NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS82

Particle Size Component 2021/22

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APEM

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APPENDICES

BENCHMARK DATA

Table 1. Summary data for the benchmark replicates distributed as PS82.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis)
PSA_2830 BM REP 1	NMBAQC	0.03	76.22	23.75	Slightly Gravelly Muddy Sand
PSA_2831 BM REP 2	NMBAQC	0.00	76.44	23.55	Slightly Gravelly Muddy Sand
PSA_2832 BM REP 3	NMBAQC	0.01	76.17	23.82	Slightly Gravelly Muddy Sand
PSA_2833 BM REP 4	NMBAQC	0.04	76.02	23.94	Slightly Gravelly Muddy Sand
PSA_2834 BM REP 5	NMBAQC	0.00	75.87	24.13	Muddy Sand
BM REP AVERAGE	NMBAQC	0.02	76.14	23.84	Slightly Gravelly Muddy Sand

Table 2. Summary of sieve data for the benchmark replicates distributed as PS82.

		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	0.00	0.00	0.00	0.00
-2.00 to -1.50; 2.8 mm		0.04	0.00	0.00	0.00	0.00	0.01
-1.50 to -1.00; 2 mm		0.00	0.01	0.01	0.06	0.00	0.02
-1.00 to -0.50; 1.4 mm		0.04	0.05	0.03	0.06	0.02	0.04
-0.50 to 0.00; 1.0 mm		0.04	0.05	0.05	0.07	0.04	0.05
>1.0 mm		0.12	0.10	0.10	0.19	0.06	0.11
<1.0 mm	Base Pan	0.01	0.01	0.02	0.01	0.01	0.01
	Oven Dried	152.15	154.87	146.52	152.89	153.85	152.06
Total Weight (g)		152.28	154.99	146.64	153.09	153.91	152.18

BENCHMARK DATA

Table 3. Summary of final laser data for the benchmark replicates distributed as PS82.

	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)	0.85	0.50	0.68	0.47	0.83	0.66
0.50 to 1.00; (500 µm)	2.91	2.84	2.43	2.60	2.73	2.70
1.00 to 1.50; (353.6 µm)	6.47	6.22	5.91	6.08	5.90	6.12
1.50 to 2.00; (250 µm)	10.46	10.38	10.14	10.29	10.01	10.26
2.00 to 2.50; (176.8 µm)	15.25	15.48	15.64	15.50	15.49	15.47
2.50 to 3.00; (125 µm)	16.55	16.95	17.30	17.14	17.06	17.00
3.00 to 3.50; (88.39 µm)	13.84	14.02	14.02	13.96	13.82	13.93
3.50 to 4.00; (62.5 µm)	9.91	10.04	10.05	10.00	10.01	10.00
4.00 to 4.50; (44.19 µm)	6.03	6.20	6.26	6.28	6.28	6.21
4.50 to 5.00; (31.25 µm)	3.31	3.29	3.36	3.34	3.36	3.33
5.00 to 5.50; (22.097 µm)	1.98	1.92	1.98	1.96	2.00	1.97
5.50 to 6.00; (15.625 µm)	1.43	1.39	1.45	1.44	1.46	1.43
6.00 to 6.50; (11.049 µm)	1.25	1.22	1.26	1.25	1.26	1.25
6.50 to 7.00; (7.813 µm)	1.17	1.15	1.15	1.16	1.18	1.16
7.00 to 7.50; (5.524 µm)	1.13	1.13	1.11	1.12	1.14	1.13
7.50 to 8.00; (3.906 µm)	1.10	1.09	1.08	1.08	1.10	1.09
8.00 to 8.50; (2.762 µm)	1.03	1.02	1.01	1.01	1.03	1.02
8.50 to 9.00; (1.953 µm)	0.95	0.93	0.93	0.94	0.94	0.94
9.00 to 9.50; (1.381 µm)	0.87	0.84	0.85	0.86	0.86	0.86
9.50 to 10.00; (0.977 µm)	0.77	0.74	0.75	0.76	0.77	0.76
10.00 to 10.50; (0.691 µm)	0.66	0.63	0.64	0.66	0.66	0.65
10.50 to 11.00; (0.488 µm)	0.56	0.53	0.53	0.56	0.56	0.55
11.00 to 11.50; (0.345 µm)	0.46	0.44	0.44	0.46	0.46	0.46
11.50 to 12.00; (0.244 µm)	0.38	0.36	0.36	0.38	0.38	0.37
12.00 to 12.50; (0.173 µm)	0.29	0.27	0.27	0.29	0.29	0.28
12.50 to 13.00; (0.122 µm)	0.22	0.21	0.20	0.22	0.21	0.21
13.00 to 13.50; (0.086 µm)	0.14	0.13	0.13	0.14	0.14	0.13
13.50 to 14.00; (0.061 µm)	0.06	0.05	0.05	0.06	0.05	0.05
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:	Very Fine Sand	Very Fine Sand	Very Fine Sand	Very Fine Sand	Very Fine Sand	Very Fine Sand
SORTING:	Poorly Sorted	Poorly Sorted	Poorly Sorted	Poorly Sorted	Poorly Sorted	Poorly Sorted
SKEWNESS:	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed
KURTOSIS:	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic
MODE:	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal
MODE 1 (µm):	150.9	150.9	150.9	150.9	150.9	150.9
MODE 2 (µm):	0	0	0	0	0	0
MODE 3 (µm):	0	0	0	0	0	0

BENCHMARK DATA

Table 4. Summary of Coefficient of Variation for Benchmark laser replicates for PS82.

		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	1.22	1.92	1.61	1.65	0.78
	Subsample 2	3.25	1.18	2.40	1.10	1.73
	Subsample 3	0.77	1.76	1.60	2.51	2.32
					n	
D_{50}	Subsample 1	0.28	0.42	0.20	0.23	0.15
	Subsample 2	0.32	0.23	0.09	0.08	0.39
	Subsample 3	0.58	0.32	0.26	0.52	0.41
D_{90}	Subsample 1	1.04	0.75	0.47	0.62	0.34
	Subsample 2	1.84	0.24	0.49	0.50	0.84
	Subsample 3	1.31	0.98	0.68	1.62	1.19

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

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 PS82.

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):	8-10%
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 PS82 (Benchmark Data).

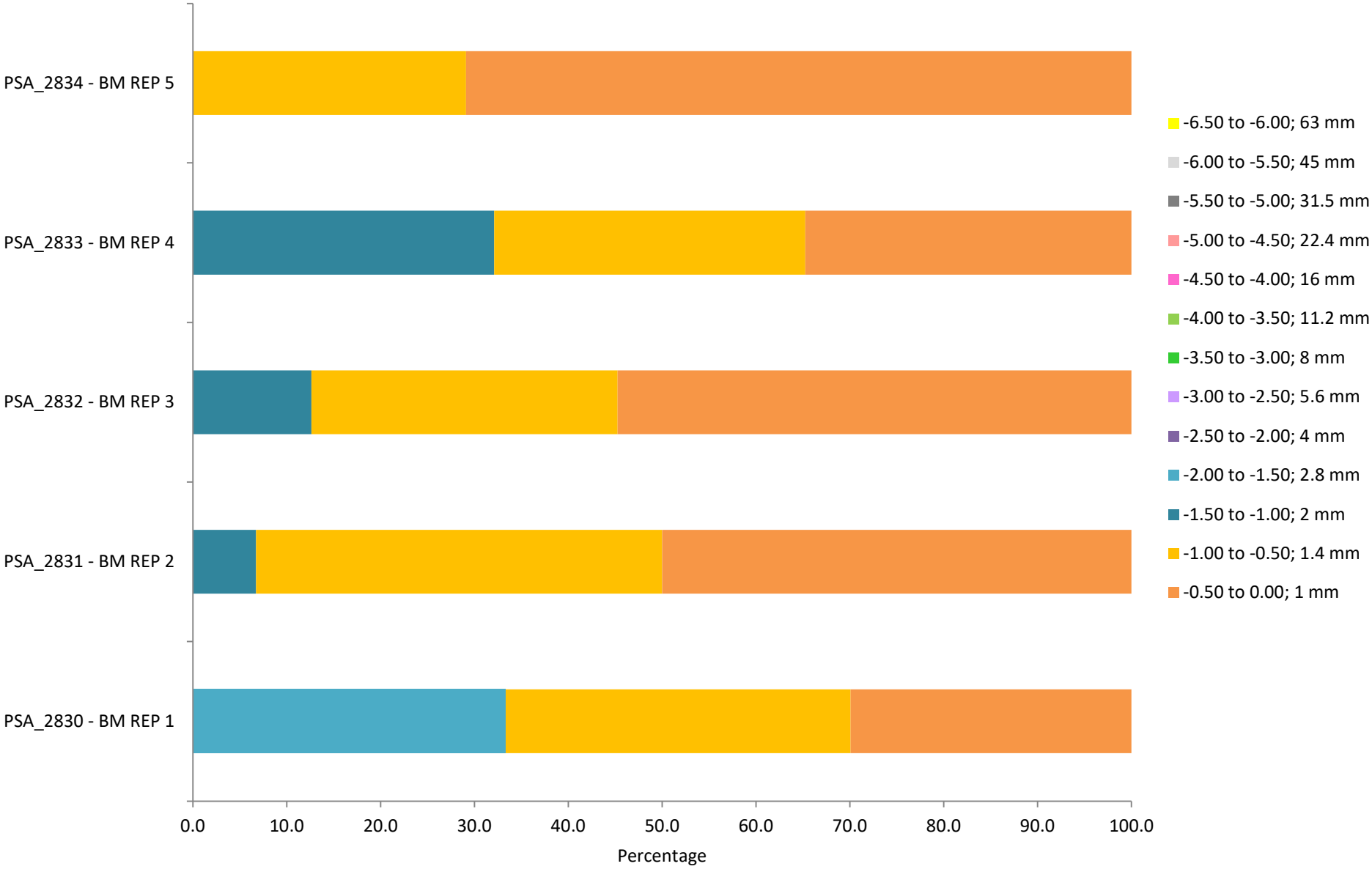

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Figure 1b. Particle size distribution curves resulting from final laser analysis of 5 replicate samples of sediment distibuted as PS82 (Benchmark Data).

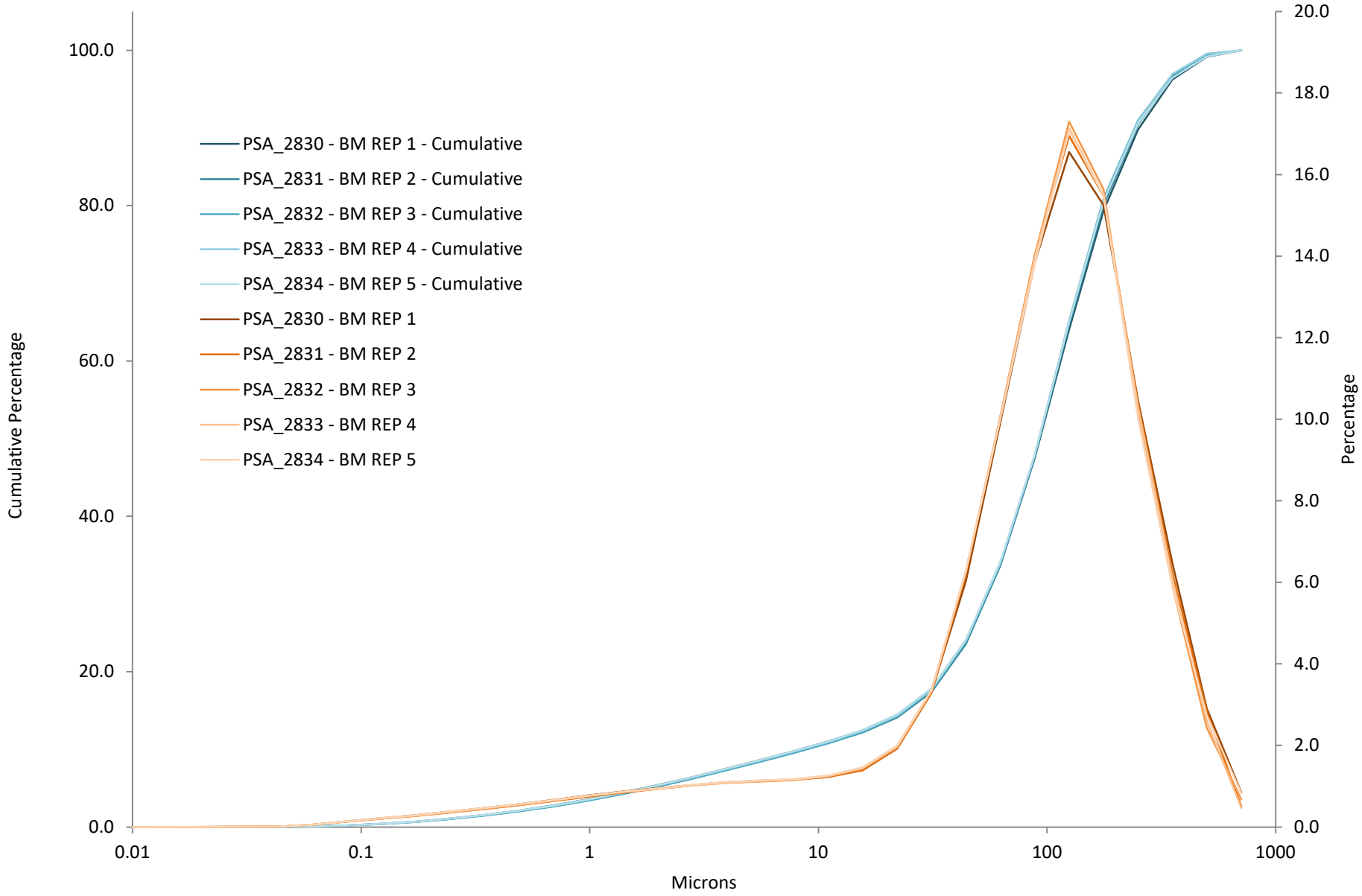


Figure 3. Particle size distribution curves resulting from analysis of 5 replicate samples of sediment distibuted as PS82 (Benchmark Data).

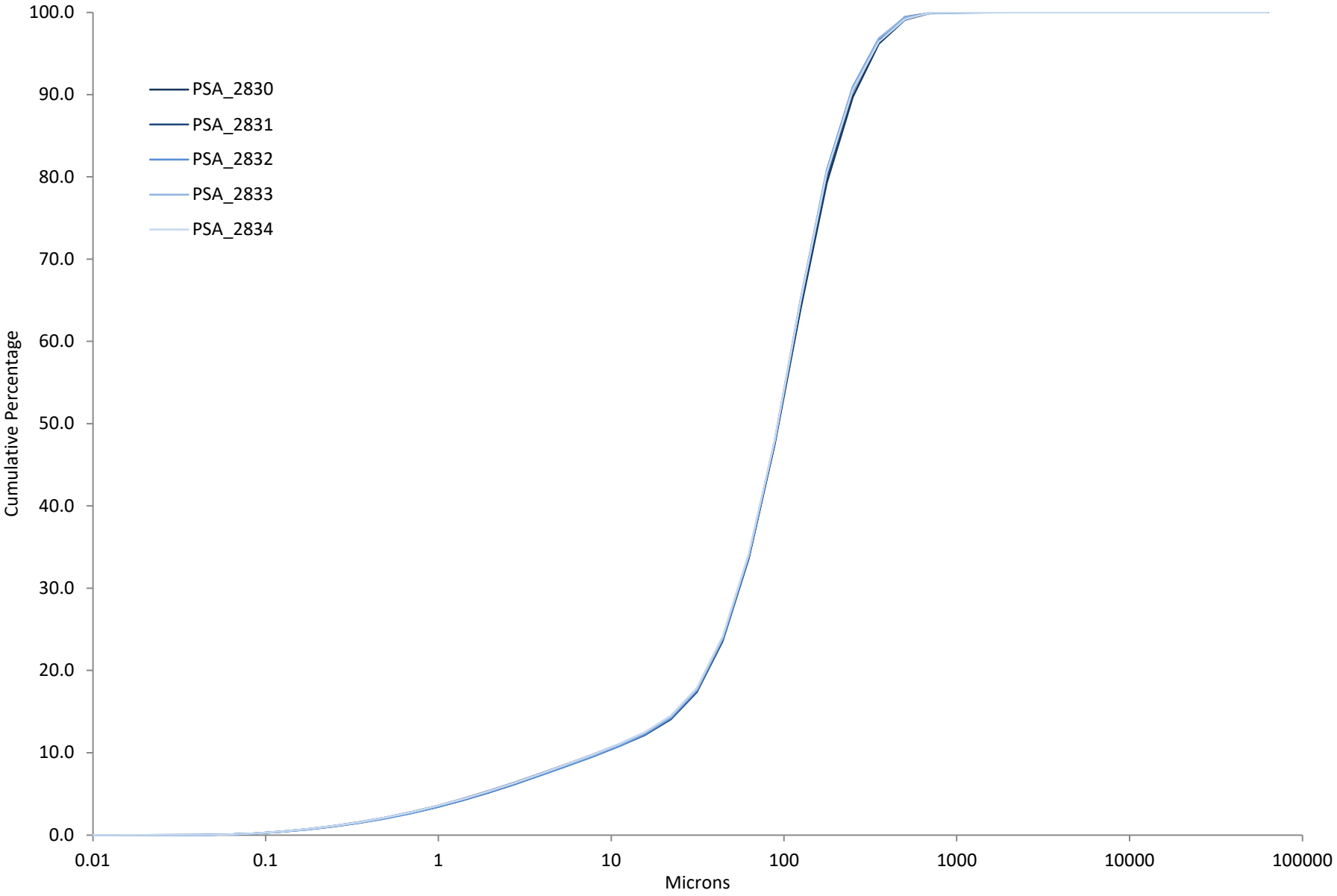
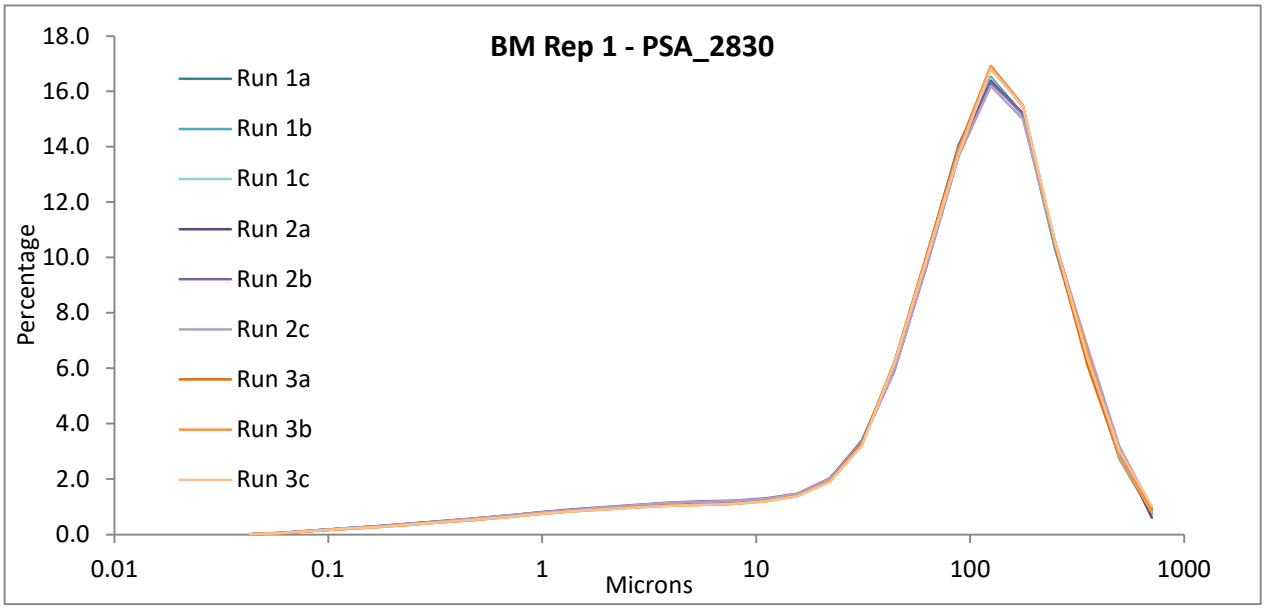
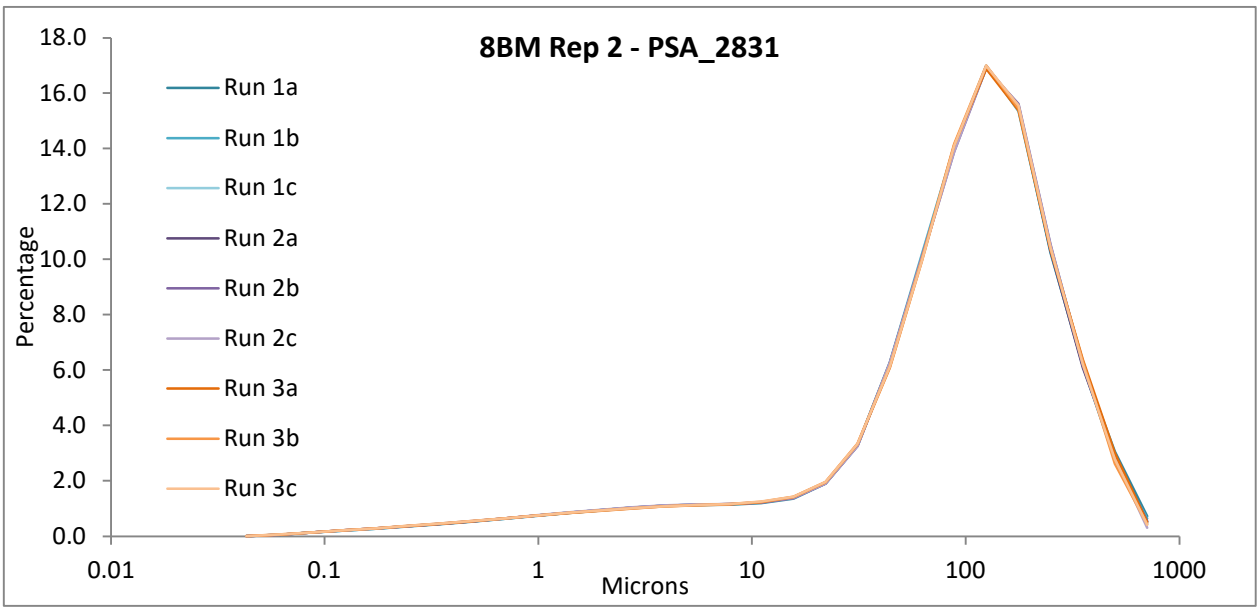


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS82.





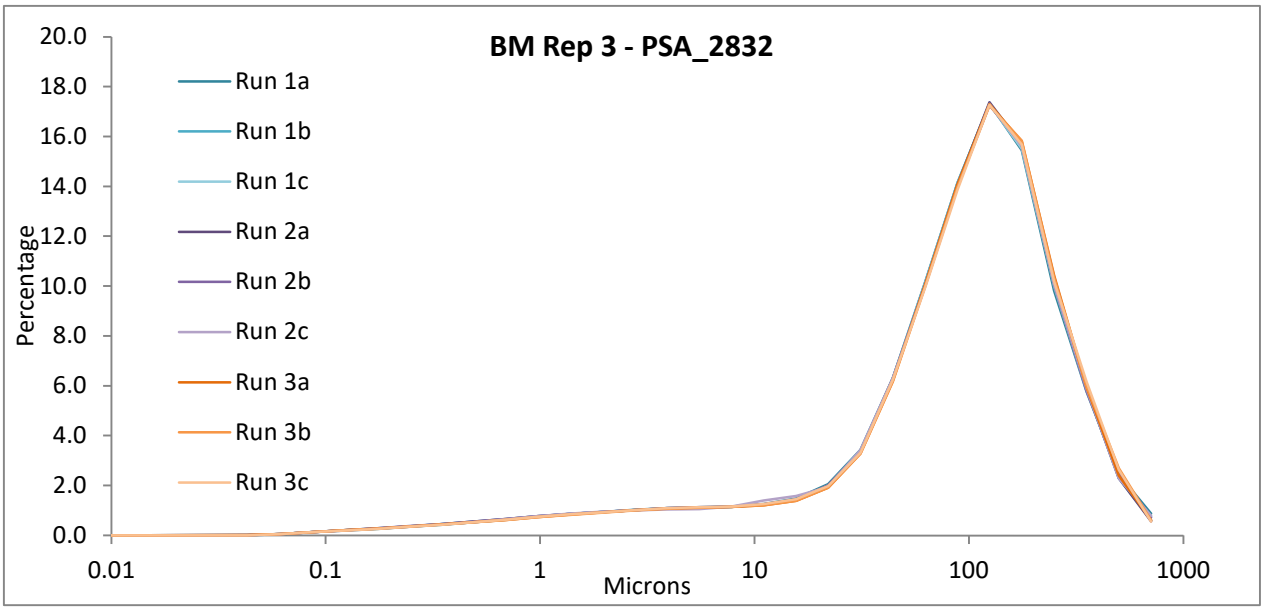
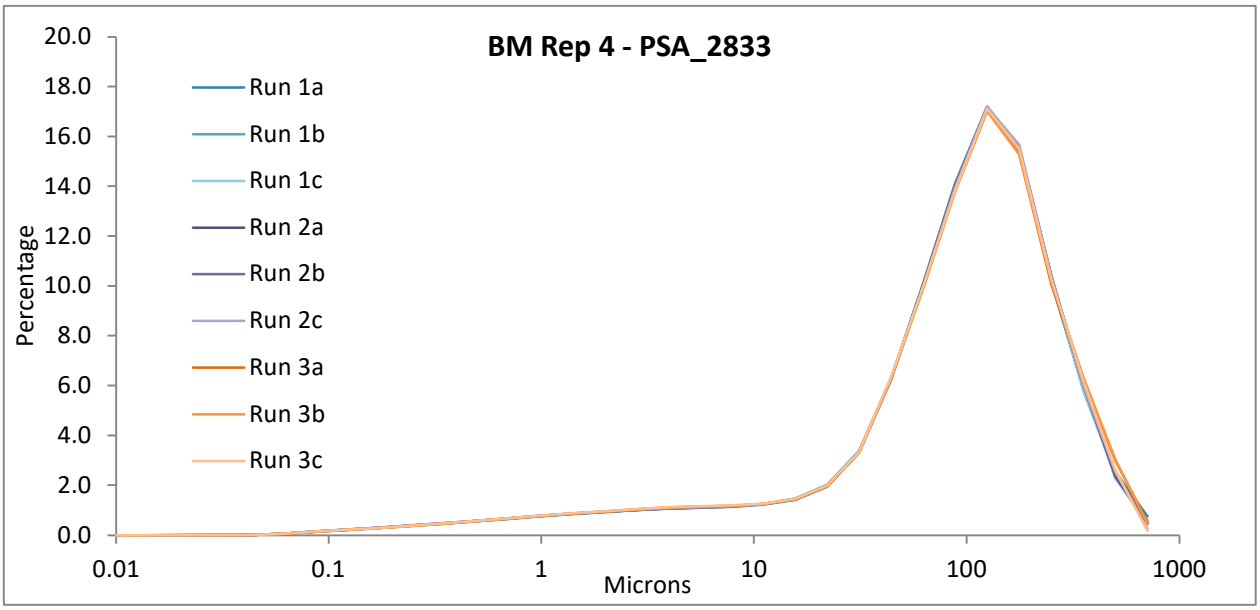
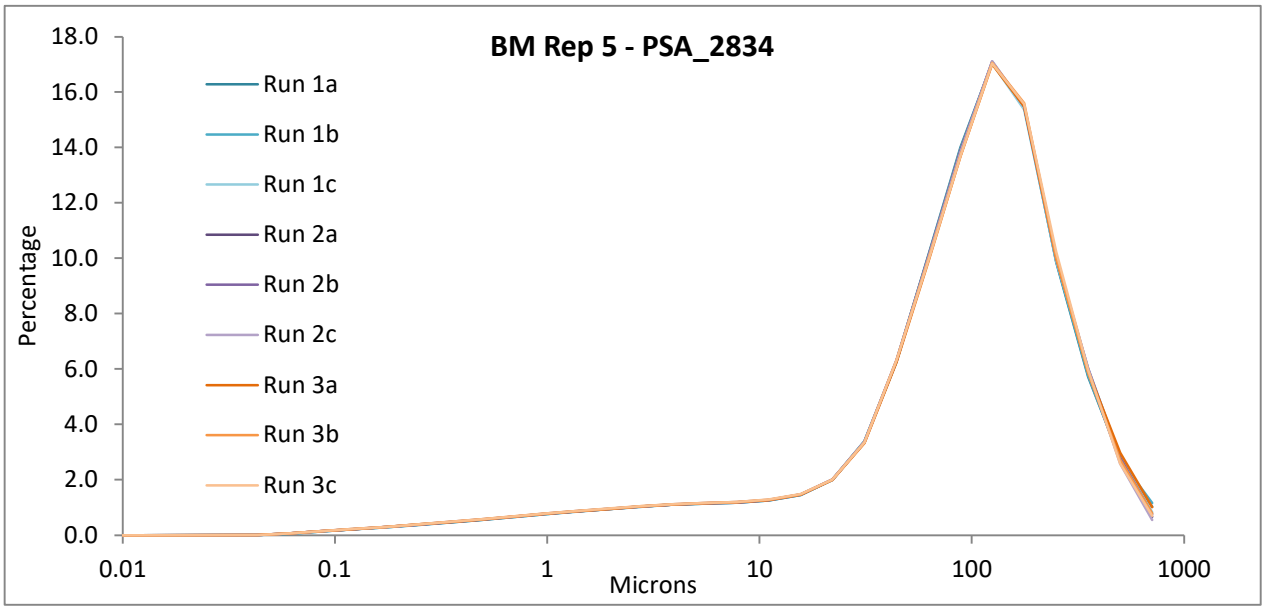


Figure 2. Particle size distribution curves resulting from laser analysis of five replicate samples of sediment distributed as PS82.





PARTICIPANT DATA

Table 6. Summary of equipment and methods used by participants and sample summary data provided by participants for sediment distributed as PS82.

Lab	Equipment Used		Method Used	Chemical Dispersant Used	Peroxide pre-treatment Used	Summary Data			Sediment Description (Post Analysis)	Sediment Description* Gradistat Textural Group
	Sieves	Laser				% Gravel	% Sand	% Mud		
Benchmark Average	Yes	Yes	NMBAQC	No	No	0.02	76.14	23.84	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand
PSA_2801	No	Yes	NMBAQC	No	No	0	82	18	Muddy Sand	Muddy Sand
PSA_2802	Yes	Yes	NMBAQC	No	No	0.05	82.20	17.75	sand and muddy sand	Slightly Gravelly Muddy Sand
PSA_2803	No	Yes	NMBAQC	No	No	0.00	76.81	23.19	Muddy Sand	Muddy Sand
PSA_2804	Yes	Yes	NMBAQC	No	No	0.05	87.98	11.97	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand
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	0.0	76.8	23.2	slightly gravelly muddy sand	Slightly Gravelly Muddy Sand
PSA_2807	Yes	Yes	NMBAQC	No	No	0.04	78.52	21.44	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand
PSA_2808	Yes	Yes	NMBAQC	No	No	0.01	75.69	24.31	Slightly gravelly muddy sand	Slightly Gravelly Muddy Sand
PSA_2809_v2	No	Yes	OTHER	No	No	0.00	74.85	25.15	Muddy sand	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	No	Yes	NMBAQC	No	No	0.00	80.23	19.77	Muddy sand	Muddy Sand
PSA_2812	Yes	Yes	NMBAQC	No	No	0.03	85.80	14.17	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand
PSA_2813	No	Yes	OTHER	No	No	0.00	76.89	23.11	Muddy sand	Muddy Sand
PSA_2814	Yes	Yes	NMBAQC	No	No	0.01	83.19	16.80	slightly gravelly muddy Sand	Slightly Gravelly Muddy Sand
PSA_2815a	No	Yes	NMBAQC	No	No	0.00	78.34	21.66	Muddy Sand	Muddy Sand
PSA_2815b	No	Yes	NMBAQC	No	No	0.00	77.39	22.61	Muddy Sand	Muddy Sand
PSA_2818_v2	No	Yes	NMBAQC	No	No	0.00	78.11	21.89	Muddy Sand	Muddy Sand
PSA_2829	No	Yes	OTHER	No	No	0.00	83.04	16.96	muddy sand	Muddy Sand
PSA_2835	Yes	Yes	NMBAQC	No	No	0.02	70.63	29.35	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand

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 PS82.

		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_v2	PSA_2810
Sieves Used		Yes	No	Yes	No	Yes	n/p	Yes	0.00	Yes	No	n/p
-6.50 to -6.00; 63 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-6.00 to -5.50; 45 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-5.50 to -5.00; 31.5 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-5.00 to -4.50; 22.4 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-4.50 to -4.00; 16 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-4.00 to -3.50; 11.2 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-3.50 to -3.00; 8 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-3.00 to -2.50; 5.6 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-2.50 to -2.00; 4 mm		0.00	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-2.00 to -1.50; 2.8 mm		0.01	-	0.00	-	0.00	n/p	0.00	0.00	0.00	-	n/p
-1.50 to -1.00; 2 mm		0.02	-	0.07	-	0.06	n/p	0.01	0.05	0.01	-	n/p
-1.00 to -0.50; 1.4 mm		0.04	-	0.06	-	0.06	n/p	0.02	0.07	0.03	-	n/p
-0.50 to 0.00; 1 mm		0.05	-	0.11	-	0.07	n/p	0.08	0.06	0.06	-	n/p
*Total **		0.11	-	0.24	-	0.19	n/p	0.11	0.18	0.10	-	n/p
Summary Data												
< 0.00; >1 mm		0.11	-	0.24	-	0.19	n/p	0.11	0.18	0.10	-	n/p
> 0.00;	Base pan	0.01	-	0.03	-	0.04	n/p	0.00	0.02	0.01	-	n/p
<1 mm	Oven dried	152.06	-	142.73	167.90	121.50	n/p	166.45	134.56	149.87	161.40	n/p
Total Sample Weight		152.18	-	143.00	167.90	121.73	n/p	166.56	134.76	149.98	161.40	n/p

- No data provided.

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 PS82.

		Participant									
Phi interval (explicit) + sieve mesh		Benchmark Average	PSA_2811	PSA_2812	PSA_2813	PSA_2814	PSA_2815a	PSA_2815b	PSA_2818_v2	PSA_2829	PSA_2835
Sieves Used		Yes	No	Yes	No	Yes	No	No	No	No	Yes
-6.50 to -6.00; 63 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-6.00 to -5.50; 45 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-5.50 to -5.00; 31.5 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-5.00 to -4.50; 22.4 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-4.50 to -4.00; 16 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-4.00 to -3.50; 11.2 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-3.50 to -3.00; 8 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-3.00 to -2.50; 5.6 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-2.50 to -2.00; 4 mm		0.00	-	0.00	-	0.00	-	-	-	-	0.00
-2.00 to -1.50; 2.8 mm		0.01	-	0.03	-	0.00	-	-	-	-	0.00
-1.50 to -1.00; 2 mm		0.02	-	0.00	-	0.01	-	-	-	-	0.02
-1.00 to -0.50; 1.4 mm		0.04	-	0.05	-	0.09	-	-	-	-	0.05
-0.50 to 0.00; 1 mm		0.05	-	0.08	-	0.11	-	-	-	-	0.01
*Total**		0.11	-	0.16	-	0.21	-	-	-	-	0.08
Summary Data											
< 0.00; >1 mm		0.11	-	0.16	195.33	0.21	-	-	-	-	0.08
> 0.00;	Base pan	0.01	-	0.05	976.37	0.27	-	-	-	-	0.11
<1 mm	Oven dried	152.06	-	110.25	1171.70	147.26	-	-	-	-	107.90
Total Sample Weight		152.18	1.00	110.46	1171.70	147.74	-	-	-	-	108.09

- No data provided.

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 PS82 with Gradistat output.

Microns	Benchmark Average	PSA_2801	PSA_2802	PSA_2803	PSA_2804	PSA_2805	PSA_2806
707	0.66	0.00	1.60	0.01	0.14	n/p	0.00
500	2.70	2.78	3.74	1.27	3.22	n/p	1.65
353.6	6.12	8.93	7.33	5.56	9.07	n/p	6.37
250	10.26	14.25	12.93	9.94	15.75	n/p	11.11
176.8	15.47	17.02	18.19	16.82	19.78	n/p	15.09
125	17.00	16.44	17.06	17.96	18.66	n/p	16.64
88.39	13.93	13.26	12.71	14.52	13.58	n/p	14.97
62.5	10.00	9.17	8.66	10.73	7.79	n/p	10.94
44.19	6.21	5.60	4.99	6.37	3.68	n/p	6.49
31.25	3.33	3.23	2.48	3.49	1.64	n/p	3.31
22.097	1.97	1.99	1.47	2.05	0.91	n/p	1.80
15.625	1.43	1.43	0.92	1.21	0.69	n/p	1.34
11.049	1.25	1.15	0.79	1.07	0.64	n/p	1.26
7.813	1.16	0.97	0.87	1.10	0.67	n/p	1.25
5.524	1.13	0.84	0.90	1.12	0.76	n/p	1.28
3.906	1.09	0.73	0.87	1.07	0.80	n/p	1.36
2.762	1.02	0.63	0.80	0.97	0.74	n/p	1.38
1.953	0.94	0.50	0.72	0.86	0.59	n/p	1.26
1.381	0.86	0.38	0.63	0.76	0.42	n/p	0.99
0.977	0.76	0.30	0.54	0.68	0.27	n/p	0.71
0.691	0.65	0.26	0.45	0.58	0.15	n/p	0.50
0.488	0.55	0.14	0.37	0.50	0.04	n/p	0.30
0.345	0.46	0.00	0.30	0.41	0.00	n/p	0.00
0.244	0.37	0.00	0.24	0.33	0.00	n/p	0.00
0.173	0.28	0.00	0.19	0.25	0.00	n/p	0.00
0.122	0.21	0.00	0.14	0.19	0.00	n/p	0.00
0.086	0.13	0.00	0.09	0.12	0.00	n/p	0.00
0.061	0.05	0.00	0.04	0.05	0.00	n/p	0.00
0.043	0.01	0.00	0.00	0.01	0.00	n/p	0.00
0.01	0.00	0.00	0.00	0.00	0.00	n/p	0.00
Total	100.00	100.00	100.00	100.00	100.00	n/p	100.00
GRADISTAT OUTPUTS							
MEAN:	Very Fine Sand	Fine Sand	Fine Sand	Very Fine Sand	Fine Sand	n/p	Very Fine Sand
SORTING:	Poorly Sorted	Poorly Sorted	Poorly Sorted	Poorly Sorted	Poorly Sorted	n/p	Poorly Sorted
SKEWNESS:	Very Fine Skewed	Fine Skewed	Very Fine Skewed	Very Fine Skewed	Fine Skewed	n/p	Very Fine Skewed
KURTOSIS:	Very Leptokurtic	Leptokurtic	Very Leptokurtic	Very Leptokurtic	Leptokurtic	n/p	Very Leptokurtic
MODE:	Unimodal	Unimodal	Unimodal	Unimodal	Unimodal	n/p	Unimodal
MODE 1 (µm):	150.9	213.4	213.4	150.9	213.4	n/p	150.9
MODE 2 (µm):	-	-	-	-	-	n/p	-
MODE 3 (µm):	-	-	-	-	-	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 PS82 with Gradistat output.

Microns	BM Average	PSA_2807	PSA_2808	PSA_2809_v2	PSA_2810	PSA_2811	PSA_2812
707	0.66	0.12	0.58	0.00	n/p	0.17	0.33
500	2.70	1.47	2.54	1.50	n/p	1.70	2.64
353.6	6.12	5.14	5.96	5.09	n/p	5.58	7.23
250	10.26	10.96	10.09	10.18	n/p	11.47	13.18
176.8	15.47	15.89	15.56	13.93	n/p	16.65	17.77
125	17.00	17.96	17.11	17.71	n/p	18.43	18.57
88.39	13.93	15.81	13.88	14.60	n/p	15.67	15.53
62.5	10.00	11.20	9.95	11.85	n/p	10.56	10.55
44.19	6.21	6.53	6.25	7.30	n/p	6.00	5.81
31.25	3.33	3.29	3.36	3.68	n/p	3.09	2.59
22.097	1.97	1.75	2.01	2.17	n/p	1.70	1.06
15.625	1.43	1.24	1.47	1.43	n/p	1.20	0.61
11.049	1.25	1.06	1.28	1.30	n/p	1.04	0.58
7.813	1.16	1.09	1.20	1.26	n/p	1.01	0.61
5.524	1.13	1.13	1.18	1.31	n/p	1.04	0.61
3.906	1.09	1.16	1.15	1.32	n/p	1.05	0.59
2.762	1.02	1.21	1.07	1.25	n/p	1.03	0.53
1.953	0.94	0.94	0.98	1.13	n/p	0.85	0.45
1.381	0.86	0.72	0.89	0.97	n/p	0.56	0.34
0.977	0.76	0.59	0.78	0.75	n/p	0.49	0.25
0.691	0.65	0.59	0.66	0.70	n/p	0.56	0.16
0.488	0.55	0.15	0.55	0.47	n/p	0.15	0.01
0.345	0.46	0.00	0.45	0.13	n/p	0.00	0.00
0.244	0.37	0.00	0.36	0.00	n/p	0.00	0.00
0.173	0.28	0.00	0.28	0.00	n/p	0.00	0.00
0.122	0.21	0.00	0.21	0.00	n/p	0.00	0.00
0.086	0.13	0.00	0.13	0.00	n/p	0.00	0.00
0.061	0.05	0.00	0.05	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	n/p	100.00	100.00
GRADISTAT OUTPUTS							
MEAN:	Very Fine Sand	Very Fine Sand	Very Fine Sand	Very Fine Sand	n/p	Very Fine Sand	Fine Sand
SORTING:	Poorly Sorted	Poorly Sorted	Poorly Sorted	Poorly Sorted	n/p	Poorly Sorted	Poorly Sorted
SKEWNESS:	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	n/p	Very Fine Skewed	Fine Skewed
KURTOSIS:	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	n/p	Very Leptokurtic	Leptokurtic
MODE:	Unimodal	Unimodal	Unimodal	Unimodal	n/p	Unimodal	Unimodal
MODE 1 (µm):	150.9	150.9	150.9	150.9	n/p	150.9	150.9
MODE 2 (µm):	-	-	-	-	n/p	-	-
MODE 3 (µm):	-	-	-	-	n/p	-	-

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

PARTICIPANT DATA

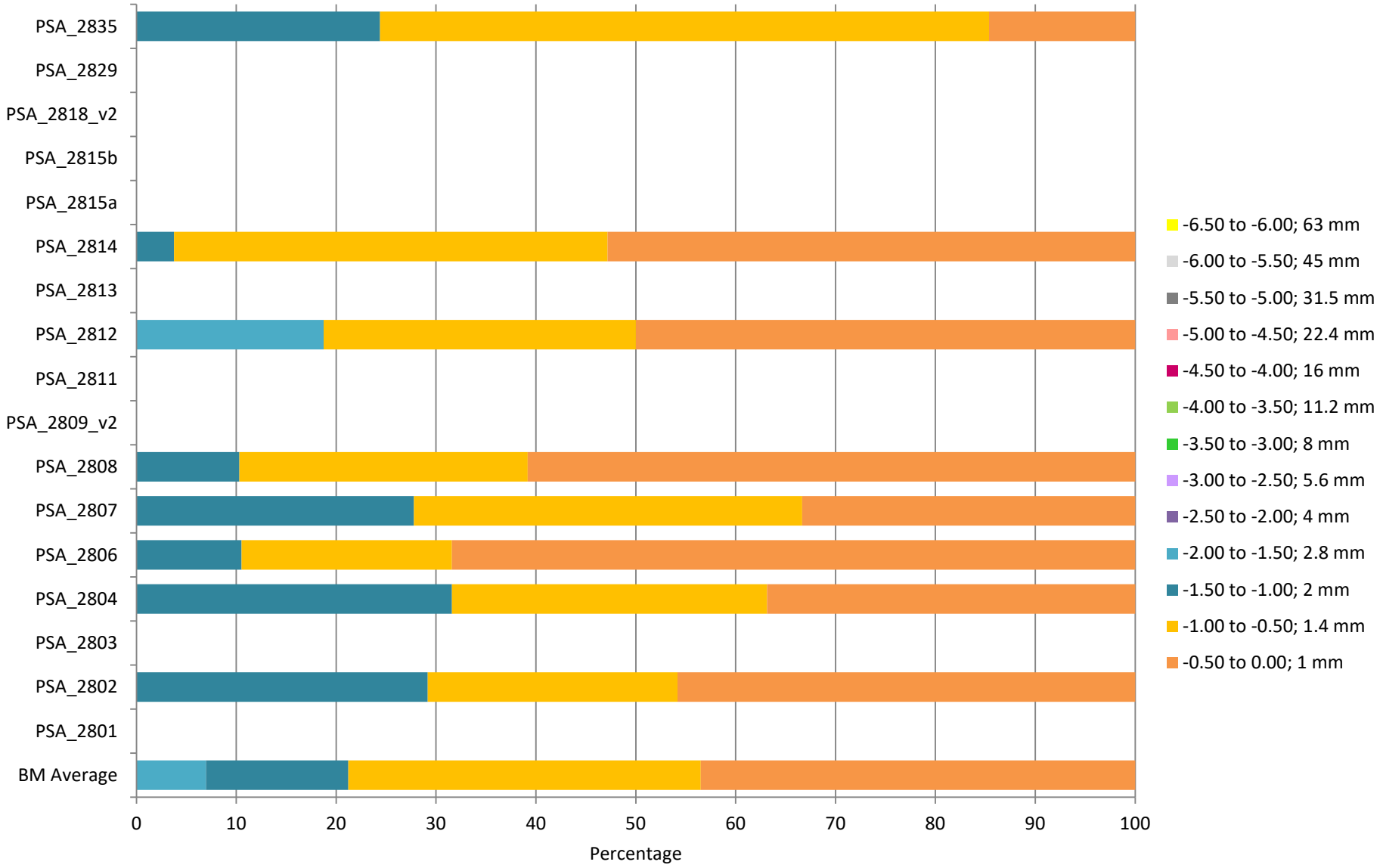
Table 8. Summary of final laser data for the participants for sediment distributed as PS82 with Gradistat output.

Microns	BM Average	PSA_2813	PSA_2814	PSA_2815a	PSA_2815b	PSA_2818_v2	PSA_2829
707	0.66	1.89	0.90	0.99	0.02	0.09	1.97
500	2.70	6.38	3.49	10.60	3.46	1.45	6.87
353.6	6.12	12.11	8.19	13.70	12.26	5.19	12.12
250	10.26	16.37	13.63	9.02	15.67	11.07	16.13
176.8	15.47	16.93	17.19	13.06	14.60	16.00	16.77
125	17.00	13.86	17.03	10.78	10.13	17.86	13.96
88.39	13.93	9.31	13.64	11.83	11.96	15.48	9.57
62.5	10.00	5.38	9.09	8.36	9.28	10.97	5.64
44.19	6.21	2.96	5.21	5.57	6.19	6.58	3.19
31.25	3.33	2.00	2.74	3.69	3.78	3.47	2.16
22.097	1.97	1.92	1.51	2.14	2.14	1.89	1.90
15.625	1.43	2.06	1.04	1.21	1.29	1.34	1.81
11.049	1.25	2.01	0.88	0.63	0.70	1.17	1.67
7.813	1.16	1.76	0.83	0.71	0.82	1.11	1.49
5.524	1.13	1.45	0.84	0.67	0.84	1.18	1.30
3.906	1.09	1.14	0.86	0.76	0.92	1.21	1.10
2.762	1.02	0.86	0.82	0.90	0.98	1.17	0.85
1.953	0.94	0.70	0.69	0.93	0.96	0.96	0.61
1.381	0.86	0.63	0.54	0.79	0.87	0.65	0.44
0.977	0.76	0.26	0.41	0.59	0.75	0.51	0.32
0.691	0.65	0.00	0.31	0.34	0.48	0.52	0.12
0.488	0.55	0.00	0.15	0.41	0.55	0.14	0.00
0.345	0.46	0.00	0.00	0.46	0.47	0.00	0.00
0.244	0.37	0.00	0.00	0.54	0.38	0.00	0.00
0.173	0.28	0.00	0.00	0.58	0.28	0.00	0.00
0.122	0.21	0.00	0.00	0.49	0.16	0.00	0.00
0.086	0.13	0.00	0.00	0.27	0.05	0.00	0.00
0.061	0.05	0.00	0.00	0.00	0.00	0.00	0.00
0.043	0.01	0.00	0.00	0.00	0.00	0.00	0.00
0.01	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
GRADISTAT OUTPUTS							
MEAN:	Very Fine Sand	Fine Sand	Fine Sand	Fine Sand	Fine Sand	Very Fine Sand	Fine Sand
SORTING:	Poorly Sorted	Poorly Sorted	Poorly Sorted	Very Poorly Sorted	Poorly Sorted	Poorly Sorted	Poorly Sorted
SKEWNESS:	Very Fine Skewed	Very Fine Skewed	Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed
KURTOSIS:	Very Leptokurtic	Leptokurtic	Leptokurtic	Leptokurtic	Leptokurtic	Very Leptokurtic	Leptokurtic
MODE:	Unimodal	Unimodal	Unimodal	Trimodal	Bimodal	Unimodal	Unimodal
MODE 1 (µm):	150.9	213.4	213.4	426.8	301.8	150.9	213.4
MODE 2 (µm):	-	-	-	213.4	106.695	-	-
MODE 3 (µm):	-	-	-	106.695	-	-	-

PARTICIPANT DATA

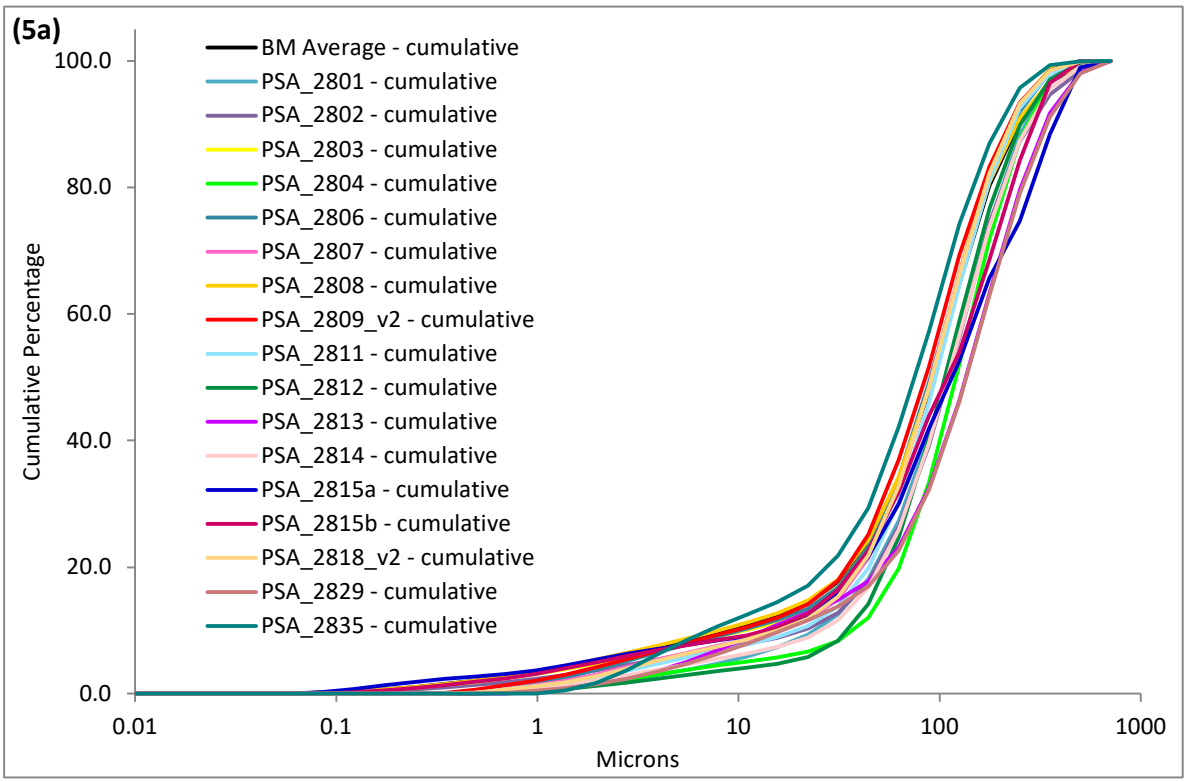
Microns	BM Average	PSA_2835
707	0.66	0.02
500	2.70	0.63
353.6	6.12	3.63
250	10.26	8.78
176.8	15.47	12.75
125	17.00	16.99
88.39	13.93	14.93
62.5	10.00	12.88
44.19	6.21	7.55
31.25	3.33	4.71
22.097	1.97	2.59
15.625	1.43	1.98
11.049	1.25	1.91
7.813	1.16	2.10
5.524	1.13	2.38
3.906	1.09	2.44
2.762	1.02	1.99
1.953	0.94	1.20
1.381	0.86	0.49
0.977	0.76	0.02
0.691	0.65	0.00
0.488	0.55	0.00
0.345	0.46	0.00
0.244	0.37	0.00
0.173	0.28	0.00
0.122	0.21	0.00
0.086	0.13	0.00
0.061	0.05	0.00
0.043	0.01	0.00
0.01	0.00	0.00
Total	100.00	100.00
GRADISTAT OUTPUTS		
MEAN:	Very Fine Sand	Very Fine Sand
SORTING:	Poorly Sorted	Poorly Sorted
SKEWNESS:	Very Fine Skewed	Very Fine Skewed
KURTOSIS:	Very Leptokurtic	Leptokurtic
MODE:	Unimodal	Unimodal
MODE 1 (µm):	150.9	150.9
MODE 2 (µm):	-	-
MODE 3 (µm):	-	-

Figure 4. Final sieve data (in percentages) provided by each participant for sediment distributed as PS82.



NMBAQC Particle Size Analysis
2021/22 - PS82

Figure 5. (a) Cumulative and (b) Differential final laser data provided by the participants and Benchmark average for sediment distributed as PS82.



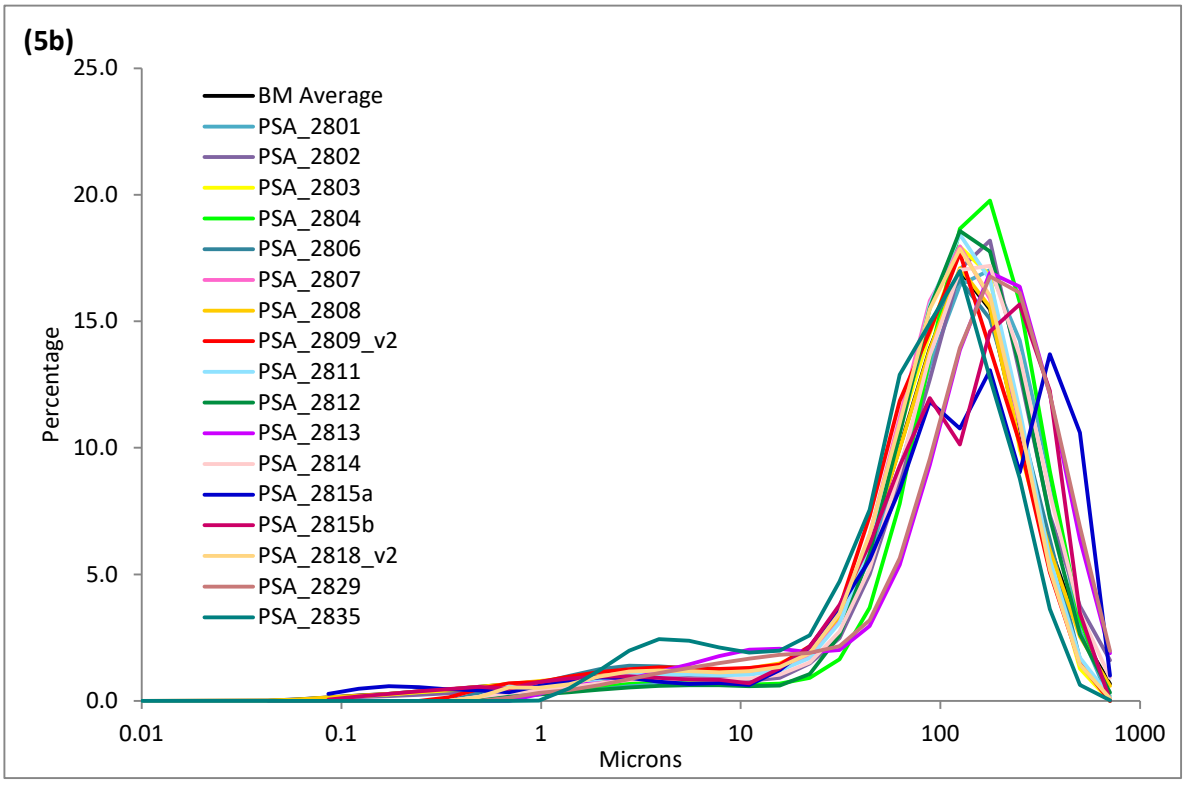


Figure 6. Particle size distribution curves from all participating laboratories and the Benchmark Average for sediment distributed as PS82.

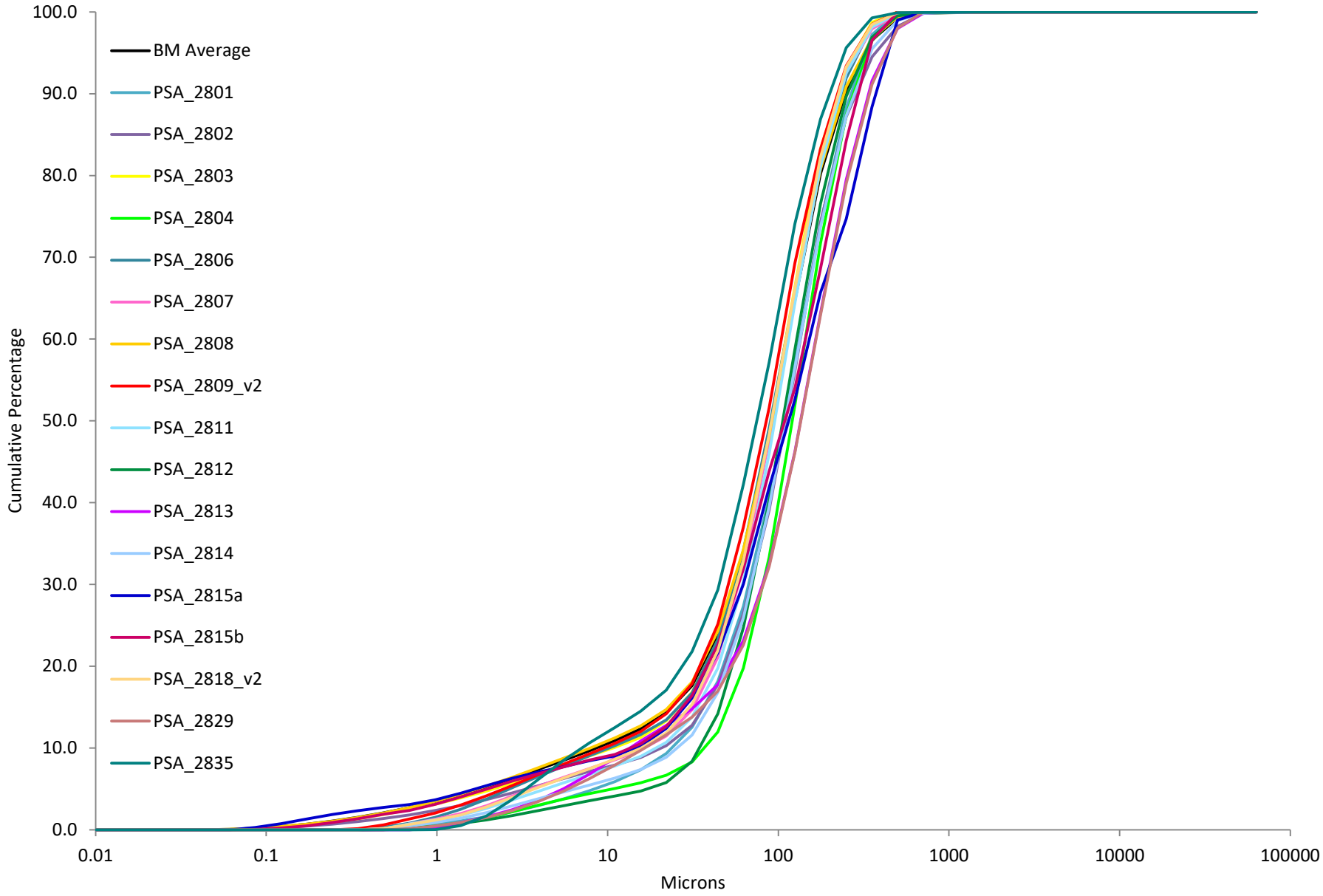


Figure 7. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the Benchmark Average for PS82.

NMBAQC Particle Size Analysis
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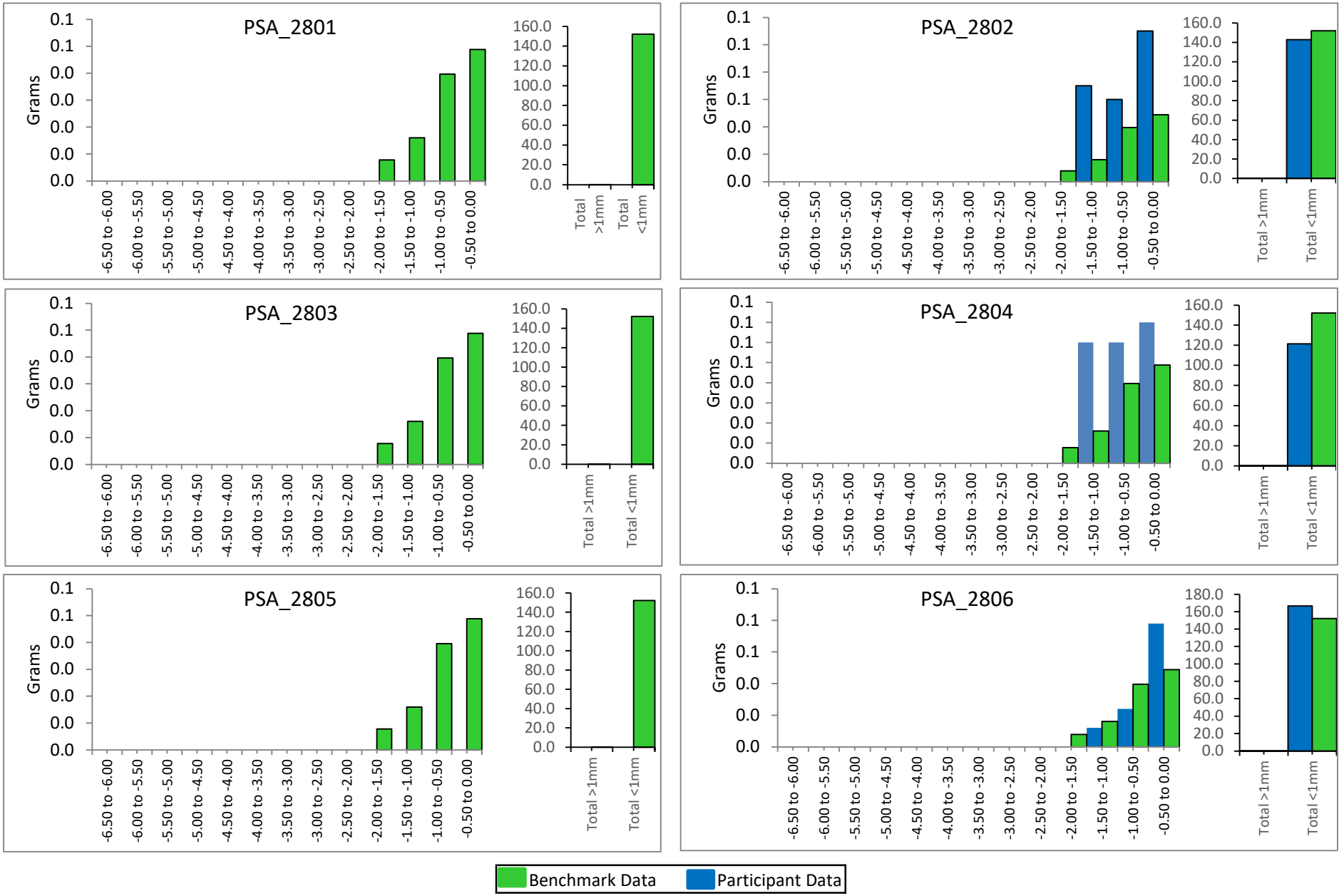
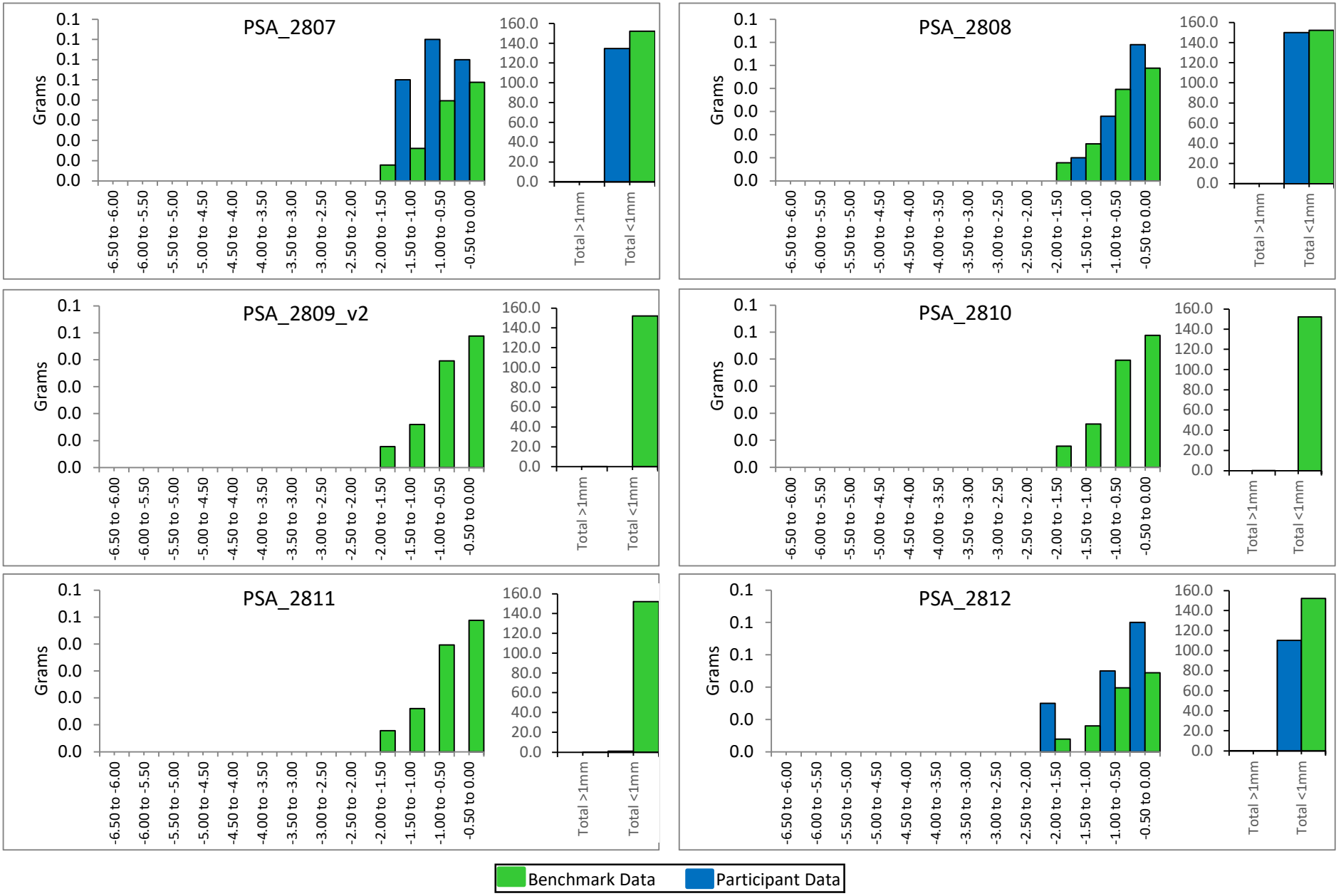
Figure 8. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS82.



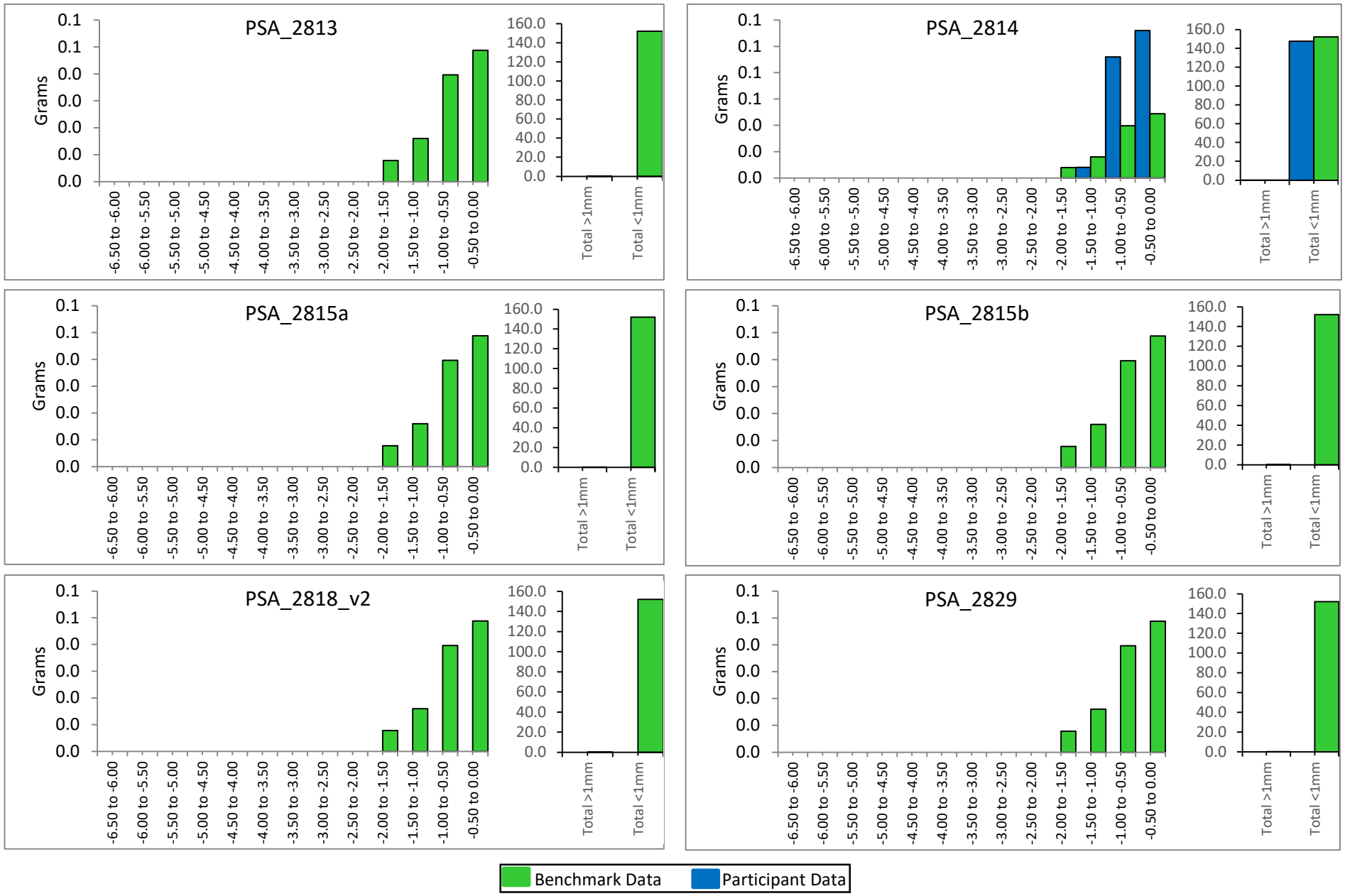
NMBAQC Particle Size Analysis
2021/22 - PS82

Figure 8. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS82.



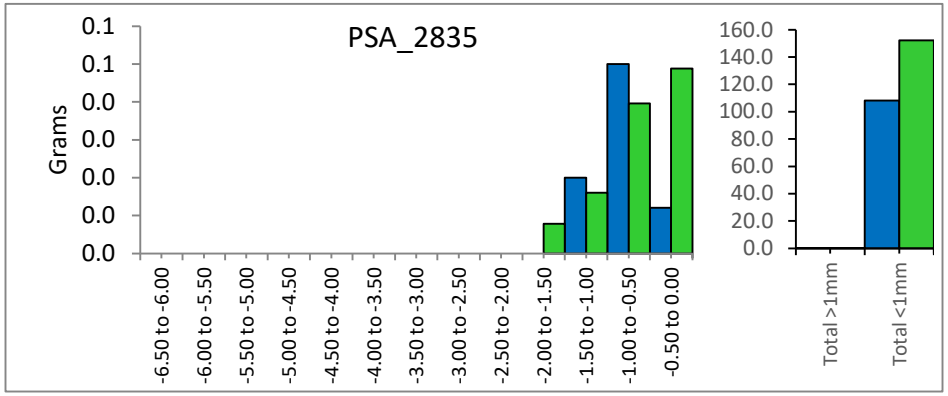
NMBAQC Particle Size Analysis
2021/22 - PS82

Figure 8. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS82.



NMBAQC Particle Size Analysis
2021/22 - PS82

Figure 8. Individual comparisons of participant sieve data with the Benchmark Average for sediment distributed as PS82.



NMBAQC Particle Size Analysis
2021/22 - PS82

Figure 9. Comparison of participant laser replicate data with the Benchmark Average for sediment distributed as PS82.

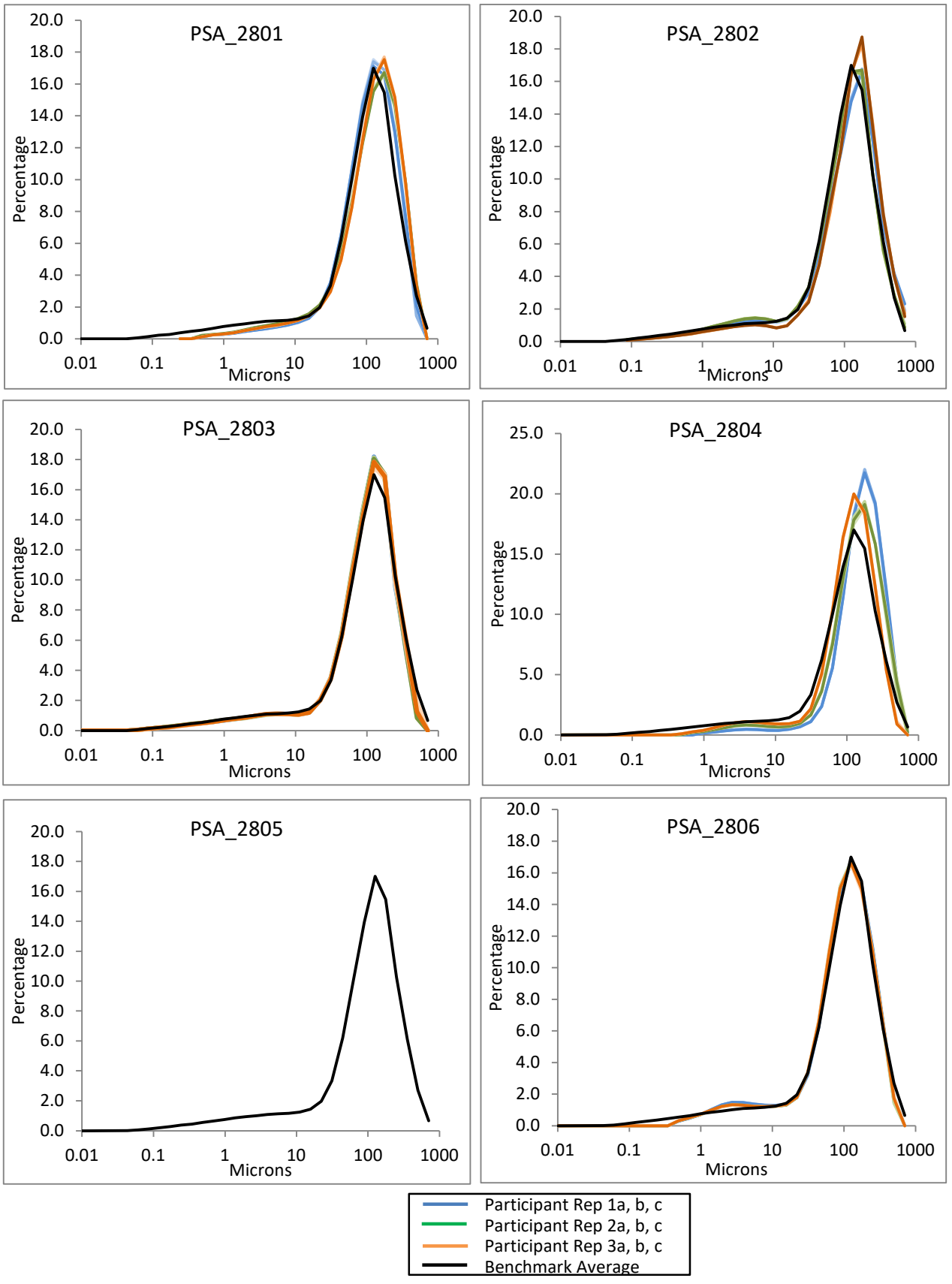


Figure 9. Comparison of participant laser replicate data with the Benchmark Average for sediment distributed as PS82.

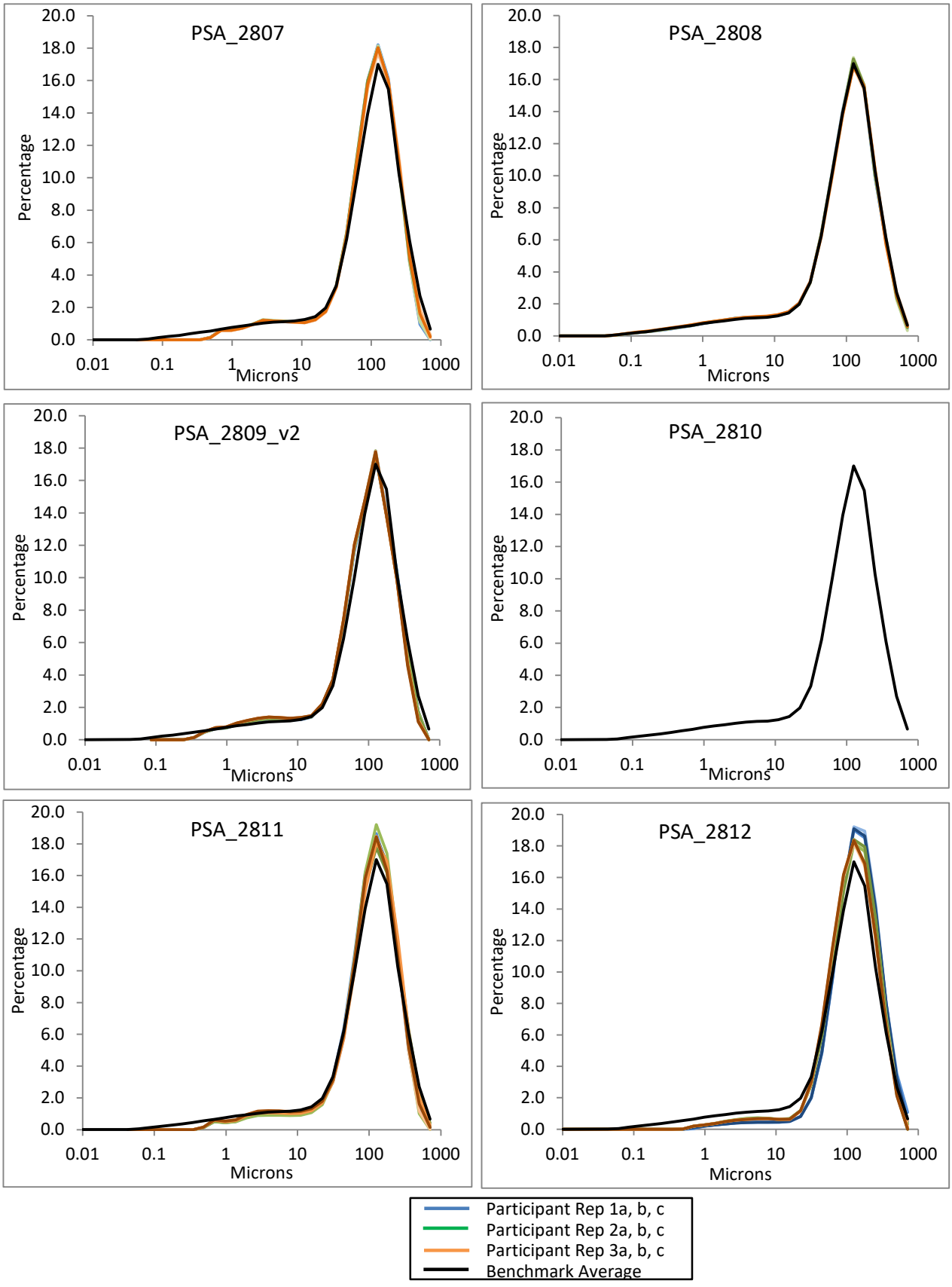


Figure 9. Comparison of participant laser replicate data with the Benchmark Average for sediment distributed as PS82.

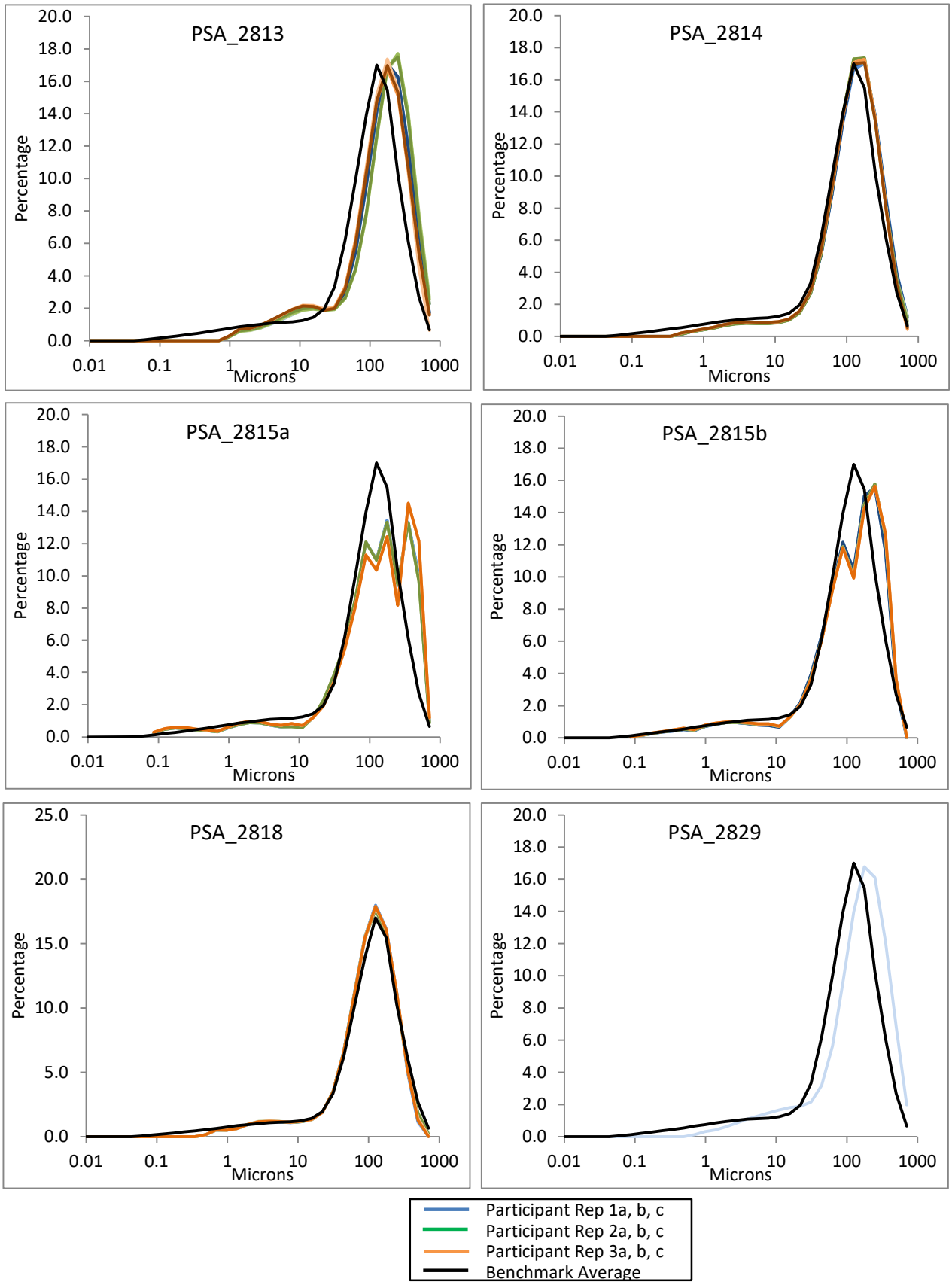
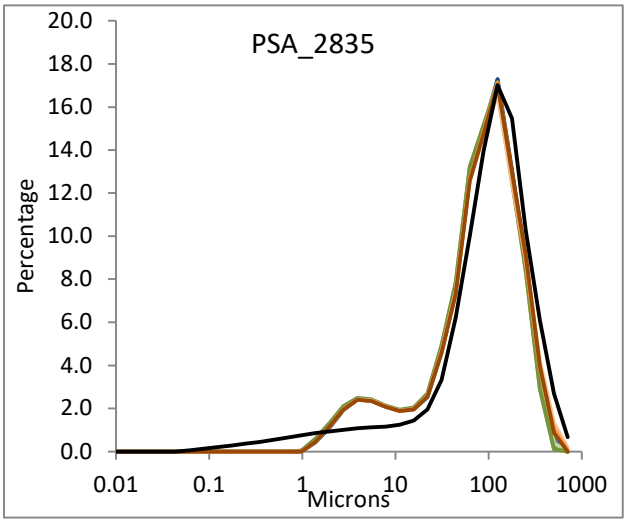


Figure 9. Comparison of participant laser replicate data with the Benchmark Average for sediment distributed as PS82.



APPENDICES

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS82.

	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)	0.76	0.94	0.85	0.61	0.77	0.97	0.91	0.79	1.01
0.50 to 1.00; (500 µm)	2.72	2.98	2.73	3.02	2.94	3.16	2.81	2.81	3.01
1.00 to 1.50; (353.6 µm)	6.37	6.36	6.48	6.58	6.62	6.77	6.11	6.57	6.35
1.50 to 2.00; (250 µm)	10.38	10.28	10.47	10.53	10.51	10.50	10.42	10.48	10.55
2.00 to 2.50; (176.8 µm)	15.17	15.13	15.09	15.21	15.21	15.00	15.49	15.44	15.47
2.50 to 3.00; (125 µm)	16.52	16.46	16.47	16.37	16.33	16.19	16.92	16.91	16.80
3.00 to 3.50; (88.39 µm)	14.05	13.94	13.91	13.82	13.66	13.66	13.95	13.85	13.72
3.50 to 4.00; (62.5 µm)	10.02	9.96	9.93	9.85	9.70	9.73	10.07	10.00	9.92
4.00 to 4.50; (44.19 µm)	6.02	5.98	5.98	5.94	5.90	5.89	6.20	6.17	6.16
4.50 to 5.00; (31.25 µm)	3.39	3.35	3.36	3.34	3.34	3.32	3.29	3.22	3.21
5.00 to 5.50; (22.097 µm)	2.01	2.01	2.02	2.01	2.03	2.01	1.92	1.91	1.90
5.50 to 6.00; (15.625 µm)	1.44	1.44	1.45	1.45	1.47	1.46	1.39	1.39	1.38
6.00 to 6.50; (11.049 µm)	1.26	1.26	1.27	1.27	1.30	1.28	1.20	1.19	1.20
6.50 to 7.00; (7.813 µm)	1.19	1.19	1.19	1.20	1.22	1.20	1.10	1.10	1.10
7.00 to 7.50; (5.524 µm)	1.16	1.16	1.16	1.16	1.19	1.17	1.07	1.06	1.07
7.50 to 8.00; (3.906 µm)	1.12	1.12	1.12	1.12	1.15	1.13	1.05	1.04	1.04
8.00 to 8.50; (2.762 µm)	1.04	1.04	1.05	1.05	1.07	1.06	0.98	0.98	0.98
8.50 to 9.00; (1.953 µm)	0.96	0.96	0.96	0.97	0.98	0.97	0.91	0.90	0.90
9.00 to 9.50; (1.381 µm)	0.88	0.88	0.88	0.88	0.90	0.89	0.84	0.83	0.83
9.50 to 10.00; (0.977 µm)	0.78	0.78	0.79	0.79	0.80	0.79	0.74	0.74	0.74
10.00 to 10.50; (0.691 µm)	0.67	0.67	0.68	0.68	0.69	0.68	0.63	0.63	0.63
10.50 to 11.00; (0.488 µm)	0.56	0.57	0.57	0.57	0.59	0.58	0.53	0.53	0.53
11.00 to 11.50; (0.345 µm)	0.47	0.47	0.47	0.47	0.49	0.48	0.44	0.44	0.44
11.50 to 12.00; (0.244 µm)	0.38	0.38	0.38	0.38	0.40	0.39	0.36	0.36	0.36
12.00 to 12.50; (0.173 µm)	0.29	0.29	0.29	0.29	0.30	0.30	0.27	0.27	0.27
12.50 to 13.00; (0.122 µm)	0.22	0.22	0.22	0.22	0.23	0.22	0.21	0.21	0.21
13.00 to 13.50; (0.086 µm)	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13
13.50 to 14.00; (0.061 µm)	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05
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	11.33	11.33	11.09	11.08	10.39	10.85	13.46	13.67	13.54
d50	130.10	130.80	130.64	131.31	131.48	132.11	132.00	132.92	133.54
d90	351.74	359.07	354.89	357.61	359.91	370.13	351.61	356.70	360.95

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	11.25	0.14	1.22	10.77	0.35	3.25	13.56	0.10	0.77
d50	130.51	0.37	0.28	131.63	0.42	0.32	132.82	0.77	0.58
d90	355.23	3.68	1.04	362.55	6.67	1.84	356.42	4.67	1.31

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS82.

	Replicate Sample 2								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.71	0.63	0.45	0.53	0.52	0.30	0.50	0.43	0.40
0.50 to 1.00; (500 µm)	3.06	2.75	2.83	2.91	2.80	2.83	3.00	2.62	2.77
1.00 to 1.50; (353.6 µm)	6.16	6.14	6.29	6.08	6.18	6.26	6.37	6.31	6.19
1.50 to 2.00; (250 µm)	10.24	10.29	10.46	10.30	10.53	10.50	10.35	10.38	10.42
2.00 to 2.50; (176.8 µm)	15.46	15.35	15.44	15.53	15.61	15.55	15.38	15.45	15.55
2.50 to 3.00; (125 µm)	16.91	16.99	16.92	16.98	16.90	16.94	16.89	17.00	16.99
3.00 to 3.50; (88.39 µm)	14.00	14.08	13.99	13.97	13.88	13.89	14.11	14.17	14.09
3.50 to 4.00; (62.5 µm)	10.09	10.18	10.10	10.07	10.03	10.04	9.93	9.99	9.93
4.00 to 4.50; (44.19 µm)	6.21	6.27	6.24	6.25	6.22	6.26	6.08	6.13	6.12
4.50 to 5.00; (31.25 µm)	3.28	3.28	3.26	3.27	3.25	3.25	3.32	3.34	3.33
5.00 to 5.50; (22.097 µm)	1.89	1.91	1.90	1.91	1.90	1.90	1.95	1.96	1.96
5.50 to 6.00; (15.625 µm)	1.36	1.37	1.37	1.38	1.37	1.39	1.41	1.42	1.42
6.00 to 6.50; (11.049 µm)	1.20	1.21	1.21	1.22	1.22	1.23	1.23	1.24	1.25
6.50 to 7.00; (7.813 µm)	1.14	1.15	1.15	1.16	1.15	1.16	1.15	1.16	1.16
7.00 to 7.50; (5.524 µm)	1.12	1.13	1.13	1.14	1.13	1.14	1.11	1.12	1.12
7.50 to 8.00; (3.906 µm)	1.09	1.10	1.10	1.11	1.10	1.11	1.07	1.08	1.08
8.00 to 8.50; (2.762 µm)	1.02	1.03	1.03	1.03	1.03	1.04	1.00	1.01	1.01
8.50 to 9.00; (1.953 µm)	0.93	0.94	0.93	0.94	0.94	0.95	0.92	0.92	0.92
9.00 to 9.50; (1.381 µm)	0.83	0.84	0.84	0.85	0.85	0.85	0.83	0.84	0.84
9.50 to 10.00; (0.977 µm)	0.73	0.74	0.74	0.74	0.74	0.75	0.74	0.75	0.75
10.00 to 10.50; (0.691 µm)	0.62	0.63	0.63	0.63	0.63	0.64	0.63	0.64	0.64
10.50 to 11.00; (0.488 µm)	0.52	0.53	0.53	0.53	0.53	0.54	0.54	0.54	0.54
11.00 to 11.50; (0.345 µm)	0.43	0.44	0.44	0.44	0.44	0.45	0.44	0.45	0.45
11.50 to 12.00; (0.244 µm)	0.35	0.36	0.36	0.36	0.36	0.36	0.36	0.37	0.37
12.00 to 12.50; (0.173 µm)	0.27	0.27	0.27	0.27	0.27	0.28	0.27	0.28	0.28
12.50 to 13.00; (0.122 µm)	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21
13.00 to 13.50; (0.086 µm)	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
13.50 to 14.00; (0.061 µm)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
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	13.01	12.57	12.61	12.37	12.41	12.14	12.84	12.49	12.42
d50	131.67	130.59	131.27	131.09	131.67	131.22	131.56	130.72	131.08
d90	352.77	347.90	348.59	347.98	347.77	346.44	352.11	346.15	346.29

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	12.73	0.24	1.92	12.31	0.15	1.18	12.58	0.22	1.76
d50	131.18	0.55	0.42	131.33	0.31	0.23	131.12	0.42	0.32
d90	349.75	2.64	0.75	347.40	0.83	0.24	348.18	3.40	0.98

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS82.

	Replicate Sample 3								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.88	0.60	0.77	0.56	0.73	0.78	0.60	0.61	0.56
0.50 to 1.00; (500 µm)	2.44	2.29	2.36	2.30	2.49	2.29	2.40	2.70	2.63
1.00 to 1.50; (353.6 µm)	5.78	5.88	5.83	5.88	5.80	5.89	5.96	5.98	6.17
1.50 to 2.00; (250 µm)	9.80	10.19	10.00	10.15	10.06	10.07	10.43	10.34	10.18
2.00 to 2.50; (176.8 µm)	15.44	15.61	15.51	15.66	15.66	15.61	15.79	15.82	15.68
2.50 to 3.00; (125 µm)	17.32	17.29	17.30	17.38	17.26	17.32	17.29	17.25	17.28
3.00 to 3.50; (88.39 µm)	14.13	14.14	14.09	14.05	13.98	13.94	14.07	13.97	13.85
3.50 to 4.00; (62.5 µm)	10.16	10.11	10.11	10.04	10.03	9.98	10.05	9.99	9.94
4.00 to 4.50; (44.19 µm)	6.31	6.28	6.30	6.29	6.26	6.31	6.19	6.17	6.23
4.50 to 5.00; (31.25 µm)	3.43	3.38	3.39	3.37	3.36	3.43	3.29	3.27	3.32
5.00 to 5.50; (22.097 µm)	2.05	1.99	2.00	1.99	2.00	1.94	1.92	1.91	1.98
5.50 to 6.00; (15.625 µm)	1.48	1.43	1.44	1.44	1.44	1.58	1.39	1.39	1.46
6.00 to 6.50; (11.049 µm)	1.26	1.23	1.24	1.24	1.25	1.40	1.21	1.21	1.25
6.50 to 7.00; (7.813 µm)	1.15	1.14	1.15	1.15	1.15	1.15	1.14	1.14	1.16
7.00 to 7.50; (5.524 µm)	1.12	1.11	1.12	1.12	1.12	1.06	1.12	1.11	1.13
7.50 to 8.00; (3.906 µm)	1.10	1.08	1.09	1.09	1.09	1.03	1.08	1.07	1.09
8.00 to 8.50; (2.762 µm)	1.02	1.01	1.02	1.02	1.02	1.00	1.01	1.00	1.01
8.50 to 9.00; (1.953 µm)	0.94	0.93	0.94	0.94	0.94	0.95	0.92	0.91	0.93
9.00 to 9.50; (1.381 µm)	0.86	0.86	0.86	0.86	0.87	0.88	0.83	0.83	0.84
9.50 to 10.00; (0.977 µm)	0.76	0.76	0.77	0.77	0.77	0.77	0.73	0.73	0.74
10.00 to 10.50; (0.691 µm)	0.64	0.65	0.65	0.65	0.66	0.65	0.62	0.62	0.63
10.50 to 11.00; (0.488 µm)	0.52	0.54	0.55	0.55	0.55	0.53	0.52	0.53	0.52
11.00 to 11.50; (0.345 µm)	0.43	0.45	0.45	0.45	0.45	0.43	0.43	0.44	0.43
11.50 to 12.00; (0.244 µm)	0.34	0.36	0.37	0.37	0.37	0.35	0.35	0.35	0.35
12.00 to 12.50; (0.173 µm)	0.26	0.28	0.28	0.28	0.28	0.26	0.27	0.27	0.26
12.50 to 13.00; (0.122 µm)	0.20	0.21	0.21	0.21	0.21	0.20	0.20	0.20	0.20
13.00 to 13.50; (0.086 µm)	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12
13.50 to 14.00; (0.061 µm)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
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	12.59	12.48	12.20	12.22	12.09	12.65	13.11	13.17	12.78
d50	129.24	129.76	129.52	129.91	130.14	130.01	131.35	131.98	131.43
d90	342.47	339.24	341.09	338.69	341.85	341.18	341.59	345.22	345.96

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	12.42	0.20	1.61	12.32	0.30	2.40	13.02	0.21	1.60
d50	129.50	0.26	0.20	130.02	0.12	0.09	131.59	0.34	0.26
d90	340.93	1.62	0.47	340.58	1.67	0.49	344.26	2.34	0.68

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS82.

	Replicate Sample 4								
	Subsample 1			Subsample 2			Subsample 3		
	Run 1a	Run 1b	Run 1c	Run 2a	Run 2b	Run 2c	Run 3a	Run 3b	Run 3c
0.00 to 0.50; (707 µm)	0.75	0.50	0.60	0.44	0.53	0.24	0.51	0.45	0.17
0.50 to 1.00; (500 µm)	2.54	2.30	2.39	2.39	2.54	2.55	3.01	3.05	2.63
1.00 to 1.50; (353.6 µm)	5.87	6.07	5.80	6.03	6.04	6.04	6.31	6.35	6.21
1.50 to 2.00; (250 µm)	10.18	10.28	10.38	10.44	10.37	10.42	10.08	10.21	10.28
2.00 to 2.50; (176.8 µm)	15.55	15.52	15.63	15.55	15.47	15.66	15.32	15.27	15.49
2.50 to 3.00; (125 µm)	17.20	17.20	17.16	17.17	17.14	17.19	17.05	17.01	17.12
3.00 to 3.50; (88.39 µm)	14.12	14.05	14.05	14.04	13.97	13.95	13.81	13.78	13.84
3.50 to 4.00; (62.5 µm)	10.08	10.06	10.07	10.05	9.99	9.97	9.92	9.89	9.96
4.00 to 4.50; (44.19 µm)	6.25	6.30	6.28	6.27	6.27	6.26	6.30	6.29	6.35
4.50 to 5.00; (31.25 µm)	3.35	3.39	3.35	3.33	3.34	3.33	3.32	3.30	3.34
5.00 to 5.50; (22.097 µm)	1.94	2.01	1.96	1.95	1.96	1.96	1.96	1.96	1.99
5.50 to 6.00; (15.625 µm)	1.41	1.46	1.43	1.43	1.43	1.44	1.43	1.43	1.45
6.00 to 6.50; (11.049 µm)	1.23	1.25	1.24	1.24	1.25	1.25	1.25	1.25	1.27
6.50 to 7.00; (7.813 µm)	1.13	1.16	1.15	1.15	1.15	1.16	1.18	1.17	1.19
7.00 to 7.50; (5.524 µm)	1.09	1.13	1.10	1.11	1.11	1.11	1.15	1.14	1.16
7.50 to 8.00; (3.906 µm)	1.06	1.08	1.07	1.07	1.07	1.07	1.11	1.11	1.12
8.00 to 8.50; (2.762 µm)	1.00	1.00	1.01	1.01	1.01	1.01	1.03	1.03	1.04
8.50 to 9.00; (1.953 µm)	0.92	0.91	0.93	0.93	0.94	0.94	0.95	0.94	0.96
9.00 to 9.50; (1.381 µm)	0.85	0.84	0.86	0.86	0.86	0.86	0.86	0.86	0.87
9.50 to 10.00; (0.977 µm)	0.75	0.75	0.76	0.76	0.77	0.77	0.76	0.76	0.77
10.00 to 10.50; (0.691 µm)	0.65	0.65	0.66	0.66	0.66	0.67	0.65	0.65	0.66
10.50 to 11.00; (0.488 µm)	0.55	0.55	0.56	0.56	0.56	0.57	0.55	0.55	0.56
11.00 to 11.50; (0.345 µm)	0.46	0.46	0.47	0.47	0.47	0.47	0.45	0.46	0.47
11.50 to 12.00; (0.244 µm)	0.37	0.37	0.38	0.38	0.38	0.39	0.37	0.37	0.38
12.00 to 12.50; (0.173 µm)	0.28	0.28	0.29	0.29	0.29	0.29	0.28	0.28	0.29
12.50 to 13.00; (0.122 µm)	0.21	0.21	0.22	0.22	0.22	0.22	0.21	0.21	0.22
13.00 to 13.50; (0.086 µm)	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.14
13.50 to 14.00; (0.061 µm)	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.06
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	12.59	12.32	12.19	12.14	11.98	11.88	11.90	11.85	11.36
d50	130.36	129.78	130.05	130.22	130.39	130.42	130.95	131.14	129.89
d90	343.61	340.34	339.65	340.50	343.29	340.17	351.65	351.86	341.97

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	12.37	0.20	1.65	12.00	0.13	1.10	11.70	0.29	2.51
d50	130.07	0.29	0.23	130.34	0.11	0.08	130.66	0.68	0.52
d90	341.20	2.12	0.62	341.32	1.71	0.50	348.49	5.65	1.62

APPENDIX 1. Benchmark laser replicate data for sediment distributed as PS82.

	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)	1.02	1.15	0.82	0.66	0.75	0.54	1.01	0.78	0.69
0.50 to 1.00; (500 µm)	2.75	2.71	2.84	2.65	2.80	2.57	2.97	2.72	2.58
1.00 to 1.50; (353.6 µm)	5.71	5.76	6.01	5.89	6.01	5.99	5.91	5.86	5.95
1.50 to 2.00; (250 µm)	9.86	9.90	9.92	10.09	10.00	10.07	10.01	10.04	10.23
2.00 to 2.50; (176.8 µm)	15.47	15.44	15.36	15.49	15.49	15.52	15.49	15.59	15.56
2.50 to 3.00; (125 µm)	17.06	17.06	17.05	17.08	17.10	17.11	17.01	17.06	17.03
3.00 to 3.50; (88.39 µm)	14.00	13.93	13.91	13.89	13.78	13.84	13.68	13.69	13.69
3.50 to 4.00; (62.5 µm)	10.12	10.06	10.06	10.07	9.97	10.04	9.88	9.96	9.92
4.00 to 4.50; (44.19 µm)	6.27	6.26	6.26	6.30	6.27	6.31	6.23	6.30	6.30
4.50 to 5.00; (31.25 µm)	3.39	3.38	3.36	3.37	3.35	3.37	3.32	3.34	3.34
5.00 to 5.50; (22.097 µm)	2.00	1.99	2.00	2.00	2.00	2.01	1.99	2.00	2.01
5.50 to 6.00; (15.625 µm)	1.45	1.45	1.46	1.46	1.46	1.47	1.46	1.48	1.48
6.00 to 6.50; (11.049 µm)	1.25	1.25	1.26	1.26	1.26	1.27	1.26	1.28	1.28
6.50 to 7.00; (7.813 µm)	1.17	1.17	1.17	1.18	1.17	1.19	1.18	1.19	1.19
7.00 to 7.50; (5.524 µm)	1.14	1.13	1.14	1.14	1.14	1.15	1.14	1.15	1.16
7.50 to 8.00; (3.906 µm)	1.10	1.09	1.10	1.10	1.10	1.11	1.10	1.11	1.12
8.00 to 8.50; (2.762 µm)	1.03	1.02	1.02	1.03	1.03	1.04	1.03	1.04	1.04
8.50 to 9.00; (1.953 µm)	0.94	0.94	0.94	0.94	0.94	0.95	0.94	0.95	0.96
9.00 to 9.50; (1.381 µm)	0.85	0.85	0.85	0.86	0.86	0.87	0.86	0.87	0.87
9.50 to 10.00; (0.977 µm)	0.75	0.75	0.76	0.77	0.76	0.77	0.77	0.78	0.78
10.00 to 10.50; (0.691 µm)	0.65	0.65	0.65	0.66	0.66	0.67	0.66	0.67	0.67
10.50 to 11.00; (0.488 µm)	0.54	0.55	0.55	0.56	0.56	0.57	0.56	0.57	0.57
11.00 to 11.50; (0.345 µm)	0.45	0.45	0.46	0.46	0.46	0.47	0.47	0.47	0.47
11.50 to 12.00; (0.244 µm)	0.36	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.39
12.00 to 12.50; (0.173 µm)	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29
12.50 to 13.00; (0.122 µm)	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22
13.00 to 13.50; (0.086 µm)	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14
13.50 to 14.00; (0.061 µm)	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.06	0.06
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	12.17	12.14	12.00	11.73	11.82	11.43	11.74	11.34	11.24
d50	129.88	130.25	130.18	129.81	130.59	129.65	131.25	130.31	130.33
d90	347.29	349.01	349.53	344.08	348.35	342.85	352.19	345.85	344.45

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	12.11	0.09	0.78	11.66	0.20	1.73	11.44	0.27	2.32
d50	130.10	0.20	0.15	130.02	0.50	0.39	130.63	0.54	0.41
d90	348.61	1.18	0.34	345.09	2.89	0.84	347.50	4.12	1.19

APPENDIX 2. Gradistat output of size categories based on final merged data provided by each participant and the Benchmark Average for sediment distributed as PS82 (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_v2	PSA_2810
VERY COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	n/p
COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	n/p
MEDIUM GRAVEL	0.00	0.00	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	n/p
FINE GRAVEL	0.00	0.00	0.00	0.00	0.00	n/p	0.00	0.00	0.00	0.00	n/p
VERY FINE GRAVEL	0.02	0.00	0.05	0.00	0.05	n/p	0.00	0.04	0.01	0.00	n/p
VERY COARSE SAND	0.06	0.00	0.12	0.00	0.11	n/p	0.00	0.10	0.06	0.00	n/p
COARSE SAND	3.36	2.78	5.33	1.28	3.36	n/p	1.65	1.91	3.12	1.50	n/p
MEDIUM SAND	16.36	23.18	20.23	15.50	24.78	n/p	17.48	16.50	16.04	15.26	n/p
FINE SAND	32.45	33.46	35.20	34.78	38.38	n/p	31.72	33.77	32.65	31.63	n/p
VERY FINE SAND	23.92	22.42	21.33	25.25	21.35	n/p	25.90	26.59	23.82	26.45	n/p
VERY COARSE SILT	9.53	8.83	7.45	9.86	5.32	n/p	9.80	9.62	9.60	10.98	n/p
COARSE SILT	3.40	3.42	2.39	3.26	1.60	n/p	3.14	2.94	3.48	3.60	n/p
MEDIUM SILT	2.41	2.12	1.65	2.17	1.31	n/p	2.51	2.13	2.48	2.55	n/p
FINE SILT	2.22	1.57	1.77	2.19	1.55	n/p	2.64	2.28	2.32	2.63	n/p
VERY FINE SILT	1.96	1.13	1.51	1.83	1.33	n/p	2.64	2.13	2.05	2.38	n/p
CLAY	4.32	1.08	2.98	3.88	0.87	n/p	2.50	2.00	4.37	3.02	n/p

GRAVEL	0.02	0.00	0.05	0.00	0.05	0.00	0.00	0.04	0.01	0.00	0.00
SAND	76.14	81.85	82.20	76.81	87.98	0.00	76.76	78.87	75.69	74.85	0.00
SILT	19.52	17.07	14.77	19.31	11.10	0.00	20.74	19.10	19.94	22.13	0.00
CLAY	4.32	1.08	2.98	3.88	0.87	n/p	2.50	2.00	4.37	3.02	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 PS82 (used to create Figure 7).

	BM Average	PSA_2811	PSA_2812	PSA_2813	PSA_2814	PSA_2815a	PSA_2815b	PSA_2818_v2	PSA_2829	PSA_2835
VERY COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COARSE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FINE GRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VERY FINE GRAVEL	0.02	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.02
VERY COARSE SAND	0.06	0.00	0.12	0.15	0.14	0.00	0.00	0.00	0.00	0.06
COARSE SAND	3.36	1.87	2.96	8.26	4.38	11.59	3.48	1.54	8.85	0.65
MEDIUM SAND	16.36	17.05	20.39	28.45	21.79	22.72	27.93	16.25	28.25	12.41
FINE SAND	32.45	35.08	36.29	30.74	34.17	23.84	24.73	33.86	30.73	29.72
VERY FINE SAND	23.92	26.23	26.05	14.67	22.70	20.19	21.24	26.45	15.21	27.79
VERY COARSE SILT	9.53	9.09	8.39	4.96	7.94	9.26	9.97	10.05	5.35	12.26
COARSE SILT	3.40	2.90	1.66	3.98	2.54	3.35	3.43	3.22	3.71	4.57
MEDIUM SILT	2.41	2.05	1.18	3.77	1.71	1.34	1.52	2.29	3.16	4.01
FINE SILT	2.22	2.09	1.20	2.58	1.69	1.43	1.75	2.38	2.40	4.81
VERY FINE SILT	1.96	1.88	0.98	1.56	1.51	1.83	1.94	2.13	1.47	3.19
CLAY	4.32	1.76	0.76	0.89	1.42	4.46	4.00	1.82	0.88	0.51

GRAVEL	0.02	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.02
SAND	76.14	80.23	85.80	82.26	83.19	78.34	77.39	78.11	83.04	70.63
SILT	19.52	18.01	13.41	16.85	15.39	17.20	18.61	20.07	16.08	28.84
CLAY	4.32	1.76	0.76	0.89	1.42	4.46	4.00	1.82	0.88	0.51

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

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500	1.47	1.43	2.07	3.36	3.53	3.46	3.23	3.16	3.35
353.6	7.27	7.32	7.66	9.55	9.79	9.77	9.57	9.65	9.79
250	12.94	13.07	12.96	14.54	14.62	14.72	15.02	15.21	15.16
176.8	16.88	16.90	16.55	16.74	16.61	16.72	17.56	17.71	17.54
125	17.54	17.40	17.12	15.76	15.56	15.54	16.41	16.38	16.25
88.39	14.93	14.78	14.67	12.56	12.42	12.30	12.67	12.52	12.46
62.5	10.63	10.60	10.56	8.70	8.65	8.54	8.38	8.24	8.22
44.19	6.46	6.50	6.46	5.40	5.39	5.37	4.99	4.94	4.93
31.25	3.50	3.55	3.50	3.22	3.22	3.25	2.94	2.94	2.95
22.097	1.94	1.95	1.94	2.09	2.08	2.12	1.92	1.93	1.94
15.625	1.28	1.28	1.29	1.55	1.55	1.57	1.44	1.44	1.45
11.049	1.01	1.02	1.03	1.26	1.27	1.28	1.16	1.15	1.17
7.813	0.85	0.86	0.86	1.07	1.08	1.09	0.97	0.97	0.98
5.524	0.72	0.73	0.73	0.93	0.93	0.95	0.84	0.84	0.86
3.906	0.62	0.63	0.63	0.82	0.82	0.83	0.74	0.75	0.76
2.762	0.54	0.54	0.54	0.70	0.70	0.71	0.64	0.64	0.64
1.953	0.44	0.44	0.44	0.56	0.56	0.56	0.50	0.50	0.51
1.381	0.34	0.34	0.34	0.41	0.41	0.42	0.37	0.37	0.38
0.977	0.28	0.29	0.28	0.32	0.32	0.33	0.29	0.29	0.30
0.691	0.25	0.25	0.25	0.28	0.28	0.28	0.25	0.25	0.25
0.488	0.12	0.12	0.12	0.20	0.20	0.20	0.11	0.11	0.12
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	36.65	36.35	36.43	30.29	30.22	29.57	34.22	34.17	33.69
d50	141.00	141.21	142.18	155.55	156.60	156.96	160.36	161.54	161.77
d90	341.85	342.07	351.06	392.94	397.70	396.50	391.32	391.15	395.14

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	36.48	0.16	0.43	30.03	0.40	1.33	34.03	0.29	0.86
d50	141.47	0.63	0.44	156.37	0.73	0.47	161.22	0.76	0.47
d90	344.99	5.25	1.52	395.71	2.47	0.62	392.54	2.26	0.58

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	1.94	1.87	2.31	1.10	0.83	0.87	1.62	1.73	1.52
500	3.88	3.94	4.19	2.83	2.80	2.85	3.94	4.06	4.02
353.6	7.11	7.28	7.14	5.51	5.56	5.63	7.89	7.67	7.80
250	12.43	12.41	12.37	10.20	10.20	10.20	13.27	13.39	13.12
176.8	16.63	16.77	16.64	16.43	16.46	16.69	18.29	18.36	18.73
125	15.00	14.89	14.77	16.64	16.68	16.60	16.54	16.48	16.39
88.39	11.79	11.70	11.54	13.05	13.07	12.96	11.80	11.77	11.69
62.5	8.70	8.58	8.47	9.51	9.54	9.47	7.99	7.92	8.31
44.19	5.48	5.46	5.39	6.00	6.02	5.99	4.78	4.74	4.72
31.25	3.02	3.02	2.99	3.33	3.35	3.34	2.54	2.53	2.42
22.097	2.00	2.03	2.03	2.17	2.19	2.17	1.63	1.63	1.63
15.625	1.33	1.39	1.41	1.39	1.39	1.41	0.98	0.99	0.97
11.049	1.15	1.21	1.23	1.22	1.23	1.25	0.85	0.85	0.83
7.813	1.24	1.28	1.29	1.38	1.39	1.39	0.98	0.99	0.98
5.524	1.27	1.28	1.28	1.45	1.46	1.44	1.05	1.05	1.03
3.906	1.21	1.20	1.20	1.40	1.40	1.39	1.02	1.01	0.99
2.762	1.09	1.08	1.07	1.26	1.26	1.25	0.92	0.92	0.90
1.953	0.95	0.96	0.94	1.09	1.09	1.09	0.81	0.81	0.81
1.381	0.82	0.83	0.82	0.91	0.92	0.91	0.69	0.69	0.70
0.977	0.68	0.69	0.69	0.75	0.75	0.74	0.57	0.58	0.59
0.691	0.56	0.55	0.56	0.60	0.61	0.59	0.47	0.47	0.47
0.488	0.46	0.44	0.45	0.49	0.49	0.48	0.38	0.38	0.38
0.345	0.38	0.36	0.37	0.39	0.40	0.39	0.31	0.31	0.30
0.244	0.30	0.29	0.30	0.32	0.32	0.31	0.24	0.24	0.24
0.173	0.23	0.22	0.23	0.24	0.24	0.24	0.19	0.18	0.18
0.122	0.17	0.16	0.17	0.18	0.18	0.18	0.14	0.14	0.13
0.086	0.11	0.10	0.11	0.11	0.12	0.11	0.09	0.09	0.08
0.061	0.05	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.03
0.043	0.01	0.01	0.01	0.01	0.01	0.01	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	12.73	12.87	12.69	9.44	9.30	9.58	23.43	23.44	23.91
d50	146.96	147.63	148.81	132.25	131.73	132.65	159.22	159.82	159.73
d90	408.00	409.47	421.93	346.87	343.95	345.88	411.39	413.33	410.23

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	12.76	0.09	0.74	9.44	0.14	1.44	23.59	0.27	1.16
d50	147.80	0.94	0.64	132.21	0.46	0.35	159.59	0.32	0.20
d90	413.14	7.65	1.85	345.57	1.48	0.43	411.65	1.57	0.38

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00
500	1.51	1.15	1.41	0.98	1.08	0.85	1.91	1.34	1.25
353.6	5.72	5.17	5.45	5.37	5.51	5.24	6.12	5.53	5.95
250	10.01	10.01	9.54	9.71	9.92	10.03	9.78	10.19	10.27
176.8	16.70	16.93	16.76	16.66	16.67	17.03	16.74	17.02	16.87
125	17.83	18.09	18.19	18.11	18.13	18.05	17.51	17.84	17.84
88.39	14.49	14.76	14.68	14.68	14.80	14.52	14.11	14.36	14.27
62.5	10.72	10.85	10.75	10.95	10.80	10.77	10.56	10.66	10.52
44.19	6.36	6.35	6.35	6.58	6.34	6.43	6.33	6.31	6.28
31.25	3.47	3.45	3.48	3.58	3.48	3.54	3.51	3.45	3.44
22.097	2.02	2.02	2.04	2.07	2.03	2.07	2.11	2.03	2.03
15.625	1.20	1.20	1.21	1.22	1.20	1.23	1.24	1.20	1.20
11.049	1.05	1.06	1.07	1.06	1.05	1.08	1.10	1.05	1.06
7.813	1.10	1.10	1.12	1.10	1.09	1.11	1.13	1.10	1.10
5.524	1.12	1.12	1.14	1.10	1.10	1.12	1.14	1.12	1.12
3.906	1.07	1.08	1.09	1.05	1.04	1.07	1.10	1.08	1.09
2.762	0.97	0.97	0.98	0.95	0.94	0.97	0.99	0.98	0.99
1.953	0.85	0.85	0.86	0.84	0.84	0.86	0.87	0.86	0.87
1.381	0.75	0.75	0.76	0.76	0.75	0.77	0.77	0.77	0.77
0.977	0.66	0.67	0.67	0.68	0.68	0.69	0.68	0.68	0.68
0.691	0.57	0.58	0.58	0.60	0.59	0.61	0.57	0.58	0.58
0.488	0.49	0.49	0.49	0.52	0.51	0.52	0.47	0.49	0.49
0.345	0.40	0.41	0.41	0.43	0.43	0.44	0.38	0.41	0.41
0.244	0.33	0.33	0.33	0.35	0.35	0.35	0.30	0.33	0.33
0.173	0.25	0.25	0.25	0.27	0.27	0.27	0.22	0.25	0.25
0.122	0.18	0.19	0.19	0.20	0.20	0.20	0.16	0.19	0.18
0.086	0.12	0.12	0.12	0.13	0.13	0.13	0.10	0.12	0.12
0.061	0.05	0.05	0.05	0.05	0.05	0.05	0.04	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	15.80	15.52	15.01	15.10	15.49	14.44	15.39	15.31	15.22
d50	129.39	128.30	128.30	126.98	128.17	127.91	130.26	129.78	130.41
d90	321.31	311.32	315.59	310.36	313.87	308.89	329.98	317.98	321.75

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	15.44	0.40	2.59	15.01	0.53	3.52	15.31	0.09	0.56
d50	128.66	0.63	0.49	127.69	0.62	0.49	130.15	0.33	0.26
d90	316.07	5.01	1.59	311.04	2.56	0.82	323.24	6.14	1.90

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	0.49	0.00	0.00	0.55	0.00	0.24	0.00	0.00	0.00
500	4.47	4.08	4.58	4.76	3.65	4.38	1.12	1.08	0.89
353.6	11.52	11.80	12.06	10.23	9.62	10.05	5.47	5.53	5.35
250	18.96	19.30	19.18	15.89	15.85	15.85	12.12	12.33	12.27
176.8	21.81	22.03	21.75	18.88	19.37	19.11	18.21	18.44	18.42
125	18.26	18.33	18.14	17.46	18.11	17.81	19.88	19.97	19.99
88.39	11.45	11.45	11.38	12.75	13.23	12.97	16.38	16.28	16.37
62.5	5.59	5.57	5.55	7.46	7.71	7.49	10.34	10.16	10.28
44.19	2.36	2.36	2.34	3.62	3.73	3.60	5.10	4.97	5.05
31.25	1.11	1.11	1.10	1.64	1.70	1.65	2.17	2.13	2.16
22.097	0.67	0.67	0.67	0.90	0.94	0.94	1.12	1.13	1.14
15.625	0.46	0.46	0.46	0.68	0.71	0.71	0.90	0.91	0.92
11.049	0.36	0.37	0.37	0.64	0.67	0.65	0.89	0.88	0.90
7.813	0.39	0.38	0.38	0.69	0.71	0.69	0.95	0.94	0.95
5.524	0.45	0.44	0.43	0.78	0.80	0.77	1.05	1.04	1.05
3.906	0.47	0.47	0.46	0.82	0.84	0.81	1.11	1.09	1.10
2.762	0.43	0.43	0.42	0.75	0.78	0.75	1.03	1.01	1.02
1.953	0.35	0.34	0.34	0.61	0.63	0.61	0.83	0.82	0.83
1.381	0.25	0.25	0.25	0.43	0.44	0.43	0.57	0.57	0.57
0.977	0.15	0.15	0.15	0.28	0.29	0.29	0.37	0.37	0.38
0.691	0.00	0.00	0.00	0.19	0.20	0.19	0.26	0.25	0.25
0.488	0.00	0.00	0.00	0.02	0.02	0.02	0.09	0.09	0.09
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	73.23	73.32	73.68	51.44	49.68	51.09	35.56	36.18	35.47
d50	198.40	198.05	199.44	177.79	171.76	175.56	140.77	142.02	140.94
d90	429.73	420.26	427.88	426.59	397.87	415.34	320.81	321.49	317.97

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	73.41	0.24	0.33	50.74	0.93	1.83	35.74	0.39	1.08
d50	198.63	0.72	0.36	175.04	3.05	1.74	141.25	0.68	0.48
d90	425.96	5.02	1.18	413.27	14.47	3.50	320.09	1.87	0.58

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500	1.51	1.47	1.82	1.46	1.42	1.83	1.90	1.74	1.73
353.6	6.36	6.32	6.57	6.21	6.17	6.48	6.41	6.41	6.35
250	11.26	11.24	11.34	11.02	10.99	11.13	10.92	11.11	10.99
176.8	15.28	15.31	15.22	15.08	15.05	15.02	14.81	15.04	14.98
125	16.68	16.74	16.56	16.74	16.72	16.56	16.50	16.61	16.62
88.39	14.79	14.83	14.66	15.18	15.17	14.96	15.06	15.01	15.03
62.5	10.67	10.66	10.55	11.19	11.18	11.00	11.15	11.02	11.03
44.19	6.29	6.27	6.20	6.67	6.67	6.55	6.67	6.56	6.57
31.25	3.23	3.22	3.18	3.38	3.39	3.32	3.39	3.34	3.36
22.097	1.79	1.80	1.78	1.79	1.80	1.78	1.81	1.80	1.82
15.625	1.37	1.37	1.37	1.32	1.33	1.32	1.34	1.34	1.35
11.049	1.30	1.30	1.30	1.23	1.24	1.23	1.25	1.24	1.25
7.813	1.31	1.31	1.31	1.21	1.22	1.21	1.22	1.21	1.22
5.524	1.38	1.38	1.37	1.23	1.25	1.24	1.23	1.23	1.24
3.906	1.47	1.47	1.47	1.30	1.32	1.31	1.30	1.29	1.31
2.762	1.49	1.49	1.49	1.32	1.34	1.34	1.32	1.32	1.34
1.953	1.33	1.33	1.33	1.20	1.23	1.23	1.21	1.22	1.24
1.381	1.01	1.02	1.02	0.95	0.98	0.98	0.97	0.97	0.99
0.977	0.71	0.71	0.71	0.70	0.71	0.71	0.71	0.72	0.73
0.691	0.48	0.48	0.48	0.50	0.51	0.50	0.51	0.51	0.52
0.488	0.28	0.28	0.28	0.31	0.31	0.30	0.32	0.31	0.31
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	12.76	12.69	12.77	15.78	15.17	15.41	15.46	15.55	14.91
d50	127.87	127.83	129.02	126.34	125.91	127.71	126.43	127.41	126.74
d90	331.19	330.32	336.67	328.67	327.73	335.50	335.15	333.77	332.74

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	12.74	0.04	0.32	15.45	0.31	2.00	15.31	0.35	2.29
d50	128.24	0.67	0.53	126.66	0.94	0.74	126.86	0.50	0.39
d90	332.73	3.45	1.04	330.63	4.24	1.28	333.88	1.21	0.36

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	0.08	0.09	0.00	0.04	0.04	0.25	0.09	0.30	0.18
500	1.54	1.57	0.96	1.17	1.12	1.70	1.66	1.92	1.60
353.6	5.38	5.27	4.82	4.88	4.75	4.95	5.60	5.44	5.14
250	11.06	10.98	11.04	10.86	10.78	10.50	11.36	11.07	10.95
176.8	15.72	15.80	16.13	15.93	15.96	15.65	16.00	15.85	15.99
125	17.74	17.86	18.21	18.08	18.15	18.02	17.82	17.76	18.04
88.39	15.74	15.78	16.00	15.92	15.99	15.96	15.57	15.54	15.75
62.5	11.26	11.22	11.31	11.29	11.34	11.30	10.97	11.00	11.07
44.19	6.60	6.56	6.59	6.61	6.64	6.58	6.37	6.42	6.44
31.25	3.31	3.30	3.32	3.35	3.36	3.32	3.19	3.23	3.25
22.097	1.75	1.75	1.76	1.79	1.79	1.79	1.70	1.72	1.74
15.625	1.23	1.23	1.24	1.26	1.26	1.26	1.21	1.22	1.24
11.049	1.05	1.05	1.06	1.07	1.08	1.07	1.04	1.05	1.06
7.813	1.08	1.08	1.08	1.11	1.11	1.10	1.07	1.09	1.09
5.524	1.12	1.12	1.12	1.16	1.16	1.14	1.12	1.13	1.14
3.906	1.14	1.14	1.14	1.19	1.19	1.17	1.14	1.15	1.16
2.762	1.19	1.19	1.19	1.24	1.24	1.22	1.19	1.20	1.21
1.953	0.94	0.94	0.94	0.97	0.96	0.95	0.93	0.93	0.94
1.381	0.71	0.72	0.72	0.73	0.73	0.72	0.70	0.70	0.71
0.977	0.60	0.60	0.60	0.60	0.60	0.60	0.57	0.58	0.59
0.691	0.60	0.60	0.61	0.60	0.60	0.60	0.57	0.58	0.58
0.488	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14
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	22.94	22.90	22.75	21.62	21.62	22.18	23.59	23.15	22.73
d50	128.78	128.87	127.80	127.32	126.92	127.60	131.29	130.82	129.64
d90	321.87	320.93	309.72	312.10	310.02	319.20	326.12	328.59	320.73

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	22.86	0.10	0.42	21.80	0.33	1.50	23.16	0.43	1.87
d50	128.48	0.59	0.46	127.28	0.34	0.27	130.58	0.85	0.65
d90	317.51	6.76	2.13	313.77	4.81	1.53	325.15	4.02	1.24

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	0.73	0.43	0.64	0.55	0.33	0.50	0.81	0.68	0.59
500	2.60	2.56	2.52	2.56	2.28	2.42	2.74	2.67	2.54
353.6	5.97	5.86	5.91	6.14	5.97	6.08	6.07	5.95	5.72
250	9.86	9.93	9.89	9.98	10.07	10.01	10.31	10.39	10.40
176.8	15.55	15.64	15.52	15.57	15.68	15.64	15.32	15.51	15.61
125	17.18	17.30	17.23	17.15	17.38	17.28	16.81	16.82	16.81
88.39	13.98	14.06	13.92	13.87	13.94	13.80	13.78	13.75	13.78
62.5	10.08	10.08	10.01	10.01	10.03	9.96	9.77	9.78	9.84
44.19	6.25	6.28	6.32	6.30	6.33	6.31	6.14	6.13	6.18
31.25	3.36	3.36	3.38	3.33	3.33	3.33	3.38	3.37	3.39
22.097	1.98	1.99	2.05	1.99	2.00	1.99	2.01	2.03	2.05
15.625	1.44	1.45	1.51	1.46	1.47	1.47	1.47	1.48	1.50
11.049	1.25	1.26	1.30	1.26	1.28	1.28	1.29	1.30	1.31
7.813	1.18	1.18	1.20	1.17	1.19	1.19	1.21	1.22	1.23
5.524	1.17	1.17	1.18	1.15	1.18	1.18	1.18	1.19	1.20
3.906	1.15	1.15	1.16	1.14	1.15	1.15	1.14	1.14	1.16
2.762	1.07	1.07	1.09	1.07	1.08	1.08	1.06	1.07	1.08
1.953	0.97	0.97	0.99	0.99	0.98	0.98	0.97	0.98	0.99
1.381	0.87	0.88	0.88	0.91	0.89	0.89	0.89	0.89	0.91
0.977	0.76	0.76	0.76	0.80	0.78	0.77	0.79	0.80	0.81
0.691	0.63	0.64	0.63	0.66	0.65	0.65	0.68	0.68	0.69
0.488	0.53	0.53	0.51	0.54	0.54	0.54	0.57	0.58	0.59
0.345	0.43	0.44	0.42	0.43	0.45	0.45	0.48	0.48	0.49
0.244	0.35	0.35	0.34	0.35	0.36	0.36	0.39	0.39	0.40
0.173	0.26	0.27	0.26	0.26	0.27	0.28	0.29	0.30	0.30
0.122	0.20	0.20	0.19	0.20	0.21	0.21	0.22	0.22	0.23
0.086	0.13	0.13	0.12	0.13	0.13	0.13	0.14	0.14	0.14
0.061	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06
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	11.83	11.66	11.69	11.52	11.29	11.27	10.81	10.59	10.24
d50	129.86	129.36	129.38	129.99	129.32	129.93	130.43	130.29	129.37
d90	344.99	339.61	342.32	344.41	336.70	341.52	349.02	345.40	340.22

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	11.73	0.09	0.75	11.36	0.14	1.23	10.55	0.29	2.73
d50	129.54	0.28	0.22	129.75	0.37	0.29	130.03	0.58	0.44
d90	342.31	2.69	0.79	340.87	3.90	1.14	344.88	4.42	1.28

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

PSA_2809_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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500	1.68	1.72	1.74	1.64	1.73	1.51	1.23	1.17	1.10
353.6	5.35	5.57	5.39	5.22	5.38	4.88	4.73	4.69	4.56
250	10.46	10.43	10.30	10.29	10.28	9.94	10.04	9.94	9.91
176.8	14.16	13.90	13.87	13.98	13.87	13.90	13.96	13.80	13.90
125	17.80	17.55	17.59	17.70	17.62	17.83	17.80	17.67	17.78
88.39	14.47	14.42	14.49	14.58	14.55	14.72	14.73	14.73	14.74
62.5	11.61	11.68	11.75	11.82	11.80	11.92	11.96	12.05	12.02
44.19	7.16	7.24	7.27	7.26	7.24	7.34	7.32	7.42	7.41
31.25	3.66	3.70	3.71	3.64	3.63	3.71	3.65	3.71	3.73
22.097	2.15	2.17	2.18	2.13	2.13	2.19	2.16	2.19	2.21
15.625	1.38	1.40	1.41	1.40	1.41	1.44	1.45	1.47	1.48
11.049	1.24	1.25	1.27	1.27	1.28	1.31	1.33	1.36	1.36
7.813	1.20	1.22	1.23	1.23	1.24	1.27	1.29	1.32	1.32
5.524	1.25	1.27	1.28	1.28	1.28	1.31	1.35	1.37	1.37
3.906	1.27	1.28	1.29	1.29	1.29	1.32	1.38	1.39	1.39
2.762	1.19	1.20	1.21	1.22	1.22	1.25	1.31	1.32	1.32
1.953	1.07	1.08	1.09	1.10	1.10	1.13	1.18	1.20	1.20
1.381	0.92	0.93	0.94	0.94	0.94	0.97	1.01	1.02	1.03
0.977	0.71	0.72	0.73	0.73	0.73	0.75	0.77	0.79	0.79
0.691	0.67	0.68	0.69	0.68	0.69	0.71	0.72	0.74	0.74
0.488	0.45	0.46	0.47	0.46	0.47	0.48	0.49	0.50	0.50
0.345	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14
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	15.18	14.73	14.35	14.26	14.15	13.25	12.17	11.66	11.64
d50	123.39	122.55	121.70	121.56	121.70	119.44	118.60	117.24	117.16
d90	320.46	323.18	320.98	318.04	320.72	311.79	307.56	306.10	303.73

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	14.76	0.41	2.79	13.89	0.55	3.99	11.82	0.30	2.54
d50	122.55	0.84	0.69	120.90	1.27	1.05	117.67	0.81	0.68
d90	321.54	1.44	0.45	316.85	4.58	1.45	305.80	1.94	0.63

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	0.25	0.07	0.14	0.20	0.00	0.42	0.02	0.26	0.15
500	1.93	1.34	1.77	1.99	1.01	2.44	1.15	2.08	1.62
353.6	5.76	5.00	5.76	5.98	5.07	6.28	4.99	6.19	5.21
250	11.55	10.95	11.65	11.69	11.70	11.58	11.09	12.10	10.91
176.8	16.72	16.47	16.74	16.63	17.40	16.18	16.51	16.90	16.31
125	18.44	18.65	18.46	18.32	19.21	17.77	18.48	18.08	18.44
88.39	15.48	16.15	15.73	15.62	16.21	15.22	15.79	14.99	15.83
62.5	10.23	11.05	10.67	10.56	10.85	10.39	10.68	10.01	10.64
44.19	5.73	6.33	6.08	5.99	6.10	5.95	6.11	5.72	6.00
31.25	2.99	3.25	3.09	3.03	3.05	3.06	3.22	3.00	3.11
22.097	1.71	1.75	1.64	1.61	1.58	1.68	1.84	1.67	1.79
15.625	1.23	1.22	1.13	1.12	1.07	1.20	1.34	1.19	1.31
11.049	1.06	1.05	0.97	0.97	0.91	1.05	1.17	1.03	1.14
7.813	1.04	1.02	0.94	0.95	0.88	1.03	1.14	1.01	1.12
5.524	1.08	1.04	0.96	0.97	0.90	1.07	1.19	1.04	1.17
3.906	1.08	1.04	0.96	0.97	0.90	1.07	1.20	1.05	1.19
2.762	1.05	1.02	0.93	0.95	0.89	1.04	1.16	1.03	1.16
1.953	0.88	0.85	0.78	0.80	0.74	0.86	0.96	0.86	0.96
1.381	0.58	0.57	0.51	0.53	0.49	0.56	0.63	0.57	0.63
0.977	0.50	0.49	0.45	0.46	0.43	0.48	0.54	0.49	0.54
0.691	0.58	0.57	0.51	0.53	0.50	0.55	0.63	0.58	0.63
0.488	0.15	0.15	0.13	0.14	0.13	0.14	0.17	0.15	0.16
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	25.87	26.87	31.54	31.28	33.45	26.93	21.42	27.22	22.15
d50	136.42	130.85	136.05	136.92	135.31	136.91	130.37	139.19	131.39
d90	332.34	315.48	329.80	334.91	314.84	344.61	313.61	339.04	321.25

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	28.09	3.03	10.77	30.55	3.32	10.87	23.60	3.16	13.39
d50	134.44	3.11	2.32	136.38	0.92	0.68	133.65	4.83	3.61
d90	325.88	9.09	2.79	331.45	15.19	4.58	324.63	13.05	4.02

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	0.33	1.07	0.52	0.00	0.35	0.00	0.55	0.13	0.00
500	2.97	3.54	3.25	2.26	2.49	2.21	2.49	2.36	2.14
353.6	7.98	8.00	7.98	7.11	7.21	7.09	6.61	6.57	6.55
250	14.32	13.90	14.06	13.16	13.28	13.39	12.14	12.15	12.25
176.8	18.95	18.52	18.64	17.76	17.66	17.94	16.72	16.85	16.89
125	19.22	19.01	19.10	18.41	18.13	18.41	18.19	18.37	18.35
88.39	15.28	15.23	15.36	15.31	15.07	15.20	16.02	16.17	16.17
62.5	9.63	9.62	9.75	10.50	10.41	10.42	11.46	11.54	11.61
44.19	4.85	4.82	4.91	5.97	5.98	5.95	6.55	6.58	6.67
31.25	2.01	1.97	2.01	2.81	2.82	2.82	2.94	2.95	3.00
22.097	0.82	0.80	0.81	1.20	1.19	1.21	1.14	1.15	1.17
15.625	0.50	0.50	0.50	0.69	0.67	0.68	0.64	0.64	0.65
11.049	0.45	0.45	0.46	0.65	0.64	0.64	0.63	0.63	0.64
7.813	0.45	0.45	0.45	0.71	0.70	0.69	0.68	0.67	0.68
5.524	0.46	0.44	0.45	0.73	0.72	0.71	0.68	0.67	0.67
3.906	0.45	0.44	0.44	0.71	0.69	0.68	0.65	0.64	0.64
2.762	0.41	0.40	0.40	0.63	0.61	0.61	0.58	0.58	0.58
1.953	0.35	0.34	0.35	0.51	0.51	0.50	0.49	0.48	0.48
1.381	0.27	0.27	0.27	0.38	0.38	0.38	0.37	0.37	0.37
0.977	0.20	0.20	0.20	0.28	0.27	0.27	0.27	0.27	0.27
0.691	0.11	0.04	0.11	0.20	0.20	0.20	0.20	0.20	0.20
0.488	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02
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	56.88	57.67	56.81	45.47	45.68	45.77	45.92	45.90	45.67
d50	160.24	161.48	159.84	147.27	148.80	148.19	142.02	141.12	140.49
d90	373.81	395.91	381.52	347.84	354.47	347.19	350.13	344.24	340.73

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	57.12	0.48	0.83	45.64	0.15	0.34	45.83	0.14	0.30
d50	160.52	0.85	0.53	148.09	0.77	0.52	141.21	0.77	0.55
d90	383.75	11.22	2.92	349.83	4.03	1.15	345.03	4.75	1.38

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	2.26	1.72	1.73	2.70	2.54	2.28	0.62	1.60	1.57
500	6.48	6.36	6.06	7.99	7.77	7.46	4.52	5.38	5.45
353.6	12.02	12.05	11.84	13.93	14.03	13.64	10.35	10.51	10.65
250	16.26	16.16	16.29	17.49	17.71	17.50	15.55	15.10	15.32
176.8	16.96	16.84	17.10	16.70	16.79	16.86	17.36	16.77	16.97
125	14.04	14.08	14.19	12.52	12.47	12.68	15.18	14.76	14.77
88.39	9.47	9.65	9.61	7.79	7.73	7.90	10.74	10.55	10.37
62.5	5.41	5.58	5.52	4.40	4.38	4.47	6.33	6.26	6.06
44.19	2.96	3.02	2.99	2.60	2.59	2.64	3.35	3.30	3.20
31.25	2.05	2.04	2.02	1.95	1.92	1.96	2.09	2.03	1.99
22.097	1.98	1.97	1.95	1.89	1.85	1.90	1.98	1.91	1.87
15.625	2.04	2.08	2.07	1.96	1.95	2.02	2.19	2.14	2.10
11.049	1.90	1.97	1.99	1.87	1.90	1.98	2.20	2.17	2.14
7.813	1.60	1.68	1.72	1.63	1.67	1.75	1.94	1.94	1.94
5.524	1.30	1.37	1.40	1.33	1.36	1.44	1.60	1.60	1.61
3.906	1.03	1.08	1.11	1.04	1.07	1.13	1.26	1.26	1.27
2.762	0.79	0.83	0.85	0.79	0.81	0.85	0.96	0.96	0.96
1.953	0.63	0.67	0.68	0.63	0.64	0.68	0.78	0.77	0.78
1.381	0.58	0.61	0.62	0.56	0.58	0.61	0.71	0.71	0.71
0.977	0.24	0.25	0.26	0.23	0.24	0.25	0.29	0.29	0.29
0.691	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	21.68	20.21	19.72	21.94	21.26	19.57	16.28	16.40	16.40
d50	191.77	188.56	188.00	212.26	212.19	207.28	170.46	174.14	176.57
d90	482.11	473.12	468.75	515.26	506.99	496.69	424.94	452.61	453.70

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	20.53	1.02	4.97	20.93	1.22	5.84	16.36	0.07	0.43
d50	189.44	2.03	1.07	210.57	2.86	1.36	173.73	3.08	1.77
d90	474.66	6.81	1.44	506.31	9.30	1.84	443.75	16.30	3.67

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

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	1.27	1.24	1.15	1.22	0.79	0.94	0.43	0.43	0.55
500	3.81	3.98	3.88	3.54	3.33	3.50	3.14	3.10	3.19
353.6	8.34	8.66	8.50	8.08	8.01	8.10	8.06	8.00	7.97
250	13.69	13.81	13.77	13.45	13.57	13.62	13.68	13.65	13.48
176.8	17.22	17.01	17.16	17.06	17.32	17.37	17.26	17.28	17.08
125	16.95	16.65	16.85	17.07	17.30	17.29	17.07	17.09	17.01
88.39	13.43	13.27	13.38	13.81	13.90	13.80	13.71	13.69	13.78
62.5	8.86	8.85	8.85	9.24	9.22	9.09	9.21	9.18	9.32
44.19	5.06	5.11	5.07	5.25	5.23	5.13	5.34	5.34	5.41
31.25	2.68	2.70	2.68	2.69	2.70	2.65	2.82	2.85	2.85
22.097	1.50	1.49	1.50	1.46	1.47	1.46	1.56	1.59	1.57
15.625	1.02	1.02	1.03	1.01	1.01	1.01	1.07	1.08	1.08
11.049	0.86	0.87	0.87	0.86	0.86	0.85	0.91	0.92	0.92
7.813	0.81	0.82	0.82	0.81	0.81	0.80	0.86	0.87	0.87
5.524	0.83	0.83	0.83	0.81	0.82	0.80	0.87	0.88	0.88
3.906	0.85	0.85	0.85	0.83	0.83	0.82	0.89	0.90	0.90
2.762	0.80	0.80	0.80	0.79	0.79	0.78	0.85	0.86	0.86
1.953	0.68	0.68	0.68	0.67	0.68	0.66	0.73	0.73	0.73
1.381	0.52	0.52	0.52	0.53	0.53	0.52	0.57	0.57	0.57
0.977	0.40	0.40	0.40	0.40	0.40	0.40	0.44	0.44	0.44
0.691	0.30	0.30	0.30	0.30	0.31	0.30	0.33	0.34	0.34
0.488	0.12	0.12	0.12	0.13	0.12	0.12	0.21	0.21	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	36.99	36.87	36.96	37.45	37.20	37.96	34.15	33.62	33.77
d50	157.42	158.34	157.76	154.45	153.70	155.26	152.04	151.68	151.03
d90	407.46	412.96	408.32	399.37	387.67	394.08	379.33	377.75	380.93

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	36.94	0.06	0.16	37.54	0.39	1.03	33.84	0.27	0.80
d50	157.84	0.46	0.29	154.47	0.78	0.50	151.58	0.51	0.34
d90	409.58	2.96	0.72	393.71	5.86	1.49	379.34	1.59	0.42

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

PSA_2815a 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	0.92	0.92	0.92	0.87	0.87	0.87	1.20	1.20	1.20
500	9.98	9.98	9.98	9.66	9.66	9.66	12.16	12.16	12.16
353.6	13.32	13.32	13.32	13.27	13.27	13.27	14.50	14.50	14.50
250	9.41	9.41	9.41	9.49	9.49	9.49	8.16	8.16	8.16
176.8	13.44	13.44	13.44	13.33	13.33	13.33	12.42	12.42	12.42
125	11.01	11.01	11.01	10.96	10.96	10.96	10.36	10.36	10.36
88.39	12.10	12.10	12.10	12.10	12.10	12.10	11.29	11.29	11.29
62.5	8.45	8.45	8.45	8.54	8.54	8.54	8.09	8.09	8.09
44.19	5.55	5.55	5.55	5.73	5.73	5.73	5.44	5.44	5.44
31.25	3.72	3.72	3.72	3.88	3.88	3.88	3.45	3.45	3.45
22.097	2.21	2.21	2.21	2.29	2.29	2.29	1.93	1.93	1.93
15.625	1.21	1.21	1.21	1.21	1.21	1.21	1.20	1.20	1.20
11.049	0.59	0.59	0.59	0.57	0.57	0.57	0.72	0.72	0.72
7.813	0.66	0.66	0.66	0.65	0.65	0.65	0.82	0.82	0.82
5.524	0.63	0.63	0.63	0.64	0.64	0.64	0.73	0.73	0.73
3.906	0.73	0.73	0.73	0.74	0.74	0.74	0.80	0.80	0.80
2.762	0.87	0.87	0.87	0.88	0.88	0.88	0.95	0.95	0.95
1.953	0.89	0.89	0.89	0.90	0.90	0.90	0.99	0.99	0.99
1.381	0.75	0.75	0.75	0.76	0.76	0.76	0.85	0.85	0.85
0.977	0.56	0.56	0.56	0.57	0.57	0.57	0.63	0.63	0.63
0.691	0.32	0.32	0.32	0.33	0.33	0.33	0.37	0.37	0.37
0.488	0.40	0.40	0.40	0.40	0.40	0.40	0.44	0.44	0.44
0.345	0.44	0.44	0.44	0.44	0.44	0.44	0.49	0.49	0.49
0.244	0.52	0.52	0.52	0.52	0.52	0.52	0.58	0.58	0.58
0.173	0.56	0.56	0.56	0.56	0.56	0.56	0.62	0.62	0.62
0.122	0.47	0.47	0.47	0.47	0.47	0.47	0.52	0.52	0.52
0.086	0.26	0.26	0.26	0.26	0.26	0.26	0.29	0.29	0.29
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	22.50	22.50	22.50	22.49	22.49	22.49	16.55	16.55	16.55
d50	161.27	161.27	161.27	158.86	158.86	158.86	167.80	167.80	167.80
d90	515.84	515.84	515.84	509.53	509.53	509.53	550.16	550.16	550.16

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	22.50	0.00	0.00	22.49	0.00	0.00	16.55	0.00	0.00
d50	161.27	0.00	0.00	158.86	0.00	0.00	167.80	0.00	0.00
d90	515.84	0.00	0.00	509.53	0.00	0.00	550.16	0.00	0.00

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

PSA_2815b 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	0.01	0.01	0.01	0.03	0.03	0.03	0.04	0.04	0.04
500	3.15	3.15	3.15	3.55	3.55	3.55	3.68	3.68	3.68
353.6	11.57	11.57	11.57	12.52	12.52	12.52	12.70	12.70	12.70
250	15.57	15.57	15.57	15.79	15.79	15.79	15.65	15.65	15.65
176.8	15.04	15.04	15.04	14.51	14.51	14.51	14.25	14.25	14.25
125	10.43	10.43	10.43	10.04	10.04	10.04	9.93	9.93	9.93
88.39	12.17	12.17	12.17	11.88	11.88	11.88	11.83	11.83	11.83
62.5	9.43	9.43	9.43	9.23	9.23	9.23	9.19	9.19	9.19
44.19	6.37	6.37	6.37	6.13	6.13	6.13	6.06	6.06	6.06
31.25	3.95	3.95	3.95	3.73	3.73	3.73	3.66	3.66	3.66
22.097	2.23	2.23	2.23	2.11	2.11	2.11	2.07	2.07	2.07
15.625	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
11.049	0.67	0.67	0.67	0.71	0.71	0.71	0.73	0.73	0.73
7.813	0.77	0.77	0.77	0.84	0.84	0.84	0.87	0.87	0.87
5.524	0.79	0.79	0.79	0.84	0.84	0.84	0.88	0.88	0.88
3.906	0.89	0.89	0.89	0.92	0.92	0.92	0.95	0.95	0.95
2.762	0.95	0.95	0.95	0.97	0.97	0.97	1.01	1.01	1.01
1.953	0.94	0.94	0.94	0.95	0.95	0.95	0.99	0.99	0.99
1.381	0.84	0.84	0.84	0.86	0.86	0.86	0.91	0.91	0.91
0.977	0.71	0.71	0.71	0.74	0.74	0.74	0.79	0.79	0.79
0.691	0.45	0.45	0.45	0.48	0.48	0.48	0.51	0.51	0.51
0.488	0.52	0.52	0.52	0.55	0.55	0.55	0.59	0.59	0.59
0.345	0.43	0.43	0.43	0.46	0.46	0.46	0.50	0.50	0.50
0.244	0.35	0.35	0.35	0.37	0.37	0.37	0.41	0.41	0.41
0.173	0.26	0.26	0.26	0.28	0.28	0.28	0.30	0.30	0.30
0.122	0.16	0.16	0.16	0.16	0.16	0.16	0.18	0.18	0.18
0.086	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
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	21.62	21.62	21.62	19.47	19.47	19.47	17.11	17.11	17.11
d50	151.43	151.43	151.43	156.15	156.15	156.15	155.42	155.42	155.42
d90	407.38	407.38	407.38	418.57	418.57	418.57	421.24	421.24	421.24

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	21.62	0.00	0.00	19.47	0.00	0.00	17.11	0.00	0.00
d50	151.43	0.00	0.00	156.15	0.00	0.00	155.42	0.00	0.00
d90	407.38	0.00	0.00	418.57	0.00	0.00	421.24	0.00	0.00

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

PSA_2818_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	0.00	0.04	0.04	0.29	0.10	0.22	0.07	0.07	0.00
500	1.11	1.16	1.22	1.91	1.60	1.85	1.40	1.47	1.30
353.6	5.05	4.99	5.09	5.29	5.17	5.43	5.19	5.28	5.18
250	11.21	11.14	11.19	10.75	10.86	10.95	11.17	11.18	11.18
176.8	16.17	16.18	16.17	15.66	15.84	15.72	16.12	16.05	16.12
125	17.96	17.99	17.97	17.71	17.86	17.64	17.89	17.83	17.90
88.39	15.54	15.55	15.54	15.46	15.56	15.39	15.42	15.40	15.45
62.5	11.02	11.04	11.01	10.96	11.02	10.96	10.89	10.89	10.95
44.19	6.62	6.64	6.61	6.56	6.60	6.60	6.53	6.53	6.57
31.25	3.48	3.49	3.48	3.45	3.48	3.47	3.44	3.44	3.47
22.097	1.89	1.89	1.88	1.88	1.90	1.88	1.88	1.88	1.89
15.625	1.34	1.33	1.33	1.34	1.34	1.32	1.34	1.34	1.35
11.049	1.17	1.17	1.16	1.17	1.17	1.16	1.19	1.19	1.19
7.813	1.11	1.11	1.09	1.12	1.11	1.10	1.13	1.13	1.13
5.524	1.18	1.17	1.15	1.20	1.18	1.16	1.18	1.18	1.18
3.906	1.21	1.20	1.18	1.24	1.22	1.20	1.21	1.20	1.20
2.762	1.17	1.16	1.15	1.20	1.18	1.16	1.17	1.16	1.16
1.953	0.96	0.95	0.94	0.98	0.97	0.96	0.96	0.96	0.96
1.381	0.64	0.64	0.64	0.66	0.65	0.65	0.64	0.65	0.65
0.977	0.51	0.51	0.51	0.51	0.52	0.51	0.51	0.51	0.51
0.691	0.52	0.52	0.52	0.52	0.53	0.52	0.52	0.53	0.53
0.488	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.15
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	22.30	22.51	22.89	21.64	22.04	22.59	22.13	22.11	22.06
d50	128.67	128.65	129.11	129.00	128.52	129.54	129.55	129.63	129.12
d90	314.00	314.05	315.78	326.10	319.97	326.70	318.79	320.37	317.00

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	22.57	0.30	1.32	22.09	0.47	2.14	22.10	0.04	0.17
d50	128.81	0.26	0.20	129.02	0.51	0.40	129.43	0.27	0.21
d90	314.61	1.01	0.32	324.26	3.72	1.15	318.72	1.69	0.53

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

PSA_2829 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	1.97	-	-	-	-	-	-	-	-
500	6.87	-	-	-	-	-	-	-	-
353.6	12.12	-	-	-	-	-	-	-	-
250	16.13	-	-	-	-	-	-	-	-
176.8	16.77	-	-	-	-	-	-	-	-
125	13.96	-	-	-	-	-	-	-	-
88.39	9.57	-	-	-	-	-	-	-	-
62.5	5.64	-	-	-	-	-	-	-	-
44.19	3.19	-	-	-	-	-	-	-	-
31.25	2.16	-	-	-	-	-	-	-	-
22.097	1.90	-	-	-	-	-	-	-	-
15.625	1.81	-	-	-	-	-	-	-	-
11.049	1.67	-	-	-	-	-	-	-	-
7.813	1.49	-	-	-	-	-	-	-	-
5.524	1.30	-	-	-	-	-	-	-	-
3.906	1.10	-	-	-	-	-	-	-	-
2.762	0.85	-	-	-	-	-	-	-	-
1.953	0.61	-	-	-	-	-	-	-	-
1.381	0.44	-	-	-	-	-	-	-	-
0.977	0.32	-	-	-	-	-	-	-	-
0.691	0.12	-	-	-	-	-	-	-	-
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	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	23.27	-	-	-	-	-	-	-	-
d50	191.52	-	-	-	-	-	-	-	-
d90	483.79	-	-	-	-	-	-	-	-

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	23.27	-	-	-	-	-	-	-	-
d50	191.52	-	-	-	-	-	-	-	-
d90	483.79	-	-	-	-	-	-	-	-

APPENDIX 3. Participant laser replicate data for sediment distributed as PS82.

PSA_2835 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	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06	0.00
500	0.87	0.59	0.29	0.38	0.11	0.12	1.35	1.07	0.88
353.6	3.98	3.73	3.47	3.66	2.91	2.92	4.21	3.85	3.98
250	8.98	8.89	8.92	8.71	8.45	8.34	8.86	8.80	9.11
176.8	12.75	12.86	13.08	12.42	12.75	12.59	12.50	12.84	12.98
125	16.93	17.12	17.29	16.65	17.14	17.02	16.62	17.12	17.05
88.39	14.91	15.00	15.01	14.95	15.15	15.14	14.62	14.85	14.73
62.5	12.85	12.87	12.84	13.16	13.19	13.23	12.64	12.63	12.55
44.19	7.47	7.48	7.48	7.80	7.80	7.86	7.43	7.35	7.32
31.25	4.59	4.63	4.66	4.85	4.89	4.95	4.66	4.62	4.59
22.097	2.51	2.54	2.57	2.63	2.67	2.71	2.58	2.57	2.56
15.625	1.95	1.97	1.99	1.99	2.01	2.05	1.97	1.96	1.96
11.049	1.90	1.92	1.93	1.91	1.92	1.95	1.91	1.88	1.89
7.813	2.10	2.11	2.12	2.09	2.11	2.13	2.10	2.07	2.07
5.524	2.36	2.38	2.39	2.37	2.39	2.42	2.38	2.35	2.34
3.906	2.40	2.42	2.44	2.46	2.48	2.51	2.43	2.40	2.40
2.762	1.91	1.94	1.95	2.06	2.08	2.10	1.96	1.95	1.95
1.953	1.10	1.12	1.13	1.30	1.31	1.33	1.17	1.16	1.17
1.381	0.42	0.43	0.44	0.58	0.59	0.60	0.46	0.46	0.47
0.977	0.00	0.00	0.00	0.04	0.05	0.05	0.00	0.00	0.00
0.691	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	10.51	10.34	10.23	9.53	9.38	9.19	10.17	10.33	10.34
d50	107.51	106.78	106.47	103.43	102.58	101.70	107.62	108.01	108.56
d90	289.88	283.23	277.49	278.96	265.56	264.76	298.96	290.19	290.82

	Subsample 1			Subsample 2			Subsample 3		
	Mean	StDev	COV	Mean	StDev	COV	Mean	StDev	COV
d10	10.36	0.14	1.38	9.37	0.17	1.83	10.28	0.09	0.91
d50	106.92	0.53	0.50	102.57	0.86	0.84	108.06	0.47	0.43
d90	283.53	6.20	2.19	269.76	7.98	2.96	293.32	4.89	1.67

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
LabCode:	PSA_2801
Sample Code:	PS822801

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)	0.00	
0.50 to 1.00; (500 µm)	2.78	
1.00 to 1.50; (353.6 µm)	8.93	
1.50 to 2.00; (250 µm)	14.25	
2.00 to 2.50; (176.8 µm)	17.02	
2.50 to 3.00; (125 µm)	16.44	
3.00 to 3.50; (88.39 µm)	13.26	
3.50 to 4.00; (62.5 µm)	9.17	
4.00 to 4.50; (44.19 µm)	5.60	
4.50 to 5.00; (31.25 µm)	3.23	
5.00 to 5.50; (22.097 µm)	1.99	
5.50 to 6.00; (15.625 µm)	1.43	
6.00 to 6.50; (11.049 µm)	1.15	
6.50 to 7.00; (7.813 µm)	0.97	
7.00 to 7.50; (5.524 µm)	0.84	
7.50 to 8.00; (3.906 µm)	0.73	
8.00 to 8.50; (2.762 µm)	0.63	
8.50 to 9.00; (1.953 µm)	0.50	
9.00 to 9.50; (1.381 µm)	0.38	
9.50 to 10.00; (0.977 µm)	0.30	
10.00 to 10.50; (0.691 µm)	0.26	
10.50 to 11.00; (0.488 µm)	0.14	
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)		
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:
0.19g of 1mm material in PS82 sample has been regarded as insignificant and results reported as laser only.

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
LabCode:	PSA_2802
Sample Code:	PS822802

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.05	0.07
-1.00 to -0.50; 1.4 mm	0.04	0.06
-0.50 to 0.00; 1 mm	0.08	0.11
0.00 to 0.50; (707 µm)	1.60	2.29
0.50 to 1.00; (500 µm)	3.73	5.33
1.00 to 1.50; (353.6 µm)	7.32	10.46
1.50 to 2.00; (250 µm)	12.91	18.46
2.00 to 2.50; (176.8 µm)	18.16	25.97
2.50 to 3.00; (125 µm)	17.03	24.36
3.00 to 3.50; (88.39 µm)	12.69	18.14
3.50 to 4.00; (62.5 µm)	8.64	12.36
4.00 to 4.50; (44.19 µm)	4.98	7.12
4.50 to 5.00; (31.25 µm)	2.47	3.54
5.00 to 5.50; (22.097 µm)	1.47	2.10
5.50 to 6.00; (15.625 µm)	0.91	1.31
6.00 to 6.50; (11.049 µm)	0.79	1.13
6.50 to 7.00; (7.813 µm)	0.87	1.24
7.00 to 7.50; (5.524 µm)	0.90	1.29
7.50 to 8.00; (3.906 µm)	0.87	1.24
8.00 to 8.50; (2.762 µm)	0.80	1.14
8.50 to 9.00; (1.953 µm)	0.72	1.02
9.00 to 9.50; (1.381 µm)	0.63	0.90
9.50 to 10.00; (0.977 µm)	0.54	0.77
10.00 to 10.50; (0.691 µm)	0.44	0.64
10.50 to 11.00; (0.488 µm)	0.37	0.53
11.00 to 11.50; (0.345 µm)	0.30	0.43
11.50 to 12.00; (0.244 µm)	0.24	0.35
12.00 to 12.50; (0.173 µm)	0.19	0.27
12.50 to 13.00; (0.122 µm)	0.14	0.20
13.00 to 13.50; (0.086 µm)	0.09	0.13
13.50 to 14.00; (0.061µm)	0.04	0.05
14.00 to 14.50; (0.043µm)	0.00	0.01
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	143.00

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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2803
Sample Code:	PS822803

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)	0.01	
0.50 to 1.00; (500 µm)	1.27	
1.00 to 1.50; (353.6 µm)	5.56	
1.50 to 2.00; (250 µm)	9.94	
2.00 to 2.50; (176.8 µm)	16.82	
2.50 to 3.00; (125 µm)	17.96	
3.00 to 3.50; (88.39 µm)	14.52	
3.50 to 4.00; (62.5 µm)	10.73	
4.00 to 4.50; (44.19 µm)	6.37	
4.50 to 5.00; (31.25 µm)	3.49	
5.00 to 5.50; (22.097 µm)	2.05	
5.50 to 6.00; (15.625 µm)	1.21	
6.00 to 6.50; (11.049 µm)	1.07	
6.50 to 7.00; (7.813 µm)	1.10	
7.00 to 7.50; (5.524 µm)	1.12	
7.50 to 8.00; (3.906 µm)	1.07	
8.00 to 8.50; (2.762 µm)	0.97	
8.50 to 9.00; (1.953 µm)	0.86	
9.00 to 9.50; (1.381 µm)	0.76	
9.50 to 10.00; (0.977 µm)	0.68	
10.00 to 10.50; (0.691 µm)	0.58	
10.50 to 11.00; (0.488 µm)	0.50	
11.00 to 11.50; (0.345 µm)	0.41	
11.50 to 12.00; (0.244 µm)	0.33	
12.00 to 12.50; (0.173 µm)	0.25	
12.50 to 13.00; (0.122 µm)	0.19	
13.00 to 13.50; (0.086 µm)	0.12	
13.50 to 14.00; (0.061µm)	0.05	
14.00 to 14.50; (0.043µm)	0.01	
> 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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2804
Sample Code:	PS822804

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.05	0.06
-1.00 to -0.50; 1.4 mm	0.05	0.06
-0.50 to 0.00; 1 mm	0.06	0.07
0.00 to 0.50; (707 µm)	0.14	0.17
0.50 to 1.00; (500 µm)	3.22	3.92
1.00 to 1.50; (353.6 µm)	9.06	11.03
1.50 to 2.00; (250 µm)	15.73	19.14
2.00 to 2.50; (176.8 µm)	19.75	24.04
2.50 to 3.00; (125 µm)	18.63	22.68
3.00 to 3.50; (88.39 µm)	13.56	16.51
3.50 to 4.00; (62.5 µm)	7.78	9.47
4.00 to 4.50; (44.19 µm)	3.68	4.47
4.50 to 5.00; (31.25 µm)	1.64	2.00
5.00 to 5.50; (22.097 µm)	0.91	1.11
5.50 to 6.00; (15.625 µm)	0.69	0.84
6.00 to 6.50; (11.049 µm)	0.63	0.77
6.50 to 7.00; (7.813 µm)	0.67	0.82
7.00 to 7.50; (5.524 µm)	0.76	0.92
7.50 to 8.00; (3.906 µm)	0.80	0.97
8.00 to 8.50; (2.762 µm)	0.73	0.89
8.50 to 9.00; (1.953 µm)	0.59	0.72
9.00 to 9.50; (1.381 µm)	0.42	0.51
9.50 to 10.00; (0.977 µm)	0.27	0.33
10.00 to 10.50; (0.691 µm)	0.15	0.18
10.50 to 11.00; (0.488 µm)	0.04	0.04
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	121.73

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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2805
Sample Code:	PS822805

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 the 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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2806
Sample Code:	PS822806

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	0.01	
-1.00 to -0.50; 1.4 mm	0.01	
-0.50 to 0.00; 1 mm	0.05	
0.00 to 0.50; (707 µm)	0.00	
0.50 to 1.00; (500 µm)	1.65	
1.00 to 1.50; (353.6 µm)	6.36	
1.50 to 2.00; (250 µm)	11.10	
2.00 to 2.50; (176.8 µm)	15.08	
2.50 to 3.00; (125 µm)	16.62	
3.00 to 3.50; (88.39 µm)	14.95	
3.50 to 4.00; (62.5 µm)	10.93	
4.00 to 4.50; (44.19 µm)	6.49	
4.50 to 5.00; (31.25 µm)	3.31	
5.00 to 5.50; (22.097 µm)	1.80	
5.50 to 6.00; (15.625 µm)	1.34	
6.00 to 6.50; (11.049 µm)	1.26	
6.50 to 7.00; (7.813 µm)	1.25	
7.00 to 7.50; (5.524 µm)	1.28	
7.50 to 8.00; (3.906 µm)	1.36	
8.00 to 8.50; (2.762 µm)	1.38	
8.50 to 9.00; (1.953 µm)	1.25	
9.00 to 9.50; (1.381 µm)	0.99	
9.50 to 10.00; (0.977 µm)	0.71	
10.00 to 10.50; (0.691 µm)	0.50	
10.50 to 11.00; (0.488 µm)	0.30	
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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2807
Sample Code:	PS822807

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	0.04	
-1.00 to -0.50; 1.4 mm	0.05	
-0.50 to 0.00; 1 mm	0.04	
0.00 to 0.50; (707 µm)	0.19	
0.50 to 1.00; (500 µm)	1.72	
1.00 to 1.50; (353.6 µm)	5.39	
1.50 to 2.00; (250 µm)	11.11	
2.00 to 2.50; (176.8 µm)	15.92	
2.50 to 3.00; (125 µm)	17.85	
3.00 to 3.50; (88.39 µm)	15.60	
3.50 to 4.00; (62.5 µm)	11.00	
4.00 to 4.50; (44.19 µm)	6.40	
4.50 to 5.00; (31.25 µm)	3.22	
5.00 to 5.50; (22.097 µm)	1.72	
5.50 to 6.00; (15.625 µm)	1.22	
6.00 to 6.50; (11.049 µm)	1.05	
6.50 to 7.00; (7.813 µm)	1.08	
7.00 to 7.50; (5.524 µm)	1.13	
7.50 to 8.00; (3.906 µm)	1.15	
8.00 to 8.50; (2.762 µm)	1.20	
8.50 to 9.00; (1.953 µm)	0.93	
9.00 to 9.50; (1.381 µm)	0.70	
9.50 to 10.00; (0.977 µm)	0.58	
10.00 to 10.50; (0.691 µm)	0.72	
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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2808
Sample Code:	PS822808

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.01	0.01
-1.00 to -0.50; 1.4 mm	0.02	0.03
-0.50 to 0.00; 1 mm	0.04	0.06
0.00 to 0.50; (707 µm)	0.58	0.87
0.50 to 1.00; (500 µm)	2.54	3.81
1.00 to 1.50; (353.6 µm)	5.96	8.94
1.50 to 2.00; (250 µm)	10.09	15.13
2.00 to 2.50; (176.8 µm)	15.55	23.32
2.50 to 3.00; (125 µm)	17.10	25.64
3.00 to 3.50; (88.39 µm)	13.87	20.80
3.50 to 4.00; (62.5 µm)	9.95	14.92
4.00 to 4.50; (44.19 µm)	6.24	9.36
4.50 to 5.00; (31.25 µm)	3.36	5.03
5.00 to 5.50; (22.097 µm)	2.01	3.01
5.50 to 6.00; (15.625 µm)	1.47	2.21
6.00 to 6.50; (11.049 µm)	1.28	1.92
6.50 to 7.00; (7.813 µm)	1.20	1.79
7.00 to 7.50; (5.524 µm)	1.18	1.76
7.50 to 8.00; (3.906 µm)	1.15	1.72
8.00 to 8.50; (2.762 µm)	1.07	1.61
8.50 to 9.00; (1.953 µm)	0.98	1.47
9.00 to 9.50; (1.381 µm)	0.89	1.33
9.50 to 10.00; (0.977 µm)	0.78	1.17
10.00 to 10.50; (0.691 µm)	0.66	0.99
10.50 to 11.00; (0.488 µm)	0.55	0.82
11.00 to 11.50; (0.345 µm)	0.45	0.68
11.50 to 12.00; (0.244 µm)	0.36	0.55
12.00 to 12.50; (0.173 µm)	0.28	0.42
12.50 to 13.00; (0.122 µm)	0.21	0.31
13.00 to 13.50; (0.086 µm)	0.13	0.20
13.50 to 14.00; (0.061µm)	0.05	0.08
14.00 to 14.50; (0.043µm)	0.01	0.01
> 14.50; (0.01 µm)	0.00	0.00
TOTAL	100.00	149.98

Notes:
A few grains were retained on the 1 mm sieve during laser analysis of PS82, and the full laser size distribution (to 2 mm) displayed a small volume above 1 mm. Therefore the sample was additionally wet separated at 1 mm. The sample contained a number of particles >2mm, and hence the sample is strictly classified as "slightly gravelly muddy sand" according to Folk (1954) who specified that a 'trace' of gravel was sufficient to classify it as "slightly gravelly".

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
LabCode:	PSA_2809_v2
Sample Code:	PS82809_v2

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)	0.00	0.00
0.50 to 1.00; (500 µm)	1.50	2.42
1.00 to 1.50; (353.6 µm)	5.09	8.21
1.50 to 2.00; (250 µm)	10.18	16.43
2.00 to 2.50; (176.8 µm)	13.93	22.48
2.50 to 3.00; (125 µm)	17.71	28.58
3.00 to 3.50; (88.39 µm)	14.60	23.57
3.50 to 4.00; (62.5 µm)	11.85	19.12
4.00 to 4.50; (44.19 µm)	7.30	11.78
4.50 to 5.00; (31.25 µm)	3.68	5.94
5.00 to 5.50; (22.097 µm)	2.17	3.50
5.50 to 6.00; (15.625 µm)	1.43	2.30
6.00 to 6.50; (11.049 µm)	1.30	2.09
6.50 to 7.00; (7.813 µm)	1.26	2.03
7.00 to 7.50; (5.524 µm)	1.31	2.11
7.50 to 8.00; (3.906 µm)	1.32	2.14
8.00 to 8.50; (2.762 µm)	1.25	2.01
8.50 to 9.00; (1.953 µm)	1.13	1.82
9.00 to 9.50; (1.381 µm)	0.97	1.56
9.50 to 10.00; (0.977 µm)	0.75	1.20
10.00 to 10.50; (0.691 µm)	0.70	1.13
10.50 to 11.00; (0.488 µm)	0.47	0.77
11.00 to 11.50; (0.345 µm)	0.13	0.21
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	161.40

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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2810
Sample Code:	PS822810

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 the 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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2811
Sample Code:	PS822811

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)	0.17	0.00
0.50 to 1.00; (500 µm)	1.70	0.02
1.00 to 1.50; (353.6 µm)	5.58	0.06
1.50 to 2.00; (250 µm)	11.47	0.12
2.00 to 2.50; (176.8 µm)	16.65	0.17
2.50 to 3.00; (125 µm)	18.43	0.18
3.00 to 3.50; (88.39 µm)	15.67	0.16
3.50 to 4.00; (62.5 µm)	10.56	0.11
4.00 to 4.50; (44.19 µm)	6.00	0.06
4.50 to 5.00; (31.25 µm)	3.09	0.03
5.00 to 5.50; (22.097 µm)	1.70	0.02
5.50 to 6.00; (15.625 µm)	1.20	0.01
6.00 to 6.50; (11.049 µm)	1.04	0.01
6.50 to 7.00; (7.813 µm)	1.01	0.01
7.00 to 7.50; (5.524 µm)	1.04	0.01
7.50 to 8.00; (3.906 µm)	1.05	0.01
8.00 to 8.50; (2.762 µm)	1.03	0.01
8.50 to 9.00; (1.953 µm)	0.85	0.01
9.00 to 9.50; (1.381 µm)	0.56	0.01
9.50 to 10.00; (0.977 µm)	0.49	0.00
10.00 to 10.50; (0.691 µm)	0.56	0.01
10.50 to 11.00; (0.488 µm)	0.15	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)		
TOTAL	100.00	1.00

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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2812
Sample Code:	PS822812

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	0.03	0.03
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.05	0.05
-0.50 to 0.00; 1 mm	0.07	0.08
0.00 to 0.50; (707 µm)	0.33	0.36
0.50 to 1.00; (500 µm)	2.63	2.91
1.00 to 1.50; (353.6 µm)	7.22	7.98
1.50 to 2.00; (250 µm)	13.17	14.54
2.00 to 2.50; (176.8 µm)	17.74	19.60
2.50 to 3.00; (125 µm)	18.55	20.49
3.00 to 3.50; (88.39 µm)	15.51	17.13
3.50 to 4.00; (62.5 µm)	10.53	11.64
4.00 to 4.50; (44.19 µm)	5.80	6.41
4.50 to 5.00; (31.25 µm)	2.59	2.86
5.00 to 5.50; (22.097 µm)	1.05	1.17
5.50 to 6.00; (15.625 µm)	0.61	0.67
6.00 to 6.50; (11.049 µm)	0.57	0.63
6.50 to 7.00; (7.813 µm)	0.61	0.67
7.00 to 7.50; (5.524 µm)	0.61	0.68
7.50 to 8.00; (3.906 µm)	0.59	0.65
8.00 to 8.50; (2.762 µm)	0.53	0.59
8.50 to 9.00; (1.953 µm)	0.44	0.49
9.00 to 9.50; (1.381 µm)	0.34	0.38
9.50 to 10.00; (0.977 µm)	0.25	0.27
10.00 to 10.50; (0.691 µm)	0.16	0.18
10.50 to 11.00; (0.488 µm)	0.01	0.01
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	110.46

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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2813
Sample Code:	PS822813

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	0.04	
-0.50 to 0.00; 1 mm	0.11	
0.00 to 0.50; (707 µm)	1.89	
0.50 to 1.00; (500 µm)	6.38	
1.00 to 1.50; (353.6 µm)	12.10	
1.50 to 2.00; (250 µm)	16.35	
2.00 to 2.50; (176.8 µm)	16.90	
2.50 to 3.00; (125 µm)	13.84	
3.00 to 3.50; (88.39 µm)	9.30	
3.50 to 4.00; (62.5 µm)	5.37	
4.00 to 4.50; (44.19 µm)	2.96	
4.50 to 5.00; (31.25 µm)	2.00	
5.00 to 5.50; (22.097 µm)	1.92	
5.50 to 6.00; (15.625 µm)	2.06	
6.00 to 6.50; (11.049 µm)	2.01	
6.50 to 7.00; (7.813 µm)	1.76	
7.00 to 7.50; (5.524 µm)	1.44	
7.50 to 8.00; (3.906 µm)	1.14	
8.00 to 8.50; (2.762 µm)	0.86	
8.50 to 9.00; (1.953 µm)	0.70	
9.00 to 9.50; (1.381 µm)	0.63	
9.50 to 10.00; (0.977 µm)	0.26	
10.00 to 10.50; (0.691 µm)	0.00	
10.50 to 11.00; (0.488 µm)	0.00	
11.00 to 11.50; (0.345 µm)	0.00	
11.50 to 12.00; (0.244 µm)	0.00	
12.00 to 12.50; (0.173 µm)	0.00	
12.50 to 13.00; (0.122 µm)	0.00	
13.00 to 13.50; (0.086 µm)	0.00	
13.50 to 14.00; (0.061µm)	0.00	
14.00 to 14.50; (0.043µm)	0.00	
> 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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2814
Sample Code:	PS822814

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.01	0.01
-1.00 to -0.50; 1.4 mm	0.06	0.09
-0.50 to 0.00; 1 mm	0.08	0.11
0.00 to 0.50; (707 µm)	0.90	1.32
0.50 to 1.00; (500 µm)	3.49	5.15
1.00 to 1.50; (353.6 µm)	8.18	12.08
1.50 to 2.00; (250 µm)	13.61	20.11
2.00 to 2.50; (176.8 µm)	17.17	25.37
2.50 to 3.00; (125 µm)	17.01	25.12
3.00 to 3.50; (88.39 µm)	13.62	20.12
3.50 to 4.00; (62.5 µm)	9.08	13.41
4.00 to 4.50; (44.19 µm)	5.21	7.69
4.50 to 5.00; (31.25 µm)	2.73	4.04
5.00 to 5.50; (22.097 µm)	1.51	2.23
5.50 to 6.00; (15.625 µm)	1.03	1.53
6.00 to 6.50; (11.049 µm)	0.88	1.29
6.50 to 7.00; (7.813 µm)	0.83	1.22
7.00 to 7.50; (5.524 µm)	0.84	1.24
7.50 to 8.00; (3.906 µm)	0.86	1.27
8.00 to 8.50; (2.762 µm)	0.81	1.20
8.50 to 9.00; (1.953 µm)	0.69	1.02
9.00 to 9.50; (1.381 µm)	0.54	0.80
9.50 to 10.00; (0.977 µm)	0.41	0.61
10.00 to 10.50; (0.691 µm)	0.31	0.46
10.50 to 11.00; (0.488 µm)	0.15	0.22
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	147.74

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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2815a
Sample Code:	PS82815a

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)	0.99	
0.50 to 1.00; (500 µm)	10.60	
1.00 to 1.50; (353.6 µm)	13.70	
1.50 to 2.00; (250 µm)	9.02	
2.00 to 2.50; (176.8 µm)	13.06	
2.50 to 3.00; (125 µm)	10.78	
3.00 to 3.50; (88.39 µm)	11.83	
3.50 to 4.00; (62.5 µm)	8.36	
4.00 to 4.50; (44.19 µm)	5.57	
4.50 to 5.00; (31.25 µm)	3.69	
5.00 to 5.50; (22.097 µm)	2.14	
5.50 to 6.00; (15.625 µm)	1.21	
6.00 to 6.50; (11.049 µm)	0.63	
6.50 to 7.00; (7.813 µm)	0.71	
7.00 to 7.50; (5.524 µm)	0.67	
7.50 to 8.00; (3.906 µm)	0.76	
8.00 to 8.50; (2.762 µm)	0.90	
8.50 to 9.00; (1.953 µm)	0.93	
9.00 to 9.50; (1.381 µm)	0.79	
9.50 to 10.00; (0.977 µm)	0.59	
10.00 to 10.50; (0.691 µm)	0.34	
10.50 to 11.00; (0.488 µm)	0.41	
11.00 to 11.50; (0.345 µm)	0.46	
11.50 to 12.00; (0.244 µm)	0.54	
12.00 to 12.50; (0.173 µm)	0.58	
12.50 to 13.00; (0.122 µm)	0.49	
13.00 to 13.50; (0.086 µm)	0.27	
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL	100.00	

Notes:
This has been evaluated using our normal Laser calculation settings set to "Broad" resolution

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
LabCode:	PSA_2815b
Sample Code:	PS82815b

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)	0.02	
0.50 to 1.00; (500 µm)	3.46	
1.00 to 1.50; (353.6 µm)	12.26	
1.50 to 2.00; (250 µm)	15.67	
2.00 to 2.50; (176.8 µm)	14.60	
2.50 to 3.00; (125 µm)	10.13	
3.00 to 3.50; (88.39 µm)	11.96	
3.50 to 4.00; (62.5 µm)	9.28	
4.00 to 4.50; (44.19 µm)	6.19	
4.50 to 5.00; (31.25 µm)	3.78	
5.00 to 5.50; (22.097 µm)	2.14	
5.50 to 6.00; (15.625 µm)	1.29	
6.00 to 6.50; (11.049 µm)	0.70	
6.50 to 7.00; (7.813 µm)	0.82	
7.00 to 7.50; (5.524 µm)	0.84	
7.50 to 8.00; (3.906 µm)	0.92	
8.00 to 8.50; (2.762 µm)	0.98	
8.50 to 9.00; (1.953 µm)	0.96	
9.00 to 9.50; (1.381 µm)	0.87	
9.50 to 10.00; (0.977 µm)	0.75	
10.00 to 10.50; (0.691 µm)	0.48	
10.50 to 11.00; (0.488 µm)	0.55	
11.00 to 11.50; (0.345 µm)	0.47	
11.50 to 12.00; (0.244 µm)	0.38	
12.00 to 12.50; (0.173 µm)	0.28	
12.50 to 13.00; (0.122 µm)	0.16	
13.00 to 13.50; (0.086 µm)	0.05	
13.50 to 14.00; (0.061µm)		
14.00 to 14.50; (0.043µm)		
> 14.50; (0.01 µm)		
TOTAL		

Notes:
This has been evaluated using a "Very Broad" Laser resoution calculation settings for PS82

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
LabCode:	PSA_2818_v2
Sample Code:	PS828_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	0.00	
-6.00 to -5.50; 45 mm	0.00	
-5.50 to -5.00; 31.5 mm	0.00	
-5.00 to -4.50; 22.4 mm	0.00	
-4.50 to -4.00; 16 mm	0.00	
-4.00 to -3.50; 11.2 mm	0.00	
-3.50 to -3.00; 8 mm	0.00	
-3.00 to -2.50; 5.6 mm	0.00	
-2.50 to -2.00; 4 mm	0.00	
-2.00 to -1.50; 2.8 mm	0.00	
-1.50 to -1.00; 2 mm	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	0.09	
0.50 to 1.00; (500 µm)	1.45	
1.00 to 1.50; (353.6 µm)	5.19	
1.50 to 2.00; (250 µm)	11.07	
2.00 to 2.50; (176.8 µm)	16.00	
2.50 to 3.00; (125 µm)	17.86	
3.00 to 3.50; (88.39 µm)	15.48	
3.50 to 4.00; (62.5 µm)	10.97	
4.00 to 4.50; (44.19 µm)	6.58	
4.50 to 5.00; (31.25 µm)	3.47	
5.00 to 5.50; (22.097 µm)	1.89	
5.50 to 6.00; (15.625 µm)	1.34	
6.00 to 6.50; (11.049 µm)	1.17	
6.50 to 7.00; (7.813 µm)	1.11	
7.00 to 7.50; (5.524 µm)	1.18	
7.50 to 8.00; (3.906 µm)	1.21	
8.00 to 8.50; (2.762 µm)	1.17	
8.50 to 9.00; (1.953 µm)	0.96	
9.00 to 9.50; (1.381 µm)	0.65	
9.50 to 10.00; (0.977 µm)	0.51	
10.00 to 10.50; (0.691 µm)	0.52	
10.50 to 11.00; (0.488 µm)	0.14	
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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2829
Sample Code:	PS822829

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	0.00	
-1.00 to -0.50; 1.4 mm	0.00	
-0.50 to 0.00; 1 mm	0.00	
0.00 to 0.50; (707 µm)	1.97	
0.50 to 1.00; (500 µm)	6.87	
1.00 to 1.50; (353.6 µm)	12.12	
1.50 to 2.00; (250 µm)	16.13	
2.00 to 2.50; (176.8 µm)	16.77	
2.50 to 3.00; (125 µm)	13.96	
3.00 to 3.50; (88.39 µm)	9.57	
3.50 to 4.00; (62.5 µm)	5.64	
4.00 to 4.50; (44.19 µm)	3.19	
4.50 to 5.00; (31.25 µm)	2.16	
5.00 to 5.50; (22.097 µm)	1.90	
5.50 to 6.00; (15.625 µm)	1.81	
6.00 to 6.50; (11.049 µm)	1.67	
6.50 to 7.00; (7.813 µm)	1.49	
7.00 to 7.50; (5.524 µm)	1.30	
7.50 to 8.00; (3.906 µm)	1.10	
8.00 to 8.50; (2.762 µm)	0.85	
8.50 to 9.00; (1.953 µm)	0.61	
9.00 to 9.50; (1.381 µm)	0.44	
9.50 to 10.00; (0.977 µm)	0.32	
10.00 to 10.50; (0.691 µm)	0.12	
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	
>14.5; (0.01)		
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 PS82.

Exercise Code:	PS82
LabCode:	PSA_2835
Sample Code:	PS822835

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material & leave blank for not analysed)	Grams (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.02	0.02
-1.00 to -0.50; 1.4 mm	0.05	0.05
-0.50 to 0.00; 1 mm	0.01	0.01
0.00 to 0.50; (707 µm)	0.02	0.03
0.50 to 1.00; (500 µm)	0.63	0.68
1.00 to 1.50; (353.6 µm)	3.63	3.93
1.50 to 2.00; (250 µm)	8.78	9.49
2.00 to 2.50; (176.8 µm)	12.74	13.77
2.50 to 3.00; (125 µm)	16.98	18.35
3.00 to 3.50; (88.39 µm)	14.92	16.13
3.50 to 4.00; (62.5 µm)	12.87	13.92
4.00 to 4.50; (44.19 µm)	7.55	8.16
4.50 to 5.00; (31.25 µm)	4.71	5.09
5.00 to 5.50; (22.097 µm)	2.59	2.80
5.50 to 6.00; (15.625 µm)	1.98	2.14
6.00 to 6.50; (11.049 µm)	1.91	2.06
6.50 to 7.00; (7.813 µm)	2.10	2.27
7.00 to 7.50; (5.524 µm)	2.37	2.57
7.50 to 8.00; (3.906 µm)	2.43	2.63
8.00 to 8.50; (2.762 µm)	1.99	2.15
8.50 to 9.00; (1.953 µm)	1.20	1.30
9.00 to 9.50; (1.381 µm)	0.49	0.53
9.50 to 10.00; (0.977 µm)	0.02	0.02
10.00 to 10.50; (0.691 µm)	0.00	0.00
10.50 to 11.00; (0.488 µm)	0.00	0.00
11.00 to 11.50; (0.345 µm)	0.00	0.00
11.50 to 12.00; (0.244 µm)	0.00	0.00
12.00 to 12.50; (0.173 µm)	0.00	0.00
12.50 to 13.00; (0.122 µm)	0.00	0.00
13.00 to 13.50; (0.086 µm)	0.00	0.00
13.50 to 14.00; (0.061µm)	0.00	0.00
14.00 to 14.50; (0.043µm)	0.00	0.00
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	108.09

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 PS82.

Exercise Code:	PS82
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
-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	0.03	0.04
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.03	0.04
-0.50 to 0.00; 1 mm	0.02	0.04
0.00 to 0.50; (707 µm)	0.84	1.29
0.50 to 1.00; (500 µm)	2.91	4.43
1.00 to 1.50; (353.6 µm)	6.46	9.84
1.50 to 2.00; (250 µm)	10.45	15.91
2.00 to 2.50; (176.8 µm)	15.23	23.20
2.50 to 3.00; (125 µm)	16.54	25.19
3.00 to 3.50; (88.39 µm)	13.83	21.06
3.50 to 4.00; (62.5 µm)	9.90	15.08
4.00 to 4.50; (44.19 µm)	6.02	9.17
4.50 to 5.00; (31.25 µm)	3.31	5.04
5.00 to 5.50; (22.097 µm)	1.98	3.01
5.50 to 6.00; (15.625 µm)	1.43	2.18
6.00 to 6.50; (11.049 µm)	1.25	1.90
6.50 to 7.00; (7.813 µm)	1.16	1.77
7.00 to 7.50; (5.524 µm)	1.13	1.73
7.50 to 8.00; (3.906 µm)	1.10	1.67
8.00 to 8.50; (2.762 µm)	1.03	1.56
8.50 to 9.00; (1.953 µm)	0.95	1.44
9.00 to 9.50; (1.381 µm)	0.87	1.32
9.50 to 10.00; (0.977 µm)	0.77	1.17
10.00 to 10.50; (0.691 µm)	0.66	1.01
10.50 to 11.00; (0.488 µm)	0.56	0.85
11.00 to 11.50; (0.345 µm)	0.46	0.70
11.50 to 12.00; (0.244 µm)	0.38	0.57
12.00 to 12.50; (0.173 µm)	0.29	0.44
12.50 to 13.00; (0.122 µm)	0.21	0.33
13.00 to 13.50; (0.086 µm)	0.14	0.21
13.50 to 14.00; (0.061µm)	0.06	0.08
14.00 to 14.50; (0.043µm)	0.01	0.01
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	152.28

Notes:

These samples contained muddy sand which required thorough mixing to achieve a homongenous paste. During several laser analysis reps it was evident that a few grains were being retained on the 1 mm sieve, and the full laser size distribution (to 2 mm) displayed a small volume above 1 mm. Therefore the samples were all additionally wet separated at 1 mm. Although small, all samples contained particles >1mm. Sample 2830 also contained some particles >2mm, and hence was strictly classified as "slightly gravelly muddy sand" according to Folk (1954) who specified that a 'trace' of gravel was sufficient to classify it as "slightly gravelly".

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
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 (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.01
-1.00 to -0.50; 1.4 mm	0.03	0.05
-0.50 to 0.00; 1 mm	0.03	0.05
0.00 to 0.50; (707 µm)	0.50	0.77
0.50 to 1.00; (500 µm)	2.84	4.40
1.00 to 1.50; (353.6 µm)	6.22	9.63
1.50 to 2.00; (250 µm)	10.38	16.08
2.00 to 2.50; (176.8 µm)	15.47	23.98
2.50 to 3.00; (125 µm)	16.94	26.25
3.00 to 3.50; (88.39 µm)	14.01	21.72
3.50 to 4.00; (62.5 µm)	10.03	15.55
4.00 to 4.50; (44.19 µm)	6.19	9.60
4.50 to 5.00; (31.25 µm)	3.28	5.09
5.00 to 5.50; (22.097 µm)	1.92	2.97
5.50 to 6.00; (15.625 µm)	1.39	2.15
6.00 to 6.50; (11.049 µm)	1.22	1.89
6.50 to 7.00; (7.813 µm)	1.15	1.79
7.00 to 7.50; (5.524 µm)	1.13	1.75
7.50 to 8.00; (3.906 µm)	1.09	1.69
8.00 to 8.50; (2.762 µm)	1.02	1.58
8.50 to 9.00; (1.953 µm)	0.93	1.44
9.00 to 9.50; (1.381 µm)	0.84	1.30
9.50 to 10.00; (0.977 µm)	0.74	1.15
10.00 to 10.50; (0.691 µm)	0.63	0.98
10.50 to 11.00; (0.488 µm)	0.53	0.83
11.00 to 11.50; (0.345 µm)	0.44	0.69
11.50 to 12.00; (0.244 µm)	0.36	0.56
12.00 to 12.50; (0.173 µm)	0.27	0.42
12.50 to 13.00; (0.122 µm)	0.21	0.32
13.00 to 13.50; (0.086 µm)	0.13	0.20
13.50 to 14.00; (0.061µm)	0.05	0.08
14.00 to 14.50; (0.043µm)	0.01	0.01
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	154.99

Notes:

These samples contained muddy sand which required thorough mixing to achieve a homongenous paste. During several laser analysis reps it was evident that a few grains were being retained on the 1 mm sieve, and the full laser size distribution (to 2 mm) displayed a small volume above 1 mm. Therefore the samples were all additionally wet separated at 1 mm. Although small, all samples contained particles >1mm. Sample 2831 also contained some particles >2mm, and hence was strictly classified as "slightly gravelly muddy sand" according to Folk (1954) who specified that a 'trace' of gravel was sufficient to classify it as "slightly gravelly".

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
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	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.01	0.01
-1.00 to -0.50; 1.4 mm	0.02	0.03
-0.50 to 0.00; 1 mm	0.04	0.05
0.00 to 0.50; (707 µm)	0.68	0.99
0.50 to 1.00; (500 µm)	2.43	3.57
1.00 to 1.50; (353.6 µm)	5.90	8.66
1.50 to 2.00; (250 µm)	10.13	14.85
2.00 to 2.50; (176.8 µm)	15.63	22.92
2.50 to 3.00; (125 µm)	17.29	25.35
3.00 to 3.50; (88.39 µm)	14.01	20.55
3.50 to 4.00; (62.5 µm)	10.04	14.72
4.00 to 4.50; (44.19 µm)	6.26	9.17
4.50 to 5.00; (31.25 µm)	3.36	4.92
5.00 to 5.50; (22.097 µm)	1.98	2.90
5.50 to 6.00; (15.625 µm)	1.45	2.13
6.00 to 6.50; (11.049 µm)	1.26	1.84
6.50 to 7.00; (7.813 µm)	1.15	1.68
7.00 to 7.50; (5.524 µm)	1.11	1.63
7.50 to 8.00; (3.906 µm)	1.08	1.58
8.00 to 8.50; (2.762 µm)	1.01	1.48
8.50 to 9.00; (1.953 µm)	0.93	1.37
9.00 to 9.50; (1.381 µm)	0.85	1.25
9.50 to 10.00; (0.977 µm)	0.75	1.11
10.00 to 10.50; (0.691 µm)	0.64	0.94
10.50 to 11.00; (0.488 µm)	0.53	0.78
11.00 to 11.50; (0.345 µm)	0.44	0.65
11.50 to 12.00; (0.244 µm)	0.36	0.52
12.00 to 12.50; (0.173 µm)	0.27	0.40
12.50 to 13.00; (0.122 µm)	0.20	0.30
13.00 to 13.50; (0.086 µm)	0.13	0.19
13.50 to 14.00; (0.061µm)	0.05	0.08
14.00 to 14.50; (0.043µm)	0.01	0.01
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	146.64

Notes:

These samples contained muddy sand which required thorough mixing to achieve a homongenous paste. During several laser analysis reps it was evident that a few grains were being retained on the 1 mm sieve, and the full laser size distribution (to 2 mm) displayed a small volume above 1 mm. Therefore the samples were all additionally wet separated at 1 mm. Although small, all samples contained particles >1mm. Sample 2832 also contained some particles >2mm, and hence was strictly classified as "slightly gravelly muddy sand" according to Folk (1954) who specified that a 'trace' of gravel was sufficient to classify it as "slightly gravelly".

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
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 (mark as "0" for no material & leave blank for not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	0.00	0.00
-3.00 to -2.50; 5.6 mm	0.00	0.00
-2.50 to -2.00; 4 mm	0.00	0.00
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.04	0.06
-1.00 to -0.50; 1.4 mm	0.04	0.06
-0.50 to 0.00; 1 mm	0.04	0.07
0.00 to 0.50; (707 µm)	0.47	0.71
0.50 to 1.00; (500 µm)	2.60	3.98
1.00 to 1.50; (353.6 µm)	6.07	9.30
1.50 to 2.00; (250 µm)	10.28	15.74
2.00 to 2.50; (176.8 µm)	15.48	23.69
2.50 to 3.00; (125 µm)	17.11	26.20
3.00 to 3.50; (88.39 µm)	13.94	21.34
3.50 to 4.00; (62.5 µm)	9.99	15.29
4.00 to 4.50; (44.19 µm)	6.28	9.61
4.50 to 5.00; (31.25 µm)	3.33	5.10
5.00 to 5.50; (22.097 µm)	1.96	3.00
5.50 to 6.00; (15.625 µm)	1.43	2.20
6.00 to 6.50; (11.049 µm)	1.25	1.91
6.50 to 7.00; (7.813 µm)	1.16	1.77
7.00 to 7.50; (5.524 µm)	1.12	1.72
7.50 to 8.00; (3.906 µm)	1.08	1.66
8.00 to 8.50; (2.762 µm)	1.01	1.55
8.50 to 9.00; (1.953 µm)	0.93	1.43
9.00 to 9.50; (1.381 µm)	0.86	1.31
9.50 to 10.00; (0.977 µm)	0.76	1.17
10.00 to 10.50; (0.691 µm)	0.66	1.01
10.50 to 11.00; (0.488 µm)	0.56	0.85
11.00 to 11.50; (0.345 µm)	0.46	0.71
11.50 to 12.00; (0.244 µm)	0.38	0.58
12.00 to 12.50; (0.173 µm)	0.29	0.44
12.50 to 13.00; (0.122 µm)	0.22	0.33
13.00 to 13.50; (0.086 µm)	0.14	0.21
13.50 to 14.00; (0.061µm)	0.06	0.08
14.00 to 14.50; (0.043µm)	0.01	0.01
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	153.09

Notes:

These samples contained muddy sand which required thorough mixing to achieve a homongenous paste. During several laser analysis reps it was evident that a few grains were being retained on the 1 mm sieve, and the full laser size distribution (to 2 mm) displayed a small volume above 1 mm. Therefore the samples were all additionally wet separated at 1 mm. Although small, all samples contained particles >1mm. Sample 2833 also contained some particles >2mm, and hence was strictly classified as "slightly gravelly muddy sand" according to Folk (1954) who specified that a 'trace' of gravel was sufficient to classify it as "slightly gravelly".

APPENDIX 4. Final Merged Data sheets (with comments) as supplied by participating laboratories (arranged by LabCode) and the Benchmark Replicates for sediment distributed as PS82.

Exercise Code:	PS82
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	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.01	0.02
-0.50 to 0.00; 1 mm	0.03	0.04
0.00 to 0.50; (707 µm)	0.83	1.27
0.50 to 1.00; (500 µm)	2.73	4.21
1.00 to 1.50; (353.6 µm)	5.90	9.08
1.50 to 2.00; (250 µm)	10.01	15.41
2.00 to 2.50; (176.8 µm)	15.48	23.83
2.50 to 3.00; (125 µm)	17.06	26.25
3.00 to 3.50; (88.39 µm)	13.82	21.27
3.50 to 4.00; (62.5 µm)	10.00	15.40
4.00 to 4.50; (44.19 µm)	6.28	9.66
4.50 to 5.00; (31.25 µm)	3.36	5.17
5.00 to 5.50; (22.097 µm)	2.00	3.08
5.50 to 6.00; (15.625 µm)	1.46	2.25
6.00 to 6.50; (11.049 µm)	1.26	1.94
6.50 to 7.00; (7.813 µm)	1.18	1.81
7.00 to 7.50; (5.524 µm)	1.14	1.76
7.50 to 8.00; (3.906 µm)	1.10	1.70
8.00 to 8.50; (2.762 µm)	1.03	1.58
8.50 to 9.00; (1.953 µm)	0.94	1.45
9.00 to 9.50; (1.381 µm)	0.86	1.32
9.50 to 10.00; (0.977 µm)	0.77	1.18
10.00 to 10.50; (0.691 µm)	0.66	1.01
10.50 to 11.00; (0.488 µm)	0.56	0.86
11.00 to 11.50; (0.345 µm)	0.46	0.71
11.50 to 12.00; (0.244 µm)	0.38	0.58
12.00 to 12.50; (0.173 µm)	0.29	0.44
12.50 to 13.00; (0.122 µm)	0.21	0.33
13.00 to 13.50; (0.086 µm)	0.14	0.21
13.50 to 14.00; (0.061µm)	0.05	0.08
14.00 to 14.50; (0.043µm)	0.01	0.01
>14.5; (0.01)	0.00	0.00
TOTAL	100.00	153.91

Notes:

These samples contained muddy sand which required thorough mixing to achieve a homongenous paste. During several laser analysis reps it was evident that a few grains were being retained on the 1 mm sieve, and the full laser size distribution (to 2 mm) displayed a small volume above 1 mm. Therefore the samples were all additionally wet separated at 1 mm. Although small, all samples contained particles >1mm. Sample 2834 contained 0.061g of sediment >1mm, but none of the particles were >2mm, hence this sample is strictly classified as "muddy sand" only, without the "slightly gravelly" qualification.