



**NMBQC**  
The National Marine Biological Analytical Quality Control Scheme

## Particle Size Report - PS57

Particle Size Component 2015/16

August 2015

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## PS57

Sample produced from commercial aggregates and mixed with water.

<b>Phi Category</b>	<b>Weight (g)</b>	<b>Percentage</b>
-4.0 to -3.5	100	10.81
-3.5 to -3.0	400	43.24
-3.0 to -2.5	300	32.43
-2.5 to -2.0	100	10.81
-2.0 to -1.5	15	1.62
-1.5 to -1.0	5	0.54
-1.0 to -0.5	5	0.54
<b>Total</b>	925	100

## BENCHMARK DATA

**Table 1.** Summary data for the benchmark replicates distributed as PS57.

	Method	% Gravel	% Sand	% Silt/Clay	Sediment Description (Post analysis)
REPLICATE 1	NMBAQC	99.52	0.48	0.00	Gravel
REPLICATE 2	NMBAQC	99.50	0.50	0.00	Gravel
REPLICATE 3	NMBAQC	99.52	0.48	0.00	Gravel
REPLICATE 4	NMBAQC	99.45	0.55	0.00	Gravel
REPLICATE 5	NMBAQC	99.51	0.49	0.00	Gravel
REP AVERAGE	NMBAQC	99.50	0.50	0.00	Gravel

**Table 2.** Summary of equipment used and sieve data for the benchmark replicates distributed as PS57.

	Sieves used	Phi; sieve mesh		Total Weight (g)	Laser used
		Weight (g) < 0.00; >1 mm	Weight (g) > 0.00; <1 mm		
REPLICATE 1	<input checked="" type="checkbox"/>	920.74	0.17	920.91	<input type="checkbox"/>
REPLICATE 2	<input checked="" type="checkbox"/>	922.00	0.21	922.21	<input type="checkbox"/>
REPLICATE 3	<input checked="" type="checkbox"/>	920.60	0.20	920.80	<input type="checkbox"/>
REPLICATE 4	<input checked="" type="checkbox"/>	921.08	0.30	921.38	<input type="checkbox"/>
REPLICATE 5	<input checked="" type="checkbox"/>	921.29	0.20	921.49	<input type="checkbox"/>
BM AVERAGE	<input checked="" type="checkbox"/>	921.14	0.22	921.36	<input type="checkbox"/>

**Table 3.** Summary of final laser data for the benchmark replicates distributed as PS57.

	% Sand			
	Coarse 0 - 1 phi	Medium 1 - 2 phi	Fine 2 - 3 phi	Very Fine 3 - 4 phi
REPLICATE 1	-	-	-	-
REPLICATE 2	-	-	-	-
REPLICATE 3	-	-	-	-
REPLICATE 4	-	-	-	-
REPLICATE 5	-	-	-	-
BM AVERAGE	-	-	-	-

	% Silt				% Clay
	Coarse 4 - 5 phi	Medium 5 - 6 phi	Fine 6 - 7 phi	Very Fine 7 - 8 phi	8 - 13 phi
REPLICATE 1	-	-	-	-	-
REPLICATE 2	-	-	-	-	-
REPLICATE 3	-	-	-	-	-
REPLICATE 4	-	-	-	-	-
REPLICATE 5	-	-	-	-	-
BM AVERAGE	-	-	-	-	-

- No data

## BENCHMARK DATA

**Table 4.** Summary of descriptive statistics and coefficient of variance for the benchmark replicates distributed as PS57.

	D10 (µm)		D50 (µm)		D90 (µm)		Mean (µm)	
	Result	d	Result	d	Result	d	Result	d
BENCHMARK REPLICATE 1	4970.30	71.48	8394.21	3.08	11725.98	136.36	8507.23	32.70
BENCHMARK REPLICATE 2	4862.41	36.41	8367.88	23.25	11377.74	211.88	8431.56	42.97
BENCHMARK REPLICATE 3	4831.79	67.03	8347.69	43.44	11384.88	204.74	8413.93	60.60
BENCHMARK REPLICATE 4	4907.05	8.23	8425.81	34.68	11831.74	242.12	8520.60	46.07
BENCHMARK REPLICATE 5	4922.56	23.73	8420.05	28.92	11627.77	38.15	8499.34	24.80
Grand Robust Mean	4907.05		8394.21		11627.77		8499.34	
Mean	4898.82		8391.13		11589.62		8474.53	
Robust Standard Deviation	36.41		28.92		204.74		42.97	
Standard Deviation	53.76		33.45		203.40		48.28	
Median Absolute Deviations	54.00		42.89		303.64		63.73	
Coefficient of Variance (COV)	1.10		0.40		1.76		0.57	

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

Good reproducibility when: - COV < 3% for D50

-COV < 5% for D10 and D90

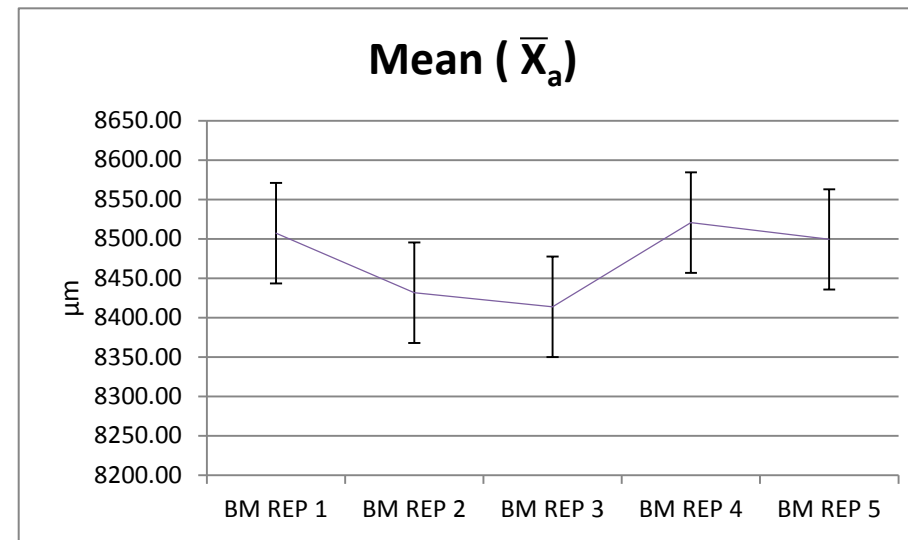
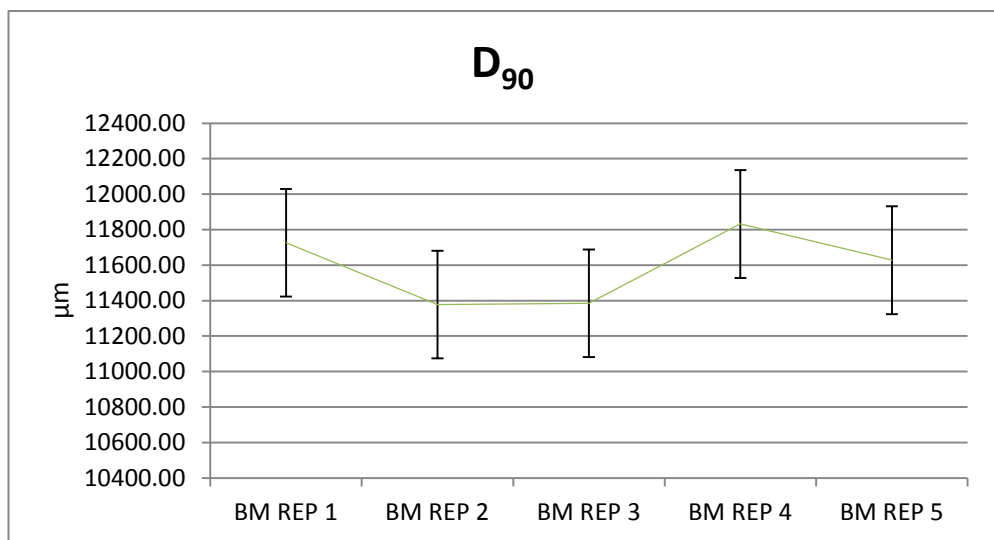
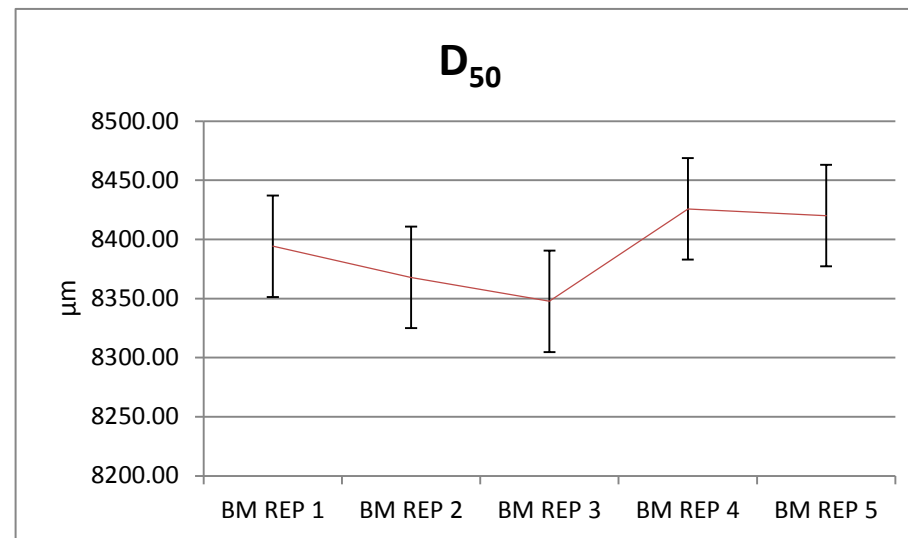
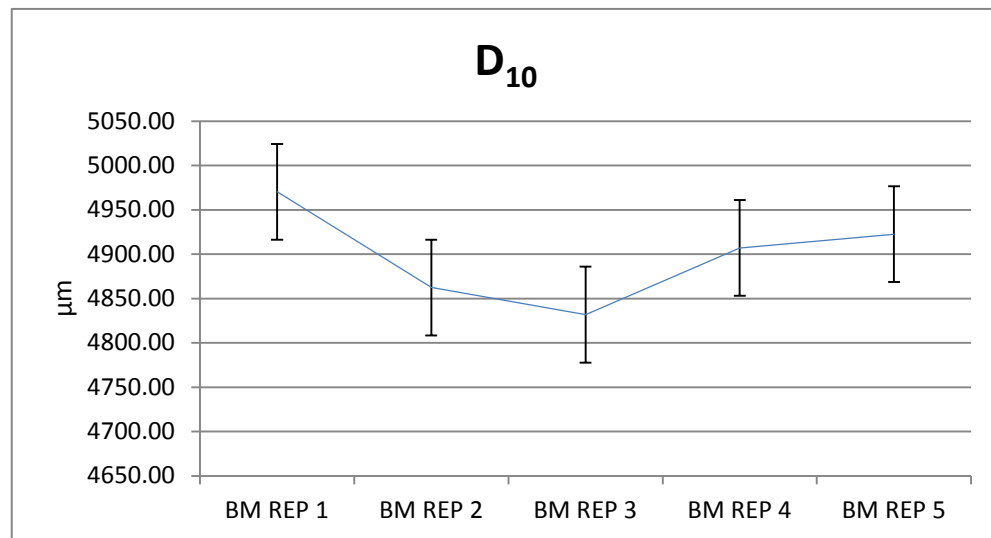
All limits double when the D50 < 10 µm.

Benchmark replicates distributed as PS57 show a COV <3% for the D50 and <5% for the D10 and D90.

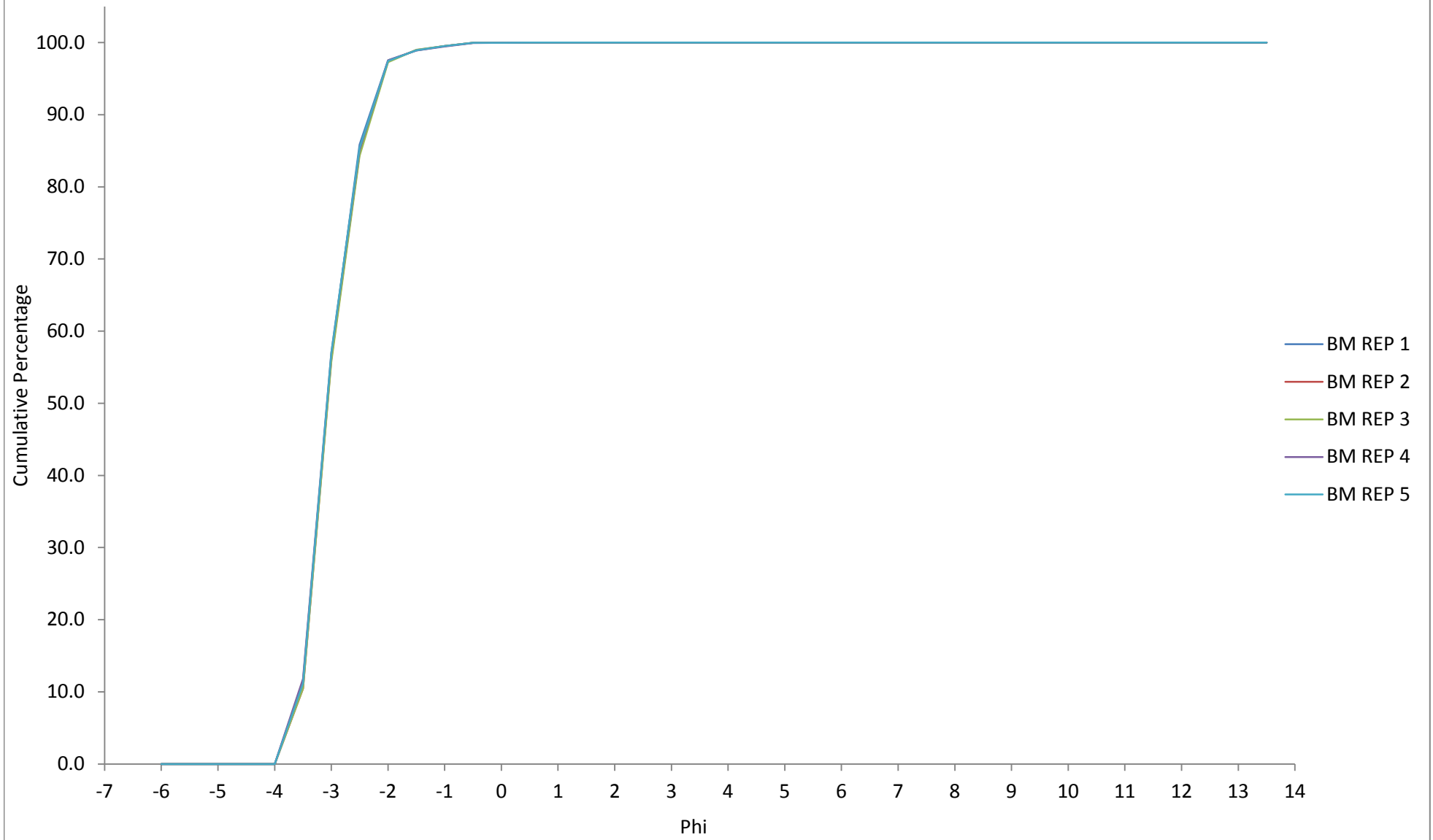
**The replicates show good reproducibility.**

# BENCHMARK DATA

Figure 1. Scatterplot of Benchmark Data for PS57 with error bars showing  $\pm 1 \text{ MAD}_E$ .



**Figure 2.** Particle size distribution curves resulting from analysis of 5 replicate samples of sediment distributed as PS57 (Benchmark Data).





## PARTICIPANT DATA

**Table 5.** Summary data and verification for the participants for sediment distributed as PS57.

Lab	% Gravel	% Sand	% Silt/Clay	Sediment Description (Post analysis)	Summary Data APEM verification							
					% Gravel		% Sand		% Silt/Clay		Sediment Description (Post analysis)	
Benchmark Average	99.50	0.50	0.00	Gravel	-		-		-		-	
PSA_2201	99.5	0.5	0.0	Medium Gravel	99.50	<input checked="" type="checkbox"/>	0.50	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2202	99.57	0.43	0.00	Gravel	99.57	<input checked="" type="checkbox"/>	0.43	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2203	99.5	0.5	0.00	Gravel	99.52	<input checked="" type="checkbox"/>	0.48	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2204	98.92	1.08	0.00	Gravel	98.92	<input checked="" type="checkbox"/>	1.08	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2205	99.5	0.5	0.00	Medium Gravel	99.47	<input checked="" type="checkbox"/>	0.53	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2208	99	1	0	Gravel	99.54	<input checked="" type="checkbox"/>	0.46	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2209	98.8	1.00	0.00	Gravel	99.94	<input checked="" type="checkbox"/>	0.06	<input checked="" type="checkbox"/>	0.01	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2210	99.5	0.4	0.0	Gravel	99.55	<input checked="" type="checkbox"/>	0.45	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2211	99.5	0.5	0.0	Gravel	99.53	<input checked="" type="checkbox"/>	0.47	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2212	99.5	0.5	0.00	Gravel	99.47	<input checked="" type="checkbox"/>	0.53	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2213	99.47	0.53	0.00	Gravel	99.47	<input checked="" type="checkbox"/>	0.53	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2214_A	99.45	0.49	0.06	Gravel	99.45	<input checked="" type="checkbox"/>	0.55	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2214_B	99.46	0.48	0.06	Gravel	99.46	<input checked="" type="checkbox"/>	0.54	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2215	99.5	0.5	0.0	Medium Gravel	99.54	<input checked="" type="checkbox"/>	0.46	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2216	99.42	0.58	0.00	Gravel	99.42	<input checked="" type="checkbox"/>	0.58	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2217	100	-	-	-	99.55	<input checked="" type="checkbox"/>	0.45	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>
PSA_2218	99.5	0.5	0.0	Gravel	99.48	<input checked="" type="checkbox"/>	0.52	<input checked="" type="checkbox"/>	0.00	<input checked="" type="checkbox"/>	Gravel	<input checked="" type="checkbox"/>

- Data not provided

## PARTICIPANT DATA

**Table 6.** Summary of equipment used and sieve data for the participants for sediment distributed as PS57.

Participant	Method	Sieves used	Phi; sieve mesh		Total Weight (g)	Laser used
			Weight (g) < 0.00; >1 mm	Weight (g) > 0.00; <1 mm		
Benchmark Average	NMBAQC	<input checked="" type="checkbox"/>	921.14	0.22	921.36	<input checked="" type="checkbox"/>
PSA_2201	NMBAQC	<input checked="" type="checkbox"/>	919.06	0.00	919.06	<input checked="" type="checkbox"/>
PSA_2202	NMBAQC	<input checked="" type="checkbox"/>	922.96	0.00	922.96	<input checked="" type="checkbox"/>
PSA_2203	NMBAQC	<input checked="" type="checkbox"/>	920.74	0.17	920.91	<input checked="" type="checkbox"/>
PSA_2204	NMBAQC	<input checked="" type="checkbox"/>	99.18*	0.00	99.18*	<input checked="" type="checkbox"/>
PSA_2205	NMBAQC	<input checked="" type="checkbox"/>	920.80	0.38	921.18	<input checked="" type="checkbox"/>
PSA_2208	NMBAQC	<input checked="" type="checkbox"/>	917.84	0.63	918.47	<input checked="" type="checkbox"/>
PSA_2209	OTHER	<input checked="" type="checkbox"/>	916.63	0.20	916.83	<input checked="" type="checkbox"/>
PSA_2210	NMBAQC	<input checked="" type="checkbox"/>	925.72	0.00	925.72	<input checked="" type="checkbox"/>
PSA_2211	NMBAQC	<input checked="" type="checkbox"/>	918.90	0.00	918.90	<input checked="" type="checkbox"/>
PSA_2212	NMBAQC	<input checked="" type="checkbox"/>	920.73	-	920.73	<input checked="" type="checkbox"/>
PSA_2213	NMBAQC	<input checked="" type="checkbox"/>	919.24	0.20	919.44	<input checked="" type="checkbox"/>
PSA_2214_A	NMBAQC*	<input checked="" type="checkbox"/>	919.74	0.76	920.51	<input checked="" type="checkbox"/>
PSA_2214_B	NMBAQC*	<input checked="" type="checkbox"/>	919.28	0.76	920.04	<input checked="" type="checkbox"/>
PSA_2215	NMBAQC	<input checked="" type="checkbox"/>	99.99*	0.00	99.99*	<input checked="" type="checkbox"/>
PSA_2216	NMBAQC	<input checked="" type="checkbox"/>	921.81	0.57	922.38	<input checked="" type="checkbox"/>
PSA_2217	NMBAQC	<input checked="" type="checkbox"/>	917.61	0.06	917.67	<input checked="" type="checkbox"/>
PSA_2218	NMBAQC	<input checked="" type="checkbox"/>	921.29	0.05	921.34	<input checked="" type="checkbox"/>

\* possibly in percentages

OTHER In-house methodology

NMBAQC\* NMBAQC PSA SOP for supporting biological data - incorporating BS1377: 1990 Parts 1-2 (sieving).

## PARTICIPANT DATA

**Table 7.** Summary of final laser data for the participants for sediment distributed as PS57.

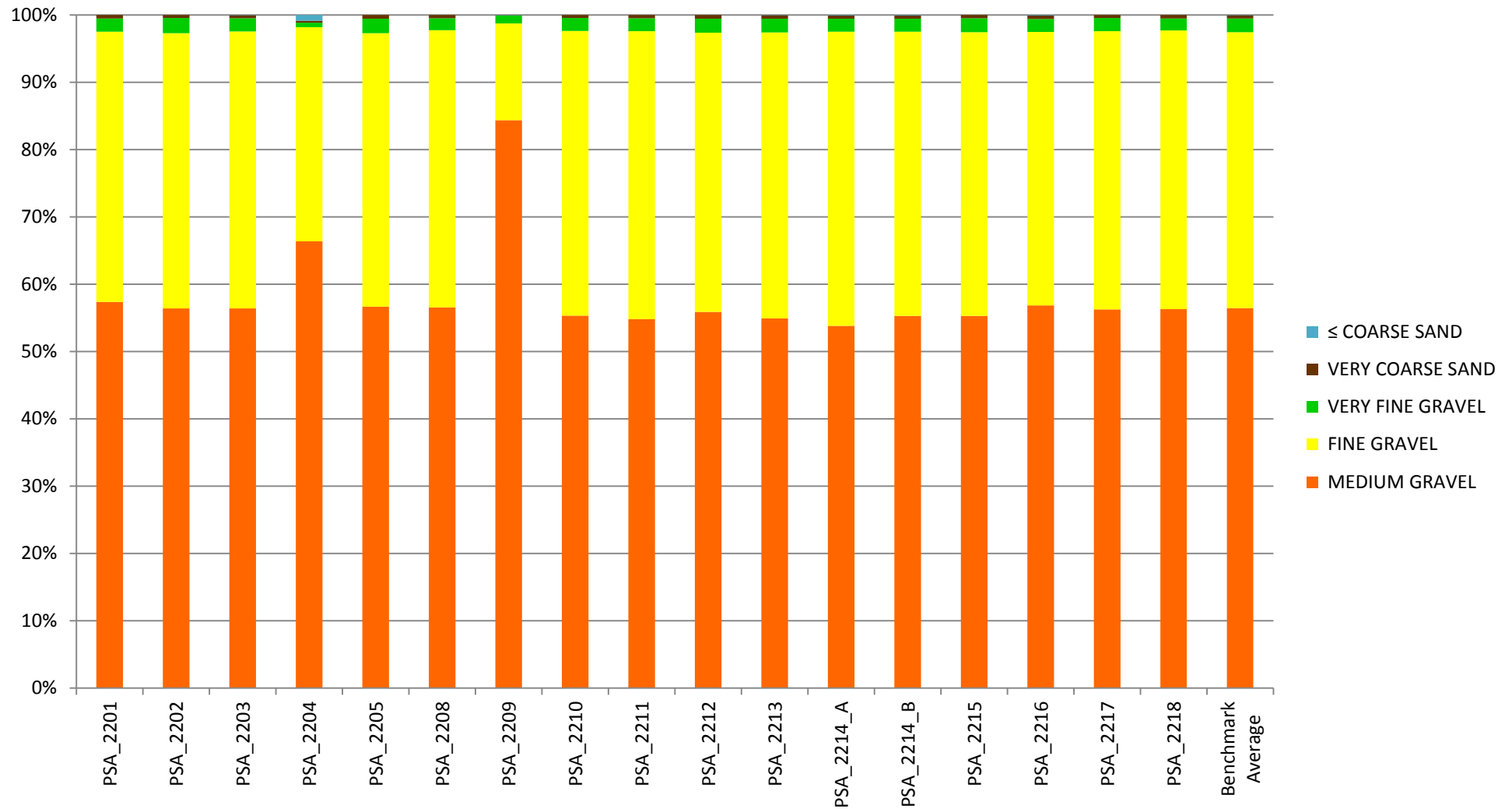
Participant	% Sand				% Silt				% Clay	Total	Laser Data Re-proportioned?
	Coarse 0 - 1 phi	Medium 1 - 2 phi	Fine 2 - 3 phi	Very Fine 3 - 4 phi	Coarse 4 - 5 phi	Medium 5 - 6 phi	Fine 6 - 7 phi	Very Fine 7 - 8 phi	8 - 13 phi		
Benchmark Average	-	-	-	-	-	-	-	-	-	-	-
PSA_2201	-	-	-	-	-	-	-	-	-	-	-
PSA_2202	-	-	-	-	-	-	-	-	-	-	-
PSA_2203	-	-	-	-	-	-	-	-	-	-	-
PSA_2204	0.12	0.04	0.59	0.06	0.00	0.00	0.00	0.00	0.00	0.81	<input checked="" type="checkbox"/> *
PSA_2205	-	-	-	-	-	-	-	-	-	-	-
PSA_2208	-	-	-	-	-	-	-	-	-	-	-
PSA_2209	17.18	21.23	21.42	13.36	9.09	6.86	4.02	2.97	3.86	100.00	<input checked="" type="checkbox"/>
PSA_2210	-	-	-	-	-	-	-	-	-	-	-
PSA_2211	-	-	-	-	-	-	-	-	-	-	-
PSA_2212	-	-	-	-	-	-	-	-	-	-	-
PSA_2213	-	-	-	-	-	-	-	-	-	-	-
PSA_2214_A	-	-	-	-	-	-	-	-	-	-	-
PSA_2214_B	-	-	-	-	-	-	-	-	-	-	-
PSA_2215	-	-	-	-	-	-	-	-	-	-	-
PSA_2216	-	-	-	-	-	-	-	-	-	-	-
PSA_2217	-	-	-	-	-	-	-	-	-	-	-
PSA_2218	-	-	-	-	-	-	-	-	-	-	-

- No laser analysis

\* Possibly in grams



**Figure 4.** Bar chart showing the percentage medium gravel, fine gravel, very fine gravel, very coarse sand and  $\leq$  coarse sand recorded by each participating laboratory and the benchmark average for PS57.



# Z-SCORES

**Table 8.** Calculations of Robust Mean and SDPA for PS57.

Laboratory	D <sub>10</sub> (µm)		D <sub>50</sub> (µm)		D <sub>90</sub> (µm)		Mean (µm)	
	result	d	result	d	result	d	result	d
PSA_2201	5026.67	28.77	8457.74	66.05	12107.14	265.64	8597.48	90.25
PSA_2202	5032.05	34.15	8417.53	25.84	11954.13	112.63	8595.76	88.54
PSA_2203	4970.30	27.60	8394.21	2.51	11725.98	115.52	8507.23	0.00
PSA_2204	5594.66	596.76	9140.40	748.71	14310.47	2468.97	9587.50	1080.27
PSA_2205	4982.08	15.82	8446.48	54.78	12146.09	304.59	8641.93	134.70
PSA_2208	5288.96	291.06	8317.75	73.95	10552.99	1288.51	8106.66	400.56
PSA_2209	7063.78	2065.88	11518.24	3126.54	16648.86	4807.36	11900.82	3393.59
PSA_2210	5109.00	111.10	8334.54	57.16	11717.12	124.38	8502.88	4.35
PSA_2211	4997.90	0.00	8295.42	96.28	11280.38	561.12	8416.73	90.50
PSA_2212	4816.24	181.66	8357.06	34.64	11420.84	420.66	8415.05	92.18
PSA_2213	4954.66	43.24	8311.99	79.71	11739.42	102.08	8463.30	43.93
PSA_2214_A	4929.57	68.33	8236.39	155.30	11170.91	670.58	8350.97	156.26
PSA_2214_B	4952.87	45.03	8317.93	73.76	11162.83	678.67	8393.24	113.99
PSA_2215	4979.17	18.73	8335.47	56.22	11857.02	15.53	8494.98	12.25
PSA_2216	4964.05	33.85	8439.52	47.83	12321.95	480.45	8603.04	95.81
PSA_2217	5028.42	30.52	8394.09	2.39	11981.18	139.68	8551.07	43.84
PSA_2218	5038.23	40.33	8391.70	0.00	11841.50	0.00	8532.40	25.17
<b>Original Statistics</b>								
Median	4997.90		8391.70		11841.50		8507.23	
Mean	5160.51		8594.50		12114.05		8744.77	
MAD	43.24		66.05		304.59		90.50	
Std Dev	519.63		778.83		1402.50		865.55	
MADe	64.12		97.95		451.71		134.21	
median + (5*MADe)	5318.52		8881.43		14100.03		9178.25	
median - (5*MADe)	4677.28		7901.97		9582.97		7836.20	
<b>Outliers removed</b>								
Robust Mean	4982.08		8357.06		11739.42		8502.88	
Mean	5004.68		8560.38		11976.77		8692.10	
MAD	36.01		52.77		343.15		90.36	
Std Dev	101.77		63.48		467.71		133.59	
MADe or SPDA	53.40		78.26		508.89		134.00	

Data falls outside the range of:  
Median ± 5xMADe.  
Therefore removed from Robust mean and  
MADe calculations.

Data not used for any Median/Mean or Std Dev  
calculations due to reporting errors.

- MAD - Median of Absolute Deviations
- MADe - Normalised Median of Absolute Deviations
- SDPA - Standard Deviation for Proficiency Assessment

## Z-SCORES

**Table 9.** z-score results for each participating laboratory for PS57 when using robust statistics with outliers removed.

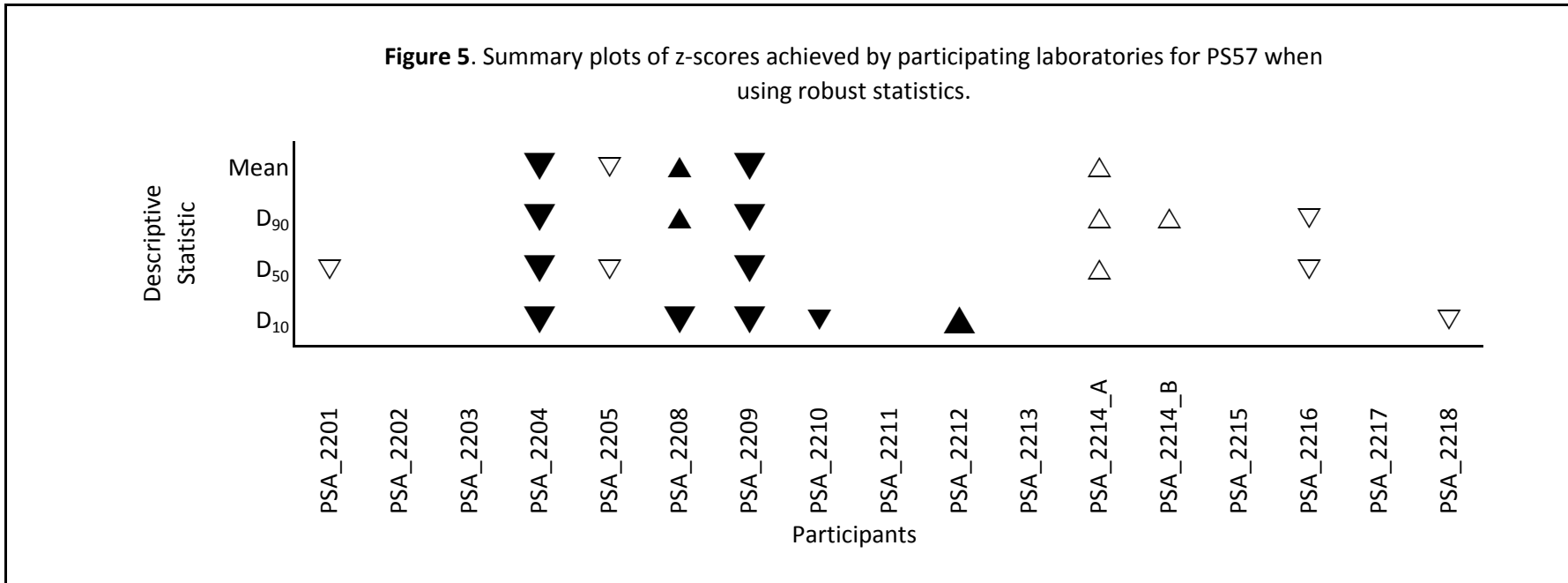
Laboratory	D <sub>10</sub> (mm)		D <sub>50</sub> (mm)		D <sub>90</sub> (mm)		Mean(μm)	
	Result	z	result	z	result	z	result	z
PSA_2201	5026.67	0.84	8457.74	1.29	12107.14	0.72	8597.48	0.71
PSA_2202	5032.05	0.94	8417.53	0.77	11954.13	0.42	8595.76	0.69
PSA_2203	4970.30	-0.22	8394.21	0.47	11725.98	-0.03	8507.23	0.03
PSA_2204	5594.66	11.47	9140.40	10.01	14310.47	5.05	9587.50	8.09
PSA_2205	4982.08	0.00	8446.48	1.14	12146.09	0.80	8641.93	1.04
PSA_2208	5288.96	5.75	8317.75	-0.50	10552.99	-2.33	8106.66	-2.96
PSA_2209	7063.78	38.98	11518.24	40.39	16648.86	9.65	11900.82	25.36
PSA_2210	5109.00	2.38	8334.54	-0.29	11717.12	-0.04	8502.88	0.00
PSA_2211	4997.90	0.30	8295.42	-0.79	11280.38	-0.90	8416.73	-0.64
PSA_2212	4816.24	-3.11	8357.06	0.00	11420.84	-0.63	8415.05	-0.66
PSA_2213	4954.66	-0.51	8311.99	-0.58	11739.42	0.00	8463.30	-0.30
PSA_2214_A	4929.57	-0.98	8236.39	-1.54	11170.91	-1.12	8350.97	-1.13
PSA_2214_B	4952.87	-0.55	8317.93	-0.50	11162.83	-1.13	8393.24	-0.82
PSA_2215	4979.17	-0.05	8335.47	-0.28	11857.02	0.23	8494.98	-0.06
PSA_2216	4964.05	-0.34	8439.52	1.05	12321.95	1.14	8603.04	0.75
PSA_2217	5028.42	0.87	8394.09	0.47	11981.18	0.48	8551.07	0.36
PSA_2218	5038.23	1.05	8391.70	0.44	11841.50	0.20	8532.40	0.22
Robust Mean	4982.08		8357.06		11739.42		8502.88	
MADe	53.40		78.26		508.89		134.00	

$$z = \frac{x - X}{SDPA}$$

where;      x = participant data  
                  X = Robust Mean  
                  SDPA = MADe

# Z-SCORES

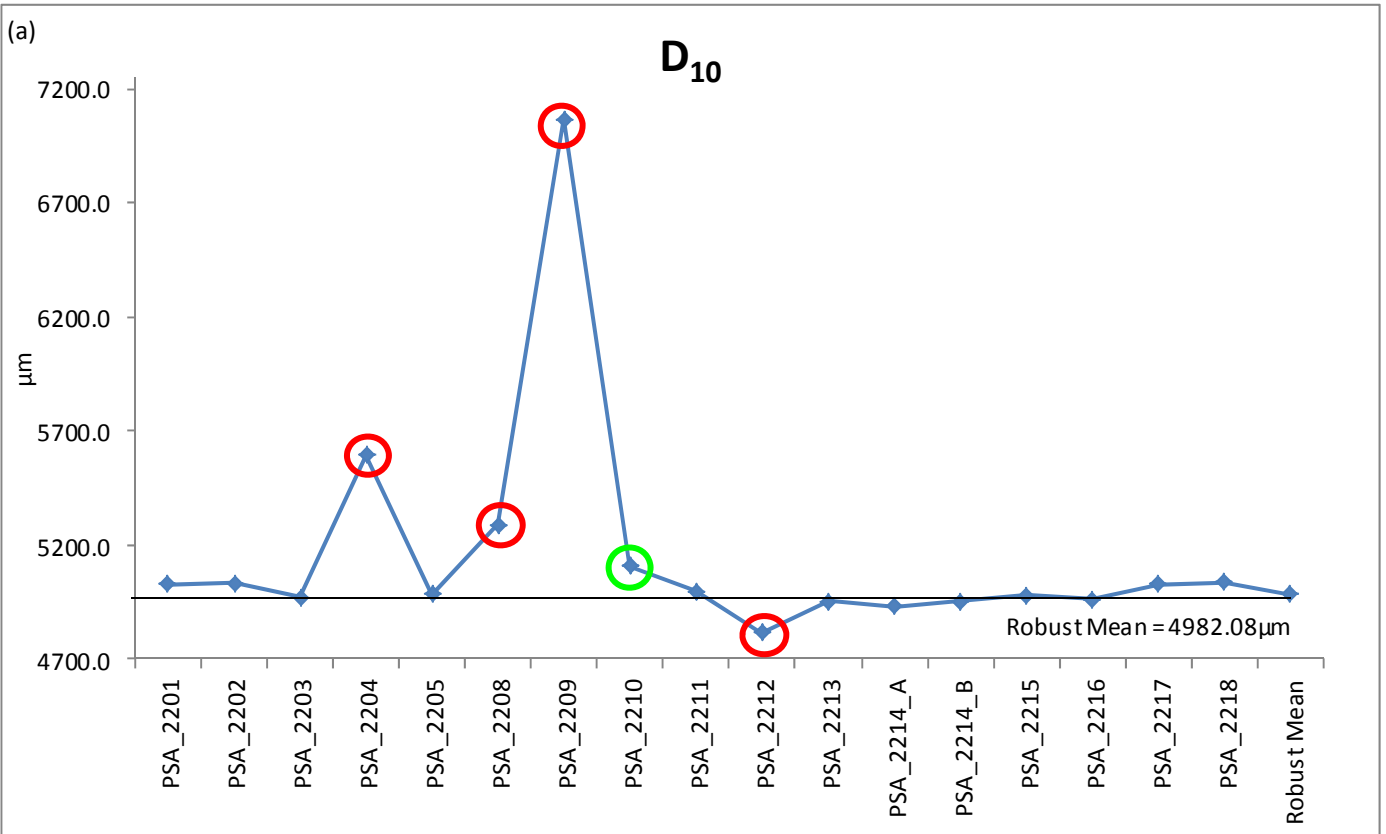
**Figure 5.** Summary plots of z-scores achieved by participating laboratories for PS57 when using robust statistics.



▼	$z\text{-score} \geq 3.00$	Unsatisfactory result
▼	$2.00 \leq z\text{-score} < 3.00$	Questionable result
▽	$1.00 \leq z\text{-score} < 2.00$	Satisfactory result
	$-1.00 < z\text{-score} < 1.00$	
△	$-2.00 < z\text{-score} \leq -1.00$	
▲	$-3.00 < z\text{-score} \leq -2.00$	Questionable result
▲	$z\text{-score} \leq -3.00$	Unsatisfactory result



Figure 6. Line plot of participant descriptive statistics for PS57 for (a)  $D_{10}$ , (b)  $D_{50}$ , (c)  $D_{90}$  and (d) Mean.



KEY	
	Unsatisfactory Result
	Questionable Result
	Robust Mean

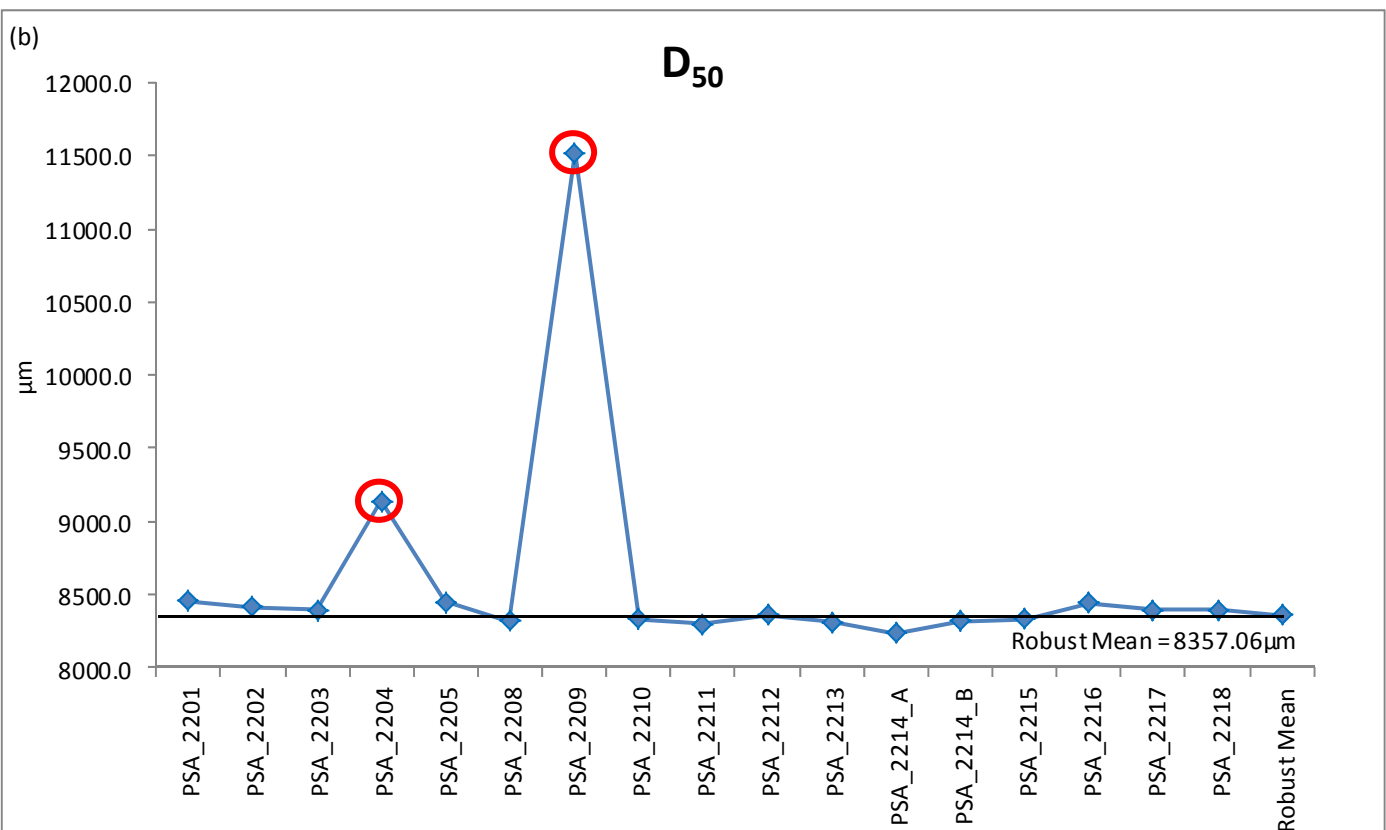
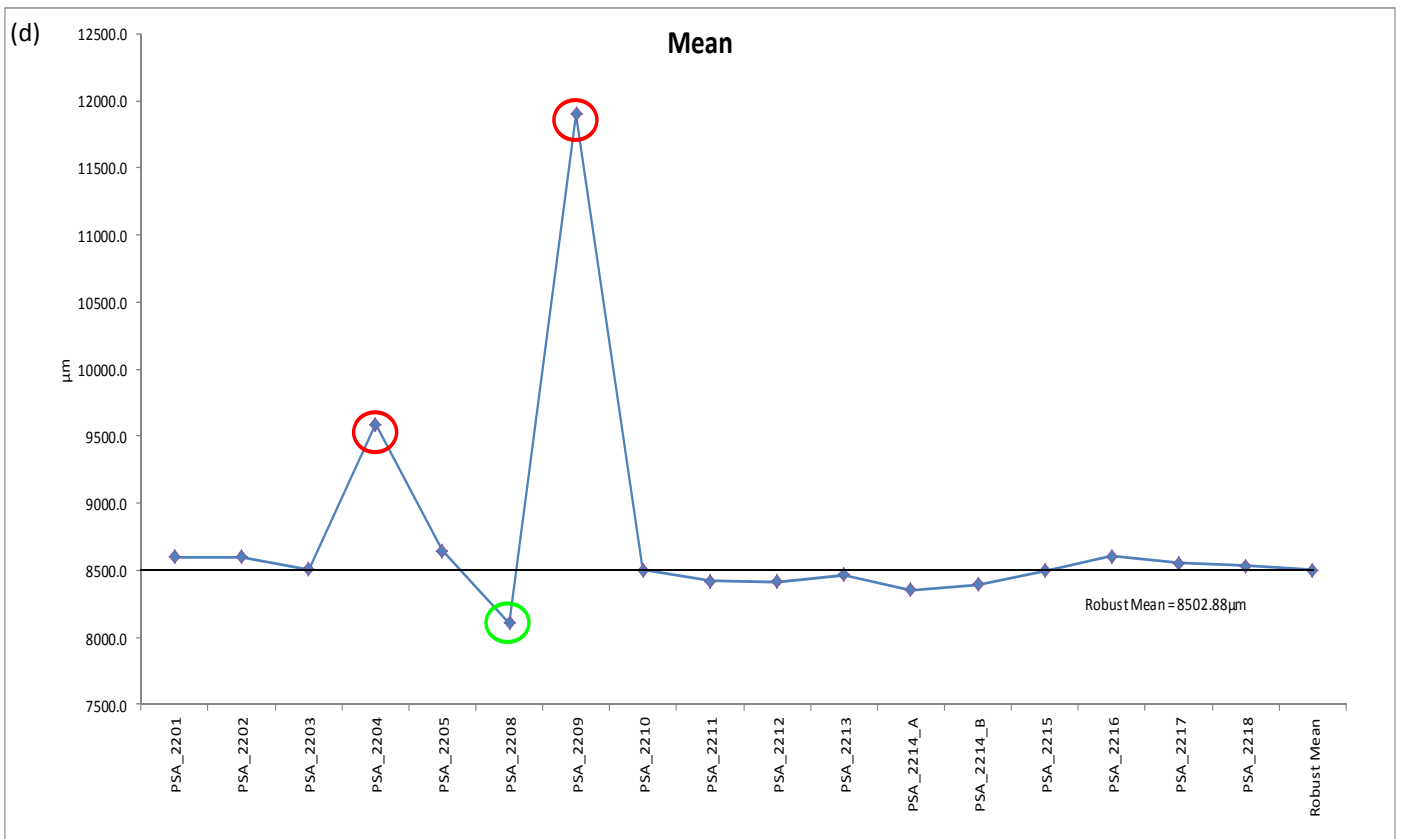
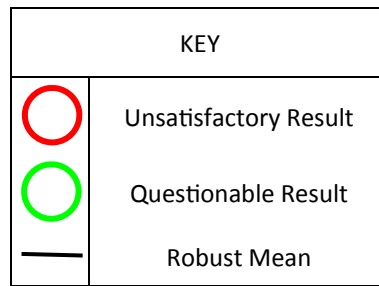
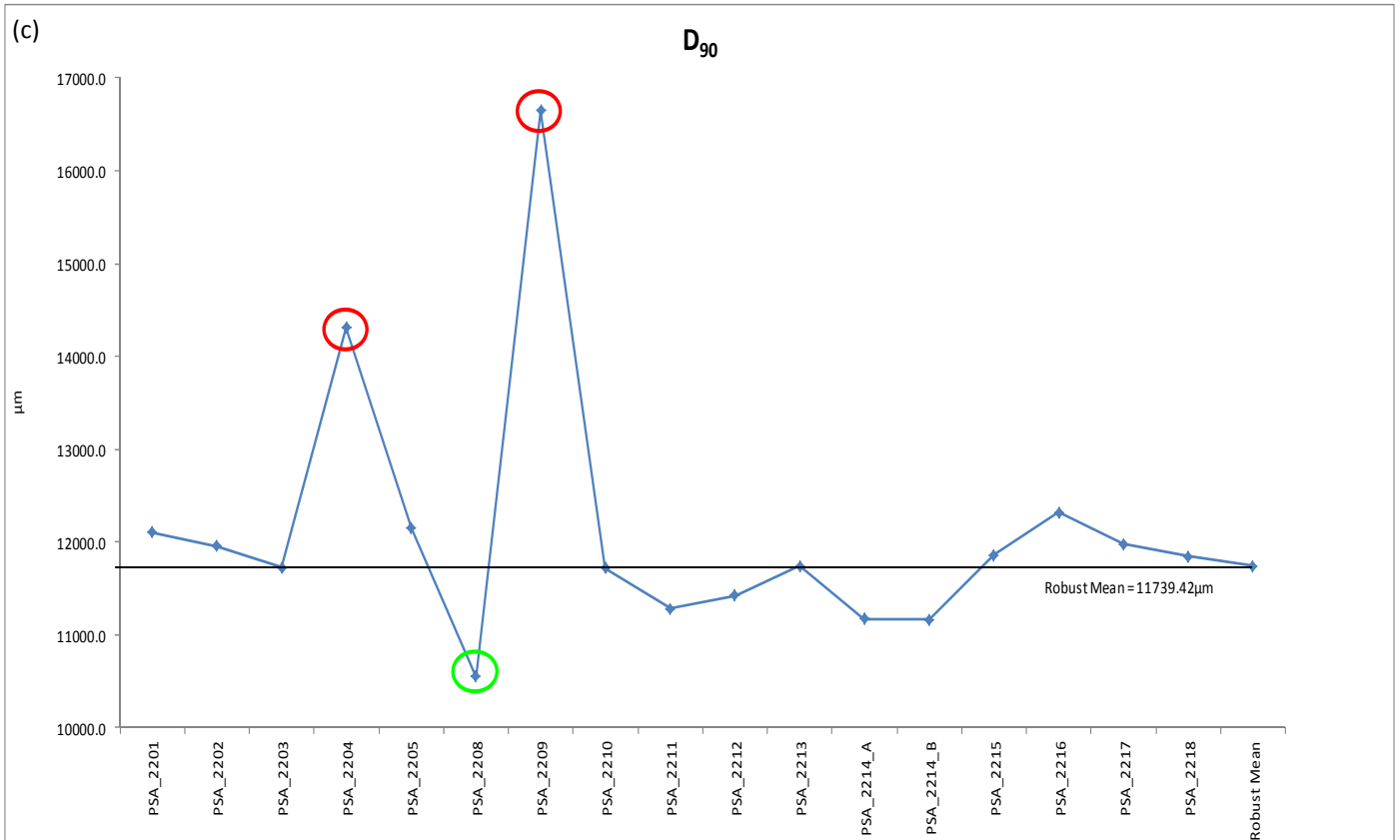


Figure 6. Line plots of participants descriptive statistics for PS57 for (a)  $D_{10}$ , (b)  $D_{50}$ , (c)  $D_{90}$  and (d) Mean.



# PERFORMANCE

**Table 10.** Summary of Results for PS57.

	D <sub>10</sub>	D <sub>50</sub>	D <sub>90</sub>	Mean (µm)	Satisfactory	Questionable	Unsatisfactory	Score	%	Pass/Fail	
PSA_2201	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2201
PSA_2202	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2202
PSA_2203	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2203
PSA_2204	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	0	0	4	0	0	FAIL - BAD	PSA_2204
PSA_2205	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2205
PSA_2208	Unsatisfactory	Satisfactory	Questionable	Questionable	1	2	1	9	45	FAIL - POOR	PSA_2208
PSA_2209	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	0	0	4	0	0	FAIL - BAD	PSA_2209
PSA_2210	Questionable	Satisfactory	Satisfactory	Satisfactory	3	1	0	17	85	PASS - GOOD	PSA_2210
PSA_2211	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2211
PSA_2212	Unsatisfactory	Satisfactory	Satisfactory	Satisfactory	3	0	1	15	75	PASS - GOOD	PSA_2212
PSA_2213	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2213
PSA_2214_A	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2214_A
PSA_2214_B	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2214_B
PSA_2215	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2215
PSA_2216	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2216
PSA_2217	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2217
PSA_2218	Satisfactory	Satisfactory	Satisfactory	Satisfactory	4	0	0	20	100	PASS - EXCELLENT	PSA_2218

Score	
5	Satisfactory
2	Questionable
0	Unsatisfactory

Score	%	Pass/ Fail	Level
20	86 - 100	PASS	EXCELLENT
15 - 19	71 - 85	PASS	GOOD
12 - 14	60 - 70	PASS	ACCEPTABLE
6 - 11	26 - 59	FAIL	POOR
0-5	0 - 15	FAIL	BAD

## Appendices

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Exercise Code:	PS57
LabCode:	PSA_2201
Sample Code:	PS572201

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	117.5800
-3.50 to -3.00; 8 mm	409.7000
-3.00 to -2.50; 5.6 mm	267.1800
-2.50 to -2.00; 4 mm	101.8500
-2.00 to -1.50; 2.8 mm	12.3800
-1.50 to -1.00; 2 mm	5.7600
-1.00 to -0.50; 1.4 mm	4.4800
-0.50 to 0.00; 1 mm	0.1300
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2202
Sample Code:	PS572202

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.7888
-4.00 to -3.50; 11.2 mm	11.2703
-3.50 to -3.00; 8 mm	44.6997
-3.00 to -2.50; 5.6 mm	29.8312
-2.50 to -2.00; 4 mm	10.7296
-2.00 to -1.50; 2.8 mm	1.5504
-1.50 to -1.00; 2 mm	0.7043
-1.00 to -0.50; 1.4 mm	0.4258
-0.50 to 0.00; 1 mm	0.0000
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2203
Sample Code:	PS572203

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	11.4767
-3.50 to -3.00; 8 mm	44.9490
-3.00 to -2.50; 5.6 mm	29.4274
-2.50 to -2.00; 4 mm	11.6971
-2.00 to -1.50; 2.8 mm	1.3574
-1.50 to -1.00; 2 mm	0.6081
-1.00 to -0.50; 1.4 mm	0.4550
-0.50 to 0.00; 1 mm	0.0109
0.00 to 0.50; (707 µm)	0.0185
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2204
Sample Code:	PS572204

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	4.1307
-4.00 to -3.50; 11.2 mm	18.7587
-3.50 to -3.00; 8 mm	44.8894
-3.00 to -2.50; 5.6 mm	22.1976
-2.50 to -2.00; 4 mm	8.2922
-2.00 to -1.50; 2.8 mm	0.4362
-1.50 to -1.00; 2 mm	0.2113
-1.00 to -0.50; 1.4 mm	0.2045
-0.50 to 0.00; 1 mm	0.0682
0.00 to 0.50; (707 µm)	0.784 (0.0783)
0.50 to 1.00; (500 µm)	0.0443
1.00 to 1.50; (353.6 µm)	0.0136
1.50 to 2.00; (250 µm)	0.0307
2.00 to 2.50; (176.8 µm)	0.2215
2.50 to 3.00; (125 µm)	0.3647
3.00 to 3.50; (88.39 µm)	0.0545
3.50 to 4.00; (62.5 µm)	0.0034
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

There was a separate column next to the merged data that contained the data in brackets. This was used for analysis as the presented merged data summed to over 100%, this was presumed to be a transcription error.



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Exercise Code:	PS57
LabCode:	PSA_2205
Sample Code:	PS572205

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	11.2000
-4.00 to -3.50; 11.2 mm	104.6800
-3.50 to -3.00; 8 mm	410.8300
-3.00 to -2.50; 5.6 mm	266.0800
-2.50 to -2.00; 4 mm	103.4000
-2.00 to -1.50; 2.8 mm	13.6200
-1.50 to -1.00; 2 mm	6.1000
-1.00 to -0.50; 1.4 mm	4.7000
-0.50 to 0.00; 1 mm	0.1900
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2208
Sample Code:	PS572208

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	0.0000
-3.50 to -3.00; 8 mm	519.0000
-3.00 to -2.50; 5.6 mm	292.5200
-2.50 to -2.00; 4 mm	85.5900
-2.00 to -1.50; 2.8 mm	11.5300
-1.50 to -1.00; 2 mm	4.9800
-1.00 to -0.50; 1.4 mm	4.0700
-0.50 to 0.00; 1 mm	0.1500
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2209
Sample Code:	PS572209

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	103.9667
-4.00 to -3.50; 11.2 mm	384.6667
-3.50 to -3.00; 8 mm	301.1333
-3.00 to -2.50; 5.6 mm	101.4000
-2.50 to -2.00; 4 mm	15.3667
-2.00 to -1.50; 2.8 mm	5.3667
-1.50 to -1.00; 2 mm	4.3667
-1.00 to -0.50; 1.4 mm	0.1333
-0.50 to 0.00; 1 mm	0.2333
0.00 to 0.50; (707 µm)	0.0153
0.50 to 1.00; (500 µm)	0.0191
1.00 to 1.50; (353.6 µm)	0.0202
1.50 to 2.00; (250 µm)	0.0222
2.00 to 2.50; (176.8 µm)	0.0214
2.50 to 3.00; (125 µm)	0.0214
3.00 to 3.50; (88.39 µm)	0.0149
3.50 to 4.00; (62.5 µm)	0.0119
4.00 to 4.50; (44.19 µm)	0.0098
4.50 to 5.00; (31.25 µm)	0.0084
5.00 to 5.50; (22.097 µm)	0.0078
5.50 to 6.00; (15.625 µm)	0.0059
6.00 to 6.50; (11.049 µm)	0.0045
6.50 to 7.00; (7.813 µm)	0.0036
7.00 to 7.50; (5.524 µm)	0.0032
7.50 to 8.00; (3.906 µm)	0.0028
8.00 to 8.50; (2.762 µm)	0.0022
8.50 to 9.00; (1.953 µm)	0.0017
9.00 to 9.50; (1.381 µm)	0.0012
9.50 to 10.00; (0.977 µm)	0.0009
10.00 to 10.50; (0.691 µm)	0.0009
10.50 to 11.00; (0.488 µm)	0.0007
11.00 to 11.50; (0.345 µm)	0.0002
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2210
Sample Code:	PS572210

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	11.4500
-3.50 to -3.00; 8 mm	43.9000
-3.00 to -2.50; 5.6 mm	31.7900
-2.50 to -2.00; 4 mm	10.5200
-2.00 to -1.50; 2.8 mm	1.2300
-1.50 to -1.00; 2 mm	0.6700
-1.00 to -0.50; 1.4 mm	0.4300
-0.50 to 0.00; 1 mm	0.0200
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2211
Sample Code:	PS572211

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	93.7700
-3.50 to -3.00; 8 mm	409.8500
-3.00 to -2.50; 5.6 mm	287.6500
-2.50 to -2.00; 4 mm	105.7200
-2.00 to -1.50; 2.8 mm	11.2900
-1.50 to -1.00; 2 mm	6.3400
-1.00 to -0.50; 1.4 mm	4.1800
-0.50 to 0.00; 1 mm	0.1000
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2212
Sample Code:	PS572212

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	97.4048
-3.50 to -3.00; 8 mm	417.0840
-3.00 to -2.50; 5.6 mm	259.0637
-2.50 to -2.00; 4 mm	122.9650
-2.00 to -1.50; 2.8 mm	12.9285
-1.50 to -1.00; 2 mm	6.3680
-1.00 to -0.50; 1.4 mm	4.4752
-0.50 to 0.00; 1 mm	0.4362
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2213
Sample Code:	PS572213

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-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	11.52
-3.50 to -3.00; 8 mm	43.42
-3.00 to -2.50; 5.6 mm	30.81
-2.50 to -2.00; 4 mm	11.68
-2.00 to -1.50; 2.8 mm	1.50
-1.50 to -1.00; 2 mm	0.54
-1.00 to -0.50; 1.4 mm	0.49
-0.50 to 0.00; 1 mm	0.02
<1mm	0.02

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Exercise Code:	PS57
LabCode:	PSA_2214_A
Sample Code:	PS5714_A

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	9.6587
-3.50 to -3.00; 8 mm	44.1636
-3.00 to -2.50; 5.6 mm	31.5924
-2.50 to -2.00; 4 mm	12.0992
-2.00 to -1.50; 2.8 mm	1.3604
-1.50 to -1.00; 2 mm	0.5731
-1.00 to -0.50; 1.4 mm	0.4570
-0.50 to 0.00; 1 mm	0.0127
<1mm	0.0829

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Exercise Code:	PS57
LabCode:	PSA_2214_B
Sample Code:	PS5714_B

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	9.5480
-3.50 to -3.00; 8 mm	45.7512
-3.00 to -2.50; 5.6 mm	30.3658
-2.50 to -2.00; 4 mm	11.8778
-2.00 to -1.50; 2.8 mm	1.3138
-1.50 to -1.00; 2 mm	0.6056
-1.00 to -0.50; 1.4 mm	0.4432
-0.50 to 0.00; 1 mm	0.0123
<1mm	0.0823



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Exercise Code:	PS57
LabCode:	PSA_2215
Sample Code:	PS572215

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	11.9014
-3.50 to -3.00; 8 mm	43.3924
-3.00 to -2.50; 5.6 mm	30.7068
-2.50 to -2.00; 4 mm	11.4327
-2.00 to -1.50; 2.8 mm	1.5052
-1.50 to -1.00; 2 mm	0.5971
-1.00 to -0.50; 1.4 mm	0.4492
-0.50 to 0.00; 1 mm	0.0076
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2216
Sample Code:	PS572216

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	125.9500
-3.50 to -3.00; 8 mm	398.6000
-3.00 to -2.50; 5.6 mm	267.0000
-2.50 to -2.00; 4 mm	107.7200
-2.00 to -1.50; 2.8 mm	12.2800
-1.50 to -1.00; 2 mm	5.4500
-1.00 to -0.50; 1.4 mm	4.6700
-0.50 to 0.00; 1 mm	0.1400
0.00 to 0.50; (707 µm)	0.0713
0.50 to 1.00; (500 µm)	0.0713
1.00 to 1.50; (353.6 µm)	0.0713
1.50 to 2.00; (250 µm)	0.0713
2.00 to 2.50; (176.8 µm)	0.0713
2.50 to 3.00; (125 µm)	0.0713
3.00 to 3.50; (88.39 µm)	0.0713
3.50 to 4.00; (62.5 µm)	0.0713
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2217
Sample Code:	PS572217

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	113.1500
-3.50 to -3.00; 8 mm	403.2900
-3.00 to -2.50; 5.6 mm	276.6700
-2.50 to -2.00; 4 mm	102.3200
-2.00 to -1.50; 2.8 mm	13.3600
-1.50 to -1.00; 2 mm	4.6600
-1.00 to -0.50; 1.4 mm	4.0600
-0.50 to 0.00; 1 mm	0.1000
0.00 to 0.50; (707 µm)	0.0000
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_2218
Sample Code:	PS572218

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	109.1840
-3.50 to -3.00; 8 mm	409.6910
-3.00 to -2.50; 5.6 mm	277.7420
-2.50 to -2.00; 4 mm	103.7400
-2.00 to -1.50; 2.8 mm	9.8520
-1.50 to -1.00; 2 mm	6.3410
-1.00 to -0.50; 1.4 mm	4.6140
-0.50 to 0.00; 1 mm	0.1300
0.00 to 0.50; (707 µm)	0.0140
0.50 to 1.00; (500 µm)	0.0090
1.00 to 1.50; (353.6 µm)	0.0070
1.50 to 2.00; (250 µm)	0.0020
2.00 to 2.50; (176.8 µm)	0.0050
2.50 to 3.00; (125 µm)	0.0080
3.00 to 3.50; (88.39 µm)	0.0050
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_BM REP 1
Sample Code:	PS57BM REP 1

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	11.4767
-3.50 to -3.00; 8 mm	44.9490
-3.00 to -2.50; 5.6 mm	29.4274
-2.50 to -2.00; 4 mm	11.6971
-2.00 to -1.50; 2.8 mm	1.3574
-1.50 to -1.00; 2 mm	0.6081
-1.00 to -0.50; 1.4 mm	0.4550
-0.50 to 0.00; 1 mm	0.0109
0.00 to 0.50; (707 µm)	0.0185
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_BM REP 2
Sample Code:	PS57BM REP 2

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	10.4618
-3.50 to -3.00; 8 mm	45.6360
-3.00 to -2.50; 5.6 mm	28.5423
-2.50 to -2.00; 4 mm	12.7693
-2.00 to -1.50; 2.8 mm	1.5441
-1.50 to -1.00; 2 mm	0.5509
-1.00 to -0.50; 1.4 mm	0.4598
-0.50 to 0.00; 1 mm	0.0130
0.00 to 0.50; (707 µm)	0.0228
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_BM REP 3
Sample Code:	PS57BM REP 3

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	10.4811
-3.50 to -3.00; 8 mm	45.2389
-3.00 to -2.50; 5.6 mm	28.5828
-2.50 to -2.00; 4 mm	12.9920
-2.00 to -1.50; 2.8 mm	1.7018
-1.50 to -1.00; 2 mm	0.5213
-1.00 to -0.50; 1.4 mm	0.4485
-0.50 to 0.00; 1 mm	0.0119
0.00 to 0.50; (707 µm)	0.0217
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000

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Exercise Code:	PS57
LabCode:	PSA_BM REP 4
Sample Code:	PS57BM REP 4

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	11.8181
-3.50 to -3.00; 8 mm	45.1388
-3.00 to -2.50; 5.6 mm	28.1708
-2.50 to -2.00; 4 mm	12.4107
-2.00 to -1.50; 2.8 mm	1.3773
-1.50 to -1.00; 2 mm	0.5372
-1.00 to -0.50; 1.4 mm	0.5014
-0.50 to 0.00; 1 mm	0.0130
0.00 to 0.50; (707 µm)	0.0326
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000



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Exercise Code:	PS57
LabCode:	PSA_BM REP 5
Sample Code:	PS57BM REP 5

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Volume/Weight (mark as "0" for not analysed or no material)
-6.50 to -6.00; 63 mm	0.0000
-6.00 to -5.50; 45 mm	0.0000
-5.50 to -5.00; 31.5 mm	0.0000
-5.00 to -4.50; 22.4 mm	0.0000
-4.50 to -4.00; 16 mm	0.0000
-4.00 to -3.50; 11.2 mm	11.1743
-3.50 to -3.00; 8 mm	45.7900
-3.00 to -2.50; 5.6 mm	28.4073
-2.50 to -2.00; 4 mm	12.0783
-2.00 to -1.50; 2.8 mm	1.4824
-1.50 to -1.00; 2 mm	0.5762
-1.00 to -0.50; 1.4 mm	0.4580
-0.50 to 0.00; 1 mm	0.0119
0.00 to 0.50; (707 µm)	0.0217
0.50 to 1.00; (500 µm)	0.0000
1.00 to 1.50; (353.6 µm)	0.0000
1.50 to 2.00; (250 µm)	0.0000
2.00 to 2.50; (176.8 µm)	0.0000
2.50 to 3.00; (125 µm)	0.0000
3.00 to 3.50; (88.39 µm)	0.0000
3.50 to 4.00; (62.5 µm)	0.0000
4.00 to 4.50; (44.19 µm)	0.0000
4.50 to 5.00; (31.25 µm)	0.0000
5.00 to 5.50; (22.097 µm)	0.0000
5.50 to 6.00; (15.625 µm)	0.0000
6.00 to 6.50; (11.049 µm)	0.0000
6.50 to 7.00; (7.813 µm)	0.0000
7.00 to 7.50; (5.524 µm)	0.0000
7.50 to 8.00; (3.906 µm)	0.0000
8.00 to 8.50; (2.762 µm)	0.0000
8.50 to 9.00; (1.953 µm)	0.0000
9.00 to 9.50; (1.381 µm)	0.0000
9.50 to 10.00; (0.977 µm)	0.0000
10.00 to 10.50; (0.691 µm)	0.0000
10.50 to 11.00; (0.488 µm)	0.0000
11.00 to 11.50; (0.345 µm)	0.0000
11.50 to 12.00; (0.244 µm)	0.0000
12.00 to 12.50; (0.173 µm)	0.0000
12.50 to 13.00; (0.122 µm)	0.0000
13.00 to 13.50; (0.086 µm)	0.0000