NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS73

Particle Size Component 2019/20

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APEM

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BENCHMARK DATA

Table 1. Summary data for the benchmark replicates distributed as PS73.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis)
PSA_2630 BM REP 1	NMBAQC	11.98	86.49	1.53	Gravelly sand
PSA_2631 BM REP 2	NMBAQC	11.94	86.88	1.19	Gravelly sand
PSA_2632 BM REP 3	NMBAQC	11.92	86.76	1.32	Gravelly sand
PSA_2633 BM REP 4	NMBAQC	11.89	86.84	1.28	Gravelly sand
PSA_2634 BM REP 5	NMBAQC	11.90	86.87	1.22	Gravelly sand
BM REP AVERAGE	NMBAQC	11.92	86.77	1.31	Gravelly sand

Table 2. Summary of sieve data for the benchmark replicates distributed as PS73.

		PSA_2630 BM REP 1	PSA_2631 BM REP 2	PSA_2632 BM REP 3	PSA_2633 BM REP 4	PSA_2634 BM REP 5	BM Average
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	0.00
-6.00 to -5.50; 45 mm		0.00	0.00	0.00	0.00	0.00	0.00
-5.50 to -5.00; 31.5 mm		0.00	0.00	0.00	0.00	0.00	0.00
-5.00 to -4.50; 22.4 mm		0.00	0.00	0.00	0.00	0.00	0.00
-4.50 to -4.00; 16 mm		0.00	0.00	0.00	0.00	0.00	0.00
-4.00 to -3.50; 11.2 mm		0.00	0.00	0.00	0.00	0.00	0.00
-3.50 to -3.00; 8 mm		1.55	2.07	1.32	2.30	2.06	1.86
-3.00 to -2.50; 5.6 mm		12.08	13.58	14.25	12.51	13.95	13.27
-2.50 to -2.00; 4 mm		25.49	21.97	20.40	23.37	25.19	23.28
-2.00 to -1.50; 2.8 mm		47.64	45.42	48.06	44.93	45.24	46.26
-1.50 to -1.00; 2 mm		8.20	11.45	10.36	11.33	8.18	9.90
-1.00 to -0.50; 1.4 mm		0.08	0.11	0.27	0.11	0.11	0.14
-0.50 to 0.00; 1.0 mm		0.03	0.05	0.05	0.05	0.03	0.04
>1.0 mm		95.07	94.65	94.71	94.60	94.76	94.76
<1.0 mm	Base Pan	0.00	0.00	0.00	0.00	0.00	0.00
	Oven Dried	697.78	696.99	697.38	699.81	700.06	698.40
Total Weight (g)		792.85	791.64	792.09	794.41	794.82	793.16

BENCHMARK DATA

Table 3. Summary of final laser data for the benchmark replicates distributed as PS73.

	PSA_2630 BM REP 1	PSA_2631 BM REP 2	PSA_2632 BM REP 3	PSA_2633 BM REP 4	PSA_2634 BM REP 5	BM AVERAGE
0.00 to 0.50; (707 µm)	1.07	0.89	0.99	0.42	0.81	0.84
0.50 to 1.00; (500 µm)	10.98	11.63	11.62	11.13	11.00	11.27
1.00 to 1.50; (353.6 µm)	38.76	39.60	38.61	38.49	38.76	38.85
1.50 to 2.00; (250 µm)	35.68	36.09	35.72	36.31	36.22	36.01
2.00 to 2.50; (176.8 µm)	9.06	8.74	9.24	9.80	9.43	9.25
2.50 to 3.00; (125 µm)	1.37	0.72	1.00	1.03	1.08	1.04
3.00 to 3.50; (88.39 µm)	0.96	0.76	0.94	0.98	0.94	0.91
3.50 to 4.00; (62.5 µm)	0.37	0.22	0.37	0.39	0.37	0.34
4.00 to 4.50; (44.19 µm)	0.24	0.16	0.24	0.24	0.23	0.22
4.50 to 5.00; (31.25 µm)	0.16	0.12	0.16	0.15	0.14	0.14
5.00 to 5.50; (22.097 µm)	0.12	0.09	0.11	0.09	0.09	0.10
5.50 to 6.00; (15.625 µm)	0.12	0.08	0.08	0.07	0.07	0.08
6.00 to 6.50; (11.049 µm)	0.12	0.07	0.07	0.07	0.06	0.08
6.50 to 7.00; (7.813 µm)	0.11	0.07	0.07	0.06	0.06	0.07
7.00 to 7.50; (5.524 µm)	0.09	0.06	0.06	0.05	0.05	0.06
7.50 to 8.00; (3.906 µm)	0.07	0.05	0.05	0.04	0.04	0.05
8.00 to 8.50; (2.762 µm)	0.06	0.04	0.04	0.04	0.04	0.04
8.50 to 9.00; (1.953 µm)	0.05	0.05	0.05	0.04	0.04	0.05
9.00 to 9.50; (1.381 µm)	0.07	0.06	0.06	0.06	0.06	0.06
9.50 to 10.00; (0.977 µm)	0.08	0.07	0.07	0.07	0.07	0.07
10.00 to 10.50; (0.691 µm)	0.09	0.08	0.08	0.08	0.08	0.08
10.50 to 11.00; (0.488 µm)	0.08	0.08	0.08	0.08	0.08	0.08
11.00 to 11.50; (0.345 µm)	0.08	0.07	0.07	0.07	0.07	0.07
11.50 to 12.00; (0.244 µm)	0.07	0.06	0.07	0.07	0.06	0.07
12.00 to 12.50; (0.173 µm)	0.05	0.05	0.05	0.05	0.05	0.05
12.50 to 13.00; (0.122 µm)	0.04	0.04	0.04	0.04	0.04	0.04
13.00 to 13.50; (0.086 µm)	0.03	0.03	0.03	0.03	0.03	0.03
13.50 to 14.00; (0.061 µm)	0.01	0.01	0.01	0.01	0.01	0.01
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00
>14.50; (0.01 µm)	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

BENCHMARK DATA

Table 4. Summary of Coefficient of Variation for Benchmark laser replicates for PS73.

		PSA_2630 BM REP 1	PSA_2631 BM REP 2	PSA_2632 BM REP 3	PSA_2633 BM REP 4	PSA_2634 BM REP 5
D_{10}	Subsample 1	0.38	0.15	0.16	0.11	0.06
	Subsample 2	0.10	0.64	0.12	0.06	0.12
	Subsample 3	0.09	0.20	0.05	0.14	1.02
D_{50}	Subsample 1	0.14	0.16	0.11	0.10	0.10
	Subsample 2	0.03	0.47	0.05	0.11	0.11
	Subsample 3	0.07	0.19	0.05	0.17	0.20
D_{90}	Subsample 1	0.49	1.06	0.60	0.85	0.55
	Subsample 2	0.18	0.85	0.56	0.89	0.55
	Subsample 3	0.82	0.97	0.05	0.27	1.01

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

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

All limits double when the D50 is <10microns.

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

The Benchmark replicates show good reproducibility

Table 5. Laser metadata for Benchmark replicates for PS73.

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 PS73.

Figure 1a. Percentage bar charts resulting from final sieve analysis of 5 replicate samples of sediment distributed as PS73 (Benchmark Data).

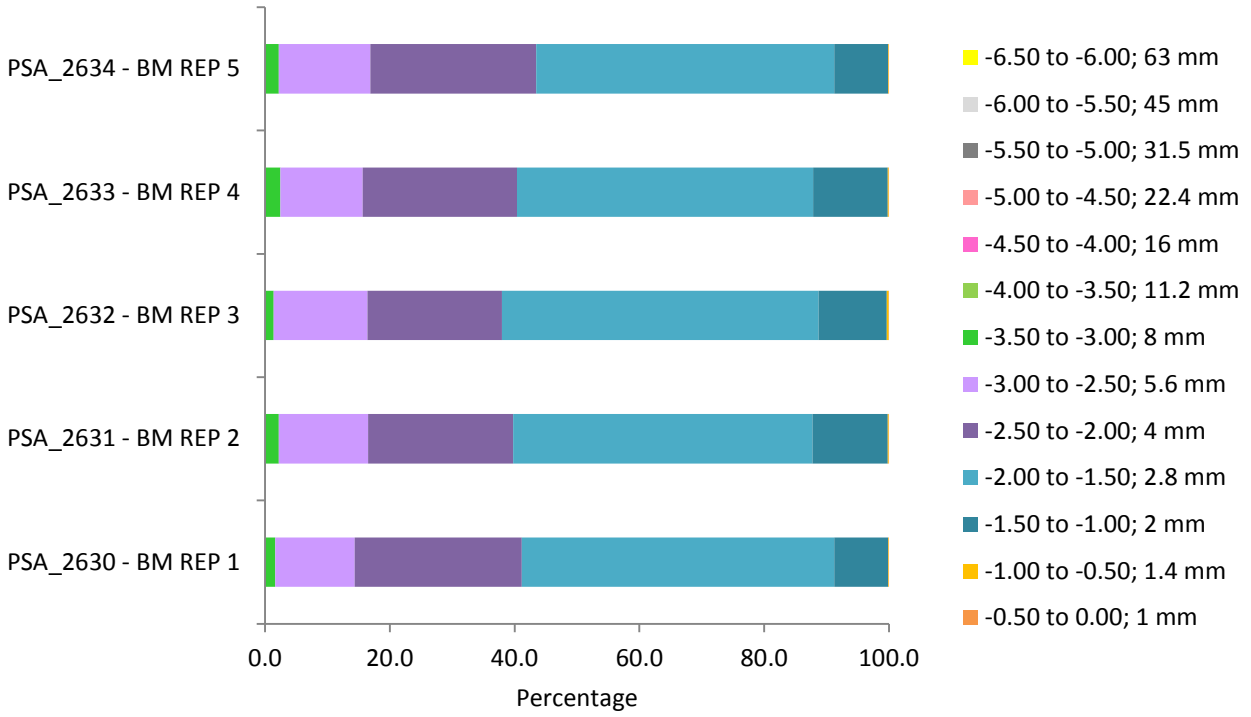


Figure 1b. Particle size distribution curves resulting from final laser analysis of 5 replicate samples of sediment distibuted as PS73 (Benchmark Data).

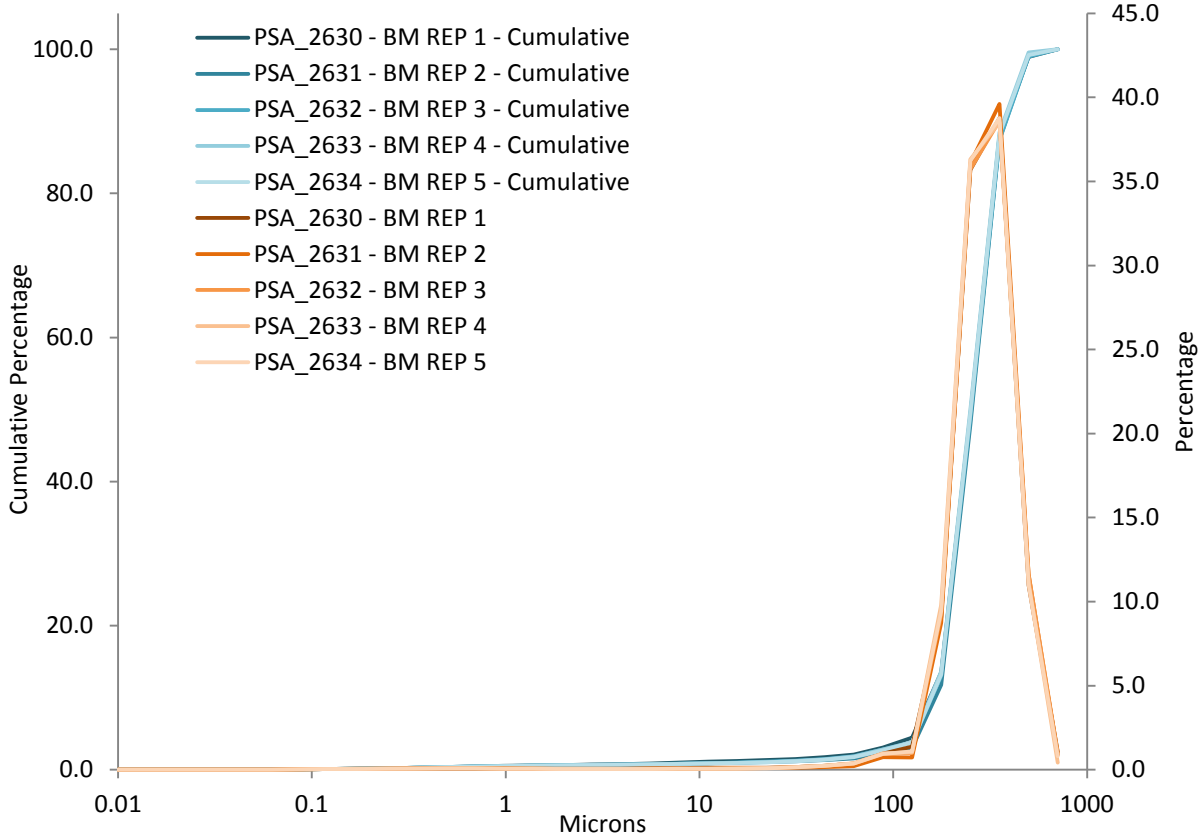
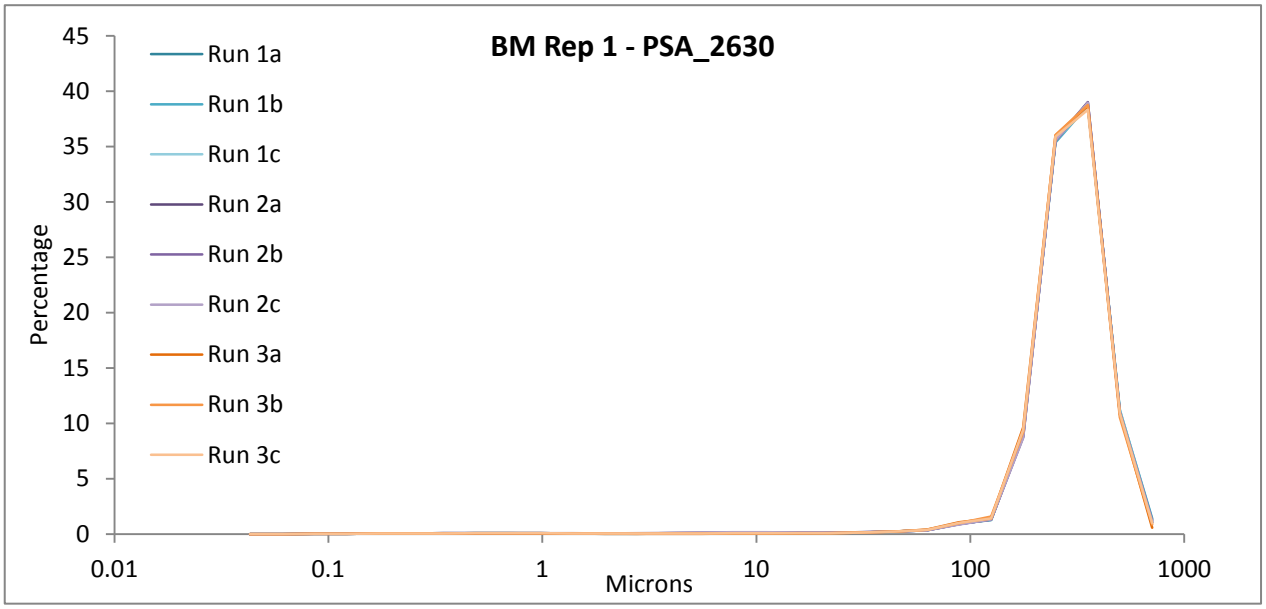
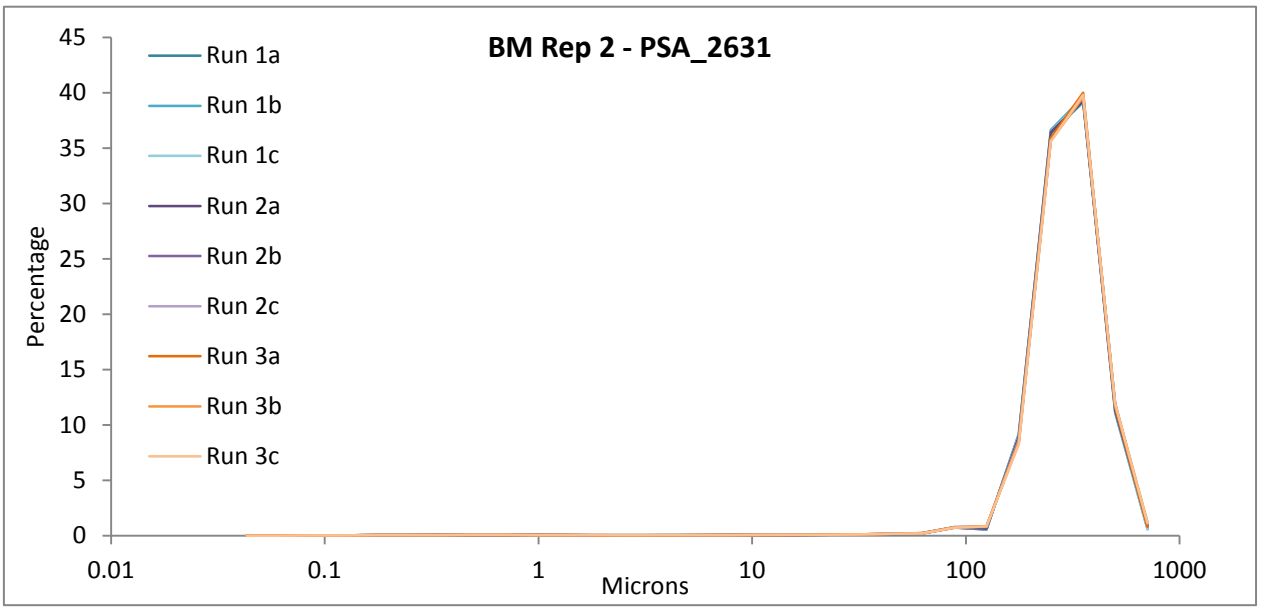


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS73.





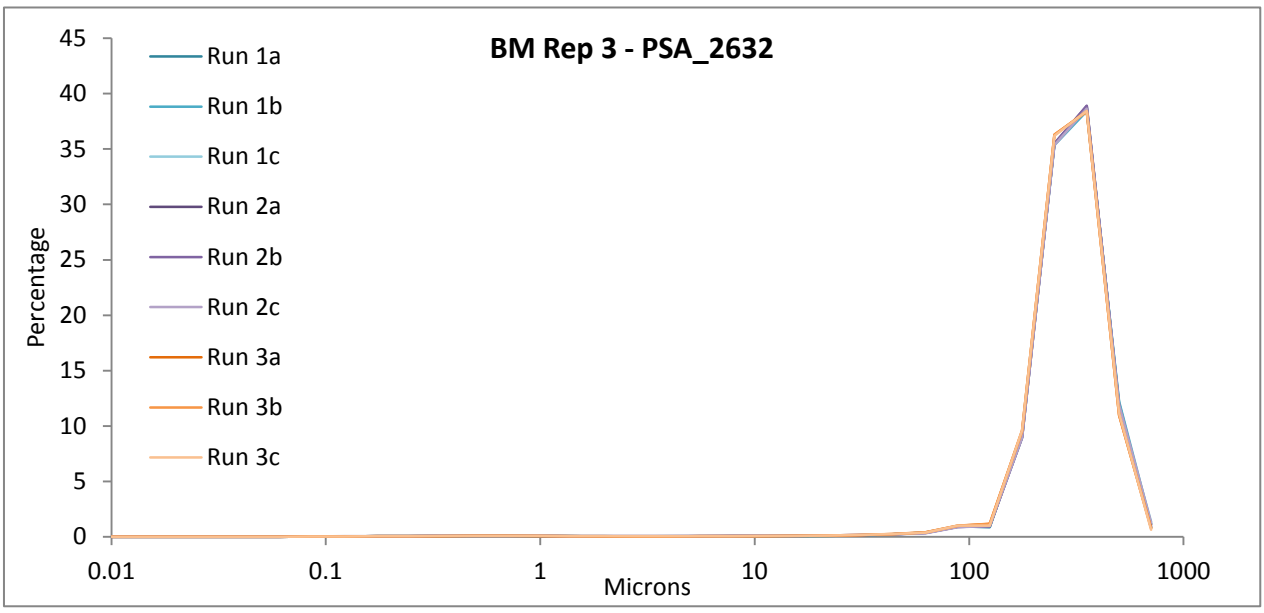
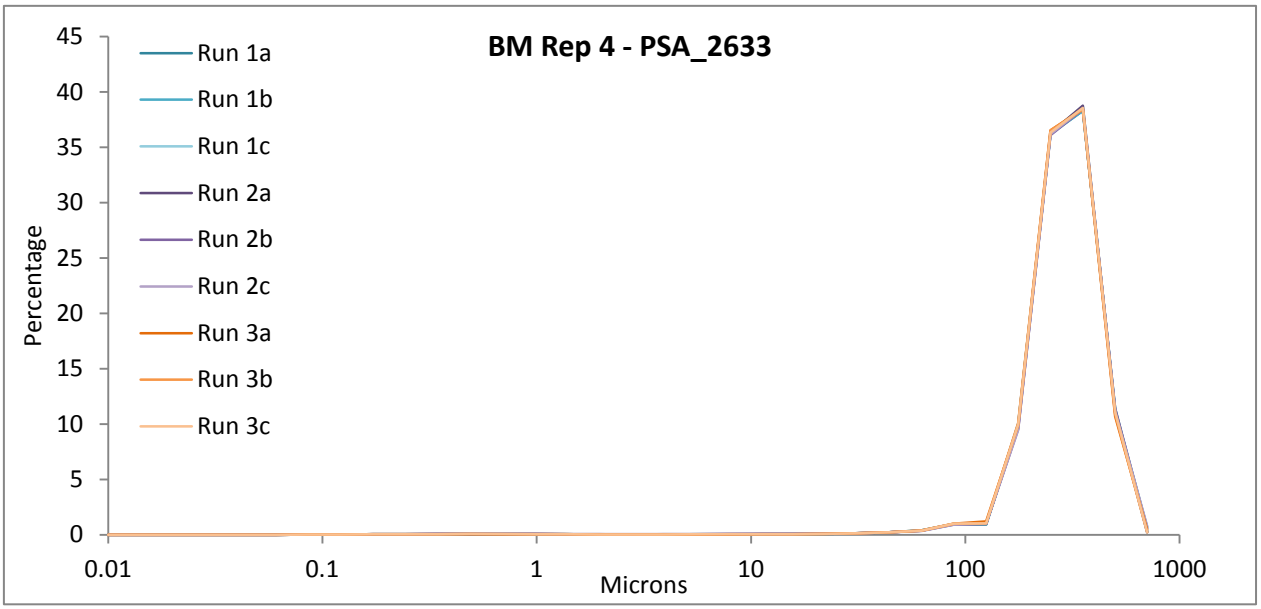


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS73.



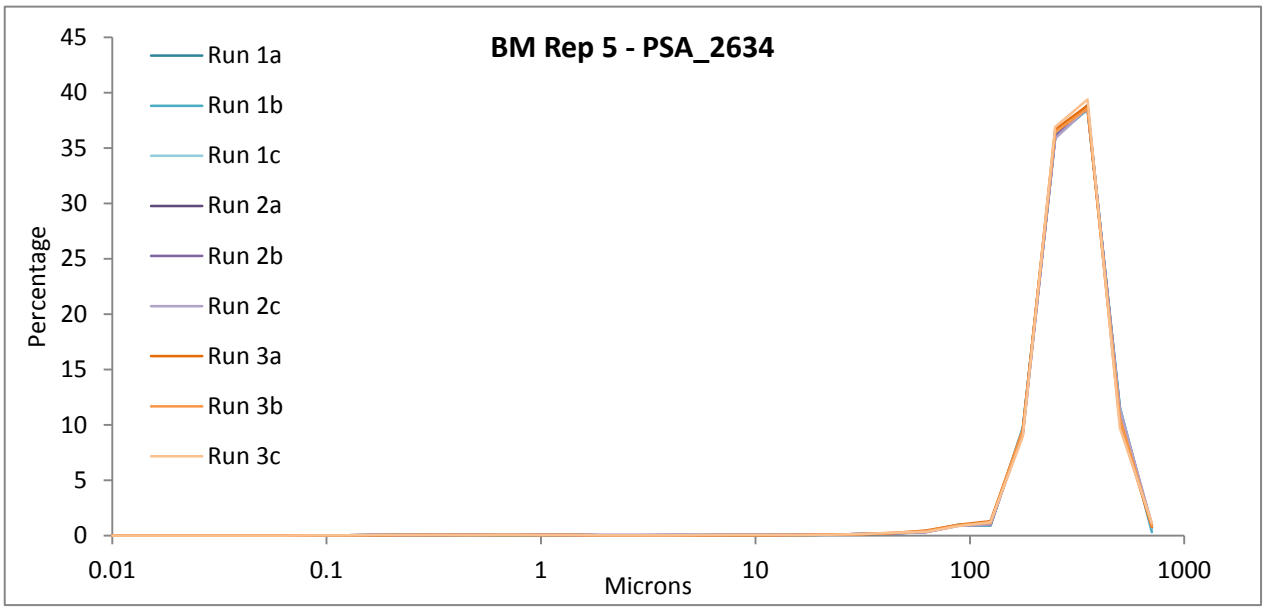
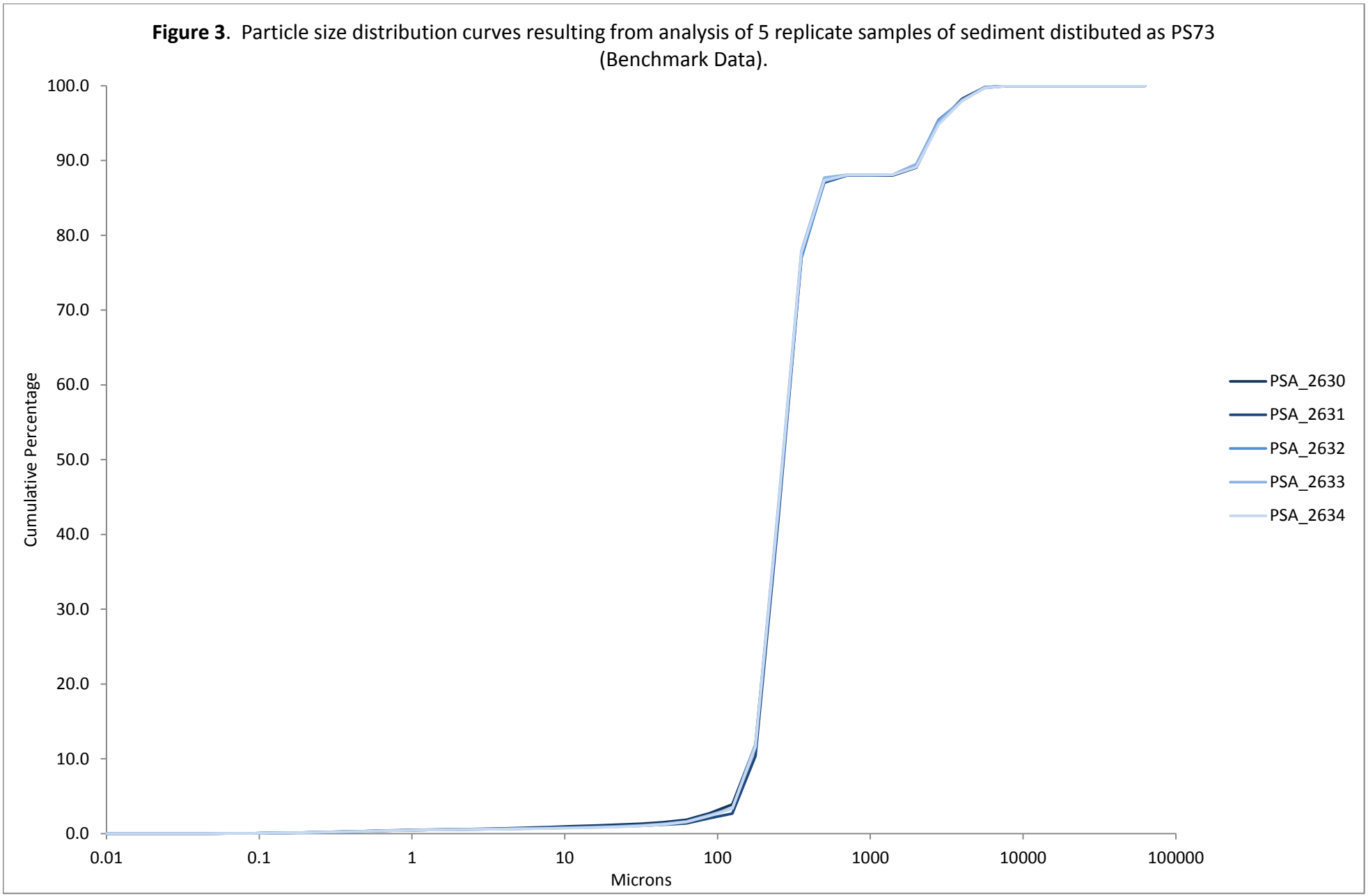


Figure 3. Particle size distribution curves resulting from analysis of 5 replicate samples of sediment distibuted as PS73 (Benchmark Data).



PARTICIPANT DATA

Table 6. Summary of equipment and methods used by participants and sample summary data provided by participants for sediment distributed as PS73.

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	11.92	86.77	1.31	Gravelly sand	Gravelly sand
PSA_2601	YES	NO	OTHER	NO	NO	11.9	88.0	0.1	Gravelly Sand	Gravelly Sand
PSA_2602	NO	YES	OTHER	NO	NO	-	-	-	Sand with seashells/inorganic material	Sand
PSA_2603	YES	YES	OTHER	NO	NO	11.77	88.23	0.00	Gravelly Sand	Gravelly Sand
PSA_2604	YES	YES	NMBAQC	NO	NO	11.7	88.3	0.0	Gravelly Sand	Gravelly Sand
PSA_2605	YES	YES	NMBAQC	NO	NO	11.99	86.17	1.84	Gravelly Sand	Gravelly Sand
PSA_2606	YES	YES	NMBAQC	NO	NO	11.6	86.3	2.1	Very Fine Gravelly Medium Sand	Gravelly Sand
PSA_2607	YES	YES	NMBAQC	NO	NO	12	88	0	Gravelly Sand	Gravelly Sand
PSA_2608	YES	YES	NMBAQC	NO	NO	11.95	88.05	0.00	Gravelly Sand	Gravelly Sand
PSA_2609	YES	YES	NMBAQC	NO	NO	12.3	87.7	0.0	Gravelly Sand	Gravelly Sand
PSA_2610	YES	YES	NMBAQC	NO	NO	11.72	88.28	0.00	Gravelly Sand	Gravelly Sand
PSA_2611	YES	YES	NMBAQC	NO	NO	11.96	88.04	0.00	Sand with fragments of coral	Gravelly Sand
PSA_2612	YES	YES	NMBAQC	NO	NO	12.05	87.95	0.00	Medium sand with coral fragments	Gravelly Sand
PSA_2613	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p
PSA_2614	YES	YES	NMBAQC	NO	NO	11.70	87.01	1.29	Gravelly sand	Gravelly Sand
PSA_2615	YES	YES	NMBAQC	NO	NO	12	88	0	Gravelly Sand	Gravelly Sand
PSA_2616	YES	YES	NMBAQC	NO	NO	11.9	88.1	0.0	Gravelly Sand	Gravelly Sand
PSA_2617	YES	YES	NMBAQC	NO	NO	11.8	88.2	0.0	Gravelly Sand	Gravelly Sand
PSA_2618	YES	YES	NMBAQC	NO	NO	11.95	86.80	1.25	Gravelly Sand	Gravelly Sand
PSA_2619	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p

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 PS73.

		Participant									
Phi interval (explicit) + sieve mesh		Benchmark Average	PSA_2601	PSA_2602	PSA_2603	PSA_2604	PSA_2605	PSA_2606	PSA_2607	PSA_2608	PSA_2609	PSA_2610
-6.50 to -6.00; 63 mm		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	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	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	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	0.00	0.00	0.00	0.00
-4.00 to -3.50; 11.2 mm		0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
-3.50 to -3.00; 8 mm		1.86	0.00	-	0.07	3.40	3.98	0.97	0.84	0.00	4.22	1.73
-3.00 to -2.50; 5.6 mm		13.27	14.13	-	12.57	11.93	14.47	13.59	14.23	15.08	12.16	13.62
-2.50 to -2.00; 4 mm		23.28	26.10	-	21.37	20.78	23.42	23.97	22.46	23.89	28.39	23.68
-2.00 to -1.50; 2.8 mm		46.26	43.69	-	43.90	37.39	36.37	43.03	46.70	39.10	38.00	35.75
-1.50 to -1.00; 2 mm		9.90	10.58	-	15.50	9.70	4.39	10.32	10.65	16.67	11.10	9.51
-1.00 to -0.50; 1.4 mm		0.14	0.14	-	0.50	0.21	0.09	0.06	0.13	0.14	0.44	0.18
-0.50 to 0.00; 1 mm		0.04	0.06	-	0.13	0.02	0.03	0.09	0.71	0.01	0.27	0.12
Total		94.76	94.70	-	94.03	83.43	82.75	92.03	95.72	94.90	95.02	84.59
Summary Data												
< 0.00; >1 mm		94.76	94.70	-	94.03	83.43	82.75	92.03	95.72	94.90	95.02	84.59
> 0.00; <1 mm	Base pan	0.00	0.81	-	0.00	0.12	0.00	698.21	0.00	0.05	1.47	1.10
	Oven dried	698.40	697.06	-	699.23	628.31	0.00	0.00	0.00	698.17	671.40	635.06
Total Sample Weight		793.16	792.56	-	793.26	711.86	82.75	790.24	95.72	793.12	767.89	720.75

PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS73.

		Participant									
Phi interval (explicit) + sieve mesh		Benchmark Average	PSA_2611	PSA_2612	PSA_2613	PSA_2614	PSA_2615	PSA_2616	PSA_2617	PSA_2618	PSA_2619
-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	n/p
-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	n/p
-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	n/p
-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	n/p
-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	n/p
-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	n/p
-3.50 to -3.00; 8 mm		1.86	3.08	1.13	n/p	0.00	0.00	0.00	0.15	0.47	n/p
-3.00 to -2.50; 5.6 mm		13.27	14.72	12.98	n/p	13.69	14.98	12.43	14.02	12.95	n/p
-2.50 to -2.00; 4 mm		23.28	22.12	24.02	n/p	20.23	24.93	25.00	21.84	25.52	n/p
-2.00 to -1.50; 2.8 mm		46.26	47.34	45.71	n/p	36.34	39.63	42.37	37.73	46.98	n/p
-1.50 to -1.00; 2 mm		9.90	7.78	11.43	n/p	13.77	15.26	14.68	11.62	8.65	n/p
-1.00 to -0.50; 1.4 mm		0.14	0.03	0.19	n/p	0.26	0.22	0.47	0.29	0.21	n/p
-0.50 to 0.00; 1 mm		0.04	0.12	0.07	n/p	0.04	0.03	0.08	0.09	0.07	n/p
Total		94.76	95.19	95.53	n/p	84.33	95.05	95.03	85.74	94.85	n/p
Summary Data											
< 0.00; >1 mm		94.76	95.19	95.53	n/p	84.33	95.05	95.03	86.14	94.85	n/p
> 0.00; <1 mm	Base pan	0.00	0.00	695.01	n/p	0.22	0.05	0.05	0.40	0.00	n/p
	Oven dried	698.40	699.18	0.00	n/p	633.75	698.89	696.40	637.37	696.52	n/p
Total Sample Weight		793.16	794.37	790.54	n/p	718.30	793.99	791.48	723.91	791.37	n/p

n/p - not participating in this exercise

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS73.

Microns	BM Average	PSA_2601*	PSA_2602	PSA_2603	PSA_2604	PSA_2605	PSA_2606	PSA_2607	PSA_2608	PSA_2609	PSA_2610	PSA_2611	PSA_2612	PSA_2613	PSA_2614	PSA_2615	PSA_2616	PSA_2617	PSA_2618	PSA_2619
707	0.84	1.10	1.45	1.88	0.41	1.80	1.66	0.98	1.77	17.07	1.03	0.42	1.62	n/p	4.12	0.47	0.89	0.60	0.28	n/p
500	11.27	3.05	15.52	16.53	14.31	12.43	26.45	17.25	16.78	39.65	16.52	13.46	16.85	n/p	13.59	12.56	14.71	14.65	10.59	n/p
353.6	38.85	18.52	36.71	34.84	36.89	38.65	46.58	36.89	39.08	33.57	37.45	33.44	37.91	n/p	39.53	40.36	38.31	37.38	38.18	n/p
250	36.01	56.55	27.89	33.23	34.93	34.44	18.75	33.64	33.01	9.42	33.41	34.52	32.97	n/p	33.14	37.15	35.15	34.95	36.75	n/p
176.8	9.25	17.94	5.86	12.35	12.52	8.75	2.34	10.55	9.10	0.29	10.94	15.75	10.12	n/p	6.84	9.26	10.58	11.70	10.25	n/p
125	1.04	2.11	0.08	1.17	0.95	0.95	0.61	0.69	0.26	0.00	0.64	2.25	0.53	n/p	0.65	0.20	0.35	0.73	1.11	n/p
88.39	0.91	0.38	0.00	0.00	0.00	0.70	0.86	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.53	0.00	0.00	0.00	1.01	n/p
62.5	0.34	0.24	0.00	0.00	0.00	0.19	0.37	0.00	0.00	0.00	0.00	0.03	0.00	n/p	0.13	0.00	0.00	0.00	0.41	n/p
44.19	0.22	0.12	0.00	0.00	0.00	0.23	0.12	0.00	0.00	0.00	0.00	0.07	0.00	n/p	0.09	0.00	0.00	0.00	0.25	n/p
31.25	0.14	0.00	0.00	0.00	0.00	0.26	0.07	0.00	0.00	0.00	0.00	0.05	0.00	n/p	0.06	0.00	0.00	0.00	0.15	n/p
22.097	0.10	0.00	0.00	0.00	0.00	0.23	0.06	0.00	0.00	0.00	0.00	0.01	0.00	n/p	0.06	0.00	0.00	0.00	0.09	n/p
15.625	0.08	0.00	0.00	0.00	0.00	0.21	0.11	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.06	0.00	0.00	0.00	0.07	n/p
11.049	0.08	0.00	0.00	0.00	0.00	0.18	0.12	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.07	0.00	0.00	0.00	0.06	n/p
7.813	0.07	0.00	0.00	0.00	0.00	0.12	0.17	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.09	0.00	0.00	0.00	0.06	n/p
5.524	0.06	0.00	0.00	0.00	0.00	0.09	0.15	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.09	0.00	0.00	0.00	0.05	n/p
3.906	0.05	0.00	0.00	0.00	0.00	0.07	0.15	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.09	0.00	0.00	0.00	0.04	n/p
2.762	0.04	0.00	0.00	0.00	0.00	0.06	0.16	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.08	0.00	0.00	0.00	0.04	n/p
1.953	0.05	0.00	0.00	0.00	0.00	0.06	0.16	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.09	0.00	0.00	0.00	0.04	n/p
1.381	0.06	0.00	0.00	0.00	0.00	0.07	0.14	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.10	0.00	0.00	0.00	0.06	n/p
0.977	0.07	0.00	0.00	0.00	0.00	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.11	0.00	0.00	0.00	0.07	n/p
0.691	0.08	0.00	0.00	0.00	0.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.10	0.00	0.00	0.00	0.08	n/p
0.488	0.08	0.00	0.00	0.00	0.00	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.09	0.00	0.00	0.00	0.08	n/p
0.345	0.07	0.00	0.00	0.00	0.00	0.07	0.10	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.08	0.00	0.00	0.00	0.08	n/p
0.244	0.07	0.00	0.00	0.00	0.00	0.07	0.15	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.06	0.00	0.00	0.00	0.07	n/p
0.173	0.05	0.00	0.00	0.00	0.00	0.05	0.19	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.05	0.00	0.00	0.00	0.05	n/p
0.122	0.04	0.00	0.00	0.00	0.00	0.04	0.18	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.04	0.00	0.00	0.00	0.04	n/p
0.086	0.03	0.00	0.00	0.00	0.00	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.03	0.00	0.00	0.00	0.03	n/p
0.061	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.01	0.00	0.00	0.00	0.01	n/p
0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	0.00	n/p
0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	0.00	n/p
Total	100.00	100.00	87.50	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	n/p	100.00	100.00	100.00	100.00	100.00	n/p

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

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 PS73.

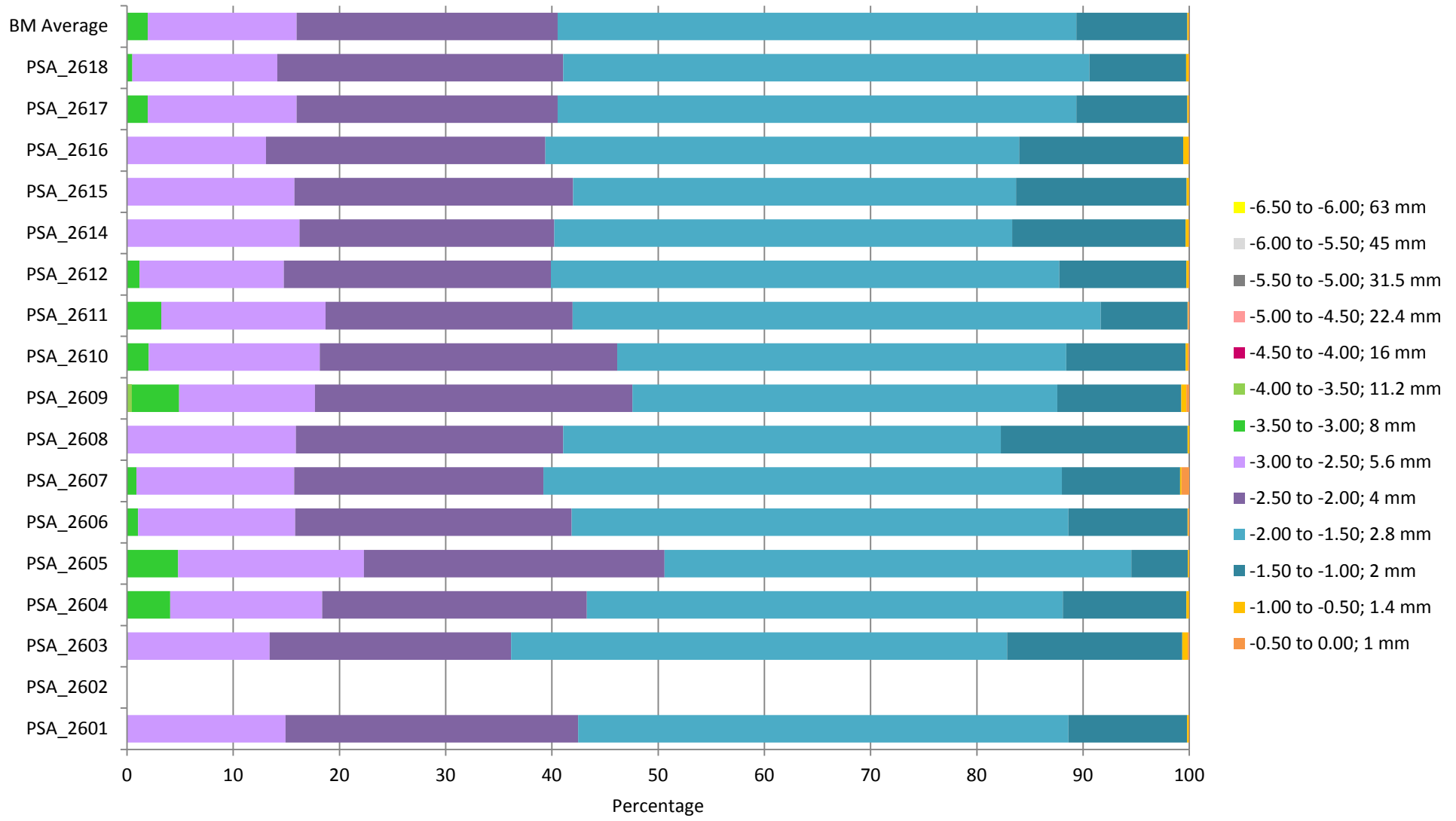


Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS73, shown as (a) cumulative and (b) differential.

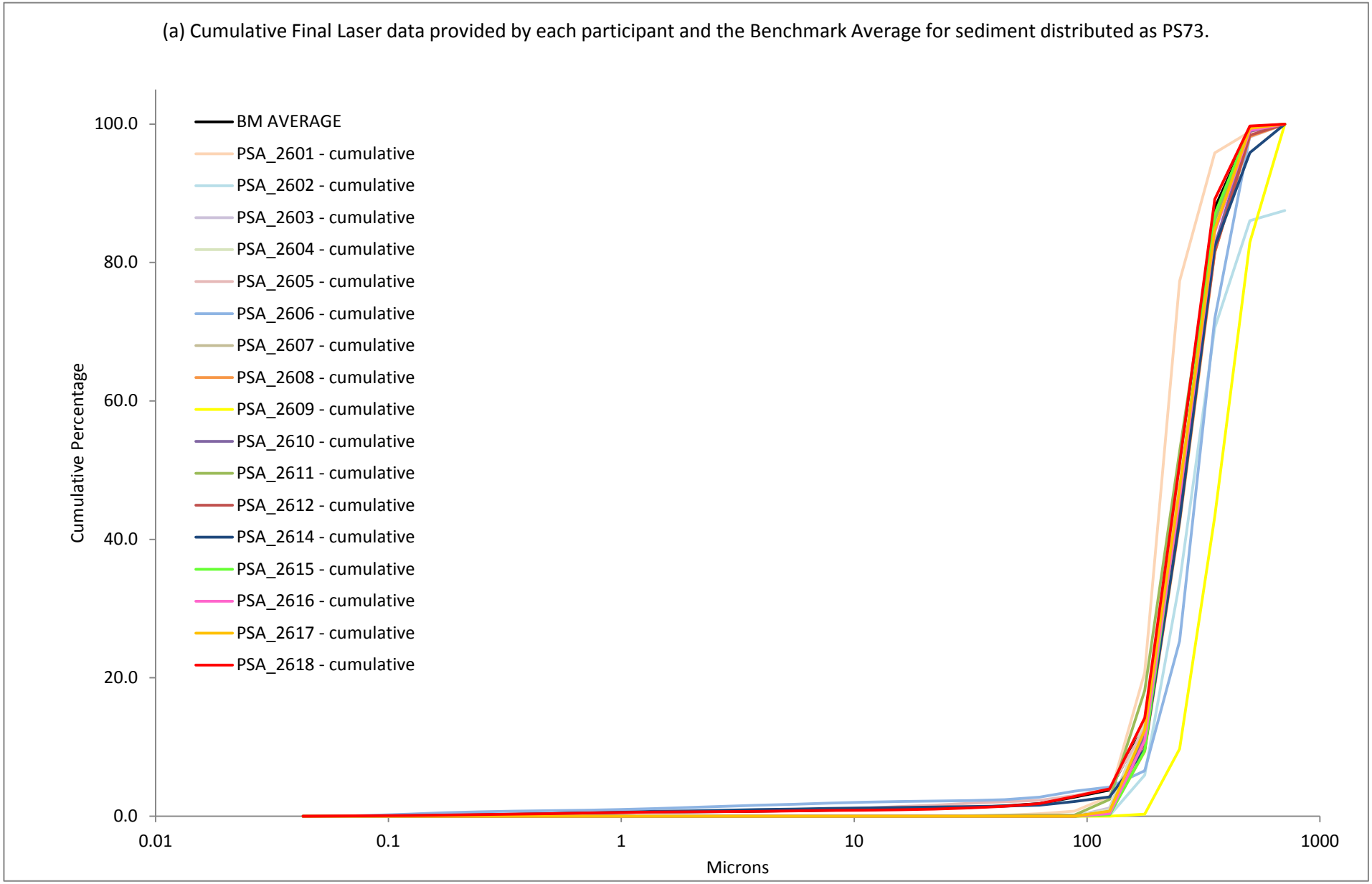
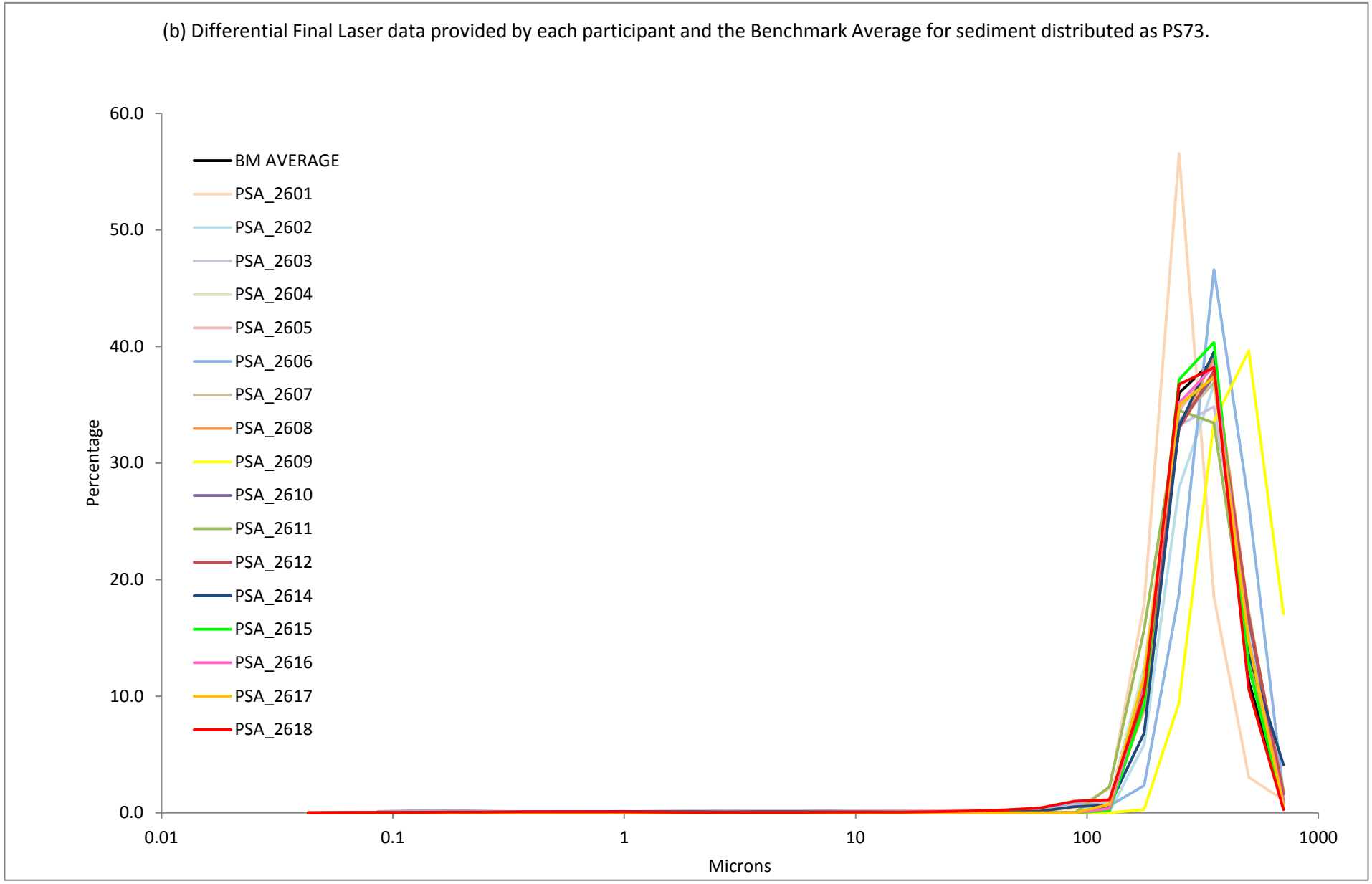


Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS73, shown as (a) cumulative and (b) differential.



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 PS73.

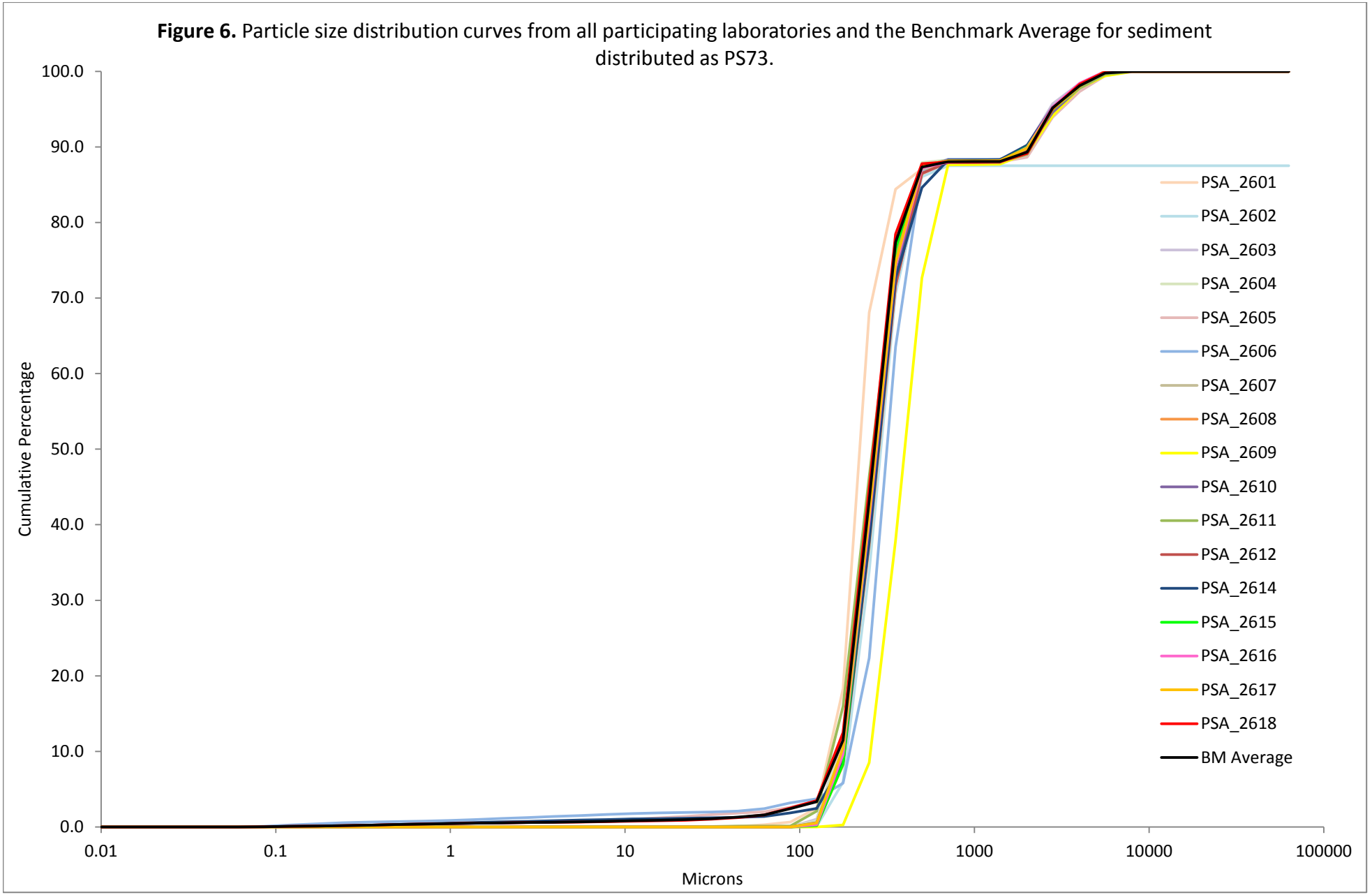

Figure 7. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the Benchmark Average for PS73.

APPENDICES

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS73.

	Replicate Sample 1								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	1.31	1.43	1.08	1.03	1.21	1.14	0.59	0.87	0.99
0.50 to 1.00; (500 µm)	11.15	11.20	11.24	11.02	10.94	10.93	10.86	10.56	10.93
1.00 to 1.50; (353.6 µm)	38.74	38.70	38.71	39.01	38.96	38.97	38.66	38.76	38.34
1.50 to 2.00; (250 µm)	35.53	35.39	35.56	35.57	35.53	35.59	36.02	36.06	35.90
2.00 to 2.50; (176.8 µm)	9.11	8.95	8.94	8.82	8.76	8.70	9.62	9.24	9.42
2.50 to 3.00; (125 µm)	1.29	1.31	1.33	1.32	1.33	1.32	1.43	1.60	1.43
3.00 to 3.50; (88.39 µm)	0.96	0.94	0.93	0.91	0.89	0.88	1.08	1.00	1.02
3.50 to 4.00; (62.5 µm)	0.37	0.36	0.36	0.36	0.35	0.34	0.42	0.40	0.39
4.00 to 4.50; (44.19 µm)	0.23	0.24	0.24	0.24	0.24	0.24	0.25	0.25	0.25
4.50 to 5.00; (31.25 µm)	0.15	0.15	0.16	0.17	0.17	0.17	0.14	0.15	0.15
5.00 to 5.50; (22.097 µm)	0.11	0.13	0.14	0.14	0.15	0.15	0.09	0.10	0.10
5.50 to 6.00; (15.625 µm)	0.10	0.12	0.13	0.14	0.15	0.16	0.07	0.08	0.09
6.00 to 6.50; (11.049 µm)	0.10	0.12	0.14	0.15	0.16	0.17	0.06	0.07	0.08
6.50 to 7.00; (7.813 µm)	0.09	0.11	0.13	0.14	0.15	0.16	0.05	0.07	0.08
7.00 to 7.50; (5.524 µm)	0.07	0.09	0.11	0.12	0.13	0.14	0.04	0.06	0.07
7.50 to 8.00; (3.906 µm)	0.05	0.07	0.08	0.09	0.10	0.11	0.04	0.05	0.06
8.00 to 8.50; (2.762 µm)	0.04	0.05	0.06	0.07	0.07	0.08	0.03	0.05	0.05
8.50 to 9.00; (1.953 µm)	0.04	0.05	0.06	0.06	0.07	0.07	0.04	0.05	0.05
9.00 to 9.50; (1.381 µm)	0.06	0.06	0.07	0.07	0.08	0.08	0.05	0.07	0.07
9.50 to 10.00; (0.977 µm)	0.07	0.08	0.08	0.09	0.09	0.09	0.07	0.08	0.08
10.00 to 10.50; (0.691 µm)	0.08	0.08	0.09	0.09	0.09	0.10	0.08	0.08	0.08
10.50 to 11.00; (0.488 µm)	0.08	0.08	0.09	0.09	0.09	0.09	0.08	0.08	0.08
11.00 to 11.50; (0.345 µm)	0.07	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.08
11.50 to 12.00; (0.244 µm)	0.06	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.07
12.00 to 12.50; (0.173 µm)	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.05
12.50 to 13.00; (0.122 µm)	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.04
13.00 to 13.50; (0.086 µm)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
13.50 to 14.00; (0.061 µm)	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	220.67	220.23	219.04	219.05	218.84	218.59	217.44	217.24	217.02
d50	357.38	357.83	356.87	356.96	357.09	356.89	353.93	354.22	354.41
d90	539.59	542.32	537.01	533.35	535.19	533.87	523.57	524.15	531.28

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	219.98	0.84	0.38	218.83	0.23	0.10	217.23	0.21	0.09
d50	357.36	0.48	0.14	356.98	0.10	0.03	354.19	0.24	0.07
d90	539.64	2.65	0.49	534.14	0.95	0.18	526.33	4.29	0.82

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS73.

	Replicate Sample 2								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.73	0.59	0.57	0.91	0.98	1.05	0.83	1.23	1.13
0.50 to 1.00; (500 µm)	11.78	11.12	11.38	11.32	11.91	11.72	11.64	11.92	11.92
1.00 to 1.50; (353.6 µm)	39.16	39.62	39.50	39.31	39.64	39.69	40.01	39.62	39.83
1.50 to 2.00; (250 µm)	36.32	36.66	36.49	36.45	35.82	35.86	35.90	35.66	35.62
2.00 to 2.50; (176.8 µm)	9.18	9.08	9.05	8.92	8.66	8.61	8.48	8.38	8.28
2.50 to 3.00; (125 µm)	0.56	0.59	0.62	0.65	0.79	0.80	0.83	0.84	0.84
3.00 to 3.50; (88.39 µm)	0.76	0.76	0.75	0.74	0.79	0.78	0.76	0.74	0.73
3.50 to 4.00; (62.5 µm)	0.22	0.21	0.20	0.20	0.25	0.24	0.23	0.23	0.22
4.00 to 4.50; (44.19 µm)	0.14	0.14	0.15	0.15	0.17	0.17	0.18	0.18	0.17
4.50 to 5.00; (31.25 µm)	0.11	0.12	0.12	0.12	0.11	0.12	0.12	0.12	0.12
5.00 to 5.50; (22.097 µm)	0.09	0.09	0.10	0.10	0.08	0.09	0.09	0.10	0.10
5.50 to 6.00; (15.625 µm)	0.07	0.08	0.09	0.09	0.06	0.07	0.08	0.08	0.08
6.00 to 6.50; (11.049 µm)	0.07	0.07	0.08	0.09	0.05	0.06	0.07	0.07	0.08
6.50 to 7.00; (7.813 µm)	0.06	0.07	0.08	0.08	0.05	0.05	0.06	0.07	0.07
7.00 to 7.50; (5.524 µm)	0.05	0.06	0.07	0.08	0.04	0.05	0.06	0.06	0.07
7.50 to 8.00; (3.906 µm)	0.05	0.05	0.06	0.06	0.03	0.04	0.05	0.05	0.06
8.00 to 8.50; (2.762 µm)	0.04	0.04	0.05	0.05	0.03	0.04	0.04	0.05	0.05
8.50 to 9.00; (1.953 µm)	0.04	0.05	0.05	0.05	0.04	0.04	0.04	0.05	0.05
9.00 to 9.50; (1.381 µm)	0.06	0.06	0.06	0.07	0.05	0.05	0.06	0.06	0.06
9.50 to 10.00; (0.977 µm)	0.07	0.07	0.08	0.08	0.06	0.07	0.07	0.07	0.08
10.00 to 10.50; (0.691 µm)	0.08	0.08	0.08	0.08	0.07	0.07	0.08	0.08	0.08
10.50 to 11.00; (0.488 µm)	0.08	0.08	0.08	0.08	0.07	0.07	0.08	0.08	0.08
11.00 to 11.50; (0.345 µm)	0.07	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07
11.50 to 12.00; (0.244 µm)	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06
12.00 to 12.50; (0.173 µm)	0.05	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.05
12.50 to 13.00; (0.122 µm)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
13.00 to 13.50; (0.086 µm)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
13.50 to 14.00; (0.061 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	231.68	231.51	231.03	231.29	234.04	233.69	233.92	234.24	234.83
d50	358.84	357.72	358.11	358.44	361.51	361.29	361.25	362.24	362.57
d90	538.23	527.30	530.53	535.33	543.84	542.68	538.07	547.86	546.29

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	231.41	0.34	0.15	233.00	1.50	0.64	234.33	0.46	0.20
d50	358.22	0.57	0.16	360.41	1.71	0.47	362.02	0.69	0.19
d90	532.02	5.62	1.06	540.62	4.61	0.85	544.07	5.26	0.97

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS73.

	Replicate Sample 3								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.84	1.16	1.36	1.12	0.96	1.28	0.77	0.78	0.64
0.50 to 1.00; (500 µm)	12.09	12.21	11.66	11.77	11.84	11.91	10.97	10.99	11.16
1.00 to 1.50; (353.6 µm)	38.65	38.42	38.77	38.88	38.92	38.64	38.43	38.37	38.46
1.50 to 2.00; (250 µm)	35.52	35.37	35.51	35.47	35.51	35.36	36.27	36.30	36.19
2.00 to 2.50; (176.8 µm)	9.35	9.21	8.93	8.99	8.96	8.97	9.59	9.52	9.61
2.50 to 3.00; (125 µm)	0.87	0.89	1.01	0.96	0.96	0.98	1.16	1.18	1.02
3.00 to 3.50; (88.39 µm)	0.96	0.94	0.93	0.91	0.90	0.88	1.00	0.99	1.00
3.50 to 4.00; (62.5 µm)	0.38	0.37	0.38	0.34	0.33	0.33	0.39	0.40	0.39
4.00 to 4.50; (44.19 µm)	0.23	0.24	0.23	0.24	0.24	0.23	0.25	0.23	0.25
4.50 to 5.00; (31.25 µm)	0.15	0.15	0.14	0.16	0.16	0.16	0.15	0.17	0.16
5.00 to 5.50; (22.097 µm)	0.09	0.10	0.10	0.11	0.11	0.12	0.10	0.12	0.10
5.50 to 6.00; (15.625 µm)	0.07	0.08	0.08	0.09	0.09	0.10	0.07	0.07	0.08
6.00 to 6.50; (11.049 µm)	0.06	0.07	0.07	0.08	0.09	0.09	0.06	0.06	0.07
6.50 to 7.00; (7.813 µm)	0.05	0.06	0.06	0.07	0.08	0.09	0.06	0.06	0.07
7.00 to 7.50; (5.524 µm)	0.04	0.05	0.06	0.07	0.07	0.08	0.05	0.05	0.06
7.50 to 8.00; (3.906 µm)	0.04	0.04	0.05	0.06	0.06	0.07	0.04	0.04	0.05
8.00 to 8.50; (2.762 µm)	0.03	0.04	0.04	0.05	0.05	0.06	0.03	0.04	0.04
8.50 to 9.00; (1.953 µm)	0.04	0.04	0.05	0.05	0.06	0.06	0.04	0.05	0.05
9.00 to 9.50; (1.381 µm)	0.05	0.06	0.06	0.06	0.07	0.07	0.06	0.06	0.06
9.50 to 10.00; (0.977 µm)	0.07	0.07	0.07	0.08	0.08	0.08	0.07	0.07	0.08
10.00 to 10.50; (0.691 µm)	0.07	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.08
10.50 to 11.00; (0.488 µm)	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.08	0.08
11.00 to 11.50; (0.345 µm)	0.07	0.07	0.07	0.08	0.08	0.08	0.07	0.07	0.08
11.50 to 12.00; (0.244 µm)	0.06	0.07	0.06	0.07	0.07	0.07	0.06	0.06	0.07
12.00 to 12.50; (0.173 µm)	0.05	0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.06
12.50 to 13.00; (0.122 µm)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
13.00 to 13.50; (0.086 µm)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
13.50 to 14.00; (0.061 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	224.45	224.73	225.16	224.75	224.56	224.24	219.86	219.72	219.96
d50	358.63	359.37	359.29	359.20	359.05	359.42	354.14	354.09	354.42
d90	543.72	550.24	546.94	544.35	542.65	548.54	528.30	528.83	528.70

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	224.78	0.36	0.16	224.52	0.26	0.12	219.85	0.12	0.05
d50	359.10	0.41	0.11	359.22	0.19	0.05	354.22	0.18	0.05
d90	546.97	3.26	0.60	545.18	3.03	0.56	528.61	0.28	0.05

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS73.

	Replicate Sample 4								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.32	0.69	0.24	0.24	0.58	0.77	0.47	0.22	0.22
0.50 to 1.00; (500 µm)	11.42	11.25	11.13	11.17	11.40	11.07	10.71	10.91	11.10
1.00 to 1.50; (353.6 µm)	38.30	38.30	38.72	38.77	38.44	38.49	38.47	38.41	38.56
1.50 to 2.00; (250 µm)	36.26	36.19	36.31	36.28	36.10	36.20	36.55	36.55	36.35
2.00 to 2.50; (176.8 µm)	10.03	9.81	9.74	9.66	9.55	9.49	9.91	10.10	9.94
2.50 to 3.00; (125 µm)	0.94	0.97	1.00	1.00	1.02	1.04	1.21	1.04	1.05
3.00 to 3.50; (88.39 µm)	1.00	0.98	0.97	0.96	0.94	0.92	1.02	1.03	1.01
3.50 to 4.00; (62.5 µm)	0.41	0.40	0.39	0.38	0.37	0.36	0.39	0.40	0.39
4.00 to 4.50; (44.19 µm)	0.24	0.25	0.25	0.25	0.25	0.25	0.24	0.23	0.23
4.50 to 5.00; (31.25 µm)	0.15	0.15	0.16	0.16	0.16	0.16	0.14	0.15	0.15
5.00 to 5.50; (22.097 µm)	0.08	0.09	0.10	0.10	0.11	0.11	0.08	0.08	0.09
5.50 to 6.00; (15.625 µm)	0.06	0.07	0.08	0.08	0.09	0.09	0.06	0.06	0.07
6.00 to 6.50; (11.049 µm)	0.05	0.06	0.07	0.08	0.08	0.09	0.05	0.06	0.06
6.50 to 7.00; (7.813 µm)	0.05	0.06	0.06	0.07	0.08	0.08	0.04	0.05	0.05
7.00 to 7.50; (5.524 µm)	0.04	0.05	0.06	0.06	0.07	0.07	0.04	0.04	0.05
7.50 to 8.00; (3.906 µm)	0.03	0.04	0.05	0.05	0.06	0.06	0.03	0.03	0.04
8.00 to 8.50; (2.762 µm)	0.03	0.04	0.04	0.05	0.05	0.05	0.03	0.03	0.04
8.50 to 9.00; (1.953 µm)	0.04	0.04	0.05	0.05	0.05	0.06	0.03	0.04	0.04
9.00 to 9.50; (1.381 µm)	0.05	0.06	0.06	0.06	0.07	0.07	0.05	0.05	0.06
9.50 to 10.00; (0.977 µm)	0.07	0.07	0.07	0.08	0.08	0.08	0.07	0.07	0.07
10.00 to 10.50; (0.691 µm)	0.08	0.08	0.08	0.08	0.08	0.09	0.07	0.08	0.08
10.50 to 11.00; (0.488 µm)	0.08	0.08	0.08	0.08	0.08	0.09	0.07	0.08	0.08
11.00 to 11.50; (0.345 µm)	0.07	0.07	0.08	0.08	0.08	0.08	0.07	0.07	0.07
11.50 to 12.00; (0.244 µm)	0.06	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.07
12.00 to 12.50; (0.173 µm)	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.05
12.50 to 13.00; (0.122 µm)	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.04
13.00 to 13.50; (0.086 µm)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
13.50 to 14.00; (0.061 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	219.97	220.39	220.03	220.14	220.39	220.26	218.86	218.64	219.24
d50	353.71	354.38	353.91	354.15	354.95	354.66	352.42	352.07	353.21
d90	527.07	530.78	521.86	522.36	531.06	529.70	519.40	518.34	521.12

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	220.13	0.23	0.11	220.26	0.12	0.06	218.91	0.31	0.14
d50	354.00	0.34	0.10	354.59	0.40	0.11	352.57	0.59	0.17
d90	526.57	4.48	0.85	527.71	4.68	0.89	519.62	1.40	0.27

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS73.

	Replicate Sample 5								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.66	0.33	0.73	0.82	0.98	1.02	0.79	0.87	1.12
0.50 to 1.00; (500 µm)	11.55	11.60	11.52	11.30	11.04	11.41	10.19	10.65	9.75
1.00 to 1.50; (353.6 µm)	38.50	38.73	38.62	38.68	38.87	38.61	38.85	38.58	39.40
1.50 to 2.00; (250 µm)	36.00	36.10	35.93	36.05	36.02	35.88	36.68	36.43	36.92
2.00 to 2.50; (176.8 µm)	9.75	9.65	9.54	9.45	9.16	9.32	9.50	9.56	8.95
2.50 to 3.00; (125 µm)	0.94	0.94	0.98	0.98	1.20	1.01	1.31	1.17	1.22
3.00 to 3.50; (88.39 µm)	0.97	0.96	0.94	0.93	0.89	0.90	0.98	0.97	0.88
3.50 to 4.00; (62.5 µm)	0.37	0.36	0.35	0.34	0.33	0.32	0.45	0.40	0.36
4.00 to 4.50; (44.19 µm)	0.22	0.22	0.22	0.22	0.23	0.22	0.25	0.26	0.25
4.50 to 5.00; (31.25 µm)	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.15	0.15
5.00 to 5.50; (22.097 µm)	0.08	0.09	0.09	0.09	0.10	0.10	0.08	0.09	0.10
5.50 to 6.00; (15.625 µm)	0.06	0.07	0.07	0.07	0.08	0.08	0.06	0.07	0.07
6.00 to 6.50; (11.049 µm)	0.05	0.06	0.06	0.07	0.07	0.08	0.05	0.06	0.06
6.50 to 7.00; (7.813 µm)	0.05	0.05	0.06	0.06	0.07	0.07	0.04	0.05	0.05
7.00 to 7.50; (5.524 µm)	0.04	0.05	0.05	0.06	0.06	0.07	0.04	0.04	0.05
7.50 to 8.00; (3.906 µm)	0.03	0.04	0.04	0.05	0.06	0.06	0.03	0.04	0.04
8.00 to 8.50; (2.762 µm)	0.03	0.03	0.04	0.04	0.05	0.05	0.03	0.03	0.04
8.50 to 9.00; (1.953 µm)	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.05
9.00 to 9.50; (1.381 µm)	0.05	0.05	0.06	0.06	0.07	0.07	0.05	0.05	0.06
9.50 to 10.00; (0.977 µm)	0.07	0.07	0.07	0.07	0.08	0.08	0.07	0.07	0.07
10.00 to 10.50; (0.691 µm)	0.07	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08
10.50 to 11.00; (0.488 µm)	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08
11.00 to 11.50; (0.345 µm)	0.07	0.07	0.07	0.08	0.08	0.08	0.07	0.07	0.07
11.50 to 12.00; (0.244 µm)	0.06	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06
12.00 to 12.50; (0.173 µm)	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.05	0.05
12.50 to 13.00; (0.122 µm)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
13.00 to 13.50; (0.086 µm)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
13.50 to 14.00; (0.061 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
14.00 to 14.50; (0.043 µm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

d10	222.35	222.49	222.60	222.78	222.48	223.00	220.05	220.52	224.19
d50	355.86	355.68	356.37	356.14	356.44	356.92	353.02	353.93	354.44
d90	534.27	529.64	535.00	533.60	532.82	538.27	516.91	525.31	515.68

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	222.48	0.12	0.06	222.75	0.26	0.12	221.59	2.27	1.02
d50	355.97	0.36	0.10	356.50	0.39	0.11	353.79	0.72	0.20
d90	532.97	2.91	0.55	534.90	2.95	0.55	519.30	5.24	1.01

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS73 (used to create Figure 7).

	BM Average	PSA_2601	PSA_2602	PSA_2603	PSA_2604	PSA_2605	PSA_2606	PSA_2607	PSA_2608	PSA_2609	PSA_2610
VERY COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM GRAVEL	0.23	0.00	0.00	0.01	0.48	0.58	0.12	0.11	0.00	0.61	0.24
FINE GRAVEL	4.61	5.08	0.00	4.28	4.59	5.50	4.75	4.63	4.91	5.28	5.18
VERY FINE GRAVEL	7.08	6.85	0.00	7.49	6.62	5.92	6.75	7.24	7.03	6.39	6.28
VERY COARSE SAND	0.02	0.02	0.00	0.08	0.03	0.02	0.02	0.11	0.02	0.09	0.04
COARSE SAND	10.66	3.65	19.39	16.23	12.99	12.52	24.84	16.02	16.34	49.70	15.49
MEDIUM SAND	65.91	66.10	73.83	60.00	63.40	64.31	57.72	62.02	63.46	37.67	62.54
FINE SAND	9.07	17.65	6.78	11.91	11.89	8.54	2.61	9.88	8.23	0.26	10.23
VERY FINE SAND	1.11	0.54	0.00	0.00	0.00	0.78	1.09	0.00	0.00	0.00	0.00
VERY COARSE SILT	0.32	0.10	0.00	0.00	0.00	0.43	0.17	0.00	0.00	0.00	0.00
COARSE SILT	0.16	0.00	0.00	0.00	0.00	0.38	0.15	0.00	0.00	0.00	0.00
MEDIUM SILT	0.13	0.00	0.00	0.00	0.00	0.26	0.26	0.00	0.00	0.00	0.00
FINE SILT	0.10	0.00	0.00	0.00	0.00	0.14	0.26	0.00	0.00	0.00	0.00
VERY FINE SILT	0.08	0.00	0.00	0.00	0.00	0.11	0.28	0.00	0.00	0.00	0.00
CLAY	0.51	0.00	0.00	0.00	0.00	0.52	0.97	0.00	0.00	0.00	0.00

GRAVEL	11.92	11.92	0.00	11.77	11.69	11.99	11.63	11.98	11.95	12.28	11.69
SAND	86.77	87.97	100.00	88.23	88.31	86.17	86.28	88.02	88.05	87.72	88.31
SILT	0.80	0.10	0.00	0.00	0.00	1.32	1.13	0.00	0.00	0.00	0.00
CLAY	0.51	0.00	0.00	0.00	0.00	0.52	0.97	0.00	0.00	0.00	0.00

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS73 (used to create Figure 7).

	BM Average	PSA_2611	PSA_2612	PSA_2613	PSA_2614	PSA_2615	PSA_2616	PSA_2617	PSA_2618	PSA_2619
VERY COARSE GRAVEL	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	0.00	n/p
COARSE GRAVEL	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	0.00	n/p
MEDIUM GRAVEL	0.23	0.39	0.14	n/p	0.00	0.00	0.00	0.02	0.06	n/p
FINE GRAVEL	4.61	4.64	4.68	n/p	4.73	5.03	4.73	4.96	4.86	n/p
VERY FINE GRAVEL	7.08	6.94	7.23	n/p	6.98	6.91	7.21	6.82	7.03	n/p
VERY COARSE SAND	0.02	0.02	0.03	n/p	0.05	0.03	0.07	0.05	0.04	n/p
COARSE SAND	10.66	12.22	16.24	n/p	15.63	11.47	13.74	13.52	9.57	n/p
MEDIUM SAND	65.91	59.82	62.31	n/p	64.14	68.23	64.64	64.14	65.94	n/p
FINE SAND	9.07	15.85	9.36	n/p	6.61	8.33	9.62	10.49	10.00	n/p
VERY FINE SAND	1.11	0.02	0.00	n/p	0.59	0.00	0.00	0.00	1.25	n/p
VERY COARSE SILT	0.32	0.10	0.00	n/p	0.13	0.00	0.00	0.00	0.35	n/p
COARSE SILT	0.16	0.01	0.00	n/p	0.10	0.00	0.00	0.00	0.14	n/p
MEDIUM SILT	0.13	0.00	0.00	n/p	0.14	0.00	0.00	0.00	0.10	n/p
FINE SILT	0.10	0.00	0.00	n/p	0.16	0.00	0.00	0.00	0.08	n/p
VERY FINE SILT	0.08	0.00	0.00	n/p	0.15	0.00	0.00	0.00	0.07	n/p
CLAY	0.51	0.00	0.00	n/p	0.59	0.00	0.00	0.00	0.51	n/p

GRAVEL	11.92	11.96	12.05	n/p	11.71	11.94	11.94	11.80	11.95	n/p
SAND	86.77	87.93	87.95	n/p	87.02	88.06	88.06	88.20	86.80	n/p
SILT	0.80	0.11	0.00	n/p	0.68	0.00	0.00	0.00	0.74	n/p
CLAY	0.51	0.00	0.00	n/p	0.59	0.00	0.00	0.00	0.51	n/p

n/p - not participating in this exercise

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS73.

Exercise Code:	PS73
LabCode:	PSA_2601
Sample Code:	PS732601

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	1.78	14.13
-2.50 to -2.00; 4 mm	3.29	26.10
-2.00 to -1.50; 2.8 mm	5.51	43.69
-1.50 to -1.00; 2 mm	1.33	10.58
-1.00 to -0.50; 1.4 mm	0.02	0.14
-0.50 to 0.00; 1 mm	0.01	0.06
0.00 to 0.50; (707 µm)	0.97	7.66
0.50 to 1.00; (500 µm)	2.69	21.29
1.00 to 1.50; (353.6 µm)	16.31	129.24
1.50 to 2.00; (250 µm)	49.80	394.66
2.00 to 2.50; (176.8 µm)	15.80	125.19
2.50 to 3.00; (125 µm)	1.86	14.72
3.00 to 3.50; (88.39 µm)	0.33	2.62
3.50 to 4.00; (62.5 µm)	0.21	1.67
4.00 to 4.50; (44.19 µm)	0.10	0.81
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)	0.00	0.00
6.50 to 7.00; (7.813 µm)	0.00	0.00
7.00 to 7.50; (5.524 µm)	0.00	0.00
7.50 to 8.00; (3.906 µm)	0.00	0.00
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
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	792.56

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2602
Sample Code:	PS732602

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)	1.45	
0.50 to 1.00; (500 µm)	15.52	
1.00 to 1.50; (353.6 µm)	36.71	
1.50 to 2.00; (250 µm)	27.89	
2.00 to 2.50; (176.8 µm)	5.86	
2.50 to 3.00; (125 µm)	0.08	
3.00 to 3.50; (88.39 µm)	0.00	
3.50 to 4.00; (62.5 µm)	0.00	
4.00 to 4.50; (44.19 µm)	0.00	
4.50 to 5.00; (31.25 µm)	0.00	
5.00 to 5.50; (22.097 µm)	0.00	
5.50 to 6.00; (15.625 µm)	0.00	
6.00 to 6.50; (11.049 µm)	0.00	
6.50 to 7.00; (7.813 µm)	0.00	
7.00 to 7.50; (5.524 µm)	0.00	
7.50 to 8.00; (3.906 µm)	0.00	
8.00 to 8.50; (2.762 µm)	0.00	
8.50 to 9.00; (1.953 µm)	0.00	
9.00 to 9.50; (1.381 µm)	0.00	
9.50 to 10.00; (0.977 µm)	0.00	
10.00 to 10.50; (0.691 µm)	0.00	
10.50 to 11.00; (0.488 µm)	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	87.50	

Notes:

Participant notes: Used method is an agreed method within the framework of the Scheldt Commission (Netherlands/Belgium). Sediment was sieved over a 1000 mm sieve. Calculated fraction >1000 um = 12.5%. I have calculated this in a different way than was provided in the form.

APEM notes: The laser section of the workbook is for raw laser data before it has been merged with any sieve analysis of sediment greater than 1mm and therefore should always sum to 100%. The final data has omitted the sediment that was greater 1mm and only sums to 87.5%.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS73.

Exercise Code:	PS73
LabCode:	PSA_2603
Sample Code:	PS732603

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.01	0.07
-3.00 to -2.50; 5.6 mm	1.58	12.57
-2.50 to -2.00; 4 mm	2.69	21.37
-2.00 to -1.50; 2.8 mm	5.53	43.90
-1.50 to -1.00; 2 mm	1.95	15.50
-1.00 to -0.50; 1.4 mm	0.06	0.50
-0.50 to 0.00; 1 mm	0.02	0.13
0.00 to 0.50; (707 µm)	1.66	13.15
0.50 to 1.00; (500 µm)	14.57	115.59
1.00 to 1.50; (353.6 µm)	30.71	243.62
1.50 to 2.00; (250 µm)	29.29	232.34
2.00 to 2.50; (176.8 µm)	10.88	86.32
2.50 to 3.00; (125 µm)	1.03	8.19
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)	0.00	0.00
6.50 to 7.00; (7.813 µm)	0.00	0.00
7.00 to 7.50; (5.524 µm)	0.00	0.00
7.50 to 8.00; (3.906 µm)	0.00	0.00
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
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	793.23

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2604
Sample Code:	PS732604

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	0.48	3.40
-3.00 to -2.50; 5.6 mm	1.68	11.93
-2.50 to -2.00; 4 mm	2.92	20.78
-2.00 to -1.50; 2.8 mm	5.25	37.39
-1.50 to -1.00; 2 mm	1.36	9.70
-1.00 to -0.50; 1.4 mm	0.03	0.21
-0.50 to 0.00; 1 mm	0.00	0.02
0.00 to 0.50; (707 µm)	0.36	2.53
0.50 to 1.00; (500 µm)	12.63	89.70
1.00 to 1.50; (353.6 µm)	32.57	231.86
1.50 to 2.00; (250 µm)	30.83	219.65
2.00 to 2.50; (176.8 µm)	11.05	78.68
2.50 to 3.00; (125 µm)	0.84	6.00
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)	0.00	0.00
6.50 to 7.00; (7.813 µm)	0.00	0.00
7.00 to 7.50; (5.524 µm)	0.00	0.00
7.50 to 8.00; (3.906 µm)	0.00	0.00
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
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	711.86

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2605
Sample Code:	PS732605

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	0.58	
-3.00 to -2.50; 5.6 mm	2.10	
-2.50 to -2.00; 4 mm	3.40	
-2.00 to -1.50; 2.8 mm	5.28	
-1.50 to -1.00; 2 mm	0.64	
-1.00 to -0.50; 1.4 mm	0.01	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	1.58	
0.50 to 1.00; (500 µm)	10.94	
1.00 to 1.50; (353.6 µm)	34.01	
1.50 to 2.00; (250 µm)	30.30	
2.00 to 2.50; (176.8 µm)	7.70	
2.50 to 3.00; (125 µm)	0.84	
3.00 to 3.50; (88.39 µm)	0.62	
3.50 to 4.00; (62.5 µm)	0.17	
4.00 to 4.50; (44.19 µm)	0.20	
4.50 to 5.00; (31.25 µm)	0.23	
5.00 to 5.50; (22.097 µm)	0.20	
5.50 to 6.00; (15.625 µm)	0.18	
6.00 to 6.50; (11.049 µm)	0.16	
6.50 to 7.00; (7.813 µm)	0.11	
7.00 to 7.50; (5.524 µm)	0.08	
7.50 to 8.00; (3.906 µm)	0.06	
8.00 to 8.50; (2.762 µm)	0.05	
8.50 to 9.00; (1.953 µm)	0.05	
9.00 to 9.50; (1.381 µm)	0.06	
9.50 to 10.00; (0.977 µm)	0.07	
10.00 to 10.50; (0.691 µm)	0.07	
10.50 to 11.00; (0.488 µm)	0.07	
11.00 to 11.50; (0.345 µm)	0.07	
11.50 to 12.00; (0.244 µm)	0.06	
12.00 to 12.50; (0.173 µm)	0.05	
12.50 to 13.00; (0.122 µm)	0.04	
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:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS73.

Exercise Code:	PS73
LabCode:	PSA_2606
Sample Code:	PS732606

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	0.12	
-3.00 to -2.50; 5.6 mm	1.72	
-2.50 to -2.00; 4 mm	3.03	
-2.00 to -1.50; 2.8 mm	5.45	
-1.50 to -1.00; 2 mm	1.31	
-1.00 to -0.50; 1.4 mm	0.01	
-0.50 to 0.00; 1 mm	0.01	
0.00 to 0.50; (707 µm)	1.46	
0.50 to 1.00; (500 µm)	23.37	
1.00 to 1.50; (353.6 µm)	41.16	
1.50 to 2.00; (250 µm)	16.56	
2.00 to 2.50; (176.8 µm)	2.07	
2.50 to 3.00; (125 µm)	0.54	
3.00 to 3.50; (88.39 µm)	0.76	
3.50 to 4.00; (62.5 µm)	0.33	
4.00 to 4.50; (44.19 µm)	0.10	
4.50 to 5.00; (31.25 µm)	0.06	
5.00 to 5.50; (22.097 µm)	0.05	
5.50 to 6.00; (15.625 µm)	0.10	
6.00 to 6.50; (11.049 µm)	0.11	
6.50 to 7.00; (7.813 µm)	0.15	
7.00 to 7.50; (5.524 µm)	0.13	
7.50 to 8.00; (3.906 µm)	0.13	
8.00 to 8.50; (2.762 µm)	0.14	
8.50 to 9.00; (1.953 µm)	0.14	
9.00 to 9.50; (1.381 µm)	0.12	
9.50 to 10.00; (0.977 µm)	0.09	
10.00 to 10.50; (0.691 µm)	0.05	
10.50 to 11.00; (0.488 µm)	0.06	
11.00 to 11.50; (0.345 µm)	0.09	
11.50 to 12.00; (0.244 µm)	0.13	
12.00 to 12.50; (0.173 µm)	0.17	
12.50 to 13.00; (0.122 µm)	0.16	
13.00 to 13.50; (0.086 µm)	0.10	
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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2607
Sample Code:	PS732607

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	0.11	
-3.00 to -2.50; 5.6 mm	1.80	
-2.50 to -2.00; 4 mm	2.83	
-2.00 to -1.50; 2.8 mm	5.89	
-1.50 to -1.00; 2 mm	1.34	
-1.00 to -0.50; 1.4 mm	0.02	
-0.50 to 0.00; 1 mm	0.09	
0.00 to 0.50; (707 µm)	0.86	
0.50 to 1.00; (500 µm)	15.16	
1.00 to 1.50; (353.6 µm)	32.44	
1.50 to 2.00; (250 µm)	29.57	
2.00 to 2.50; (176.8 µm)	9.28	
2.50 to 3.00; (125 µm)	0.60	
3.00 to 3.50; (88.39 µm)	0.00	
3.50 to 4.00; (62.5 µm)	0.00	
4.00 to 4.50; (44.19 µm)	0.00	
4.50 to 5.00; (31.25 µm)	0.00	
5.00 to 5.50; (22.097 µm)	0.00	
5.50 to 6.00; (15.625 µm)	0.00	
6.00 to 6.50; (11.049 µm)	0.00	
6.50 to 7.00; (7.813 µm)	0.00	
7.00 to 7.50; (5.524 µm)	0.00	
7.50 to 8.00; (3.906 µm)	0.00	
8.00 to 8.50; (2.762 µm)	0.00	
8.50 to 9.00; (1.953 µm)	0.00	
9.00 to 9.50; (1.381 µm)	0.00	
9.50 to 10.00; (0.977 µm)	0.00	
10.00 to 10.50; (0.691 µm)	0.00	
10.50 to 11.00; (0.488 µm)	0.00	
11.00 to 11.50; (0.345 µm)	0.00	
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
TOTAL	99.99	

Notes:
Participant notes: The sample was not dried as all subsamples for laser analysis went through the 1mm wet sieve entirely. Out mastersizer 3000 does not have the blue laser and so cannot analyse the finest fractions.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS73.

Exercise Code:	PS73
LabCode:	PSA_2608
Sample Code:	PS732608

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	1.90	15.08
-2.50 to -2.00; 4 mm	3.01	23.89
-2.00 to -1.50; 2.8 mm	4.93	39.10
-1.50 to -1.00; 2 mm	2.10	16.67
-1.00 to -0.50; 1.4 mm	0.02	0.14
-0.50 to 0.00; 1 mm	0.00	0.01
0.00 to 0.50; (707 µm)	1.56	12.38
0.50 to 1.00; (500 µm)	14.77	117.18
1.00 to 1.50; (353.6 µm)	34.40	272.86
1.50 to 2.00; (250 µm)	29.06	230.49
2.00 to 2.50; (176.8 µm)	8.01	63.53
2.50 to 3.00; (125 µm)	0.22	1.78
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)	0.00	0.00
6.50 to 7.00; (7.813 µm)	0.00	0.00
7.00 to 7.50; (5.524 µm)	0.00	0.00
7.50 to 8.00; (3.906 µm)	0.00	0.00
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
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	793.12

Notes:

Participant notes: NMBAQC PSA SOP for supporting biological data - incorporating BS1377: Parts 1: 2016 and 2: 1990 (dry sieving) and BS13320: 2009 (laser diffraction).

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS73.

Exercise Code:	PS73
LabCode:	PSA_2609
Sample Code:	PS732609

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	0.06	0.44
-3.50 to -3.00; 8 mm	0.55	4.22
-3.00 to -2.50; 5.6 mm	1.58	12.16
-2.50 to -2.00; 4 mm	3.70	28.39
-2.00 to -1.50; 2.8 mm	4.95	38.00
-1.50 to -1.00; 2 mm	1.45	11.10
-1.00 to -0.50; 1.4 mm	0.06	0.44
-0.50 to 0.00; 1 mm	0.04	0.27
0.00 to 0.50; (707 µm)	14.96	114.85
0.50 to 1.00; (500 µm)	34.74	266.78
1.00 to 1.50; (353.6 µm)	29.42	225.88
1.50 to 2.00; (250 µm)	8.26	63.39
2.00 to 2.50; (176.8 µm)	0.26	1.97
2.50 to 3.00; (125 µm)	0.00	0.00
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)	0.00	0.00
6.50 to 7.00; (7.813 µm)	0.00	0.00
7.00 to 7.50; (5.524 µm)	0.00	0.00
7.50 to 8.00; (3.906 µm)	0.00	0.00
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
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	767.89

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2610
Sample Code:	PS732610

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	0.24	1.73
-3.00 to -2.50; 5.6 mm	1.89	13.62
-2.50 to -2.00; 4 mm	3.29	23.68
-2.00 to -1.50; 2.8 mm	4.96	35.75
-1.50 to -1.00; 2 mm	1.32	9.51
-1.00 to -0.50; 1.4 mm	0.02	0.18
-0.50 to 0.00; 1 mm	0.02	0.12
0.00 to 0.50; (707 µm)	0.91	6.56
0.50 to 1.00; (500 µm)	14.58	105.09
1.00 to 1.50; (353.6 µm)	33.06	238.25
1.50 to 2.00; (250 µm)	29.49	212.54
2.00 to 2.50; (176.8 µm)	9.66	69.62
2.50 to 3.00; (125 µm)	0.57	4.10
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)	0.00	0.00
6.50 to 7.00; (7.813 µm)	0.00	0.00
7.00 to 7.50; (5.524 µm)	0.00	0.00
7.50 to 8.00; (3.906 µm)	0.00	0.00
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
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	720.75

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2611
Sample Code:	PS732611

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	0.39	3.08
-3.00 to -2.50; 5.6 mm	1.85	14.72
-2.50 to -2.00; 4 mm	2.78	22.12
-2.00 to -1.50; 2.8 mm	5.96	47.34
-1.50 to -1.00; 2 mm	0.98	7.78
-1.00 to -0.50; 1.4 mm	0.00	0.03
-0.50 to 0.00; 1 mm	0.02	0.12
0.00 to 0.50; (707 µm)	0.37	2.94
0.50 to 1.00; (500 µm)	11.85	94.10
1.00 to 1.50; (353.6 µm)	29.43	233.82
1.50 to 2.00; (250 µm)	30.39	241.37
2.00 to 2.50; (176.8 µm)	13.87	110.15
2.50 to 3.00; (125 µm)	1.98	15.75
3.00 to 3.50; (88.39 µm)	0.00	0.00
3.50 to 4.00; (62.5 µm)	0.02	0.18
4.00 to 4.50; (44.19 µm)	0.06	0.49
4.50 to 5.00; (31.25 µm)	0.04	0.33
5.00 to 5.50; (22.097 µm)	0.01	0.05
5.50 to 6.00; (15.625 µm)	0.00	0.00
6.00 to 6.50; (11.049 µm)	0.00	0.00
6.50 to 7.00; (7.813 µm)	0.00	0.00
7.00 to 7.50; (5.524 µm)	0.00	0.00
7.50 to 8.00; (3.906 µm)	0.00	0.00
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
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	794.37

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2612
Sample Code:	PS732612

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	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.14	1.13
-3.00 to -2.50; 5.6 mm	1.64	12.98
-2.50 to -2.00; 4 mm	3.04	24.02
-2.00 to -1.50; 2.8 mm	5.78	45.71
-1.50 to -1.00; 2 mm	1.45	11.43
-1.00 to -0.50; 1.4 mm	0.02	0.19
-0.50 to 0.00; 1 mm	0.01	0.07
0.00 to 0.50; (707 µm)	1.42	11.26
0.50 to 1.00; (500 µm)	14.81	117.10
1.00 to 1.50; (353.6 µm)	33.33	263.47
1.50 to 2.00; (250 µm)	28.99	229.14
2.00 to 2.50; (176.8 µm)	8.90	70.34
2.50 to 3.00; (125 µm)	0.47	3.70
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)	0.00	0.00
6.50 to 7.00; (7.813 µm)	0.00	0.00
7.00 to 7.50; (5.524 µm)	0.00	0.00
7.50 to 8.00; (3.906 µm)	0.00	0.00
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
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	790.54

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2614
Sample Code:	PS732614

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	0.0000
-6.00 to -5.50; 45 mm	0.00	0.0000
-5.50 to -5.00; 31.5 mm	0.00	0.0000
-5.00 to -4.50; 22.4 mm	0.00	0.0000
-4.50 to -4.00; 16 mm	0.00	0.0000
-4.00 to -3.50; 11.2 mm	0.00	0.0000
-3.50 to -3.00; 8 mm	0.00	0.0000
-3.00 to -2.50; 5.6 mm	1.91	13.6900
-2.50 to -2.00; 4 mm	2.82	20.2300
-2.00 to -1.50; 2.8 mm	5.06	36.3400
-1.50 to -1.00; 2 mm	1.92	13.7700
-1.00 to -0.50; 1.4 mm	0.04	0.2600
-0.50 to 0.00; 1 mm	0.01	0.0400
0.00 to 0.50; (707 µm)	3.64	26.1319
0.50 to 1.00; (500 µm)	11.99	86.1597
1.00 to 1.50; (353.6 µm)	34.89	250.6301
1.50 to 2.00; (250 µm)	29.25	210.0682
2.00 to 2.50; (176.8 µm)	6.04	43.3950
2.50 to 3.00; (125 µm)	0.57	4.1142
3.00 to 3.50; (88.39 µm)	0.47	3.3754
3.50 to 4.00; (62.5 µm)	0.12	0.8442
4.00 to 4.50; (44.19 µm)	0.08	0.5455
4.50 to 5.00; (31.25 µm)	0.05	0.3860
5.00 to 5.50; (22.097 µm)	0.05	0.3536
5.50 to 6.00; (15.625 µm)	0.05	0.3818
6.00 to 6.50; (11.049 µm)	0.06	0.4653
6.50 to 7.00; (7.813 µm)	0.08	0.5608
7.00 to 7.50; (5.524 µm)	0.08	0.5945
7.50 to 8.00; (3.906 µm)	0.08	0.5637
8.00 to 8.50; (2.762 µm)	0.07	0.5348
8.50 to 9.00; (1.953 µm)	0.08	0.5787
9.00 to 9.50; (1.381 µm)	0.09	0.6555
9.50 to 10.00; (0.977 µm)	0.10	0.6885
10.00 to 10.50; (0.691 µm)	0.09	0.6523
10.50 to 11.00; (0.488 µm)	0.08	0.5796
11.00 to 11.50; (0.345 µm)	0.07	0.4926
11.50 to 12.00; (0.244 µm)	0.06	0.4062
12.00 to 12.50; (0.173 µm)	0.04	0.3149
12.50 to 13.00; (0.122 µm)	0.03	0.2419
13.00 to 13.50; (0.086 µm)	0.02	0.1619
13.50 to 14.00; (0.061µm)	0.0108	0.0779
14.00 to 14.50; (0.043µm)	0.0021	0.0150
TOTAL	100.00	718.30

Notes:

Participant notes - For ring test samples, 5 separate subsample runs completed (Rep 3,4 and 5 with 3 runs) by 2 analysts. For ring test assessment of PS73, all rep1s except 1 have been included in Laser Reps 1-3 Data . These have been averaged for final laser data

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS73.

Exercise Code:	PS73
LabCode:	PSA_2615
Sample Code:	PS732615

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	1.89	14.98
-2.50 to -2.00; 4 mm	3.14	24.93
-2.00 to -1.50; 2.8 mm	4.99	39.63
-1.50 to -1.00; 2 mm	1.92	15.26
-1.00 to -0.50; 1.4 mm	0.03	0.22
-0.50 to 0.00; 1 mm	0.00	0.03
0.00 to 0.50; (707 µm)	0.41	3.25
0.50 to 1.00; (500 µm)	11.06	87.82
1.00 to 1.50; (353.6 µm)	35.52	282.06
1.50 to 2.00; (250 µm)	32.70	259.67
2.00 to 2.50; (176.8 µm)	8.15	64.75
2.50 to 3.00; (125 µm)	0.18	1.39
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)	0.00	0.00
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	793.99

Notes: APEM - In 'PS_Final_Merged_Data' tab 'Grams' and 'Percentage' columns were entered the wrong way around, corrected 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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2616
Sample Code:	PS732616

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	1.57	
-2.50 to -2.00; 4 mm	3.16	
-2.00 to -1.50; 2.8 mm	5.35	
-1.50 to -1.00; 2 mm	1.86	
-1.00 to -0.50; 1.4 mm	0.06	
-0.50 to 0.00; 1 mm	0.01	
0.00 to 0.50; (707 µm)	0.79	
0.50 to 1.00; (500 µm)	12.95	
1.00 to 1.50; (353.6 µm)	33.71	
1.50 to 2.00; (250 µm)	30.93	
2.00 to 2.50; (176.8 µm)	9.31	
2.50 to 3.00; (125 µm)	0.31	
3.00 to 3.50; (88.39 µm)	0.00	
3.50 to 4.00; (62.5 µm)	0.00	
4.00 to 4.50; (44.19 µm)	0.00	
4.50 to 5.00; (31.25 µm)	0.00	
5.00 to 5.50; (22.097 µm)	0.00	
5.50 to 6.00; (15.625 µm)	0.00	
6.00 to 6.50; (11.049 µm)	0.00	
6.50 to 7.00; (7.813 µm)	0.00	
7.00 to 7.50; (5.524 µm)	0.00	
7.50 to 8.00; (3.906 µm)	0.00	
8.00 to 8.50; (2.762 µm)	0.00	
8.50 to 9.00; (1.953 µm)	0.00	
9.00 to 9.50; (1.381 µm)	0.00	
9.50 to 10.00; (0.977 µm)	0.00	
10.00 to 10.50; (0.691 µm)	0.00	
10.50 to 11.00; (0.488 µm)	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:
Participant notes: A range of values were used for AI and RI for this sample without significant change in the fit analysis values

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS73.

Exercise Code:	PS73
LabCode:	PSA_2617
Sample Code:	PS732617

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	0.02	
-3.00 to -2.50; 5.6 mm	1.94	
-2.50 to -2.00; 4 mm	3.02	
-2.00 to -1.50; 2.8 mm	5.21	
-1.50 to -1.00; 2 mm	1.61	
-1.00 to -0.50; 1.4 mm	0.04	
-0.50 to 0.00; 1 mm	0.01	
0.00 to 0.50; (707 µm)	0.59	
0.50 to 1.00; (500 µm)	12.93	
1.00 to 1.50; (353.6 µm)	33.27	
1.50 to 2.00; (250 µm)	30.87	
2.00 to 2.50; (176.8 µm)	9.94	
2.50 to 3.00; (125 µm)	0.55	
3.00 to 3.50; (88.39 µm)	0.00	
3.50 to 4.00; (62.5 µm)	0.00	
4.00 to 4.50; (44.19 µm)	0.00	
4.50 to 5.00; (31.25 µm)	0.00	
5.00 to 5.50; (22.097 µm)	0.00	
5.50 to 6.00; (15.625 µm)	0.00	
6.00 to 6.50; (11.049 µm)	0.00	
6.50 to 7.00; (7.813 µm)	0.00	
7.00 to 7.50; (5.524 µm)	0.00	
7.50 to 8.00; (3.906 µm)	0.00	
8.00 to 8.50; (2.762 µm)	0.00	
8.50 to 9.00; (1.953 µm)	0.00	
9.00 to 9.50; (1.381 µm)	0.00	
9.50 to 10.00; (0.977 µm)	0.00	
10.00 to 10.50; (0.691 µm)	0.00	
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2618
Sample Code:	PS732618

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	14.74	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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2630
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	0.20	1.55
-3.00 to -2.50; 5.6 mm	1.52	12.08
-2.50 to -2.00; 4 mm	3.21	25.49
-2.00 to -1.50; 2.8 mm	6.01	47.64
-1.50 to -1.00; 2 mm	1.03	8.20
-1.00 to -0.50; 1.4 mm	0.01	0.08
-0.50 to 0.00; 1 mm	0.00	0.03
0.00 to 0.50; (707 µm)	0.94	7.48
0.50 to 1.00; (500 µm)	9.66	76.61
1.00 to 1.50; (353.6 µm)	34.11	270.47
1.50 to 2.00; (250 µm)	31.40	248.99
2.00 to 2.50; (176.8 µm)	7.98	63.24
2.50 to 3.00; (125 µm)	1.21	9.57
3.00 to 3.50; (88.39 µm)	0.84	6.67
3.50 to 4.00; (62.5 µm)	0.33	2.60
4.00 to 4.50; (44.19 µm)	0.21	1.67
4.50 to 5.00; (31.25 µm)	0.14	1.10
5.00 to 5.50; (22.097 µm)	0.11	0.86
5.50 to 6.00; (15.625 µm)	0.10	0.81
6.00 to 6.50; (11.049 µm)	0.10	0.82
6.50 to 7.00; (7.813 µm)	0.10	0.75
7.00 to 7.50; (5.524 µm)	0.08	0.64
7.50 to 8.00; (3.906 µm)	0.06	0.50
8.00 to 8.50; (2.762 µm)	0.05	0.39
8.50 to 9.00; (1.953 µm)	0.05	0.38
9.00 to 9.50; (1.381 µm)	0.06	0.47
9.50 to 10.00; (0.977 µm)	0.07	0.56
10.00 to 10.50; (0.691 µm)	0.08	0.60
10.50 to 11.00; (0.488 µm)	0.07	0.58
11.00 to 11.50; (0.345 µm)	0.07	0.54
11.50 to 12.00; (0.244 µm)	0.06	0.47
12.00 to 12.50; (0.173 µm)	0.05	0.38
12.50 to 13.00; (0.122 µm)	0.04	0.30
13.00 to 13.50; (0.086 µm)	0.03	0.21
13.50 to 14.00; (0.061µm)	0.01	0.10
14.00 to 14.50; (0.043µm)	0.00	0.02
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	792.85

Notes:This sample arrived in an almost dry state, was unconsolidated, with no apparent mud. It also contained a quantity of branching coralline material in the gravel fraction which would have broken down if subjected to vigorous brushing or mechanical sieving. The low density and large size of this material also caused the particles to migrate to the surface of the sample pot making it very difficult/impossible to remove a representative sub-sample for laser diffraction prior to sieving. Consequently, it was decided to perform the sieve analysis first using the whole sample as supplied, then perform laser diffraction on the <1mm material afterwards. Hence, a slightly modified methodology was followed for this sample:

1. Oven dry the whole sample
2. Sieve the whole sample manually (by hand-shaking) through large diameter sieves to 4 mm, then mechanically below 4 mm
3. The amount retained in the pan below 1 mm constitutes the 'oven dried <1mm fraction'
4. Take laser subsamples from the <1 mm fraction and run on the LS13320

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS73.

Exercise Code:	PS73
LabCode:	PSA_2631
Sample Code:	Benchmark Replicate 2

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.26	2.07
-3.00 to -2.50; 5.6 mm	1.72	13.58
-2.50 to -2.00; 4 mm	2.78	21.97
-2.00 to -1.50; 2.8 mm	5.74	45.42
-1.50 to -1.00; 2 mm	1.45	11.45
-1.00 to -0.50; 1.4 mm	0.01	0.11
-0.50 to 0.00; 1 mm	0.01	0.05
0.00 to 0.50; (707 µm)	0.78	6.20
0.50 to 1.00; (500 µm)	10.24	81.09
1.00 to 1.50; (353.6 µm)	34.86	275.99
1.50 to 2.00; (250 µm)	31.77	251.53
2.00 to 2.50; (176.8 µm)	7.69	60.90
2.50 to 3.00; (125 µm)	0.64	5.05
3.00 to 3.50; (88.39 µm)	0.67	5.28
3.50 to 4.00; (62.5 µm)	0.20	1.55
4.00 to 4.50; (44.19 µm)	0.14	1.12
4.50 to 5.00; (31.25 µm)	0.10	0.82
5.00 to 5.50; (22.097 µm)	0.08	0.64
5.50 to 6.00; (15.625 µm)	0.07	0.55
6.00 to 6.50; (11.049 µm)	0.06	0.50
6.50 to 7.00; (7.813 µm)	0.06	0.46
7.00 to 7.50; (5.524 µm)	0.05	0.41
7.50 to 8.00; (3.906 µm)	0.04	0.35
8.00 to 8.50; (2.762 µm)	0.04	0.30
8.50 to 9.00; (1.953 µm)	0.04	0.32
9.00 to 9.50; (1.381 µm)	0.05	0.41
9.50 to 10.00; (0.977 µm)	0.06	0.50
10.00 to 10.50; (0.691 µm)	0.07	0.55
10.50 to 11.00; (0.488 µm)	0.07	0.54
11.00 to 11.50; (0.345 µm)	0.06	0.50
11.50 to 12.00; (0.244 µm)	0.06	0.45
12.00 to 12.50; (0.173 µm)	0.05	0.36
12.50 to 13.00; (0.122 µm)	0.04	0.29
13.00 to 13.50; (0.086 µm)	0.03	0.20
13.50 to 14.00; (0.061µm)	0.01	0.10
14.00 to 14.50; (0.043µm)	0.00	0.02
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	791.64

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2632
Sample Code:	Benchmark Replicate 3

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.17	1.32
-3.00 to -2.50; 5.6 mm	1.80	14.25
-2.50 to -2.00; 4 mm	2.58	20.40
-2.00 to -1.50; 2.8 mm	6.07	48.06
-1.50 to -1.00; 2 mm	1.31	10.36
-1.00 to -0.50; 1.4 mm	0.03	0.27
-0.50 to 0.00; 1 mm	0.01	0.05
0.00 to 0.50; (707 µm)	0.87	6.91
0.50 to 1.00; (500 µm)	10.23	81.04
1.00 to 1.50; (353.6 µm)	34.00	269.29
1.50 to 2.00; (250 µm)	31.45	249.13
2.00 to 2.50; (176.8 µm)	8.13	64.42
2.50 to 3.00; (125 µm)	0.88	7.00
3.00 to 3.50; (88.39 µm)	0.83	6.59
3.50 to 4.00; (62.5 µm)	0.32	2.56
4.00 to 4.50; (44.19 µm)	0.21	1.66
4.50 to 5.00; (31.25 µm)	0.14	1.09
5.00 to 5.50; (22.097 µm)	0.09	0.74
5.50 to 6.00; (15.625 µm)	0.07	0.56
6.00 to 6.50; (11.049 µm)	0.06	0.50
6.50 to 7.00; (7.813 µm)	0.06	0.46
7.00 to 7.50; (5.524 µm)	0.05	0.41
7.50 to 8.00; (3.906 µm)	0.04	0.35
8.00 to 8.50; (2.762 µm)	0.04	0.30
8.50 to 9.00; (1.953 µm)	0.04	0.33
9.00 to 9.50; (1.381 µm)	0.05	0.42
9.50 to 10.00; (0.977 µm)	0.07	0.52
10.00 to 10.50; (0.691 µm)	0.07	0.56
10.50 to 11.00; (0.488 µm)	0.07	0.56
11.00 to 11.50; (0.345 µm)	0.07	0.52
11.50 to 12.00; (0.244 µm)	0.06	0.46
12.00 to 12.50; (0.173 µm)	0.05	0.38
12.50 to 13.00; (0.122 µm)	0.04	0.30
13.00 to 13.50; (0.086 µm)	0.03	0.20
13.50 to 14.00; (0.061µm)	0.01	0.10
14.00 to 14.50; (0.043µm)	0.00	0.02
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	792.09

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2633
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	0.29	2.30
-3.00 to -2.50; 5.6 mm	1.57	12.51
-2.50 to -2.00; 4 mm	2.94	23.37
-2.00 to -1.50; 2.8 mm	5.66	44.93
-1.50 to -1.00; 2 mm	1.43	11.33
-1.00 to -0.50; 1.4 mm	0.01	0.11
-0.50 to 0.00; 1 mm	0.01	0.05
0.00 to 0.50; (707 µm)	0.37	2.93
0.50 to 1.00; (500 µm)	9.80	77.88
1.00 to 1.50; (353.6 µm)	33.91	269.39
1.50 to 2.00; (250 µm)	31.99	254.10
2.00 to 2.50; (176.8 µm)	8.64	68.60
2.50 to 3.00; (125 µm)	0.91	7.20
3.00 to 3.50; (88.39 µm)	0.86	6.86
3.50 to 4.00; (62.5 µm)	0.34	2.73
4.00 to 4.50; (44.19 µm)	0.21	1.70
4.50 to 5.00; (31.25 µm)	0.13	1.07
5.00 to 5.50; (22.097 µm)	0.08	0.66
5.50 to 6.00; (15.625 µm)	0.06	0.52
6.00 to 6.50; (11.049 µm)	0.06	0.47
6.50 to 7.00; (7.813 µm)	0.05	0.42
7.00 to 7.50; (5.524 µm)	0.05	0.37
7.50 to 8.00; (3.906 µm)	0.04	0.31
8.00 to 8.50; (2.762 µm)	0.03	0.27
8.50 to 9.00; (1.953 µm)	0.04	0.31
9.00 to 9.50; (1.381 µm)	0.05	0.41
9.50 to 10.00; (0.977 µm)	0.06	0.51
10.00 to 10.50; (0.691 µm)	0.07	0.56
10.50 to 11.00; (0.488 µm)	0.07	0.56
11.00 to 11.50; (0.345 µm)	0.07	0.52
11.50 to 12.00; (0.244 µm)	0.06	0.47
12.00 to 12.50; (0.173 µm)	0.05	0.38
12.50 to 13.00; (0.122 µm)	0.04	0.30
13.00 to 13.50; (0.086 µm)	0.03	0.21
13.50 to 14.00; (0.061µm)	0.01	0.10
14.00 to 14.50; (0.043µm)	0.00	0.02
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	794.41

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 PS73.

Exercise Code:	PS73
LabCode:	PSA_2634
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	0.26	2.06
-3.00 to -2.50; 5.6 mm	1.76	13.95
-2.50 to -2.00; 4 mm	3.17	25.19
-2.00 to -1.50; 2.8 mm	5.69	45.24
-1.50 to -1.00; 2 mm	1.03	8.18
-1.00 to -0.50; 1.4 mm	0.01	0.11
-0.50 to 0.00; 1 mm	0.00	0.03
0.00 to 0.50; (707 µm)	0.72	5.69
0.50 to 1.00; (500 µm)	9.69	77.02
1.00 to 1.50; (353.6 µm)	34.14	271.34
1.50 to 2.00; (250 µm)	31.91	253.59
2.00 to 2.50; (176.8 µm)	8.31	66.01
2.50 to 3.00; (125 µm)	0.95	7.58
3.00 to 3.50; (88.39 µm)	0.82	6.55
3.50 to 4.00; (62.5 µm)	0.32	2.56
4.00 to 4.50; (44.19 µm)	0.20	1.61
4.50 to 5.00; (31.25 µm)	0.12	0.98
5.00 to 5.50; (22.097 µm)	0.08	0.64
5.50 to 6.00; (15.625 µm)	0.06	0.49
6.00 to 6.50; (11.049 µm)	0.05	0.43
6.50 to 7.00; (7.813 µm)	0.05	0.40
7.00 to 7.50; (5.524 µm)	0.04	0.35
7.50 to 8.00; (3.906 µm)	0.04	0.30
8.00 to 8.50; (2.762 µm)	0.03	0.27
8.50 to 9.00; (1.953 µm)	0.04	0.31
9.00 to 9.50; (1.381 µm)	0.05	0.41
9.50 to 10.00; (0.977 µm)	0.06	0.50
10.00 to 10.50; (0.691 µm)	0.07	0.55
10.50 to 11.00; (0.488 µm)	0.07	0.54
11.00 to 11.50; (0.345 µm)	0.06	0.51
11.50 to 12.00; (0.244 µm)	0.06	0.45
12.00 to 12.50; (0.173 µm)	0.05	0.37
12.50 to 13.00; (0.122 µm)	0.04	0.29
13.00 to 13.50; (0.086 µm)	0.03	0.20
13.50 to 14.00; (0.061µm)	0.01	0.10
14.00 to 14.50; (0.043µm)	0.00	0.02
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	794.82

Notes: