

# **Kincardine Offshore Windfarm** Environmental Statement Appendix A: Particle Size Analysis Report

February 2016

**ATKINS**

# Analytical Report

## on the Particle Size Distribution of Samples

FOR:

Amy Parry  
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INVESTORS IN PEOPLE



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Job and Sample Information:	
Job No(s):	2014-20632
Client Order No/Reference:	
Date Sample(s) Received:	3/3/15
<b>Lab Code</b>	<b>Client Code</b>
See Table	See Table

## Methods

Methods	Accreditation Reference
Particle Size Analysis using Laser Diffraction	DM011

## Results

Customer Code	Laboratory Code	>32mm (%)	<32mm >2mm (%)	<2mm (%)
6/EAB/2013 Mar 2013 12143 TV6	1201092	0	0.19	99.81
8/KINCSS/2014 Mar 2014 18251 TV9	1201093	0	0.97	99.03
9/KINCSS/2014 Mar 2014 18252 TV10	1201094	0	0.44	99.56
10/EAB/2013 Mar 2013 12144 TV10	1201095	0	0.05	99.95
23/KINCSS/2014 Mar 2014 18266 TV27	1201096	0	0.37	99.63
28/KINCSS/2014 Mar 2014 18271 TV33	1201097	0	3.89	96.11
31/KINCSS/2014 Mar 2014 18274 TV38	1201098	0	7.92	92.08
34/KINCSS/2014 Mar 2014 18277 TV41	1201099	0	1.73	98.27
38/KINCSS/2014 Mar 2014 18281 TV45	1201100	0	4.59	95.41
7/KINCSS/2014 Mar 2014 18250 TV8	1201126	0	0.49	99.51

See Appendix  
(Ten Pages)

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**Note:**

Samples will be stored for a period of eight weeks following completion of analysis and acceptance of analytical report(s) at no extra cost after which samples will be disposed of unless a specific instruction is given (with the sample analysis request/order) to store the sample beyond this period. Extended storage charges will apply.

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# Result Analysis Report

**Laboratory Code**

 1201092 6/EAB/2013 Mar 2013  
 12143 TV6

**Measured:**

12 March 2015 09:39:54

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 09:39:55

**Sample bulk lot ref:**

1201092 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

0.020 to 2000.000 um

**Obscuration:**

8.65 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

0.941 %

**Result Emulation:**

Off

**Concentration:**

0.1528 %Vol

**Span :**

1.081

**Uniformity:**

0.347

**Result units:**

Volume

**Specific Surface Area:**

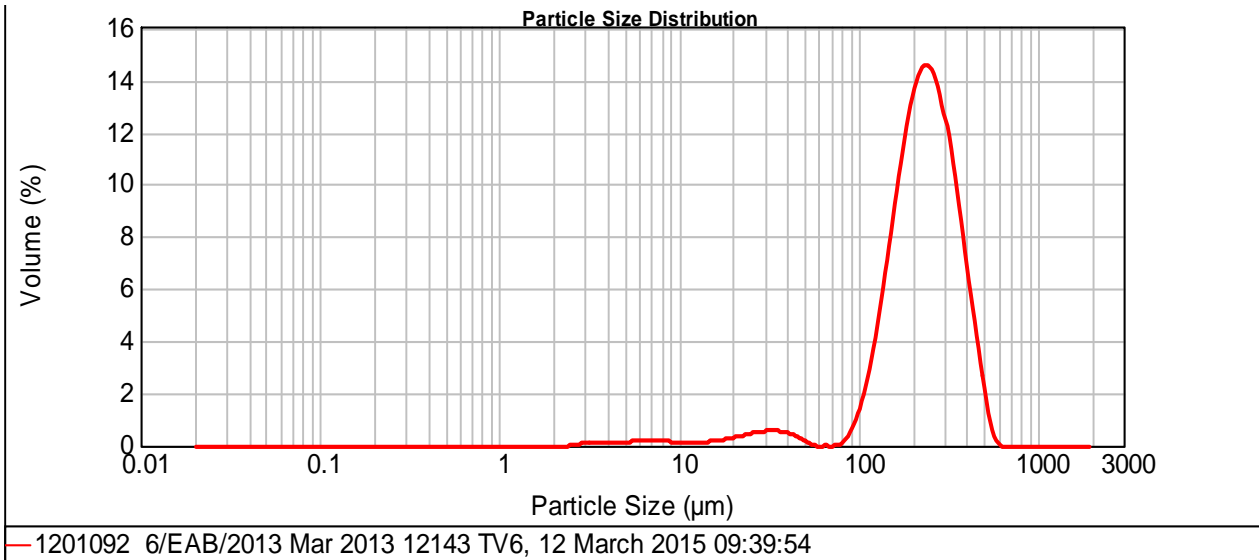
 0.0489 m<sup>2</sup>/g

**Surface Weighted Mean D[3,2]:**

122.744 um

**Vol. Weighted Mean D[4,3]:**

240.711 um

**d(0.1): 128.122 um**
**d(0.5): 231.390 um**
**d(0.9): 378.321 um**


Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.13	50.238	0.05	355.656	6.12
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.12	56.368	0.00	399.052	4.18
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.12	63.246	0.00	447.744	2.43
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.11	70.963	0.00	502.377	0.77
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.11	79.621	0.00	563.677	0.04
0.036	0.00	0.252	0.00	1.783	0.00	12.619	0.11	89.337	0.62	632.456	0.00
0.040	0.00	0.283	0.00	2.000	0.00	14.159	0.12	100.237	1.39	709.627	0.00
0.045	0.00	0.317	0.00	2.244	0.00	15.887	0.15	112.468	2.57	796.214	0.00
0.050	0.00	0.356	0.00	2.518	0.00	17.825	0.19	126.191	4.09	893.367	0.00
0.056	0.00	0.399	0.00	2.825	0.04	20.000	0.25	141.589	5.88	1002.374	0.00
0.063	0.00	0.448	0.00	3.170	0.07	22.440	0.32	158.866	7.70	1124.683	0.00
0.071	0.00	0.502	0.00	3.557	0.07	25.179	0.38	178.250	9.35	1261.915	0.00
0.080	0.00	0.564	0.00	3.991	0.09	28.251	0.42	200.000	10.51	1415.892	0.00
0.089	0.00	0.632	0.00	4.477	0.10	31.698	0.44	224.404	10.99	1588.656	0.00
0.100	0.00	0.710	0.00	5.024	0.12	35.566	0.41	251.785	10.69	1782.502	0.00
0.112	0.00	0.796	0.00	5.637	0.13	39.905	0.33	282.508	9.66	2000.000	0.00
0.126	0.00	0.893	0.00	6.325	0.13	44.774	0.21	316.979	8.03		
0.142	0.00	1.002	0.00	7.096	0.13	50.238		355.656			

**Operator notes:** 2014-20632

# Result Analysis Report

**Laboratory Code**

 1201093 8/KINCSS/2014 Mar 2014  
 18251 TV9

**Measured:**

12 March 2015 10:07:13

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 10:07:14

**Sample bulk lot ref:**

1201093 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

0.020 to 2000.000 um

**Obscuration:**

8.86 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

0.967 %

**Result Emulation:**

Off

**Concentration:**

0.1326 %Vol

**Span :**

1.301

**Uniformity:**

0.403

**Result units:**

Volume

**Specific Surface Area:**

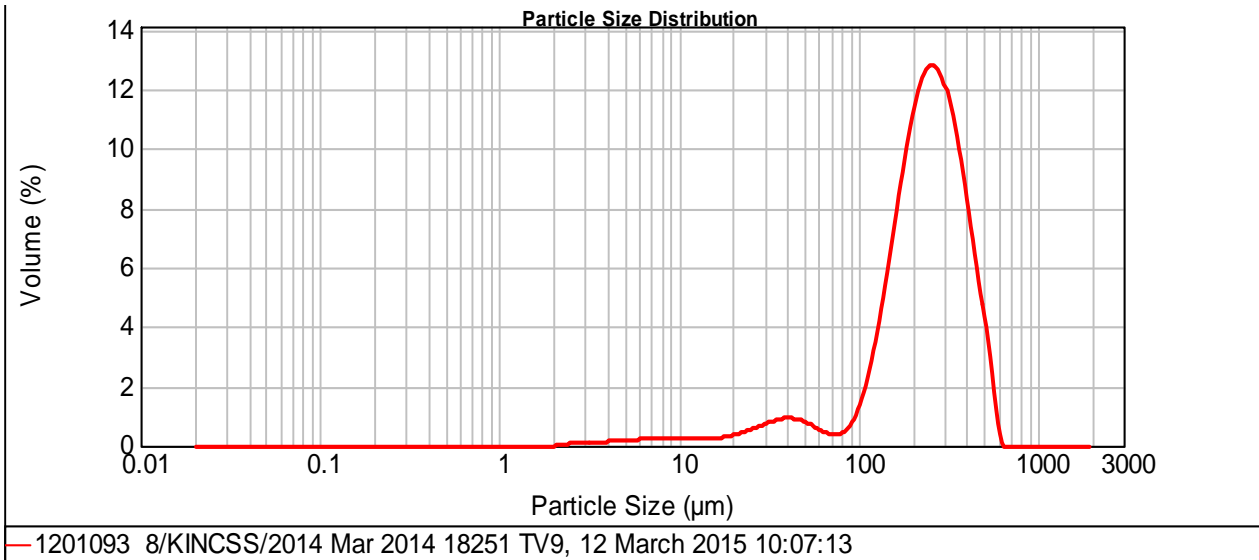
 0.0573 m<sup>2</sup>/g

**Surface Weighted Mean D[3,2]:**

104.641 um

**Vol. Weighted Mean D[4,3]:**

250.247 um

**d(0.1): 103.235 um**
**d(0.5): 240.944 um**
**d(0.9): 416.604 um**


Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.18	50.238	0.55	355.656	6.97
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.18	56.368	0.43	399.052	5.41
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.18	63.246	0.31	447.744	3.87
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.18	70.963	0.27	502.377	2.50
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.18	79.621	0.37	563.677	0.43
0.036	0.00	0.252	0.00	1.783	0.00	12.619	0.17	89.337	0.69	632.456	0.00
0.040	0.00	0.283	0.00	2.000	0.01	14.159	0.18	100.237	1.28	709.627	0.00
0.045	0.00	0.317	0.00	2.244	0.05	15.887	0.20	112.468	2.20	796.214	0.00
0.050	0.00	0.356	0.00	2.518	0.06	17.825	0.24	126.191	3.38	893.367	0.00
0.056	0.00	0.399	0.00	2.825	0.07	20.000	0.29	141.589	4.80	1002.374	0.00
0.063	0.00	0.448	0.00	3.170	0.08	22.440	0.37	158.866	6.28	1124.683	0.00
0.071	0.00	0.502	0.00	3.557	0.10	25.179	0.46	178.250	7.69	1261.915	0.00
0.080	0.00	0.564	0.00	3.991	0.11	28.251	0.56	200.000	8.81	1415.892	0.00
0.089	0.00	0.632	0.00	4.477	0.13	31.698	0.64	224.404	9.50	1588.656	0.00
0.100	0.00	0.710	0.00	5.024	0.14	35.566	0.69	251.785	9.64	1782.502	0.00
0.112	0.00	0.796	0.00	5.637	0.16	39.905	0.70	282.508	9.22	2000.000	0.00
0.126	0.00	0.893	0.00	6.325	0.17	44.774	0.65	316.979	8.27		
0.142	0.00	1.002	0.00	7.096	0.17	50.238	0.65	355.656	8.27		

**Operator notes:** 2014-20632

# Result Analysis Report

**Laboratory Code**  
1201094 9/KINCSS/2014 Mar 2014  
18252 TV10

**Measured:**  
12 March 2015 10:50:45

**Sample Source & type:**  
Supplier = Atkins Limited

**Measured by:**  
analy

**Analysed:**  
12 March 2015 10:50:46

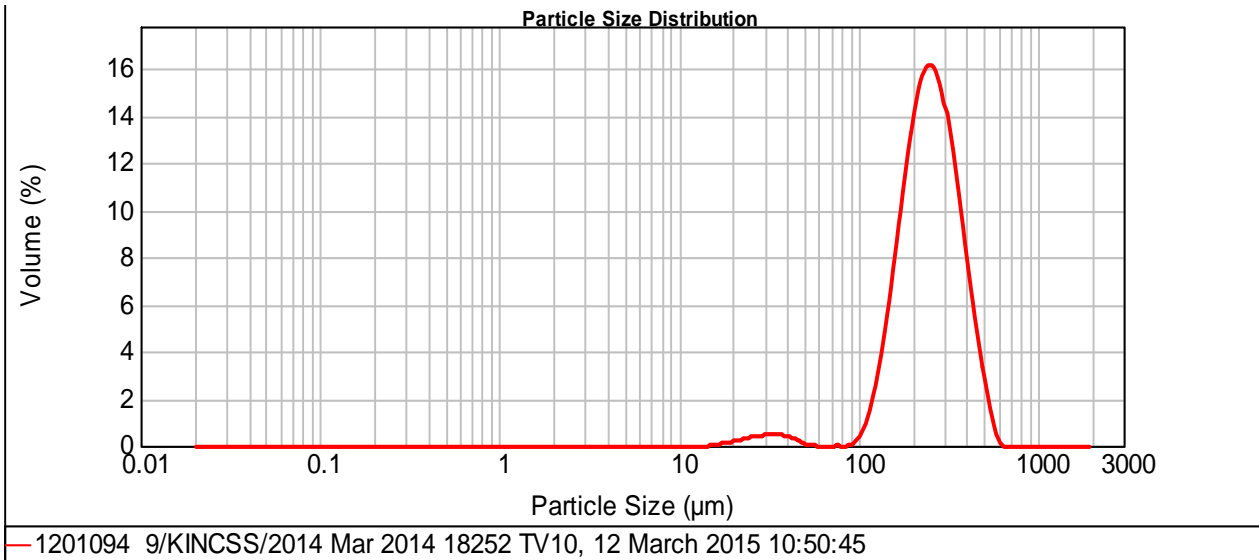
**Sample bulk lot ref:**  
1201094 = Run 1

**Result Source:**  
Measurement

<b>Particle Name:</b> Default	<b>Accessory Name:</b> Hydro 2000G (A)	<b>Analysis model:</b> General purpose	<b>Sensitivity:</b> Normal
<b>Particle RI:</b> 1.520	<b>Absorption:</b> 0.1	<b>Size range:</b> 0.020 to 2000.000 um	<b>Obscuration:</b> 9.09 %
<b>Dispersant Name:</b> Water	<b>Dispersant RI:</b> 1.330	<b>Weighted Residual:</b> 0.911 %	<b>Result Emulation:</b> Off

<b>Concentration:</b> 0.2745 %Vol	<b>Span :</b> 0.967	<b>Uniformity:</b> 0.307	<b>Result units:</b> Volume
<b>Specific Surface Area:</b> 0.0294 m <sup>2</sup> /g	<b>Surface Weighted Mean D[3,2]:</b> 203.793 um	<b>Vol. Weighted Mean D[4,3]:</b> 260.912 um	

**d(0.1): 152.859 um                      d(0.5): 248.903 um                      d(0.9): 393.428 um**



Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.00	50.238	0.02	355.656	7.08
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.00	56.368	0.00	399.052	4.84
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.00	63.246	0.00	447.744	2.91
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.00	70.963	0.00	502.377	1.32
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.00	79.621	0.00	563.677	0.17
0.036	0.00	0.252	0.00	1.783	0.00	12.619	0.00	89.337	0.07	632.456	0.00
0.040	0.00	0.283	0.00	2.000	0.00	14.159	0.00	100.237	0.51	709.627	0.00
0.045	0.00	0.317	0.00	2.244	0.00	15.887	0.07	112.468	1.40	796.214	0.00
0.050	0.00	0.356	0.00	2.518	0.00	17.825	0.10	126.191	2.81	893.367	0.00
0.056	0.00	0.399	0.00	2.825	0.00	20.000	0.16	141.589	4.76	1002.374	0.00
0.063	0.00	0.448	0.00	3.170	0.00	22.440	0.23	158.866	7.00	1124.683	0.00
0.071	0.00	0.502	0.00	3.557	0.00	25.179	0.30	178.250	9.25	1261.915	0.00
0.080	0.00	0.564	0.00	3.991	0.00	28.251	0.35	200.000	11.06	1415.892	0.00
0.089	0.00	0.632	0.00	4.477	0.00	31.698	0.36	224.404	12.07	1588.656	0.00
0.100	0.00	0.710	0.00	5.024	0.00	35.566	0.33	251.785	12.08	1782.502	0.00
0.112	0.00	0.796	0.00	5.637	0.00	39.905	0.25	282.508	11.09	2000.000	0.00
0.126	0.00	0.893	0.00	6.325	0.00	44.774	0.12	316.979	9.28		
0.142	0.00	1.002	0.00	7.096	0.00	50.238		355.656			

**Operator notes:** 2014-20632

# Result Analysis Report

**Laboratory Code**

 1201095 10/EAB/2013 Mar 2013  
 12144 TV10

**Measured:**

12 March 2015 10:57:21

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 10:57:22

**Sample bulk lot ref:**

1201095 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

 0.020 to 2000.000  $\mu\text{m}$ 
**Obscuration:**

9.99 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

0.662 %

**Result Emulation:**

Off

**Concentration:**

0.1245 %Vol

**Span :**

1.387

**Uniformity:**

0.434

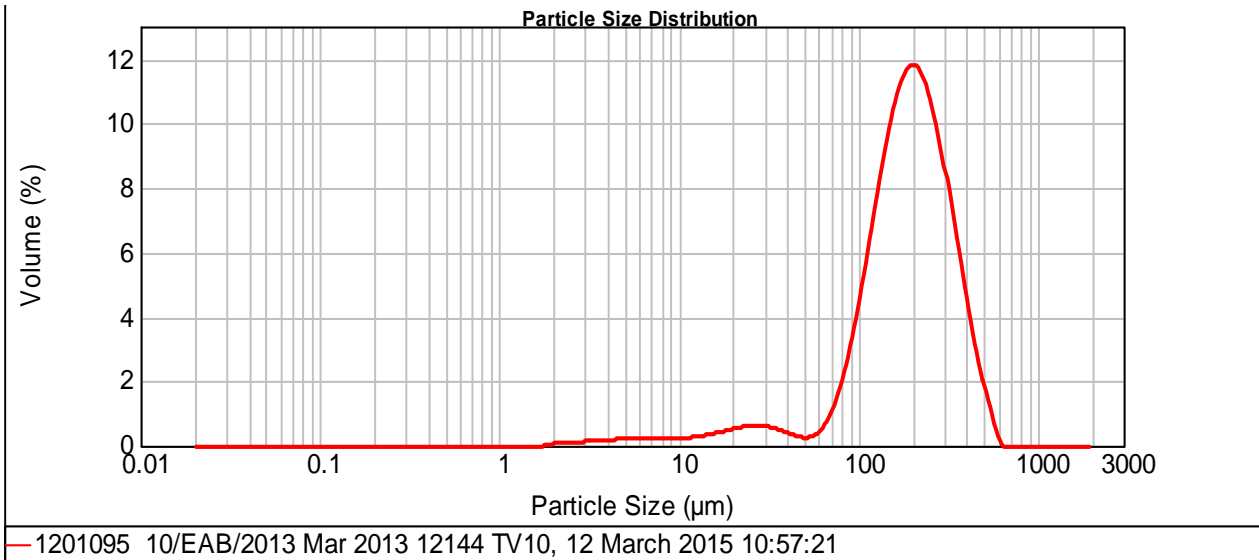
**Result units:**

Volume

**Specific Surface Area:**

 0.0688  $\text{m}^2/\text{g}$ 
**Surface Weighted Mean D[3,2]:**

 87.261  $\mu\text{m}$ 
**Vol. Weighted Mean D[4,3]:**

 206.476  $\mu\text{m}$ 
**d(0.1): 87.341  $\mu\text{m}$** 
**d(0.5): 191.769  $\mu\text{m}$** 
**d(0.9): 353.332  $\mu\text{m}$** 


Size ( $\mu\text{m}$ )	Volume In %	Size ( $\mu\text{m}$ )	Volume In %	Size ( $\mu\text{m}$ )	Volume In %	Size ( $\mu\text{m}$ )	Volume In %	Size ( $\mu\text{m}$ )	Volume In %	Size ( $\mu\text{m}$ )	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.16	50.238	0.20	355.656	4.04
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.16	56.368	0.31	399.052	2.79
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.17	63.246	0.59	447.744	1.74
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.18	70.963	1.08	502.377	1.00
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.20	79.621	1.80	563.677	0.16
0.036	0.00	0.252	0.00	1.783	0.02	12.619	0.22	89.337	2.76	632.456	0.00
0.040	0.00	0.283	0.00	2.000	0.06	14.159	0.26	100.237	3.89	709.627	0.00
0.045	0.00	0.317	0.00	2.244	0.07	15.887	0.31	112.468	5.14	796.214	0.00
0.050	0.00	0.356	0.00	2.518	0.09	17.825	0.37	126.191	6.38	893.367	0.00
0.056	0.00	0.399	0.00	2.825	0.10	20.000	0.42	141.589	7.50	1002.374	0.00
0.063	0.00	0.448	0.00	3.170	0.12	22.440	0.46	158.866	8.34	1124.683	0.00
0.071	0.00	0.502	0.00	3.557	0.13	25.179	0.47	178.250	8.83	1261.915	0.00
0.080	0.00	0.564	0.00	3.991	0.14	28.251	0.46	200.000	8.88	1415.892	0.00
0.089	0.00	0.632	0.00	4.477	0.15	31.698	0.41	224.404	8.49	1588.656	0.00
0.100	0.00	0.710	0.00	5.024	0.16	35.566	0.34	251.785	7.70	1782.502	0.00
0.112	0.00	0.796	0.00	5.637	0.16	39.905	0.26	282.508	6.62	2000.000	0.00
0.126	0.00	0.893	0.00	6.325	0.16	44.774	0.20	316.979	5.33		
0.142	0.00	1.002	0.00	7.096	0.16	50.238		355.656			

**Operator notes:** 2014-20632



# Result Analysis Report

**Laboratory Code**

1201096 23/KINCSS/2014 Mar 2014  
18266 TV27

**Measured:**

12 March 2015 11:17:10

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 11:17:11

**Sample bulk lot ref:**

1201096 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

0.020 to 2000.000 um

**Obscuration:**

8.20 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

1.164 %

**Result Emulation:**

Off

**Concentration:**

0.1859 %Vol

**Span :**

1.449

**Uniformity:**

0.481

**Result units:**

Volume

**Specific Surface Area:**

0.038 m<sup>2</sup>/g

**Surface Weighted Mean D[3,2]:**

157.782 um

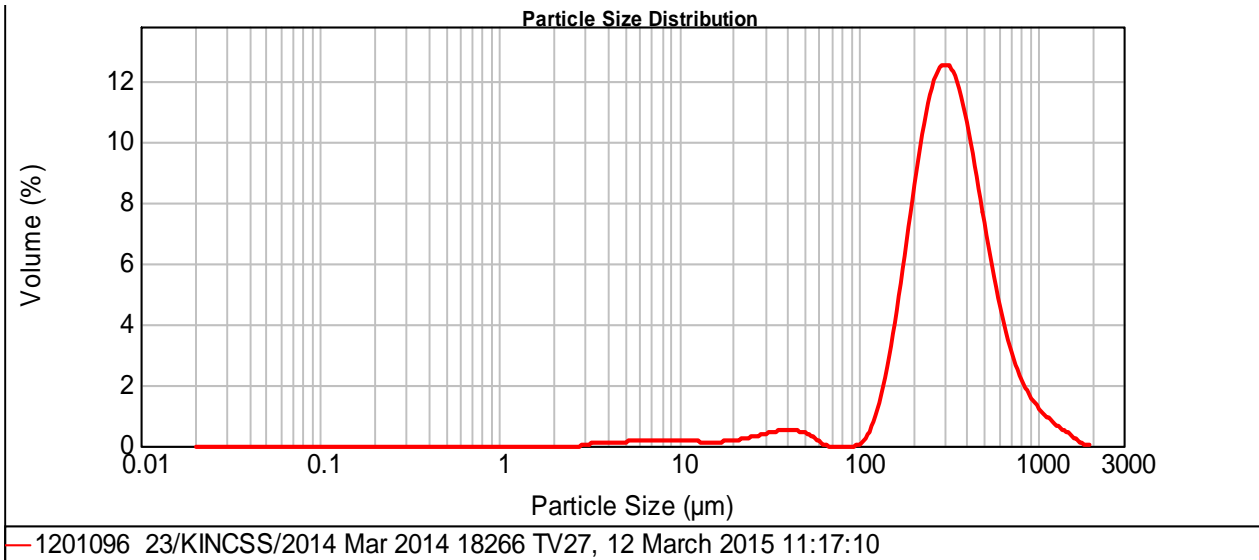
**Vol. Weighted Mean D[4,3]:**

364.264 um

**d(0.1): 167.625 um**

**d(0.5): 314.040 um**

**d(0.9): 622.594 um**



— 1201096 23/KINCSS/2014 Mar 2014 18266 TV27, 12 March 2015 11:17:10

Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.13	50.238	0.27	355.656	8.50
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.13	56.368	0.12	399.052	7.39
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.13	63.246	0.00	447.744	6.10
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.12	70.963	0.00	502.377	4.81
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.11	79.621	0.00	563.677	3.65
0.036	0.00	0.252	0.00	1.783	0.00	12.619	0.10	89.337	0.00	632.456	2.70
0.040	0.00	0.283	0.00	2.000	0.00	14.159	0.10	100.237	0.08	709.627	1.98
0.045	0.00	0.317	0.00	2.244	0.00	15.887	0.10	112.468	0.48	796.214	1.46
0.050	0.00	0.356	0.00	2.518	0.00	17.825	0.11	126.191	1.20	893.367	1.09
0.056	0.00	0.399	0.00	2.825	0.00	20.000	0.14	141.589	2.27	1002.374	0.83
0.063	0.00	0.448	0.00	3.170	0.07	22.440	0.18	158.866	3.64	1124.683	0.62
0.071	0.00	0.502	0.00	3.557	0.07	25.179	0.24	178.250	5.21	1261.915	0.44
0.080	0.00	0.564	0.00	3.991	0.09	28.251	0.30	200.000	6.78	1415.892	0.30
0.089	0.00	0.632	0.00	4.477	0.10	31.698	0.35	224.404	9.44	1588.656	0.12
0.100	0.00	0.710	0.00	5.024	0.11	35.566	0.39	251.785	9.07	1782.502	0.03
0.112	0.00	0.796	0.00	5.637	0.12	39.905	0.39	282.508	9.44	2000.000	
0.126	0.00	0.893	0.00	6.325	0.12	44.774	0.35	316.979	9.23		
0.142	0.00	1.002	0.00	7.096	0.12	50.238	0.35	355.656			

Operator notes: 2014-20632

# Result Analysis Report

**Laboratory Code**

1201097 28/KINCSS/2014 Mar 2014  
18271 TV33

**Measured:**

12 March 2015 11:23:47

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 11:23:48

**Sample bulk lot ref:**

1201097 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

0.020 to 2000.000 um

**Obscuration:**

8.74 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

0.829 %

**Result Emulation:**

Off

**Concentration:**

0.1107 %Vol

**Span :**

2.315

**Uniformity:**

0.735

**Result units:**

Volume

**Specific Surface Area:**

0.0671 m<sup>2</sup>/g

**Surface Weighted Mean D[3,2]:**

89.410 um

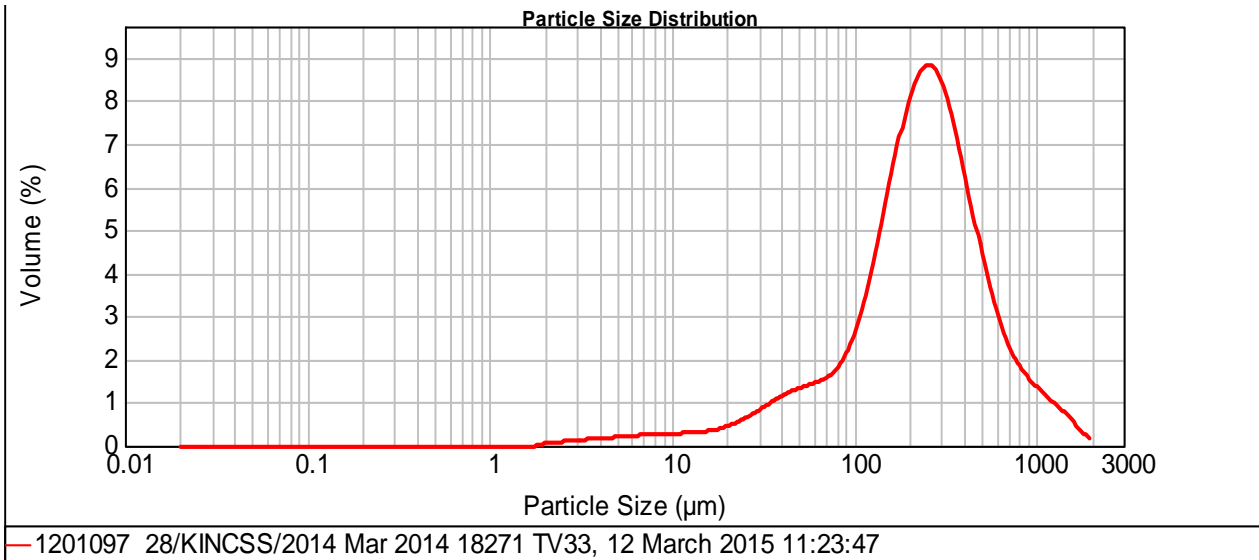
**Vol. Weighted Mean D[4,3]:**

306.436 um

**d(0.1): 57.044 um**

**d(0.5): 238.496 um**

**d(0.9): 609.244 um**



Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.19	50.238	1.04	355.656	5.22
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.20	56.368	1.09	399.052	4.45
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.21	63.246	1.15	447.744	3.68
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.22	70.963	1.26	502.377	2.97
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.22	79.621	1.46	563.677	2.37
0.036	0.00	0.252	0.00	1.783	0.02	12.619	0.23	89.337	1.76	632.456	1.90
0.040	0.00	0.283	0.00	2.000	0.06	14.159	0.25	100.237	2.20	709.627	1.55
0.045	0.00	0.317	0.00	2.244	0.07	15.887	0.27	112.468	2.79	796.214	1.31
0.050	0.00	0.356	0.00	2.518	0.08	17.825	0.31	126.191	3.49	893.367	1.12
0.056	0.00	0.399	0.00	2.825	0.09	20.000	0.37	141.589	4.28	1002.374	0.96
0.063	0.00	0.448	0.00	3.170	0.11	22.440	0.44	158.866	5.06	1124.683	0.81
0.071	0.00	0.502	0.00	3.557	0.12	25.179	0.53	178.250	5.77	1261.915	0.65
0.080	0.00	0.564	0.00	3.991	0.13	28.251	0.63	200.000	6.31	1415.892	0.50
0.089	0.00	0.632	0.00	4.477	0.15	31.698	0.73	224.404	6.61	1588.656	0.32
0.100	0.00	0.710	0.00	5.024	0.16	35.566	0.83	251.785	6.63	1782.502	0.17
0.112	0.00	0.796	0.00	5.637	0.17	39.905	0.91	282.508	6.38	2000.000	
0.126	0.00	0.893	0.00	6.325	0.18	44.774	0.98	316.979	5.88		
0.142	0.00	1.002	0.00	7.096		50.238		355.656			

**Operator notes:** 2014-20632

# Result Analysis Report

**Laboratory Code**

1201098 31/KINCSS/2014 Mar 2014  
18274 TV38

**Measured:**

12 March 2015 11:30:42

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 11:30:44

**Sample bulk lot ref:**

1201098 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

0.020 to 2000.000 um

**Obscuration:**

9.34 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

0.671 %

**Result Emulation:**

Off

**Concentration:**

0.1275 %Vol

**Span :**

1.771

**Uniformity:**

0.546

**Result units:**

Volume

**Specific Surface Area:**

0.0625 m<sup>2</sup>/g

**Surface Weighted Mean D[3,2]:**

96.056 um

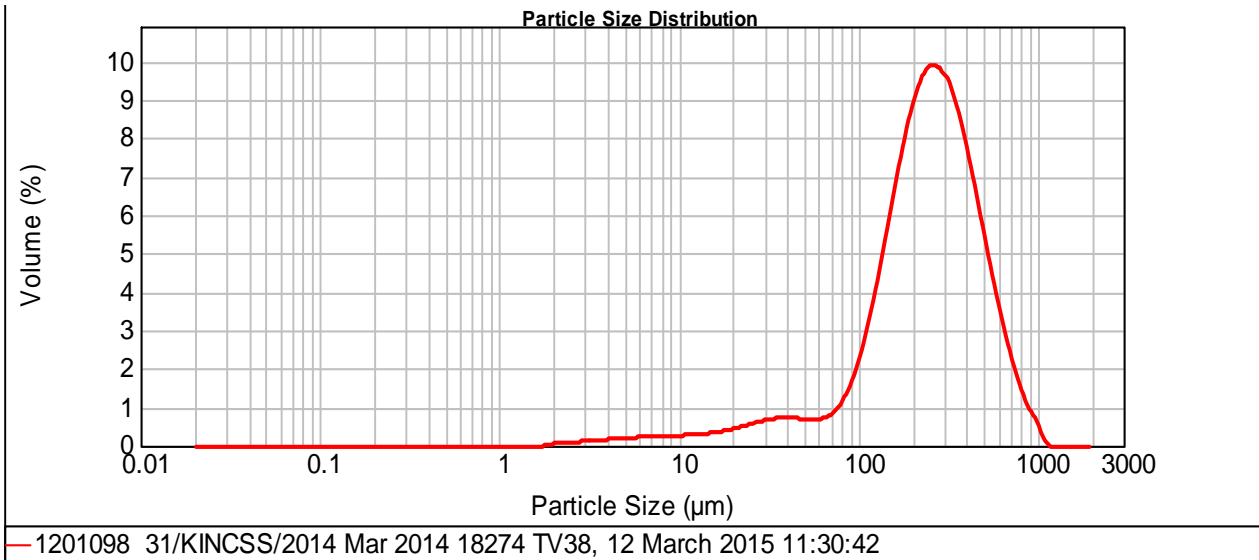
**Vol. Weighted Mean D[4,3]:**

283.314 um

**d(0.1): 84.691 um**

**d(0.5): 249.132 um**

**d(0.9): 525.830 um**



1201098 31/KINCSS/2014 Mar 2014 18274 TV38, 12 March 2015 11:30:42

Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.18	50.238	0.51	355.656	6.21
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.19	56.368	0.52	399.052	5.40
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.20	63.246	0.57	447.744	4.52
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.21	70.963	0.71	502.377	3.63
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.21	79.621	0.98	563.677	2.78
0.036	0.00	0.252	0.00	1.783	0.02	12.619	0.23	89.337	1.39	632.456	2.05
0.040	0.00	0.283	0.00	2.000	0.06	14.159	0.25	100.237	1.97	709.627	1.41
0.045	0.00	0.317	0.00	2.244	0.06	15.887	0.27	112.468	2.72	796.214	0.91
0.050	0.00	0.356	0.00	2.518	0.08	17.825	0.31	126.191	3.58	893.367	0.58
0.056	0.00	0.399	0.00	2.825	0.09	20.000	0.35	141.589	4.52	1002.374	0.19
0.063	0.00	0.448	0.00	3.170	0.10	22.440	0.40	158.866	5.45	1124.683	0.00
0.071	0.00	0.502	0.00	3.557	0.12	25.179	0.45	178.250	6.28	1261.915	0.00
0.080	0.00	0.564	0.00	3.991	0.13	28.251	0.50	200.000	6.94	1415.892	0.00
0.089	0.00	0.632	0.00	4.477	0.14	31.698	0.53	224.404	7.35	1588.656	0.00
0.100	0.00	0.710	0.00	5.024	0.15	35.566	0.55	251.785	7.47	1782.502	0.00
0.112	0.00	0.796	0.00	5.637	0.17	39.905	0.55	282.508	7.30	2000.000	0.00
0.126	0.00	0.893	0.00	6.325	0.18	44.774	0.53	316.979	6.86		
0.142	0.00	1.002	0.00	7.096	0.18	50.238	0.53	355.656	6.86		

Operator notes: 2014-20632

# Result Analysis Report

**Laboratory Code**

1201099 34/KINCSS/2014 Mar 2014  
18277 TV41

**Measured:**

12 March 2015 11:38:36

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 11:38:37

**Sample bulk lot ref:**

1201099 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

0.020 to 2000.000 um

**Obscuration:**

9.27 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

1.023 %

**Result Emulation:**

Off

**Concentration:**

0.3101 %Vol

**Span :**

1.227

**Uniformity:**

0.407

**Result units:**

Volume

**Specific Surface Area:**

0.0266 m<sup>2</sup>/g

**Surface Weighted Mean D[3,2]:**

225.241 um

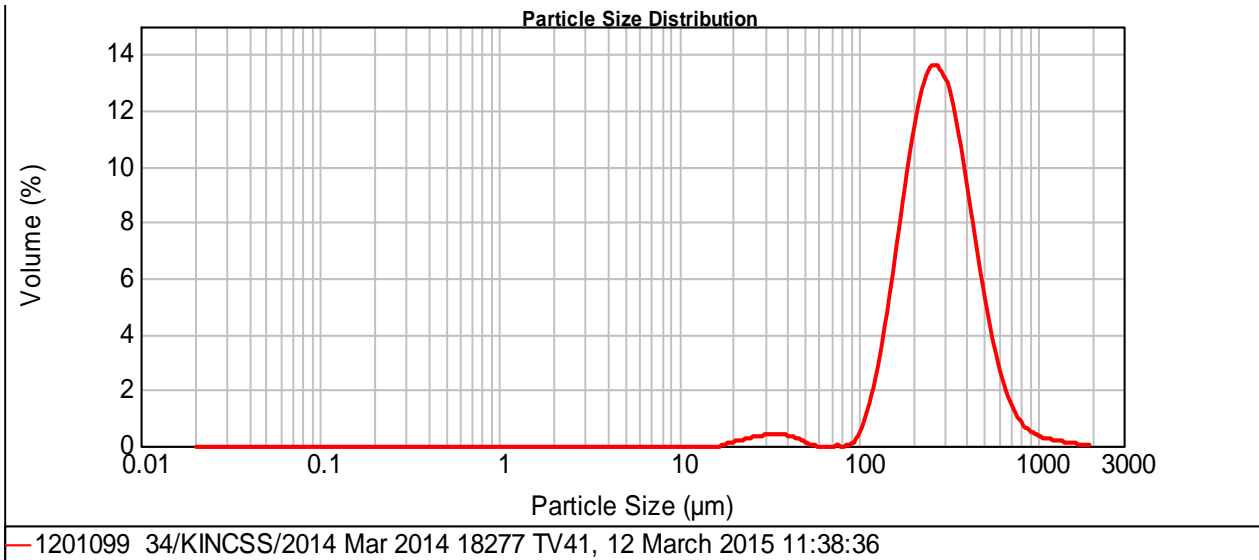
**Vol. Weighted Mean D[4,3]:**

306.872 um

**d(0.1): 156.381 um**

**d(0.5): 273.174 um**

**d(0.9): 491.478 um**



1201099 34/KINCSS/2014 Mar 2014 18277 TV41, 12 March 2015 11:38:36

Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.00	50.238	0.03	355.656	7.78
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.00	56.368	0.00	399.052	6.23
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.00	63.246	0.00	447.744	4.68
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.00	70.963	0.00	502.377	3.30
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.00	79.621	0.00	563.677	2.19
0.036	0.00	0.252	0.00	1.783	0.00	12.619	0.00	89.337	0.10	632.456	1.38
0.040	0.00	0.283	0.00	2.000	0.00	14.159	0.00	100.237	0.58	709.627	0.83
0.045	0.00	0.317	0.00	2.244	0.00	15.887	0.00	112.468	1.39	796.214	0.51
0.050	0.00	0.356	0.00	2.518	0.00	17.825	0.07	126.191	2.56	893.367	0.33
0.056	0.00	0.399	0.00	2.825	0.00	20.000	0.12	141.589	4.08	1002.374	0.23
0.063	0.00	0.448	0.00	3.170	0.00	22.440	0.19	158.866	5.76	1124.683	0.17
0.071	0.00	0.502	0.00	3.557	0.00	25.179	0.24	178.250	7.47	1261.915	0.13
0.080	0.00	0.564	0.00	3.991	0.00	28.251	0.29	200.000	8.92	1415.892	0.08
0.089	0.00	0.632	0.00	4.477	0.00	31.698	0.31	224.404	9.91	1588.656	0.06
0.100	0.00	0.710	0.00	5.024	0.00	35.566	0.30	251.785	10.28	1782.502	0.03
0.112	0.00	0.796	0.00	5.637	0.00	39.905	0.25	282.508	10.00	2000.000	
0.126	0.00	0.893	0.00	6.325	0.00	44.774	0.16	316.979	9.09		
0.142	0.00	1.002	0.00	7.096	0.00	50.238		355.656			

Operator notes: 2014-20632

# Result Analysis Report

**Laboratory Code**

1201100 38/KINCSS/2014 Mar 2014  
18281 TV45

**Measured:**

12 March 2015 11:44:38

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 11:44:39

**Sample bulk lot ref:**

1201100 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

0.020 to 2000.000 um

**Obscuration:**

9.45 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

1.013 %

**Result Emulation:**

Off

**Concentration:**

0.1767 %Vol

**Span :**

1.184

**Uniformity:**

0.427

**Result units:**

Volume

**Specific Surface Area:**

0.0462 m<sup>2</sup>/g

**Surface Weighted Mean D[3,2]:**

129.733 um

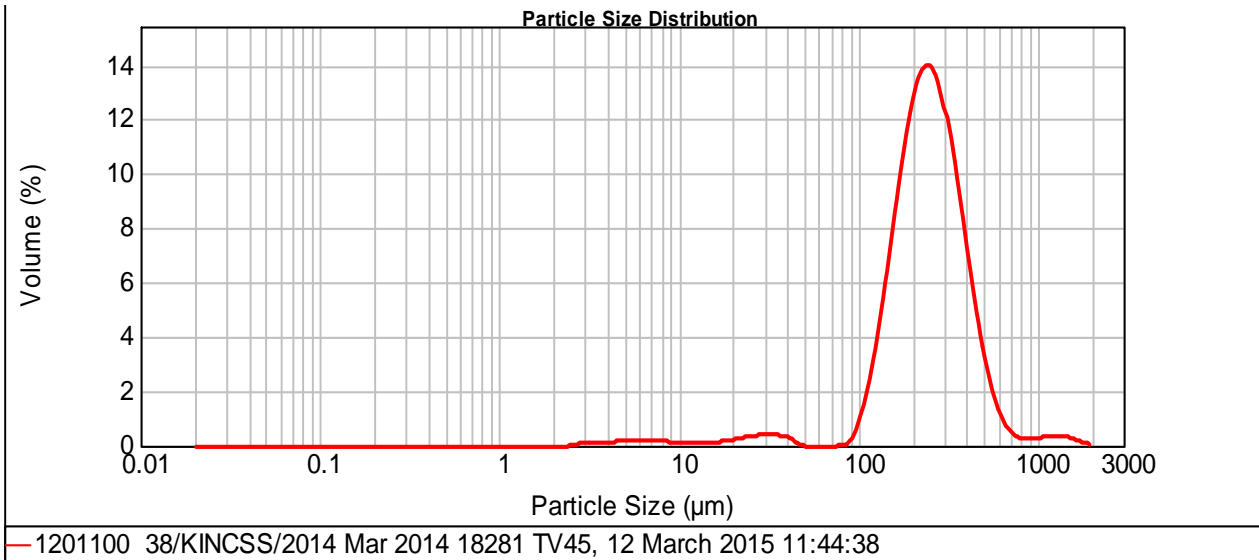
**Vol. Weighted Mean D[4,3]:**

275.257 um

**d(0.1): 138.222 um**

**d(0.5): 244.082 um**

**d(0.9): 427.253 um**



Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.13	50.238	0.00	355.656	6.35
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.12	56.368	0.00	399.052	4.60
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.11	63.246	0.00	447.744	3.06
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.09	70.963	0.00	502.377	1.85
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.08	79.621	0.02	563.677	1.01
0.036	0.00	0.252	0.00	1.783	0.00	12.619	0.08	89.337	0.33	632.456	0.51
0.040	0.00	0.283	0.00	2.000	0.00	14.159	0.09	100.237	1.05	709.627	0.27
0.045	0.00	0.317	0.00	2.244	0.00	15.887	0.11	112.468	2.16	796.214	0.19
0.050	0.00	0.356	0.00	2.518	0.05	17.825	0.14	126.191	3.63	893.367	0.20
0.056	0.00	0.399	0.00	2.825	0.07	20.000	0.19	141.589	5.39	1002.374	0.24
0.063	0.00	0.448	0.00	3.170	0.08	22.440	0.24	158.866	7.19	1124.683	0.26
0.071	0.00	0.502	0.00	3.557	0.10	25.179	0.29	178.250	8.83	1261.915	0.26
0.080	0.00	0.564	0.00	3.991	0.11	28.251	0.32	200.000	10.01	1415.892	0.23
0.089	0.00	0.632	0.00	4.477	0.12	31.698	0.31	224.404	10.55	1588.656	0.15
0.100	0.00	0.710	0.00	5.024	0.13	35.566	0.27	251.785	10.35	1782.502	0.09
0.112	0.00	0.796	0.00	5.637	0.13	39.905	0.19	282.508	9.47	2000.000	
0.126	0.00	0.893	0.00	6.325	0.13	44.774	0.01	316.979	8.04		
0.142	0.00	1.002	0.00	7.096	0.13	50.238		355.656			

**Operator notes:** 2014-20632

# Result Analysis Report

**Laboratory Code**

1201126 7/KINCSS/2014 Mar 2014  
18250 TV8

**Measured:**

12 March 2015 11:51:06

**Sample Source & type:**

Supplier = Atkins Limited

**Measured by:**

analy

**Analysed:**

12 March 2015 11:51:07

**Sample bulk lot ref:**

1201126 = Run 1

**Result Source:**

Measurement

**Particle Name:**

Default

**Accessory Name:**

Hydro 2000G (A)

**Analysis model:**

General purpose

**Sensitivity:**

Normal

**Particle RI:**

1.520

**Absorption:**

0.1

**Size range:**

0.020 to 2000.000 um

**Obscuration:**

8.53 %

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Weighted Residual:**

1.126 %

**Result Emulation:**

Off

**Concentration:**

0.3146 %Vol

**Span :**

1.265

**Uniformity:**

0.427

**Result units:**

Volume

**Specific Surface Area:**

0.0241 m<sup>2</sup>/g

**Surface Weighted Mean D[3,2]:**

249.132 um

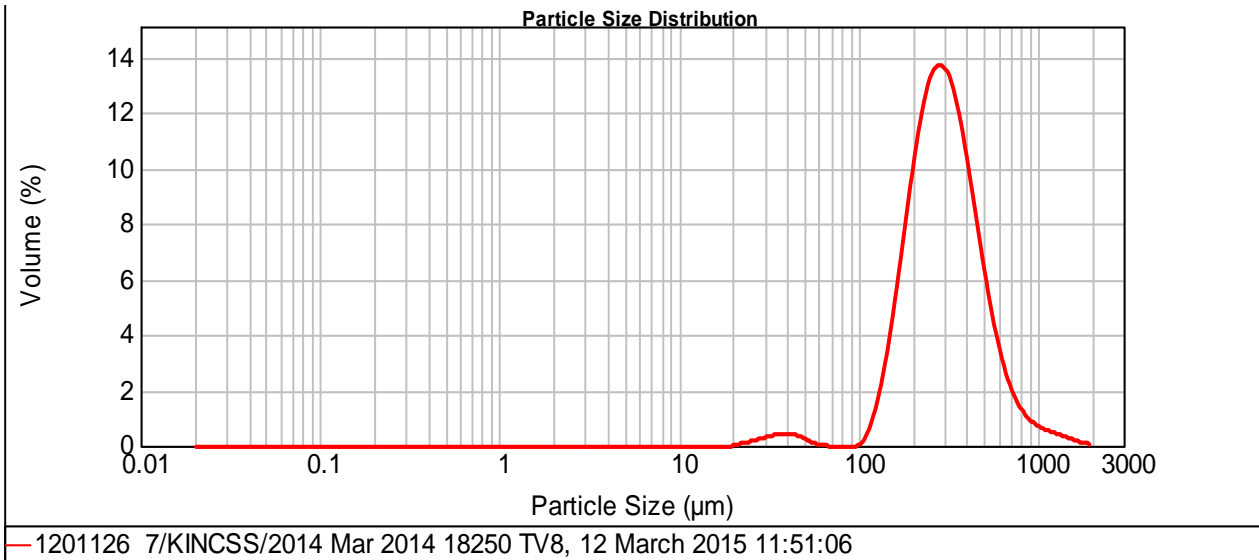
**Vol. Weighted Mean D[4,3]:**

338.978 um

**d(0.1): 171.233 um**

**d(0.5): 294.615 um**

**d(0.9): 544.010 um**



1201126 7/KINCSS/2014 Mar 2014 18250 TV8, 12 March 2015 11:51:06

Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.020	0.00	0.142	0.00	1.002	0.00	7.096	0.00	50.238	0.13	355.656	8.50
0.022	0.00	0.159	0.00	1.125	0.00	7.962	0.00	56.368	0.03	399.052	7.00
0.025	0.00	0.178	0.00	1.262	0.00	8.934	0.00	63.246	0.00	447.744	5.43
0.028	0.00	0.200	0.00	1.416	0.00	10.024	0.00	70.963	0.00	502.377	3.98
0.032	0.00	0.224	0.00	1.589	0.00	11.247	0.00	79.621	0.00	563.677	2.77
0.036	0.00	0.252	0.00	1.783	0.00	12.619	0.00	89.337	0.00	632.456	1.87
0.040	0.00	0.283	0.00	2.000	0.00	14.159	0.00	100.237	0.00	709.627	1.24
0.045	0.00	0.317	0.00	2.244	0.00	15.887	0.00	112.468	0.11	796.214	0.86
0.050	0.00	0.356	0.00	2.518	0.00	17.825	0.00	126.191	0.67	893.367	0.62
0.056	0.00	0.399	0.00	2.825	0.00	20.000	0.00	141.589	1.61	1002.374	0.48
0.063	0.00	0.448	0.00	3.170	0.00	22.440	0.02	158.866	4.65	1124.683	0.38
0.071	0.00	0.502	0.00	3.557	0.00	25.179	0.08	178.250	6.47	1261.915	0.29
0.080	0.00	0.564	0.00	3.991	0.00	28.251	0.16	200.000	8.17	1415.892	0.22
0.089	0.00	0.632	0.00	4.477	0.00	31.698	0.23	224.404	9.50	1588.656	0.12
0.100	0.00	0.710	0.00	5.024	0.00	35.566	0.29	251.785	10.25	1782.502	0.07
0.112	0.00	0.796	0.00	5.637	0.00	39.905	0.31	282.508	10.30	2000.000	
0.126	0.00	0.893	0.00	6.325	0.00	44.774	0.25	316.979	9.66		
0.142	0.00	1.002	0.00	7.096	0.00	50.238	0.00	355.656			

Operator notes: 2014-20632