1.04
10.50 to 11.00; (0.488 µm)	0.09	0.84
11.00 to 11.50; (0.345 µm)	0.08	0.74
11.50 to 12.00; (0.244 µm)	0.08	0.67
12.00 to 12.50; (0.173 µm)	0.07	0.58
12.50 to 13.00; (0.122 µm)	0.05	0.48
13.00 to 13.50; (0.086 µm)	0.04	0.34
13.50 to 14.00; (0.061µm)	0.02	0.16
14.00 to 14.50; (0.043µm)	0.00	0.03
TOTAL	100.00	888.33

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
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	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	14.01	124.80
-3.00 to -2.50; 5.6 mm	15.99	142.50
-2.50 to -2.00; 4 mm	4.88	43.45
-2.00 to -1.50; 2.8 mm	0.02	0.18
-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)	4.27	38.09
0.50 to 1.00; (500 µm)	10.76	95.89
1.00 to 1.50; (353.6 µm)	16.65	148.37
1.50 to 2.00; (250 µm)	14.10	125.62
2.00 to 2.50; (176.8 µm)	7.15	63.73
2.50 to 3.00; (125 µm)	2.68	23.89
3.00 to 3.50; (88.39 µm)	1.18	10.54
3.50 to 4.00; (62.5 µm)	0.71	6.29
4.00 to 4.50; (44.19 µm)	0.69	6.14
4.50 to 5.00; (31.25 µm)	0.83	7.43
5.00 to 5.50; (22.097 µm)	0.85	7.56
5.50 to 6.00; (15.625 µm)	0.89	7.91
6.00 to 6.50; (11.049 µm)	0.87	7.75
6.50 to 7.00; (7.813 µm)	0.77	6.83
7.00 to 7.50; (5.524 µm)	0.66	5.92
7.50 to 8.00; (3.906 µm)	0.54	4.81
8.00 to 8.50; (2.762 µm)	0.37	3.27
8.50 to 9.00; (1.953 µm)	0.24	2.14
9.00 to 9.50; (1.381 µm)	0.19	1.65
9.50 to 10.00; (0.977 µm)	0.15	1.35
10.00 to 10.50; (0.691 µm)	0.12	1.06
10.50 to 11.00; (0.488 µm)	0.10	0.86
11.00 to 11.50; (0.345 µm)	0.08	0.74
11.50 to 12.00; (0.244 µm)	0.07	0.66
12.00 to 12.50; (0.173 µm)	0.06	0.56
12.50 to 13.00; (0.122 µm)	0.05	0.46
13.00 to 13.50; (0.086 µm)	0.04	0.31
13.50 to 14.00; (0.061µm)	0.02	0.15
14.00 to 14.50; (0.043µm)	0.00	0.03
TOTAL	100.00	890.96

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS71.

Exercise Code:	PS71
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	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	13.28	120.16
-3.00 to -2.50; 5.6 mm	16.83	152.24
-2.50 to -2.00; 4 mm	5.02	45.43
-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	0.02
0.00 to 0.50; (707 µm)	5.67	51.31
0.50 to 1.00; (500 µm)	12.03	108.82
1.00 to 1.50; (353.6 µm)	16.85	152.45
1.50 to 2.00; (250 µm)	12.98	117.45
2.00 to 2.50; (176.8 µm)	6.08	54.99
2.50 to 3.00; (125 µm)	2.17	19.61
3.00 to 3.50; (88.39 µm)	0.99	8.97
3.50 to 4.00; (62.5 µm)	0.63	5.70
4.00 to 4.50; (44.19 µm)	0.66	5.98
4.50 to 5.00; (31.25 µm)	0.83	7.50
5.00 to 5.50; (22.097 µm)	0.84	7.57
5.50 to 6.00; (15.625 µm)	0.86	7.81
6.00 to 6.50; (11.049 µm)	0.84	7.60
6.50 to 7.00; (7.813 µm)	0.75	6.75
7.00 to 7.50; (5.524 µm)	0.65	5.91
7.50 to 8.00; (3.906 µm)	0.54	4.86
8.00 to 8.50; (2.762 µm)	0.36	3.30
8.50 to 9.00; (1.953 µm)	0.24	2.16
9.00 to 9.50; (1.381 µm)	0.19	1.70
9.50 to 10.00; (0.977 µm)	0.15	1.38
10.00 to 10.50; (0.691 µm)	0.12	1.06
10.50 to 11.00; (0.488 µm)	0.09	0.86
11.00 to 11.50; (0.345 µm)	0.08	0.76
11.50 to 12.00; (0.244 µm)	0.08	0.70
12.00 to 12.50; (0.173 µm)	0.07	0.61
12.50 to 13.00; (0.122 µm)	0.06	0.51
13.00 to 13.50; (0.086 µm)	0.04	0.35
13.50 to 14.00; (0.061µm)	0.02	0.17
14.00 to 14.50; (0.043µm)	0.00	0.03
TOTAL	100.00	904.71

Notes: