NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS81

Particle Size Component 2021/22

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Søren Pears, Lydia McIntyre-Brown & David Hall
nmbaqc@apemltd.co.uk

APEM

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APPENDICES

BENCHMARK DATA

Table 1. Summary data for the benchmark replicates distributed as PS81.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis)
PSA_2830 BM REP 1	NMBAQC	16.89	65.85	17.26	Gravelly Muddy Sand
PSA_2831 BM REP 2	NMBAQC	17.77	64.81	17.42	Gravelly Muddy Sand
PSA_2832 BM REP 3	NMBAQC	17.92	64.56	17.51	Gravelly Muddy Sand
PSA_2833 BM REP 4	NMBAQC	17.77	64.47	17.75	Gravelly Muddy Sand
PSA_2834 BM REP 5	NMBAQC	17.56	65.14	17.30	Gravelly Muddy Sand
BM REP AVERAGE	NMBAQC	17.58	64.97	17.45	Gravelly Muddy Sand

Table 2. Summary of sieve data for the benchmark replicates distributed as PS81.

		PSA_2830 BM REP 1	PSA_2831 BM REP 2	PSA_2832 BM REP 3	PSA_2833 BM REP 4	PSA_2834 BM REP 5	BM Average
Sieves used		YES	YES	YES	YES	YES	YES
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		0.00	0.00	0.00	0.00	0.00	0.00
-3.00 to -2.50; 5.6 mm		0.00	0.00	0.00	0.00	0.00	0.00
-2.50 to -2.00; 4 mm		0.00	0.00	0.10	0.00	0.00	0.02
-2.00 to -1.50; 2.8 mm		9.43	15.73	13.96	13.76	12.07	12.99
-1.50 to -1.00; 2 mm		124.26	126.73	129.24	127.79	128.03	127.21
-1.00 to -0.50; 1.4 mm		38.93	31.47	33.59	31.61	33.50	33.82
-0.50 to 0.00; 1.0 mm		1.09	0.35	0.44	0.36	0.48	0.54
>1.0 mm		173.71	174.28	177.33	173.52	174.08	174.58
<1.0 mm	Base Pan	0.24	0.27	0.21	0.18	0.26	0.23
	Oven Dried	617.43	627.13	622.01	622.65	623.43	622.53
Total Weight (g)		791.38	801.68	799.55	796.35	797.77	797.35

BENCHMARK DATA

Table 3. Summary of final laser data for the benchmark replicates distributed as PS81.

	PSA_2830 BM REP 1	PSA_2831 BM REP 2	PSA_2832 BM REP 3	PSA_2833 BM REP 4	PSA_2834 BM REP 5	BM AVERAGE
0.00 to 0.50; (707 µm)	2.11	1.81	1.69	1.58	1.51	1.74
0.50 to 1.00; (500 µm)	9.72	9.71	9.28	9.32	9.46	9.50
1.00 to 1.50; (353.6 µm)	23.83	23.75	23.70	23.72	24.15	23.83
1.50 to 2.00; (250 µm)	22.66	22.76	22.79	22.86	23.01	22.82
2.00 to 2.50; (176.8 µm)	9.64	9.87	9.82	9.79	9.81	9.79
2.50 to 3.00; (125 µm)	3.59	3.62	3.63	3.60	3.62	3.61
3.00 to 3.50; (88.39 µm)	3.00	2.95	3.10	3.05	2.96	3.01
3.50 to 4.00; (62.5 µm)	3.34	3.27	3.48	3.38	3.34	3.36
4.00 to 4.50; (44.19 µm)	3.27	3.26	3.30	3.28	3.25	3.27
4.50 to 5.00; (31.25 µm)	2.75	2.79	2.82	2.87	2.77	2.80
5.00 to 5.50; (22.097 µm)	2.10	2.11	2.18	2.18	2.12	2.14
5.50 to 6.00; (15.625 µm)	1.64	1.66	1.62	1.66	1.61	1.64
6.00 to 6.50; (11.049 µm)	1.54	1.54	1.52	1.56	1.52	1.54
6.50 to 7.00; (7.813 µm)	1.48	1.47	1.47	1.50	1.48	1.48
7.00 to 7.50; (5.524 µm)	1.43	1.43	1.44	1.45	1.44	1.44
7.50 to 8.00; (3.906 µm)	1.33	1.34	1.35	1.36	1.33	1.34
8.00 to 8.50; (2.762 µm)	1.13	1.15	1.16	1.17	1.13	1.15
8.50 to 9.00; (1.953 µm)	0.94	0.96	0.97	0.98	0.95	0.96
9.00 to 9.50; (1.381 µm)	0.81	0.82	0.83	0.84	0.81	0.82
9.50 to 10.00; (0.977 µm)	0.70	0.71	0.73	0.73	0.71	0.72
10.00 to 10.50; (0.691 µm)	0.62	0.62	0.64	0.65	0.63	0.63
10.50 to 11.00; (0.488 µm)	0.55	0.56	0.58	0.58	0.57	0.57
11.00 to 11.50; (0.345 µm)	0.50	0.51	0.52	0.53	0.51	0.51
11.50 to 12.00; (0.244 µm)	0.44	0.44	0.46	0.46	0.44	0.45
12.00 to 12.50; (0.173 µm)	0.35	0.36	0.37	0.37	0.35	0.36
12.50 to 13.00; (0.122 µm)	0.27	0.28	0.28	0.28	0.27	0.28
13.00 to 13.50; (0.086 µm)	0.17	0.18	0.18	0.18	0.17	0.18
13.50 to 14.00; (0.061 µm)	0.07	0.07	0.07	0.07	0.07	0.07
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.01	0.01	0.01
>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
MEAN:	Medium Sand	Medium Sand	Medium Sand	Medium Sand	Medium Sand	Medium Sand
SORTING:	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted
SKEWNESS:	Fine Skewed	Fine Skewed	Fine Skewed	Fine Skewed	Fine Skewed	Fine Skewed
KURTOSIS:	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic
MODE:	Bimodal	Bimodal	Bimodal	Bimodal	Bimodal	Bimodal
MODE 1 (µm):	426.8	426.8	426.8	426.8	426.8	426.8
MODE 2 (µm):	2400	2400	2400	2400	2400	2400
MODE 3 (µm):	0	0	0	0	0	0

BENCHMARK DATA

Table 4. Summary of Coefficient of Variation for Benchmark laser replicates for PS81.

		PSA_2830 BM REP 1	PSA_2831 BM REP 2	PSA_2832 BM REP 3	PSA_2833 BM REP 4	PSA_2834 BM REP 5
D_{10}	Subsample 1	2.40	1.43	2.16	0.46	1.07
	Subsample 2	1.69	2.10	2.40	1.29	0.06
	Subsample 3	0.91	0.66	1.10	1.30	3.16
					n	
D_{50}	Subsample 1	0.24	0.63	0.44	0.17	0.23
	Subsample 2	0.07	0.41	0.29	0.20	0.12
	Subsample 3	0.26	0.18	0.14	0.51	0.74
D_{90}	Subsample 1	0.84	0.88	1.05	0.16	2.08
	Subsample 2	0.27	0.77	0.71	1.01	1.31
	Subsample 3	0.37	0.60	0.22	0.90	1.67

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

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 PS81.

If laser used, provide manufacturer/model:	Beckman Coulter LS 13320
Dispersion unit:	Universal Liquid Module
Analysis model:	Mie
Dispersant used:	Water (RI - 1.33)
Particle Refractive Index:	1.55
Particle Absorption Index:	0.1
Fines extension	PIDS system
Obscuration (average):	10%
Pump speed (% or rpm)	80%
Stirrer speed (% or rpm)	n/a
Ultrasonic duration (seconds)	20
Ultrasonic level (eg %, unit as described by instrument manual)	2

Figure 1a. Percentage bar charts resulting from final sieve analysis of 5 replicate samples of sediment distibuted as PS81 (Benchmark Data).

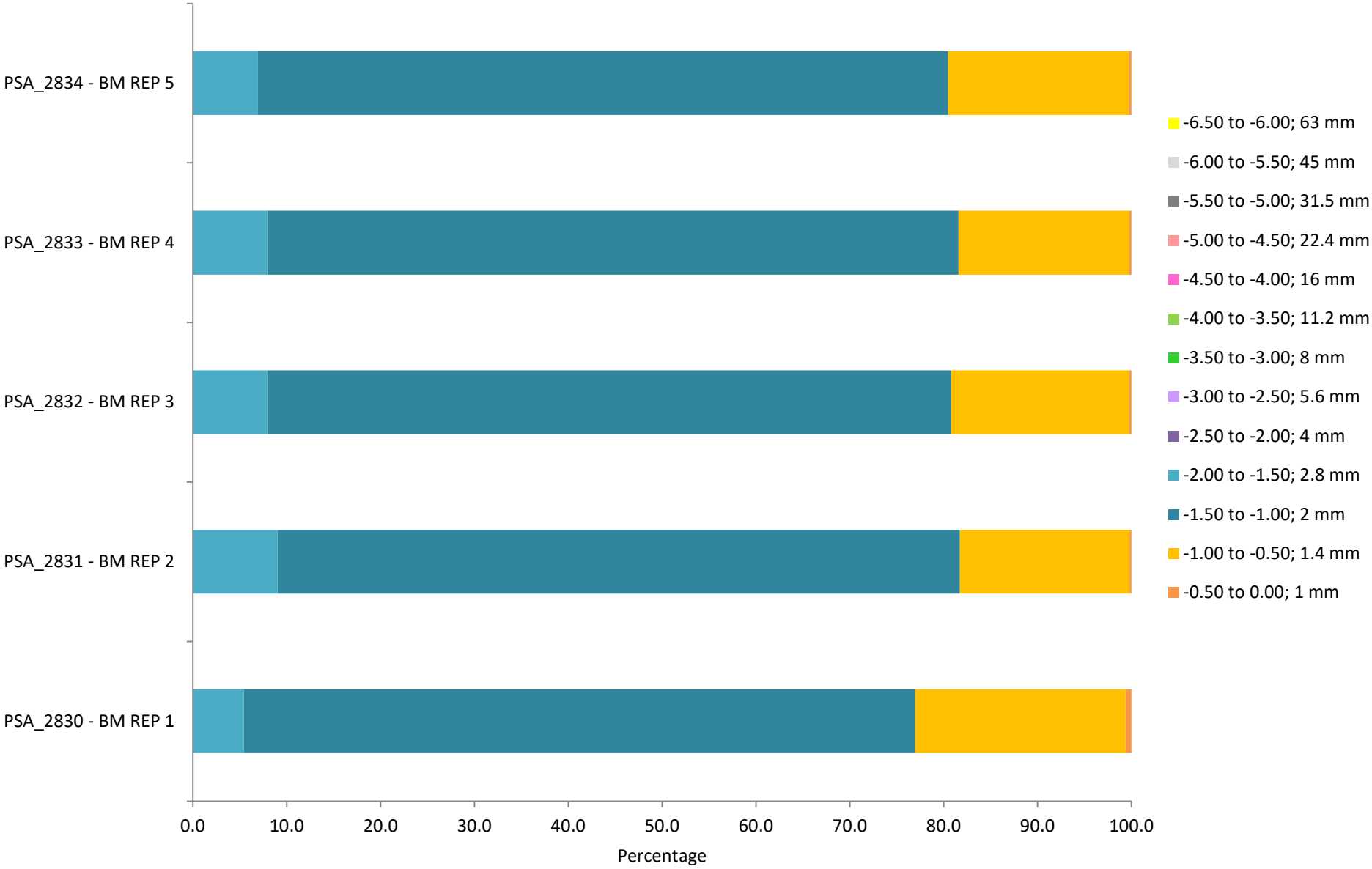

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Figure 1b. Particle size distribution curves resulting from final laser analysis of 5 replicate samples of sediment distibuted as PS81 (Benchmark Data).

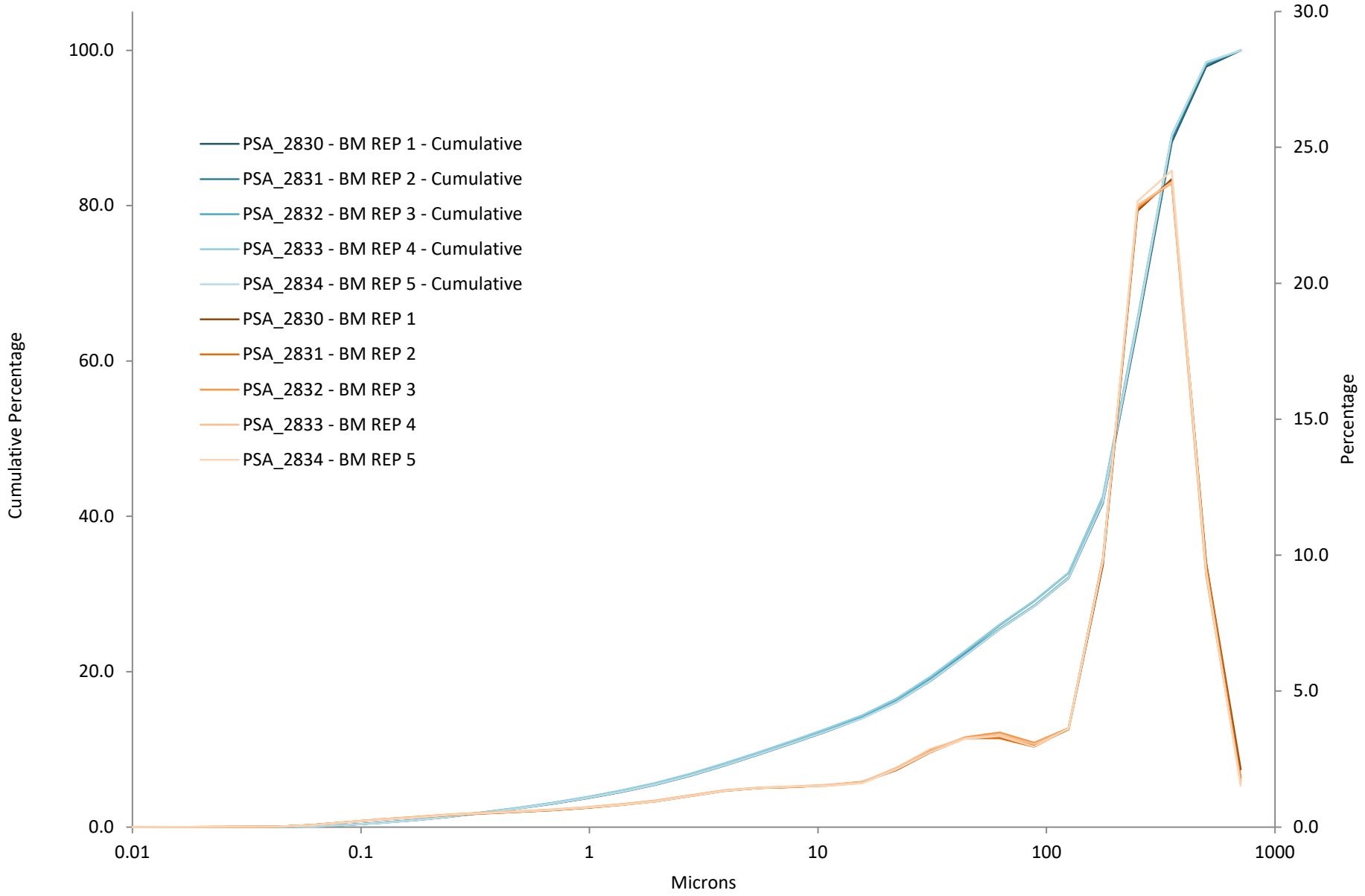
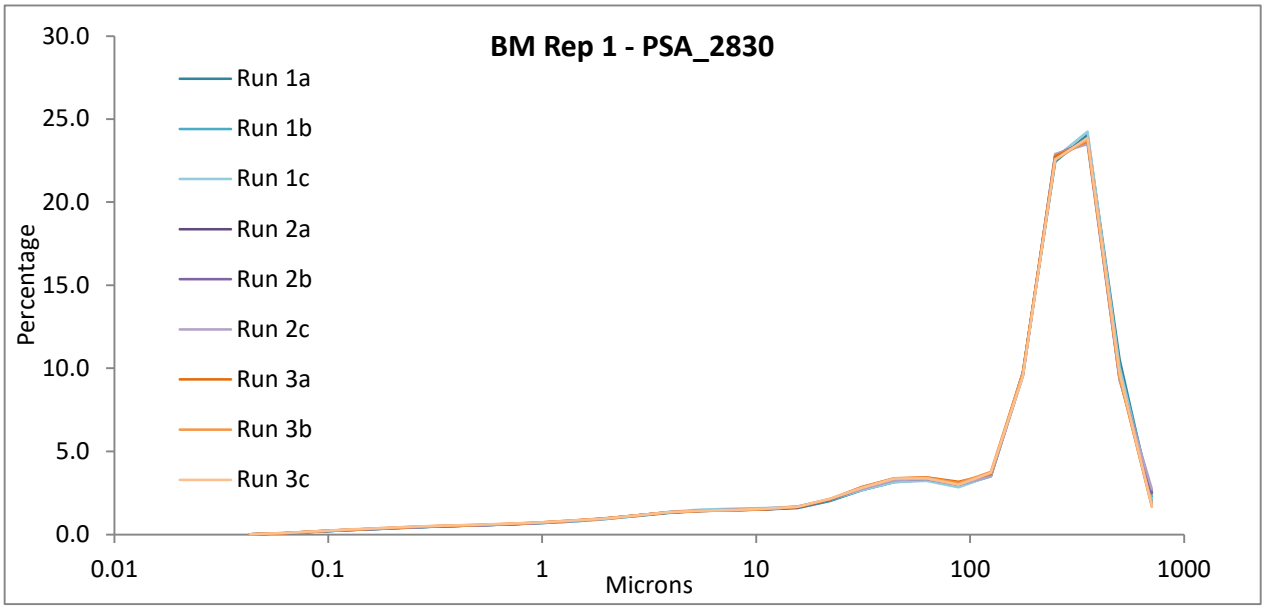
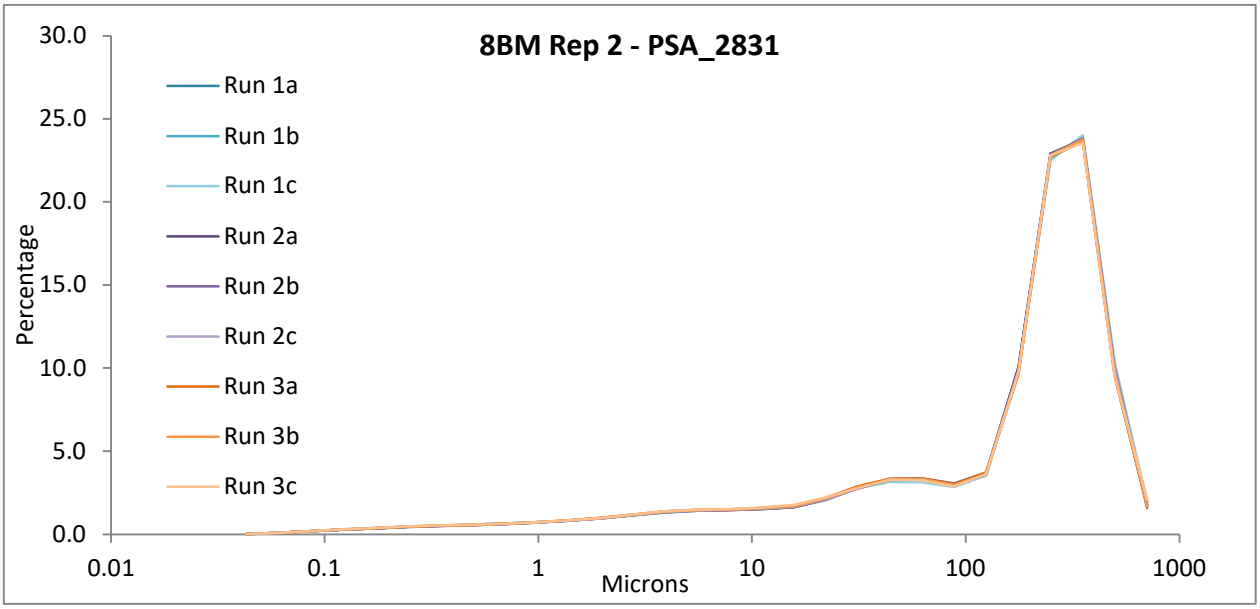


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS81.





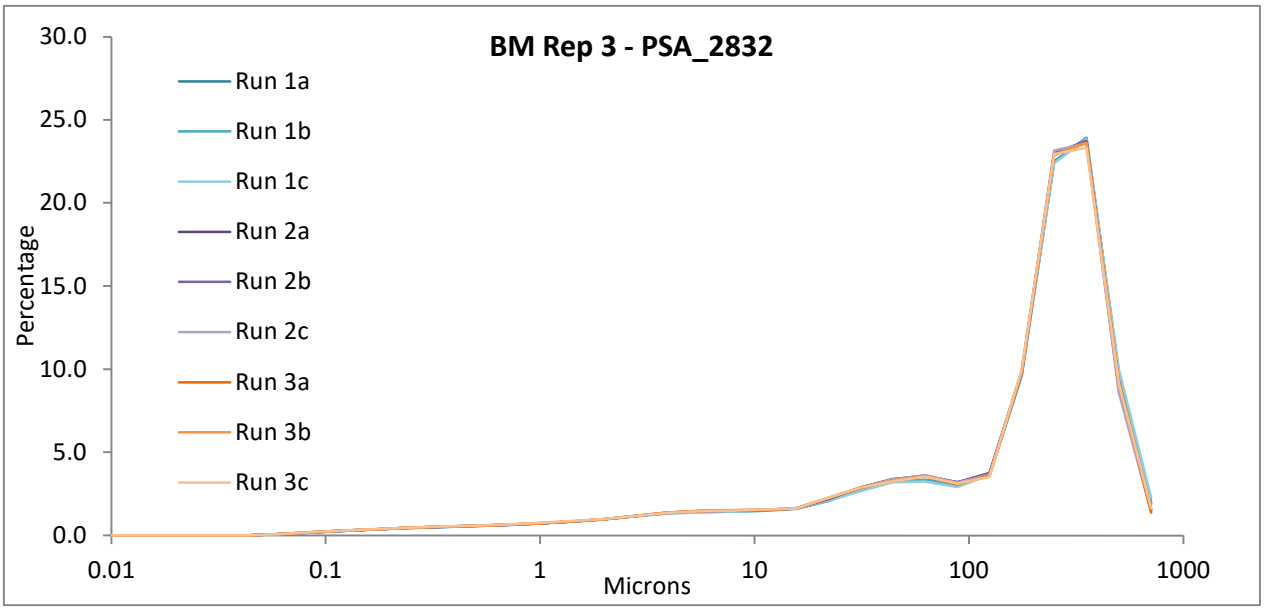
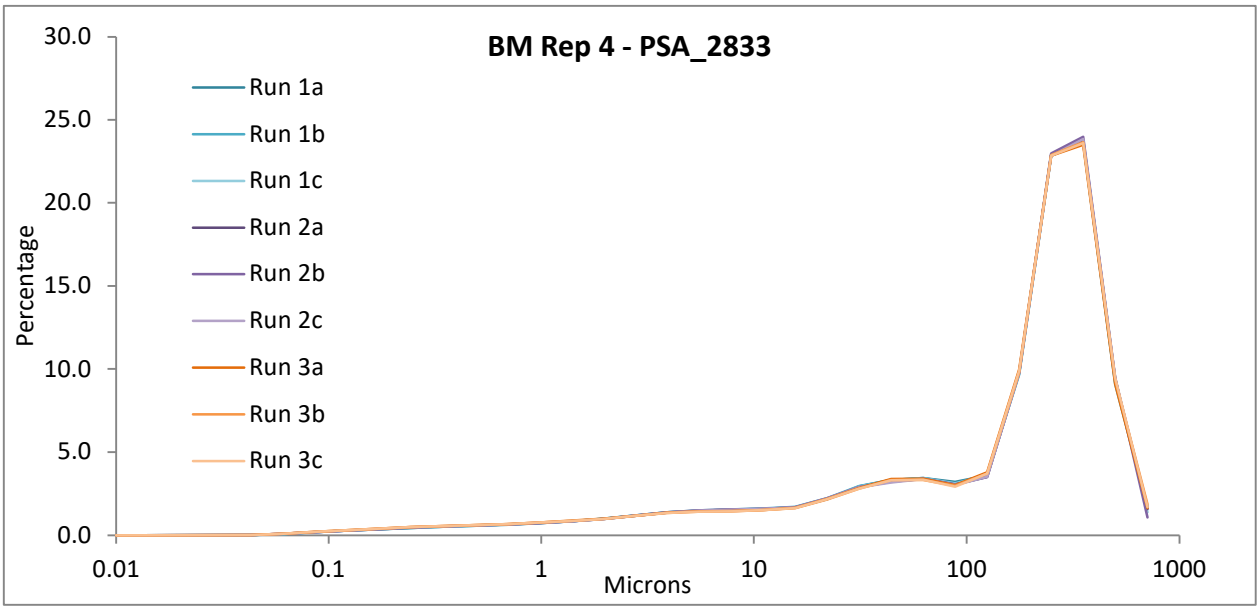


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS81.



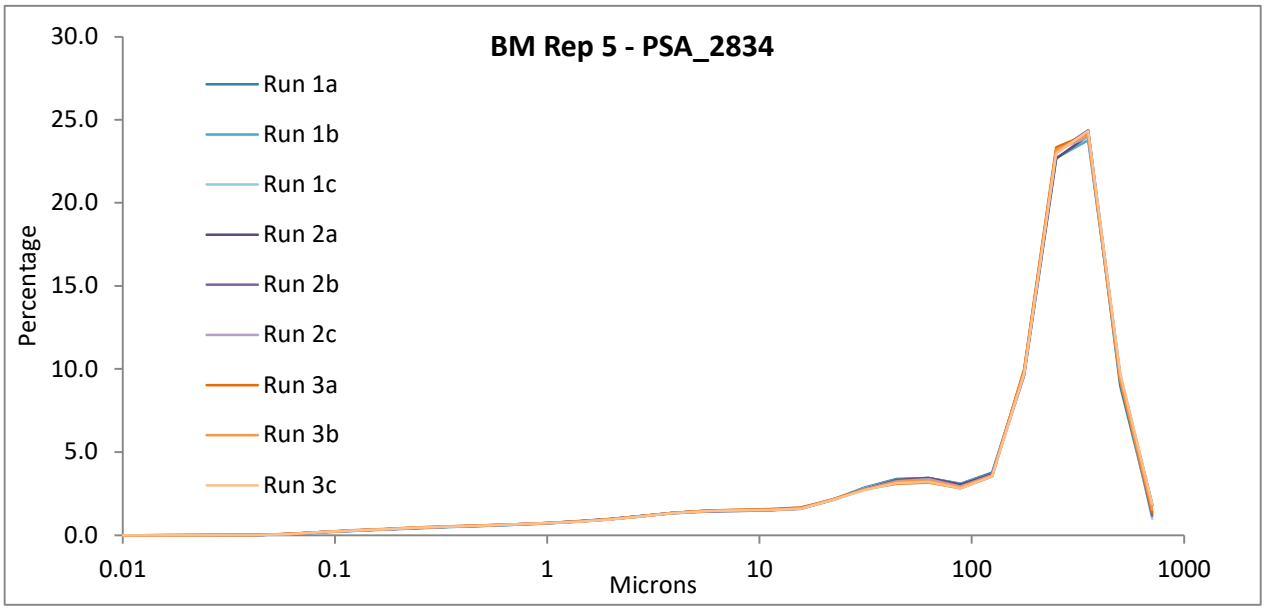
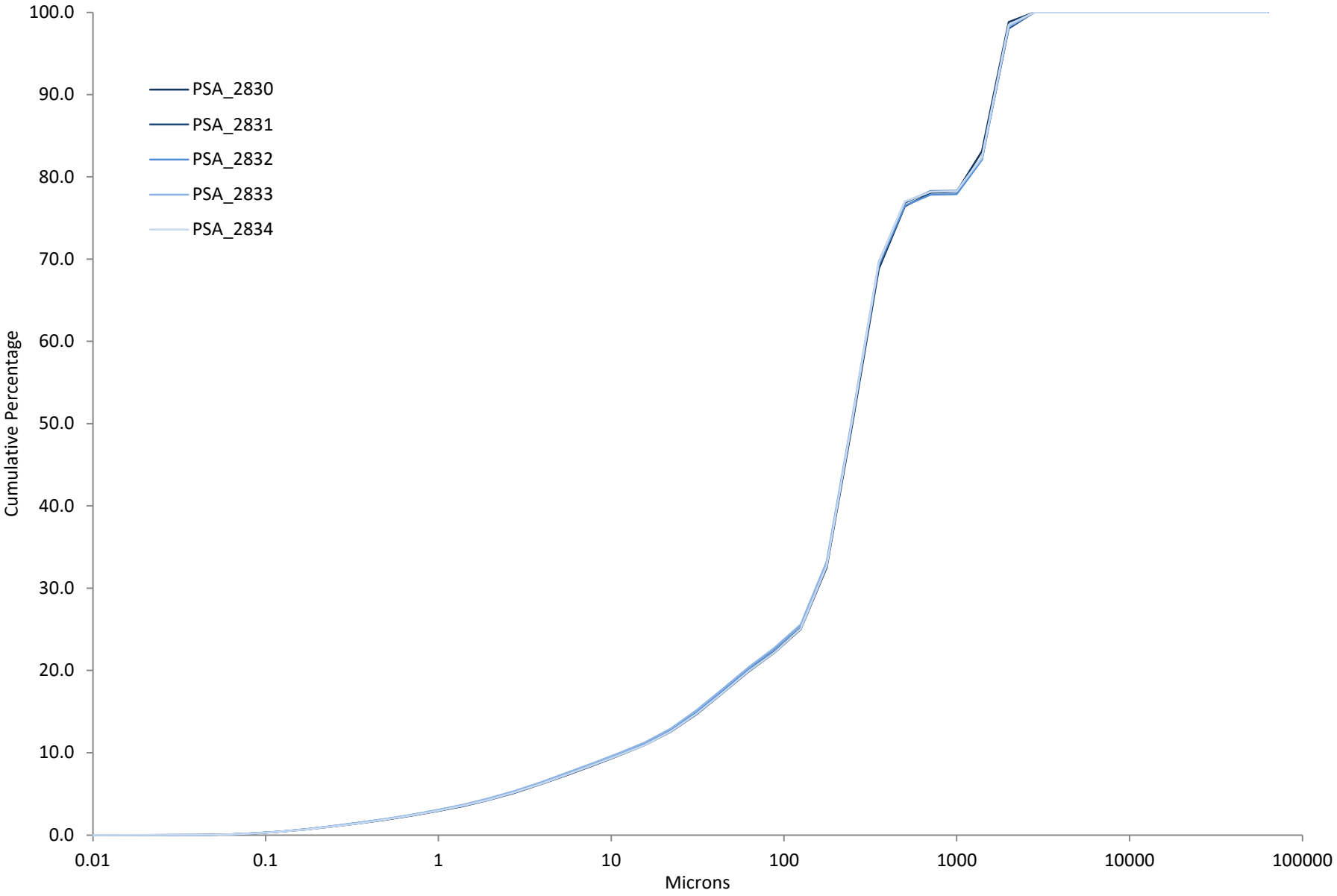


Figure 3. Particle size distribution curves resulting from analysis of 5 replicate samples of sediment distibuted as PS81 (Benchmark Data).



PARTICIPANT DATA

Table 6. Summary of equipment and methods used by participants and sample summary data provided by participants for sediment distributed as PS81.

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	17.58	64.97	17.45	Gravelly muddy sand	Gravelly Muddy Sand
PSA_2801	Yes	Yes	NMBAQC	No	No	16.4	73.8	9.8	gravelly muddy Sand	Gravelly Muddy Sand
PSA_2802	Yes	Yes	NMBAQC	No	No	15.03	69.25	15.72	mixed sediments	Gravelly Muddy Sand
PSA_2803	Yes	Yes	NMBAQC	No	No	16.87	65.76	17.37	Gravelly Muddy Sand	Gravelly Muddy Sand
PSA_2804	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p
PSA_2805	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p
PSA_2806	Yes	Yes	NMBAQC	No	No	16.1	66.6	17.2	gravelly muddy sand	Gravelly Muddy Sand
PSA_2807	Yes	Yes	NMBAQC	No	No	17.16	61.27	21.57	Gravelly Muddy Sand	Gravelly Muddy Sand
PSA_2808	Yes	Yes	NMBAQC	No	No	17.95	64.62	17.43	Gravelly muddy sand	Gravelly Muddy Sand
PSA_2809	Yes	Yes	OTHER	No	No	12.86	67.98	19.15	Gravelly muddy sand	Gravelly Muddy Sand
PSA_2810	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p
PSA_2811	Yes	Yes	NMBAQC	No	No	17.33	65.90	16.78	Gravelly, muddy sand	Gravelly Muddy Sand
PSA_2812	Yes	Yes	NMBAQC	No	No	16.94	70.32	12.74	Gravelly Muddy Sand	Gravelly Muddy Sand
PSA_2813	No	Yes	OTHER	No	No	-	-	-	-	-
PSA_2814	Yes	Yes	NMBAQC	No	No	15.87	72.15	11.98	gravelly muddy Sand	Gravelly Muddy Sand
PSA_2815	Yes	Yes	NMBAQC	No	No	16.63	66.09	17.28	Gravelly Muddy Sand	Gravelly Muddy Sand
PSA_2818	Yes	Yes	NMBAQC	No	No	17.28	69.32	13.40	Muddy Gravelly Sand	Gravelly Muddy Sand
PSA_2829_v2	Yes	Yes	OTHER	No	No	19.73	66.61	13.65	Gravelly muddy sand	Gravelly Muddy Sand
PSA_2835	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.

* Sediment description from Gradistat textural group based on final data supplied by participant.
n/p - not participating in this exercise at current time.

PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS81.

		Participant									
Phi interval (explicit) + sieve mesh		Benchmark Average	PSA_2801	PSA_2802	PSA_2803	PSA_2804	PSA_2805	PSA_2806	PSA_2807	PSA_2808	PSA_2809	PSA_2810
Sieves Used		YES	YES	YES	YES	0.00	n/p	YES	YES	YES	YES	0.00
-6.50 to -6.00; 63 mm		0.00	0.00	0.00	0.00	n/p	n/p	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	n/p	n/p	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	n/p	n/p	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	n/p	n/p	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	n/p	n/p	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	n/p	n/p	0.00	0.00	0.00	0.00	n/p
-3.50 to -3.00; 8 mm		0.00	0.00	0.00	0.00	n/p	n/p	0.00	0.00	0.00	0.00	n/p
-3.00 to -2.50; 5.6 mm		0.00	0.00	0.00	0.00	n/p	n/p	0.00	0.00	0.00	0.00	n/p
-2.50 to -2.00; 4 mm		0.02	0.00	0.00	0.00	n/p	n/p	0.00	0.00	0.00	0.00	n/p
-2.00 to -1.50; 2.8 mm		12.99	3.09	3.52	8.80	n/p	n/p	5.63	8.09	13.90	5.70	n/p
-1.50 to -1.00; 2 mm		127.21	134.53	109.23	123.59	n/p	n/p	127.26	122.33	128.24	97.20	n/p
-1.00 to -0.50; 1.4 mm		33.82	46.16	42.33	41.25	n/p	n/p	49.45	36.67	33.04	63.57	n/p
-0.50 to 0.00; 1 mm		0.54	1.29	1.09	1.10	n/p	n/p	1.09	0.49	0.45	6.27	n/p
*Total **		174.58	185.07	156.17	174.75	n/p	n/p	183.43	167.58	175.63	172.73	n/p
Summary Data												
< 0.00; >1 mm		174.58	185.07	156.17	174.75	n/p	n/p	183.43	167.58	175.63	172.73	n/p
> 0.00; <1 mm	Base pan	0.23	0.95	0.71	1.48	n/p	n/p	0.60	1.98	0.31	0.00	n/p
	Oven dried	622.53	652.88	593.16	608.45	n/p	n/p	641.64	590.38	616.00	627.20	n/p
Total Sample Weight		797.35	838.90	750.04	784.68	n/p	n/p	825.67	759.94	791.94	799.93	n/p

- No data provided.

n/p - not participating in this exercise at current time.

n/s - not subscribed to this part of the exercise.

PARTICIPANT DATA

Table 7. Raw sieve data (weight in grams) provided by participants for sediment distributed as PS81.

		Participant								
Phi interval (explicit) + sieve mesh		Benchmark Average	PSA_2811	PSA_2812	PSA_2813	PSA_2814	PSA_2815	PSA_2818	PSA_2829_v2	PSA_2835
Sieves Used		YES	YES	YES	NO	YES	YES	YES	YES	0
-6.50 to -6.00; 63 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	n/p
-6.00 to -5.50; 45 mm		0.00	0.00	0.00	n/s	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/s	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/s	0.00	0.00	0.00	0.00	n/p
-4.50 to -4.00; 16 mm		0.00	0.00	0.00	n/s	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/s	0.00	0.00	0.00	0.00	n/p
-3.50 to -3.00; 8 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	n/p
-3.00 to -2.50; 5.6 mm		0.00	0.00	0.00	n/s	0.00	0.00	0.00	0.00	n/p
-2.50 to -2.00; 4 mm		0.02	0.00	0.00	n/s	0.00	0.00	0.00	0.00	n/p
-2.00 to -1.50; 2.8 mm		12.99	7.31	10.72	n/s	5.34	8.20	10.73	0.00	n/p
-1.50 to -1.00; 2 mm		127.21	117.27	122.97	n/s	120.58	122.82	133.31	165.69	n/p
-1.00 to -0.50; 1.4 mm		33.82	38.20	40.12	n/s	46.59	42.10	39.18	0.00	n/p
-0.50 to 0.00; 1 mm		0.54	0.34	0.53	n/s	1.84	1.23	0.89	10.09	n/p
*Total**		174.58	163.12	174.34	n/s	174.34	174.35	184.11	175.78	n/p
Summary Data										
< 0.00; >1 mm		174.58	163.12	174.34	n/s	174.34	174.35	184.11	175.78	n/p
> 0.00; <1 mm	Base pan	0.23	1.38	0.37	n/s	0.69	1.19	12.16	-	n/p
	Oven dried	622.53	554.48	614.70	n/s	618.42	612.25	637.16	-	n/p
Total Sample Weight		797.35	718.98	789.41	n/s	793.45	787.79	833.43	-	n/p

- No data provided.

n/p - not participating in this exercise at current time.

n/s - not subscribed to this part of the exercise.

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS81 with Gradistat output.

Microns	Benchmark Average	PSA_2801	PSA_2802	PSA_2803	PSA_2804	PSA_2805	PSA_2806
707	1.74	1.75	3.25	0.37	n/p	n/p	1.70
500	9.50	14.46	9.08	6.70	n/p	n/p	12.28
353.6	23.83	25.02	23.57	22.80	n/p	n/p	20.78
250	22.82	24.22	23.68	24.77	n/p	n/p	20.53
176.8	9.79	13.97	10.66	12.20	n/p	n/p	12.69
125	3.61	4.42	3.62	5.05	n/p	n/p	4.91
88.39	3.01	1.30	2.95	2.32	n/p	n/p	2.08
62.5	3.36	2.22	3.34	3.45	n/p	n/p	2.86
44.19	3.27	2.99	3.22	3.63	n/p	n/p	3.77
31.25	2.80	2.39	2.50	2.89	n/p	n/p	3.34
22.097	2.14	1.43	1.96	2.36	n/p	n/p	2.25
15.625	1.64	0.91	1.16	1.58	n/p	n/p	1.52
11.049	1.54	0.81	0.94	1.46	n/p	n/p	1.43
7.813	1.48	0.80	1.14	1.66	n/p	n/p	1.69
5.524	1.44	0.74	1.21	1.72	n/p	n/p	1.94
3.906	1.34	0.65	1.14	1.55	n/p	n/p	1.97
2.762	1.15	0.56	1.02	1.22	n/p	n/p	1.74
1.953	0.96	0.45	0.90	0.89	n/p	n/p	1.32
1.381	0.82	0.34	0.80	0.67	n/p	n/p	0.82
0.977	0.72	0.26	0.69	0.56	n/p	n/p	0.35
0.691	0.63	0.21	0.61	0.48	n/p	n/p	0.04
0.488	0.57	0.10	0.57	0.42	n/p	n/p	0.00
0.345	0.51	0.00	0.53	0.36	n/p	n/p	0.00
0.244	0.45	0.00	0.48	0.30	n/p	n/p	0.00
0.173	0.36	0.00	0.39	0.23	n/p	n/p	0.00
0.122	0.28	0.00	0.31	0.18	n/p	n/p	0.00
0.086	0.18	0.00	0.20	0.11	n/p	n/p	0.00
0.061	0.07	0.00	0.08	0.04	n/p	n/p	0.00
0.043	0.01	0.00	0.01	0.01	n/p	n/p	0.00
0.01	0.00	0.00	0.00	0.00	n/p	n/p	0.00
Total	100.00	100.00	100.00	100.00	0.00	0.00	100.00
GRADISTAT OUTPUTS							
MEAN:	Medium Sand	Medium Sand	Fine Sand	Fine Sand	n/p	n/p	Fine Sand
SORTING:	Very Poorly Sorted	Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	n/p	n/p	Very Poorly Sorted
SKEWNESS:	Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	n/p	n/p	Very Fine Skewed
KURTOSIS:	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Leptokurtic	n/p	n/p	Leptokurtic
MODE:	Bimodal	Unimodal	Unimodal	Unimodal	n/p	n/p	Bimodal
MODE 1 (µm):	426.8	426.8	301.8	301.8	n/p	n/p	426.8
MODE 2 (µm):	2400	-	-	-	n/p	n/p	53.345
MODE 3 (µm):	0	-	-	-	n/p	n/p	-

n/p - not participating in this exercise at current time.

PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS81 with Gradistat output.

Microns	BM Average	PSA_2807	PSA_2808	PSA_2809	PSA_2810	PSA_2811	PSA_2812
707	1.74	0.39	1.85	1.64	n/p	0.95	2.23
500	9.50	7.33	9.10	11.18	n/p	10.06	13.10
353.6	23.83	17.00	23.64	19.24	n/p	20.60	23.00
250	22.82	19.30	22.90	20.21	n/p	21.78	22.88
176.8	9.79	12.65	9.90	12.39	n/p	13.46	13.45
125	3.61	5.83	3.76	5.71	n/p	5.27	4.66
88.39	3.01	3.79	3.04	2.20	n/p	2.66	1.87
62.5	3.36	4.75	3.41	3.00	n/p	3.52	2.46
44.19	3.27	5.03	3.33	3.95	n/p	3.92	3.25
31.25	2.80	4.04	2.81	3.28	n/p	3.14	2.81
22.097	2.14	2.89	2.14	2.45	n/p	2.10	1.87
15.625	1.64	2.25	1.62	1.62	n/p	1.59	1.31
11.049	1.54	2.06	1.49	1.46	n/p	1.48	1.24
7.813	1.48	2.27	1.43	1.51	n/p	1.54	1.32
5.524	1.44	2.33	1.41	1.65	n/p	1.59	1.27
3.906	1.34	2.16	1.33	1.66	n/p	1.52	1.06
2.762	1.15	1.91	1.15	1.52	n/p	1.36	0.78
1.953	0.96	1.28	0.97	1.34	n/p	1.06	0.54
1.381	0.82	0.88	0.84	1.16	n/p	0.67	0.34
0.977	0.72	0.74	0.74	0.93	n/p	0.59	0.23
0.691	0.63	0.82	0.64	0.92	n/p	0.79	0.19
0.488	0.57	0.30	0.58	0.66	n/p	0.36	0.13
0.345	0.51	0.00	0.53	0.33	n/p	0.00	0.00
0.244	0.45	0.00	0.46	0.00	n/p	0.00	0.00
0.173	0.36	0.00	0.37	0.00	n/p	0.00	0.00
0.122	0.28	0.00	0.29	0.00	n/p	0.00	0.00
0.086	0.18	0.00	0.18	0.00	n/p	0.00	0.00
0.061	0.07	0.00	0.07	0.00	n/p	0.00	0.00
0.043	0.01	0.00	0.01	0.00	n/p	0.00	0.00
0.01	0.00	0.00	0.00	0.00	n/p	0.00	0.00
Total	100.00	100.00	100.00	100.00	0.00	100.00	100.00
GRADISTAT OUTPUTS							
MEAN:	Medium Sand	Medium Sand	Fine Sand	Fine Sand	n/p	Medium Sand	Fine Sand
SORTING:	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	Very Poorly Sorted	n/p	Very Poorly Sorted	Poorly Sorted
SKEWNESS:	Fine Skewed	Fine Skewed	Very Fine Skewed	Very Fine Skewed	n/p	Fine Skewed	Very Fine Skewed
KURTOSIS:	Very Leptokurtic	Leptokurtic	Leptokurtic	Leptokurtic	n/p	Very Leptokurtic	Very Leptokurtic
MODE:	Bimodal	Trimodal	Unimodal	Bimodal	n/p	Trimodal	Unimodal
MODE 1 (µm):	426.8	2400	426.8	301.8	n/p	301.8	426.8
MODE 2 (µm):	2400	301.8	-	53.345	n/p	2400	-
MODE 3 (µm):	0	53.345	-	-	n/p	53.345	-

n/p - not participating in this exercise at current time.

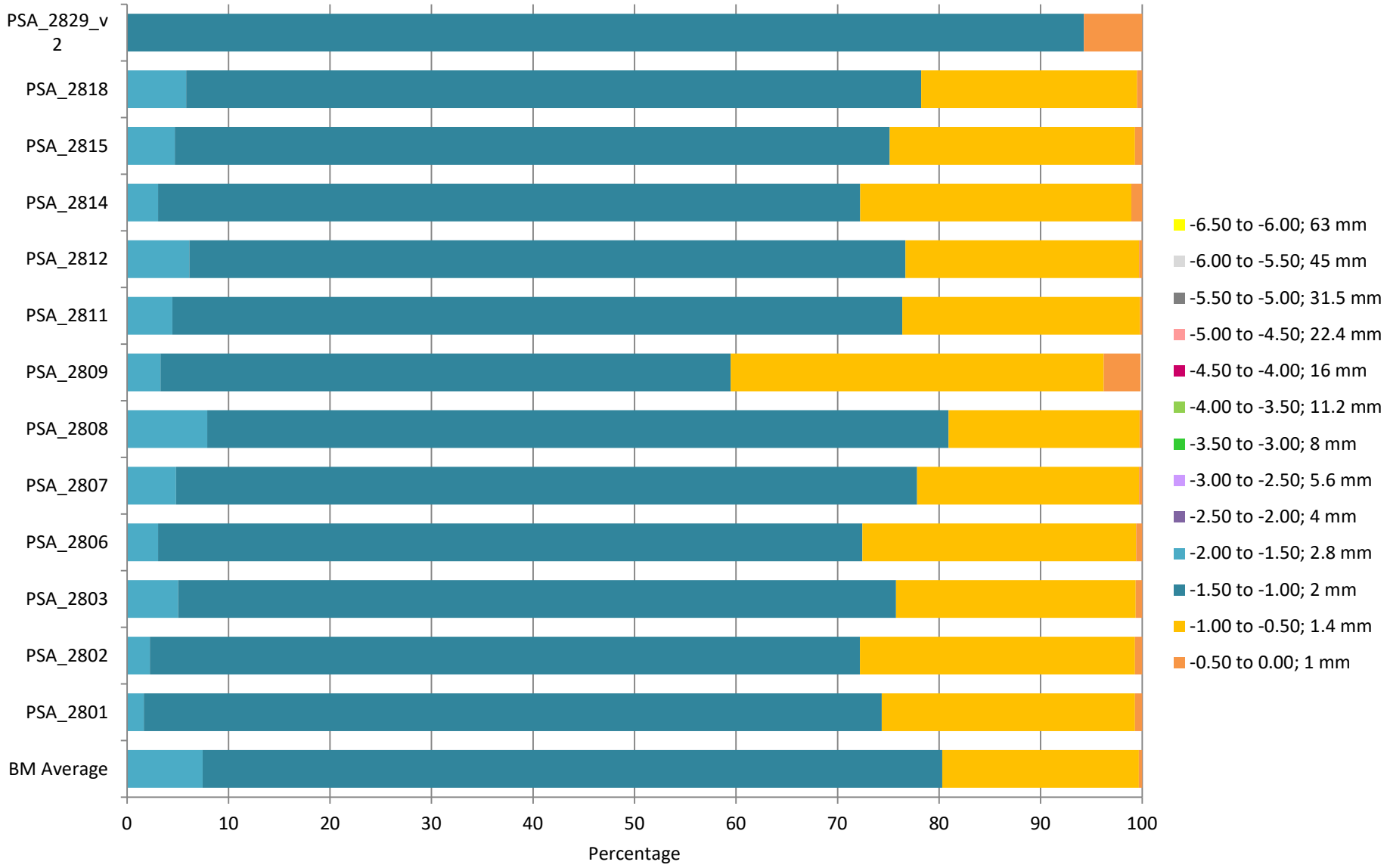
PARTICIPANT DATA

Table 8. Summary of final laser data for the participants for sediment distributed as PS81 with Gradistat output.

Microns	BM Average	PSA_2813	PSA_2814	PSA_2815	PSA_2818	PSA_2829_v2	PSA_2835
707	1.74	13.19	3.76	1.33	0.63	14.48	n/p
500	9.50	25.40	14.23	19.16	9.77	22.87	n/p
353.6	23.83	25.88	23.18	31.49	21.41	21.72	n/p
250	22.82	14.49	22.46	14.04	23.95	12.45	n/p
176.8	9.79	3.64	13.22	4.64	15.35	3.85	n/p
125	3.61	0.23	4.37	1.85	6.06	1.08	n/p
88.39	3.01	1.18	1.31	2.20	2.48	2.22	n/p
62.5	3.36	2.33	2.11	3.11	3.15	3.46	n/p
44.19	3.27	2.24	2.93	3.23	3.58	3.43	n/p
31.25	2.80	1.76	2.47	2.20	2.72	2.82	n/p
22.097	2.14	1.61	1.54	1.26	1.66	2.30	n/p
15.625	1.64	1.64	1.02	1.23	1.19	1.96	n/p
11.049	1.54	1.52	0.96	0.97	1.14	1.66	n/p
7.813	1.48	1.24	1.06	1.12	1.18	1.39	n/p
5.524	1.44	0.96	1.13	0.97	1.23	1.16	n/p
3.906	1.34	0.76	1.10	1.11	1.19	0.95	n/p
2.762	1.15	0.60	0.96	1.35	1.06	0.74	n/p
1.953	0.96	0.45	0.74	1.39	0.80	0.54	n/p
1.381	0.82	0.35	0.53	1.18	0.50	0.40	n/p
0.977	0.72	0.31	0.39	0.90	0.39	0.31	n/p
0.691	0.63	0.21	0.31	0.55	0.43	0.21	n/p
0.488	0.57	0.00	0.21	0.71	0.15	0.00	n/p
0.345	0.51	0.00	0.00	0.82	0.00	0.00	n/p
0.244	0.45	0.00	0.00	0.96	0.00	0.00	n/p
0.173	0.36	0.00	0.00	1.00	0.00	0.00	n/p
0.122	0.28	0.00	0.00	0.81	0.00	0.00	n/p
0.086	0.18	0.00	0.00	0.42	0.00	0.00	n/p
0.061	0.07	0.00	0.00	0.00	0.00	0.00	n/p
0.043	0.01	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	n/p
Total	100.00	100.00	100.00	100.00	100.00	100.00	0.00
GRADISTAT OUTPUTS							
MEAN:	Medium Sand	Medium Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand	n/p
SORTING:	Very Poorly Sorted	Poorly Sorted	Poorly Sorted	Very Poorly Sorted	Poorly Sorted	Poorly Sorted	n/p
SKEWNESS:	Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	n/p
KURTOSIS:	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	n/p
MODE:	Bimodal	Unimodal	Unimodal	Unimodal	Unimodal	Bimodal	n/p
MODE 1 (µm):	426.8	426.8	426.8	426.8	301.8	603.5	n/p
MODE 2 (µm):	2400	-	-	-	-	75.445	n/p
MODE 3 (µm):	0	-	-	-	-	-	n/p

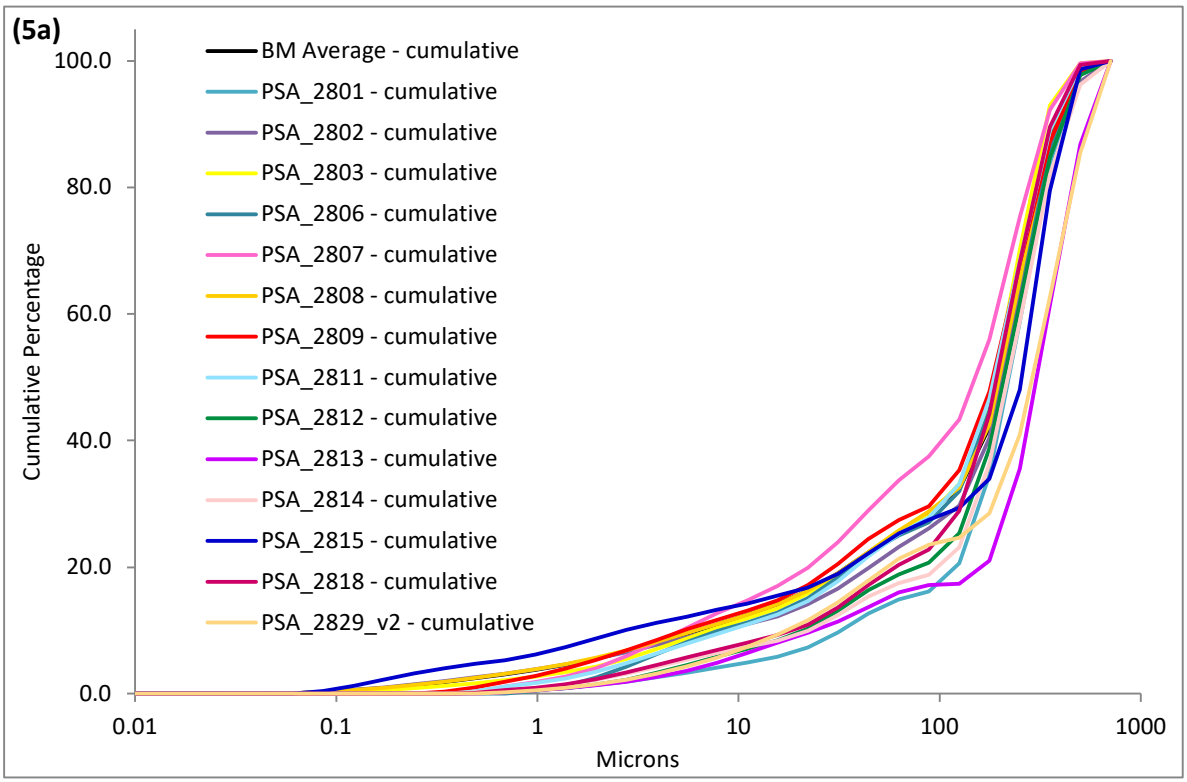
n/p - not participating in this exercise at current time.

Figure 4. Final sieve data (in percentages) provided by each participant for sediment distributed as PS81.



NMBAQC Particle Size Analysis
2021/22 - PS81

Figure 5. (a) Cumulative and (b) Differential final laser data provided by the participants and Benchmark average for sediment distributed as PS81.



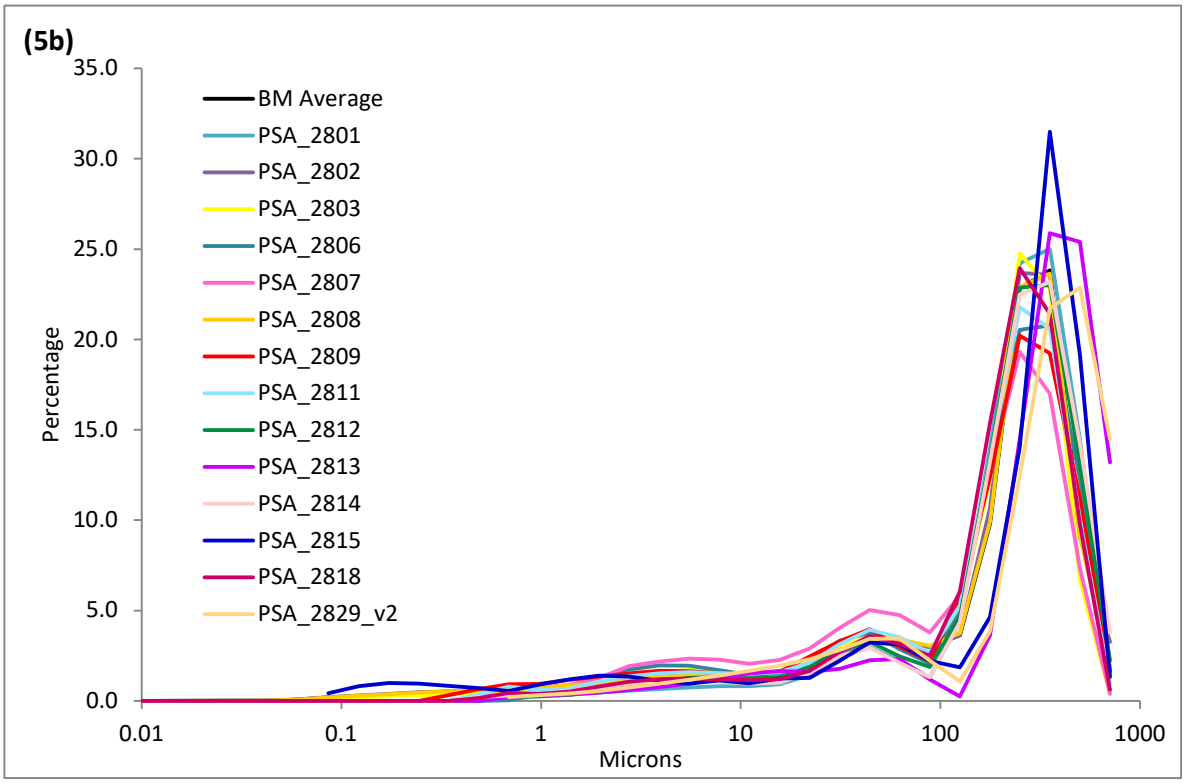


Figure 6. Particle size distribution curves from all participating laboratories and the Benchmark Average for sediment distributed as PS81.

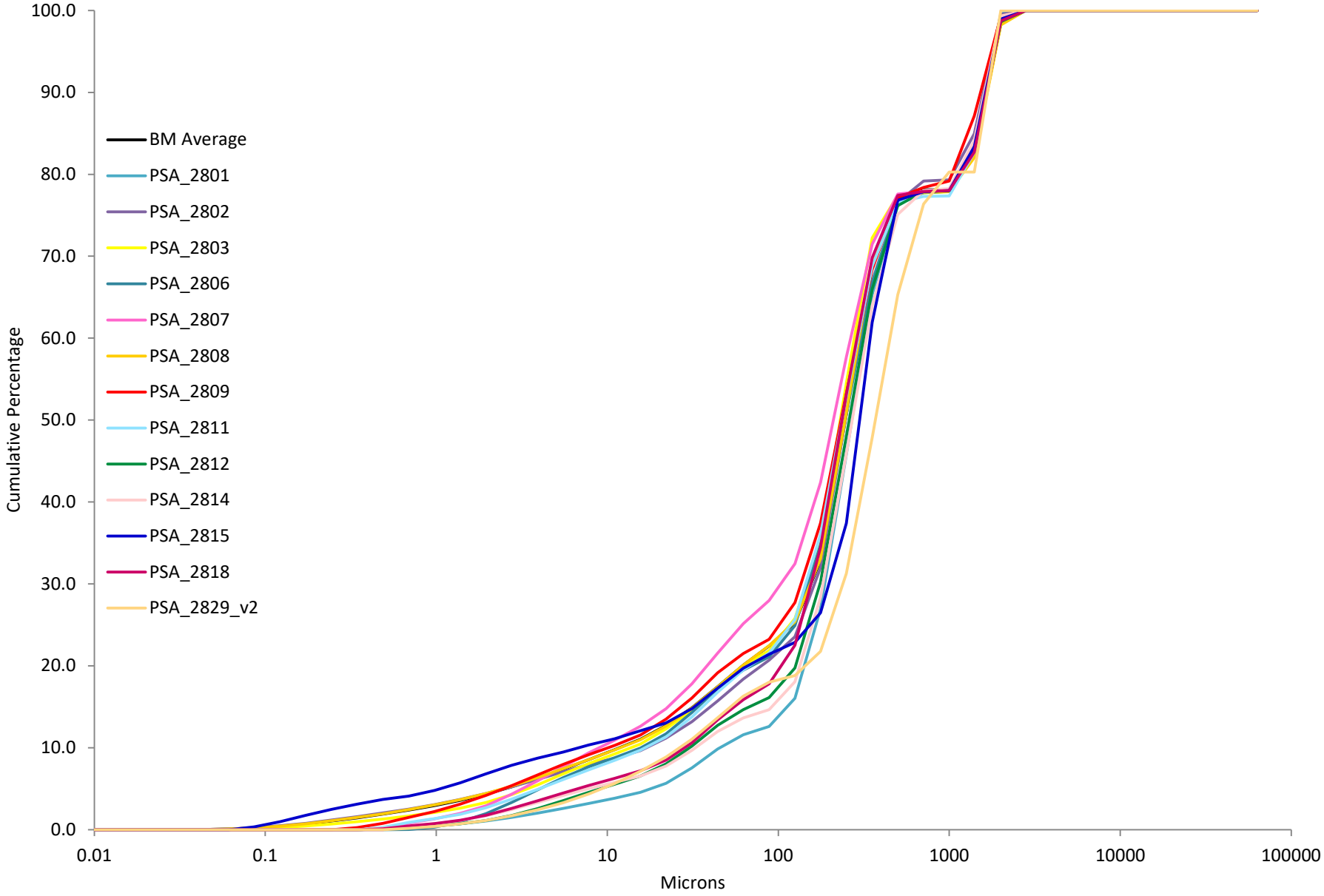
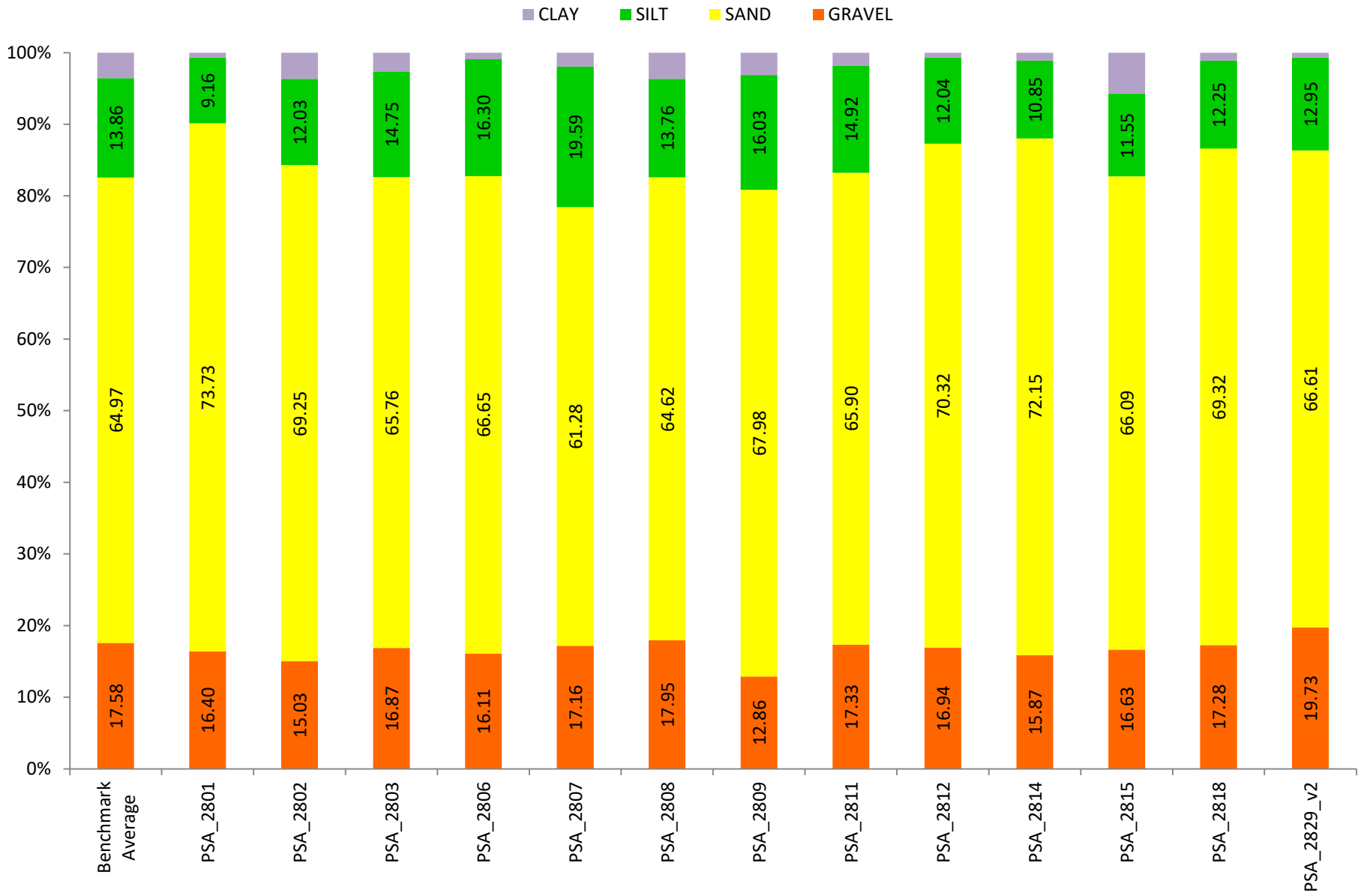


Figure 7. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the Benchmark Average for PS81.



NMBAQC Particle Size Analysis
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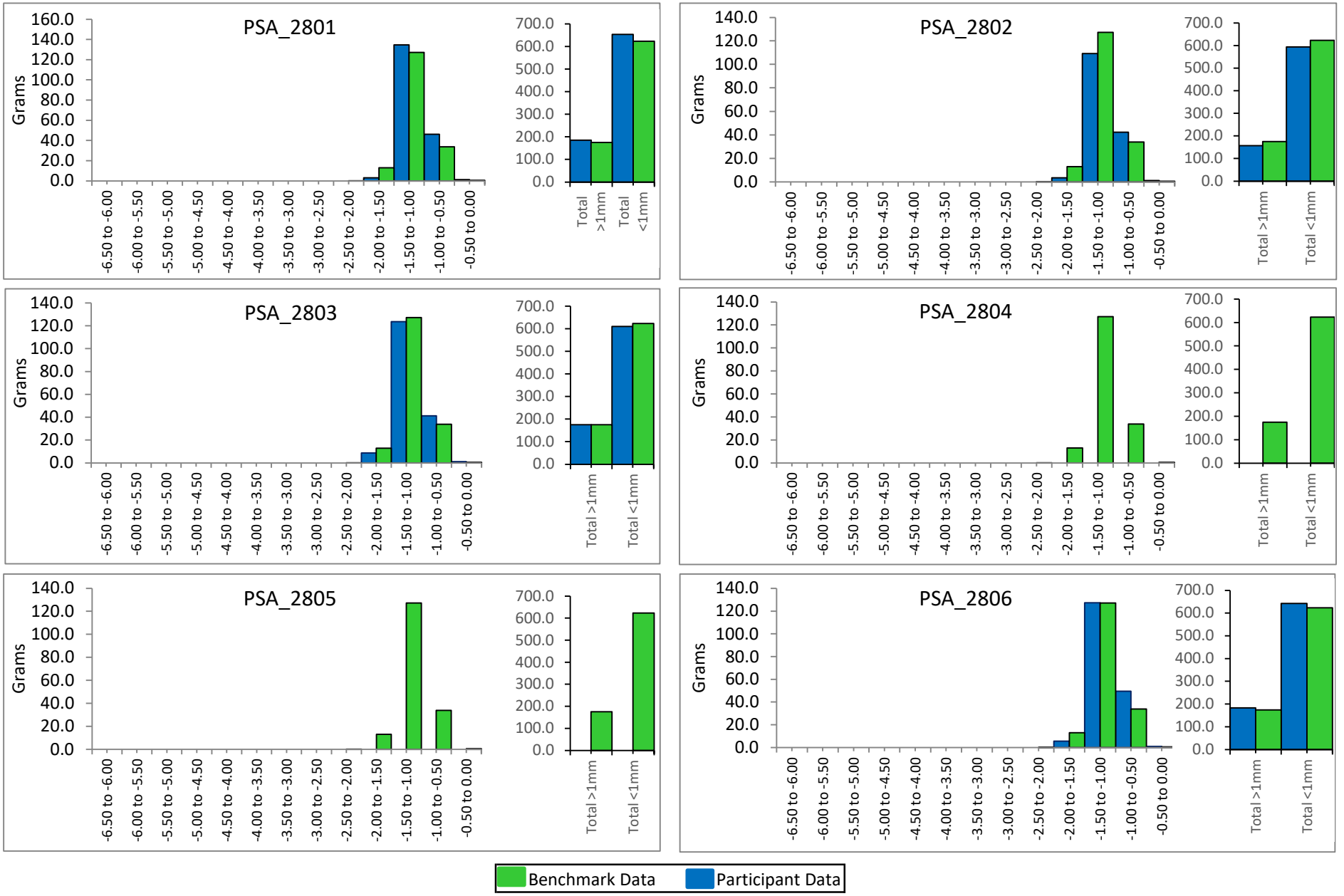
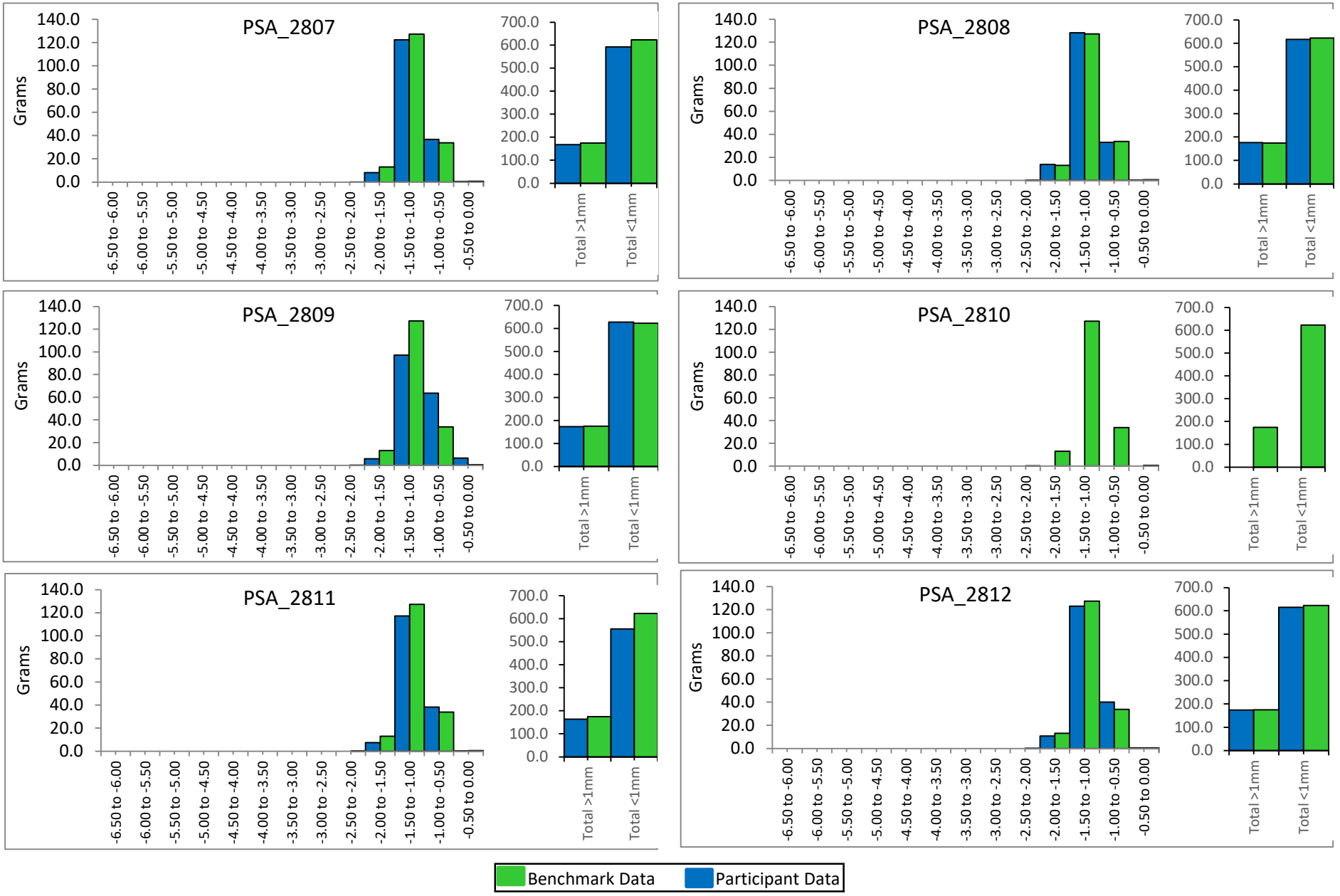
Figure 8. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS81.



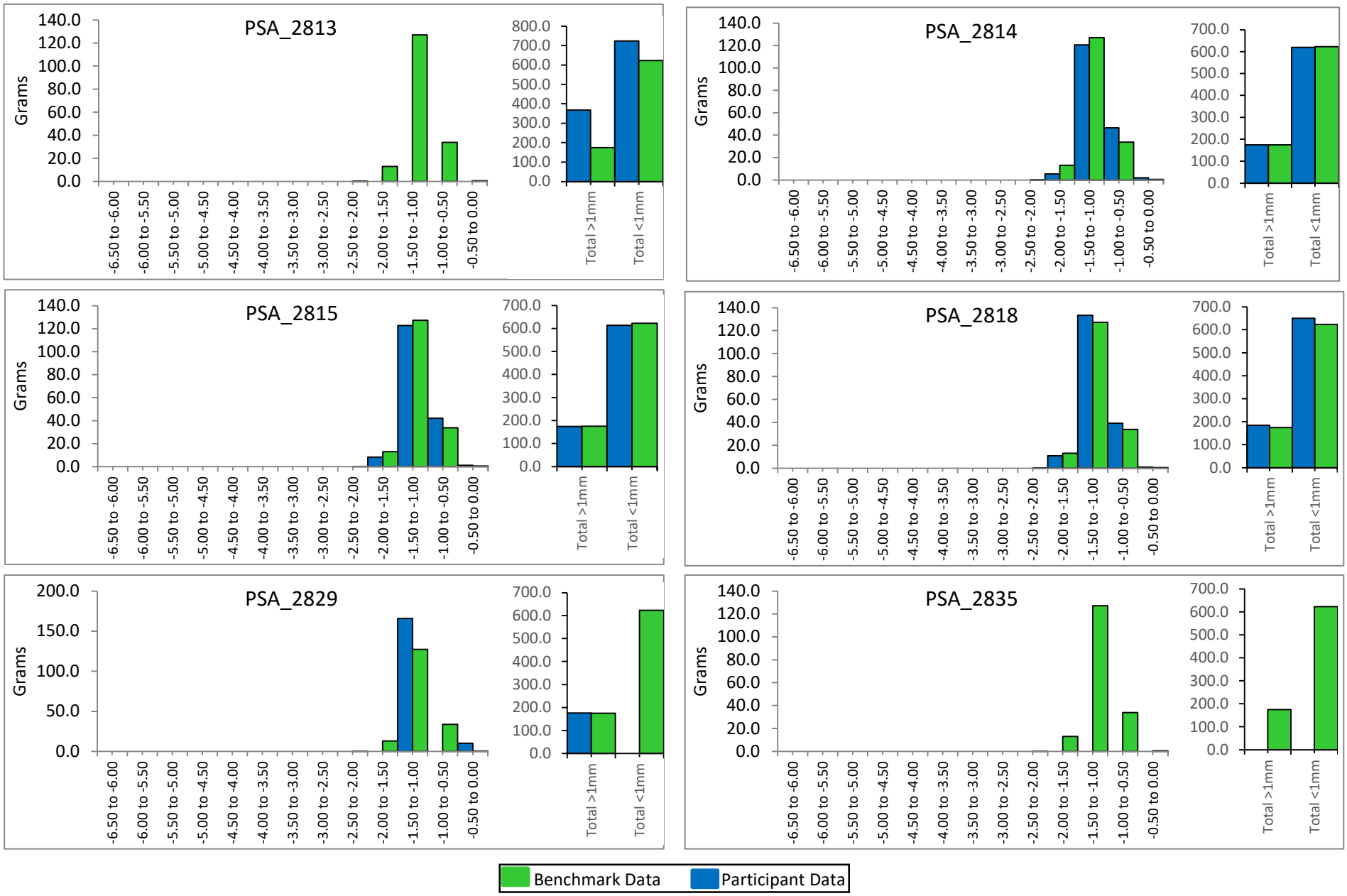
NMBAQC Particle Size Analysis
2021/22 - PS81

Figure 8. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS81.



NMBAQC Particle Size Analysis
2021/22 - PS81

Figure 8. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS81.



NMBAQC Particle Size Analysis
2021/22 - PS81

Figure 9. Comparison of participant laser replicate data with the Benchmark Average for sediment distributed as PS81.

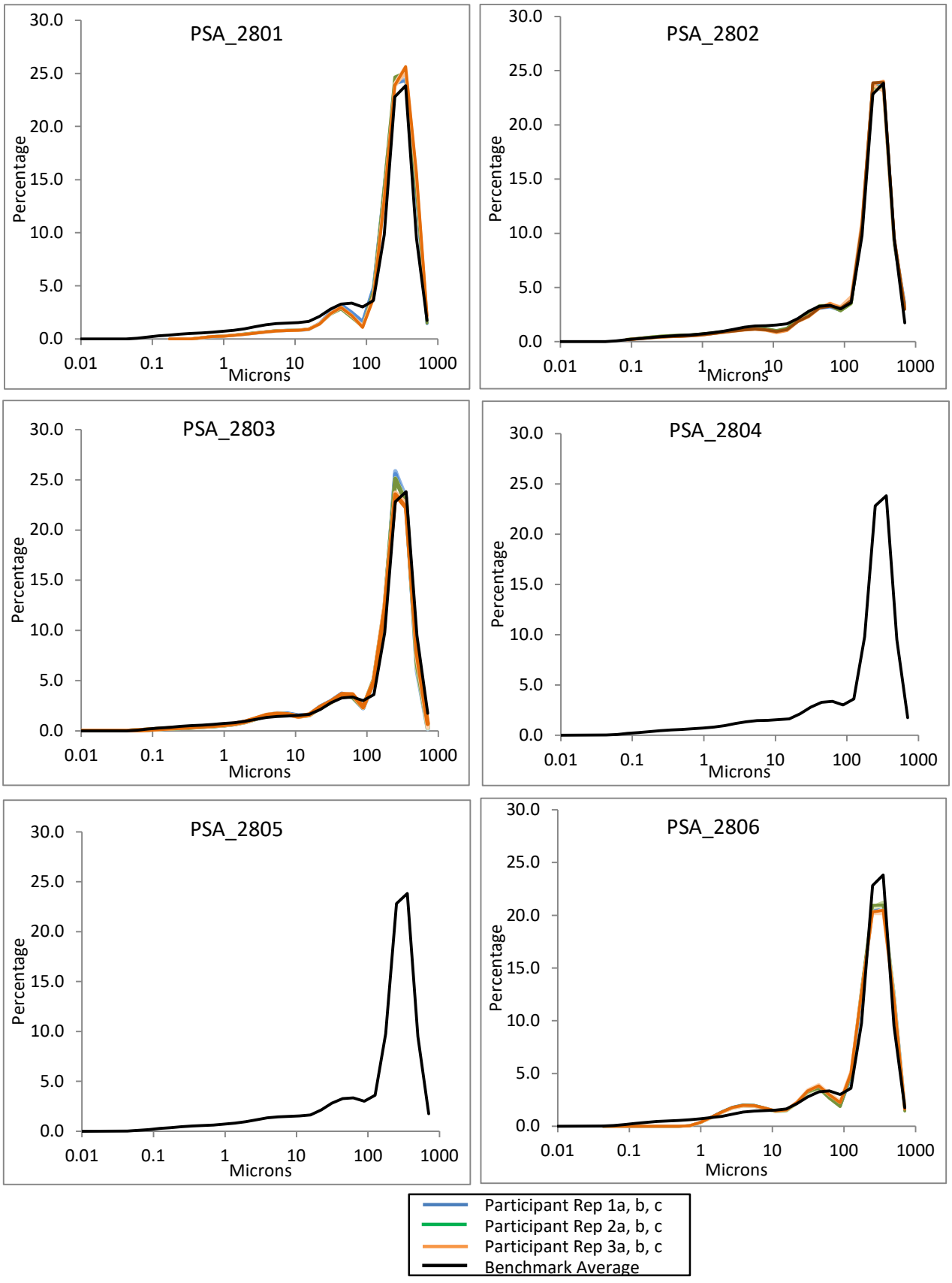


Figure 9. Comparison of participant laser replicate data with the Benchmark Average for sediment distributed as PS81.

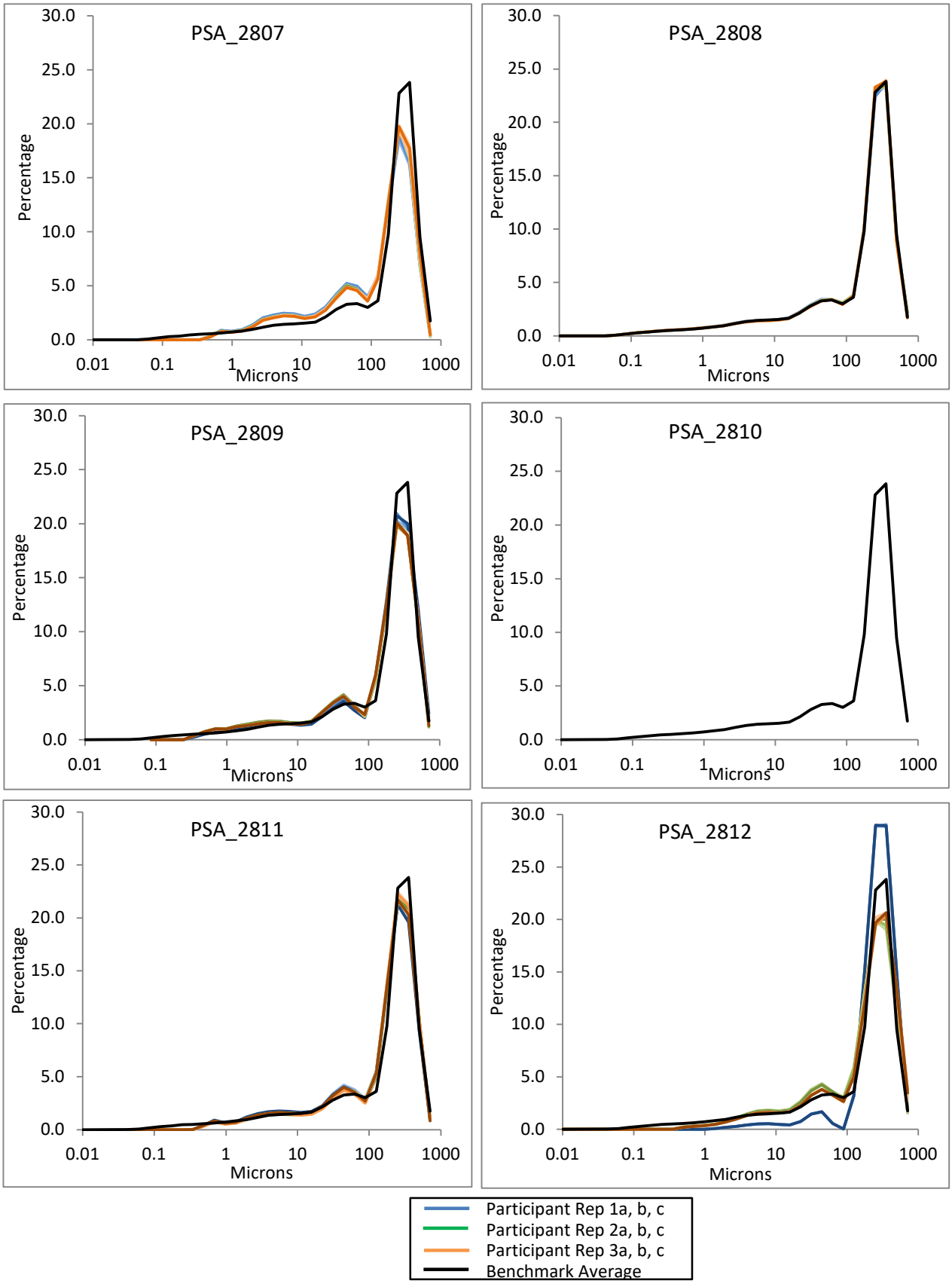
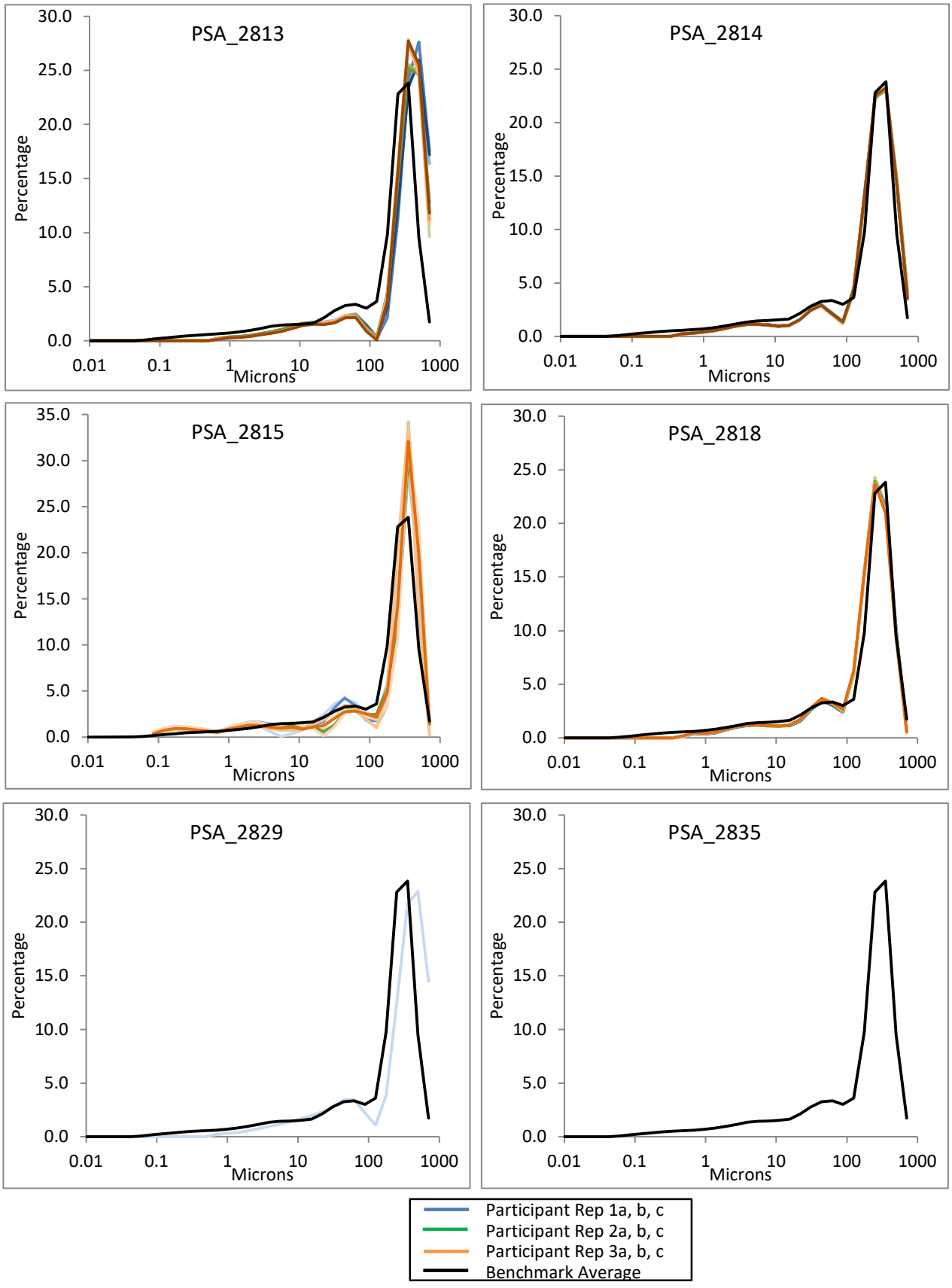


Figure 9. Comparison of participant laser replicate data with the Benchmark Average for sediment distributed as PS81.



APPENDICES

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS81.

	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)	1.98	2.29	1.91	2.48	2.50	2.72	1.67	1.77	1.69
0.50 to 1.00; (500 µm)	10.54	10.08	10.05	9.42	9.40	9.29	9.52	9.45	9.72
1.00 to 1.50; (353.6 µm)	24.06	23.86	24.25	23.82	23.69	23.50	23.67	23.76	23.87
1.50 to 2.00; (250 µm)	22.44	22.54	22.66	22.66	22.84	22.89	22.76	22.57	22.57
2.00 to 2.50; (176.8 µm)	9.73	9.76	9.57	9.65	9.58	9.54	9.71	9.73	9.53
2.50 to 3.00; (125 µm)	3.51	3.50	3.53	3.58	3.56	3.51	3.63	3.76	3.71
3.00 to 3.50; (88.39 µm)	2.96	2.91	2.85	3.01	3.00	2.99	3.16	3.08	3.00
3.50 to 4.00; (62.5 µm)	3.28	3.29	3.23	3.36	3.34	3.33	3.43	3.41	3.38
4.00 to 4.50; (44.19 µm)	3.16	3.16	3.15	3.30	3.28	3.26	3.37	3.37	3.36
4.50 to 5.00; (31.25 µm)	2.67	2.67	2.66	2.77	2.76	2.74	2.87	2.84	2.80
5.00 to 5.50; (22.097 µm)	2.02	2.05	2.11	2.09	2.10	2.12	2.11	2.12	2.14
5.50 to 6.00; (15.625 µm)	1.58	1.62	1.67	1.63	1.65	1.68	1.65	1.66	1.67
6.00 to 6.50; (11.049 µm)	1.51	1.55	1.59	1.52	1.54	1.57	1.52	1.54	1.55
6.50 to 7.00; (7.813 µm)	1.47	1.51	1.54	1.45	1.47	1.49	1.44	1.46	1.47
7.00 to 7.50; (5.524 µm)	1.42	1.45	1.49	1.42	1.42	1.44	1.41	1.42	1.42
7.50 to 8.00; (3.906 µm)	1.30	1.32	1.35	1.33	1.33	1.34	1.33	1.33	1.33
8.00 to 8.50; (2.762 µm)	1.11	1.12	1.12	1.14	1.14	1.14	1.15	1.14	1.14
8.50 to 9.00; (1.953 µm)	0.92	0.93	0.91	0.95	0.95	0.95	0.96	0.96	0.96
9.00 to 9.50; (1.381 µm)	0.78	0.79	0.77	0.81	0.81	0.81	0.83	0.83	0.83
9.50 to 10.00; (0.977 µm)	0.68	0.69	0.68	0.70	0.70	0.71	0.72	0.72	0.72
10.00 to 10.50; (0.691 µm)	0.60	0.61	0.61	0.61	0.61	0.62	0.63	0.63	0.64
10.50 to 11.00; (0.488 µm)	0.54	0.55	0.55	0.54	0.55	0.55	0.57	0.57	0.58
11.00 to 11.50; (0.345 µm)	0.48	0.49	0.49	0.48	0.49	0.50	0.51	0.52	0.52
11.50 to 12.00; (0.244 µm)	0.42	0.43	0.43	0.42	0.43	0.44	0.45	0.46	0.46
12.00 to 12.50; (0.173 µm)	0.33	0.34	0.34	0.34	0.35	0.35	0.36	0.37	0.37
12.50 to 13.00; (0.122 µm)	0.26	0.26	0.26	0.26	0.27	0.27	0.28	0.28	0.29
13.00 to 13.50; (0.086 µm)	0.16	0.17	0.16	0.17	0.17	0.17	0.18	0.18	0.19
13.50 to 14.00; (0.061 µm)	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

d10	9.69	9.32	9.28	9.35	9.20	9.04	8.90	8.81	8.73
d50	287.38	286.06	286.33	284.25	284.12	283.89	280.84	280.72	282.06
d90	543.15	542.38	534.89	536.30	536.18	538.77	522.27	522.88	525.86

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	9.43	0.23	2.40	9.20	0.16	1.69	8.81	0.08	0.91
d50	286.59	0.70	0.24	284.09	0.19	0.07	281.21	0.74	0.26
d90	540.14	4.56	0.84	537.08	1.46	0.27	523.67	1.92	0.37

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS81.

	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)	1.95	1.99	1.92	1.59	1.66	1.67	1.79	1.66	2.05
0.50 to 1.00; (500 µm)	9.72	9.62	10.28	9.55	9.96	9.80	9.42	9.56	9.45
1.00 to 1.50; (353.6 µm)	23.68	23.73	24.03	23.74	23.84	23.73	23.67	23.74	23.56
1.50 to 2.00; (250 µm)	22.71	22.82	22.50	22.90	22.85	22.78	22.69	22.79	22.79
2.00 to 2.50; (176.8 µm)	10.01	9.99	9.91	10.06	9.85	9.84	9.63	9.80	9.75
2.50 to 3.00; (125 µm)	3.60	3.55	3.52	3.70	3.64	3.66	3.70	3.61	3.62
3.00 to 3.50; (88.39 µm)	2.99	2.93	2.84	3.04	2.98	2.96	3.00	2.97	2.87
3.50 to 4.00; (62.5 µm)	3.23	3.21	3.12	3.35	3.29	3.28	3.33	3.32	3.24
4.00 to 4.50; (44.19 µm)	3.23	3.21	3.15	3.31	3.28	3.30	3.34	3.27	3.28
4.50 to 5.00; (31.25 µm)	2.82	2.81	2.75	2.77	2.73	2.76	2.88	2.80	2.77
5.00 to 5.50; (22.097 µm)	2.06	2.06	2.04	2.09	2.08	2.11	2.18	2.14	2.20
5.50 to 6.00; (15.625 µm)	1.62	1.63	1.62	1.63	1.63	1.66	1.72	1.68	1.75
6.00 to 6.50; (11.049 µm)	1.52	1.54	1.53	1.50	1.50	1.53	1.58	1.56	1.60
6.50 to 7.00; (7.813 µm)	1.46	1.47	1.47	1.44	1.44	1.47	1.49	1.49	1.50
7.00 to 7.50; (5.524 µm)	1.42	1.42	1.41	1.42	1.41	1.43	1.46	1.45	1.46
7.50 to 8.00; (3.906 µm)	1.32	1.32	1.30	1.33	1.32	1.34	1.38	1.36	1.37
8.00 to 8.50; (2.762 µm)	1.14	1.14	1.12	1.15	1.13	1.15	1.18	1.17	1.18
8.50 to 9.00; (1.953 µm)	0.96	0.96	0.94	0.95	0.94	0.95	0.98	0.97	0.97
9.00 to 9.50; (1.381 µm)	0.82	0.82	0.81	0.81	0.80	0.81	0.84	0.83	0.83
9.50 to 10.00; (0.977 µm)	0.71	0.72	0.71	0.69	0.69	0.70	0.72	0.72	0.71
10.00 to 10.50; (0.691 µm)	0.63	0.63	0.63	0.60	0.61	0.62	0.61	0.63	0.62
10.50 to 11.00; (0.488 µm)	0.56	0.57	0.57	0.54	0.55	0.56	0.55	0.57	0.56
11.00 to 11.50; (0.345 µm)	0.50	0.51	0.51	0.49	0.50	0.51	0.50	0.52	0.51
11.50 to 12.00; (0.244 µm)	0.44	0.45	0.44	0.43	0.44	0.45	0.44	0.46	0.46
12.00 to 12.50; (0.173 µm)	0.35	0.36	0.35	0.35	0.35	0.36	0.36	0.37	0.37
12.50 to 13.00; (0.122 µm)	0.27	0.28	0.27	0.27	0.27	0.28	0.28	0.29	0.28
13.00 to 13.50; (0.086 µm)	0.17	0.18	0.17	0.18	0.18	0.18	0.18	0.19	0.18
13.50 to 14.00; (0.061 µm)	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.07
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

d10	9.02	8.92	9.18	9.20	9.29	8.93	8.67	8.56	8.60
d50	282.77	283.03	285.99	281.26	283.58	282.31	280.68	281.29	281.66
d90	530.79	529.93	538.46	521.13	529.04	526.68	522.80	522.52	528.11

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	9.04	0.13	1.43	9.14	0.19	2.10	8.61	0.06	0.66
d50	283.93	1.79	0.63	282.38	1.16	0.41	281.21	0.50	0.18
d90	533.06	4.70	0.88	525.62	4.06	0.77	524.48	3.15	0.60

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS81.

	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)	1.98	1.88	2.28	1.53	1.49	1.43	1.38	1.62	1.64
0.50 to 1.00; (500 µm)	9.86	9.79	10.02	8.83	8.85	8.60	9.33	9.09	9.16
1.00 to 1.50; (353.6 µm)	23.93	23.90	23.86	23.73	23.72	23.59	23.62	23.61	23.32
1.50 to 2.00; (250 µm)	22.50	22.42	22.40	22.99	22.96	23.15	22.89	22.89	22.94
2.00 to 2.50; (176.8 µm)	9.63	9.74	9.78	9.84	9.80	9.90	9.90	9.83	9.99
2.50 to 3.00; (125 µm)	3.59	3.65	3.65	3.75	3.69	3.66	3.60	3.55	3.53
3.00 to 3.50; (88.39 µm)	3.10	3.02	2.90	3.20	3.20	3.17	3.07	3.09	3.12
3.50 to 4.00; (62.5 µm)	3.34	3.33	3.24	3.56	3.60	3.62	3.56	3.54	3.55
4.00 to 4.50; (44.19 µm)	3.26	3.27	3.20	3.40	3.37	3.37	3.30	3.29	3.25
4.50 to 5.00; (31.25 µm)	2.78	2.73	2.65	2.89	2.87	2.87	2.84	2.87	2.86
5.00 to 5.50; (22.097 µm)	2.06	2.10	2.07	2.17	2.21	2.25	2.24	2.24	2.25
5.50 to 6.00; (15.625 µm)	1.60	1.64	1.62	1.61	1.62	1.65	1.62	1.63	1.62
6.00 to 6.50; (11.049 µm)	1.48	1.51	1.49	1.52	1.53	1.54	1.53	1.55	1.55
6.50 to 7.00; (7.813 µm)	1.42	1.44	1.42	1.48	1.49	1.50	1.50	1.51	1.49
7.00 to 7.50; (5.524 µm)	1.40	1.41	1.39	1.45	1.46	1.47	1.47	1.48	1.45
7.50 to 8.00; (3.906 µm)	1.33	1.33	1.31	1.35	1.36	1.37	1.36	1.37	1.36
8.00 to 8.50; (2.762 µm)	1.15	1.15	1.13	1.16	1.16	1.17	1.16	1.17	1.17
8.50 to 9.00; (1.953 µm)	0.97	0.97	0.95	0.96	0.97	0.97	0.96	0.97	0.99
9.00 to 9.50; (1.381 µm)	0.83	0.84	0.82	0.82	0.83	0.83	0.83	0.83	0.86
9.50 to 10.00; (0.977 µm)	0.72	0.73	0.72	0.71	0.72	0.73	0.72	0.73	0.74
10.00 to 10.50; (0.691 µm)	0.63	0.64	0.64	0.63	0.63	0.64	0.64	0.64	0.65
10.50 to 11.00; (0.488 µm)	0.57	0.58	0.57	0.56	0.57	0.58	0.58	0.58	0.58
11.00 to 11.50; (0.345 µm)	0.51	0.53	0.52	0.51	0.52	0.53	0.53	0.53	0.53
11.50 to 12.00; (0.244 µm)	0.45	0.46	0.45	0.45	0.45	0.46	0.46	0.47	0.47
12.00 to 12.50; (0.173 µm)	0.36	0.37	0.37	0.36	0.37	0.37	0.37	0.38	0.38
12.50 to 13.00; (0.122 µm)	0.28	0.29	0.28	0.28	0.28	0.29	0.29	0.29	0.29
13.00 to 13.50; (0.086 µm)	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19
13.50 to 14.00; (0.061 µm)	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.07
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

d10	8.91	8.64	9.01	8.79	8.59	8.38	8.50	8.39	8.32
d50	284.00	282.89	285.41	278.19	277.96	276.71	278.83	278.86	278.16
d90	533.50	530.51	541.38	507.21	506.70	500.74	513.21	513.78	515.37

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	8.85	0.19	2.16	8.58	0.21	2.40	8.40	0.09	1.10
d50	284.10	1.26	0.44	277.62	0.79	0.29	278.62	0.39	0.14
d90	535.13	5.62	1.05	504.88	3.60	0.71	514.12	1.12	0.22

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS81.

	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)	1.64	1.70	1.38	1.57	1.07	1.69	1.61	1.86	1.69
0.50 to 1.00; (500 µm)	9.21	9.07	9.42	9.43	9.49	9.36	9.10	9.32	9.46
1.00 to 1.50; (353.6 µm)	23.66	23.66	23.82	23.77	23.98	23.84	23.50	23.65	23.60
1.50 to 2.00; (250 µm)	22.84	22.84	22.88	22.88	22.96	22.81	22.84	22.87	22.83
2.00 to 2.50; (176.8 µm)	9.72	9.65	9.80	9.81	9.77	9.73	9.96	9.78	9.89
2.50 to 3.00; (125 µm)	3.58	3.63	3.52	3.50	3.51	3.51	3.77	3.71	3.69
3.00 to 3.50; (88.39 µm)	3.19	3.12	3.11	3.05	3.04	3.02	3.00	2.97	2.91
3.50 to 4.00; (62.5 µm)	3.43	3.42	3.41	3.38	3.39	3.37	3.40	3.32	3.33
4.00 to 4.50; (44.19 µm)	3.32	3.33	3.25	3.22	3.20	3.17	3.38	3.32	3.30
4.50 to 5.00; (31.25 µm)	2.93	2.95	2.91	2.87	2.89	2.87	2.84	2.80	2.79
5.00 to 5.50; (22.097 µm)	2.15	2.22	2.18	2.18	2.21	2.20	2.17	2.15	2.17
5.50 to 6.00; (15.625 µm)	1.66	1.70	1.66	1.66	1.68	1.67	1.64	1.62	1.63
6.00 to 6.50; (11.049 µm)	1.57	1.60	1.57	1.57	1.59	1.59	1.51	1.50	1.51
6.50 to 7.00; (7.813 µm)	1.52	1.54	1.52	1.52	1.54	1.53	1.44	1.42	1.43
7.00 to 7.50; (5.524 µm)	1.48	1.48	1.47	1.47	1.48	1.48	1.42	1.40	1.41
7.50 to 8.00; (3.906 µm)	1.37	1.38	1.36	1.35	1.37	1.36	1.35	1.33	1.33
8.00 to 8.50; (2.762 µm)	1.18	1.18	1.17	1.16	1.17	1.16	1.17	1.15	1.15
8.50 to 9.00; (1.953 µm)	0.98	0.98	0.97	0.97	0.98	0.97	0.99	0.97	0.98
9.00 to 9.50; (1.381 µm)	0.83	0.84	0.83	0.83	0.84	0.83	0.86	0.85	0.85
9.50 to 10.00; (0.977 µm)	0.72	0.73	0.72	0.72	0.73	0.73	0.76	0.75	0.75
10.00 to 10.50; (0.691 µm)	0.63	0.63	0.64	0.64	0.65	0.65	0.67	0.66	0.67
10.50 to 11.00; (0.488 µm)	0.56	0.56	0.57	0.58	0.59	0.58	0.60	0.60	0.60
11.00 to 11.50; (0.345 µm)	0.50	0.50	0.51	0.52	0.53	0.52	0.55	0.55	0.55
11.50 to 12.00; (0.244 µm)	0.44	0.44	0.45	0.45	0.46	0.46	0.48	0.48	0.49
12.00 to 12.50; (0.173 µm)	0.35	0.35	0.36	0.36	0.37	0.36	0.39	0.39	0.39
12.50 to 13.00; (0.122 µm)	0.27	0.27	0.27	0.28	0.28	0.28	0.30	0.30	0.30
13.00 to 13.50; (0.086 µm)	0.17	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.19
13.50 to 14.00; (0.061 µm)	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

d10	8.67	8.59	8.61	8.60	8.38	8.46	8.18	8.39	8.29
d50	279.55	279.16	280.12	280.75	279.96	281.02	278.26	280.91	280.51
d90	516.36	514.98	514.92	518.81	510.26	519.77	513.82	522.33	521.42

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	8.63	0.04	0.46	8.48	0.11	1.29	8.28	0.11	1.30
d50	279.61	0.48	0.17	280.58	0.55	0.20	279.89	1.43	0.51
d90	515.42	0.82	0.16	516.28	5.23	1.01	519.19	4.67	0.90

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS81.

	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)	1.30	1.83	0.99	1.83	1.16	1.74	1.38	1.53	1.87
0.50 to 1.00; (500 µm)	9.00	9.59	9.60	9.58	9.52	9.35	9.32	9.42	9.77
1.00 to 1.50; (353.6 µm)	24.37	23.78	24.30	24.04	24.35	23.96	24.15	24.10	24.33
1.50 to 2.00; (250 µm)	23.04	22.69	23.01	22.66	23.07	23.16	23.33	23.18	22.98
2.00 to 2.50; (176.8 µm)	9.77	9.78	9.81	9.62	9.86	9.87	9.98	9.89	9.68
2.50 to 3.00; (125 µm)	3.76	3.67	3.67	3.66	3.61	3.59	3.54	3.58	3.52
3.00 to 3.50; (88.39 µm)	3.09	3.08	3.07	3.05	2.93	2.91	2.81	2.89	2.82
3.50 to 4.00; (62.5 µm)	3.44	3.43	3.41	3.44	3.37	3.35	3.17	3.30	3.20
4.00 to 4.50; (44.19 µm)	3.37	3.34	3.32	3.31	3.28	3.23	3.08	3.19	3.12
4.50 to 5.00; (31.25 µm)	2.85	2.82	2.80	2.76	2.75	2.73	2.77	2.74	2.70
5.00 to 5.50; (22.097 µm)	2.13	2.10	2.11	2.13	2.13	2.13	2.15	2.14	2.10
5.50 to 6.00; (15.625 µm)	1.63	1.60	1.60	1.59	1.60	1.59	1.67	1.60	1.59
6.00 to 6.50; (11.049 µm)	1.53	1.51	1.51	1.49	1.51	1.51	1.57	1.53	1.51
6.50 to 7.00; (7.813 µm)	1.48	1.48	1.48	1.45	1.49	1.49	1.52	1.50	1.48
7.00 to 7.50; (5.524 µm)	1.44	1.44	1.44	1.41	1.44	1.44	1.46	1.45	1.42
7.50 to 8.00; (3.906 µm)	1.34	1.33	1.32	1.32	1.32	1.32	1.34	1.33	1.31
8.00 to 8.50; (2.762 µm)	1.15	1.14	1.13	1.15	1.13	1.13	1.14	1.13	1.11
8.50 to 9.00; (1.953 µm)	0.95	0.95	0.94	0.97	0.94	0.94	0.95	0.94	0.93
9.00 to 9.50; (1.381 µm)	0.81	0.81	0.81	0.83	0.81	0.81	0.82	0.81	0.80
9.50 to 10.00; (0.977 µm)	0.70	0.71	0.71	0.72	0.71	0.71	0.72	0.72	0.71
10.00 to 10.50; (0.691 µm)	0.61	0.62	0.63	0.63	0.63	0.63	0.65	0.64	0.63
10.50 to 11.00; (0.488 µm)	0.54	0.56	0.56	0.56	0.57	0.57	0.59	0.58	0.57
11.00 to 11.50; (0.345 µm)	0.48	0.50	0.50	0.50	0.51	0.51	0.53	0.52	0.51
11.50 to 12.00; (0.244 µm)	0.41	0.43	0.43	0.44	0.44	0.44	0.46	0.45	0.44
12.00 to 12.50; (0.173 µm)	0.33	0.34	0.35	0.35	0.35	0.35	0.37	0.36	0.35
12.50 to 13.00; (0.122 µm)	0.25	0.26	0.27	0.27	0.27	0.27	0.28	0.27	0.27
13.00 to 13.50; (0.086 µm)	0.16	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.17
13.50 to 14.00; (0.061 µm)	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
14.00 to 14.50; (0.043 µm)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

d10	9.30	9.16	9.12	9.02	9.02	9.01	8.62	8.92	9.18
d50	280.75	282.01	281.59	283.01	282.35	282.70	282.32	282.74	286.15
d90	505.82	526.29	510.75	526.11	512.54	520.68	513.14	517.78	529.96

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	9.19	0.10	1.07	9.02	0.01	0.06	8.91	0.28	3.16
d50	281.45	0.64	0.23	282.69	0.33	0.12	283.74	2.10	0.74
d90	514.29	10.68	2.08	519.78	6.83	1.31	520.29	8.69	1.67

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS81 (used to create Figure 7).

	BM Average	PSA_2801	PSA_2802	PSA_2803	PSA_2804	PSA_2805	PSA_2806	PSA_2807	PSA_2808	PSA_2809	PSA_2810
VERY COARSE GRAVEL	0.00	0.00	0.00	0.00	n/p	n/p	0.00	0.00	0.00	0.00	n/p
COARSE GRAVEL	0.00	0.00	0.00	0.00	n/p	n/p	0.00	0.00	0.00	0.00	n/p
MEDIUM GRAVEL	0.00	0.00	0.00	0.00	n/p	n/p	0.00	0.00	0.00	0.00	n/p
FINE GRAVEL	0.00	0.00	0.00	0.00	n/p	n/p	0.00	0.00	0.00	0.00	n/p
VERY FINE GRAVEL	17.58	16.40	15.03	16.87	n/p	n/p	16.11	17.16	17.95	12.86	n/p
VERY COARSE SAND	4.31	5.66	5.79	5.40	n/p	n/p	6.13	4.89	4.23	8.73	n/p
COARSE SAND	8.78	12.63	9.76	5.50	n/p	n/p	10.87	6.50	8.52	10.05	n/p
MEDIUM SAND	36.43	38.37	37.42	36.98	n/p	n/p	32.13	29.08	36.22	30.93	n/p
FINE SAND	10.47	14.33	11.30	13.41	n/p	n/p	13.69	14.38	10.63	14.19	n/p
VERY FINE SAND	4.98	2.74	4.98	4.48	n/p	n/p	3.84	6.43	5.02	4.08	n/p
VERY COARSE SILT	4.74	4.19	4.53	5.07	n/p	n/p	5.53	6.78	4.78	5.67	n/p
COARSE SILT	2.95	1.82	2.47	3.07	n/p	n/p	2.93	3.85	2.93	3.20	n/p
MEDIUM SILT	2.36	1.26	1.64	2.43	n/p	n/p	2.43	3.24	2.27	2.33	n/p
FINE SILT	2.17	1.09	1.86	2.54	n/p	n/p	3.03	3.35	2.13	2.60	n/p
VERY FINE SILT	1.65	0.79	1.52	1.64	n/p	n/p	2.38	2.36	1.65	2.24	n/p
CLAY	3.59	0.71	3.69	2.62	n/p	n/p	0.94	1.97	3.67	3.13	n/p

GRAVEL	17.58	16.40	15.03	16.87	n/p	n/p	16.11	17.16	17.95	12.86	n/p
SAND	64.97	73.73	69.25	65.76	n/p	n/p	66.65	61.28	64.62	67.98	n/p
SILT	13.86	9.16	12.03	14.75	n/p	n/p	16.30	19.59	13.76	16.03	n/p
CLAY	3.59	0.71	3.69	2.62	n/p	n/p	0.94	1.97	3.67	3.13	n/p

n/p - not participating in this exercise at current time.

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS81 (used to create Figure 7).

	BM Average	PSA_2811	PSA_2812	PSA_2813	PSA_2814	PSA_2815	PSA_2818	PSA_2829_v2	PSA_2835
VERY COARSE GRAVEL	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	n/p
MEDIUM GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n/p
FINE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n/p
VERY FINE GRAVEL	17.58	17.33	16.94	57.86	15.87	16.63	17.28	19.73	n/p
VERY COARSE SAND	4.31	5.36	5.15	0.89	6.10	5.50	4.81	3.90	n/p
COARSE SAND	8.78	8.51	11.94	15.91	14.04	15.95	8.10	28.52	n/p
MEDIUM SAND	36.43	32.77	35.75	16.65	35.62	35.45	35.33	26.09	n/p
FINE SAND	10.47	14.49	14.11	1.60	13.72	5.06	16.68	3.76	n/p
VERY FINE SAND	4.98	4.77	3.37	1.45	2.67	4.13	4.39	4.33	n/p
VERY COARSE SILT	4.74	5.46	4.72	1.65	4.21	4.23	4.91	4.77	n/p
COARSE SILT	2.95	2.85	2.48	1.34	2.00	1.94	2.22	3.25	n/p
MEDIUM SILT	2.36	2.34	1.99	1.14	1.58	1.63	1.80	2.33	n/p
FINE SILT	2.17	2.40	1.82	0.71	1.75	1.61	1.89	1.62	n/p
VERY FINE SILT	1.65	1.87	1.03	0.43	1.32	2.13	1.44	0.98	n/p
CLAY	3.59	1.86	0.70	0.36	1.12	5.73	1.14	0.70	n/p

GRAVEL	17.58	17.33	16.94	57.86	15.87	16.63	17.28	19.73	n/p
SAND	64.97	65.90	70.32	36.51	72.15	66.09	69.32	66.61	n/p
SILT	13.86	14.92	12.04	5.27	10.85	11.55	12.25	12.95	n/p
CLAY	3.59	1.86	0.70	0.36	1.12	5.73	1.14	0.70	n/p

n/p - not participating in this exercise at current time.

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2801 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	1.71	1.42	1.47	1.64	1.73	1.49	2.03	2.09	2.18
500	14.17	13.53	13.59	14.34	14.39	14.00	15.36	15.12	15.62
353.6	24.67	24.44	24.33	25.16	25.05	25.11	25.67	25.09	25.63
250	24.13	24.29	24.04	24.66	24.42	24.66	24.10	23.78	23.88
176.8	14.18	14.47	14.25	14.28	14.22	14.38	13.35	13.42	13.13
125	4.72	4.93	4.85	4.46	4.50	4.54	3.91	4.10	3.78
88.39	1.53	1.64	1.68	1.13	1.16	1.16	1.08	1.21	1.07
62.5	2.38	2.46	2.55	1.98	2.00	2.00	2.14	2.24	2.19
44.19	3.10	3.17	3.26	2.79	2.82	2.83	2.91	3.03	2.97
31.25	2.43	2.49	2.56	2.28	2.32	2.33	2.32	2.44	2.36
22.097	1.40	1.44	1.49	1.39	1.42	1.43	1.39	1.47	1.41
15.625	0.86	0.89	0.93	0.91	0.93	0.94	0.90	0.95	0.91
11.049	0.77	0.79	0.82	0.82	0.83	0.85	0.80	0.84	0.81
7.813	0.77	0.79	0.82	0.80	0.82	0.83	0.79	0.82	0.80
5.524	0.71	0.73	0.76	0.75	0.76	0.77	0.72	0.76	0.73
3.906	0.62	0.64	0.66	0.66	0.67	0.68	0.64	0.67	0.64
2.762	0.53	0.55	0.56	0.57	0.57	0.58	0.55	0.57	0.55
1.953	0.43	0.44	0.46	0.46	0.46	0.47	0.44	0.46	0.44
1.381	0.33	0.33	0.34	0.34	0.35	0.35	0.33	0.35	0.33
0.977	0.25	0.26	0.26	0.26	0.26	0.27	0.25	0.26	0.25
0.691	0.20	0.21	0.22	0.21	0.21	0.22	0.21	0.22	0.21
0.488	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	47.30	45.87	44.28	46.67	45.84	45.16	47.23	44.63	46.62
d50	308.75	303.89	303.43	312.16	311.96	309.83	320.02	316.06	321.43
d90	577.33	567.55	568.84	577.70	579.38	572.78	590.70	589.85	594.45

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	45.82	1.51	3.29	45.89	0.75	1.64	46.16	1.36	2.94
d50	305.35	2.95	0.97	311.32	1.29	0.42	319.17	2.79	0.87
d90	571.24	5.31	0.93	576.62	3.43	0.59	591.67	2.45	0.41

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2802 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	3.24	3.54	3.40	3.14	3.08	3.15	3.11	3.25	2.98
500	8.81	9.04	9.47	9.39	9.37	9.05	9.23	9.50	9.60
353.6	23.48	23.74	23.99	23.28	23.56	23.41	23.10	24.02	23.92
250	23.78	23.64	23.71	23.32	23.46	23.58	23.70	23.74	23.89
176.8	10.77	10.57	10.55	10.46	10.46	10.53	11.22	10.85	10.75
125	3.78	3.56	3.53	3.60	3.48	3.52	4.19	3.73	3.79
88.39	3.09	2.94	2.87	2.99	2.85	2.85	3.26	3.13	3.05
62.5	3.36	3.30	3.20	3.41	3.34	3.32	3.43	3.56	3.28
44.19	3.15	3.13	3.06	3.33	3.27	3.30	3.18	3.06	3.10
31.25	2.42	2.42	2.36	2.60	2.59	2.61	2.39	2.27	2.37
22.097	1.93	1.93	1.89	2.05	2.05	2.07	1.87	1.83	1.85
15.625	1.17	1.17	1.15	1.22	1.21	1.25	1.08	1.04	1.11
11.049	0.98	0.98	0.96	0.98	0.96	1.01	0.87	0.83	0.92
7.813	1.21	1.21	1.18	1.18	1.17	1.20	1.09	1.06	1.11
5.524	1.31	1.30	1.27	1.25	1.26	1.26	1.18	1.15	1.17
3.906	1.23	1.22	1.19	1.17	1.20	1.19	1.13	1.08	1.10
2.762	1.06	1.06	1.04	1.04	1.05	1.05	0.99	0.96	0.98
1.953	0.90	0.90	0.88	0.91	0.91	0.92	0.85	0.85	0.87
1.381	0.76	0.77	0.75	0.80	0.79	0.81	0.73	0.74	0.75
0.977	0.64	0.65	0.64	0.70	0.70	0.71	0.62	0.62	0.63
0.691	0.56	0.56	0.56	0.62	0.63	0.63	0.54	0.53	0.54
0.488	0.52	0.52	0.51	0.57	0.58	0.58	0.49	0.48	0.49
0.345	0.48	0.49	0.48	0.53	0.54	0.54	0.46	0.45	0.46
0.244	0.44	0.44	0.44	0.48	0.48	0.49	0.41	0.41	0.42
0.173	0.36	0.37	0.36	0.39	0.40	0.40	0.34	0.34	0.34
0.122	0.29	0.29	0.28	0.30	0.31	0.31	0.27	0.26	0.27
0.086	0.19	0.19	0.18	0.19	0.20	0.20	0.17	0.17	0.17
0.061	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07
0.043	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	10.91	10.88	11.65	10.32	10.08	9.92	14.23	15.57	13.93
d50	286.36	289.29	291.81	286.31	287.57	286.17	285.80	291.53	290.71
d90	542.12	551.93	555.46	548.80	547.44	543.86	546.02	552.90	548.89

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	11.15	0.43	3.90	10.11	0.20	2.00	14.57	0.87	5.98
d50	289.15	2.73	0.94	286.68	0.77	0.27	289.35	3.10	1.07
d90	549.84	6.91	1.26	546.70	2.55	0.47	549.27	3.45	0.63

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2803 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.10	0.18	0.33	0.24	0.35	0.37	0.37	0.74	0.69
500	5.95	5.93	6.28	6.27	6.61	6.66	7.29	7.60	7.70
353.6	23.54	23.17	22.55	23.00	22.82	22.66	22.62	22.60	22.22
250	25.45	25.85	25.57	24.99	25.13	25.09	23.59	23.72	23.52
176.8	11.75	11.85	11.93	12.34	12.39	12.43	12.54	12.34	12.20
125	4.99	4.91	5.06	5.21	5.15	5.12	5.04	4.99	4.99
88.39	2.30	2.27	2.27	2.34	2.32	2.32	2.34	2.32	2.37
62.5	3.37	3.38	3.37	3.42	3.35	3.36	3.60	3.54	3.64
44.19	3.68	3.67	3.70	3.60	3.55	3.56	3.65	3.57	3.66
31.25	2.93	2.92	2.95	2.86	2.82	2.84	2.91	2.85	2.93
22.097	2.41	2.40	2.42	2.33	2.30	2.31	2.36	2.32	2.39
15.625	1.59	1.58	1.59	1.58	1.56	1.56	1.61	1.58	1.62
11.049	1.52	1.51	1.52	1.46	1.43	1.44	1.45	1.41	1.44
7.813	1.73	1.71	1.72	1.67	1.63	1.64	1.64	1.60	1.63
5.524	1.75	1.73	1.74	1.73	1.70	1.71	1.73	1.68	1.72
3.906	1.55	1.54	1.55	1.56	1.54	1.54	1.59	1.54	1.57
2.762	1.21	1.20	1.21	1.22	1.20	1.21	1.25	1.22	1.24
1.953	0.88	0.88	0.89	0.88	0.87	0.88	0.91	0.89	0.91
1.381	0.67	0.67	0.68	0.66	0.66	0.67	0.69	0.68	0.69
0.977	0.54	0.55	0.56	0.54	0.54	0.55	0.57	0.56	0.58
0.691	0.47	0.47	0.48	0.47	0.46	0.47	0.50	0.49	0.51
0.488	0.41	0.41	0.42	0.41	0.41	0.41	0.44	0.44	0.45
0.345	0.35	0.35	0.36	0.36	0.35	0.35	0.39	0.38	0.39
0.244	0.30	0.29	0.30	0.30	0.29	0.29	0.32	0.32	0.32
0.173	0.23	0.23	0.23	0.23	0.23	0.23	0.25	0.24	0.25
0.122	0.17	0.17	0.17	0.18	0.17	0.17	0.19	0.18	0.19
0.086	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12
0.061	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
0.043	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	10.17	10.26	10.08	10.23	10.55	10.44	9.67	10.11	9.67
d50	267.78	267.83	266.60	266.09	267.53	267.07	264.63	267.64	265.72
d90	471.79	471.79	474.65	474.38	477.46	477.76	482.35	487.45	487.65

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	10.17	0.09	0.87	10.41	0.16	1.53	9.82	0.26	2.60
d50	267.40	0.70	0.26	266.90	0.74	0.28	266.00	1.52	0.57
d90	472.74	1.65	0.35	476.53	1.87	0.39	485.82	3.00	0.62

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2804 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	-	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-	-
353.6	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-
176.8	-	-	-	-	-	-	-	-	-
125	-	-	-	-	-	-	-	-	-
88.39	-	-	-	-	-	-	-	-	-
62.5	-	-	-	-	-	-	-	-	-
44.19	-	-	-	-	-	-	-	-	-
31.25	-	-	-	-	-	-	-	-	-
22.097	-	-	-	-	-	-	-	-	-
15.625	-	-	-	-	-	-	-	-	-
11.049	-	-	-	-	-	-	-	-	-
7.813	-	-	-	-	-	-	-	-	-
5.524	-	-	-	-	-	-	-	-	-
3.906	-	-	-	-	-	-	-	-	-
2.762	-	-	-	-	-	-	-	-	-
1.953	-	-	-	-	-	-	-	-	-
1.381	-	-	-	-	-	-	-	-	-
0.977	-	-	-	-	-	-	-	-	-
0.691	-	-	-	-	-	-	-	-	-
0.488	-	-	-	-	-	-	-	-	-
0.345	-	-	-	-	-	-	-	-	-
0.244	-	-	-	-	-	-	-	-	-
0.173	-	-	-	-	-	-	-	-	-
0.122	-	-	-	-	-	-	-	-	-
0.086	-	-	-	-	-	-	-	-	-
0.061	-	-	-	-	-	-	-	-	-
0.043	-	-	-	-	-	-	-	-	-
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	-	-	-	-	-	-	-	-	-
d50	-	-	-	-	-	-	-	-	-
d90	-	-	-	-	-	-	-	-	-

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	-	-	-	-	-	-	-	-	-
d50	-	-	-	-	-	-	-	-	-
d90	-	-	-	-	-	-	-	-	-

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2806 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	1.61	1.77	1.88	1.60	1.87	1.46	1.64	1.84	1.63
500	12.19	12.57	12.63	12.20	12.73	12.00	11.89	12.23	12.07
353.6	20.79	21.00	21.01	20.87	21.25	20.99	20.17	20.50	20.48
250	20.55	20.51	20.43	20.69	20.80	20.97	20.16	20.33	20.31
176.8	12.70	12.47	12.35	12.83	12.72	12.98	12.77	12.75	12.68
125	4.92	4.67	4.58	4.95	4.78	4.90	5.23	5.09	5.05
88.39	2.13	1.96	1.91	2.01	1.87	1.89	2.43	2.23	2.25
62.5	2.95	2.85	2.82	2.77	2.63	2.66	3.14	2.95	2.98
44.19	3.87	3.80	3.77	3.73	3.57	3.65	3.96	3.80	3.83
31.25	3.41	3.36	3.33	3.34	3.18	3.27	3.46	3.34	3.36
22.097	2.28	2.25	2.23	2.27	2.15	2.22	2.34	2.25	2.27
15.625	1.50	1.49	1.50	1.53	1.46	1.51	1.58	1.53	1.56
11.049	1.39	1.40	1.43	1.43	1.39	1.45	1.47	1.44	1.47
7.813	1.64	1.67	1.72	1.69	1.65	1.73	1.70	1.68	1.73
5.524	1.89	1.93	1.99	1.93	1.89	1.99	1.92	1.91	1.97
3.906	1.93	1.98	2.03	1.96	1.92	2.02	1.94	1.93	2.00
2.762	1.72	1.76	1.80	1.72	1.69	1.78	1.72	1.71	1.77
1.953	1.31	1.34	1.37	1.30	1.28	1.34	1.30	1.30	1.35
1.381	0.81	0.83	0.85	0.80	0.79	0.82	0.81	0.81	0.83
0.977	0.36	0.36	0.36	0.34	0.34	0.35	0.36	0.36	0.37
0.691	0.04	0.04	0.04	0.03	0.03	0.03	0.04	0.04	0.04
0.488	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	4.22	3.99	3.78	4.12	4.32	3.85	4.10	4.17	3.86
d50	96.42	97.56	97.76	96.69	98.74	96.66	94.43	96.09	95.43
d90	196.99	199.26	200.07	196.95	200.36	195.34	195.91	198.41	196.60

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	4.00	0.22	5.39	4.10	0.23	5.73	4.05	0.16	4.00
d50	97.25	0.73	0.75	97.36	1.20	1.23	95.32	0.84	0.88
d90	198.77	1.59	0.80	197.55	2.56	1.30	196.97	1.29	0.66

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2807 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.40	0.37	0.31	0.33	0.27	0.43	0.48	0.43	0.47
500	7.14	6.94	6.80	7.12	6.76	7.58	8.15	7.53	7.94
353.6	16.29	16.18	16.44	17.13	16.78	17.23	18.08	17.10	17.74
250	18.42	18.58	18.94	19.77	19.64	19.37	19.85	19.40	19.75
176.8	12.23	12.41	12.48	12.95	13.04	12.61	12.53	12.86	12.73
125	5.91	5.94	5.82	5.82	5.95	5.77	5.51	6.04	5.68
88.39	4.02	4.00	3.92	3.69	3.74	3.73	3.58	3.83	3.58
62.5	4.94	4.97	4.94	4.70	4.75	4.71	4.56	4.64	4.55
44.19	5.20	5.24	5.21	5.01	5.09	5.00	4.78	4.87	4.84
31.25	4.24	4.24	4.21	4.00	4.09	4.00	3.80	3.94	3.88
22.097	3.08	3.05	3.02	2.82	2.88	2.82	2.72	2.85	2.75
15.625	2.41	2.38	2.35	2.19	2.23	2.19	2.14	2.22	2.14
11.049	2.19	2.18	2.15	2.01	2.05	2.02	1.96	2.02	1.96
7.813	2.40	2.40	2.37	2.22	2.27	2.23	2.15	2.22	2.17
5.524	2.47	2.47	2.44	2.29	2.33	2.29	2.21	2.28	2.22
3.906	2.30	2.29	2.27	2.13	2.16	2.13	2.04	2.11	2.05
2.762	2.04	2.04	2.02	1.88	1.91	1.89	1.79	1.85	1.81
1.953	1.37	1.37	1.36	1.26	1.29	1.27	1.19	1.23	1.20
1.381	0.95	0.95	0.94	0.87	0.89	0.88	0.81	0.84	0.82
0.977	0.79	0.79	0.79	0.72	0.74	0.73	0.67	0.70	0.69
0.691	0.88	0.89	0.88	0.80	0.82	0.82	0.74	0.77	0.75
0.488	0.33	0.34	0.34	0.30	0.31	0.31	0.26	0.27	0.27
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	6.67	6.66	6.74	7.52	7.31	7.45	8.19	7.75	8.05
d50	200.72	200.33	202.96	214.90	210.10	215.62	227.32	215.34	223.64
d90	474.51	471.98	470.46	474.86	470.27	480.37	487.05	479.76	484.72

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	6.69	0.04	0.66	7.43	0.11	1.49	8.00	0.22	2.77
d50	201.33	1.42	0.70	213.54	3.00	1.41	222.10	6.14	2.76
d90	472.32	2.05	0.43	475.17	5.06	1.06	483.84	3.72	0.77

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2808 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	1.76	1.97	2.11	1.90	1.67	2.22	1.60	1.70	1.76
500	9.07	9.16	9.13	9.04	8.97	9.10	9.21	9.40	8.78
353.6	23.35	23.47	23.72	23.45	23.50	23.58	23.97	23.93	23.84
250	22.86	22.62	22.38	22.92	23.02	22.94	23.18	22.91	23.30
176.8	9.93	9.86	9.63	10.06	9.98	9.85	9.93	9.89	9.96
125	3.74	3.81	3.81	3.81	3.79	3.73	3.69	3.71	3.75
88.39	3.14	3.09	2.98	3.13	3.11	3.03	2.97	2.98	2.93
62.5	3.43	3.42	3.39	3.43	3.45	3.39	3.38	3.39	3.38
44.19	3.41	3.38	3.41	3.33	3.36	3.29	3.27	3.26	3.27
31.25	2.90	2.85	2.87	2.84	2.84	2.77	2.74	2.72	2.75
22.097	2.14	2.14	2.21	2.11	2.15	2.13	2.13	2.14	2.17
15.625	1.64	1.63	1.68	1.61	1.63	1.61	1.60	1.59	1.62
11.049	1.50	1.49	1.54	1.48	1.50	1.48	1.48	1.47	1.50
7.813	1.44	1.43	1.44	1.42	1.44	1.42	1.42	1.40	1.44
5.524	1.42	1.41	1.42	1.40	1.42	1.40	1.39	1.37	1.41
3.906	1.35	1.34	1.36	1.32	1.34	1.32	1.31	1.30	1.32
2.762	1.18	1.16	1.17	1.15	1.16	1.14	1.13	1.13	1.14
1.953	0.99	0.98	0.99	0.96	0.97	0.96	0.95	0.97	0.96
1.381	0.86	0.86	0.86	0.83	0.84	0.83	0.82	0.85	0.83
0.977	0.75	0.75	0.75	0.72	0.73	0.72	0.72	0.75	0.73
0.691	0.65	0.66	0.65	0.63	0.64	0.64	0.64	0.65	0.65
0.488	0.59	0.59	0.58	0.57	0.58	0.57	0.58	0.58	0.59
0.345	0.53	0.53	0.53	0.51	0.52	0.52	0.52	0.53	0.53
0.244	0.47	0.47	0.47	0.45	0.46	0.46	0.46	0.46	0.47
0.173	0.37	0.38	0.37	0.36	0.37	0.37	0.37	0.37	0.38
0.122	0.29	0.29	0.29	0.28	0.29	0.28	0.28	0.28	0.29
0.086	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.19
0.061	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.08
0.043	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	8.37	8.43	8.39	8.93	8.63	8.90	8.94	8.82	8.66
d50	278.12	279.24	280.07	279.26	278.47	281.44	281.58	281.93	280.24
d90	516.01	521.75	523.95	518.45	512.54	525.76	515.38	520.69	510.67

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	8.39	0.03	0.36	8.82	0.17	1.87	8.81	0.14	1.59
d50	279.14	0.98	0.35	279.72	1.54	0.55	281.25	0.89	0.32
d90	520.57	4.10	0.79	518.92	6.62	1.28	515.58	5.02	0.97

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2809 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	2.13	1.69	2.42	1.54	1.15	1.26	1.53	1.74	1.30
500	11.61	11.16	12.07	11.06	10.67	10.83	11.24	11.05	10.94
353.6	19.52	19.66	20.02	19.17	19.05	18.89	19.11	18.87	18.90
250	20.28	20.94	20.72	20.03	20.10	19.83	19.95	19.97	20.09
176.8	12.31	12.90	12.54	12.08	12.25	12.09	12.25	12.46	12.60
125	5.63	5.87	5.64	5.40	5.59	5.57	5.73	5.90	6.02
88.39	2.15	2.10	2.03	2.11	2.21	2.25	2.28	2.29	2.33
62.5	2.90	2.80	2.71	3.10	3.13	3.18	3.10	3.05	3.05
44.19	3.76	3.70	3.54	4.12	4.13	4.17	4.06	4.03	4.02
31.25	3.10	3.05	2.90	3.42	3.45	3.48	3.38	3.38	3.39
22.097	2.31	2.26	2.14	2.55	2.60	2.62	2.53	2.53	2.54
15.625	1.56	1.51	1.44	1.69	1.72	1.74	1.66	1.64	1.65
11.049	1.45	1.40	1.34	1.51	1.53	1.54	1.46	1.44	1.44
7.813	1.55	1.50	1.43	1.56	1.57	1.59	1.48	1.47	1.47
5.524	1.73	1.66	1.58	1.69	1.72	1.73	1.59	1.58	1.58
3.906	1.73	1.67	1.59	1.71	1.73	1.75	1.60	1.58	1.59
2.762	1.54	1.49	1.42	1.58	1.60	1.62	1.48	1.47	1.47
1.953	1.30	1.26	1.21	1.41	1.43	1.45	1.34	1.33	1.33
1.381	1.06	1.03	0.99	1.23	1.25	1.27	1.20	1.19	1.20
0.977	0.80	0.79	0.76	0.99	1.02	1.03	0.98	0.98	0.99
0.691	0.77	0.76	0.73	0.98	1.00	1.02	0.98	0.98	1.00
0.488	0.55	0.54	0.52	0.71	0.73	0.74	0.72	0.72	0.73
0.345	0.25	0.25	0.24	0.35	0.36	0.37	0.36	0.37	0.37
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	8.31	8.83	9.85	6.85	6.59	6.43	7.41	7.49	7.39
d50	265.59	264.70	272.88	257.97	254.21	253.54	258.09	257.12	255.40
d90	559.01	546.28	568.84	542.57	530.41	534.46	544.66	545.62	536.86

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	9.00	0.79	8.74	6.62	0.21	3.15	7.43	0.05	0.69
d50	267.72	4.49	1.68	255.24	2.39	0.94	256.87	1.36	0.53
d90	558.04	11.31	2.03	535.81	6.19	1.16	542.38	4.80	0.89

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2811 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.82	1.08	0.89	0.91	0.94	1.03	0.99	1.05	0.83
500	9.43	10.44	9.33	10.04	10.38	10.30	10.45	10.45	9.72
353.6	19.72	20.87	19.59	20.48	21.25	20.84	21.26	21.14	20.29
250	21.20	21.65	21.25	21.55	22.31	21.75	22.41	22.21	21.69
176.8	13.39	13.11	13.51	13.39	13.63	13.20	13.79	13.63	13.52
125	5.47	5.00	5.49	5.43	5.20	5.01	5.28	5.22	5.35
88.39	2.90	2.57	2.80	2.88	2.56	2.53	2.49	2.52	2.70
62.5	3.77	3.51	3.62	3.62	3.43	3.49	3.29	3.35	3.56
44.19	4.21	3.94	4.06	3.92	3.82	3.94	3.68	3.76	4.01
31.25	3.40	3.15	3.29	3.10	3.00	3.17	2.91	2.97	3.23
22.097	2.29	2.12	2.25	2.09	1.96	2.14	1.93	1.96	2.18
15.625	1.71	1.60	1.72	1.61	1.46	1.62	1.46	1.48	1.64
11.049	1.58	1.49	1.63	1.50	1.36	1.50	1.37	1.39	1.52
7.813	1.64	1.54	1.71	1.56	1.41	1.55	1.43	1.45	1.57
5.524	1.69	1.59	1.77	1.60	1.45	1.59	1.47	1.50	1.62
3.906	1.62	1.52	1.69	1.53	1.38	1.53	1.41	1.43	1.55
2.762	1.46	1.36	1.53	1.37	1.25	1.37	1.26	1.28	1.40
1.953	1.13	1.06	1.18	1.05	0.97	1.06	0.97	0.99	1.09
1.381	0.72	0.67	0.75	0.66	0.62	0.66	0.60	0.62	0.70
0.977	0.63	0.59	0.66	0.58	0.55	0.59	0.53	0.55	0.62
0.691	0.85	0.79	0.89	0.79	0.74	0.79	0.71	0.73	0.84
0.488	0.39	0.36	0.40	0.35	0.34	0.34	0.31	0.33	0.39
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	10.74	12.45	9.83	12.46	15.40	12.46	15.34	14.62	11.68
d50	254.79	266.67	254.36	262.25	269.75	266.12	270.55	269.64	260.32
d90	504.50	525.78	504.03	516.57	522.59	522.88	524.36	525.44	509.92

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	11.01	1.33	12.08	13.44	1.70	12.64	13.88	1.94	13.95
d50	258.61	6.99	2.70	266.04	3.75	1.41	266.84	5.66	2.12
d90	511.44	12.42	2.43	520.68	3.56	0.68	519.91	8.67	1.67

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2812 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	1.56	1.58	1.56	1.51	1.84	1.99	2.81	3.76	3.45
500	14.72	14.89	14.73	10.87	11.31	11.87	12.76	13.42	13.35
353.6	28.85	29.05	28.94	19.03	19.42	20.02	20.61	20.46	20.65
250	28.91	28.88	28.99	19.86	20.01	19.95	20.19	19.40	19.70
176.8	15.28	15.08	15.21	13.19	13.12	12.54	12.54	11.94	12.10
125	3.33	3.19	3.23	5.92	5.77	5.30	5.15	5.05	5.05
88.39	0.05	0.04	0.04	3.06	2.92	2.82	2.58	2.69	2.65
62.5	0.56	0.57	0.57	3.62	3.49	3.56	3.23	3.27	3.25
44.19	1.65	1.66	1.67	4.35	4.22	4.25	3.85	3.80	3.78
31.25	1.45	1.45	1.45	3.82	3.70	3.66	3.29	3.25	3.23
22.097	0.75	0.74	0.74	2.69	2.59	2.54	2.28	2.29	2.26
15.625	0.40	0.40	0.40	1.93	1.85	1.82	1.67	1.68	1.66
11.049	0.45	0.45	0.45	1.77	1.69	1.68	1.56	1.56	1.54
7.813	0.55	0.55	0.55	1.84	1.77	1.75	1.64	1.62	1.59
5.524	0.53	0.52	0.52	1.79	1.71	1.69	1.58	1.56	1.54
3.906	0.41	0.40	0.40	1.51	1.44	1.43	1.34	1.32	1.30
2.762	0.28	0.28	0.28	1.10	1.06	1.05	0.99	0.99	0.98
1.953	0.20	0.20	0.20	0.75	0.72	0.72	0.68	0.68	0.68
1.381	0.08	0.08	0.08	0.49	0.48	0.48	0.46	0.46	0.46
0.977	0.00	0.00	0.00	0.37	0.36	0.36	0.34	0.34	0.34
0.691	0.00	0.00	0.00	0.31	0.30	0.30	0.28	0.28	0.28
0.488	0.00	0.00	0.00	0.21	0.20	0.20	0.19	0.19	0.19
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	164.47	167.17	166.20	15.20	16.38	16.65	19.01	19.23	19.72
d50	333.51	335.09	333.96	255.58	261.44	267.20	278.90	283.48	283.52
d90	579.59	581.28	579.66	539.37	550.68	559.67	581.65	601.74	596.50

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	165.95	1.37	0.82	16.08	0.77	4.79	19.32	0.37	1.90
d50	334.19	0.82	0.24	261.41	5.81	2.22	281.97	2.66	0.94
d90	580.18	0.96	0.17	549.91	10.17	1.85	593.30	10.42	1.76

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2813 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	16.38	17.51	17.21	9.63	11.94	12.78	10.69	11.21	11.82
500	25.79	27.64	25.96	24.71	24.70	24.64	24.54	25.16	25.56
353.6	23.57	24.19	23.39	27.87	25.57	25.22	27.59	27.56	27.72
250	12.60	11.31	12.42	16.05	15.19	14.92	16.27	15.72	15.68
176.8	3.19	2.14	3.09	3.91	4.44	4.30	4.17	3.76	3.63
125	0.38	0.14	0.30	0.18	0.39	0.32	0.18	0.12	0.07
88.39	1.49	1.37	1.39	1.18	1.19	1.15	1.02	1.02	0.86
62.5	2.49	2.34	2.38	2.38	2.36	2.34	2.27	2.25	2.14
44.19	2.33	2.16	2.19	2.28	2.25	2.25	2.32	2.24	2.12
31.25	1.88	1.72	1.74	1.76	1.74	1.73	1.87	1.78	1.65
22.097	1.74	1.61	1.63	1.61	1.60	1.58	1.65	1.60	1.48
15.625	1.72	1.63	1.68	1.68	1.69	1.69	1.59	1.59	1.51
11.049	1.53	1.48	1.56	1.58	1.62	1.63	1.42	1.45	1.40
7.813	1.23	1.20	1.27	1.30	1.34	1.37	1.13	1.16	1.13
5.524	0.96	0.93	0.99	1.01	1.04	1.07	0.87	0.89	0.87
3.906	0.77	0.75	0.79	0.80	0.83	0.85	0.70	0.71	0.69
2.762	0.61	0.59	0.62	0.64	0.66	0.67	0.55	0.56	0.54
1.953	0.45	0.44	0.46	0.47	0.49	0.50	0.40	0.41	0.40
1.381	0.35	0.35	0.37	0.38	0.39	0.40	0.31	0.32	0.31
0.977	0.32	0.31	0.32	0.34	0.35	0.35	0.28	0.28	0.27
0.691	0.22	0.21	0.22	0.23	0.24	0.25	0.19	0.19	0.13
0.488	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	31.85	34.73	31.75	30.97	29.71	28.93	37.03	36.70	40.64
d50	445.60	466.44	451.89	411.55	417.22	420.62	415.36	421.27	427.05
d90	809.18	820.31	817.52	703.36	747.98	762.33	722.97	733.91	745.76

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	32.78	1.70	5.17	29.87	1.03	3.45	38.12	2.19	5.73
d50	454.65	10.69	2.35	416.46	4.58	1.10	421.23	5.85	1.39
d90	815.67	5.79	0.71	737.89	30.75	4.17	734.21	11.39	1.55

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2814 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	3.59	3.45	3.60	3.80	4.22	4.22	3.53	3.89	3.55
500	14.12	14.01	14.06	14.25	14.18	14.73	14.27	14.27	14.22
353.6	23.17	23.17	22.99	23.27	23.01	23.33	23.32	23.15	23.25
250	22.47	22.56	22.39	22.63	22.40	22.24	22.52	22.46	22.52
176.8	13.21	13.28	13.29	13.32	13.25	12.89	13.21	13.29	13.27
125	4.35	4.39	4.46	4.34	4.37	4.15	4.37	4.43	4.44
88.39	1.32	1.36	1.38	1.23	1.27	1.23	1.32	1.29	1.36
62.5	2.15	2.19	2.17	2.05	2.06	2.08	2.12	2.06	2.13
44.19	2.97	2.99	2.99	2.89	2.91	2.90	2.93	2.89	2.92
31.25	2.50	2.49	2.51	2.44	2.46	2.43	2.47	2.45	2.45
22.097	1.57	1.56	1.58	1.52	1.54	1.52	1.55	1.53	1.53
15.625	1.04	1.04	1.04	1.00	1.01	1.00	1.02	1.00	1.01
11.049	0.98	0.98	0.98	0.94	0.94	0.94	0.95	0.93	0.95
7.813	1.09	1.09	1.09	1.05	1.05	1.05	1.06	1.04	1.05
5.524	1.16	1.16	1.16	1.12	1.12	1.12	1.13	1.12	1.12
3.906	1.13	1.12	1.13	1.09	1.09	1.09	1.10	1.09	1.09
2.762	0.97	0.97	0.98	0.94	0.95	0.94	0.96	0.94	0.95
1.953	0.75	0.75	0.75	0.72	0.73	0.73	0.74	0.73	0.74
1.381	0.54	0.54	0.54	0.52	0.53	0.53	0.53	0.53	0.53
0.977	0.40	0.40	0.40	0.39	0.39	0.39	0.39	0.39	0.40
0.691	0.31	0.31	0.31	0.30	0.30	0.31	0.30	0.30	0.31
0.488	0.21	0.21	0.21	0.20	0.20	0.21	0.20	0.20	0.21
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	30.27	30.41	30.14	32.21	31.85	32.07	31.49	32.06	31.73
d50	307.19	306.14	305.95	309.61	309.59	313.46	308.43	309.21	307.91
d90	604.10	601.19	603.82	608.13	613.95	617.06	604.26	609.57	604.18

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	30.27	0.14	0.46	32.04	0.18	0.57	31.76	0.28	0.89
d50	306.42	0.67	0.22	310.89	2.23	0.72	308.52	0.65	0.21
d90	603.04	1.60	0.27	613.05	4.53	0.74	606.00	3.09	0.51

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2815 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	1.15	1.63	1.37	1.49	1.27	1.64	1.76	0.23	1.39
500	16.54	21.42	18.99	19.43	19.82	20.74	22.78	12.99	19.70
353.6	29.36	32.43	29.31	29.49	34.21	30.34	32.39	33.75	32.09
250	16.08	12.64	12.26	12.84	15.00	12.37	10.58	20.43	14.18
176.8	5.88	4.29	4.62	5.41	3.33	5.28	3.31	4.95	4.74
125	2.05	1.95	1.78	2.33	1.03	2.48	1.90	1.01	2.14
88.39	2.71	2.05	1.81	2.22	1.87	2.41	2.26	1.93	2.52
62.5	3.74	2.81	3.40	3.04	2.98	2.91	2.91	3.30	2.85
44.19	4.14	2.75	4.24	3.28	3.19	2.65	2.63	3.46	2.73
31.25	3.61	1.26	3.14	2.08	2.72	1.28	1.04	2.70	2.01
22.097	2.42	0.39	1.67	0.90	2.10	0.59	0.16	1.85	1.25
15.625	1.69	1.06	1.29	1.00	1.53	1.14	0.92	1.37	1.09
11.049	0.79	1.19	0.99	1.08	0.74	1.10	1.22	0.77	0.85
7.813	0.33	1.45	1.28	1.48	0.72	1.32	1.60	0.87	1.06
5.524	0.08	1.12	1.24	1.24	0.73	1.17	1.31	0.85	0.96
3.906	0.56	1.18	1.40	1.27	0.91	1.30	1.33	0.94	1.05
2.762	1.17	1.43	1.62	1.52	1.05	1.49	1.56	1.07	1.25
1.953	1.35	1.46	1.62	1.58	1.03	1.46	1.60	1.10	1.29
1.381	1.12	1.23	1.34	1.35	0.90	1.24	1.37	0.98	1.11
0.977	0.79	0.92	1.00	1.01	0.72	0.97	1.05	0.78	0.84
0.691	0.46	0.56	0.61	0.61	0.44	0.61	0.64	0.48	0.51
0.488	0.61	0.73	0.78	0.79	0.55	0.81	0.83	0.62	0.67
0.345	0.72	0.83	0.89	0.93	0.62	0.94	0.98	0.71	0.77
0.244	0.83	0.96	1.02	1.09	0.73	1.11	1.15	0.84	0.89
0.173	0.85	1.00	1.05	1.13	0.79	1.17	1.21	0.88	0.93
0.122	0.67	0.82	0.84	0.92	0.66	0.96	0.99	0.73	0.75
0.086	0.31	0.43	0.43	0.46	0.37	0.51	0.52	0.38	0.37
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	11.83	3.57	3.02	2.84	9.95	2.90	2.57	6.74	4.78
d50	331.88	374.92	350.34	355.34	373.10	364.76	380.78	335.89	365.95
d90	587.44	617.50	604.03	607.54	606.90	614.89	623.70	544.83	607.65

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	6.14	4.94	80.44	5.23	4.09	78.12	4.69	2.09	44.49
d50	352.38	21.60	6.13	364.40	8.88	2.44	360.87	22.87	6.34
d90	602.99	15.06	2.50	609.78	4.44	0.73	592.06	41.68	7.04

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2818 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	0.66	0.70	0.72	0.69	0.45	0.65	0.61	0.62	0.58
500	9.93	10.15	10.13	9.97	9.24	9.93	9.56	9.60	9.41
353.6	21.61	21.79	21.58	21.36	21.51	21.60	21.11	21.13	20.96
250	24.19	24.19	23.99	23.70	24.34	23.93	23.72	23.74	23.71
176.8	15.51	15.40	15.36	15.14	15.53	15.21	15.27	15.32	15.42
125	6.07	5.97	6.03	5.99	6.00	5.98	6.09	6.14	6.27
88.39	2.39	2.35	2.40	2.50	2.41	2.49	2.58	2.59	2.65
62.5	3.02	3.00	3.05	3.18	3.17	3.16	3.26	3.25	3.27
44.19	3.44	3.43	3.48	3.60	3.63	3.58	3.69	3.68	3.70
31.25	2.60	2.59	2.64	2.73	2.75	2.71	2.80	2.80	2.82
22.097	1.58	1.57	1.61	1.68	1.68	1.65	1.72	1.71	1.72
15.625	1.16	1.14	1.16	1.21	1.19	1.17	1.23	1.21	1.21
11.049	1.15	1.12	1.13	1.16	1.13	1.10	1.17	1.14	1.14
7.813	1.21	1.17	1.18	1.20	1.16	1.12	1.21	1.17	1.16
5.524	1.25	1.22	1.23	1.26	1.22	1.18	1.28	1.24	1.22
3.906	1.18	1.15	1.17	1.22	1.18	1.15	1.24	1.20	1.19
2.762	1.01	1.00	1.02	1.09	1.07	1.04	1.11	1.08	1.08
1.953	0.74	0.74	0.76	0.82	0.82	0.80	0.84	0.83	0.84
1.381	0.46	0.46	0.48	0.52	0.52	0.51	0.53	0.53	0.53
0.977	0.35	0.35	0.36	0.40	0.40	0.40	0.40	0.41	0.42
0.691	0.38	0.38	0.40	0.44	0.45	0.45	0.45	0.46	0.47
0.488	0.11	0.11	0.12	0.14	0.14	0.20	0.14	0.14	0.21
0.345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.173	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.086	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.061	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.00	0.00	0.00	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	100.00	100.00	100.00

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	27.52	28.53	27.35	24.70	25.63	26.59	23.96	24.90	24.58
d50	273.98	275.75	274.31	271.82	270.55	273.12	268.94	269.31	267.67
d90	510.40	514.75	514.75	511.60	497.52	510.20	503.07	504.00	499.93

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	27.80	0.64	2.31	25.64	0.94	3.68	24.48	0.48	1.96
d50	274.68	0.94	0.34	271.83	1.29	0.47	268.64	0.86	0.32
d90	513.30	2.51	0.49	506.44	7.76	1.53	502.34	2.13	0.42

APPENDIX 3. Participant laser replicate data for sediment distributed as PS81.

PSA_2829_v2 LASER DATA

Microns	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
707	14.48	-	-	-	-	-	-	-	-
500	22.87	-	-	-	-	-	-	-	-
353.6	21.72	-	-	-	-	-	-	-	-
250	12.45	-	-	-	-	-	-	-	-
176.8	3.85	-	-	-	-	-	-	-	-
125	1.08	-	-	-	-	-	-	-	-
88.39	2.22	-	-	-	-	-	-	-	-
62.5	3.46	-	-	-	-	-	-	-	-
44.19	3.43	-	-	-	-	-	-	-	-
31.25	2.82	-	-	-	-	-	-	-	-
22.097	2.30	-	-	-	-	-	-	-	-
15.625	1.96	-	-	-	-	-	-	-	-
11.049	1.66	-	-	-	-	-	-	-	-
7.813	1.39	-	-	-	-	-	-	-	-
5.524	1.16	-	-	-	-	-	-	-	-
3.906	0.95	-	-	-	-	-	-	-	-
2.762	0.74	-	-	-	-	-	-	-	-
1.953	0.54	-	-	-	-	-	-	-	-
1.381	0.40	-	-	-	-	-	-	-	-
0.977	0.31	-	-	-	-	-	-	-	-
0.691	0.21	-	-	-	-	-	-	-	-
0.488	0.00	-	-	-	-	-	-	-	-
0.345	0.00	-	-	-	-	-	-	-	-
0.244	0.00	-	-	-	-	-	-	-	-
0.173	0.00	-	-	-	-	-	-	-	-
0.122	0.00	-	-	-	-	-	-	-	-
0.086	0.00	-	-	-	-	-	-	-	-
0.061	0.00	-	-	-	-	-	-	-	-
0.043	0.00	-	-	-	-	-	-	-	-
Total	100.00	-	-	-	-	-	-	-	-

	Run 1 - a	Run 1 - b	Run 1 - c	Run 2 - a	Run 2 - b	Run 2 - c	Run 3 - a	Run 3 - b	Run 3 - c
d10	24.45	-	-	-	-	-	-	-	-
d50	408.63	-	-	-	-	-	-	-	-
d90	787.12	-	-	-	-	-	-	-	-

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	24.45	-	-	-	-	-	-	-	-
d50	408.63	-	-	-	-	-	-	-	-
d90	787.12	-	-	-	-	-	-	-	-

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2801
Sample Code:	PS812801

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.37	3.09
-1.50 to -1.00; 2 mm	16.04	134.53
-1.00 to -0.50; 1.4 mm	5.50	46.16
-0.50 to 0.00; 1 mm	0.15	1.29
0.00 to 0.50; (707 µm)	1.37	11.45
0.50 to 1.00; (500 µm)	11.27	94.54
1.00 to 1.50; (353.6 µm)	19.50	163.56
1.50 to 2.00; (250 µm)	18.88	158.35
2.00 to 2.50; (176.8 µm)	10.88	91.31
2.50 to 3.00; (125 µm)	3.45	28.91
3.00 to 3.50; (88.39 µm)	1.01	8.47
3.50 to 4.00; (62.5 µm)	1.73	14.49
4.00 to 4.50; (44.19 µm)	2.33	19.53
4.50 to 5.00; (31.25 µm)	1.86	15.64
5.00 to 5.50; (22.097 µm)	1.11	9.33
5.50 to 6.00; (15.625 µm)	0.71	5.97
6.00 to 6.50; (11.049 µm)	0.63	5.33
6.50 to 7.00; (7.813 µm)	0.63	5.26
7.00 to 7.50; (5.524 µm)	0.58	4.86
7.50 to 8.00; (3.906 µm)	0.51	4.27
8.00 to 8.50; (2.762 µm)	0.44	3.66
8.50 to 9.00; (1.953 µm)	0.35	2.95
9.00 to 9.50; (1.381 µm)	0.26	2.22
9.50 to 10.00; (0.977 µm)	0.20	1.69
10.00 to 10.50; (0.691 µm)	0.17	1.39
10.50 to 11.00; (0.488 µm)	0.08	0.65
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)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	838.90

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2802
Sample Code:	PS812802

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.47	3.52
-1.50 to -1.00; 2 mm	14.56	109.23
-1.00 to -0.50; 1.4 mm	5.64	42.33
-0.50 to 0.00; 1 mm	0.15	1.09
0.00 to 0.50; (707 µm)	2.57	19.28
0.50 to 1.00; (500 µm)	7.19	53.94
1.00 to 1.50; (353.6 µm)	18.66	139.99
1.50 to 2.00; (250 µm)	18.75	140.65
2.00 to 2.50; (176.8 µm)	8.44	63.29
2.50 to 3.00; (125 µm)	2.86	21.48
3.00 to 3.50; (88.39 µm)	2.33	17.50
3.50 to 4.00; (62.5 µm)	2.65	19.85
4.00 to 4.50; (44.19 µm)	2.55	19.09
4.50 to 5.00; (31.25 µm)	1.98	14.85
5.00 to 5.50; (22.097 µm)	1.55	11.63
5.50 to 6.00; (15.625 µm)	0.92	6.91
6.00 to 6.50; (11.049 µm)	0.74	5.59
6.50 to 7.00; (7.813 µm)	0.90	6.75
7.00 to 7.50; (5.524 µm)	0.96	7.18
7.50 to 8.00; (3.906 µm)	0.91	6.79
8.00 to 8.50; (2.762 µm)	0.81	6.05
8.50 to 9.00; (1.953 µm)	0.72	5.36
9.00 to 9.50; (1.381 µm)	0.63	4.72
9.50 to 10.00; (0.977 µm)	0.55	4.09
10.00 to 10.50; (0.691 µm)	0.48	3.62
10.50 to 11.00; (0.488 µm)	0.45	3.36
11.00 to 11.50; (0.345 µm)	0.42	3.15
11.50 to 12.00; (0.244 µm)	0.38	2.85
12.00 to 12.50; (0.173 µm)	0.31	2.34
12.50 to 13.00; (0.122 µm)	0.24	1.82
13.00 to 13.50; (0.086 µm)	0.16	1.18
13.50 to 14.00; (0.061µm)	0.06	0.48
14.00 to 14.50; (0.043µm)	0.01	0.06
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	750.04

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2803
Sample Code:	PS812803

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	1.12	
-1.50 to -1.00; 2 mm	15.75	
-1.00 to -0.50; 1.4 mm	5.26	
-0.50 to 0.00; 1 mm	0.14	
0.00 to 0.50; (707 µm)	0.29	
0.50 to 1.00; (500 µm)	5.21	
1.00 to 1.50; (353.6 µm)	17.72	
1.50 to 2.00; (250 µm)	19.25	
2.00 to 2.50; (176.8 µm)	9.48	
2.50 to 3.00; (125 µm)	3.93	
3.00 to 3.50; (88.39 µm)	1.80	
3.50 to 4.00; (62.5 µm)	2.68	
4.00 to 4.50; (44.19 µm)	2.82	
4.50 to 5.00; (31.25 µm)	2.25	
5.00 to 5.50; (22.097 µm)	1.83	
5.50 to 6.00; (15.625 µm)	1.23	
6.00 to 6.50; (11.049 µm)	1.14	
6.50 to 7.00; (7.813 µm)	1.29	
7.00 to 7.50; (5.524 µm)	1.34	
7.50 to 8.00; (3.906 µm)	1.21	
8.00 to 8.50; (2.762 µm)	0.95	
8.50 to 9.00; (1.953 µm)	0.69	
9.00 to 9.50; (1.381 µm)	0.52	
9.50 to 10.00; (0.977 µm)	0.43	
10.00 to 10.50; (0.691 µm)	0.37	
10.50 to 11.00; (0.488 µm)	0.33	
11.00 to 11.50; (0.345 µm)	0.28	
11.50 to 12.00; (0.244 µm)	0.24	
12.00 to 12.50; (0.173 µm)	0.18	
12.50 to 13.00; (0.122 µm)	0.14	
13.00 to 13.50; (0.086 µm)	0.09	
13.50 to 14.00; (0.061µm)	0.03	
14.00 to 14.50; (0.043µm)	0.00	
> 14.50; (0.01 µm)	0.00	
TOTAL	100.00	

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2804
Sample Code:	PS812804

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage **(mark as "0" for no material & leave blank for not analysed)**	Grams
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm		
-3.50 to -3.00; 8 mm		
-3.00 to -2.50; 5.6 mm		
-2.50 to -2.00; 4 mm		
-2.00 to -1.50; 2.8 mm		
-1.50 to -1.00; 2 mm		
-1.00 to -0.50; 1.4 mm		
-0.50 to 0.00; 1 mm		
0.00 to 0.50; (707 µm)		
0.50 to 1.00; (500 µm)		
1.00 to 1.50; (353.6 µm)		
1.50 to 2.00; (250 µm)		
2.00 to 2.50; (176.8 µm)		
2.50 to 3.00; (125 µm)		
3.00 to 3.50; (88.39 µm)		
3.50 to 4.00; (62.5 µm)		
4.00 to 4.50; (44.19 µm)		
4.50 to 5.00; (31.25 µm)		
5.00 to 5.50; (22.097 µm)		
5.50 to 6.00; (15.625 µm)		
6.00 to 6.50; (11.049 µm)		
6.50 to 7.00; (7.813 µm)		
7.00 to 7.50; (5.524 µm)		
7.50 to 8.00; (3.906 µm)		
8.00 to 8.50; (2.762 µm)		
8.50 to 9.00; (1.953 µm)		
9.00 to 9.50; (1.381 µm)		
9.50 to 10.00; (0.977 µm)		
10.00 to 10.50; (0.691 µm)		
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL		

Notes:
Not participating in current exercise

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2805
Sample Code:	PS812805

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage **(mark as "0" for no material & leave blank for not analysed)**	Grams
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm		
-3.50 to -3.00; 8 mm		
-3.00 to -2.50; 5.6 mm		
-2.50 to -2.00; 4 mm		
-2.00 to -1.50; 2.8 mm		
-1.50 to -1.00; 2 mm		
-1.00 to -0.50; 1.4 mm		
-0.50 to 0.00; 1 mm		
0.00 to 0.50; (707 µm)		
0.50 to 1.00; (500 µm)		
1.00 to 1.50; (353.6 µm)		
1.50 to 2.00; (250 µm)		
2.00 to 2.50; (176.8 µm)		
2.50 to 3.00; (125 µm)		
3.00 to 3.50; (88.39 µm)		
3.50 to 4.00; (62.5 µm)		
4.00 to 4.50; (44.19 µm)		
4.50 to 5.00; (31.25 µm)		
5.00 to 5.50; (22.097 µm)		
5.50 to 6.00; (15.625 µm)		
6.00 to 6.50; (11.049 µm)		
6.50 to 7.00; (7.813 µm)		
7.00 to 7.50; (5.524 µm)		
7.50 to 8.00; (3.906 µm)		
8.00 to 8.50; (2.762 µm)		
8.50 to 9.00; (1.953 µm)		
9.00 to 9.50; (1.381 µm)		
9.50 to 10.00; (0.977 µm)		
10.00 to 10.50; (0.691 µm)		
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL		

Notes:
Not participating in current exercise

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2806
Sample Code:	PS812806

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.68	
-1.50 to -1.00; 2 mm	15.42	
-1.00 to -0.50; 1.4 mm	5.99	
-0.50 to 0.00; 1 mm	0.13	
0.00 to 0.50; (707 µm)	1.32	
0.50 to 1.00; (500 µm)	9.55	
1.00 to 1.50; (353.6 µm)	16.16	
1.50 to 2.00; (250 µm)	15.96	
2.00 to 2.50; (176.8 µm)	9.87	
2.50 to 3.00; (125 µm)	3.82	
3.00 to 3.50; (88.39 µm)	1.61	
3.50 to 4.00; (62.5 µm)	2.22	
4.00 to 4.50; (44.19 µm)	2.93	
4.50 to 5.00; (31.25 µm)	2.60	
5.00 to 5.50; (22.097 µm)	1.75	
5.50 to 6.00; (15.625 µm)	1.18	
6.00 to 6.50; (11.049 µm)	1.11	
6.50 to 7.00; (7.813 µm)	1.32	
7.00 to 7.50; (5.524 µm)	1.51	
7.50 to 8.00; (3.906 µm)	1.53	
8.00 to 8.50; (2.762 µm)	1.35	
8.50 to 9.00; (1.953 µm)	1.03	
9.00 to 9.50; (1.381 µm)	0.63	
9.50 to 10.00; (0.977 µm)	0.28	
10.00 to 10.50; (0.691 µm)	0.03	
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	
> 14.50; (0.01 µm)	0.00	
TOTAL	100.00	

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2807
Sample Code:	PS812807

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	1.06	
-1.50 to -1.00; 2 mm	16.10	
-1.00 to -0.50; 1.4 mm	4.83	
-0.50 to 0.00; 1 mm	0.06	
0.00 to 0.50; (707 µm)	0.36	
0.50 to 1.00; (500 µm)	6.14	
1.00 to 1.50; (353.6 µm)	13.75	
1.50 to 2.00; (250 µm)	15.33	
2.00 to 2.50; (176.8 µm)	9.90	
2.50 to 3.00; (125 µm)	4.48	
3.00 to 3.50; (88.39 µm)	2.86	
3.50 to 4.00; (62.5 µm)	3.57	
4.00 to 4.50; (44.19 µm)	3.77	
4.50 to 5.00; (31.25 µm)	3.02	
5.00 to 5.50; (22.097 µm)	2.16	
5.50 to 6.00; (15.625 µm)	1.69	
6.00 to 6.50; (11.049 µm)	1.54	
6.50 to 7.00; (7.813 µm)	1.70	
7.00 to 7.50; (5.524 µm)	1.74	
7.50 to 8.00; (3.906 µm)	1.61	
8.00 to 8.50; (2.762 µm)	1.42	
8.50 to 9.00; (1.953 µm)	0.94	
9.00 to 9.50; (1.381 µm)	0.64	
9.50 to 10.00; (0.977 µm)	0.54	
10.00 to 10.50; (0.691 µm)	0.80	
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)		
> 14.50; (0.01 µm)		
TOTAL	100.00	

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2808
Sample Code:	PS812808

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	1.76	13.90
-1.50 to -1.00; 2 mm	16.19	128.24
-1.00 to -0.50; 1.4 mm	4.17	33.04
-0.50 to 0.00; 1 mm	0.06	0.45
0.00 to 0.50; (707 µm)	1.44	11.42
0.50 to 1.00; (500 µm)	7.08	56.05
1.00 to 1.50; (353.6 µm)	18.40	145.72
1.50 to 2.00; (250 µm)	17.82	141.16
2.00 to 2.50; (176.8 µm)	7.70	61.01
2.50 to 3.00; (125 µm)	2.93	23.17
3.00 to 3.50; (88.39 µm)	2.37	18.73
3.50 to 4.00; (62.5 µm)	2.65	20.99
4.00 to 4.50; (44.19 µm)	2.59	20.52
4.50 to 5.00; (31.25 µm)	2.19	17.30
5.00 to 5.50; (22.097 µm)	1.67	13.22
5.50 to 6.00; (15.625 µm)	1.26	10.01
6.00 to 6.50; (11.049 µm)	1.16	9.21
6.50 to 7.00; (7.813 µm)	1.11	8.80
7.00 to 7.50; (5.524 µm)	1.09	8.66
7.50 to 8.00; (3.906 µm)	1.03	8.19
8.00 to 8.50; (2.762 µm)	0.90	7.09
8.50 to 9.00; (1.953 µm)	0.76	5.98
9.00 to 9.50; (1.381 µm)	0.66	5.19
9.50 to 10.00; (0.977 µm)	0.57	4.53
10.00 to 10.50; (0.691 µm)	0.50	3.97
10.50 to 11.00; (0.488 µm)	0.45	3.58
11.00 to 11.50; (0.345 µm)	0.41	3.24
11.50 to 12.00; (0.244 µm)	0.36	2.85
12.00 to 12.50; (0.173 µm)	0.29	2.29
12.50 to 13.00; (0.122 µm)	0.22	1.76
13.00 to 13.50; (0.086 µm)	0.14	1.13
13.50 to 14.00; (0.061µm)	0.06	0.46
14.00 to 14.50; (0.043µm)	0.01	0.06
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	791.94

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2809
Sample Code:	PS812809

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm		
-3.50 to -3.00; 8 mm		
-3.00 to -2.50; 5.6 mm		
-2.50 to -2.00; 4 mm		
-2.00 to -1.50; 2.8 mm	0.71	5.70
-1.50 to -1.00; 2 mm	12.15	97.20
-1.00 to -0.50; 1.4 mm	7.95	63.57
-0.50 to 0.00; 1 mm	0.78	6.27
0.00 to 0.50; (707 µm)	1.29	10.29
0.50 to 1.00; (500 µm)	8.77	70.14
1.00 to 1.50; (353.6 µm)	15.09	120.70
1.50 to 2.00; (250 µm)	15.85	126.76
2.00 to 2.50; (176.8 µm)	9.71	77.69
2.50 to 3.00; (125 µm)	4.47	35.80
3.00 to 3.50; (88.39 µm)	1.72	13.77
3.50 to 4.00; (62.5 µm)	2.35	18.84
4.00 to 4.50; (44.19 µm)	3.10	24.76
4.50 to 5.00; (31.25 µm)	2.57	20.59
5.00 to 5.50; (22.097 µm)	1.92	15.38
5.50 to 6.00; (15.625 µm)	1.27	10.18
6.00 to 6.50; (11.049 µm)	1.14	9.14
6.50 to 7.00; (7.813 µm)	1.19	9.49
7.00 to 7.50; (5.524 µm)	1.29	10.35
7.50 to 8.00; (3.906 µm)	1.30	10.42
8.00 to 8.50; (2.762 µm)	1.19	9.52
8.50 to 9.00; (1.953 µm)	1.05	8.40
9.00 to 9.50; (1.381 µm)	0.91	7.25
9.50 to 10.00; (0.977 µm)	0.73	5.81
10.00 to 10.50; (0.691 µm)	0.72	5.74
10.50 to 11.00; (0.488 µm)	0.52	4.15
11.00 to 11.50; (0.345 µm)	0.26	2.04
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)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL		
Notes:		

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2810
Sample Code:	PS812810

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage **(mark as "0" for no material & leave blank for not analysed)**	Grams
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm		
-3.50 to -3.00; 8 mm		
-3.00 to -2.50; 5.6 mm		
-2.50 to -2.00; 4 mm		
-2.00 to -1.50; 2.8 mm		
-1.50 to -1.00; 2 mm		
-1.00 to -0.50; 1.4 mm		
-0.50 to 0.00; 1 mm		
0.00 to 0.50; (707 µm)		
0.50 to 1.00; (500 µm)		
1.00 to 1.50; (353.6 µm)		
1.50 to 2.00; (250 µm)		
2.00 to 2.50; (176.8 µm)		
2.50 to 3.00; (125 µm)		
3.00 to 3.50; (88.39 µm)		
3.50 to 4.00; (62.5 µm)		
4.00 to 4.50; (44.19 µm)		
4.50 to 5.00; (31.25 µm)		
5.00 to 5.50; (22.097 µm)		
5.50 to 6.00; (15.625 µm)		
6.00 to 6.50; (11.049 µm)		
6.50 to 7.00; (7.813 µm)		
7.00 to 7.50; (5.524 µm)		
7.50 to 8.00; (3.906 µm)		
8.00 to 8.50; (2.762 µm)		
8.50 to 9.00; (1.953 µm)		
9.00 to 9.50; (1.381 µm)		
9.50 to 10.00; (0.977 µm)		
10.00 to 10.50; (0.691 µm)		
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL		

Notes:
Not participating in current exercise

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2811
Sample Code:	PS812811

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	1.02	7.31
-1.50 to -1.00; 2 mm	16.31	117.27
-1.00 to -0.50; 1.4 mm	5.31	38.20
-0.50 to 0.00; 1 mm	0.05	0.34
0.00 to 0.50; (707 µm)	0.73	5.35
0.50 to 1.00; (500 µm)	7.78	56.15
1.00 to 1.50; (353.6 µm)	15.93	114.75
1.50 to 2.00; (250 µm)	16.84	121.13
2.00 to 2.50; (176.8 µm)	10.41	74.80
2.50 to 3.00; (125 µm)	4.08	29.26
3.00 to 3.50; (88.39 µm)	2.06	14.76
3.50 to 4.00; (62.5 µm)	2.72	19.51
4.00 to 4.50; (44.19 µm)	3.03	21.76
4.50 to 5.00; (31.25 µm)	2.42	17.36
5.00 to 5.50; (22.097 µm)	1.63	11.63
5.50 to 6.00; (15.625 µm)	1.23	8.79
6.00 to 6.50; (11.049 µm)	1.15	8.21
6.50 to 7.00; (7.813 µm)	1.19	8.54
7.00 to 7.50; (5.524 µm)	1.23	8.79
7.50 to 8.00; (3.906 µm)	1.17	8.41
8.00 to 8.50; (2.762 µm)	1.05	7.56
8.50 to 9.00; (1.953 µm)	0.82	5.84
9.00 to 9.50; (1.381 µm)	0.52	3.69
9.50 to 10.00; (0.977 µm)	0.45	3.25
10.00 to 10.50; (0.691 µm)	0.61	4.37
10.50 to 11.00; (0.488 µm)	0.27	1.95
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
> 14.50; (0.01 µm)		
TOTAL	100.00	718.98

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2812
Sample Code:	PS812812

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	1.36	10.72
-1.50 to -1.00; 2 mm	15.58	122.97
-1.00 to -0.50; 1.4 mm	5.08	40.12
-0.50 to 0.00; 1 mm	0.07	0.53
0.00 to 0.50; (707 µm)	1.74	13.71
0.50 to 1.00; (500 µm)	10.21	80.58
1.00 to 1.50; (353.6 µm)	17.92	141.48
1.50 to 2.00; (250 µm)	17.82	140.70
2.00 to 2.50; (176.8 µm)	10.48	82.70
2.50 to 3.00; (125 µm)	3.63	28.69
3.00 to 3.50; (88.39 µm)	1.46	11.52
3.50 to 4.00; (62.5 µm)	1.91	15.11
4.00 to 4.50; (44.19 µm)	2.53	19.97
4.50 to 5.00; (31.25 µm)	2.19	17.28
5.00 to 5.50; (22.097 µm)	1.46	11.53
5.50 to 6.00; (15.625 µm)	1.02	8.08
6.00 to 6.50; (11.049 µm)	0.97	7.62
6.50 to 7.00; (7.813 µm)	1.03	8.10
7.00 to 7.50; (5.524 µm)	0.99	7.82
7.50 to 8.00; (3.906 µm)	0.83	6.53
8.00 to 8.50; (2.762 µm)	0.61	4.80
8.50 to 9.00; (1.953 µm)	0.42	3.30
9.00 to 9.50; (1.381 µm)	0.27	2.11
9.50 to 10.00; (0.977 µm)	0.18	1.43
10.00 to 10.50; (0.691 µm)	0.15	1.19
10.50 to 11.00; (0.488 µm)	0.10	0.80
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	
14.00 to 14.50; (0.043µm)	0.00	
> 14.50; (0.01 µm)	0.00	
TOTAL	100.00	789.41

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2813
Sample Code:	PS812813

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	57.86
-1.00 to -0.50; 1.4 mm	0.00	0.01
-0.50 to 0.00; 1 mm	0.00	0.89
0.00 to 0.50; (707 µm)	0.00	5.44
0.50 to 1.00; (500 µm)	0.00	10.47
1.00 to 1.50; (353.6 µm)	0.18	10.67
1.50 to 2.00; (250 µm)	3.27	5.98
2.00 to 2.50; (176.8 µm)	9.80	1.50
2.50 to 3.00; (125 µm)	15.54	0.10
3.00 to 3.50; (88.39 µm)	16.34	0.49
3.50 to 4.00; (62.5 µm)	12.80	0.96
4.00 to 4.50; (44.19 µm)	8.58	0.92
4.50 to 5.00; (31.25 µm)	6.14	0.73
5.00 to 5.50; (22.097 µm)	5.27	0.66
5.50 to 6.00; (15.625 µm)	4.80	0.68
6.00 to 6.50; (11.049 µm)	4.11	0.63
6.50 to 7.00; (7.813 µm)	3.34	0.51
7.00 to 7.50; (5.524 µm)	2.71	0.40
7.50 to 8.00; (3.906 µm)	2.19	0.32
8.00 to 8.50; (2.762 µm)	1.68	0.25
8.50 to 9.00; (1.953 µm)	1.31	0.18
9.00 to 9.50; (1.381 µm)	1.15	0.15
9.50 to 10.00; (0.977 µm)	0.63	0.13
10.00 to 10.50; (0.691 µm)	0.17	0.09
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
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	100.00

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2814
Sample Code:	PS812814

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.67	5.34
-1.50 to -1.00; 2 mm	15.20	120.58
-1.00 to -0.50; 1.4 mm	5.87	46.59
-0.50 to 0.00; 1 mm	0.23	1.84
0.00 to 0.50; (707 µm)	2.94	23.30
0.50 to 1.00; (500 µm)	11.11	88.13
1.00 to 1.50; (353.6 µm)	18.09	143.53
1.50 to 2.00; (250 µm)	17.53	139.08
2.00 to 2.50; (176.8 µm)	10.32	81.85
2.50 to 3.00; (125 µm)	3.41	27.03
3.00 to 3.50; (88.39 µm)	1.02	8.09
3.50 to 4.00; (62.5 µm)	1.65	13.07
4.00 to 4.50; (44.19 µm)	2.29	18.15
4.50 to 5.00; (31.25 µm)	1.92	15.27
5.00 to 5.50; (22.097 µm)	1.20	9.56
5.50 to 6.00; (15.625 µm)	0.79	6.30
6.00 to 6.50; (11.049 µm)	0.75	5.92
6.50 to 7.00; (7.813 µm)	0.83	6.58
7.00 to 7.50; (5.524 µm)	0.89	7.03
7.50 to 8.00; (3.906 µm)	0.86	6.83
8.00 to 8.50; (2.762 µm)	0.75	5.92
8.50 to 9.00; (1.953 µm)	0.58	4.56
9.00 to 9.50; (1.381 µm)	0.41	3.29
9.50 to 10.00; (0.977 µm)	0.31	2.44
10.00 to 10.50; (0.691 µm)	0.24	1.90
10.50 to 11.00; (0.488 µm)	0.16	1.27
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
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	793.45

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2815
Sample Code:	PS812815

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	1.04	8.20
-1.50 to -1.00; 2 mm	15.59	122.82
-1.00 to -0.50; 1.4 mm	5.34	42.10
-0.50 to 0.00; 1 mm	0.16	1.23
0.00 to 0.50; (707 µm)	1.03	7.07
0.50 to 1.00; (500 µm)	14.92	101.49
1.00 to 1.50; (353.6 µm)	24.52	180.13
1.50 to 2.00; (250 µm)	10.94	98.61
2.00 to 2.50; (176.8 µm)	3.62	36.05
2.50 to 3.00; (125 µm)	1.44	12.56
3.00 to 3.50; (88.39 µm)	1.71	16.62
3.50 to 4.00; (62.5 µm)	2.42	22.97
4.00 to 4.50; (44.19 µm)	2.52	25.37
4.50 to 5.00; (31.25 µm)	1.72	22.16
5.00 to 5.50; (22.097 µm)	0.98	14.83
5.50 to 6.00; (15.625 µm)	0.96	10.34
6.00 to 6.50; (11.049 µm)	0.76	4.85
6.50 to 7.00; (7.813 µm)	0.88	2.01
7.00 to 7.50; (5.524 µm)	0.75	0.50
7.50 to 8.00; (3.906 µm)	0.86	3.46
8.00 to 8.50; (2.762 µm)	1.05	7.15
8.50 to 9.00; (1.953 µm)	1.08	8.27
9.00 to 9.50; (1.381 µm)	0.92	6.87
9.50 to 10.00; (0.977 µm)	0.70	4.87
10.00 to 10.50; (0.691 µm)	0.43	2.85
10.50 to 11.00; (0.488 µm)	0.55	3.73
11.00 to 11.50; (0.345 µm)	0.64	4.39
11.50 to 12.00; (0.244 µm)	0.75	5.08
12.00 to 12.50; (0.173 µm)	0.78	5.19
12.50 to 13.00; (0.122 µm)	0.63	4.09
13.00 to 13.50; (0.086 µm)	0.33	1.93
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL		

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2818
Sample Code:	PS812818

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	1.29	10.73
-1.50 to -1.00; 2 mm	16.00	133.31
-1.00 to -0.50; 1.4 mm	4.70	39.18
-0.50 to 0.00; 1 mm	0.11	0.89
0.00 to 0.50; (707 µm)	0.49	4.10
0.50 to 1.00; (500 µm)	7.61	63.43
1.00 to 1.50; (353.6 µm)	16.68	139.00
1.50 to 2.00; (250 µm)	18.66	155.49
2.00 to 2.50; (176.8 µm)	11.96	99.68
2.50 to 3.00; (125 µm)	4.72	39.35
3.00 to 3.50; (88.39 µm)	1.94	16.13
3.50 to 4.00; (62.5 µm)	2.46	20.46
4.00 to 4.50; (44.19 µm)	2.79	23.25
4.50 to 5.00; (31.25 µm)	2.12	17.63
5.00 to 5.50; (22.097 µm)	1.29	10.77
5.50 to 6.00; (15.625 µm)	0.92	7.71
6.00 to 6.50; (11.049 µm)	0.89	7.39
6.50 to 7.00; (7.813 µm)	0.92	7.63
7.00 to 7.50; (5.524 µm)	0.96	8.01
7.50 to 8.00; (3.906 µm)	0.92	7.71
8.00 to 8.50; (2.762 µm)	0.82	6.85
8.50 to 9.00; (1.953 µm)	0.62	5.19
9.00 to 9.50; (1.381 µm)	0.39	3.28
9.50 to 10.00; (0.977 µm)	0.30	2.52
10.00 to 10.50; (0.691 µm)	0.34	2.80
10.50 to 11.00; (0.488 µm)	0.11	0.95
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
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	833.43

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2829_v2
Sample Code:	PS81829_v2

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	19.73	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	3.90	
0.00 to 0.50; (707 µm)	11.06	
0.50 to 1.00; (500 µm)	17.46	
1.00 to 1.50; (353.6 µm)	16.59	
1.50 to 2.00; (250 µm)	9.51	
2.00 to 2.50; (176.8 µm)	2.94	
2.50 to 3.00; (125 µm)	0.83	
3.00 to 3.50; (88.39 µm)	1.69	
3.50 to 4.00; (62.5 µm)	2.64	
4.00 to 4.50; (44.19 µm)	2.62	
4.50 to 5.00; (31.25 µm)	2.15	
5.00 to 5.50; (22.097 µm)	1.76	
5.50 to 6.00; (15.625 µm)	1.50	
6.00 to 6.50; (11.049 µm)	1.27	
6.50 to 7.00; (7.813 µm)	1.06	
7.00 to 7.50; (5.524 µm)	0.89	
7.50 to 8.00; (3.906 µm)	0.73	
8.00 to 8.50; (2.762 µm)	0.57	
8.50 to 9.00; (1.953 µm)	0.41	
9.00 to 9.50; (1.381 µm)	0.30	
9.50 to 10.00; (0.977 µm)	0.24	
10.00 to 10.50; (0.691 µm)	0.16	
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	
> 14.50; (0.01 µm)		
TOTAL	100.00	

Notes:

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2835
Sample Code:	PS812835

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage **(mark as "0" for no material & leave blank for not analysed)**	Grams **(mark as "0" for no material & leave blank for not analysed)**
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm		
-3.50 to -3.00; 8 mm		
-3.00 to -2.50; 5.6 mm		
-2.50 to -2.00; 4 mm		
-2.00 to -1.50; 2.8 mm		
-1.50 to -1.00; 2 mm		
-1.00 to -0.50; 1.4 mm		
-0.50 to 0.00; 1 mm		
0.00 to 0.50; (707 µm)		
0.50 to 1.00; (500 µm)		
1.00 to 1.50; (353.6 µm)		
1.50 to 2.00; (250 µm)		
2.00 to 2.50; (176.8 µm)		
2.50 to 3.00; (125 µm)		
3.00 to 3.50; (88.39 µm)		
3.50 to 4.00; (62.5 µm)		
4.00 to 4.50; (44.19 µm)		
4.50 to 5.00; (31.25 µm)		
5.00 to 5.50; (22.097 µm)		
5.50 to 6.00; (15.625 µm)		
6.00 to 6.50; (11.049 µm)		
6.50 to 7.00; (7.813 µm)		
7.00 to 7.50; (5.524 µm)		
7.50 to 8.00; (3.906 µm)		
8.00 to 8.50; (2.762 µm)		
8.50 to 9.00; (1.953 µm)		
9.00 to 9.50; (1.381 µm)		
9.50 to 10.00; (0.977 µm)		
10.00 to 10.50; (0.691 µm)		
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
>14.5; (0.01)		
TOTAL		

Notes:
Not participating in current exercise

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2830
Sample Code:	Benchmark Replicate 1

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	1.19	9.43
-1.50 to -1.00; 2 mm	15.70	124.26
-1.00 to -0.50; 1.4 mm	4.92	38.93
-0.50 to 0.00; 1 mm	0.14	1.09
0.00 to 0.50; (707 µm)	1.65	13.05
0.50 to 1.00; (500 µm)	7.58	60.02
1.00 to 1.50; (353.6 µm)	18.60	147.20
1.50 to 2.00; (250 µm)	17.69	139.96
2.00 to 2.50; (176.8 µm)	7.53	59.57
2.50 to 3.00; (125 µm)	2.80	22.16
3.00 to 3.50; (88.39 µm)	2.34	18.51
3.50 to 4.00; (62.5 µm)	2.61	20.62
4.00 to 4.50; (44.19 µm)	2.55	20.18
4.50 to 5.00; (31.25 µm)	2.15	17.01
5.00 to 5.50; (22.097 µm)	1.64	12.94
5.50 to 6.00; (15.625 µm)	1.28	10.16
6.00 to 6.50; (11.049 µm)	1.20	9.53
6.50 to 7.00; (7.813 µm)	1.15	9.13
7.00 to 7.50; (5.524 µm)	1.12	8.85
7.50 to 8.00; (3.906 µm)	1.04	8.20
8.00 to 8.50; (2.762 µm)	0.89	7.00
8.50 to 9.00; (1.953 µm)	0.74	5.83
9.00 to 9.50; (1.381 µm)	0.63	4.99
9.50 to 10.00; (0.977 µm)	0.55	4.34
10.00 to 10.50; (0.691 µm)	0.48	3.81
10.50 to 11.00; (0.488 µm)	0.43	3.43
11.00 to 11.50; (0.345 µm)	0.39	3.08
11.50 to 12.00; (0.244 µm)	0.34	2.69
12.00 to 12.50; (0.173 µm)	0.27	2.16
12.50 to 13.00; (0.122 µm)	0.21	1.67
13.00 to 13.50; (0.086 µm)	0.14	1.07
13.50 to 14.00; (0.061µm)	0.05	0.43
14.00 to 14.50; (0.043µm)	0.01	0.06
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	791.38

Notes:
For consistency with previous ring tests, laser data >1mm were removed and the data recalculated to 100% ('normalised') before entering into analysis spreadsheet

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2831
Sample Code:	Benchmark Replicate 2

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	1.96	15.73
-1.50 to -1.00; 2 mm	15.81	126.73
-1.00 to -0.50; 1.4 mm	3.93	31.47
-0.50 to 0.00; 1 mm	0.04	0.35
0.00 to 0.50; (707 µm)	1.42	11.35
0.50 to 1.00; (500 µm)	7.60	60.91
1.00 to 1.50; (353.6 µm)	18.58	148.98
1.50 to 2.00; (250 µm)	17.81	142.80
2.00 to 2.50; (176.8 µm)	7.72	61.93
2.50 to 3.00; (125 µm)	2.84	22.73
3.00 to 3.50; (88.39 µm)	2.31	18.53
3.50 to 4.00; (62.5 µm)	2.56	20.49
4.00 to 4.50; (44.19 µm)	2.56	20.48
4.50 to 5.00; (31.25 µm)	2.18	17.49
5.00 to 5.50; (22.097 µm)	1.65	13.21
5.50 to 6.00; (15.625 µm)	1.30	10.40
6.00 to 6.50; (11.049 µm)	1.21	9.67
6.50 to 7.00; (7.813 µm)	1.15	9.22
7.00 to 7.50; (5.524 µm)	1.12	8.98
7.50 to 8.00; (3.906 µm)	1.05	8.40
8.00 to 8.50; (2.762 µm)	0.90	7.22
8.50 to 9.00; (1.953 µm)	0.75	6.02
9.00 to 9.50; (1.381 µm)	0.64	5.14
9.50 to 10.00; (0.977 µm)	0.55	4.45
10.00 to 10.50; (0.691 µm)	0.49	3.89
10.50 to 11.00; (0.488 µm)	0.44	3.51
11.00 to 11.50; (0.345 µm)	0.40	3.17
11.50 to 12.00; (0.244 µm)	0.35	2.79
12.00 to 12.50; (0.173 µm)	0.28	2.25
12.50 to 13.00; (0.122 µm)	0.22	1.74
13.00 to 13.50; (0.086 µm)	0.14	1.12
13.50 to 14.00; (0.061µm)	0.06	0.46
14.00 to 14.50; (0.043µm)	0.01	0.06
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	801.68

Notes:

For consistency with previous ring tests, laser data >1mm were removed and the data recalculated to 100% ('normalised') before entering into analysis spreadsheet

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2832
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	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.01	0.10
-2.00 to -1.50; 2.8 mm	1.75	13.96
-1.50 to -1.00; 2 mm	16.16	129.24
-1.00 to -0.50; 1.4 mm	4.20	33.59
-0.50 to 0.00; 1 mm	0.06	0.44
0.00 to 0.50; (707 µm)	1.32	10.54
0.50 to 1.00; (500 µm)	7.22	57.75
1.00 to 1.50; (353.6 µm)	18.44	147.45
1.50 to 2.00; (250 µm)	17.74	141.82
2.00 to 2.50; (176.8 µm)	7.64	61.12
2.50 to 3.00; (125 µm)	2.82	22.59
3.00 to 3.50; (88.39 µm)	2.41	19.27
3.50 to 4.00; (62.5 µm)	2.71	21.66
4.00 to 4.50; (44.19 µm)	2.57	20.54
4.50 to 5.00; (31.25 µm)	2.19	17.54
5.00 to 5.50; (22.097 µm)	1.69	13.55
5.50 to 6.00; (15.625 µm)	1.26	10.10
6.00 to 6.50; (11.049 µm)	1.18	9.47
6.50 to 7.00; (7.813 µm)	1.15	9.16
7.00 to 7.50; (5.524 µm)	1.12	8.97
7.50 to 8.00; (3.906 µm)	1.05	8.40
8.00 to 8.50; (2.762 µm)	0.90	7.20
8.50 to 9.00; (1.953 µm)	0.75	6.02
9.00 to 9.50; (1.381 µm)	0.65	5.18
9.50 to 10.00; (0.977 µm)	0.56	4.51
10.00 to 10.50; (0.691 µm)	0.50	3.97
10.50 to 11.00; (0.488 µm)	0.45	3.58
11.00 to 11.50; (0.345 µm)	0.41	3.25
11.50 to 12.00; (0.244 µm)	0.36	2.85
12.00 to 12.50; (0.173 µm)	0.29	2.30
12.50 to 13.00; (0.122 µm)	0.22	1.77
13.00 to 13.50; (0.086 µm)	0.14	1.14
13.50 to 14.00; (0.061µm)	0.06	0.46
14.00 to 14.50; (0.043µm)	0.01	0.06
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	799.55

Notes:

For consistency with previous ring tests, laser data >1mm were removed and the data recalculated to 100% ('normalised') before entering into analysis spreadsheet

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2833
Sample Code:	Benchmark Replicate 4

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	1.73	13.76
-1.50 to -1.00; 2 mm	16.05	127.79
-1.00 to -0.50; 1.4 mm	3.97	31.61
-0.50 to 0.00; 1 mm	0.05	0.36
0.00 to 0.50; (707 µm)	1.23	9.83
0.50 to 1.00; (500 µm)	7.29	58.04
1.00 to 1.50; (353.6 µm)	18.55	147.73
1.50 to 2.00; (250 µm)	17.88	142.39
2.00 to 2.50; (176.8 µm)	7.66	60.98
2.50 to 3.00; (125 µm)	2.82	22.44
3.00 to 3.50; (88.39 µm)	2.38	18.97
3.50 to 4.00; (62.5 µm)	2.65	21.08
4.00 to 4.50; (44.19 µm)	2.56	20.41
4.50 to 5.00; (31.25 µm)	2.25	17.89
5.00 to 5.50; (22.097 µm)	1.71	13.59
5.50 to 6.00; (15.625 µm)	1.30	10.32
6.00 to 6.50; (11.049 µm)	1.22	9.70
6.50 to 7.00; (7.813 µm)	1.17	9.33
7.00 to 7.50; (5.524 µm)	1.14	9.06
7.50 to 8.00; (3.906 µm)	1.06	8.44
8.00 to 8.50; (2.762 µm)	0.91	7.26
8.50 to 9.00; (1.953 µm)	0.76	6.08
9.00 to 9.50; (1.381 µm)	0.66	5.23
9.50 to 10.00; (0.977 µm)	0.57	4.57
10.00 to 10.50; (0.691 µm)	0.51	4.03
10.50 to 11.00; (0.488 µm)	0.46	3.64
11.00 to 11.50; (0.345 µm)	0.41	3.27
11.50 to 12.00; (0.244 µm)	0.36	2.86
12.00 to 12.50; (0.173 µm)	0.29	2.29
12.50 to 13.00; (0.122 µm)	0.22	1.76
13.00 to 13.50; (0.086 µm)	0.14	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; (0.01)	0.00	0.00
TOTAL	100.00	796.35

Notes:

For consistency with previous ring tests, laser data >1mm were removed and the data recalculated to 100% ('normalised') before entering into analysis spreadsheet

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS81.

Exercise Code:	PS81
LabCode:	PSA_2834
Sample Code:	Benchmark Replicate 5

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	1.51	12.07
-1.50 to -1.00; 2 mm	16.05	128.03
-1.00 to -0.50; 1.4 mm	4.20	33.50
-0.50 to 0.00; 1 mm	0.06	0.48
0.00 to 0.50; (707 µm)	1.18	9.44
0.50 to 1.00; (500 µm)	7.40	59.01
1.00 to 1.50; (353.6 µm)	18.88	150.64
1.50 to 2.00; (250 µm)	17.99	143.52
2.00 to 2.50; (176.8 µm)	7.67	61.17
2.50 to 3.00; (125 µm)	2.83	22.58
3.00 to 3.50; (88.39 µm)	2.31	18.47
3.50 to 4.00; (62.5 µm)	2.61	20.86
4.00 to 4.50; (44.19 µm)	2.54	20.27
4.50 to 5.00; (31.25 µm)	2.16	17.26
5.00 to 5.50; (22.097 µm)	1.66	13.24
5.50 to 6.00; (15.625 µm)	1.26	10.02
6.00 to 6.50; (11.049 µm)	1.19	9.47
6.50 to 7.00; (7.813 µm)	1.16	9.26
7.00 to 7.50; (5.524 µm)	1.12	8.96
7.50 to 8.00; (3.906 µm)	1.04	8.27
8.00 to 8.50; (2.762 µm)	0.89	7.07
8.50 to 9.00; (1.953 µm)	0.74	5.89
9.00 to 9.50; (1.381 µm)	0.63	5.06
9.50 to 10.00; (0.977 µm)	0.56	4.44
10.00 to 10.50; (0.691 µm)	0.49	3.93
10.50 to 11.00; (0.488 µm)	0.44	3.54
11.00 to 11.50; (0.345 µm)	0.40	3.16
11.50 to 12.00; (0.244 µm)	0.34	2.74
12.00 to 12.50; (0.173 µm)	0.27	2.18
12.50 to 13.00; (0.122 µm)	0.21	1.67
13.00 to 13.50; (0.086 µm)	0.13	1.07
13.50 to 14.00; (0.061µm)	0.05	0.43
14.00 to 14.50; (0.043µm)	0.01	0.05
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	797.77

Notes:

For consistency with previous ring tests, laser data >1mm were removed and the data recalculated to 100% ('normalised') before entering into analysis spreadsheet