Appendix A

MASTERSIZER 2000

Result Analysis Report

Sample Name:
Sample 1 - Average

SOP Name:

Measured:
Friday, April 09, 2004 5:20:16 PM

Sample Source & type:
Factory = Chem Engg. Dept

Measured by:
ABCD

Analysed:
Friday, April 09, 2004 5:20:17 PM

Sample bulk lot ref:
1

Result Source:
Averaged

Particle Name:
Placebo

Accessory Name:
Hydro 2000SM (A)

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.500

Absorption:
0

Size range:
0.020 to 2000.000 um

Obscuration:
75.70 %

Dispersant Name:
Heptane

Dispersant RI:
1.390

Weighted Residual:
65.926 %

Result Emulation:
Off

Concentration:
0.0477 %Vol

Span :
1.038

Uniformity:
0.321

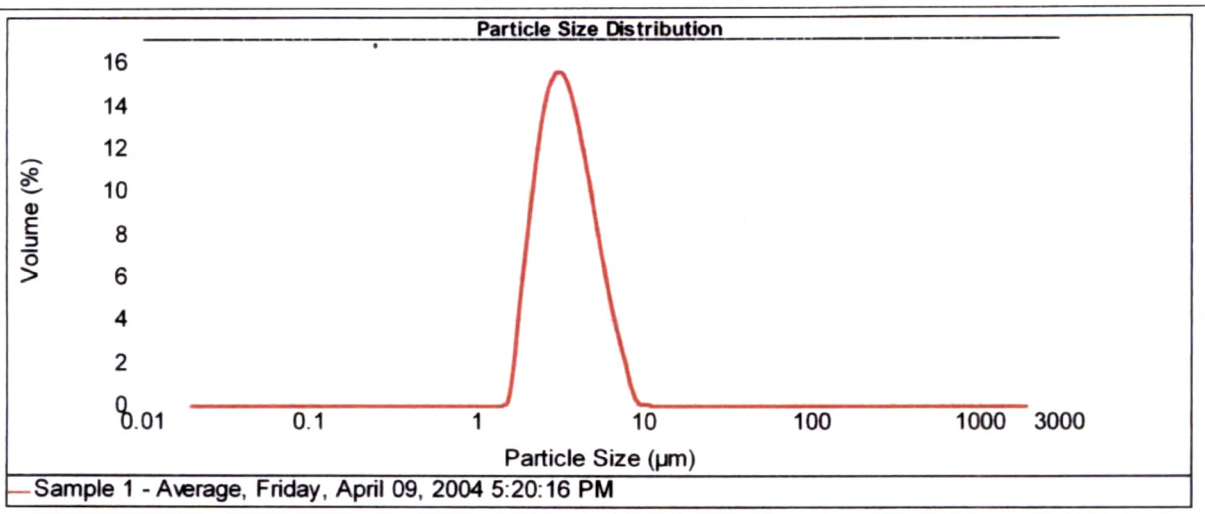
Result units:
Volume

Specific Surface Area:
1.87 m²/g

Surface Weighted Mean D[3,2]:
3.203 um

Vol. Weighted Mean D[4,3]:
3.642 um

d(0.1): 2.152 um d(0.5): 3.330 um d(0.9): 5.606 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 %
0.010	0.00	0.105	0.00	1.096	0.00	11.482	0.00	120.226	0.00	1258.925	0.00
0.011	0.00	0.120	0.00	1.259	0.00	13.183	0.00	138.038	0.00	1445.440	0.00
0.013	0.00	0.138	0.00	1.445	0.11	15.136	0.00	158.489	0.00	1659.587	0.00
0.015	0.00	0.158	0.00	1.660	3.55	17.378	0.00	181.970	0.00	1905.461	0.00
0.017	0.00	0.182	0.00	1.905	7.44	19.953	0.00	208.930	0.00	2187.762	0.00
0.020	0.00	0.209	0.00	2.188	10.98	22.909	0.00	239.883	0.00	2511.886	0.00
0.023	0.00	0.240	0.00	2.512	13.30	26.303	0.00	275.423	0.00	2884.032	0.00
0.026	0.00	0.275	0.00	2.884	14.07	30.200	0.00	316.228	0.00	3311.311	0.00
0.030	0.00	0.316	0.00	3.311	13.42	34.674	0.00	363.078	0.00	3801.894	0.00
0.035	0.00	0.363	0.00	3.802	11.75	39.811	0.00	416.869	0.00	4365.158	0.00
0.040	0.00	0.417	0.00	4.365	9.48	45.709	0.00	478.630	0.00	5011.872	0.00
0.046	0.00	0.479	0.00	5.012	7.04	52.481	0.00	549.541	0.00	5754.399	0.00
0.052	0.00	0.550	0.00	5.754	4.71	60.256	0.00	630.957	0.00	6606.934	0.00
0.060	0.00	0.631	0.00	6.607	2.85	69.183	0.00	724.436	0.00	7585.776	0.00
0.069	0.00	0.724	0.00	7.586	1.20	79.433	0.00	831.764	0.00	8709.636	0.00
0.079	0.00	0.832	0.00	8.710	0.10	91.201	0.00	954.993	0.00	10000.000	0.00
0.091	0.00	0.955	0.00	10.000	0.00	104.713	0.00	1096.478	0.00		
0.105	0.00	1.096	0.00	11.482	0.00	120.226	0.00	1258.925	0.00		

MASTERSIZER 2000

Result Analysis Report

Sample Name:
LEM1 - Average

SOP Name:

Measured:
Friday, June 27, 2003 4:35:10 PM

Sample Source & type:
Initial = Beena

Measured by:
Administrator

Analysed:
Friday, June 27, 2003 4:35:12 PM

Sample bulk lot ref:
Base run

Result Source:
Averaged

Particle Name:
LEM1

Accessory Name:
Hydro 2000SM (A)

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.500

Absorption:
0

Size range:
0.020 to 2000.000 um

Obscuration:
63.19 %

Dispersant Name:
Heptane

Dispersant RI:
1.390

Weighted Residual:
30.624 %

Result Emulation:
Off

Concentration:
0.0411 %Vol

Span :
1.091

Uniformity:
0.336

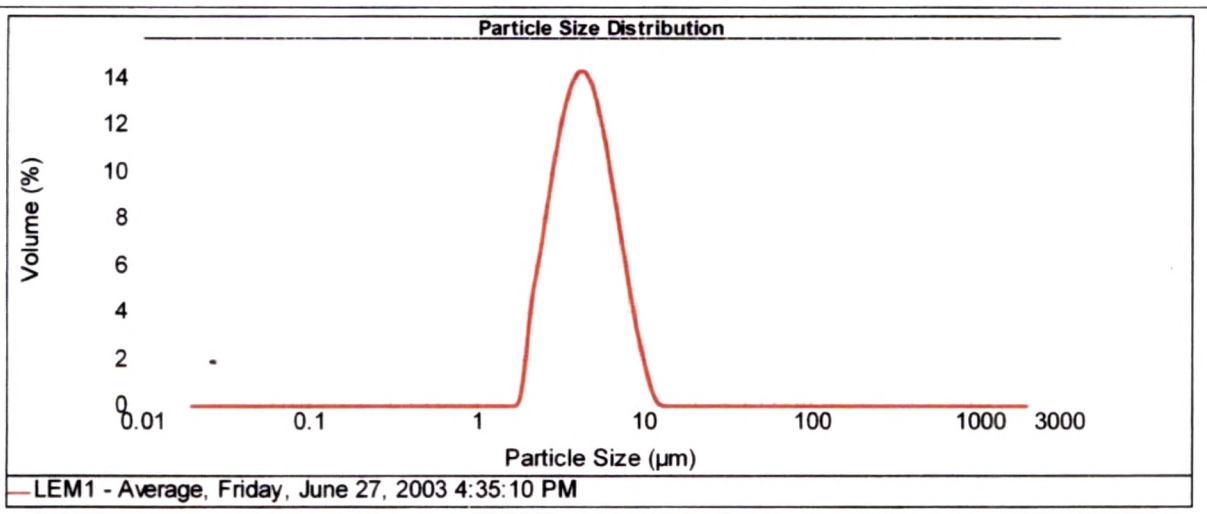
Result units:
Volume

Specific Surface Area:
1.5 m^2/g

Surface Weighted Mean D[3,2]:
3.998 um

Vol. Weighted Mean D[4,3]:
4.630 um

d(0.1): 2.581 um d(0.5): 4.261 um d(0.9): 7.231 um



Size (µm)	Volume In %
0.010	0.00
0.011	0.00
0.013	0.00
0.015	0.00
0.017	0.00
0.020	0.00
0.023	0.00
0.026	0.00
0.030	0.00
0.035	0.00
0.040	0.00
0.046	0.00
0.052	0.00
0.060	0.00
0.069	0.00
0.079	0.00
0.091	0.00
0.105	0.00

Size (µm)	Volume In %
0.105	0.00
0.120	0.00
0.138	0.00
0.158	0.00
0.182	0.00
0.209	0.00
0.240	0.00
0.275	0.00
0.316	0.00
0.363	0.00
0.417	0.00
0.479	0.00
0.550	0.00
0.631	0.00
0.724	0.00
0.832	0.00
0.955	0.00
1.096	0.00

Size (µm)	Volume In %
1.096	0.00
1.259	0.00
1.445	0.00
1.660	0.04
1.905	2.97
2.188	5.60
2.512	8.15
2.884	10.48
3.311	12.14
3.802	12.88
4.365	12.55
5.012	11.24
5.754	9.19
6.607	6.85
7.586	4.50
8.710	2.48
10.000	0.89
11.482	

Size (µm)	Volume In %
11.482	0.02
13.183	0.00
15.136	0.00
17.378	0.00
19.953	0.00
22.909	0.00
26.303	0.00
30.200	0.00
34.674	0.00
39.811	0.00
45.709	0.00
52.481	0.00
60.256	0.00
69.183	0.00
79.433	0.00
91.201	0.00
104.713	0.00
120.226	

Size (µm)	Volume In %
120.226	0.00
138.038	0.00
158.489	0.00
181.970	0.00
208.930	0.00
239.883	0.00
275.423	0.00
316.228	0.00
363.078	0.00
416.869	0.00
478.630	0.00
549.541	0.00
630.957	0.00
724.436	0.00
831.764	0.00
954.993	0.00
1096.478	0.00
1258.925	

Size (µm)	Volume In %
1258.925	0.00
1445.440	0.00
1659.587	0.00
1905.461	0.00
2187.762	0.00
2511.886	0.00
2884.032	0.00
3311.311	0.00
3801.894	0.00
4365.158	0.00
5011.872	0.00
5754.399	0.00
6606.934	0.00
7585.776	0.00
8709.636	0.00
10000.000	0.00

$\phi = 0.45$, $C_{i0} = 0.3M$

287c

MASTERSIZER 2000

Result Analysis Report

Sample Name:
LEM2 - Average

SOP Name:

Measured:
Friday, June 27, 2003 6:02:35 PM

Sample Source & type:
Initial = Beena

Measured by:
Administrator

Analysed:
Friday, June 27, 2003 6:02:36 PM

Sample bulk lot ref:
Base run

Result Source:
Averaged

Particle Name:
LEM1

Accessory Name:
Hydro 2000SM (A)

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.500

Absorption:
0

Size range:
0.020 to 2000.000 um

Obscuration:
30.34 %

Dispersant Name:
Heptane

Dispersant RI:
1.390

Weighted Residual:
2.736 %

Result Emulation:
Off

Concentration:
0.0282 %Vol

Span :
5.135

Uniformity:
1.36

Result units:
Volume

Specific Surface Area:
0.844 m²/g

Surface Weighted Mean D[3,2]:
7.110 um

Vol. Weighted Mean D[4,3]:
15.633 um

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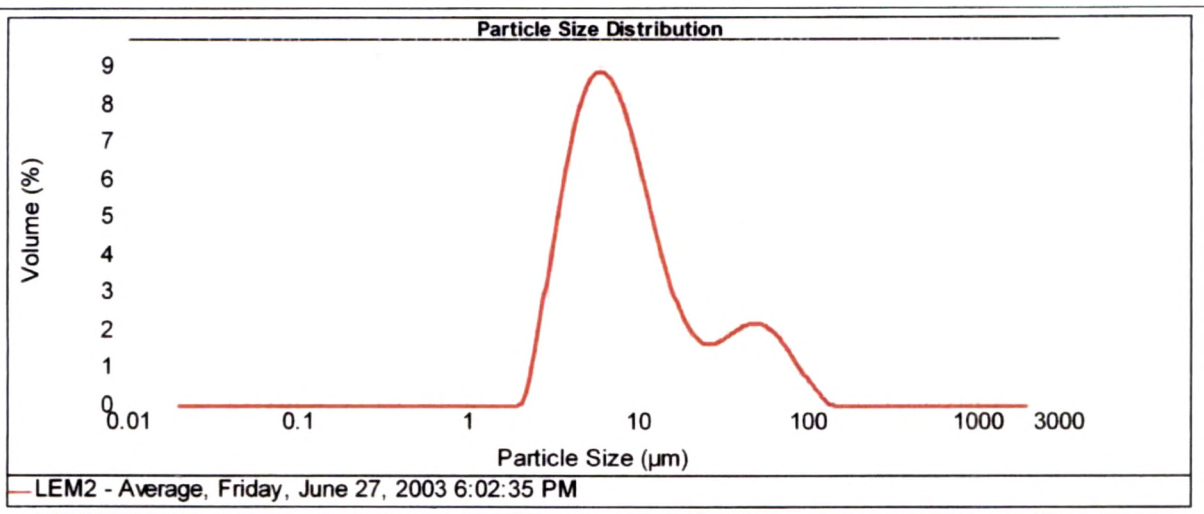
d(0.1): 3.686 um d(0.5): 7.783 um d(0.9): 43.650 um



Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.010	0.00	0.105	0.00	1.096	0.00	11.482	4.53	120.226	0.09	1258.925	0.00
0.011	0.00	0.120	0.00	1.259	0.00	13.183	3.56	138.038	0.00	1445.440	0.00
0.013	0.00	0.138	0.00	1.445	0.00	15.136	2.73	158.489	0.00	1659.587	0.00
0.015	0.00	0.158	0.00	1.660	0.00	17.378	2.09	181.970	0.00	1905.461	0.00
0.017	0.00	0.182	0.00	1.905	0.00	19.953	1.67	208.930	0.00	2187.762	0.00
0.020	0.00	0.209	0.00	2.188	0.61	22.909	1.48	239.883	0.00	2511.886	0.00
0.023	0.00	0.240	0.00	2.512	2.02	26.303	1.47	275.423	0.00	2884.032	0.00
0.026	0.00	0.275	0.00	2.884	3.56	30.200	1.59	316.228	0.00	3311.311	0.00
0.030	0.00	0.316	0.00	3.311	5.07	34.674	1.76	363.078	0.00	3801.894	0.00
0.035	0.00	0.363	0.00	3.802	6.37	39.811	1.90	416.869	0.00	4365.158	0.00
0.040	0.00	0.417	0.00	4.365	7.33	45.709	1.97	478.630	0.00	5011.872	0.00
0.046	0.00	0.479	0.00	5.012	7.87	52.481	1.92	549.541	0.00	5754.399	0.00
0.052	0.00	0.550	0.00	5.754	8.00	60.256	1.74	630.957	0.00	6606.934	0.00
0.060	0.00	0.631	0.00	6.607	7.78	69.183	1.45	724.436	0.00	7585.776	0.00
0.069	0.00	0.724	0.00	7.586	7.25	79.433	1.09	831.764	0.00	8709.636	0.00
0.079	0.00	0.832	0.00	8.710	6.48	91.201	0.71	954.993	0.00	10000.000	
0.091	0.00	0.955	0.00	10.000	5.53	104.713	0.39	1096.478	0.00		
0.105		1.096		11.482		120.226		1258.925			

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Operator notes:

Mastersizer 2000 Ver 5.1
Serial Number MAL100206

File name Chem Eng
Record Number 42
17 Nov 2004 4:12:37

$\phi = 0.45$, $c_{io} = 0.3M$
After extraction.