NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS74

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 PS74.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis)
PSA_2630 BM REP 1	NMBAQC	48.52	34.45	17.03	Muddy Sandy Gravel
PSA_2631 BM REP 2	NMBAQC	48.06	36.06	15.88	Muddy Sandy Gravel
PSA_2632 BM REP 3	NMBAQC	48.63	35.57	15.80	Muddy Sandy Gravel
PSA_2633 BM REP 4	NMBAQC	48.31	35.64	16.04	Muddy Sandy Gravel
PSA_2634 BM REP 5	NMBAQC	48.59	35.81	15.61	Muddy Sandy Gravel
BM REP AVERAGE	NMBAQC	48.42	35.51	16.07	Muddy Sandy Gravel

Table 2. Summary of sieve data for the benchmark replicates distributed as PS74.

		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		42.40	48.49	37.89	39.43	43.24	42.29
-3.00 to -2.50; 5.6 mm		198.57	180.64	199.82	193.92	191.94	192.98
-2.50 to -2.00; 4 mm		20.67	20.71	24.89	19.34	16.74	20.47
-2.00 to -1.50; 2.8 mm		77.20	72.32	67.70	76.18	74.03	73.49
-1.50 to -1.00; 2 mm		20.19	20.29	18.66	19.68	19.19	19.60
-1.00 to -0.50; 1.4 mm		8.79	8.71	8.88	8.62	8.53	8.71
-0.50 to 0.00; 1.0 mm		0.23	0.52	0.26	0.65	0.44	0.42
>1.0 mm		368.05	351.68	358.10	357.82	354.11	357.95
<1.0 mm	Base Pan	1.11	0.46	0.68	0.87	0.31	0.69
	Oven Dried	370.85	360.48	358.85	362.77	355.95	361.78
Total Weight (g)		740.01	712.62	717.63	721.46	710.37	720.42

BENCHMARK DATA

Table 3. Summary of final laser data for the benchmark replicates distributed as PS74.

	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)	1.39	1.57	0.51	1.10	0.63	1.04
0.50 to 1.00; (500 µm)	7.71	8.09	6.52	7.31	7.41	7.41
1.00 to 1.50; (353.6 µm)	21.50	22.00	22.29	21.54	22.29	21.93
1.50 to 2.00; (250 µm)	21.13	21.89	23.31	22.34	22.79	22.29
2.00 to 2.50; (176.8 µm)	9.00	9.58	10.29	10.28	10.24	9.88
2.50 to 3.00; (125 µm)	2.81	2.95	3.10	3.12	3.13	3.02
3.00 to 3.50; (88.39 µm)	1.41	1.45	1.39	1.40	1.36	1.40
3.50 to 4.00; (62.5 µm)	1.16	1.12	1.03	1.06	1.04	1.08
4.00 to 4.50; (44.19 µm)	1.40	1.36	1.24	1.26	1.21	1.29
4.50 to 5.00; (31.25 µm)	2.10	1.97	1.83	1.87	1.83	1.92
5.00 to 5.50; (22.097 µm)	2.30	2.12	1.96	2.12	2.05	2.11
5.50 to 6.00; (15.625 µm)	2.79	2.56	2.48	2.52	2.47	2.56
6.00 to 6.50; (11.049 µm)	3.23	2.92	2.88	2.89	2.84	2.95
6.50 to 7.00; (7.813 µm)	3.28	2.94	2.99	2.96	2.90	3.01
7.00 to 7.50; (5.524 µm)	3.26	2.93	3.01	2.98	2.92	3.02
7.50 to 8.00; (3.906 µm)	3.01	2.73	2.80	2.81	2.74	2.82
8.00 to 8.50; (2.762 µm)	2.42	2.23	2.31	2.32	2.26	2.31
8.50 to 9.00; (1.953 µm)	1.89	1.78	1.84	1.86	1.80	1.83
9.00 to 9.50; (1.381 µm)	1.54	1.47	1.50	1.54	1.49	1.51
9.50 to 10.00; (0.977 µm)	1.22	1.17	1.22	1.24	1.21	1.21
10.00 to 10.50; (0.691 µm)	0.99	0.95	1.02	1.02	1.01	1.00
10.50 to 11.00; (0.488 µm)	0.94	0.89	0.95	0.95	0.95	0.94
11.00 to 11.50; (0.345 µm)	0.95	0.89	0.93	0.93	0.93	0.93
11.50 to 12.00; (0.244 µm)	0.89	0.83	0.86	0.87	0.86	0.86
12.00 to 12.50; (0.173 µm)	0.71	0.67	0.70	0.70	0.69	0.70
12.50 to 13.00; (0.122 µm)	0.52	0.50	0.53	0.53	0.52	0.52
13.00 to 13.50; (0.086 µm)	0.31	0.31	0.33	0.33	0.32	0.32
13.50 to 14.00; (0.061 µm)	0.12	0.12	0.13	0.13	0.12	0.13
14.00 to 14.50; (0.043 µm)	0.02	0.02	0.02	0.02	0.02	0.02
>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 PS74.

		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	0.81	2.28	0.80	1.88	2.14
	Subsample 2	1.23	1.57	3.96	1.54	0.92
	Subsample 3	0.76	1.74	2.98	1.90	1.35
D_{50}	Subsample 1	0.95	0.22	0.22	0.69	0.16
	Subsample 2	0.49	0.27	0.22	0.35	0.41
	Subsample 3	0.19	0.17	0.58	0.50	0.50
D_{90}	Subsample 1	2.69	0.35	0.17	0.91	0.48
	Subsample 2	0.49	0.57	0.29	0.55	0.36
	Subsample 3	0.27	0.72	0.49	0.97	0.50

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

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 PS74.

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)	10 seconds before run, and 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 PS74.

Figure 1a. Percentage bar charts resulting from final sieve analysis of 5 replicate samples of sediment distributed as PS74 (Benchmark Data).

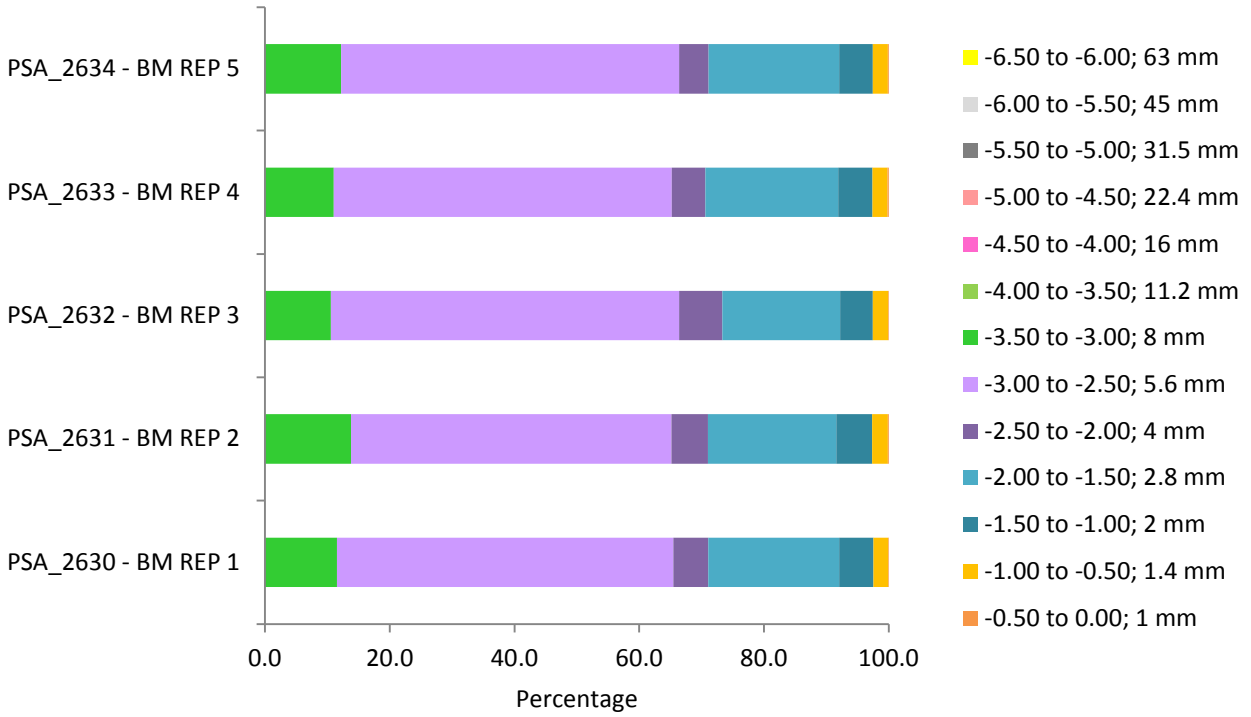


Figure 1b. Particle size distribution curves resulting from final laser analysis of 5 replicate samples of sediment distibuted as PS74 (Benchmark Data).

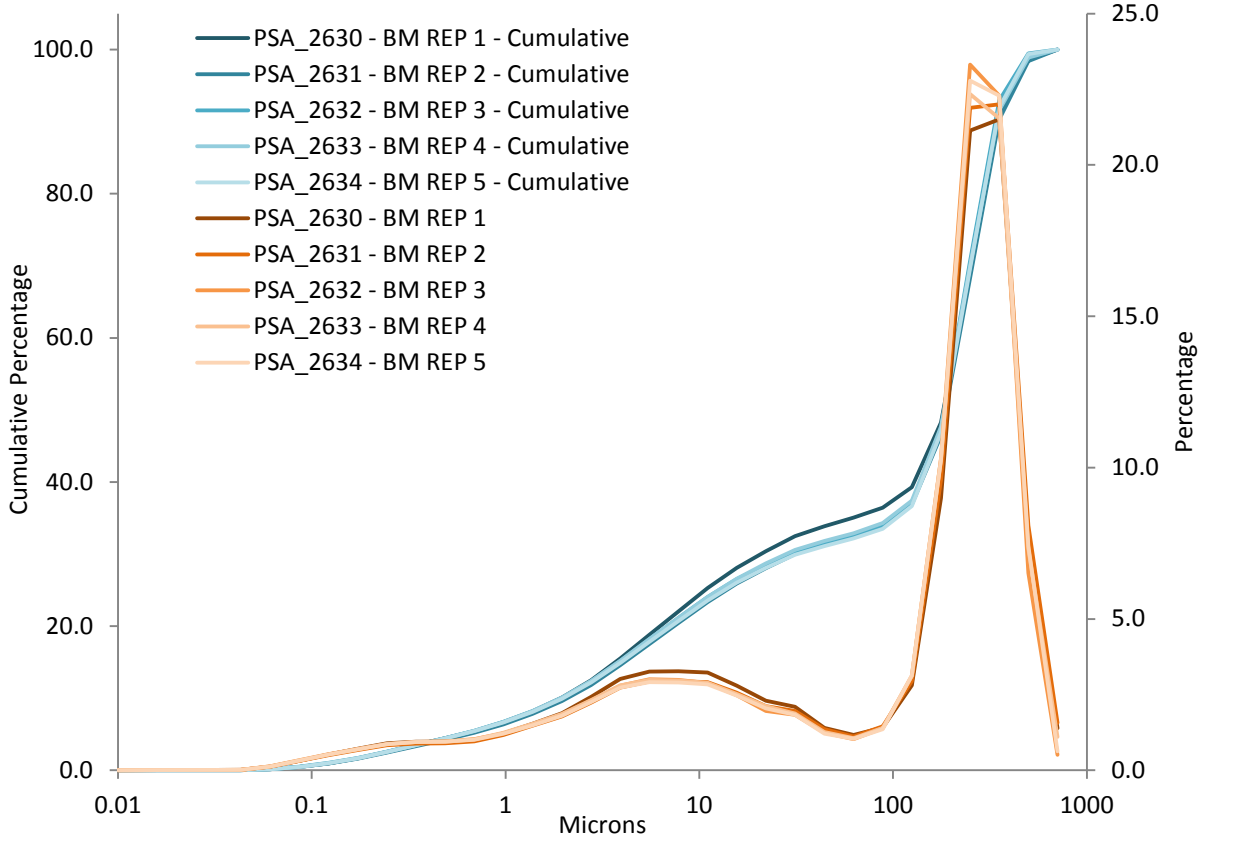
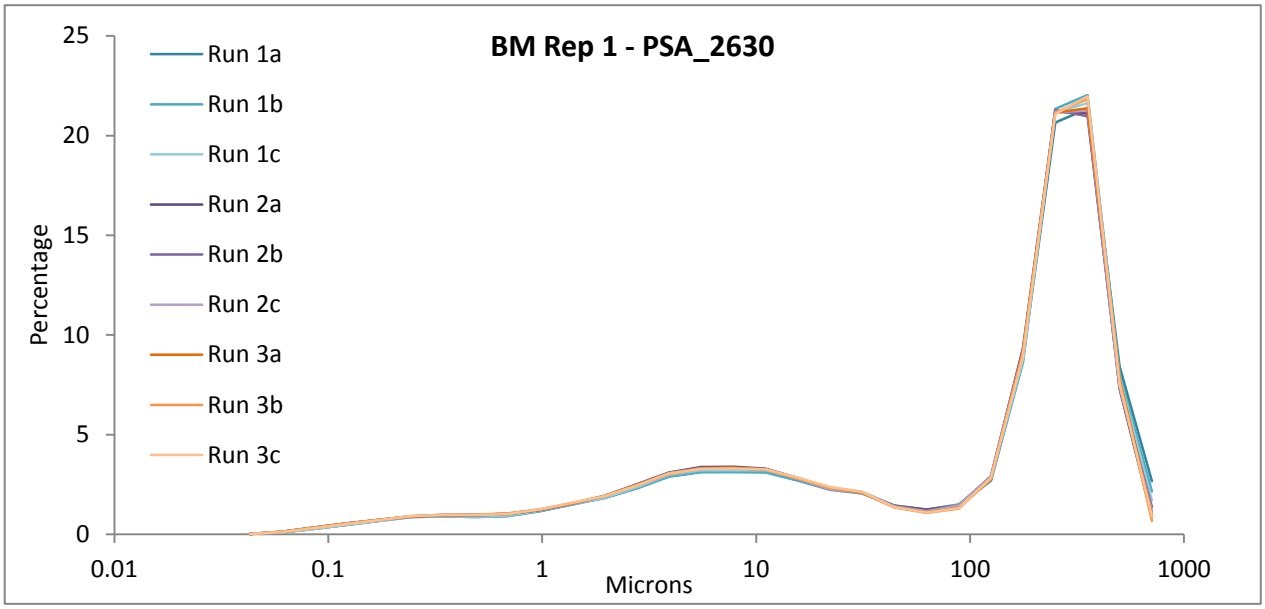
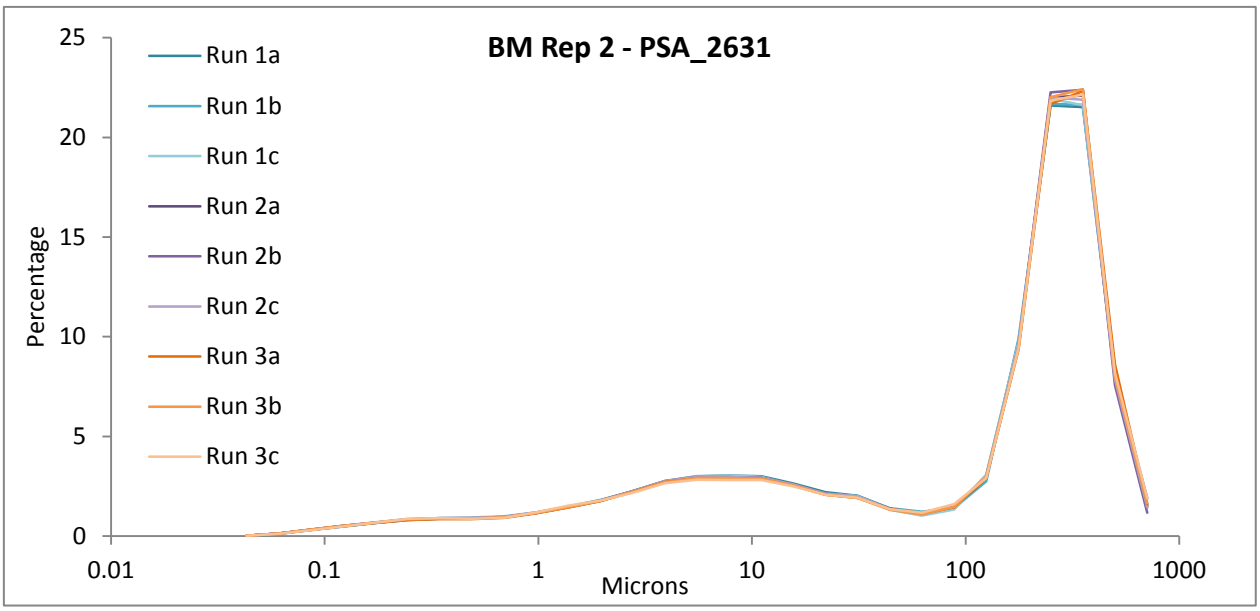


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS74.





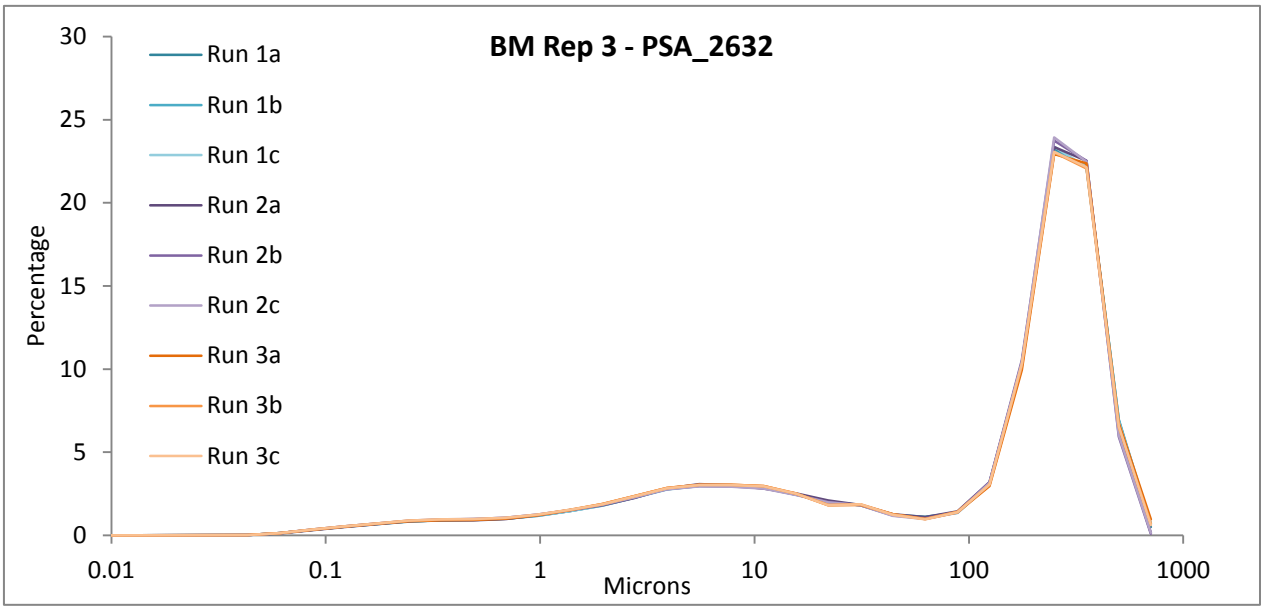
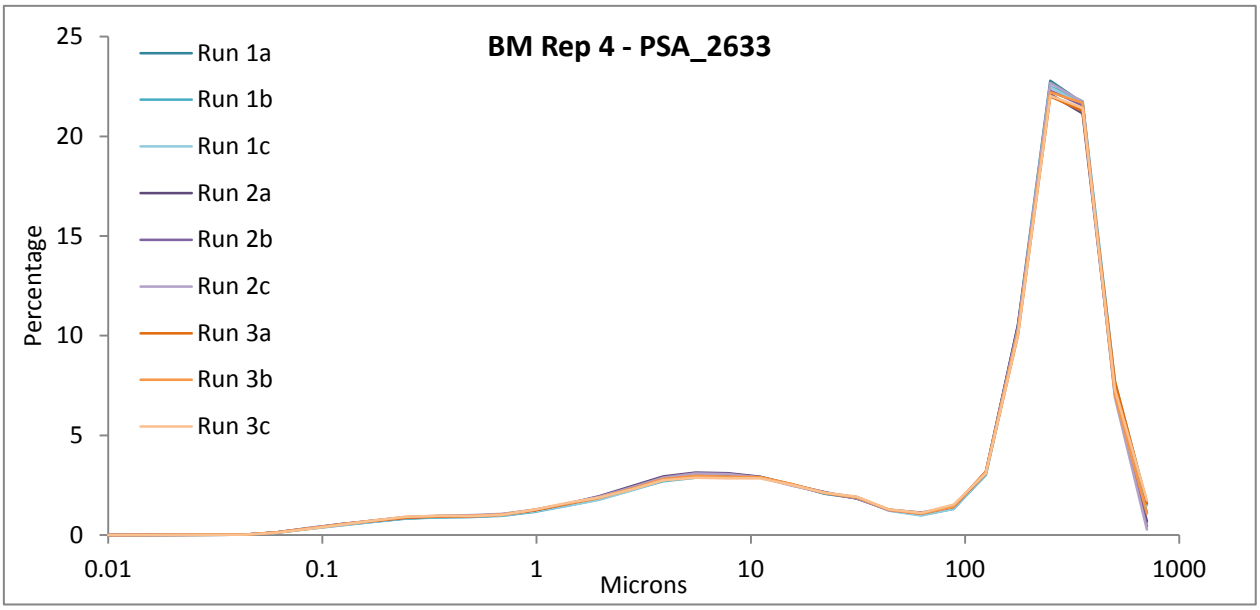


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS74.



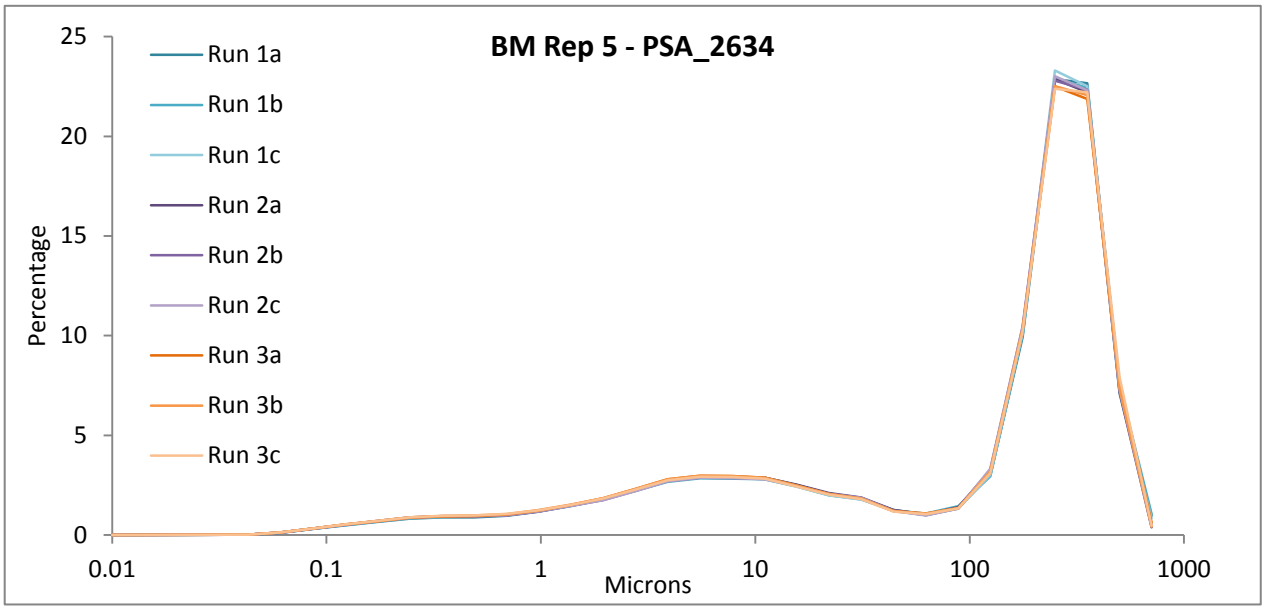
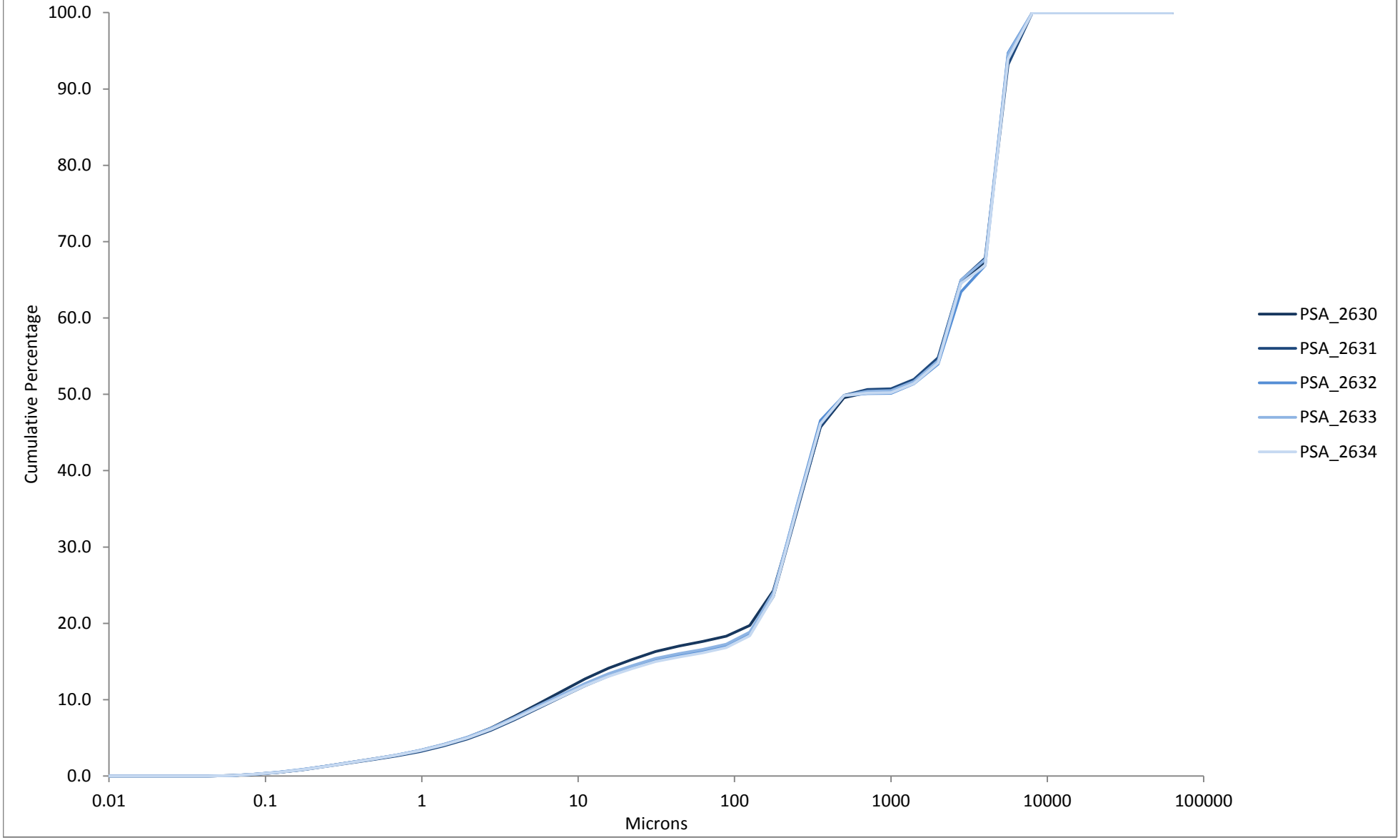


Figure 3. Particle size distribution curves resulting from analysis of 5 replicate samples of sediment distibuted as PS74 (Benchmark Data).



PARTICIPANT DATA

Table 6. Summary of equipment and methods used by participants and sample summary data provided by participants for sediment distributed as PS74.

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	48.42	35.51	16.07	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2601	YES	NO	OTHER (sieve & pipette)	YES	NO	49.12	45.01	5.87	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2602	NO	YES	OTHER	NO	NO	55	36	9	Gravel, sand and mud	Muddy Sand†
PSA_2603	YES	YES	OTHER	NO	NO	48.77	36.32	14.91	Muddy sandy gravel	Muddy Sandy Gravel
PSA_2604	YES	YES	NMBAQC	NO	NO	49.36	38.34	12.30	Muddy, sandy gravel	Muddy Sandy Gravel
PSA_2605	YES	YES	NMBAQC	NO	NO	47.47	30.12	22.42	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2606	YES	YES	NMBAQC	NO	NO	48.55	39.71	11.74	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2607	YES	YES	NMBAQC	NO	NO	52.19	33.86	13.94	Muddy gravelly sand	Muddy Sandy Gravel
PSA_2608	YES	YES	NMBAQC	NO	NO	48.98	41.91	9.12	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2609	YES	YES	NMBAQC	NO	NO	51.50	42.76	5.74	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2610	YES	YES	OTHER	NO	NO	51.73	35.61	12.67	Muddy sandy gravel	Muddy Sandy Gravel
PSA_2611	YES	YES	NMBAQC	NO	NO	48.40	35.95	15.65	Silty Sandy Gravel	Muddy Sandy Gravel
PSA_2612	YES	YES	NMBAQC	NO	NO	48.54	35.34	16.12	Silty Sandy Gravel	Muddy Sandy Gravel
PSA_2613	YES	YES	NMBAQC	NO	NO	50.11	33.19	16.70	Muddy sandy gravel	Muddy Sandy Gravel
PSA_2614	YES	YES	NMBAQC	NO	NO	47.67	36.98	15.35	msG	Muddy Sandy Gravel
PSA_2615	YES	YES	NMBAQC	NO	NO	48.3	45.3	6.4	msG	Muddy Sandy Gravel
PSA_2616	YES	YES	NMBAQC	NO	NO	48.4	37.1	14.5	Muddy Sandy Gravel	Muddy Sandy Gravel
PSA_2617	YES	YES	NMBAQC	NO	NO	47.5	37.7	14.8	Muddy sandy gravel	Muddy Sandy Gravel
PSA_2618	YES	YES	NMBAQC	NO	NO	48.24	35.61	16.15	Muddy sandy gravel	Muddy Sandy Gravel
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

† not analysing sediment greater than 1mm

PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS74.

		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	3.67	2.26
-3.50 to -3.00; 8 mm		42.29	58.28	-	28.67	38.47	43.00	32.70	28.39	33.02	60.52	78.52
-3.00 to -2.50; 5.6 mm		192.98	205.08	-	232.13	190.12	196.75	203.95	212.39	217.06	191.81	183.89
-2.50 to -2.00; 4 mm		20.47	13.03	-	7.97	8.13	12.84	11.84	6.08	9.04	29.58	23.35
-2.00 to -1.50; 2.8 mm		73.49	83.33	-	91.83	76.01	74.44	71.68	77.84	77.68	76.56	73.21
-1.50 to -1.00; 2 mm		19.60	23.31	-	23.40	19.67	21.35	22.00	18.40	20.73	20.25	21.69
-1.00 to -0.50; 1.4 mm		8.71	9.84	-	11.13	9.04	9.38	8.99	7.88	9.56	8.47	7.68
-0.50 to 0.00; 1 mm		0.42	0.19	-	0.70	0.24	0.35	0.58	0.48	0.42	0.28	0.31
Total		357.95	393.06	-	395.83	341.68	358.11	351.74	351.46	367.50	391.14	390.91
Summary Data												
< 0.00; >1 mm		357.95	393.06	-	395.83	341.68	358.11	351.74	351.46	367.50	391.14	390.91
> 0.00; <1 mm	Base pan	0.69	45.75	-	0.00	0.95	0.00	0.95	0.00	0.28	0.56	0.65
	Oven dried	361.78	340.99	-	391.60	330.81	0.00	352.12	305.91	362.22	350.80	348.72
Total Sample Weight		720.42	779.80	-	787.43	673.44	358.11	704.81	657.37	730.00	742.50	740.28

† Not participating in analysis of sediment greater than 1mm

PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS74.

		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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	n/p
-3.50 to -3.00; 8 mm		42.29	44.11	42.73	41.97	30.45	28.55	37.12	51.65	43.45	n/p
-3.00 to -2.50; 5.6 mm		192.98	215.55	218.84	192.41	205.37	233.78	209.31	188.32	198.56	n/p
-2.50 to -2.00; 4 mm		20.47	6.78	7.28	15.27	7.24	8.09	20.80	9.07	17.56	n/p
-2.00 to -1.50; 2.8 mm		73.49	91.85	90.76	79.27	80.75	79.36	85.81	74.73	73.79	n/p
-1.50 to -1.00; 2 mm		19.60	21.46	22.19	19.12	20.79	30.57	26.38	24.68	20.26	n/p
-1.00 to -0.50; 1.4 mm		8.71	9.61	9.36	8.64	10.17	9.68	10.35	8.62	9.47	n/p
-0.50 to 0.00; 1 mm		0.42	0.34	0.57	0.23	0.55	0.45	0.58	0.52	0.41	n/p
Total		357.95	389.70	391.73	356.91	355.32	390.48	390.36	357.59	363.50	n/p
Summary Data											
< 0.00; >1 mm		357.95	389.70	391.73	356.91	355.32	390.48	390.36	357.83	363.50	n/p
> 0.00; <1 mm	Base pan	0.69	0.68	3.50	0.07	0.29	0.47	0.69	0.24	1.08	n/p
	Oven dried	361.78	394.21	391.31	337.58	367.32	396.17	393.60	376.42	368.44	n/p
Total Sample Weight		720.42	784.59	786.54	694.56	722.93	787.12	784.65	734.49	733.02	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 PS74.

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	1.04	0.64	1.63	1.78	0.76	1.05	1.99	2.12	2.18	13.98	0.76	0.88	0.80	1.09	3.18	1.38	1.08	0.99	1.64	n/p
500	7.41	2.26	12.12	10.01	10.26	3.32	25.88	11.27	12.43	28.44	10.72	9.19	8.76	7.54	8.99	13.08	10.37	10.00	8.77	n/p
353.6	21.93	14.20	26.02	18.52	21.85	16.80	35.38	19.45	24.15	28.22	22.04	19.02	18.20	22.17	21.86	24.25	21.38	20.54	23.31	n/p
250	22.29	37.56	26.18	20.68	23.17	20.72	9.22	20.19	24.90	13.71	22.36	20.66	20.16	22.11	21.41	25.18	22.51	21.93	21.86	n/p
176.8	9.88	24.07	12.57	12.87	13.67	8.57	2.10	11.48	14.12	2.37	12.39	12.84	12.95	8.84	9.38	15.81	12.59	12.97	8.31	n/p
125	3.02	7.59	2.06	5.05	4.05	3.41	1.35	4.03	3.62	0.00	3.51	4.41	4.77	2.29	2.62	5.41	2.84	3.95	2.16	n/p
88.39	1.40	1.33	0.00	0.51	0.40	2.19	0.56	0.49	0.11	0.11	0.45	0.77	1.00	0.82	1.21	0.86	0.02	0.36	0.92	n/p
62.5	1.08	0.53	0.11	0.58	0.87	0.17	0.08	1.00	0.13	1.06	0.93	1.15	1.24	0.79	1.17	1.21	0.36	0.76	0.98	n/p
44.19	1.29	2.03	1.29	1.93	1.78	1.50	0.14	1.86	1.03	1.37	1.58	2.01	2.10	1.08	1.36	2.37	1.58	1.49	1.24	n/p
31.25	1.92	0.67	2.09	2.33	2.00	3.05	0.09	2.41	1.37	1.23	1.76	2.25	2.40	1.53	1.67	2.41	2.01	1.53	1.92	n/p
22.097	2.11	1.32	2.29	2.38	2.05	3.41	0.04	2.55	1.23	1.28	1.98	2.44	2.61	1.82	2.03	1.77	1.96	1.61	2.13	n/p
15.625	2.56	1.30	2.24	2.19	2.36	4.00	0.68	2.96	1.21	1.51	2.36	2.88	3.03	2.24	2.37	1.26	2.07	2.08	2.52	n/p
11.049	2.95	1.81	2.06	2.41	2.81	4.36	1.35	3.37	1.36	1.65	2.76	3.39	3.52	2.86	2.63	1.04	2.39	2.57	3.00	n/p
7.813	3.01	1.09	1.81	2.64	3.14	4.84	2.41	3.64	1.53	1.56	2.95	3.59	3.61	3.13	2.77	0.93	2.71	3.15	3.07	n/p
5.524	3.02	1.01	1.57	2.88	3.14	4.99	2.43	3.68	1.66	1.27	3.02	3.48	3.62	3.38	2.68	0.78	2.93	3.42	3.08	n/p
3.906	2.82	0.47	1.37	2.85	2.73	4.36	2.47	3.39	1.73	0.90	2.78	2.85	2.98	3.31	2.38	0.63	3.02	3.41	2.88	n/p
2.762	2.31	0.90	1.20	2.58	2.15	3.09	2.58	2.82	1.68	0.58	2.38	1.95	2.03	2.74	1.99	0.50	2.91	3.09	2.35	n/p
1.953	1.83	0.79	0.99	2.23	1.39	2.04	2.37	1.98	1.48	0.34	1.72	1.02	1.04	2.18	1.72	0.38	2.47	2.27	1.86	n/p
1.381	1.51	0.45	0.74	1.82	0.58	1.55	1.81	1.05	1.20	0.23	1.01	0.53	0.53	1.82	1.48	0.28	1.82	1.31	1.50	n/p
0.977	1.21	0.00	0.57	1.33	0.08	1.32	1.17	0.24	1.00	0.16	0.84	0.69	0.68	1.47	1.22	0.21	1.26	0.99	1.19	n/p
0.691	1.00	0.00	0.51	1.23	0.28	1.15	0.61	0.00	0.87	0.04	1.13	1.28	1.30	1.23	1.06	0.18	0.91	1.15	0.97	n/p
0.488	0.94	0.00	0.41	0.83	0.34	1.01	0.74	0.00	0.68	0.00	0.54	1.47	1.48	1.19	1.06	0.07	0.60	0.44	0.90	n/p
0.345	0.93	0.00	0.16	0.35	0.14	0.90	0.91	0.00	0.34	0.00	0.00	0.96	0.95	1.21	1.08	0.00	0.21	0.00	0.90	n/p
0.244	0.86	0.00	0.00	0.00	0.01	0.76	1.11	0.00	0.00	0.00	0.00	0.29	0.24	1.13	0.98	0.00	0.00	0.00	0.85	n/p
0.173	0.70	0.00	0.00	0.00	0.00	0.59	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.75	0.00	0.00	0.00	0.69	n/p
0.122	0.52	0.00	0.00	0.00	0.00	0.44	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.52	0.00	0.00	0.00	0.52	n/p
0.086	0.32	0.00	0.00	0.00	0.00	0.28	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.30	0.00	0.00	0.00	0.32	n/p
0.061	0.13	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.11	0.00	0.00	0.00	0.13	n/p
0.043	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.02	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	0.00	0.00	0.00	0.00	0.00	0.00	n/p
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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 PS74.

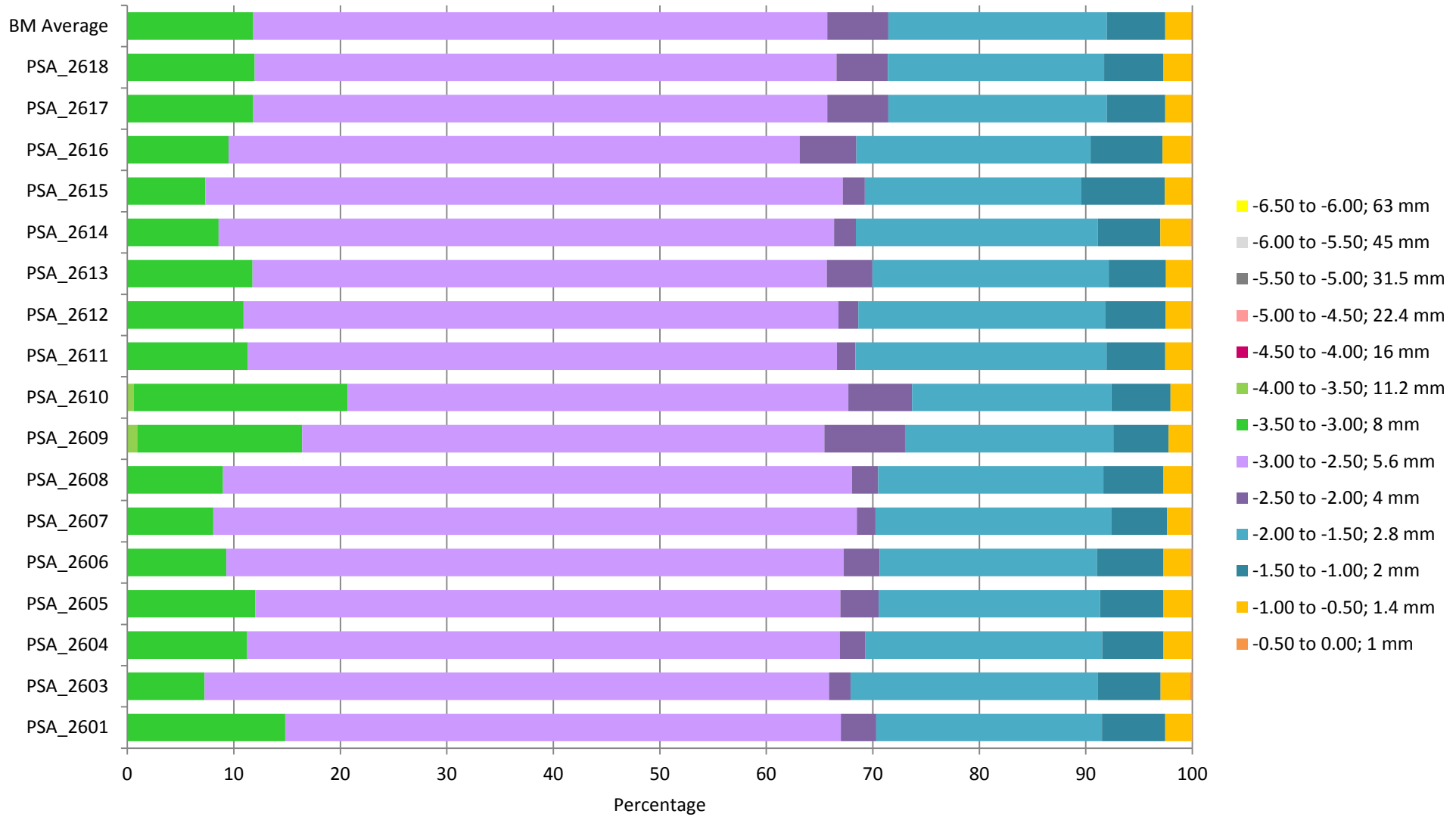
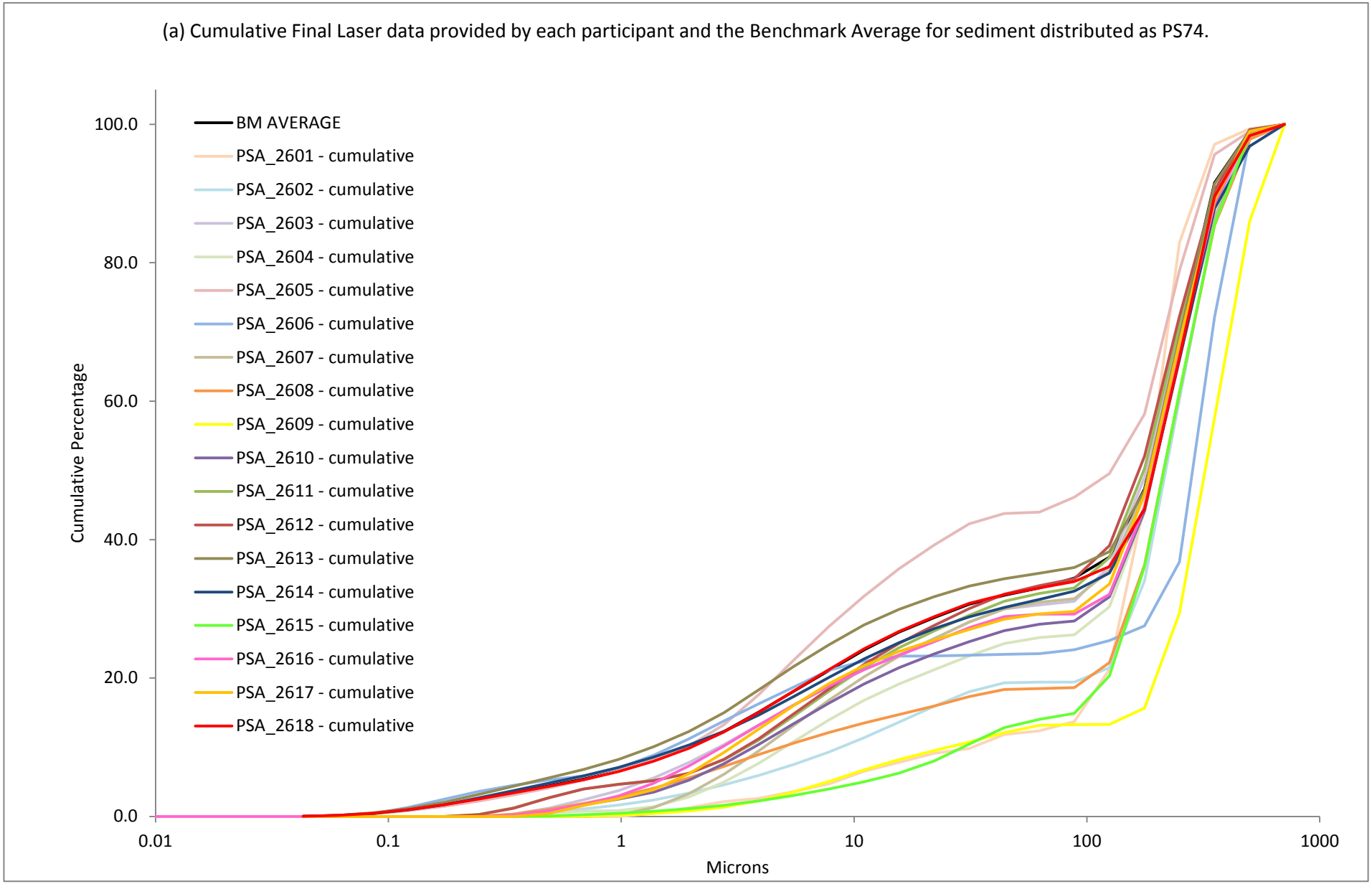
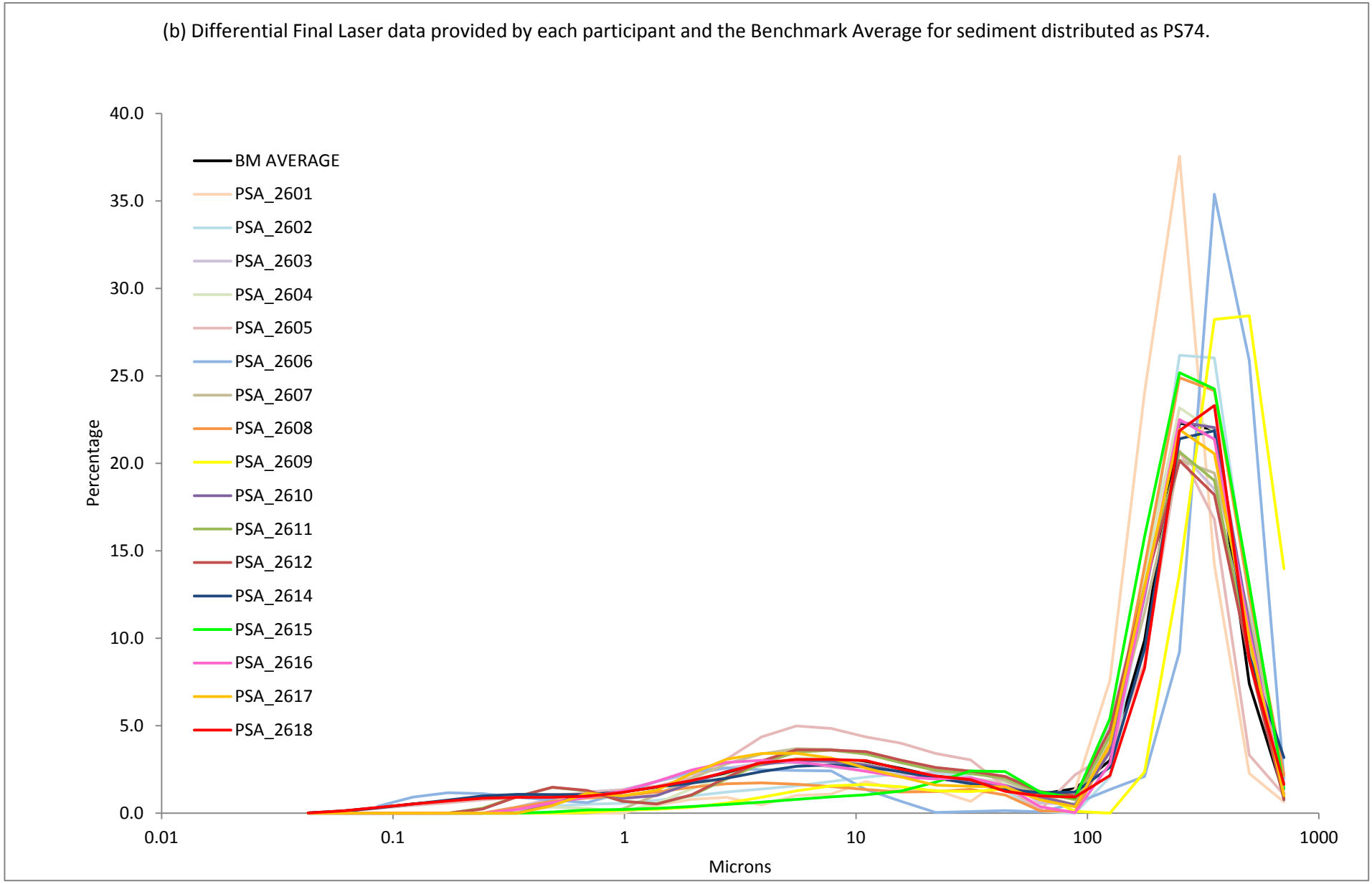


Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS74, shown as (a) cumulative and (b) differential.



NMBAQC Particle Size Analysis
2019/20 - PS74

Figure 5. Final laser data provided by each participant and the Benchmark Average for sediment distributed as PS74, shown as (a) cumulative and (b) differential.



NMBAQC Particle Size Analysis
2019/20 - PS74

Figure 6. Particle size distribution curves from all participating laboratories and the Benchmark Average for sediment distributed as PS74.

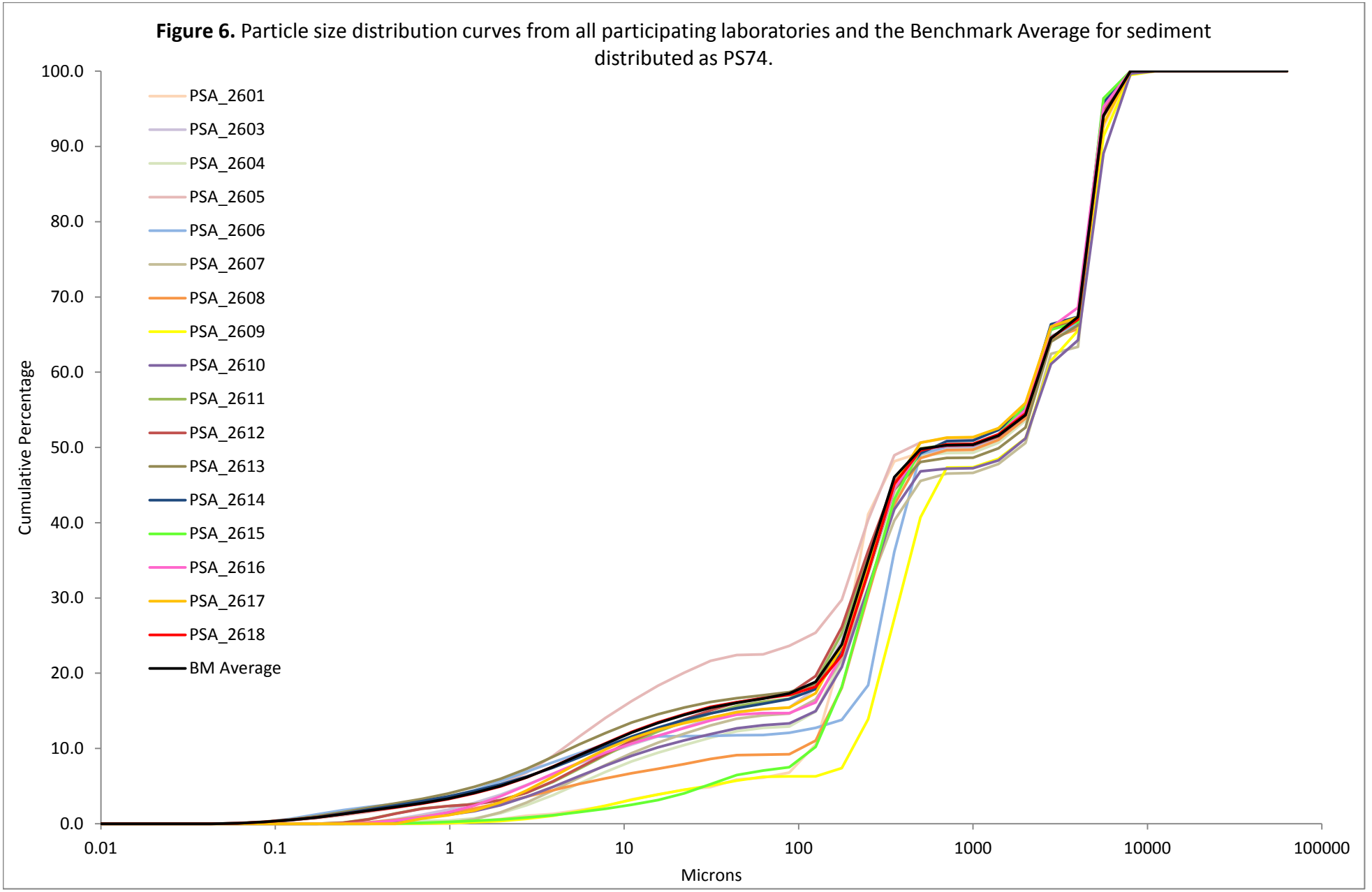
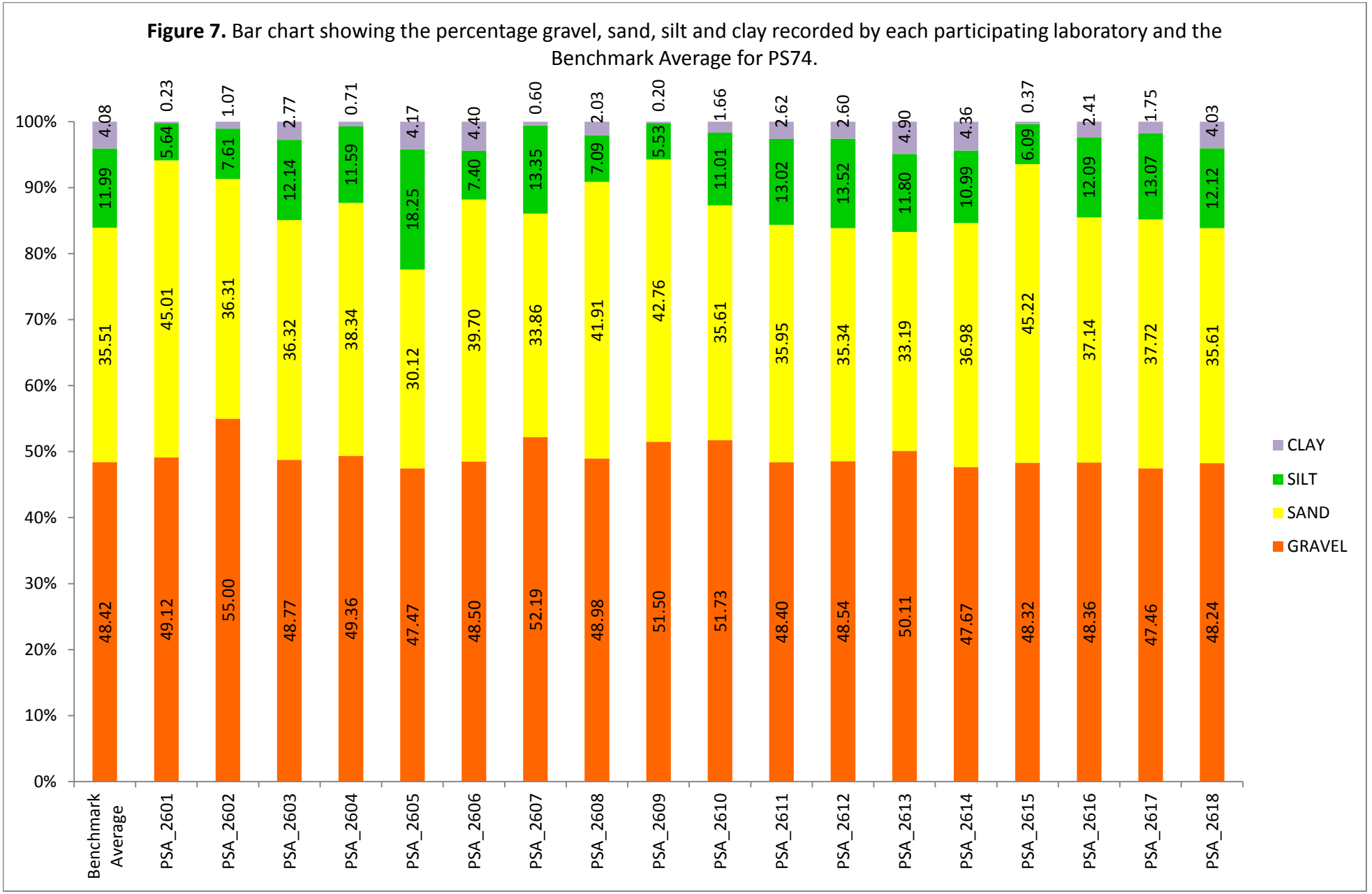


Figure 7. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the Benchmark Average for PS74.



APPENDICES

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS74.

	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)	2.67	2.16	1.71	0.88	1.37	1.17	0.96	0.68	0.90
0.50 to 1.00; (500 µm)	8.42	7.99	7.87	7.29	7.38	7.40	7.77	7.71	7.53
1.00 to 1.50; (353.6 µm)	21.35	22.03	21.62	21.12	20.98	21.25	21.37	21.84	21.97
1.50 to 2.00; (250 µm)	20.66	21.33	21.16	21.19	21.28	21.17	21.15	21.17	21.08
2.00 to 2.50; (176.8 µm)	8.75	8.60	8.77	9.34	9.18	9.14	9.15	9.14	8.91
2.50 to 3.00; (125 µm)	2.71	2.68	2.82	2.91	2.86	2.91	2.75	2.83	2.81
3.00 to 3.50; (88.39 µm)	1.49	1.46	1.48	1.45	1.45	1.44	1.34	1.29	1.32
3.50 to 4.00; (62.5 µm)	1.23	1.20	1.17	1.25	1.18	1.16	1.11	1.08	1.09
4.00 to 4.50; (44.19 µm)	1.45	1.42	1.45	1.43	1.41	1.39	1.37	1.35	1.37
4.50 to 5.00; (31.25 µm)	2.06	2.05	2.13	2.10	2.09	2.10	2.10	2.09	2.15
5.00 to 5.50; (22.097 µm)	2.27	2.24	2.33	2.32	2.27	2.26	2.34	2.32	2.39
5.50 to 6.00; (15.625 µm)	2.72	2.71	2.81	2.83	2.80	2.80	2.82	2.80	2.84
6.00 to 6.50; (11.049 µm)	3.13	3.11	3.21	3.30	3.25	3.25	3.27	3.24	3.27
6.50 to 7.00; (7.813 µm)	3.14	3.12	3.21	3.39	3.33	3.33	3.34	3.32	3.30
7.00 to 7.50; (5.524 µm)	3.13	3.11	3.22	3.37	3.32	3.32	3.31	3.29	3.28
7.50 to 8.00; (3.906 µm)	2.91	2.89	2.99	3.10	3.06	3.06	3.05	3.03	3.05
8.00 to 8.50; (2.762 µm)	2.32	2.30	2.36	2.50	2.47	2.47	2.47	2.45	2.44
8.50 to 9.00; (1.953 µm)	1.82	1.82	1.84	1.93	1.91	1.92	1.93	1.92	1.92
9.00 to 9.50; (1.381 µm)	1.50	1.51	1.52	1.54	1.53	1.54	1.56	1.56	1.59
9.50 to 10.00; (0.977 µm)	1.16	1.17	1.18	1.22	1.23	1.24	1.24	1.25	1.26
10.00 to 10.50; (0.691 µm)	0.92	0.93	0.94	1.02	1.03	1.04	1.03	1.04	1.02
10.50 to 11.00; (0.488 µm)	0.87	0.88	0.89	0.95	0.98	0.99	0.97	0.98	0.96
11.00 to 11.50; (0.345 µm)	0.91	0.91	0.92	0.94	0.97	0.98	0.96	0.98	0.97
11.50 to 12.00; (0.244 µm)	0.86	0.86	0.87	0.88	0.90	0.91	0.89	0.91	0.91
12.00 to 12.50; (0.173 µm)	0.68	0.67	0.68	0.72	0.72	0.73	0.72	0.73	0.72
12.50 to 13.00; (0.122 µm)	0.48	0.48	0.48	0.54	0.54	0.55	0.54	0.54	0.51
13.00 to 13.50; (0.086 µm)	0.28	0.28	0.28	0.34	0.33	0.34	0.34	0.33	0.31
13.50 to 14.00; (0.061 µm)	0.10	0.10	0.10	0.13	0.13	0.13	0.13	0.13	0.12
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01

d10	2.93	2.93	2.89	2.64	2.62	2.58	2.60	2.58	2.62
d50	263.34	264.69	259.86	251.98	254.18	254.12	255.19	255.82	256.16
d90	522.84	503.31	496.59	485.21	489.84	488.51	489.83	487.38	487.76

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	2.92	0.02	0.81	2.61	0.03	1.23	2.60	0.02	0.76
d50	262.63	2.49	0.95	253.42	1.25	0.49	255.72	0.49	0.19
d90	507.58	13.64	2.69	487.85	2.38	0.49	488.32	1.32	0.27

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS74.

	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)	1.89	1.55	1.41	1.50	1.17	1.44	1.60	1.65	1.90
0.50 to 1.00; (500 µm)	8.00	8.40	8.14	7.95	7.58	7.87	8.62	8.01	8.20
1.00 to 1.50; (353.6 µm)	21.52	21.63	21.62	22.10	22.39	21.89	22.33	22.41	22.15
1.50 to 2.00; (250 µm)	21.60	21.68	21.94	22.00	22.26	22.00	21.68	22.02	21.83
2.00 to 2.50; (176.8 µm)	9.74	9.91	9.73	9.49	9.56	9.60	9.40	9.36	9.45
2.50 to 3.00; (125 µm)	3.03	2.75	3.09	2.92	2.96	2.96	2.91	2.98	2.91
3.00 to 3.50; (88.39 µm)	1.39	1.41	1.33	1.46	1.46	1.47	1.45	1.46	1.61
3.50 to 4.00; (62.5 µm)	1.09	1.22	1.03	1.13	1.11	1.09	1.12	1.08	1.17
4.00 to 4.50; (44.19 µm)	1.38	1.40	1.32	1.37	1.36	1.35	1.35	1.33	1.36
4.50 to 5.00; (31.25 µm)	2.02	2.00	1.99	1.95	1.97	1.99	1.91	1.92	1.93
5.00 to 5.50; (22.097 µm)	2.20	2.13	2.12	2.13	2.12	2.12	2.08	2.08	2.08
5.50 to 6.00; (15.625 µm)	2.63	2.54	2.56	2.58	2.58	2.59	2.53	2.53	2.49
6.00 to 6.50; (11.049 µm)	3.01	2.92	2.96	2.93	2.92	2.92	2.88	2.87	2.82
6.50 to 7.00; (7.813 µm)	3.03	2.92	3.04	2.96	2.95	2.96	2.90	2.90	2.82
7.00 to 7.50; (5.524 µm)	3.00	2.89	2.99	2.95	2.95	2.97	2.90	2.90	2.82
7.50 to 8.00; (3.906 µm)	2.77	2.72	2.74	2.75	2.75	2.76	2.71	2.70	2.65
8.00 to 8.50; (2.762 µm)	2.24	2.25	2.24	2.25	2.24	2.24	2.22	2.21	2.17
8.50 to 9.00; (1.953 µm)	1.77	1.81	1.77	1.78	1.78	1.79	1.76	1.76	1.79
9.00 to 9.50; (1.381 µm)	1.45	1.49	1.45	1.46	1.47	1.48	1.44	1.45	1.53
9.50 to 10.00; (0.977 µm)	1.15	1.18	1.18	1.16	1.17	1.19	1.14	1.15	1.19
10.00 to 10.50; (0.691 µm)	0.94	0.96	1.00	0.95	0.96	0.97	0.92	0.94	0.92
10.50 to 11.00; (0.488 µm)	0.87	0.89	0.93	0.88	0.90	0.91	0.85	0.88	0.87
11.00 to 11.50; (0.345 µm)	0.86	0.89	0.90	0.88	0.89	0.91	0.85	0.88	0.90
11.50 to 12.00; (0.244 µm)	0.81	0.83	0.83	0.83	0.84	0.85	0.81	0.84	0.86
12.00 to 12.50; (0.173 µm)	0.65	0.66	0.68	0.67	0.68	0.69	0.67	0.68	0.68
12.50 to 13.00; (0.122 µm)	0.49	0.49	0.52	0.50	0.51	0.52	0.51	0.51	0.49
13.00 to 13.50; (0.086 µm)	0.30	0.30	0.33	0.31	0.32	0.32	0.32	0.32	0.29
13.50 to 14.00; (0.061 µm)	0.12	0.12	0.13	0.12	0.13	0.13	0.13	0.13	0.11
14.00 to 14.50; (0.043 µm)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01

d10	3.01	2.92	2.88	2.95	2.90	2.86	3.03	2.96	2.93
d50	262.37	263.45	262.58	264.38	263.55	262.93	267.48	266.67	266.75
d90	499.08	499.66	496.39	495.73	490.40	494.58	504.50	497.44	502.19

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	2.94	0.07	2.28	2.90	0.05	1.57	2.97	0.05	1.74
d50	262.80	0.57	0.22	263.62	0.72	0.27	266.97	0.45	0.17
d90	498.38	1.75	0.35	493.57	2.81	0.57	501.37	3.60	0.72

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS74.

	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)	0.51	0.67	0.72	0.16	0.10	0.16	0.97	0.72	0.63
0.50 to 1.00; (500 µm)	6.91	6.96	6.81	6.26	5.94	6.03	6.73	6.50	6.54
1.00 to 1.50; (353.6 µm)	22.12	22.21	22.15	22.54	22.54	22.48	22.37	22.08	22.15
1.50 to 2.00; (250 µm)	23.22	23.11	23.38	23.35	23.74	23.94	22.93	23.04	23.07
2.00 to 2.50; (176.8 µm)	10.37	10.23	10.25	10.36	10.54	10.42	9.96	10.20	10.32
2.50 to 3.00; (125 µm)	3.10	3.13	3.08	3.20	3.21	3.17	2.96	3.05	3.05
3.00 to 3.50; (88.39 µm)	1.37	1.37	1.34	1.45	1.40	1.37	1.38	1.42	1.38
3.50 to 4.00; (62.5 µm)	1.11	1.09	1.07	1.09	1.02	0.99	0.98	0.99	0.97
4.00 to 4.50; (44.19 µm)	1.24	1.24	1.22	1.26	1.20	1.18	1.28	1.27	1.24
4.50 to 5.00; (31.25 µm)	1.82	1.82	1.82	1.84	1.81	1.80	1.84	1.87	1.86
5.00 to 5.50; (22.097 µm)	2.03	2.03	2.01	2.10	2.00	1.99	1.81	1.82	1.82
5.50 to 6.00; (15.625 µm)	2.47	2.45	2.44	2.53	2.45	2.44	2.51	2.52	2.50
6.00 to 6.50; (11.049 µm)	2.89	2.87	2.85	2.82	2.84	2.82	2.96	2.97	2.94
6.50 to 7.00; (7.813 µm)	2.99	2.98	2.97	3.02	2.94	2.92	3.03	3.04	3.02
7.00 to 7.50; (5.524 µm)	3.00	2.98	2.97	3.09	2.97	2.95	3.04	3.05	3.02
7.50 to 8.00; (3.906 µm)	2.79	2.77	2.76	2.81	2.78	2.77	2.85	2.85	2.83
8.00 to 8.50; (2.762 µm)	2.30	2.28	2.27	2.26	2.31	2.30	2.37	2.37	2.35
8.50 to 9.00; (1.953 µm)	1.81	1.80	1.80	1.82	1.85	1.84	1.88	1.89	1.88
9.00 to 9.50; (1.381 µm)	1.46	1.46	1.46	1.52	1.52	1.52	1.52	1.54	1.53
9.50 to 10.00; (0.977 µm)	1.18	1.19	1.19	1.22	1.24	1.25	1.21	1.24	1.25
10.00 to 10.50; (0.691 µm)	1.00	1.01	1.02	0.99	1.05	1.06	1.00	1.04	1.05
10.50 to 11.00; (0.488 µm)	0.93	0.94	0.95	0.91	0.98	0.99	0.93	0.97	0.99
11.00 to 11.50; (0.345 µm)	0.90	0.91	0.92	0.90	0.95	0.96	0.91	0.95	0.96
11.50 to 12.00; (0.244 µm)	0.83	0.84	0.85	0.84	0.88	0.88	0.85	0.88	0.89
12.00 to 12.50; (0.173 µm)	0.68	0.69	0.69	0.68	0.71	0.72	0.69	0.71	0.72
12.50 to 13.00; (0.122 µm)	0.52	0.52	0.53	0.51	0.54	0.54	0.53	0.54	0.54
13.00 to 13.50; (0.086 µm)	0.33	0.33	0.33	0.32	0.34	0.34	0.33	0.34	0.34
13.50 to 14.00; (0.061 µm)	0.13	0.13	0.13	0.12	0.13	0.13	0.13	0.13	0.13
14.00 to 14.50; (0.043 µm)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

d10	2.85	2.83	2.81	2.82	2.65	2.63	2.76	2.64	2.61
d50	260.49	261.28	261.60	258.73	258.60	259.65	261.63	258.94	259.14
d90	480.18	481.80	481.06	473.22	470.46	471.51	482.54	478.62	478.35

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	2.83	0.02	0.80	2.70	0.11	3.96	2.67	0.08	2.98
d50	261.12	0.57	0.22	258.99	0.57	0.22	259.90	1.50	0.58
d90	481.01	0.81	0.17	471.73	1.39	0.29	479.84	2.34	0.49

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS74.

	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)	1.11	1.58	1.48	0.67	0.43	0.27	1.57	1.08	1.74
0.50 to 1.00; (500 µm)	7.08	7.67	7.61	7.22	7.28	6.91	7.71	7.03	7.30
1.00 to 1.50; (353.6 µm)	21.68	21.76	21.60	21.15	21.56	21.73	21.28	21.68	21.42
1.50 to 2.00; (250 µm)	22.79	22.50	22.47	22.12	22.29	22.67	21.99	22.21	22.04
2.00 to 2.50; (176.8 µm)	10.51	10.25	10.32	10.52	10.32	10.35	10.02	10.21	10.04
2.50 to 3.00; (125 µm)	3.11	3.03	3.08	3.17	3.19	3.13	3.11	3.20	3.10
3.00 to 3.50; (88.39 µm)	1.31	1.31	1.32	1.41	1.42	1.44	1.45	1.42	1.53
3.50 to 4.00; (62.5 µm)	1.03	1.01	0.98	1.13	1.09	1.07	1.08	1.07	1.11
4.00 to 4.50; (44.19 µm)	1.26	1.24	1.23	1.28	1.26	1.25	1.27	1.27	1.29
4.50 to 5.00; (31.25 µm)	1.85	1.87	1.90	1.84	1.84	1.84	1.88	1.92	1.91
5.00 to 5.50; (22.097 µm)	2.08	2.09	2.10	2.15	2.13	2.13	2.11	2.13	2.12
5.50 to 6.00; (15.625 µm)	2.53	2.52	2.53	2.52	2.49	2.48	2.55	2.56	2.51
6.00 to 6.50; (11.049 µm)	2.90	2.87	2.87	2.93	2.90	2.88	2.89	2.91	2.85
6.50 to 7.00; (7.813 µm)	2.96	2.89	2.89	3.10	3.07	3.05	2.91	2.93	2.85
7.00 to 7.50; (5.524 µm)	2.95	2.88	2.93	3.13	3.09	3.08	2.95	2.97	2.88
7.50 to 8.00; (3.906 µm)	2.75	2.71	2.75	2.94	2.89	2.87	2.80	2.81	2.75
8.00 to 8.50; (2.762 µm)	2.27	2.24	2.23	2.44	2.40	2.38	2.31	2.32	2.28
8.50 to 9.00; (1.953 µm)	1.82	1.79	1.76	1.94	1.92	1.91	1.86	1.87	1.88
9.00 to 9.50; (1.381 µm)	1.48	1.46	1.46	1.57	1.57	1.57	1.55	1.57	1.61
9.50 to 10.00; (0.977 µm)	1.20	1.17	1.19	1.24	1.26	1.27	1.24	1.27	1.28
10.00 to 10.50; (0.691 µm)	1.00	0.97	1.00	1.03	1.05	1.07	1.01	1.03	1.01
10.50 to 11.00; (0.488 µm)	0.92	0.90	0.93	0.95	0.97	0.99	0.94	0.96	0.95
11.00 to 11.50; (0.345 µm)	0.90	0.89	0.91	0.93	0.94	0.97	0.93	0.95	0.97
11.50 to 12.00; (0.244 µm)	0.83	0.83	0.85	0.87	0.88	0.90	0.87	0.89	0.92
12.00 to 12.50; (0.173 µm)	0.68	0.66	0.67	0.72	0.72	0.73	0.71	0.72	0.72
12.50 to 13.00; (0.122 µm)	0.52	0.49	0.49	0.55	0.55	0.55	0.53	0.54	0.51
13.00 to 13.50; (0.086 µm)	0.33	0.30	0.30	0.35	0.35	0.35	0.33	0.33	0.30
13.50 to 14.00; (0.061 µm)	0.13	0.12	0.12	0.14	0.14	0.14	0.13	0.13	0.11
14.00 to 14.50; (0.043 µm)	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01

d10	2.84	2.95	2.89	2.62	2.59	2.54	2.71	2.62	2.62
d50	260.34	263.92	262.51	254.56	256.13	256.09	260.28	257.94	260.04
d90	485.78	494.09	492.78	482.99	481.92	478.00	494.19	485.14	492.33

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	2.89	0.05	1.88	2.58	0.04	1.54	2.65	0.05	1.90
d50	262.26	1.80	0.69	255.59	0.90	0.35	259.42	1.29	0.50
d90	490.88	4.47	0.91	480.97	2.63	0.55	490.55	4.78	0.97

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS74.

	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)	0.96	1.05	0.84	0.39	0.46	0.46	0.63	0.42	0.47
0.50 to 1.00; (500 µm)	7.20	7.49	7.08	7.15	7.53	7.28	7.63	7.36	7.91
1.00 to 1.50; (353.6 µm)	22.66	22.43	22.52	22.20	22.33	22.31	21.87	22.07	22.21
1.50 to 2.00; (250 µm)	22.86	22.90	23.30	22.87	22.79	23.02	22.49	22.51	22.38
2.00 to 2.50; (176.8 µm)	9.93	10.05	10.15	10.30	10.44	10.43	10.28	10.33	10.22
2.50 to 3.00; (125 µm)	2.98	2.94	3.02	3.25	3.25	3.32	3.11	3.20	3.11
3.00 to 3.50; (88.39 µm)	1.36	1.44	1.32	1.40	1.33	1.34	1.36	1.36	1.34
3.50 to 4.00; (62.5 µm)	1.05	1.08	0.99	1.03	1.00	0.98	1.08	1.08	1.05
4.00 to 4.50; (44.19 µm)	1.25	1.23	1.20	1.25	1.22	1.21	1.20	1.19	1.17
4.50 to 5.00; (31.25 µm)	1.84	1.79	1.79	1.87	1.86	1.86	1.82	1.83	1.80
5.00 to 5.50; (22.097 µm)	2.07	2.00	1.99	2.10	2.06	2.05	2.06	2.06	2.02
5.50 to 6.00; (15.625 µm)	2.51	2.42	2.44	2.52	2.47	2.46	2.48	2.48	2.43
6.00 to 6.50; (11.049 µm)	2.87	2.79	2.80	2.88	2.81	2.80	2.88	2.88	2.83
6.50 to 7.00; (7.813 µm)	2.91	2.84	2.89	2.92	2.86	2.86	2.95	2.95	2.91
7.00 to 7.50; (5.524 µm)	2.93	2.85	2.89	2.94	2.88	2.88	2.97	2.97	2.93
7.50 to 8.00; (3.906 µm)	2.76	2.68	2.70	2.76	2.70	2.69	2.80	2.79	2.75
8.00 to 8.50; (2.762 µm)	2.26	2.22	2.23	2.25	2.21	2.21	2.32	2.31	2.28
8.50 to 9.00; (1.953 µm)	1.80	1.80	1.78	1.79	1.76	1.76	1.85	1.85	1.83
9.00 to 9.50; (1.381 µm)	1.47	1.49	1.45	1.48	1.46	1.46	1.52	1.53	1.52
9.50 to 10.00; (0.977 µm)	1.17	1.20	1.19	1.19	1.18	1.19	1.23	1.25	1.25
10.00 to 10.50; (0.691 µm)	0.96	0.99	1.02	0.99	0.99	1.00	1.03	1.05	1.05
10.50 to 11.00; (0.488 µm)	0.89	0.93	0.95	0.94	0.94	0.94	0.96	0.98	0.98
11.00 to 11.50; (0.345 µm)	0.88	0.92	0.92	0.94	0.94	0.94	0.93	0.95	0.96
11.50 to 12.00; (0.244 µm)	0.82	0.85	0.85	0.88	0.87	0.87	0.87	0.88	0.88
12.00 to 12.50; (0.173 µm)	0.66	0.68	0.69	0.70	0.70	0.70	0.70	0.71	0.71
12.50 to 13.00; (0.122 µm)	0.49	0.50	0.52	0.52	0.51	0.52	0.53	0.53	0.53
13.00 to 13.50; (0.086 µm)	0.30	0.31	0.33	0.32	0.31	0.32	0.33	0.33	0.33
13.50 to 14.00; (0.061 µm)	0.12	0.12	0.13	0.12	0.12	0.12	0.13	0.13	0.13
14.00 to 14.50; (0.043 µm)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

d10	2.94	2.85	2.83	2.80	2.85	2.83	2.72	2.65	2.67
d50	264.37	265.09	264.30	260.10	262.08	261.83	260.31	259.23	261.80
d90	486.14	488.87	484.25	481.18	484.63	482.76	486.42	482.88	487.56

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	2.87	0.06	2.14	2.83	0.03	0.92	2.68	0.04	1.35
d50	264.59	0.44	0.16	261.34	1.08	0.41	260.45	1.29	0.50
d90	486.42	2.33	0.48	482.86	1.72	0.36	485.62	2.44	0.50

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS74 (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
COARSE GRAVEL	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM GRAVEL	5.87	7.47	55.00†	3.64	5.71	5.86	4.60	4.32	4.52	8.65	10.91
FINE GRAVEL	29.63	27.97		30.49	29.44	28.56	30.60	33.23	30.97	29.82	27.99
VERY FINE GRAVEL	12.92	13.68		14.63	14.21	13.05	13.30	14.64	13.48	13.04	12.82
VERY COARSE SAND	1.27	1.29	0.00	1.50	1.38	1.33	1.40	1.27	1.37	1.18	1.08
COARSE SAND	4.25	1.44	6.19	5.87	5.43	2.23	14.00	6.23	7.25	20.07	5.42
MEDIUM SAND	22.25	25.67	23.49	19.50	22.18	19.21	22.30	18.45	24.36	19.84	20.95
FINE SAND	6.49	15.70	6.58	8.91	8.73	6.14	1.70	7.22	8.81	1.12	7.50
VERY FINE SAND	1.25	0.92	0.05	0.54	0.62	1.21	0.30	0.70	0.12	0.55	0.65
VERY COARSE SILT	1.62	1.34	1.52	2.12	1.86	2.33	0.10	1.99	1.19	1.23	1.58
COARSE SILT	2.35	1.30	2.04	2.27	2.17	3.79	0.40	2.57	1.21	1.32	2.05
MEDIUM SILT	3.00	1.43	1.74	2.51	2.93	4.71	1.90	3.26	1.43	1.52	2.70
FINE SILT	2.94	0.74	1.32	2.85	2.89	4.79	2.50	3.29	1.68	1.03	2.74
VERY FINE SILT	2.08	0.84	0.99	2.39	1.75	2.62	2.50	2.23	1.57	0.43	1.94
CLAY	4.08	0.23	1.07	2.77	0.71	4.17	4.40	0.60	2.03	0.20	1.66

GRAVEL	48.42	49.12	55.00	48.77	49.36	47.47	48.50	52.19	48.98	51.50	51.73
SAND	35.51	45.01	36.31	36.32	38.34	30.12	39.70	33.86	41.91	42.76	35.61
SILT	11.99	5.64	7.61	12.14	11.59	18.25	7.40	13.35	7.09	5.53	11.01
CLAY	4.08	0.23	1.07	2.77	0.71	4.17	4.40	0.60	2.03	0.20	1.66

†Participant not participating in analysis of sediment greater than 1mm

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS74 (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	0.00	0.00	0.00	0.00	0.00	0.00	n/p
COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n/p
MEDIUM GRAVEL	5.87	5.62	5.43	6.04	4.21	3.63	4.73	7.03	5.93	n/p
FINE GRAVEL	29.63	28.34	28.75	29.90	29.41	30.73	29.33	26.88	29.48	n/p
VERY FINE GRAVEL	12.92	14.44	14.36	14.17	14.05	13.97	14.30	13.54	12.83	n/p
VERY COARSE SAND	1.27	1.27	1.26	1.28	1.48	1.29	1.39	1.24	1.35	n/p
COARSE SAND	4.25	5.07	4.80	4.19	6.19	7.29	5.75	6.21	5.25	n/p
MEDIUM SAND	22.25	19.97	19.26	21.53	22.00	24.91	22.05	21.44	22.77	n/p
FINE SAND	6.49	8.68	8.89	5.41	6.11	10.69	7.75	8.20	5.28	n/p
VERY FINE SAND	1.25	0.97	1.13	0.79	1.21	1.04	0.19	0.62	0.96	n/p
VERY COARSE SILT	1.62	2.14	2.26	1.27	1.54	2.41	1.81	1.48	1.59	n/p
COARSE SILT	2.35	2.68	2.83	1.97	2.24	1.52	2.03	2.00	2.34	n/p
MEDIUM SILT	3.00	3.52	3.58	2.91	2.75	0.99	2.56	3.22	3.06	n/p
FINE SILT	2.94	3.19	3.31	3.25	2.57	0.71	2.99	3.70	3.00	n/p
VERY FINE SILT	2.08	1.49	1.54	2.39	1.89	0.45	2.70	2.68	2.12	n/p
CLAY	4.08	2.62	2.60	4.90	4.36	0.37	2.41	1.75	4.03	n/p

GRAVEL	48.42	48.40	48.54	50.11	47.67	48.32	48.36	47.46	48.24	n/p
SAND	35.51	35.95	35.34	33.19	36.98	45.22	37.14	37.72	35.61	n/p
SILT	11.99	13.02	13.52	11.80	10.99	6.09	12.09	13.07	12.12	n/p
CLAY	4.08	2.62	2.60	4.90	4.36	0.37	2.41	1.75	4.03	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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2601
Sample Code:	PS742601

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	7.47	58.28
-3.00 to -2.50; 5.6 mm	26.30	205.08
-2.50 to -2.00; 4 mm	1.67	13.03
-2.00 to -1.50; 2.8 mm	10.69	83.33
-1.50 to -1.00; 2 mm	2.99	23.31
-1.00 to -0.50; 1.4 mm	1.26	9.84
-0.50 to 0.00; 1 mm	0.02	0.19
0.00 to 0.50; (707 µm)	0.32	2.47
0.50 to 1.00; (500 µm)	1.12	8.76
1.00 to 1.50; (353.6 µm)	7.04	54.92
1.50 to 2.00; (250 µm)	18.63	145.26
2.00 to 2.50; (176.8 µm)	11.94	93.08
2.50 to 3.00; (125 µm)	3.76	29.34
3.00 to 3.50; (88.39 µm)	0.66	5.13
3.50 to 4.00; (62.5 µm)	0.26	2.05
4.00 to 4.50; (44.19 µm)	1.01	7.85
4.50 to 5.00; (31.25 µm)	0.33	2.59
5.00 to 5.50; (22.097 µm)	0.65	5.09
5.50 to 6.00; (15.625 µm)	0.64	5.02
6.00 to 6.50; (11.049 µm)	0.90	6.98
6.50 to 7.00; (7.813 µm)	0.54	4.20
7.00 to 7.50; (5.524 µm)	0.50	3.91
7.50 to 8.00; (3.906 µm)	0.23	1.82
8.00 to 8.50; (2.762 µm)	0.45	3.48
8.50 to 9.00; (1.953 µm)	0.39	3.05
9.00 to 9.50; (1.381 µm)	0.22	1.75
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	779.80

Notes: Participant Notes: Pipette analysis of the less than 63 micron particles, sieve only for greater than 63 micron. Slurry determined to be 350ml. Dried 100ml subsample = 13.004g multiply by 3.5 = 45.514g plus 0.232 from sieve pan = 45.746g of less than 63 microns. The proportion of gravel and sand is very similar, final description came from gradistat. Pipette analysis provided weights down to 1.953 microns remaining weight of 1.754g covers the less than 1.953 size. Pipette analysis is always problematic and calculation is open to error. Proportion of less than 63 microns maybe slightly larger as quanitity is calculated from a 100ml subsample. I did however dry all the fines except the 100ml subsample and dry weight came to 39.043g so i'm hopeful that overall fine proportions will not be significantly out.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2602
Sample Code:	PS742602

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	55.00	
-3.00 to -2.50; 5.6 mm		
-2.50 to -2.00; 4 mm		
-2.00 to -1.50; 2.8 mm		
-1.50 to -1.00; 2 mm		
-1.00 to -0.50; 1.4 mm		
-0.50 to 0.00; 1 mm		
0.00 to 0.50; (707 µm)	0.73	
0.50 to 1.00; (500 µm)	5.46	
1.00 to 1.50; (353.6 µm)	11.71	
1.50 to 2.00; (250 µm)	11.78	
2.00 to 2.50; (176.8 µm)	5.66	
2.50 to 3.00; (125 µm)	0.93	
3.00 to 3.50; (88.39 µm)	0.00	
3.50 to 4.00; (62.5 µm)	0.05	
4.00 to 4.50; (44.19 µm)	0.58	
4.50 to 5.00; (31.25 µm)	0.94	
5.00 to 5.50; (22.097 µm)	1.03	
5.50 to 6.00; (15.625 µm)	1.01	
6.00 to 6.50; (11.049 µm)	0.93	
6.50 to 7.00; (7.813 µm)	0.82	
7.00 to 7.50; (5.524 µm)	0.71	
7.50 to 8.00; (3.906 µm)	0.62	
8.00 to 8.50; (2.762 µm)	0.54	
8.50 to 9.00; (1.953 µm)	0.44	
9.00 to 9.50; (1.381 µm)	0.33	
9.50 to 10.00; (0.977 µm)	0.26	
10.00 to 10.50; (0.691 µm)	0.23	
10.50 to 11.00; (0.488 µm)	0.19	
11.00 to 11.50; (0.345 µm)	0.07	
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 not participating in analysis of sediment greater than 1mm

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2603
Sample Code:	PS742603

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	3.64	28.67
-3.00 to -2.50; 5.6 mm	29.48	232.13
-2.50 to -2.00; 4 mm	1.01	7.97
-2.00 to -1.50; 2.8 mm	11.66	91.83
-1.50 to -1.00; 2 mm	2.97	23.40
-1.00 to -0.50; 1.4 mm	1.41	11.13
-0.50 to 0.00; 1 mm	0.09	0.70
0.00 to 0.50; (707 µm)	0.89	6.99
0.50 to 1.00; (500 µm)	4.98	39.21
1.00 to 1.50; (353.6 µm)	9.21	72.54
1.50 to 2.00; (250 µm)	10.29	80.99
2.00 to 2.50; (176.8 µm)	6.40	50.41
2.50 to 3.00; (125 µm)	2.51	19.78
3.00 to 3.50; (88.39 µm)	0.25	1.99
3.50 to 4.00; (62.5 µm)	0.29	2.28
4.00 to 4.50; (44.19 µm)	0.96	7.54
4.50 to 5.00; (31.25 µm)	1.16	9.13
5.00 to 5.50; (22.097 µm)	1.18	9.31
5.50 to 6.00; (15.625 µm)	1.09	8.60
6.00 to 6.50; (11.049 µm)	1.20	9.45
6.50 to 7.00; (7.813 µm)	1.31	10.35
7.00 to 7.50; (5.524 µm)	1.43	11.26
7.50 to 8.00; (3.906 µm)	1.42	11.18
8.00 to 8.50; (2.762 µm)	1.28	10.09
8.50 to 9.00; (1.953 µm)	1.11	8.72
9.00 to 9.50; (1.381 µm)	0.90	7.12
9.50 to 10.00; (0.977 µm)	0.66	5.22
10.00 to 10.50; (0.691 µm)	0.61	4.80
10.50 to 11.00; (0.488 µm)	0.42	3.27
11.00 to 11.50; (0.345 µm)	0.18	1.38
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	787.43

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2604
Sample Code:	PS742604

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	5.71	38.47
-3.00 to -2.50; 5.6 mm	28.23	190.12
-2.50 to -2.00; 4 mm	1.21	8.13
-2.00 to -1.50; 2.8 mm	11.29	76.01
-1.50 to -1.00; 2 mm	2.92	19.67
-1.00 to -0.50; 1.4 mm	1.34	9.04
-0.50 to 0.00; 1 mm	0.04	0.24
0.00 to 0.50; (707 µm)	0.37	2.54
0.50 to 1.00; (500 µm)	5.06	33.98
1.00 to 1.50; (353.6 µm)	10.77	72.19
1.50 to 2.00; (250 µm)	11.42	76.54
2.00 to 2.50; (176.8 µm)	6.74	45.26
2.50 to 3.00; (125 µm)	2.00	13.50
3.00 to 3.50; (88.39 µm)	0.19	1.37
3.50 to 4.00; (62.5 µm)	0.43	2.94
4.00 to 4.50; (44.19 µm)	0.87	5.95
4.50 to 5.00; (31.25 µm)	0.98	6.68
5.00 to 5.50; (22.097 µm)	1.01	6.86
5.50 to 6.00; (15.625 µm)	1.16	7.90
6.00 to 6.50; (11.049 µm)	1.38	9.40
6.50 to 7.00; (7.813 µm)	1.55	10.50
7.00 to 7.50; (5.524 µm)	1.54	10.47
7.50 to 8.00; (3.906 µm)	1.34	9.10
8.00 to 8.50; (2.762 µm)	1.06	7.17
8.50 to 9.00; (1.953 µm)	0.69	4.65
9.00 to 9.50; (1.381 µm)	0.29	1.93
9.50 to 10.00; (0.977 µm)	0.04	0.28
10.00 to 10.50; (0.691 µm)	0.14	0.92
10.50 to 11.00; (0.488 µm)	0.17	1.12
11.00 to 11.50; (0.345 µm)	0.07	0.48
11.50 to 12.00; (0.244 µm)	0.00	0.02
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	673.44

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2605
Sample Code:	PS742605

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	5.86	
-3.00 to -2.50; 5.6 mm	26.81	
-2.50 to -2.00; 4 mm	1.75	
-2.00 to -1.50; 2.8 mm	10.14	
-1.50 to -1.00; 2 mm	2.91	
-1.00 to -0.50; 1.4 mm	1.28	
-0.50 to 0.00; 1 mm	0.05	
0.00 to 0.50; (707 µm)	0.54	
0.50 to 1.00; (500 µm)	1.70	
1.00 to 1.50; (353.6 µm)	8.60	
1.50 to 2.00; (250 µm)	10.61	
2.00 to 2.50; (176.8 µm)	4.39	
2.50 to 3.00; (125 µm)	1.75	
3.00 to 3.50; (88.39 µm)	1.12	
3.50 to 4.00; (62.5 µm)	0.09	
4.00 to 4.50; (44.19 µm)	0.77	
4.50 to 5.00; (31.25 µm)	1.56	
5.00 to 5.50; (22.097 µm)	1.75	
5.50 to 6.00; (15.625 µm)	2.05	
6.00 to 6.50; (11.049 µm)	2.23	
6.50 to 7.00; (7.813 µm)	2.48	
7.00 to 7.50; (5.524 µm)	2.56	
7.50 to 8.00; (3.906 µm)	2.23	
8.00 to 8.50; (2.762 µm)	1.58	
8.50 to 9.00; (1.953 µm)	1.04	
9.00 to 9.50; (1.381 µm)	0.79	
9.50 to 10.00; (0.977 µm)	0.68	
10.00 to 10.50; (0.691 µm)	0.59	
10.50 to 11.00; (0.488 µm)	0.52	
11.00 to 11.50; (0.345 µm)	0.46	
11.50 to 12.00; (0.244 µm)	0.39	
12.00 to 12.50; (0.173 µm)	0.30	
12.50 to 13.00; (0.122 µm)	0.23	
13.00 to 13.50; (0.086 µm)	0.14	
13.50 to 14.00; (0.061µm)	0.06	
14.00 to 14.50; (0.043µm)	0.01	
TOTAL	100.00	

Notes: Participant Notes: Excess water required adding to the sample in order to be able to remove it fully from the tub and homogonise it properly due to the sticky nature of the mud.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2606
Sample Code:	PS742606

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	4.64	
-3.00 to -2.50; 5.6 mm	28.94	
-2.50 to -2.00; 4 mm	1.68	
-2.00 to -1.50; 2.8 mm	10.17	
-1.50 to -1.00; 2 mm	3.12	
-1.00 to -0.50; 1.4 mm	1.28	
-0.50 to 0.00; 1 mm	0.08	
0.00 to 0.50; (707 µm)	1.00	
0.50 to 1.00; (500 µm)	12.97	
1.00 to 1.50; (353.6 µm)	17.72	
1.50 to 2.00; (250 µm)	4.62	
2.00 to 2.50; (176.8 µm)	1.05	
2.50 to 3.00; (125 µm)	0.68	
3.00 to 3.50; (88.39 µm)	0.28	
3.50 to 4.00; (62.5 µm)	0.04	
4.00 to 4.50; (44.19 µm)	0.07	
4.50 to 5.00; (31.25 µm)	0.05	
5.00 to 5.50; (22.097 µm)	0.02	
5.50 to 6.00; (15.625 µm)	0.34	
6.00 to 6.50; (11.049 µm)	0.68	
6.50 to 7.00; (7.813 µm)	1.21	
7.00 to 7.50; (5.524 µm)	1.22	
7.50 to 8.00; (3.906 µm)	1.24	
8.00 to 8.50; (2.762 µm)	1.29	
8.50 to 9.00; (1.953 µm)	1.19	
9.00 to 9.50; (1.381 µm)	0.91	
9.50 to 10.00; (0.977 µm)	0.59	
10.00 to 10.50; (0.691 µm)	0.30	
10.50 to 11.00; (0.488 µm)	0.37	
11.00 to 11.50; (0.345 µm)	0.46	
11.50 to 12.00; (0.244 µm)	0.56	
12.00 to 12.50; (0.173 µm)	0.59	
12.50 to 13.00; (0.122 µm)	0.46	
13.00 to 13.50; (0.086 µm)	0.20	
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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2607
Sample Code:	PS742607

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	4.32	
-3.00 to -2.50; 5.6 mm	32.31	
-2.50 to -2.00; 4 mm	0.92	
-2.00 to -1.50; 2.8 mm	11.84	
-1.50 to -1.00; 2 mm	2.80	
-1.00 to -0.50; 1.4 mm	1.20	
-0.50 to 0.00; 1 mm	0.07	
0.00 to 0.50; (707 µm)	0.99	
0.50 to 1.00; (500 µm)	5.25	
1.00 to 1.50; (353.6 µm)	9.05	
1.50 to 2.00; (250 µm)	9.40	
2.00 to 2.50; (176.8 µm)	5.34	
2.50 to 3.00; (125 µm)	1.87	
3.00 to 3.50; (88.39 µm)	0.23	
3.50 to 4.00; (62.5 µm)	0.47	
4.00 to 4.50; (44.19 µm)	0.87	
4.50 to 5.00; (31.25 µm)	1.12	
5.00 to 5.50; (22.097 µm)	1.19	
5.50 to 6.00; (15.625 µm)	1.38	
6.00 to 6.50; (11.049 µm)	1.57	
6.50 to 7.00; (7.813 µm)	1.70	
7.00 to 7.50; (5.524 µm)	1.71	
7.50 to 8.00; (3.906 µm)	1.58	
8.00 to 8.50; (2.762 µm)	1.31	
8.50 to 9.00; (1.953 µm)	0.92	
9.00 to 9.50; (1.381 µm)	0.49	
9.50 to 10.00; (0.977 µm)	0.11	
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)		
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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2608
Sample Code:	PS742608

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	4.52	33.02
-3.00 to -2.50; 5.6 mm	29.73	217.06
-2.50 to -2.00; 4 mm	1.24	9.04
-2.00 to -1.50; 2.8 mm	10.64	77.68
-1.50 to -1.00; 2 mm	2.84	20.73
-1.00 to -0.50; 1.4 mm	1.31	9.56
-0.50 to 0.00; 1 mm	0.06	0.42
0.00 to 0.50; (707 µm)	1.08	7.89
0.50 to 1.00; (500 µm)	6.17	45.06
1.00 to 1.50; (353.6 µm)	11.99	87.56
1.50 to 2.00; (250 µm)	12.36	90.26
2.00 to 2.50; (176.8 µm)	7.01	51.19
2.50 to 3.00; (125 µm)	1.80	13.13
3.00 to 3.50; (88.39 µm)	0.05	0.40
3.50 to 4.00; (62.5 µm)	0.06	0.47
4.00 to 4.50; (44.19 µm)	0.51	3.75
4.50 to 5.00; (31.25 µm)	0.68	4.96
5.00 to 5.50; (22.097 µm)	0.61	4.47
5.50 to 6.00; (15.625 µm)	0.60	4.38
6.00 to 6.50; (11.049 µm)	0.67	4.92
6.50 to 7.00; (7.813 µm)	0.76	5.54
7.00 to 7.50; (5.524 µm)	0.82	6.01
7.50 to 8.00; (3.906 µm)	0.86	6.28
8.00 to 8.50; (2.762 µm)	0.83	6.09
8.50 to 9.00; (1.953 µm)	0.73	5.36
9.00 to 9.50; (1.381 µm)	0.60	4.37
9.50 to 10.00; (0.977 µm)	0.50	3.62
10.00 to 10.50; (0.691 µm)	0.43	3.14
10.50 to 11.00; (0.488 µm)	0.34	2.45
11.00 to 11.50; (0.345 µm)	0.17	1.22
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)		
TOTAL	100.00	730.00

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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2609
Sample Code:	PS742609

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	0.49	3.67
-3.50 to -3.00; 8 mm	8.15	60.52
-3.00 to -2.50; 5.6 mm	25.83	191.81
-2.50 to -2.00; 4 mm	3.98	29.58
-2.00 to -1.50; 2.8 mm	10.31	76.56
-1.50 to -1.00; 2 mm	2.73	20.25
-1.00 to -0.50; 1.4 mm	1.14	8.47
-0.50 to 0.00; 1 mm	0.04	0.28
0.00 to 0.50; (707 µm)	6.62	49.12
0.50 to 1.00; (500 µm)	13.46	99.92
1.00 to 1.50; (353.6 µm)	13.36	99.16
1.50 to 2.00; (250 µm)	6.49	48.15
2.00 to 2.50; (176.8 µm)	1.12	8.31
2.50 to 3.00; (125 µm)	0.00	0.01
3.00 to 3.50; (88.39 µm)	0.05	0.38
3.50 to 4.00; (62.5 µm)	0.50	3.71
4.00 to 4.50; (44.19 µm)	0.65	4.83
4.50 to 5.00; (31.25 µm)	0.58	4.33
5.00 to 5.50; (22.097 µm)	0.60	4.49
5.50 to 6.00; (15.625 µm)	0.71	5.29
6.00 to 6.50; (11.049 µm)	0.78	5.78
6.50 to 7.00; (7.813 µm)	0.74	5.47
7.00 to 7.50; (5.524 µm)	0.60	4.48
7.50 to 8.00; (3.906 µm)	0.43	3.18
8.00 to 8.50; (2.762 µm)	0.27	2.02
8.50 to 9.00; (1.953 µm)	0.16	1.21
9.00 to 9.50; (1.381 µm)	0.11	0.80
9.50 to 10.00; (0.977 µm)	0.08	0.58
10.00 to 10.50; (0.691 µm)	0.02	0.13
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	742.50

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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2610
Sample Code:	PS742610

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	0.31	2.26
-3.50 to -3.00; 8 mm	10.61	78.52
-3.00 to -2.50; 5.6 mm	24.84	183.89
-2.50 to -2.00; 4 mm	3.15	23.35
-2.00 to -1.50; 2.8 mm	9.89	73.21
-1.50 to -1.00; 2 mm	2.93	21.69
-1.00 to -0.50; 1.4 mm	1.04	7.68
-0.50 to 0.00; 1 mm	0.04	0.31
0.00 to 0.50; (707 µm)	0.36	2.66
0.50 to 1.00; (500 µm)	5.06	37.44
1.00 to 1.50; (353.6 µm)	10.40	77.00
1.50 to 2.00; (250 µm)	10.55	78.11
2.00 to 2.50; (176.8 µm)	5.85	43.30
2.50 to 3.00; (125 µm)	1.65	12.25
3.00 to 3.50; (88.39 µm)	0.21	1.58
3.50 to 4.00; (62.5 µm)	0.44	3.26
4.00 to 4.50; (44.19 µm)	0.75	5.53
4.50 to 5.00; (31.25 µm)	0.83	6.16
5.00 to 5.50; (22.097 µm)	0.94	6.93
5.50 to 6.00; (15.625 µm)	1.12	8.26
6.00 to 6.50; (11.049 µm)	1.30	9.65
6.50 to 7.00; (7.813 µm)	1.39	10.32
7.00 to 7.50; (5.524 µm)	1.43	10.55
7.50 to 8.00; (3.906 µm)	1.31	9.73
8.00 to 8.50; (2.762 µm)	1.13	8.33
8.50 to 9.00; (1.953 µm)	0.81	6.01
9.00 to 9.50; (1.381 µm)	0.47	3.52
9.50 to 10.00; (0.977 µm)	0.40	2.95
10.00 to 10.50; (0.691 µm)	0.53	3.94
10.50 to 11.00; (0.488 µm)	0.26	1.89
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	740.28

Notes:
Participant Notes: Some uncertainty in Laser data, as inspection of cell revealed scratches on cell window, background curve has slightly elevated peaks on detector numbers 19 and 22

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2611
Sample Code:	PS742611

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	5.62	44.11
-3.00 to -2.50; 5.6 mm	27.47	215.55
-2.50 to -2.00; 4 mm	0.86	6.78
-2.00 to -1.50; 2.8 mm	11.71	91.85
-1.50 to -1.00; 2 mm	2.74	21.46
-1.00 to -0.50; 1.4 mm	1.22	9.61
-0.50 to 0.00; 1 mm	0.04	0.34
0.00 to 0.50; (707 µm)	0.44	3.47
0.50 to 1.00; (500 µm)	4.62	36.28
1.00 to 1.50; (353.6 µm)	9.57	75.10
1.50 to 2.00; (250 µm)	10.40	81.58
2.00 to 2.50; (176.8 µm)	6.46	50.72
2.50 to 3.00; (125 µm)	2.22	17.41
3.00 to 3.50; (88.39 µm)	0.39	3.05
3.50 to 4.00; (62.5 µm)	0.58	4.52
4.00 to 4.50; (44.19 µm)	1.01	7.93
4.50 to 5.00; (31.25 µm)	1.13	8.89
5.00 to 5.50; (22.097 µm)	1.23	9.64
5.50 to 6.00; (15.625 µm)	1.45	11.38
6.00 to 6.50; (11.049 µm)	1.71	13.39
6.50 to 7.00; (7.813 µm)	1.81	14.19
7.00 to 7.50; (5.524 µm)	1.75	13.76
7.50 to 8.00; (3.906 µm)	1.44	11.27
8.00 to 8.50; (2.762 µm)	0.98	7.70
8.50 to 9.00; (1.953 µm)	0.51	4.01
9.00 to 9.50; (1.381 µm)	0.27	2.11
9.50 to 10.00; (0.977 µm)	0.35	2.72
10.00 to 10.50; (0.691 µm)	0.64	5.05
10.50 to 11.00; (0.488 µm)	0.74	5.79
11.00 to 11.50; (0.345 µm)	0.48	3.77
11.50 to 12.00; (0.244 µm)	0.15	1.14
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	784.59

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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2612
Sample Code:	PS742612

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	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	5.43	42.73
-3.00 to -2.50; 5.6 mm	27.82	218.84
-2.50 to -2.00; 4 mm	0.93	7.28
-2.00 to -1.50; 2.8 mm	11.54	90.76
-1.50 to -1.00; 2 mm	2.82	22.19
-1.00 to -0.50; 1.4 mm	1.19	9.36
-0.50 to 0.00; 1 mm	0.07	0.57
0.00 to 0.50; (707 µm)	0.40	3.17
0.50 to 1.00; (500 µm)	4.40	34.57
1.00 to 1.50; (353.6 µm)	9.14	71.86
1.50 to 2.00; (250 µm)	10.12	79.60
2.00 to 2.50; (176.8 µm)	6.50	51.14
2.50 to 3.00; (125 µm)	2.39	18.82
3.00 to 3.50; (88.39 µm)	0.50	3.97
3.50 to 4.00; (62.5 µm)	0.62	4.89
4.00 to 4.50; (44.19 µm)	1.05	8.30
4.50 to 5.00; (31.25 µm)	1.21	9.48
5.00 to 5.50; (22.097 µm)	1.31	10.31
5.50 to 6.00; (15.625 µm)	1.52	11.95
6.00 to 6.50; (11.049 µm)	1.77	13.89
6.50 to 7.00; (7.813 µm)	1.81	14.25
7.00 to 7.50; (5.524 µm)	1.82	14.29
7.50 to 8.00; (3.906 µm)	1.49	11.76
8.00 to 8.50; (2.762 µm)	1.02	8.02
8.50 to 9.00; (1.953 µm)	0.52	4.12
9.00 to 9.50; (1.381 µm)	0.26	2.08
9.50 to 10.00; (0.977 µm)	0.34	2.68
10.00 to 10.50; (0.691 µm)	0.65	5.12
10.50 to 11.00; (0.488 µm)	0.74	5.84
11.00 to 11.50; (0.345 µm)	0.48	3.75
11.50 to 12.00; (0.244 µm)	0.12	0.96
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	786.54

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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2613
Sample Code:	PS742613

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	6.04	41.97
-3.00 to -2.50; 5.6 mm	27.70	192.41
-2.50 to -2.00; 4 mm	2.20	15.27
-2.00 to -1.50; 2.8 mm	11.41	79.27
-1.50 to -1.00; 2 mm	2.75	19.12
-1.00 to -0.50; 1.4 mm	1.24	8.64
-0.50 to 0.00; 1 mm	0.03	0.23
0.00 to 0.50; (707 µm)	0.53	3.68
0.50 to 1.00; (500 µm)	3.66	25.44
1.00 to 1.50; (353.6 µm)	10.78	74.86
1.50 to 2.00; (250 µm)	10.75	74.66
2.00 to 2.50; (176.8 µm)	4.30	29.84
2.50 to 3.00; (125 µm)	1.11	7.72
3.00 to 3.50; (88.39 µm)	0.40	2.78
3.50 to 4.00; (62.5 µm)	0.38	2.67
4.00 to 4.50; (44.19 µm)	0.53	3.65
4.50 to 5.00; (31.25 µm)	0.74	5.17
5.00 to 5.50; (22.097 µm)	0.89	6.16
5.50 to 6.00; (15.625 µm)	1.09	7.55
6.00 to 6.50; (11.049 µm)	1.39	9.67
6.50 to 7.00; (7.813 µm)	1.52	10.57
7.00 to 7.50; (5.524 µm)	1.64	11.41
7.50 to 8.00; (3.906 µm)	1.61	11.19
8.00 to 8.50; (2.762 µm)	1.33	9.24
8.50 to 9.00; (1.953 µm)	1.06	7.35
9.00 to 9.50; (1.381 µm)	0.88	6.13
9.50 to 10.00; (0.977 µm)	0.71	4.95
10.00 to 10.50; (0.691 µm)	0.60	4.14
10.50 to 11.00; (0.488 µm)	0.58	4.00
11.00 to 11.50; (0.345 µm)	0.59	4.09
11.50 to 12.00; (0.244 µm)	0.55	3.82
12.00 to 12.50; (0.173 µm)	0.43	2.98
12.50 to 13.00; (0.122 µm)	0.31	2.13
13.00 to 13.50; (0.086 µm)	0.18	1.26
13.50 to 14.00; (0.061µm)	0.07	0.47
14.00 to 14.50; (0.043µm)	0.01	0.06
TOTAL	100.00	694.56

Notes:

Participant notes: This sample contained a pot of largely sand and gravel sized material, with a discrete quantity of soft mud at the bottom. Efficient mixing in the pot proved impossible, so the entire sample was scraped and washed into a bowl, and sufficent water was added to achieve a paste-like consistency which could be mixed efficiently to ensure a representative laser subsample could be taken. The remainder was then wet-separated at 1 mm and dry sieved.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2614
Sample Code:	PS742614

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	4.21	30.4500
-3.00 to -2.50; 5.6 mm	28.41	205.3700
-2.50 to -2.00; 4 mm	1.00	7.2400
-2.00 to -1.50; 2.8 mm	11.17	80.7500
-1.50 to -1.00; 2 mm	2.88	20.7900
-1.00 to -0.50; 1.4 mm	1.41	10.1700
-0.50 to 0.00; 1 mm	0.08	0.5500
0.00 to 0.50; (707 µm)	1.62	11.6914
0.50 to 1.00; (500 µm)	4.57	33.0530
1.00 to 1.50; (353.6 µm)	11.11	80.3461
1.50 to 2.00; (250 µm)	10.89	78.6985
2.00 to 2.50; (176.8 µm)	4.77	34.4876
2.50 to 3.00; (125 µm)	1.33	9.6483
3.00 to 3.50; (88.39 µm)	0.61	4.4415
3.50 to 4.00; (62.5 µm)	0.59	4.2858
4.00 to 4.50; (44.19 µm)	0.69	4.9929
4.50 to 5.00; (31.25 µm)	0.85	6.1544
5.00 to 5.50; (22.097 µm)	1.03	7.4526
5.50 to 6.00; (15.625 µm)	1.21	8.7138
6.00 to 6.50; (11.049 µm)	1.34	9.6840
6.50 to 7.00; (7.813 µm)	1.41	10.1742
7.00 to 7.50; (5.524 µm)	1.36	9.8533
7.50 to 8.00; (3.906 µm)	1.21	8.7387
8.00 to 8.50; (2.762 µm)	1.01	7.3195
8.50 to 9.00; (1.953 µm)	0.88	6.3341
9.00 to 9.50; (1.381 µm)	0.75	5.4519
9.50 to 10.00; (0.977 µm)	0.62	4.4776
10.00 to 10.50; (0.691 µm)	0.54	3.9138
10.50 to 11.00; (0.488 µm)	0.54	3.8932
11.00 to 11.50; (0.345 µm)	0.55	3.9521
11.50 to 12.00; (0.244 µm)	0.50	3.6166
12.00 to 12.50; (0.173 µm)	0.38	2.7483
12.50 to 13.00; (0.122 µm)	0.26	1.9143
13.00 to 13.50; (0.086 µm)	0.15	1.1081
13.50 to 14.00; (0.061µm)	0.0567	0.4097
14.00 to 14.50; (0.043µm)	0.0071	0.0510
TOTAL	100.00	722.93

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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2615
Sample Code:	PS742615

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	3.63	28.55
-3.00 to -2.50; 5.6 mm	29.70	233.78
-2.50 to -2.00; 4 mm	1.03	8.09
-2.00 to -1.50; 2.8 mm	10.08	79.36
-1.50 to -1.00; 2 mm	3.88	30.57
-1.00 to -0.50; 1.4 mm	1.23	9.68
-0.50 to 0.00; 1 mm	0.06	0.45
0.00 to 0.50; (707 µm)	0.70	5.48
0.50 to 1.00; (500 µm)	6.59	51.89
1.00 to 1.50; (353.6 µm)	12.22	96.19
1.50 to 2.00; (250 µm)	12.69	99.88
2.00 to 2.50; (176.8 µm)	7.97	62.70
2.50 to 3.00; (125 µm)	2.72	21.45
3.00 to 3.50; (88.39 µm)	0.43	3.42
3.50 to 4.00; (62.5 µm)	0.61	4.78
4.00 to 4.50; (44.19 µm)	1.20	9.41
4.50 to 5.00; (31.25 µm)	1.21	9.56
5.00 to 5.50; (22.097 µm)	0.89	7.01
5.50 to 6.00; (15.625 µm)	0.63	4.98
6.00 to 6.50; (11.049 µm)	0.53	4.14
6.50 to 7.00; (7.813 µm)	0.47	3.6712
7.00 to 7.50; (5.524 µm)	0.40	3.1115
7.50 to 8.00; (3.906 µm)	0.32	2.5077
8.00 to 8.50; (2.762 µm)	0.25	1.9964
8.50 to 9.00; (1.953 µm)	0.19	1.5205
9.00 to 9.50; (1.381 µm)	0.14	1.0930
9.50 to 10.00; (0.977 µm)	0.11	0.8418
10.00 to 10.50; (0.691 µm)	0.09	0.7184
10.50 to 11.00; (0.488 µm)	0.04	0.2821
11.00 to 11.50; (0.345 µm)	0.00	0.0000
11.50 to 12.00; (0.244 µm)	0.00	0.0000
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	787.12

Notes:

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

Participant Notes: Diamecton - Gravel, sand & clay with live green unicellular algae growing in sample.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2616
Sample Code:	PS742616

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	4.73	
-3.00 to -2.50; 5.6 mm	26.68	
-2.50 to -2.00; 4 mm	2.65	
-2.00 to -1.50; 2.8 mm	10.94	
-1.50 to -1.00; 2 mm	3.36	
-1.00 to -0.50; 1.4 mm	1.32	
-0.50 to 0.00; 1 mm	0.07	
0.00 to 0.50; (707 µm)	0.54	
0.50 to 1.00; (500 µm)	5.21	
1.00 to 1.50; (353.6 µm)	10.74	
1.50 to 2.00; (250 µm)	11.31	
2.00 to 2.50; (176.8 µm)	6.32	
2.50 to 3.00; (125 µm)	1.43	
3.00 to 3.50; (88.39 µm)	0.01	
3.50 to 4.00; (62.5 µm)	0.18	
4.00 to 4.50; (44.19 µm)	0.79	
4.50 to 5.00; (31.25 µm)	1.01	
5.00 to 5.50; (22.097 µm)	0.98	
5.50 to 6.00; (15.625 µm)	1.04	
6.00 to 6.50; (11.049 µm)	1.20	
6.50 to 7.00; (7.813 µm)	1.36	
7.00 to 7.50; (5.524 µm)	1.47	
7.50 to 8.00; (3.906 µm)	1.52	
8.00 to 8.50; (2.762 µm)	1.46	
8.50 to 9.00; (1.953 µm)	1.24	
9.00 to 9.50; (1.381 µm)	0.92	
9.50 to 10.00; (0.977 µm)	0.63	
10.00 to 10.50; (0.691 µm)	0.46	
10.50 to 11.00; (0.488 µm)	0.30	
11.00 to 11.50; (0.345 µm)	0.10	
11.50 to 12.00; (0.244 µm)	0.00	
12.00 to 12.50; (0.173 µm)	0.00	
12.50 to 13.00; (0.122 µm)	0.00	
13.00 to 13.50; (0.086 µm)	0.00	
13.50 to 14.00; (0.061µm)	0.00	
14.00 to 14.50; (0.043µm)	0.00	
TOTAL	100.00	

Notes:

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
LabCode:	PSA_2617
Sample Code:	PS742617

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	7.03	
-3.00 to -2.50; 5.6 mm	25.65	
-2.50 to -2.00; 4 mm	1.24	
-2.00 to -1.50; 2.8 mm	10.18	
-1.50 to -1.00; 2 mm	3.36	
-1.00 to -0.50; 1.4 mm	1.17	
-0.50 to 0.00; 1 mm	0.07	
0.00 to 0.50; (707 µm)	0.68	
0.50 to 1.00; (500 µm)	5.54	
1.00 to 1.50; (353.6 µm)	10.60	
1.50 to 2.00; (250 µm)	10.85	
2.00 to 2.50; (176.8 µm)	6.29	
2.50 to 3.00; (125 µm)	1.91	
3.00 to 3.50; (88.39 µm)	0.21	
3.50 to 4.00; (62.5 µm)	0.40	
4.00 to 4.50; (44.19 µm)	0.72	
4.50 to 5.00; (31.25 µm)	0.75	
5.00 to 5.50; (22.097 µm)	0.85	
5.50 to 6.00; (15.625 µm)	1.16	
6.00 to 6.50; (11.049 µm)	1.45	
6.50 to 7.00; (7.813 µm)	1.77	
7.00 to 7.50; (5.524 µm)	1.89	
7.50 to 8.00; (3.906 µm)	1.81	
8.00 to 8.50; (2.762 µm)	1.57	
8.50 to 9.00; (1.953 µm)	1.11	
9.00 to 9.50; (1.381 µm)	0.61	
9.50 to 10.00; (0.977 µm)	0.45	
10.00 to 10.50; (0.691 µm)	0.69	
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 PS74.

Exercise Code:	PS74
LabCode:	PSA_2618
Sample Code:	PS742618

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	5.93	43.45
-3.00 to -2.50; 5.6 mm	27.09	198.56
-2.50 to -2.00; 4 mm	2.40	17.56
-2.00 to -1.50; 2.8 mm	10.07	73.79
-1.50 to -1.00; 2 mm	2.76	20.26
-1.00 to -0.50; 1.4 mm	1.29	9.47
-0.50 to 0.00; 1 mm	0.06	0.41
0.00 to 0.50; (707 µm)	0.83	6.08
0.50 to 1.00; (500 µm)	4.42	32.42
1.00 to 1.50; (353.6 µm)	11.75	86.14
1.50 to 2.00; (250 µm)	11.02	80.79
2.00 to 2.50; (176.8 µm)	4.19	30.72
2.50 to 3.00; (125 µm)	1.09	7.97
3.00 to 3.50; (88.39 µm)	0.46	3.41
3.50 to 4.00; (62.5 µm)	0.49	3.63
4.00 to 4.50; (44.19 µm)	0.63	4.59
4.50 to 5.00; (31.25 µm)	0.97	7.09
5.00 to 5.50; (22.097 µm)	1.07	7.87
5.50 to 6.00; (15.625 µm)	1.27	9.32
6.00 to 6.50; (11.049 µm)	1.51	11.09
6.50 to 7.00; (7.813 µm)	1.55	11.35
7.00 to 7.50; (5.524 µm)	1.55	11.37
7.50 to 8.00; (3.906 µm)	1.45	10.63
8.00 to 8.50; (2.762 µm)	1.19	8.70
8.50 to 9.00; (1.953 µm)	0.94	6.86
9.00 to 9.50; (1.381 µm)	0.76	5.56
9.50 to 10.00; (0.977 µm)	0.60	4.38
10.00 to 10.50; (0.691 µm)	0.49	3.58
10.50 to 11.00; (0.488 µm)	0.46	3.34
11.00 to 11.50; (0.345 µm)	0.45	3.32
11.50 to 12.00; (0.244 µm)	0.43	3.13
12.00 to 12.50; (0.173 µm)	0.35	2.55
12.50 to 13.00; (0.122 µm)	0.26	1.92
13.00 to 13.50; (0.086 µm)	0.16	1.19
13.50 to 14.00; (0.061µm)	0.06	0.47
14.00 to 14.50; (0.043µm)	0.01	0.06
TOTAL	100.00	733.02

Notes:

Participant notes: This sample contained a pot of largely sand and gravel sized material, with a discrete quantity of soft mud at the bottom. Efficient mixing in the pot proved impossible, so the entire sample was scraped and washed into a bowl, and sufficent water was added to achieve a paste-like consistency which could be mixed efficiently to ensure a representative laser subsample could be taken. The remainder was then wet-separated at 1 mm and dry sieved.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
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	5.73	42.40
-3.00 to -2.50; 5.6 mm	26.83	198.57
-2.50 to -2.00; 4 mm	2.79	20.67
-2.00 to -1.50; 2.8 mm	10.43	77.20
-1.50 to -1.00; 2 mm	2.73	20.19
-1.00 to -0.50; 1.4 mm	1.19	8.79
-0.50 to 0.00; 1 mm	0.03	0.23
0.00 to 0.50; (707 µm)	0.70	5.17
0.50 to 1.00; (500 µm)	3.87	28.67
1.00 to 1.50; (353.6 µm)	10.81	79.99
1.50 to 2.00; (250 µm)	10.62	78.61
2.00 to 2.50; (176.8 µm)	4.52	33.47
2.50 to 3.00; (125 µm)	1.41	10.44
3.00 to 3.50; (88.39 µm)	0.71	5.26
3.50 to 4.00; (62.5 µm)	0.58	4.33
4.00 to 4.50; (44.19 µm)	0.71	5.22
4.50 to 5.00; (31.25 µm)	1.05	7.79
5.00 to 5.50; (22.097 µm)	1.16	8.57
5.50 to 6.00; (15.625 µm)	1.40	10.39
6.00 to 6.50; (11.049 µm)	1.62	12.00
6.50 to 7.00; (7.813 µm)	1.65	12.18
7.00 to 7.50; (5.524 µm)	1.64	12.13
7.50 to 8.00; (3.906 µm)	1.52	11.21
8.00 to 8.50; (2.762 µm)	1.22	9.01
8.50 to 9.00; (1.953 µm)	0.95	7.03
9.00 to 9.50; (1.381 µm)	0.77	5.72
9.50 to 10.00; (0.977 µm)	0.61	4.52
10.00 to 10.50; (0.691 µm)	0.50	3.70
10.50 to 11.00; (0.488 µm)	0.47	3.50
11.00 to 11.50; (0.345 µm)	0.48	3.52
11.50 to 12.00; (0.244 µm)	0.45	3.31
12.00 to 12.50; (0.173 µm)	0.36	2.63
12.50 to 13.00; (0.122 µm)	0.26	1.92
13.00 to 13.50; (0.086 µm)	0.16	1.17
13.50 to 14.00; (0.061µm)	0.06	0.45
14.00 to 14.50; (0.043µm)	0.01	0.06
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	740.01

Notes: This sample contained a pot of largely sand and gravel sized material, with a discrete quantity of soft mud at the bottom. Efficient mixing in the pot proved impossible, so the entire sample was scraped and washed into a bowl, and sufficent water was added to achieve a paste-like consistency which could be mixed efficiently to ensure a representative laser subsample could be taken. The remainder was then wet-separated at 1 mm and dry sieved.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
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
-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	6.80	48.49
-3.00 to -2.50; 5.6 mm	25.35	180.64
-2.50 to -2.00; 4 mm	2.91	20.71
-2.00 to -1.50; 2.8 mm	10.15	72.32
-1.50 to -1.00; 2 mm	2.85	20.29
-1.00 to -0.50; 1.4 mm	1.22	8.71
-0.50 to 0.00; 1 mm	0.07	0.52
0.00 to 0.50; (707 µm)	0.79	5.66
0.50 to 1.00; (500 µm)	4.10	29.18
1.00 to 1.50; (353.6 µm)	11.15	79.42
1.50 to 2.00; (250 µm)	11.09	79.01
2.00 to 2.50; (176.8 µm)	4.85	34.59
2.50 to 3.00; (125 µm)	1.49	10.63
3.00 to 3.50; (88.39 µm)	0.73	5.23
3.50 to 4.00; (62.5 µm)	0.57	4.03
4.00 to 4.50; (44.19 µm)	0.69	4.90
4.50 to 5.00; (31.25 µm)	1.00	7.09
5.00 to 5.50; (22.097 µm)	1.07	7.64
5.50 to 6.00; (15.625 µm)	1.30	9.24
6.00 to 6.50; (11.049 µm)	1.48	10.52
6.50 to 7.00; (7.813 µm)	1.49	10.62
7.00 to 7.50; (5.524 µm)	1.48	10.58
7.50 to 8.00; (3.906 µm)	1.38	9.85
8.00 to 8.50; (2.762 µm)	1.13	8.05
8.50 to 9.00; (1.953 µm)	0.90	6.43
9.00 to 9.50; (1.381 µm)	0.74	5.30
9.50 to 10.00; (0.977 µm)	0.59	4.22
10.00 to 10.50; (0.691 µm)	0.48	3.44
10.50 to 11.00; (0.488 µm)	0.45	3.20
11.00 to 11.50; (0.345 µm)	0.45	3.20
11.50 to 12.00; (0.244 µm)	0.42	3.01
12.00 to 12.50; (0.173 µm)	0.34	2.44
12.50 to 13.00; (0.122 µm)	0.26	1.82
13.00 to 13.50; (0.086 µm)	0.16	1.13
13.50 to 14.00; (0.061µm)	0.06	0.45
14.00 to 14.50; (0.043µm)	0.01	0.06
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	712.62

Notes: This sample contained a pot of largely sand and gravel sized material, with a discrete quantity of soft mud at the bottom. Efficient mixing in the pot proved impossible, so the entire sample was scraped and washed into a bowl, and sufficent water was added to achieve a paste-like consistency which could be mixed efficiently to ensure a representative laser subsample could be taken. The remainder was then wet-separated at 1 mm and dry sieved.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
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	5.28	37.89
-3.00 to -2.50; 5.6 mm	27.84	199.82
-2.50 to -2.00; 4 mm	3.47	24.89
-2.00 to -1.50; 2.8 mm	9.43	67.70
-1.50 to -1.00; 2 mm	2.60	18.66
-1.00 to -0.50; 1.4 mm	1.24	8.88
-0.50 to 0.00; 1 mm	0.04	0.26
0.00 to 0.50; (707 µm)	0.26	1.85
0.50 to 1.00; (500 µm)	3.27	23.44
1.00 to 1.50; (353.6 µm)	11.17	80.15
1.50 to 2.00; (250 µm)	11.68	83.80
2.00 to 2.50; (176.8 µm)	5.16	37.01
2.50 to 3.00; (125 µm)	1.56	11.16
3.00 to 3.50; (88.39 µm)	0.70	4.99
3.50 to 4.00; (62.5 µm)	0.52	3.72
4.00 to 4.50; (44.19 µm)	0.62	4.45
4.50 to 5.00; (31.25 µm)	0.92	6.58
5.00 to 5.50; (22.097 µm)	0.98	7.04
5.50 to 6.00; (15.625 µm)	1.24	8.92
6.00 to 6.50; (11.049 µm)	1.44	10.37
6.50 to 7.00; (7.813 µm)	1.50	10.75
7.00 to 7.50; (5.524 µm)	1.51	10.81
7.50 to 8.00; (3.906 µm)	1.40	10.07
8.00 to 8.50; (2.762 µm)	1.16	8.31
8.50 to 9.00; (1.953 µm)	0.92	6.62
9.00 to 9.50; (1.381 µm)	0.75	5.40
9.50 to 10.00; (0.977 µm)	0.61	4.38
10.00 to 10.50; (0.691 µm)	0.51	3.68
10.50 to 11.00; (0.488 µm)	0.48	3.43
11.00 to 11.50; (0.345 µm)	0.47	3.34
11.50 to 12.00; (0.244 µm)	0.43	3.10
12.00 to 12.50; (0.173 µm)	0.35	2.52
12.50 to 13.00; (0.122 µm)	0.27	1.91
13.00 to 13.50; (0.086 µm)	0.17	1.20
13.50 to 14.00; (0.061µm)	0.07	0.47
14.00 to 14.50; (0.043µm)	0.01	0.06
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	717.63

Notes: This sample contained a pot of largely sand and gravel sized material, with a discrete quantity of soft mud at the bottom. Efficient mixing in the pot proved impossible, so the entire sample was scraped and washed into a bowl, and sufficent water was added to achieve a paste-like consistency which could be mixed efficiently to ensure a representative laser subsample could be taken. The remainder was then wet-separated at 1 mm and dry sieved.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
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	5.47	39.43
-3.00 to -2.50; 5.6 mm	26.88	193.92
-2.50 to -2.00; 4 mm	2.68	19.34
-2.00 to -1.50; 2.8 mm	10.56	76.18
-1.50 to -1.00; 2 mm	2.73	19.68
-1.00 to -0.50; 1.4 mm	1.19	8.62
-0.50 to 0.00; 1 mm	0.09	0.65
0.00 to 0.50; (707 µm)	0.56	4.02
0.50 to 1.00; (500 µm)	3.69	26.59
1.00 to 1.50; (353.6 µm)	10.86	78.33
1.50 to 2.00; (250 µm)	11.26	81.24
2.00 to 2.50; (176.8 µm)	5.18	37.39
2.50 to 3.00; (125 µm)	1.57	11.36
3.00 to 3.50; (88.39 µm)	0.71	5.10
3.50 to 4.00; (62.5 µm)	0.54	3.87
4.00 to 4.50; (44.19 µm)	0.63	4.58
4.50 to 5.00; (31.25 µm)	0.94	6.81
5.00 to 5.50; (22.097 µm)	1.07	7.69
5.50 to 6.00; (15.625 µm)	1.27	9.16
6.00 to 6.50; (11.049 µm)	1.46	10.51
6.50 to 7.00; (7.813 µm)	1.49	10.77
7.00 to 7.50; (5.524 µm)	1.50	10.85
7.50 to 8.00; (3.906 µm)	1.41	10.20
8.00 to 8.50; (2.762 µm)	1.17	8.43
8.50 to 9.00; (1.953 µm)	0.94	6.77
9.00 to 9.50; (1.381 µm)	0.78	5.59
9.50 to 10.00; (0.977 µm)	0.62	4.49
10.00 to 10.50; (0.691 µm)	0.51	3.71
10.50 to 11.00; (0.488 µm)	0.48	3.44
11.00 to 11.50; (0.345 µm)	0.47	3.40
11.50 to 12.00; (0.244 µm)	0.44	3.17
12.00 to 12.50; (0.173 µm)	0.35	2.55
12.50 to 13.00; (0.122 µm)	0.26	1.91
13.00 to 13.50; (0.086 µm)	0.16	1.18
13.50 to 14.00; (0.061µm)	0.06	0.46
14.00 to 14.50; (0.043µm)	0.01	0.06
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	721.46

Notes: This sample contained a pot of largely sand and gravel sized material, with a discrete quantity of soft mud at the bottom. Efficient mixing in the pot proved impossible, so the entire sample was scraped and washed into a bowl, and sufficent water was added to achieve a paste-like consistency which could be mixed efficiently to ensure a representative laser subsample could be taken. The remainder was then wet-separated at 1 mm and dry sieved.

APPENDIX 3. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS74.

Exercise Code:	PS74
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	6.09	43.24
-3.00 to -2.50; 5.6 mm	27.02	191.94
-2.50 to -2.00; 4 mm	2.36	16.74
-2.00 to -1.50; 2.8 mm	10.42	74.03
-1.50 to -1.00; 2 mm	2.70	19.19
-1.00 to -0.50; 1.4 mm	1.20	8.53
-0.50 to 0.00; 1 mm	0.06	0.44
0.00 to 0.50; (707 µm)	0.32	2.25
0.50 to 1.00; (500 µm)	3.71	26.38
1.00 to 1.50; (353.6 µm)	11.18	79.41
1.50 to 2.00; (250 µm)	11.43	81.19
2.00 to 2.50; (176.8 µm)	5.13	36.47
2.50 to 3.00; (125 µm)	1.57	11.16
3.00 to 3.50; (88.39 µm)	0.68	4.85
3.50 to 4.00; (62.5 µm)	0.52	3.70
4.00 to 4.50; (44.19 µm)	0.61	4.33
4.50 to 5.00; (31.25 µm)	0.92	6.51
5.00 to 5.50; (22.097 µm)	1.03	7.29
5.50 to 6.00; (15.625 µm)	1.24	8.79
6.00 to 6.50; (11.049 µm)	1.42	10.12
6.50 to 7.00; (7.813 µm)	1.45	10.33
7.00 to 7.50; (5.524 µm)	1.46	10.39
7.50 to 8.00; (3.906 µm)	1.37	9.74
8.00 to 8.50; (2.762 µm)	1.13	8.04
8.50 to 9.00; (1.953 µm)	0.90	6.42
9.00 to 9.50; (1.381 µm)	0.75	5.30
9.50 to 10.00; (0.977 µm)	0.60	4.30
10.00 to 10.50; (0.691 µm)	0.51	3.60
10.50 to 11.00; (0.488 µm)	0.47	3.37
11.00 to 11.50; (0.345 µm)	0.47	3.32
11.50 to 12.00; (0.244 µm)	0.43	3.08
12.00 to 12.50; (0.173 µm)	0.35	2.47
12.50 to 13.00; (0.122 µm)	0.26	1.84
13.00 to 13.50; (0.086 µm)	0.16	1.14
13.50 to 14.00; (0.061µm)	0.06	0.44
14.00 to 14.50; (0.043µm)	0.01	0.06
>14.5;(0.01µm)	0.00	0.00
TOTAL	100.00	710.37

Notes: This sample contained a pot of largely sand and gravel sized material, with a discrete quantity of soft mud at the bottom. Efficient mixing in the pot proved impossible, so the entire sample was scraped and washed into a bowl, and sufficent water was added to achieve a paste-like consistency which could be mixed efficiently to ensure a representative laser subsample could be taken. The remainder was then wet-separated at 1 mm and dry sieved.