

CLEMEX
intelligent microscopy

731

Particle Size Analysis



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For Caravan Ingredients Cie

Sample Description

Fourteen samples of bread softener paste were submitted for image analysis. A small quantity of paste was withdrawn from each sample and diluted in water using a small bottle. The bottles were placed in an ultrasonic bath for 10 minutes to minimize the agglomerations. For each sample, four drops were deposited on a slide. Once dried, the slides were ready for analysis.

Purpose of Analysis

To demonstrate that the Clemex Vision image analysis system can discriminate the particles and perform size and shape measurements on them.

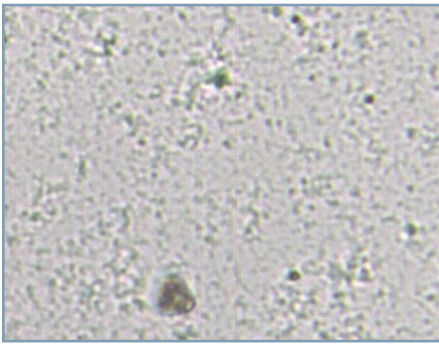


Figure 1: Part of an image from sample 1 (0.1327 microns/pixel).

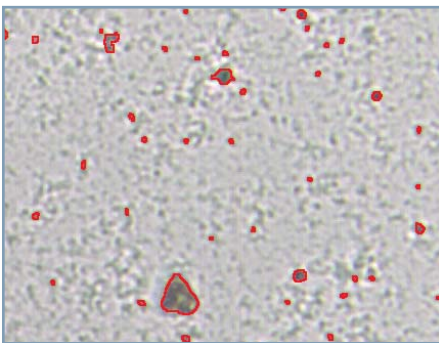


Figure 2: Outline of particles as measured in red bitplane.

Procedure¹

An auto lightening adjustment was performed at each field ensuring a constant binarization.

Since several particles were translucent, Contrast Thresholding and Gray Thresholding were combined to detect as many particles as possible.

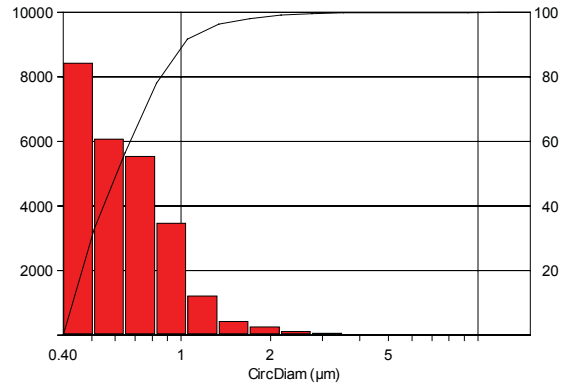
Assuming that rough particles were agglomerations, they were isolated and processed for separation. Remaining rough particles were eliminated.

Features sectioned by the field of view and those smaller than 0.1 mic² were eliminated prior to measurements.

¹ Images taken during the procedure are available in appendix A

Results²

Area, Length, Circular Diameter, Roundness, Aspect Ratio, and Ellipsoidal Volume measurements were performed on each feature. Automated statistics and graphs were generated and printed in pdf format. Final results were saved from Clemex Vision and could be loaded back for further use. A customized report was built using the Report Generator module. Raw data is linked to their respective objects for validation purposes. Raw data could also be exported in Excel format.



Minimum:	0.4 microns
Maximum:	10.3 microns
Mean:	0.683 microns
Std Dev.:	0.348 microns

Figure 3: Particle's Circular Diameter distribution and corresponding statistics from sample 1.

Equipment

Image Analysis System:	Clemex Vision PS3 Version 5.0
Microscope:	Leica DM LA
Illumination:	Transmitted Light
Calibration:	0.132743 microns/pixel
Camera:	Clemex L 1.4C (1384 x 1036)
Motorized Stage:	Marzhauser EK32IM 75 x 50 mm

Discussion

Since the client was not used to observe his samples using optical microscopy, the main difficulty of this analysis was to find a sample preparation method and to determine if the observed and detected particles were corresponding to the client expectations.

Once this was clarified, the next step was to eliminate as many agglomerations as possible.

Since very large and opaque particles were slightly out of focus, their detection could be mistaken with agglomerations and eliminated. These particles were processed differently to minimize this problem.

² Complete results are available in appendix B.



Appendix A: Image Analysis Steps

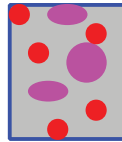


Image Analysis Steps

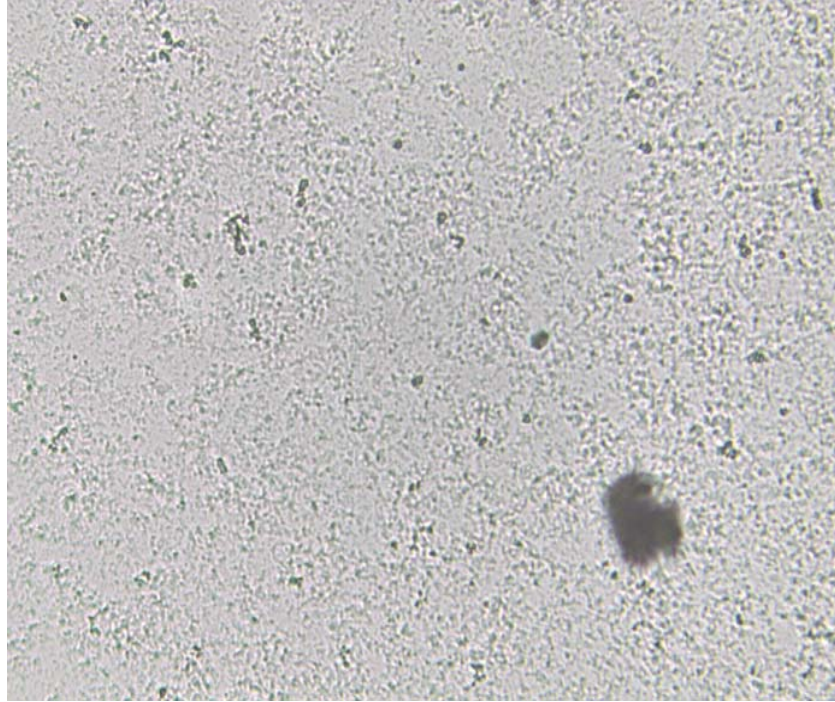


Image 1: Original image from sample 7 as captured using a Leica DM LA microscope (0.1327 microns / pixel).

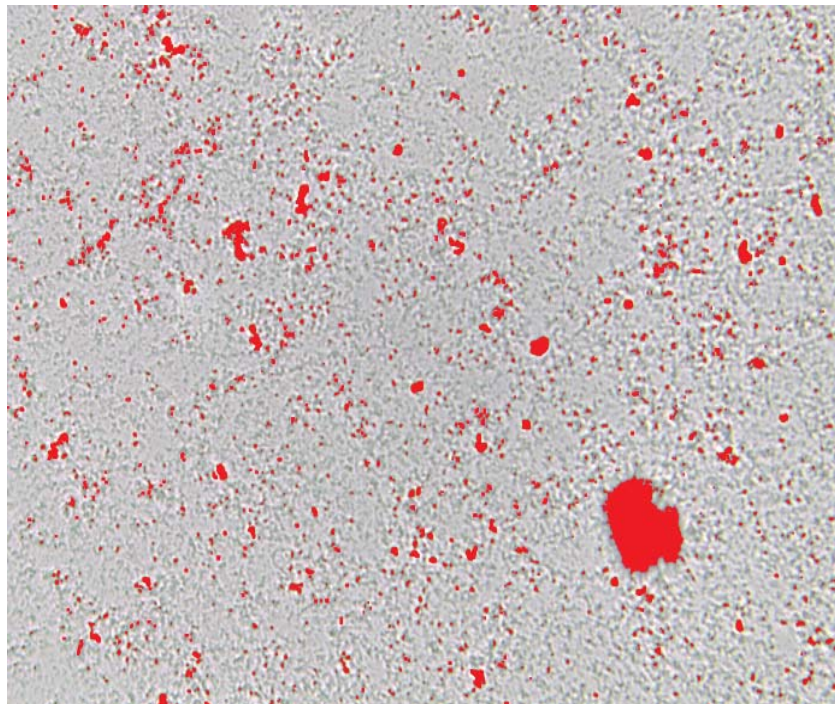


Image 2: Particles as binarized in red using a combination of Contrast Thresholding and Gray Thresholding. Connected features were separated.

Image Analysis Steps

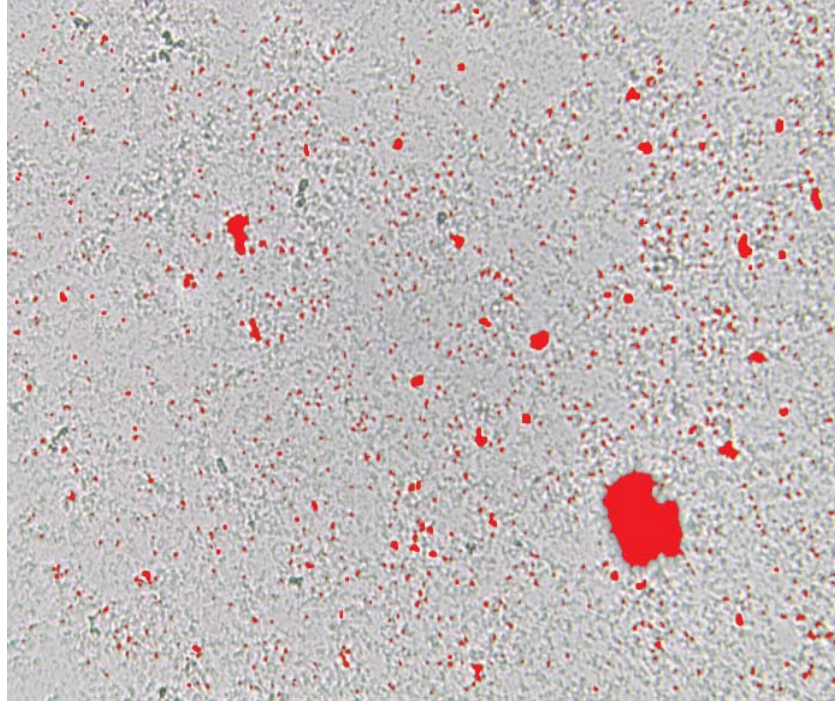


Image 3: Particles sectioned by the field of view, remaining agglomerations and small artifacts (smaller than 0.1 mic²) were eliminated prior to measurements.

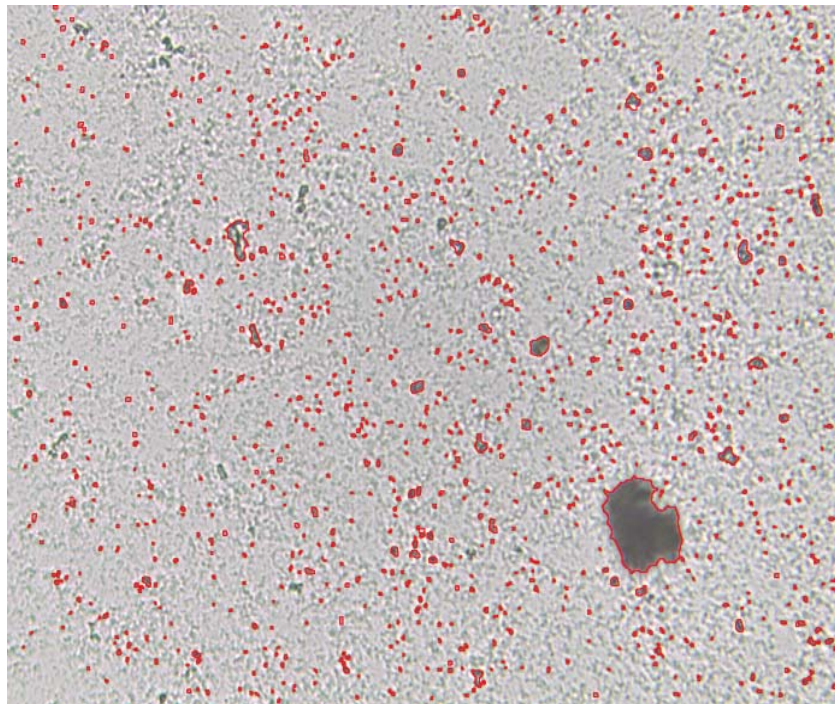
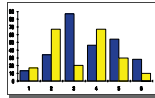


Image 4: Same as image 3 but in outline view mode allowing to see the particles through the binary detection.



Appendix B: Results

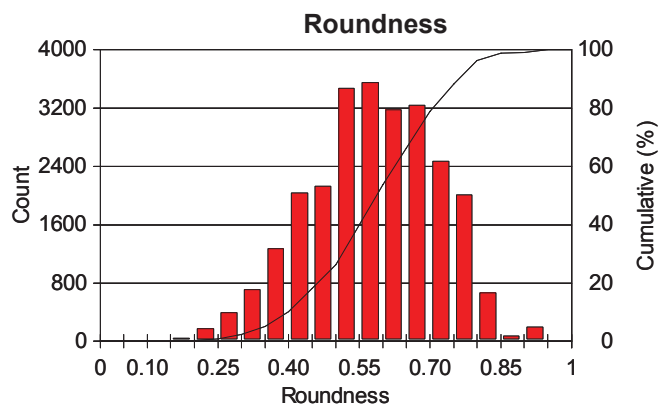
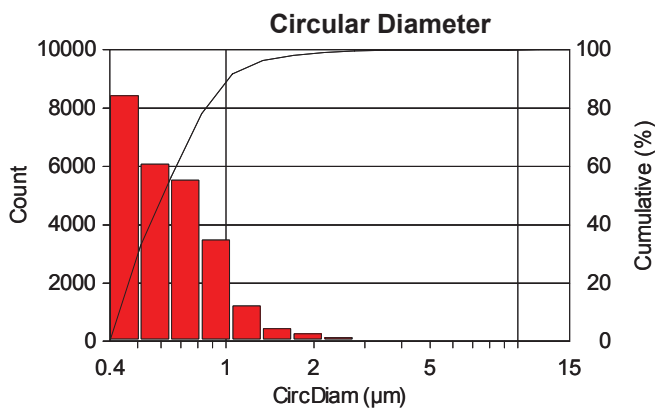
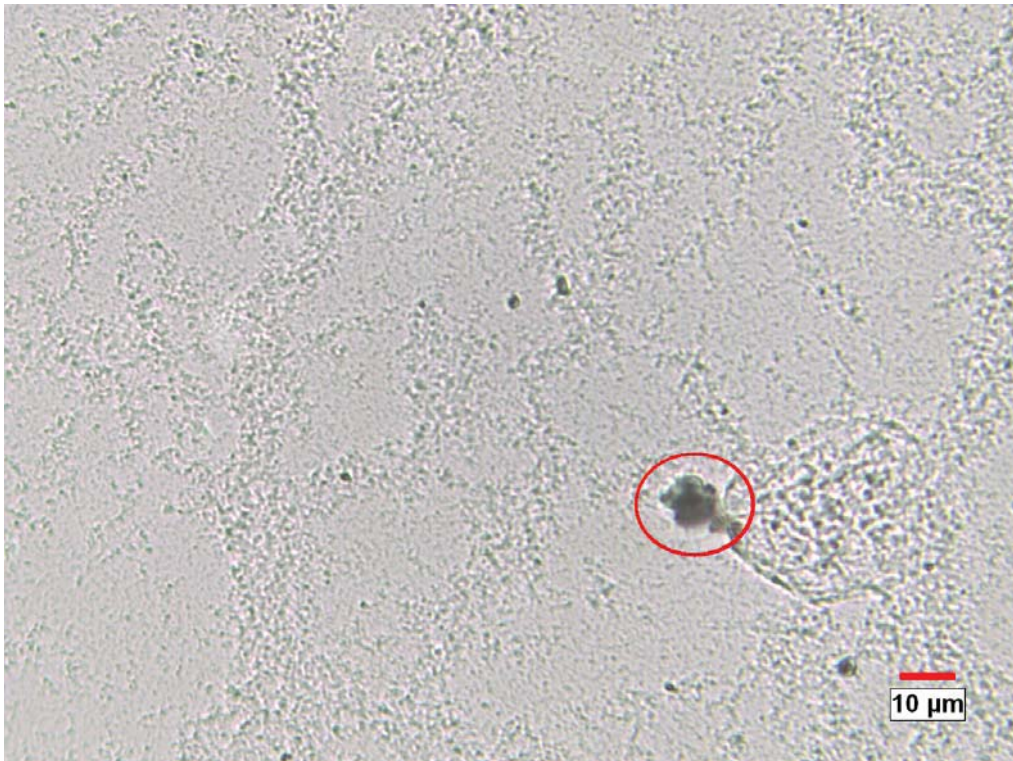


Sample # 1 - Automated Report

Particle Size Analysis

Date:	2007-Aug-19, 5:39:56 PM -04'00'	Magnification:	500X
Company:	Clemex Technologies Inc.	Calibration:	0.1327 $\mu\text{m}/\text{pixel}$
Department:	Laboratory	Units:	microns
User Name:	Myriam Savard (signer ...)	# Fields:	49
Sample ID:	S1 IC1	Count:	25650

Figure 1: Field containing the largest measured particle.



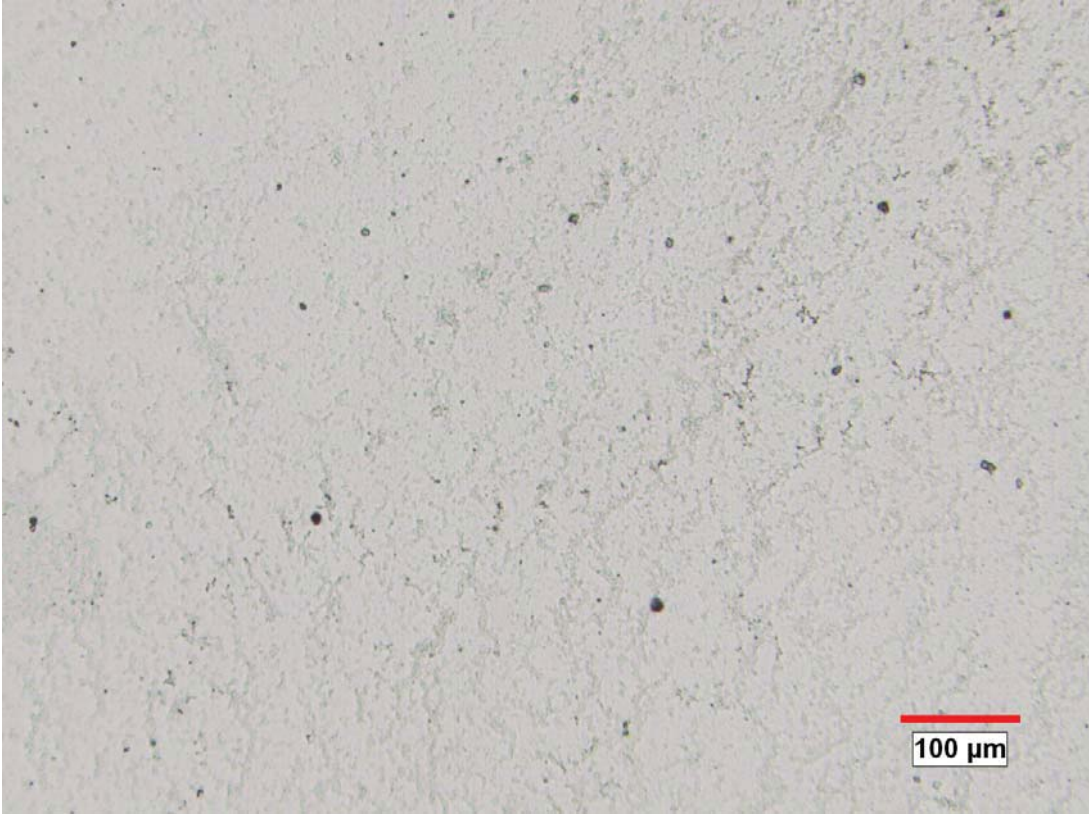
Min: 0.37
Max.: 10.26
Mean: 0.68
Std. Dev.: 0.35
D10: 0.38
D50: 0.59
D90: 1.00

Min: 0.13
Max.: 0.93
Mean: 0.58
Std. Dev.: 0.14
D10: 0.40
D50: 0.60
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 1 - Printed Results

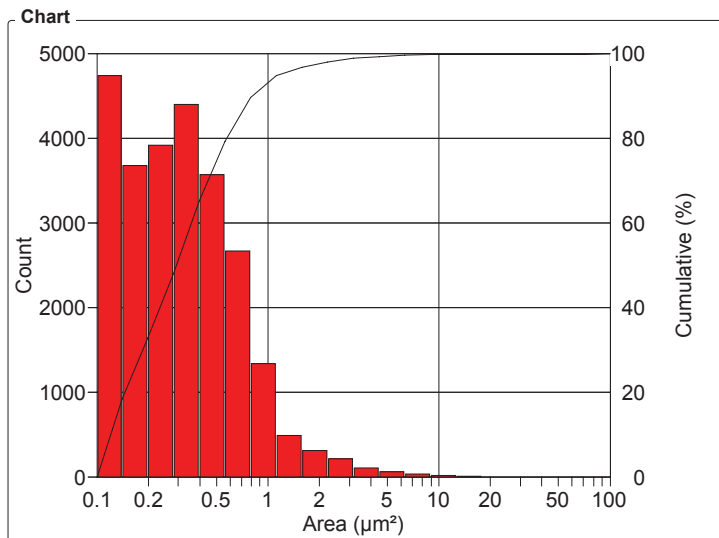
S1 IC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 17:46:26 PM**
 Sample: **S1 IC1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

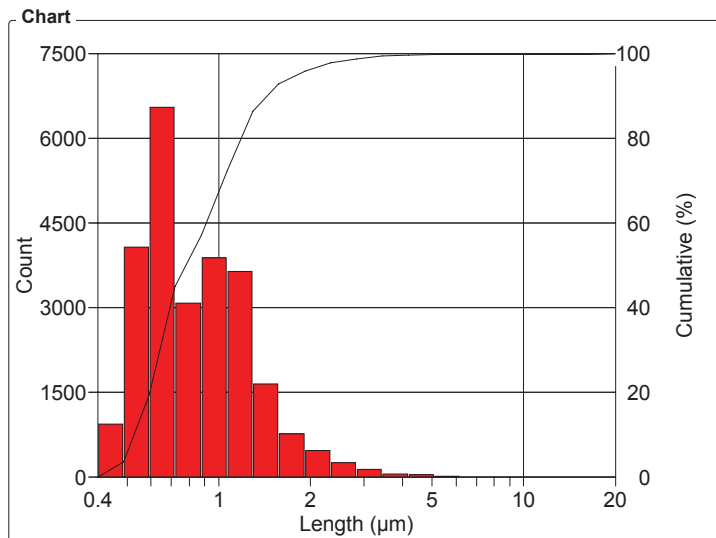
Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.1	4746	18.50	18.50
0.1 - 0.2	3687	14.37	32.88
0.2 - 0.3	3921	15.29	48.16
0.3 - 0.4	4406	17.18	65.34
0.4 - 0.6	3577	13.95	79.29
0.6 - 0.8	2670	10.41	89.70
0.8 - 1.1	1347	5.25	94.95
1.1 - 1.6	499	1.95	96.89
1.6 - 2.2	315	1.23	98.12
2.2 - 3.2	222	0.87	98.99
3.2 - 4.5	112	0.44	99.42
4.5 - 6.3	69	0.27	99.69
6.3 - 8.9	40	0.16	99.85
8.9 - 12.6	19	0.07	99.92
12.6 - 17.8	11	0.04	99.96
17.8 - 25	4	0.02	99.98
25 - 35	3	0.01	99.99
35 - 50	1	3.90e-03	100.00
50 - 71	0	0	100.00
71 - 100	1	3.90e-03	100

Statistics

Minimum: 0.1 μm^2
 Maximum: 82.7 μm^2
 Mean: 0.462 μm^2
 Std Dev.: 0.997 μm^2
 Sum: 11841.4 μm^2
 Count: 25650
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 0.1 μm^2
 D50: 0.3 μm^2
 D90: 0.8 μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	945	3.68	3.68
0.5 - 0.6	4078	15.90	19.58
0.6 - 0.7	6559	25.57	45.15
0.7 - 0.9	3088	12.04	57.19
0.9 - 1.1	3884	15.14	72.34
1.1 - 1.3	3645	14.21	86.55
1.3 - 1.6	1656	6.46	93.00
1.6 - 1.9	771	3.01	96.01
1.9 - 2.3	480	1.87	97.88
2.3 - 2.8	267	1.04	98.92
2.8 - 3.4	140	0.55	99.47
3.4 - 4.2	56	0.22	99.68
4.2 - 5.1	42	0.16	99.85
5.1 - 6.2	24	0.09	99.94
6.2 - 7.5	8	0.03	99.97
7.5 - 9.1	4	0.02	99.99
9.1 - 11.1	1	3.90e-03	99.99
11.1 - 13.5	1	3.90e-03	100.00
13.5 - 16.4	0	0	100.00
16.4 - 20	1	3.90e-03	100

Statistics

Minimum: 0.4 μm
 Maximum: 18.4 μm
 Mean: 0.923 μm
 Std Dev.: 0.526 μm
 Sum: 23674.3 μm
 Count: 25650
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 0.5 μm
 D50: 0.8 μm
 D90: 1.4 μm

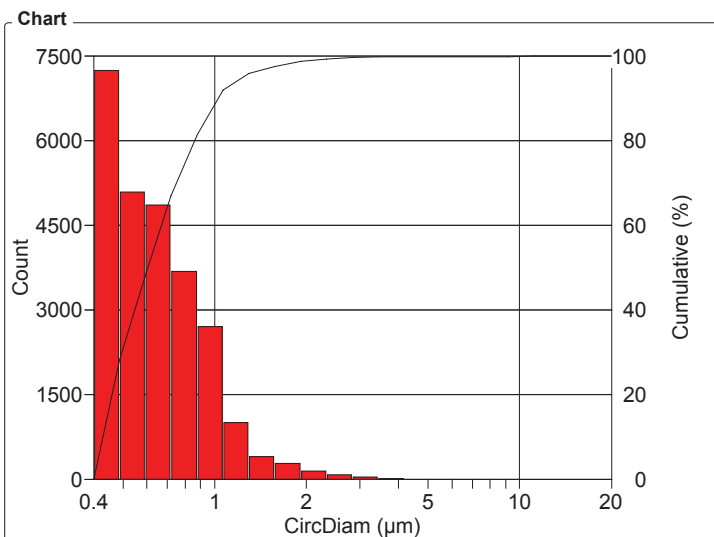
S1 IC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 17:46:27 PM**
 Sample: **S1 IC1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

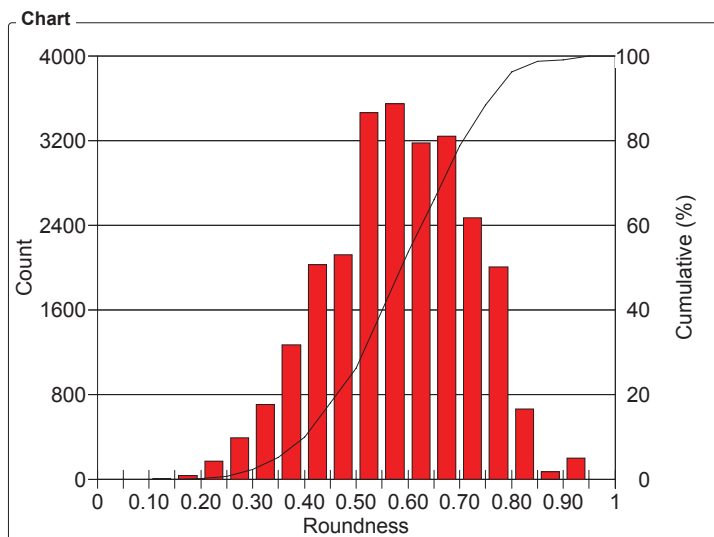
CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	7255	28.28	28.28
0.5 - 0.6	5099	19.88	48.16
0.6 - 0.7	4868	18.98	67.14
0.7 - 0.9	3689	14.38	81.52
0.9 - 1.1	2706	10.55	92.07
1.1 - 1.3	1017	3.96	96.04
1.3 - 1.6	412	1.61	97.65
1.6 - 1.9	287	1.12	98.76
1.9 - 2.3	148	0.58	99.34
2.3 - 2.8	90	0.35	99.69
2.8 - 3.4	43	0.17	99.86
3.4 - 4.2	17	0.07	99.93
4.2 - 5.1	12	0.05	99.97
5.1 - 6.2	3	0.01	99.98
6.2 - 7.5	3	0.01	100.00
7.5 - 9.1	0	0	100.00
9.1 - 11.1	1	3.90e-03	100
11.1 - 13.5	0	0	100
13.5 - 16.4	0	0	100
16.4 - 20	0	0	100

Statistics

Minimum: 0.4 µm
 Maximum: 10.3 µm
 Mean: 0.683 µm
 Std Dev.: 0.348 µm
 Sum: 17518.2 µm
 Count: 25650
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.4 µm
 D50: 0.6 µm
 D90: 1.0 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	10	0.04	0.04
0.15 - 0.20	40	0.16	0.19
0.20 - 0.25	176	0.69	0.88
0.25 - 0.30	396	1.54	2.42
0.30 - 0.35	711	2.77	5.20
0.35 - 0.40	1273	4.96	10.16
0.40 - 0.45	2035	7.93	18.09
0.45 - 0.50	2128	8.30	26.39
0.50 - 0.55	3471	13.53	39.92
0.55 - 0.60	3556	13.86	53.79
0.60 - 0.65	3181	12.40	66.19
0.65 - 0.70	3245	12.65	78.84
0.70 - 0.75	2474	9.65	88.48
0.75 - 0.80	2011	7.84	96.32
0.80 - 0.85	668	2.60	98.93
0.85 - 0.90	75	0.29	99.22
0.90 - 0.95	200	0.78	100
0.95 - 1	0	0	100

Statistics

Minimum: 0.13
 Maximum: 0.93
 Mean: 0.583
 Std Dev.: 0.136
 Count: 25650
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.40
 D50: 0.60
 D90: 0.75

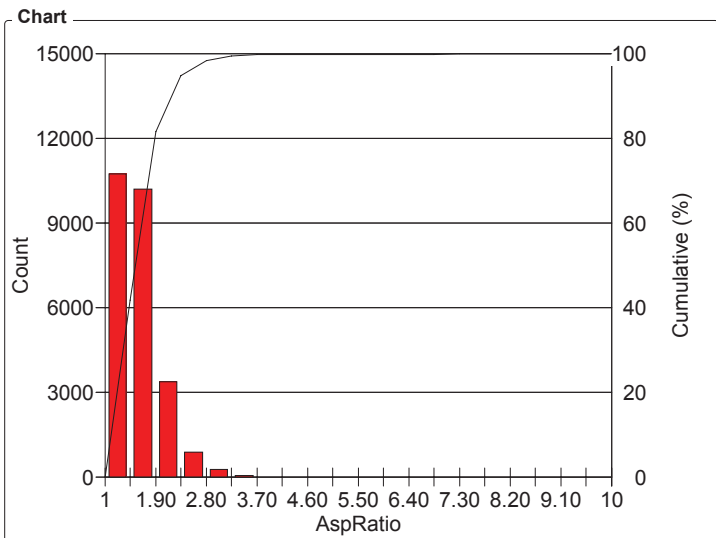
S1 IC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 17:46:27 PM**
 Sample: **S1 IC1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

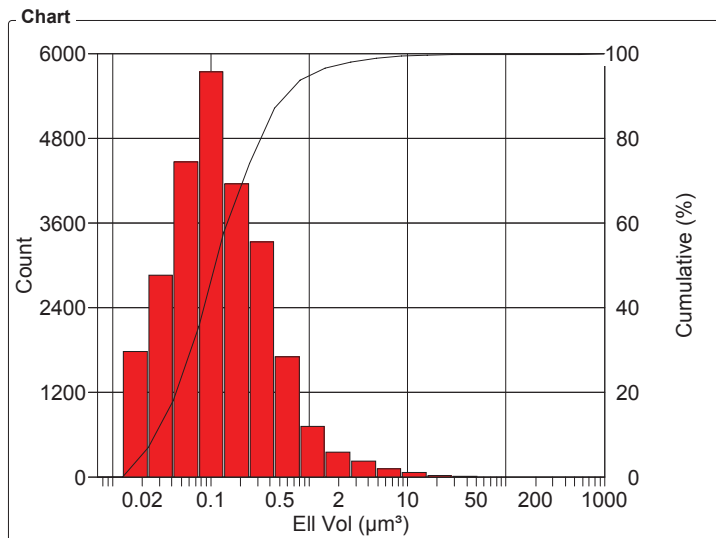


Values				
AspRatio Intervals	Count	%	Cumul%	
1 - 1.45	10750	41.91	41.91	
1.45 - 1.90	10225	39.86	81.77	
1.90 - 2.35	3390	13.22	94.99	
2.35 - 2.80	888	3.46	98.45	
2.80 - 3.25	279	1.09	99.54	
3.25 - 3.70	78	0.30	99.84	
3.70 - 4.15	19	0.07	99.92	
4.15 - 4.60	9	0.04	99.95	
4.60 - 5.05	6	0.02	99.98	
5.05 - 5.50	1	3.90e-03	99.98	
5.50 - 5.95	0	0	99.98	
5.95 - 6.40	3	0.01	99.99	
6.40 - 6.85	0	0	99.99	
6.85 - 7.30	2	7.80e-03	100	
7.30 - 7.75	0	0	100	
7.75 - 8.20	0	0	100	
8.20 - 8.65	0	0	100	
8.65 - 9.10	0	0	100	
9.10 - 9.55	0	0	100	
9.55 - 10	0	0	100	

Statistics	
Minimum:	1.04
Maximum:	7
Mean:	1.60
Std Dev.:	0.396
Count:	25650
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	1.23
D50:	1.50
D90:	2.06

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values				
Ell Vol Intervals (μm^3)	Count	%	Cumul%	
7.0e-03 - 13.0e-03	5	0.02	0.02	
13.0e-03 - 23.0e-03	1782	6.95	6.97	
23.0e-03 - 42.0e-03	2862	11.16	18.12	
42.0e-03 - 75.0e-03	4476	17.45	35.58	
75.0e-03 - 0.1	5743	22.39	57.96	
0.1 - 0.3	4165	16.24	74.20	
0.3 - 0.4	3341	13.03	87.23	
0.4 - 0.8	1714	6.68	93.91	
0.8 - 1.5	718	2.80	96.71	
1.5 - 2.6	363	1.42	98.12	
2.6 - 4.8	225	0.88	99.00	
4.8 - 8.7	127	0.50	99.50	
8.7 - 16	67	0.26	99.76	
16 - 28	32	0.12	99.88	
28 - 51	16	0.06	99.95	
51 - 93	8	0.03	99.98	
93 - 169	3	0.01	99.99	
169 - 305	2	7.80e-03	100.00	
305 - 552	0	0	100.00	
552 - 1000	1	3.90e-03	100	

Statistics		
Minimum:	7.3e-03	μm^3
Maximum:	803.2	μm^3
Mean:	0.435	μm^3
Std Dev.:	5.89	μm^3
Sum:	11157.2	μm^3
Count:	25650	
Under:	0	
Over:	0	
Accepted:	100 %	
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	28.8e-03	μm^3
D50:	0.1	μm^3
D90:	0.5	μm^3

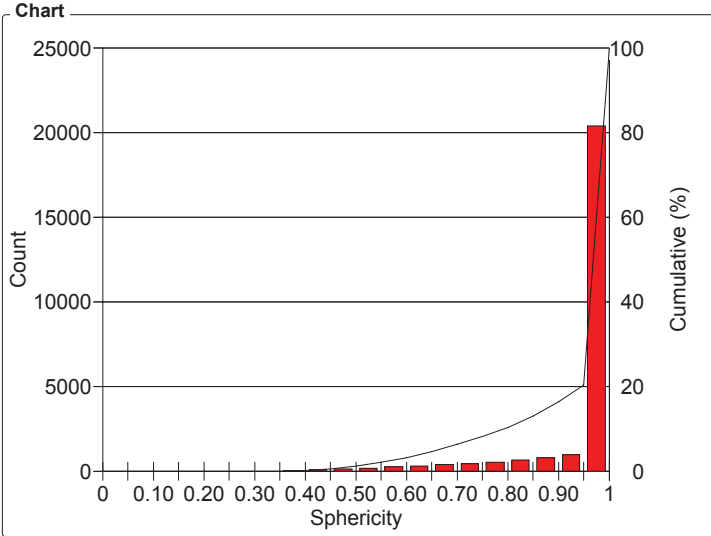
S1 IC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 17:46:27 PM**
 Sample: **S1 IC1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	0	0	0
0.15 - 0.20	1	3.90e-03	3.90e-03
0.20 - 0.25	5	0.02	0.02
0.25 - 0.30	8	0.03	0.05
0.30 - 0.35	18	0.07	0.12
0.35 - 0.40	47	0.18	0.31
0.40 - 0.45	93	0.36	0.67
0.45 - 0.50	170	0.66	1.33
0.50 - 0.55	220	0.86	2.19
0.55 - 0.60	301	1.17	3.36
0.60 - 0.65	354	1.38	4.74
0.65 - 0.70	445	1.73	6.48
0.70 - 0.75	470	1.83	8.31
0.75 - 0.80	543	2.12	10.43
0.80 - 0.85	705	2.75	13.18
0.85 - 0.90	836	3.26	16.44
0.90 - 0.95	1019	3.97	20.41
0.95 - 1	20415	79.59	100

Statistics

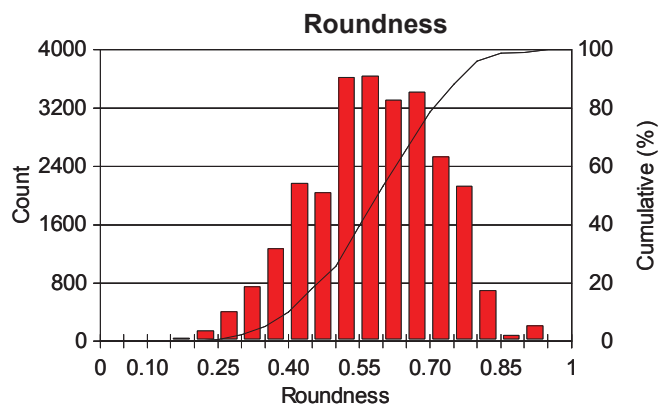
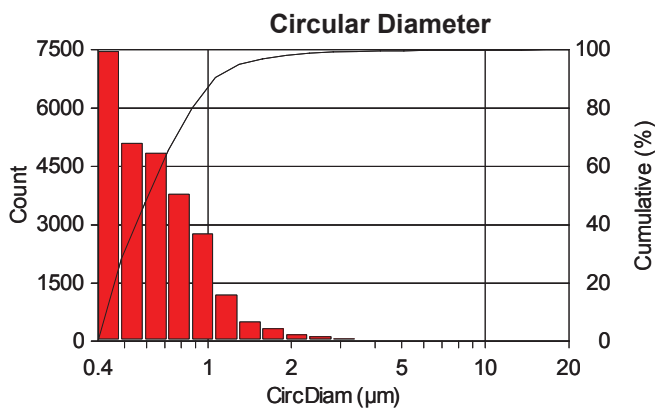
Minimum: 0.20
 Maximum: 1
 Mean: 0.950
 Std Dev.: 0.117
 Count: 25650
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.79
 D50: 1.00
 D90: 1.00

Sample # 2 - Automated Report

Particle Size Analysis

Date:	2007-Aug-19, 6:34:11 PM -04'00'	Magnification:	500X
Company:	Clemex Technologies Inc.	Calibration:	0.1327 $\mu\text{m}/\text{pixel}$
Department:	Laboratory	Units:	microns
User Name:	Myriam Savard (signer ...)	# Fields:	49
Sample ID:	S2 IC2	Count:	26471

Figure 1: Field containing the largest measured particle.



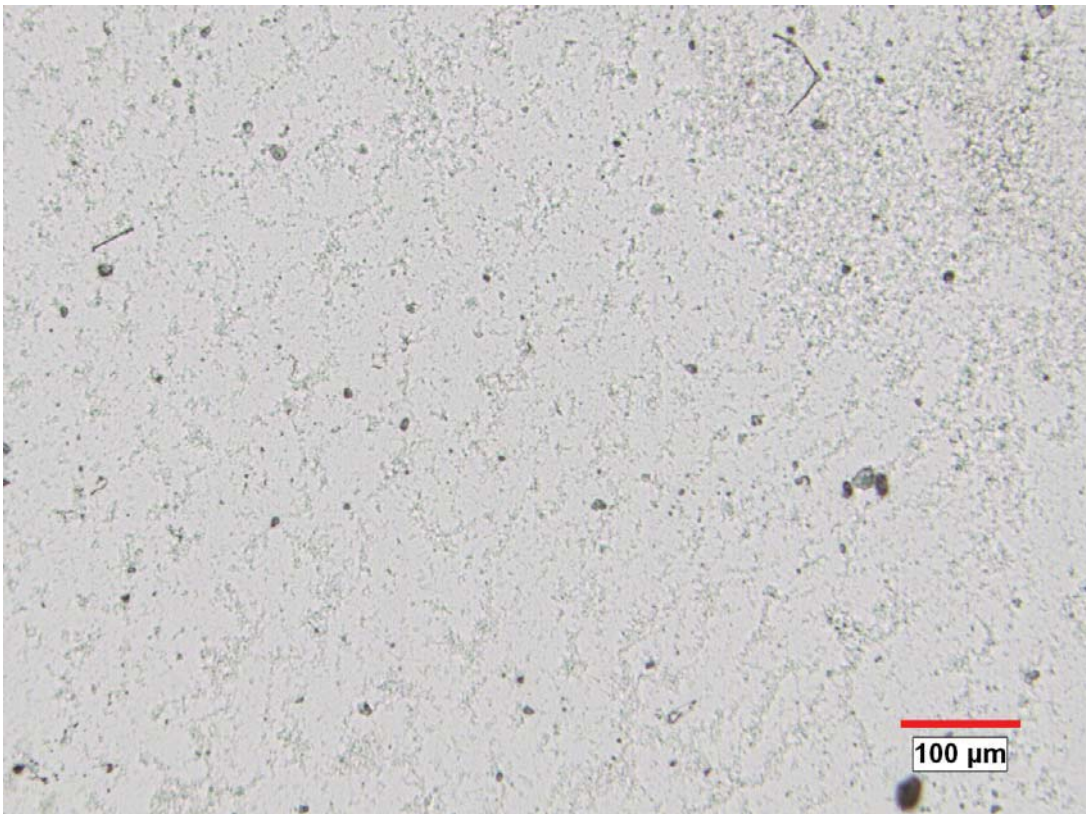
Min: 0.37
Max.: 16.35
Mean: 0.71
Std. Dev.: 0.49
D10: 0.38
D50: 0.60
D90: 1.04

Min: 0.04
Max.: 0.93
Mean: 0.58
Std. Dev.: 0.14
D10: 0.40
D50: 0.60
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 2 - Printed Results

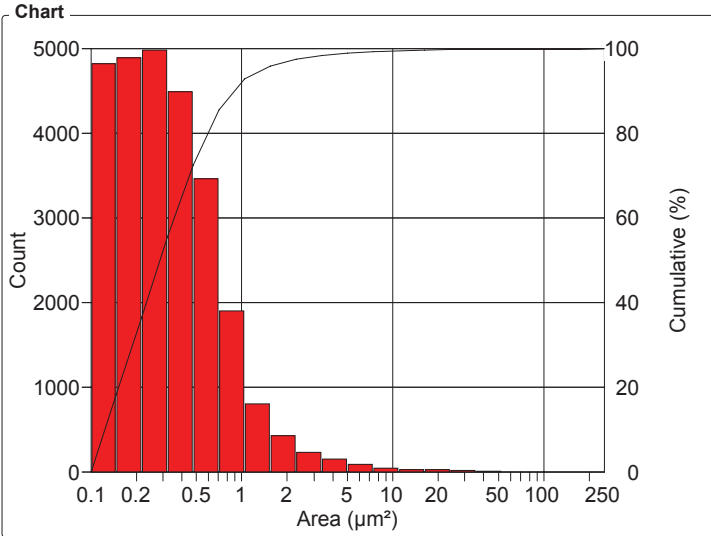
S2 IC2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 18:38:01 PM**
 Sample: **S2 IC2**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

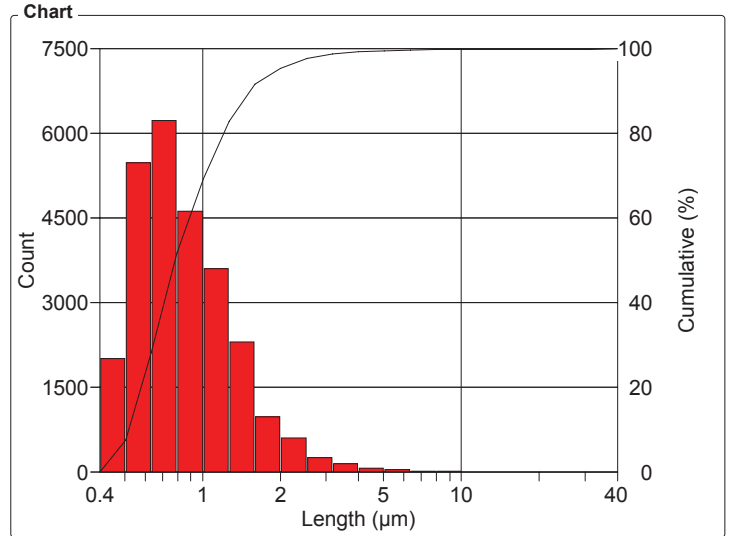
Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.1	4830	18.25	18.25
0.1 - 0.2	4900	18.51	36.76
0.2 - 0.3	4985	18.83	55.59
0.3 - 0.5	4499	17.00	72.59
0.5 - 0.7	3469	13.10	85.69
0.7 - 1.0	1905	7.20	92.89
1.0 - 1.5	804	3.04	95.92
1.5 - 2.3	435	1.64	97.57
2.3 - 3.4	241	0.91	98.48
3.4 - 5	154	0.58	99.06
5 - 7.4	98	0.37	99.43
7.4 - 10.9	47	0.18	99.61
10.9 - 16.2	34	0.13	99.74
16.2 - 24	28	0.11	99.84
24 - 35	20	0.08	99.92
35 - 52	12	0.05	99.96
52 - 77	4	0.02	99.98
77 - 114	2	7.56e-03	99.98
114 - 169	3	0.01	100.00
169 - 250	1	3.78e-03	100

Statistics

Minimum: 0.1 μm^2
 Maximum: 210.1 μm^2
 Mean: 0.584 μm^2
 Std Dev.: 2.67 μm^2
 Sum: 15446.9 μm^2
 Count: 26471
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 0.1 μm^2
 D50: 0.3 μm^2
 D90: 0.9 μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	2019	7.63	7.63
0.5 - 0.6	5491	20.74	28.37
0.6 - 0.8	6233	23.55	51.92
0.8 - 1	4628	17.48	69.40
1 - 1.3	3605	13.62	83.02
1.3 - 1.6	2315	8.75	91.76
1.6 - 2	981	3.71	95.47
2 - 2.5	606	2.29	97.76
2.5 - 3.2	264	1.00	98.76
3.2 - 4	148	0.56	99.32
4 - 5	71	0.27	99.58
5 - 6.3	41	0.15	99.74
6.3 - 8	26	0.10	99.84
8 - 10	19	0.07	99.91
10 - 12.6	12	0.05	99.95
12.6 - 15.9	6	0.02	99.98
15.9 - 20	2	7.56e-03	99.98
20 - 25.2	3	0.01	100.00
25.2 - 31.8	0	0	100.00
31.8 - 40	1	3.78e-03	100

Statistics

Minimum: 0.4 μm
 Maximum: 35.3 μm
 Mean: 0.963 μm
 Std Dev.: 0.750 μm
 Sum: 25498.8 μm
 Count: 26471
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 0.5 μm
 D50: 0.8 μm
 D90: 1.5 μm

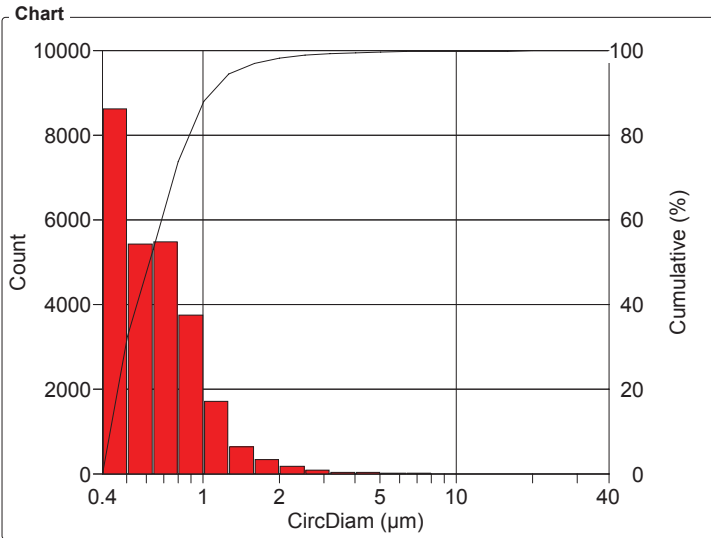
S2 IC2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 18:38:01 PM**
 Sample: **S2 IC2**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

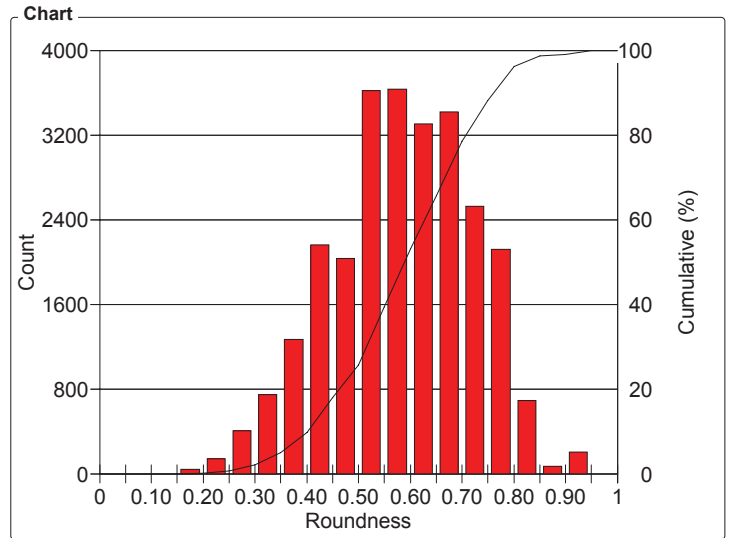
CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	8638	32.63	32.63
0.5 - 0.6	5432	20.52	53.15
0.6 - 0.8	5491	20.74	73.90
0.8 - 1	3750	14.17	88.06
1 - 1.3	1731	6.54	94.60
1.3 - 1.6	646	2.44	97.04
1.6 - 2	352	1.33	98.37
2 - 2.5	182	0.69	99.06
2.5 - 3.2	105	0.40	99.46
3.2 - 4	49	0.19	99.64
4 - 5	40	0.15	99.79
5 - 6.3	26	0.10	99.89
6.3 - 8	18	0.07	99.96
8 - 10	5	0.02	99.98
10 - 12.6	3	0.01	99.99
12.6 - 15.9	2	7.55e-03	100.00
15.9 - 20	1	3.78e-03	100
20 - 25.2	0	0	100
25.2 - 31.8	0	0	100
31.8 - 40	0	0	100

Statistics

Minimum: 0.4 µm
 Maximum: 16.4 µm
 Mean: 0.712 µm
 Std Dev.: 0.486 µm
 Sum: 18846.1 µm
 Count: 26471
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.4 µm
 D50: 0.6 µm
 D90: 1.0 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Roundness Intervals	Count	%	Cumul%
0 - 0.05	1	3.78e-03	3.78e-03
0.05 - 0.10	0	0	3.78e-03
0.10 - 0.15	6	0.02	0.03
0.15 - 0.20	44	0.17	0.19
0.20 - 0.25	146	0.55	0.74
0.25 - 0.30	412	1.56	2.30
0.30 - 0.35	750	2.83	5.13
0.35 - 0.40	1276	4.82	9.95
0.40 - 0.45	2167	8.19	18.14
0.45 - 0.50	2039	7.70	25.84
0.50 - 0.55	3622	13.68	39.53
0.55 - 0.60	3637	13.74	53.27
0.60 - 0.65	3309	12.50	65.77
0.65 - 0.70	3423	12.93	78.70
0.70 - 0.75	2530	9.56	88.26
0.75 - 0.80	2125	8.03	96.28
0.80 - 0.85	694	2.62	98.90
0.85 - 0.90	78	0.29	99.20
0.90 - 0.95	212	0.80	100
0.95 - 1	0	0	100

Statistics

Minimum: 0.04
 Maximum: 0.93
 Mean: 0.585
 Std Dev.: 0.136
 Count: 26471
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.40
 D50: 0.60
 D90: 0.75

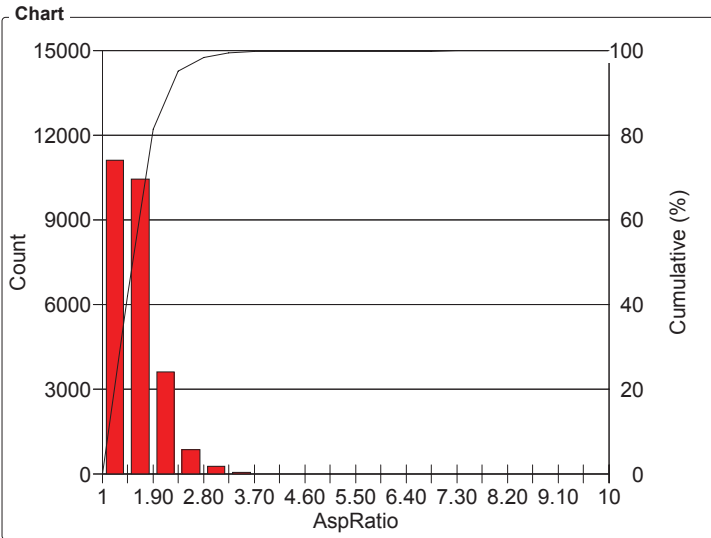
S2 IC2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 18:38:01 PM**
 Sample: **S2 IC2**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

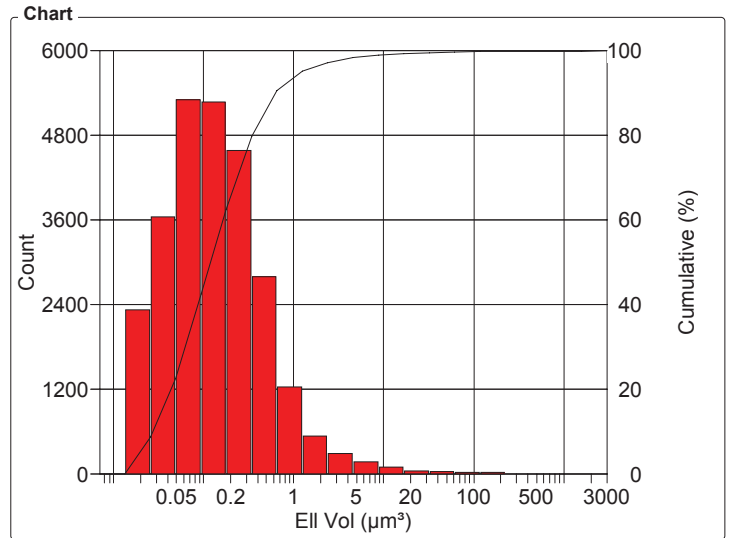
AspRatio Intervals	Count	%	Cumul%
1 - 1.45	11127	42.03	42.03
1.45 - 1.90	10462	39.52	81.56
1.90 - 2.35	3636	13.74	95.29
2.35 - 2.80	864	3.26	98.56
2.80 - 3.25	273	1.03	99.59
3.25 - 3.70	76	0.29	99.88
3.70 - 4.15	17	0.06	99.94
4.15 - 4.60	6	0.02	99.96
4.60 - 5.05	4	0.02	99.98
5.05 - 5.50	0	0	99.98
5.50 - 5.95	1	3.78e-03	99.98
5.95 - 6.40	4	0.02	100.00
6.40 - 6.85	0	0	100.00
6.85 - 7.30	1	3.78e-03	100
7.30 - 7.75	0	0	100
7.75 - 8.20	0	0	100
8.20 - 8.65	0	0	100
8.65 - 9.10	0	0	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics

Minimum: 1.02
 Maximum: 7
 Mean: 1.60
 Std Dev.: 0.390
 Count: 26471
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 1.23
 D50: 1.50
 D90: 2.06

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Ell Vol Intervals (μm^3)	Count	%	Cumul%
7.0e-03 - 13.0e-03	4	0.02	0.02
13.0e-03 - 26.0e-03	2334	8.82	8.83
26.0e-03 - 49.0e-03	3650	13.79	22.62
49.0e-03 - 94.0e-03	5305	20.04	42.66
94.0e-03 - 0.2	5275	19.93	62.59
0.2 - 0.3	4593	17.35	79.94
0.3 - 0.7	2805	10.60	90.54
0.7 - 1.3	1238	4.68	95.21
1.3 - 2.4	546	2.06	97.28
2.4 - 4.6	296	1.12	98.39
4.6 - 8.8	173	0.65	99.05
8.8 - 17	106	0.40	99.45
17 - 32	44	0.17	99.61
32 - 61	36	0.14	99.75
61 - 117	27	0.10	99.85
117 - 224	23	0.09	99.94
224 - 429	7	0.03	99.97
429 - 820	4	0.02	99.98
820 - 1569	3	0.01	99.99
1569 - 3000	2	7.56e-03	100

Statistics

Minimum: 7.3e-03 μm^3
 Maximum: 2863.8 μm^3
 Mean: 1.18 μm^3
 Std Dev.: 28.2 μm^3
 Sum: 31229.5 μm^3
 Count: 26471
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 28.7e-03 μm^3
 D50: 0.1 μm^3
 D90: 0.6 μm^3

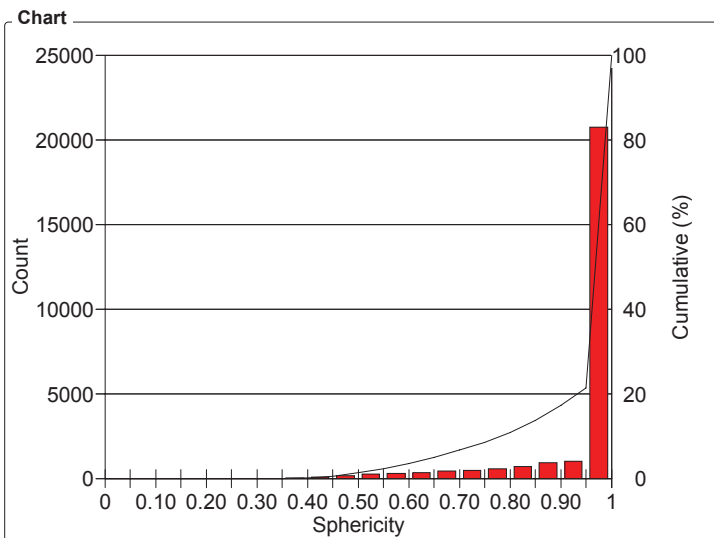
S2 IC2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 18:38:01 PM**
 Sample: **S2 IC2**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	1	3.78e-03	3.78e-03
0.10 - 0.15	1	3.78e-03	7.56e-03
0.15 - 0.20	3	0.01	0.02
0.20 - 0.25	1	3.78e-03	0.02
0.25 - 0.30	11	0.04	0.06
0.30 - 0.35	13	0.05	0.11
0.35 - 0.40	47	0.18	0.29
0.40 - 0.45	101	0.38	0.67
0.45 - 0.50	211	0.80	1.47
0.50 - 0.55	269	1.02	2.49
0.55 - 0.60	320	1.21	3.69
0.60 - 0.65	359	1.36	5.05
0.65 - 0.70	470	1.78	6.83
0.70 - 0.75	504	1.90	8.73
0.75 - 0.80	615	2.32	11.05
0.80 - 0.85	724	2.74	13.79
0.85 - 0.90	960	3.63	17.42
0.90 - 0.95	1063	4.02	21.43
0.95 - 1	20798	78.57	100

Statistics

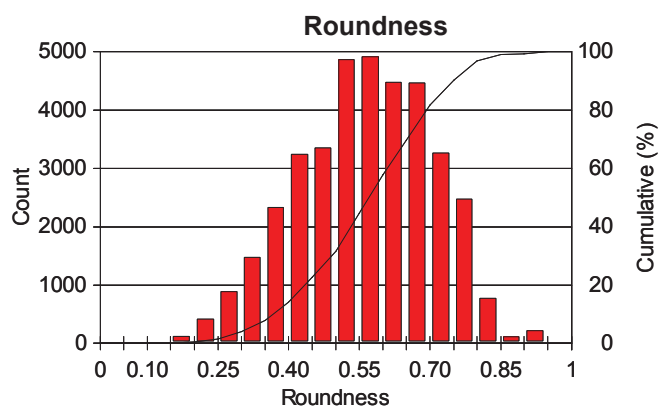
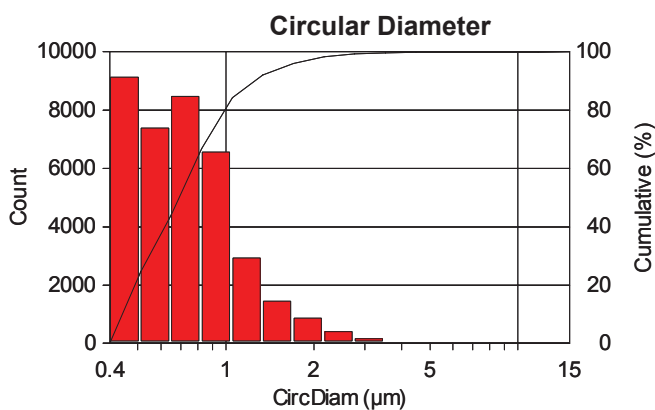
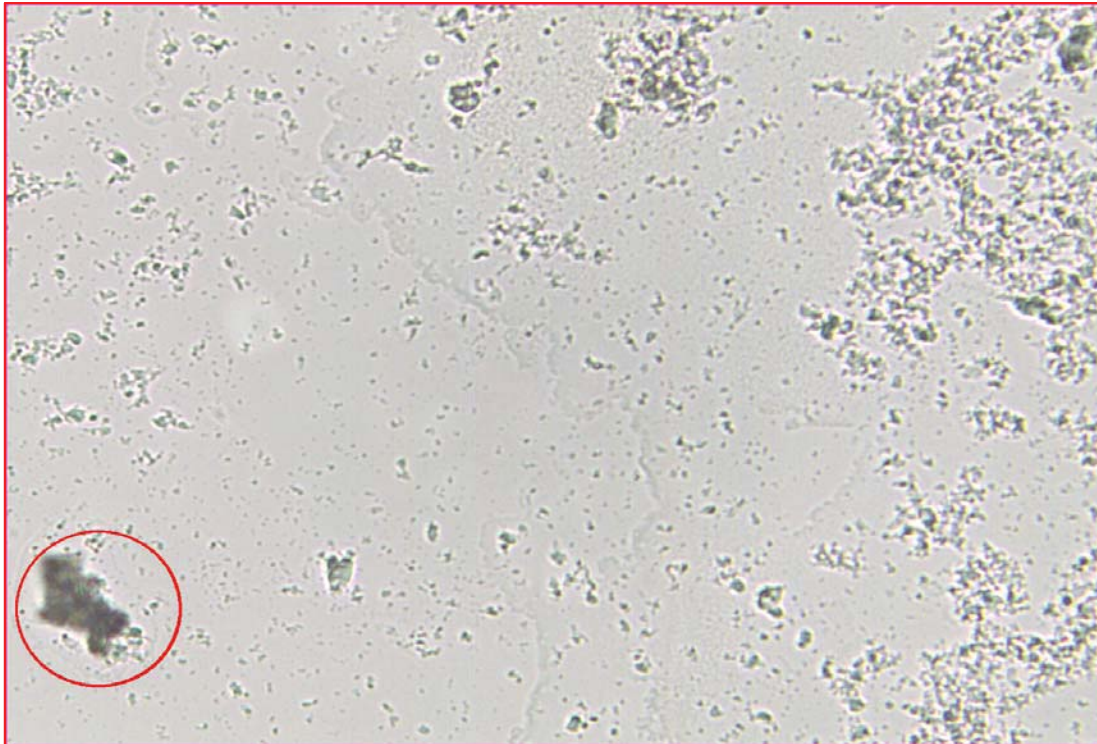
Minimum:	0.08
Maximum:	1
Mean:	0.947
Std Dev.:	0.120
Count:	26471
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.78
D50:	1.00
D90:	1.00

Sample # 3 - Automated Report

Particle Size Analysis

Date:	2007-Aug-19, 7:11:34 PM -04'00'	Magnification:	500X
Company:	Clemex Technologies Inc.	Calibration:	0.1327 $\mu\text{m}/\text{pixel}$
Department:	Laboratory	Units:	microns
User Name:	Myriam Savard (signer ...)	# Fields:	49
Sample ID:	S3 ID1	Count:	37449

Figure 1: Field containing the largest measured particle.



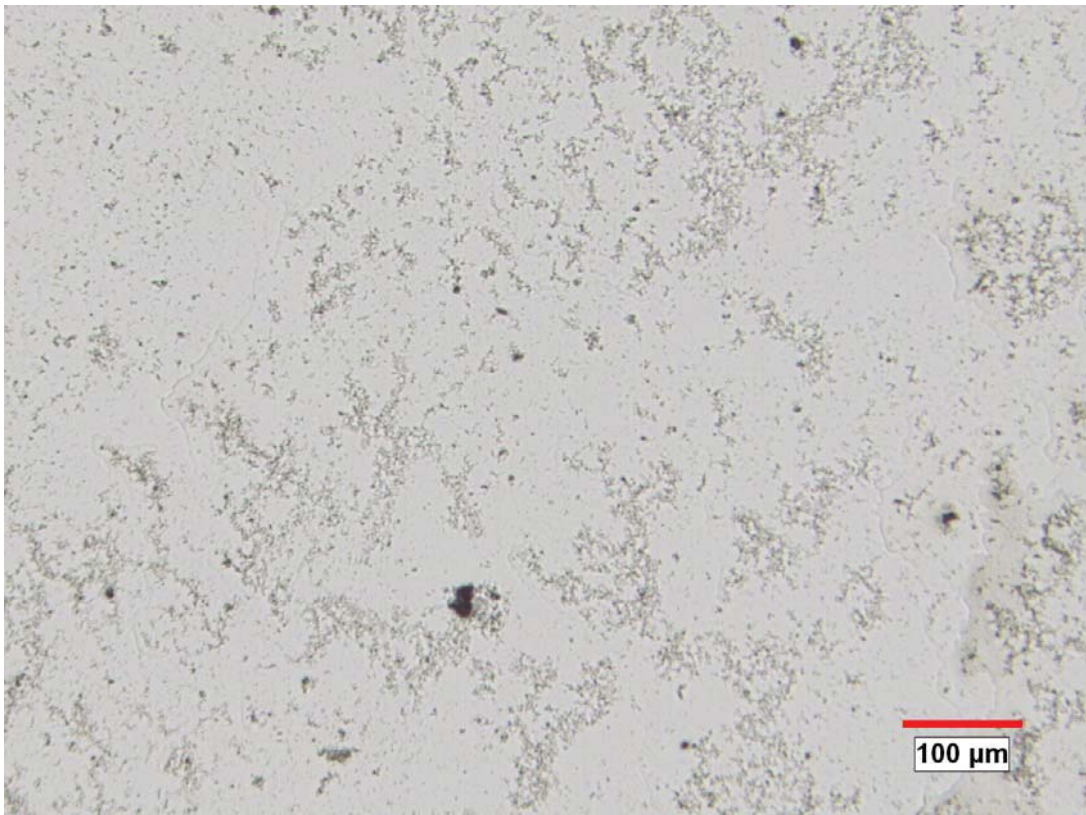
Min: 0.37
Max.: 12.99
Mean: 0.79
Std. Dev.: 0.45
D10: 0.40
D50: 0.68
D90: 1.23

Min: 0.08
Max.: 0.93
Mean: 0.56
Std. Dev.: 0.14
D10: 0.37
D50: 0.57
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 3 - Printed Results

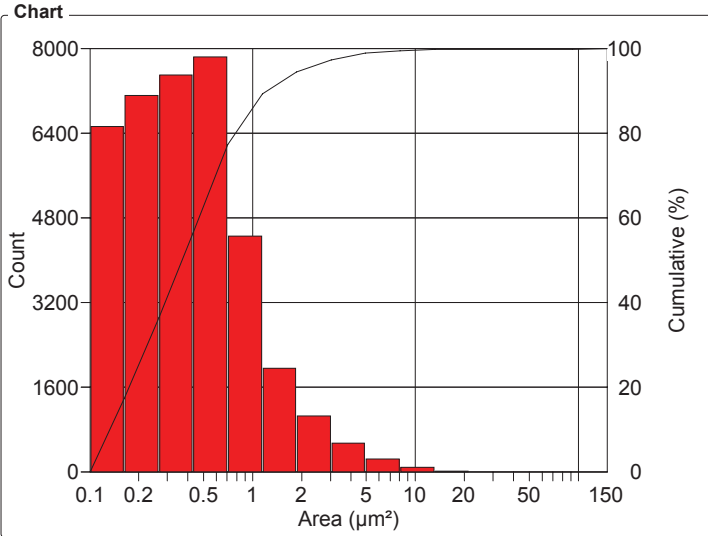
S3 ID1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:15:29 PM**
 Sample: **S3 ID1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

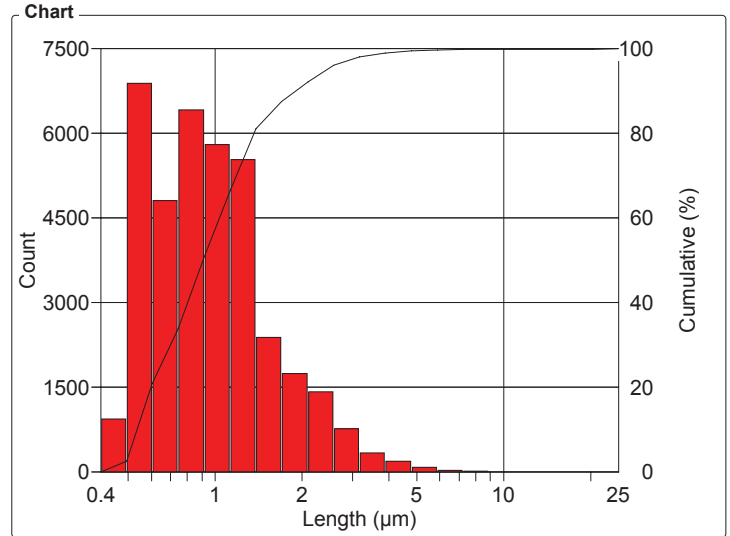
Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.2	6536	17.45	17.45
0.2 - 0.3	7116	19.00	36.45
0.3 - 0.4	7507	20.05	56.50
0.4 - 0.7	7851	20.96	77.47
0.7 - 1.1	4461	11.91	89.38
1.1 - 1.9	1969	5.26	94.64
1.9 - 3	1058	2.83	97.46
3 - 4.9	557	1.49	98.95
4.9 - 8	253	0.68	99.62
8 - 13.1	97	0.26	99.88
13.1 - 21	21	0.06	99.94
21 - 35	12	0.03	99.97
35 - 57	5	0.01	99.98
57 - 92	4	0.01	99.99
92 - 150	2	5.34e-03	100

Statistics

Minimum:	0.1	μm^2
Maximum:	132.6	μm^2
Mean:	0.653	μm^2
Std Dev.:	1.66	μm^2
Sum:	24451.2	μm^2
Count:	37449	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.1	μm^2
D50:	0.4	μm^2
D90:	1.2	μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	945	2.52	2.52
0.5 - 0.6	6894	18.41	20.93
0.6 - 0.7	4813	12.85	33.78
0.7 - 0.9	6426	17.16	50.94
0.9 - 1.1	5802	15.49	66.44
1.1 - 1.4	5539	14.79	81.23
1.4 - 1.7	2388	6.38	87.60
1.7 - 2.1	1754	4.68	92.29
2.1 - 2.6	1427	3.81	96.10
2.6 - 3.2	766	2.05	98.14
3.2 - 3.9	344	0.92	99.06
3.9 - 4.8	188	0.50	99.56
4.8 - 5.9	89	0.24	99.80
5.9 - 7.2	38	0.10	99.90
7.2 - 8.9	18	0.05	99.95
8.9 - 10.9	8	0.02	99.97
10.9 - 13.4	6	0.02	99.99
13.4 - 16.5	3	8.01e-03	100.00
16.5 - 20.3	0	0	100.00
20.3 - 25	1	2.67e-03	100

Statistics

Minimum:	0.4	μm
Maximum:	20.6	μm
Mean:	1.10	μm
Std Dev.:	0.720	μm
Sum:	41192.7	μm
Count:	37449	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.5	μm
D50:	0.9	μm
D90:	1.9	μm

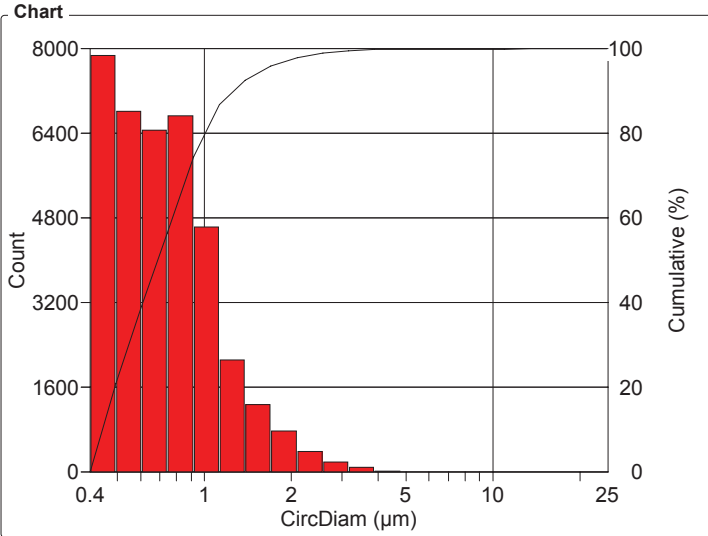
S3 ID1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:15:29 PM**
 Sample: **S3 ID1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

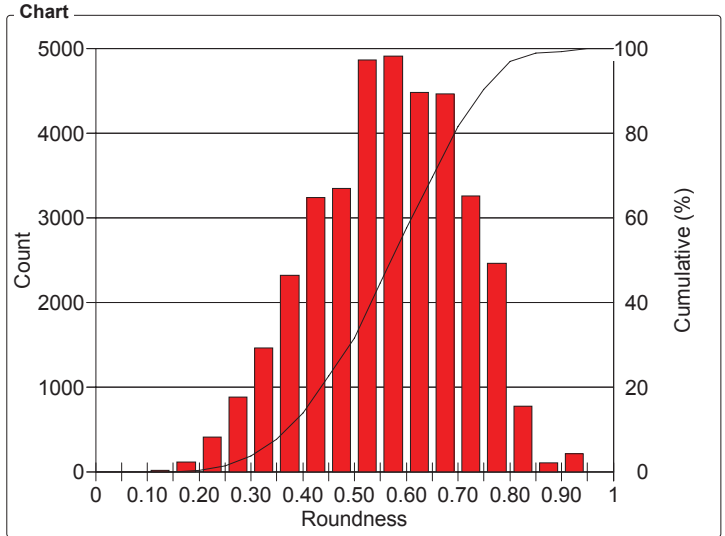
CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	7873	21.02	21.02
0.5 - 0.6	6822	18.22	39.24
0.6 - 0.7	6464	17.26	56.50
0.7 - 0.9	6739	18.00	74.50
0.9 - 1.1	4636	12.38	86.88
1.1 - 1.4	2123	5.67	92.54
1.4 - 1.7	1281	3.42	95.97
1.7 - 2.1	773	2.06	98.03
2.1 - 2.6	394	1.05	99.08
2.6 - 3.2	195	0.52	99.60
3.2 - 3.9	95	0.25	99.86
3.9 - 4.8	28	0.07	99.93
4.8 - 5.9	11	0.03	99.96
5.9 - 7.2	7	0.02	99.98
7.2 - 8.9	3	8.01e-03	99.99
8.9 - 10.9	3	8.01e-03	99.99
10.9 - 13.4	2	5.34e-03	100
13.4 - 16.5	0	0	100
16.5 - 20.3	0	0	100
20.3 - 25	0	0	100

Statistics

Minimum: 0.4 µm
 Maximum: 13.0 µm
 Mean: 0.790 µm
 Std Dev.: 0.455 µm
 Sum: 29600.0 µm
 Count: 37449
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.4 µm
 D50: 0.7 µm
 D90: 1.2 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	5	0.01	0.01
0.10 - 0.15	22	0.06	0.07
0.15 - 0.20	124	0.33	0.40
0.20 - 0.25	418	1.12	1.52
0.25 - 0.30	891	2.38	3.90
0.30 - 0.35	1473	3.93	7.83
0.35 - 0.40	2330	6.22	14.05
0.40 - 0.45	3249	8.68	22.73
0.45 - 0.50	3353	8.95	31.68
0.50 - 0.55	4868	13.00	44.68
0.55 - 0.60	4918	13.13	57.81
0.60 - 0.65	4484	11.97	69.79
0.65 - 0.70	4466	11.93	81.71
0.70 - 0.75	3264	8.72	90.43
0.75 - 0.80	2472	6.60	97.03
0.80 - 0.85	777	2.07	99.11
0.85 - 0.90	112	0.30	99.40
0.90 - 0.95	223	0.60	100
0.95 - 1	0	0	100

Statistics

Minimum: 0.08
 Maximum: 0.93
 Mean: 0.565
 Std Dev.: 0.143
 Count: 37449
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.37
 D50: 0.57
 D90: 0.75

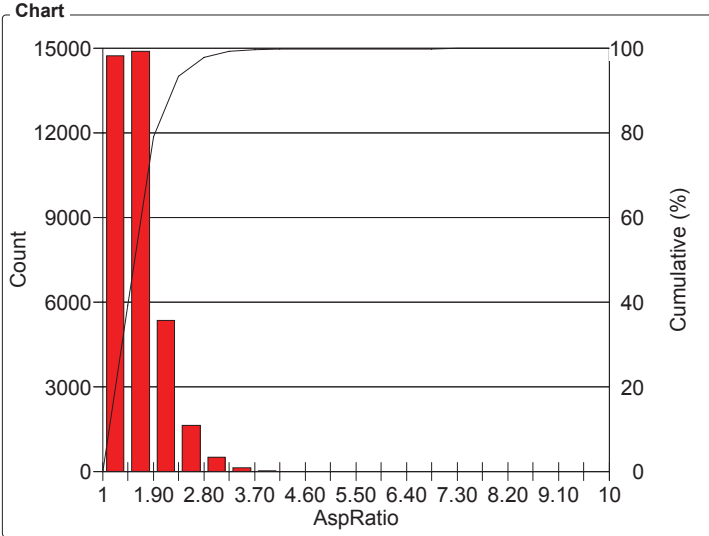
S3 ID1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:15:30 PM**
 Sample: **S3 ID1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

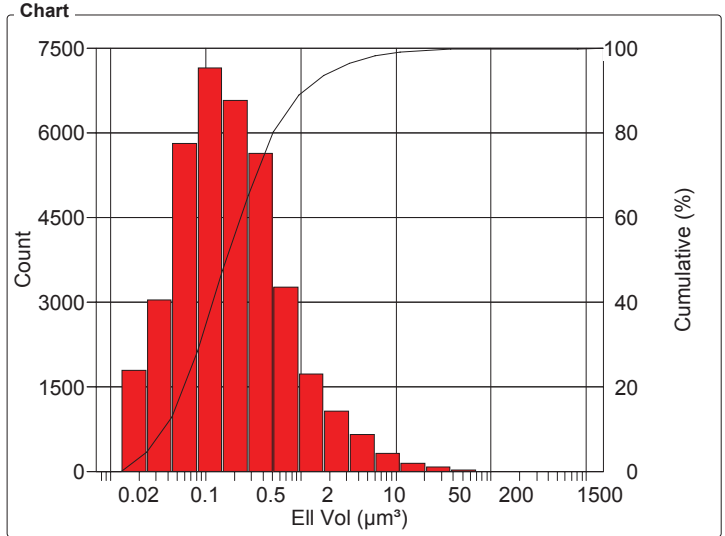
AspRatio Intervals	Count	%	Cumul%
1 - 1.45	14751	39.39	39.39
1.45 - 1.90	14903	39.80	79.19
1.90 - 2.35	5374	14.35	93.54
2.35 - 2.80	1656	4.42	97.96
2.80 - 3.25	527	1.41	99.36
3.25 - 3.70	154	0.41	99.78
3.70 - 4.15	46	0.12	99.90
4.15 - 4.60	17	0.05	99.94
4.60 - 5.05	10	0.03	99.97
5.05 - 5.50	4	0.01	99.98
5.50 - 5.95	3	8.01e-03	99.99
5.95 - 6.40	3	8.01e-03	100.00
6.40 - 6.85	0	0	100.00
6.85 - 7.30	1	2.67e-03	100
7.30 - 7.75	0	0	100
7.75 - 8.20	0	0	100
8.20 - 8.65	0	0	100
8.65 - 9.10	0	0	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics

Minimum: 1.02
 Maximum: 7
 Mean: 1.64
 Std Dev.: 0.422
 Count: 37449
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 1.24
 D50: 1.50
 D90: 2.15

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Ell Vol Intervals (µm ³)	Count	%	Cumul%
7.0e-03 - 13.0e-03	3	8.01e-03	8.01e-03
13.0e-03 - 24.0e-03	1802	4.81	4.82
24.0e-03 - 44.0e-03	3047	8.14	12.96
44.0e-03 - 82.0e-03	5822	15.55	28.50
82.0e-03 - 0.2	7160	19.12	47.62
0.2 - 0.3	6582	17.58	65.20
0.3 - 0.5	5640	15.06	80.26
0.5 - 0.9	3279	8.76	89.01
0.9 - 1.8	1741	4.65	93.66
1.8 - 3.2	1079	2.88	96.54
3.2 - 6	665	1.78	98.32
6 - 11.1	332	0.89	99.21
11.1 - 20	154	0.41	99.62
20 - 38	85	0.23	99.85
38 - 70	33	0.09	99.93
70 - 129	8	0.02	99.95
129 - 238	7	0.02	99.97
238 - 440	5	0.01	99.99
440 - 812	2	5.34e-03	99.99
812 - 1500	3	8.01e-03	100

Statistics

Minimum: 7.3e-03 µm³
 Maximum: 1426.8 µm³
 Mean: 0.836 µm³
 Std Dev.: 11.9 µm³
 Sum: 31291.0 µm³
 Count: 37449
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 36.7e-03 µm³
 D50: 0.2 µm³
 D90: 1.1 µm³

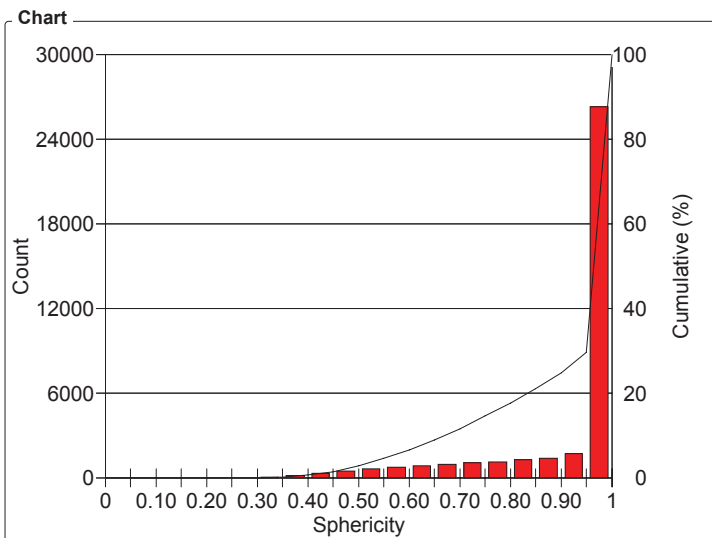
S3 ID1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:15:30 PM**
 Sample: **S3 ID1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	2	5.34e-03	5.34e-03
0.15 - 0.20	6	0.02	0.02
0.20 - 0.25	4	0.01	0.03
0.25 - 0.30	31	0.08	0.11
0.30 - 0.35	67	0.18	0.29
0.35 - 0.40	161	0.43	0.72
0.40 - 0.45	325	0.87	1.59
0.45 - 0.50	487	1.30	2.89
0.50 - 0.55	673	1.80	4.69
0.55 - 0.60	769	2.05	6.74
0.60 - 0.65	861	2.30	9.04
0.65 - 0.70	1002	2.68	11.72
0.70 - 0.75	1102	2.94	14.66
0.75 - 0.80	1145	3.06	17.72
0.80 - 0.85	1294	3.46	21.17
0.85 - 0.90	1421	3.79	24.97
0.90 - 0.95	1764	4.71	29.68
0.95 - 1	26335	70.32	100

Statistics

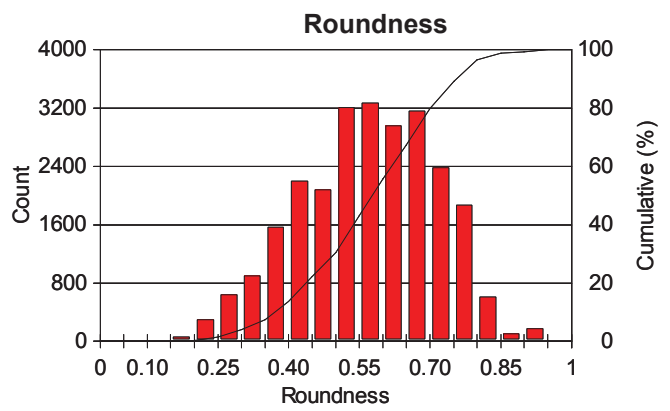
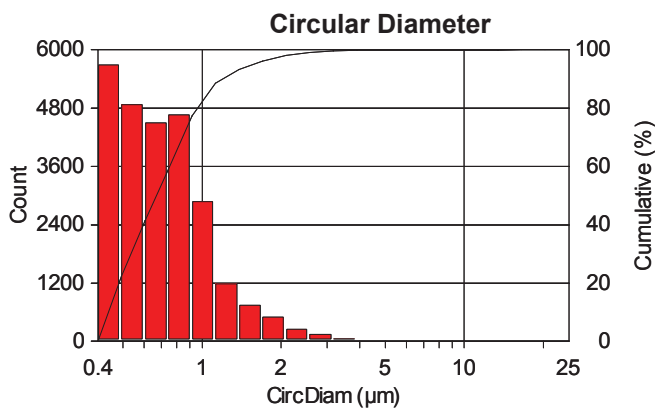
Minimum: 0.14
 Maximum: 1
 Mean: 0.918
 Std Dev.: 0.150
 Count: 37449
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.67
 D50: 1.00
 D90: 1.00

Sample # 4 - Automated Report

Particle Size Analysis

Date:	2007-Aug-19, 7:33:19 PM -04'00'	Magnification:	500X
Company:	Clemex Technologies Inc.	Calibration:	0.1327 $\mu\text{m}/\text{pixel}$
Department:	Laboratory	Units:	microns
User Name:	Myriam Savard (signer ...)	# Fields:	49
Sample ID:	S4 ID2	Count:	25527

Figure 1: Field containing the largest measured particle.



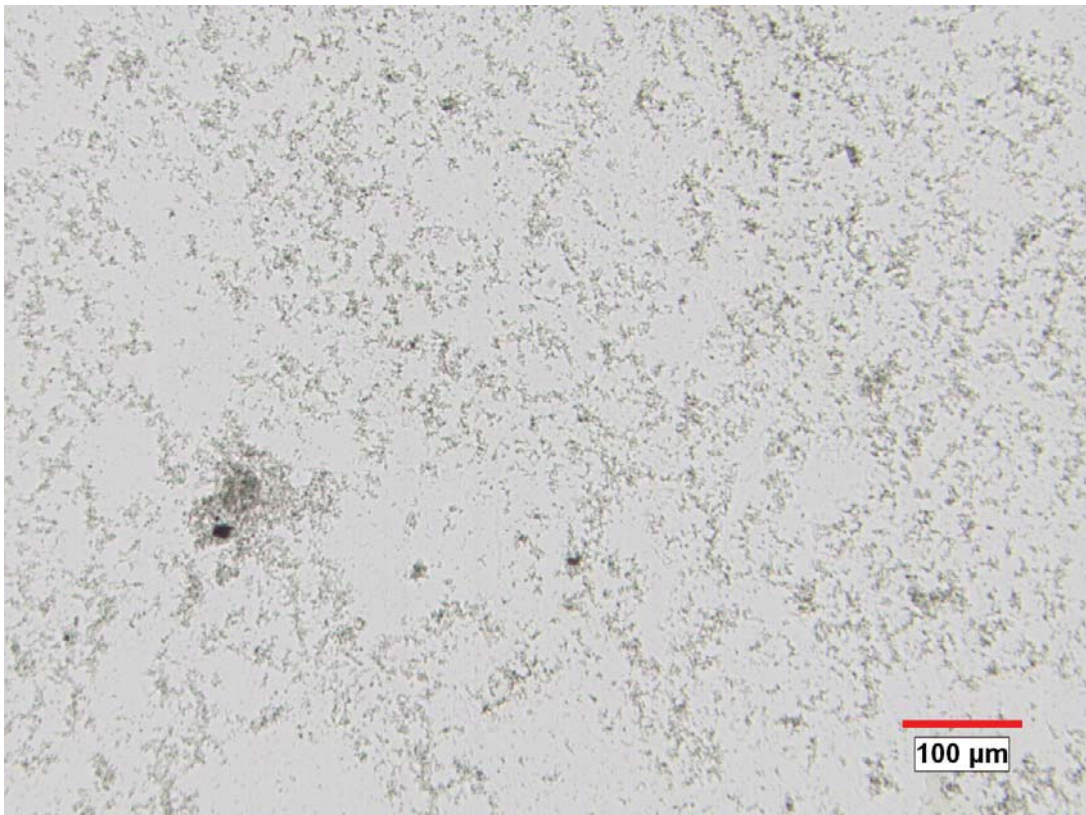
Min: 0.37
Max.: 15.23
Mean: 0.77
Std. Dev.: 0.45
D10: 0.40
D50: 0.66
D90: 1.17

Min: 0.05
Max.: 0.93
Mean: 0.57
Std. Dev.: 0.14
D10: 0.37
D50: 0.58
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 4 - Printed Results

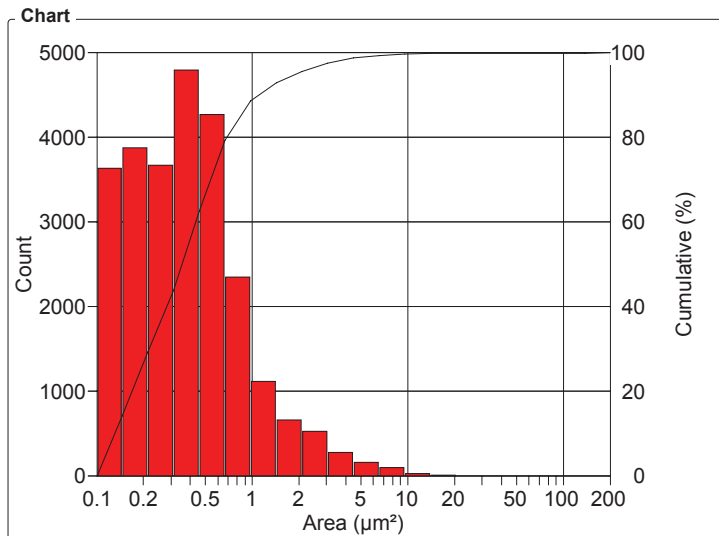
S4 ID2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:35:39 PM**
 Sample: **S4 ID2**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

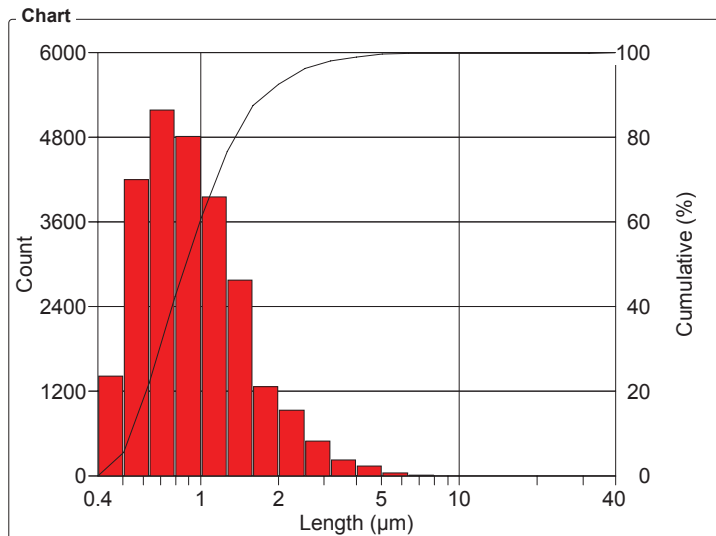
Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.1	3636	14.24	14.24
0.1 - 0.2	3881	15.20	29.45
0.2 - 0.3	3676	14.40	43.85
0.3 - 0.5	4798	18.80	62.64
0.5 - 0.7	4270	16.73	79.37
0.7 - 1.0	2350	9.21	88.58
1.0 - 1.4	1120	4.39	92.96
1.4 - 2.1	669	2.62	95.59
2.1 - 3.1	532	2.08	97.67
3.1 - 4.5	277	1.09	98.75
4.5 - 6.5	161	0.63	99.38
6.5 - 9.6	104	0.41	99.79
9.6 - 14	27	0.11	99.90
14 - 20.5	12	0.05	99.95
20.5 - 30	6	0.02	99.97
30 - 44	2	7.84e-03	99.98
44 - 64	2	7.83e-03	99.98
64 - 94	2	7.84e-03	99.99
94 - 137	1	3.92e-03	100.00
137 - 200	1	3.92e-03	100

Statistics

Minimum: 0.1 μm^2
 Maximum: 182.2 μm^2
 Mean: 0.626 μm^2
 Std Dev.: 1.87 μm^2
 Sum: 15977.6 μm^2
 Count: 25527
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 0.1 μm^2
 D50: 0.3 μm^2
 D90: 1.1 μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	1416	5.55	5.55
0.5 - 0.6	4206	16.48	22.02
0.6 - 0.8	5193	20.34	42.37
0.8 - 1	4818	18.87	61.24
1 - 1.3	3957	15.50	76.74
1.3 - 1.6	2782	10.90	87.64
1.6 - 2	1265	4.96	92.60
2 - 2.5	941	3.69	96.28
2.5 - 3.2	493	1.93	98.21
3.2 - 4	227	0.89	99.10
4 - 5	143	0.56	99.66
5 - 6.3	50	0.20	99.86
6.3 - 8	19	0.07	99.93
8 - 10	8	0.03	99.96
10 - 12.6	3	0.01	99.98
12.6 - 15.9	3	0.01	99.99
15.9 - 20	2	7.84e-03	100.00
20 - 25.2	0	0	100.00
25.2 - 31.8	0	0	100.00
31.8 - 40	1	3.92e-03	100

Statistics

Minimum: 0.4 μm
 Maximum: 36.7 μm
 Mean: 1.07 μm
 Std Dev.: 0.740 μm
 Sum: 27197.4 μm
 Count: 25527
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 0.5 μm
 D50: 0.9 μm
 D90: 1.7 μm

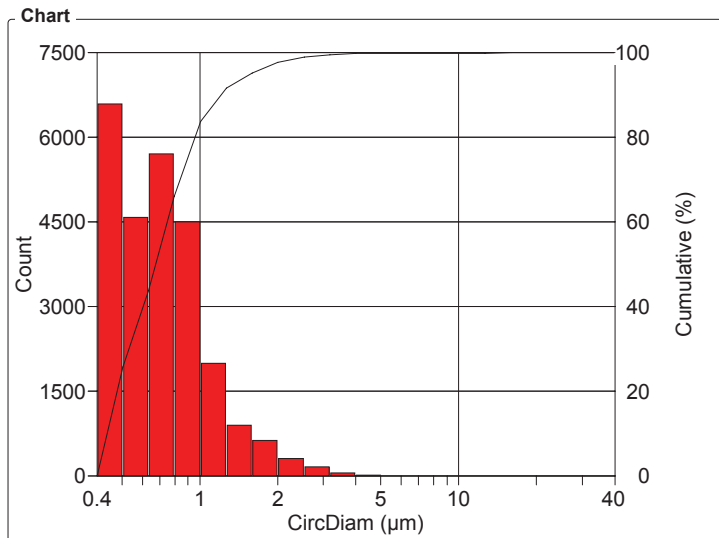
S4 ID2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:35:40 PM**
 Sample: **S4 ID2**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



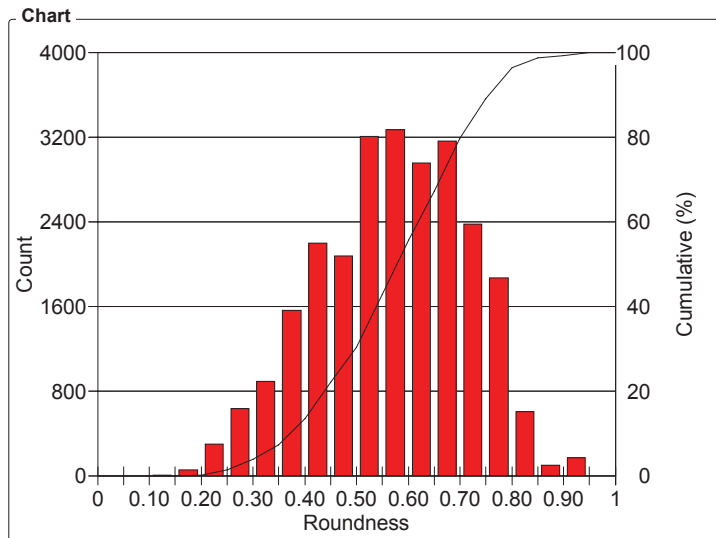
CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	6601	25.86	25.86
0.5 - 0.6	4592	17.99	43.85
0.6 - 0.8	5711	22.37	66.22
0.8 - 1	4510	17.67	83.89
1 - 1.3	2001	7.84	91.73
1.3 - 1.6	901	3.53	95.26
1.6 - 2	632	2.48	97.73
2 - 2.5	316	1.24	98.97
2.5 - 3.2	170	0.67	99.64
3.2 - 4	60	0.24	99.87
4 - 5	18	0.07	99.94
5 - 6.3	7	0.03	99.97
6.3 - 8	2	7.84e-03	99.98
8 - 10	4	0.02	99.99
10 - 12.6	1	3.92e-03	100.00
12.6 - 15.9	1	3.92e-03	100
15.9 - 20	0	0	100
20 - 25.2	0	0	100
25.2 - 31.8	0	0	100
31.8 - 40	0	0	100

Statistics

Minimum: 0.4 µm
 Maximum: 15.2 µm
 Mean: 0.770 µm
 Std Dev.: 0.451 µm
 Sum: 19663.3 µm
 Count: 25527
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.4 µm
 D50: 0.7 µm
 D90: 1.2 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	1	3.92e-03	3.92e-03
0.05 - 0.10	1	3.92e-03	7.83e-03
0.10 - 0.15	10	0.04	0.05
0.15 - 0.20	60	0.24	0.28
0.20 - 0.25	300	1.18	1.46
0.25 - 0.30	642	2.51	3.97
0.30 - 0.35	898	3.52	7.49
0.35 - 0.40	1568	6.14	13.63
0.40 - 0.45	2201	8.62	22.25
0.45 - 0.50	2084	8.16	30.42
0.50 - 0.55	3214	12.59	43.01
0.55 - 0.60	3272	12.82	55.83
0.60 - 0.65	2962	11.60	67.43
0.65 - 0.70	3166	12.40	79.83
0.70 - 0.75	2383	9.34	89.17
0.75 - 0.80	1873	7.34	96.51
0.80 - 0.85	614	2.41	98.91
0.85 - 0.90	106	0.42	99.33
0.90 - 0.95	172	0.67	100
0.95 - 1	0	0	100

Statistics

Minimum: 0.05
 Maximum: 0.93
 Mean: 0.571
 Std Dev.: 0.145
 Count: 25527
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.37
 D50: 0.58
 D90: 0.75

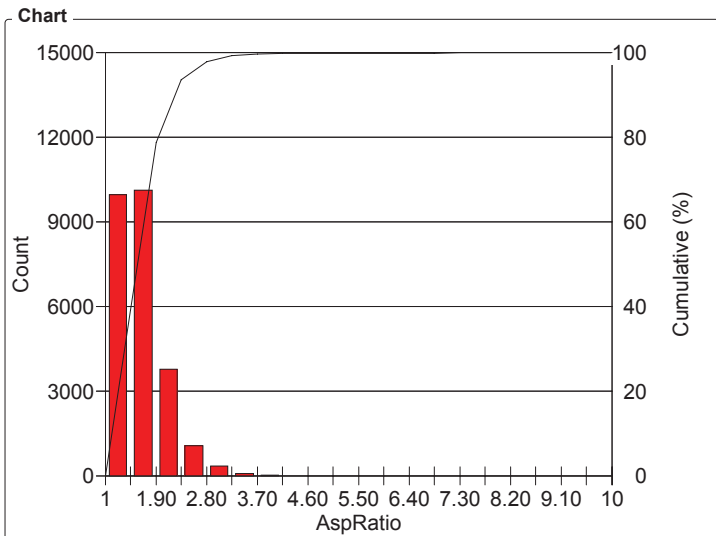
S4 ID2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:35:40 PM**
 Sample: **S4 ID2**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

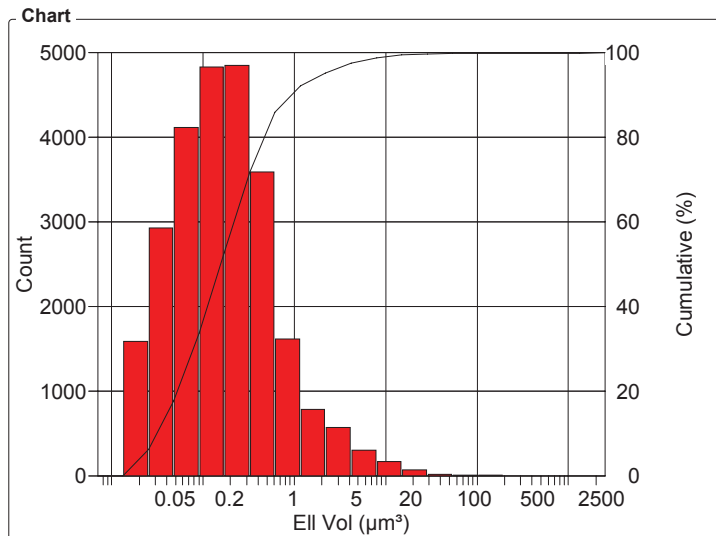
AspRatio Intervals	Count	%	Cumul%
1 - 1.45	9983	39.11	39.11
1.45 - 1.90	10134	39.70	78.81
1.90 - 2.35	3791	14.85	93.66
2.35 - 2.80	1098	4.30	97.96
2.80 - 3.25	366	1.43	99.39
3.25 - 3.70	100	0.39	99.78
3.70 - 4.15	32	0.13	99.91
4.15 - 4.60	7	0.03	99.94
4.60 - 5.05	8	0.03	99.97
5.05 - 5.50	4	0.02	99.98
5.50 - 5.95	1	3.92e-03	99.99
5.95 - 6.40	1	3.92e-03	99.99
6.40 - 6.85	1	3.92e-03	100.00
6.85 - 7.30	1	3.92e-03	100
7.30 - 7.75	0	0	100
7.75 - 8.20	0	0	100
8.20 - 8.65	0	0	100
8.65 - 9.10	0	0	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics

Minimum:	1.02
Maximum:	6.91
Mean:	1.64
Std Dev.:	0.421
Count:	25527
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	1.24
D50:	1.50
D90:	2.15

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Ell Vol Intervals (μm^3)	Count	%	Cumul%
7.0e-03 - 13.0e-03	1	3.92e-03	3.92e-03
13.0e-03 - 25.0e-03	1596	6.25	6.26
25.0e-03 - 48.0e-03	2931	11.48	17.74
48.0e-03 - 90.0e-03	4117	16.13	33.87
90.0e-03 - 0.2	4836	18.94	52.81
0.2 - 0.3	4850	19.00	71.81
0.3 - 0.6	3598	14.09	85.91
0.6 - 1.2	1619	6.34	92.25
1.2 - 2.2	791	3.10	95.35
2.2 - 4.2	575	2.25	97.60
4.2 - 7.9	306	1.20	98.80
7.9 - 15	176	0.69	99.49
15 - 28	80	0.31	99.80
28 - 54	23	0.09	99.89
54 - 102	12	0.05	99.94
102 - 194	9	0.04	99.97
194 - 367	3	0.01	99.98
367 - 696	2	7.84e-03	99.99
696 - 1319	1	3.92e-03	100.00
1319 - 2500	1	3.92e-03	100

Statistics

Minimum:	7.3e-03 μm^3
Maximum:	2114.4 μm^3
Mean:	0.827 μm^3
Std Dev.:	15.7 μm^3
Sum:	21116.4 μm^3
Count:	25527
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	34.6e-03 μm^3
D50:	0.1 μm^3
D90:	0.9 μm^3

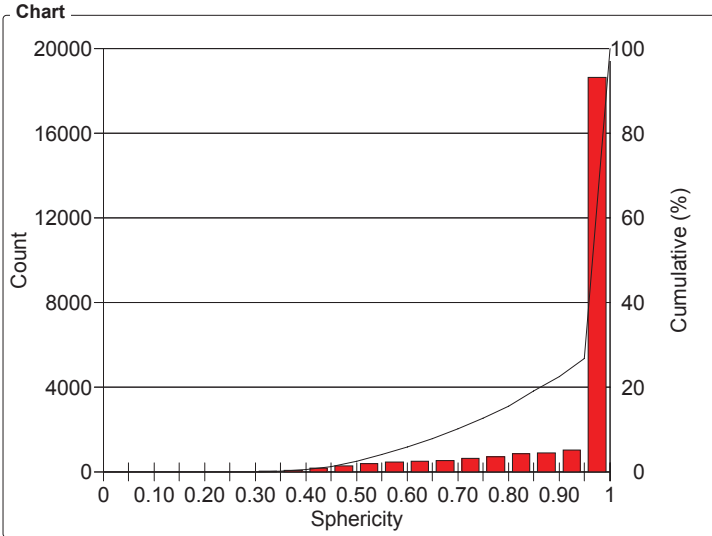
S4 ID2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:35:40 PM**
 Sample: **S4 ID2**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	1	3.92e-03	3.92e-03
0.15 - 0.20	1	3.92e-03	7.83e-03
0.20 - 0.25	10	0.04	0.05
0.25 - 0.30	13	0.05	0.10
0.30 - 0.35	42	0.16	0.26
0.35 - 0.40	94	0.37	0.63
0.40 - 0.45	203	0.80	1.43
0.45 - 0.50	299	1.17	2.60
0.50 - 0.55	406	1.59	4.19
0.55 - 0.60	472	1.85	6.04
0.60 - 0.65	504	1.97	8.01
0.65 - 0.70	568	2.23	10.24
0.70 - 0.75	652	2.55	12.79
0.75 - 0.80	734	2.88	15.67
0.80 - 0.85	880	3.45	19.11
0.85 - 0.90	905	3.55	22.66
0.90 - 0.95	1071	4.20	26.85
0.95 - 1	18672	73.15	100

Statistics

Minimum: 0.10
 Maximum: 1
 Mean: 0.927
 Std Dev.: 0.143
 Count: 25527
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.69
 D50: 1.00
 D90: 1.00

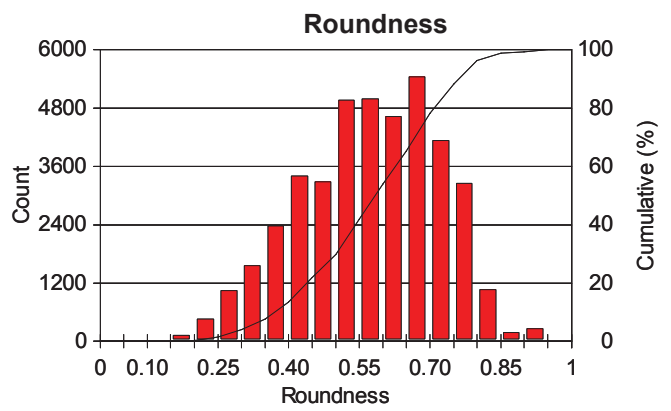
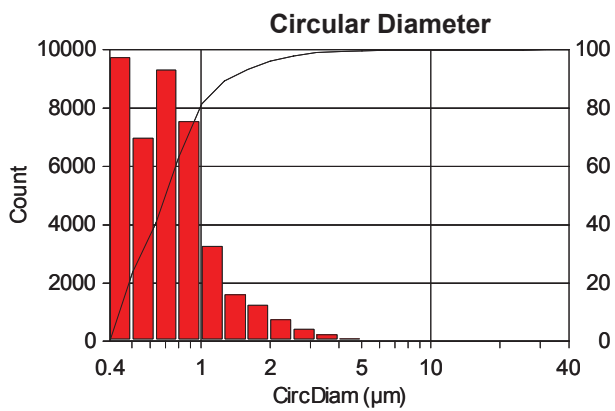
Sample # 5 - Automated Report

Particle Size Analysis

Date: 2007-Aug-19, 7:55:42 PM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer ...)
Sample ID: S5 IS1

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 41198

Figure 1: Field containing the largest measured particle.



Min: 0.37
Max.: 25.33
Mean: 0.83
Std. Dev.: 0.66
D10: 0.40
D50: 0.70
D90: 1.30

Min: 0.10
Max.: 0.91
Mean: 0.58
Std. Dev.: 0.15
D10: 0.37
D50: 0.59
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).

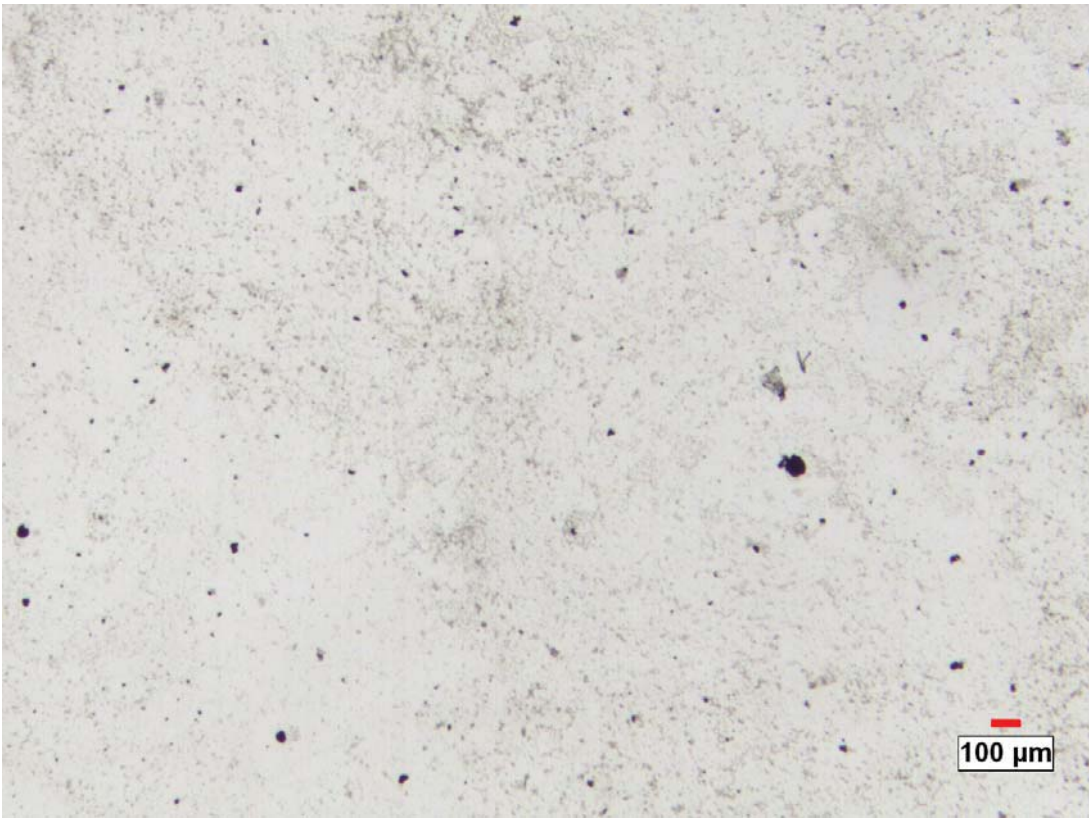
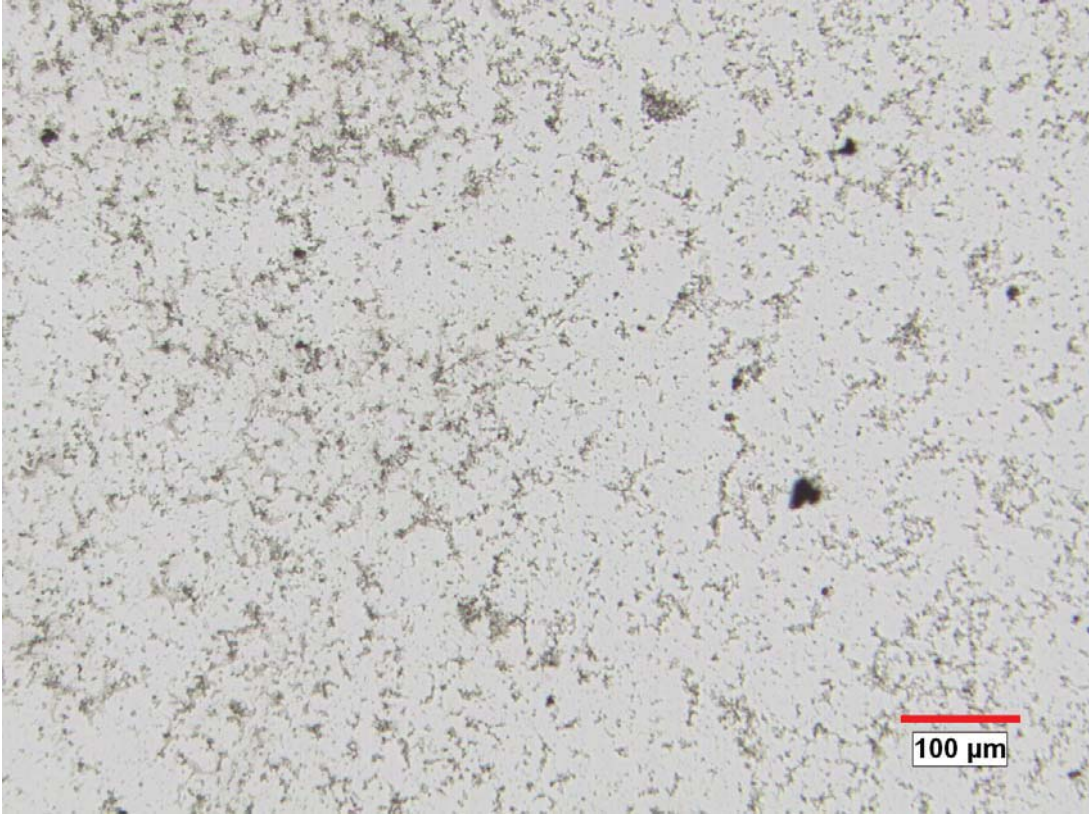


Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 5 - Printed Results

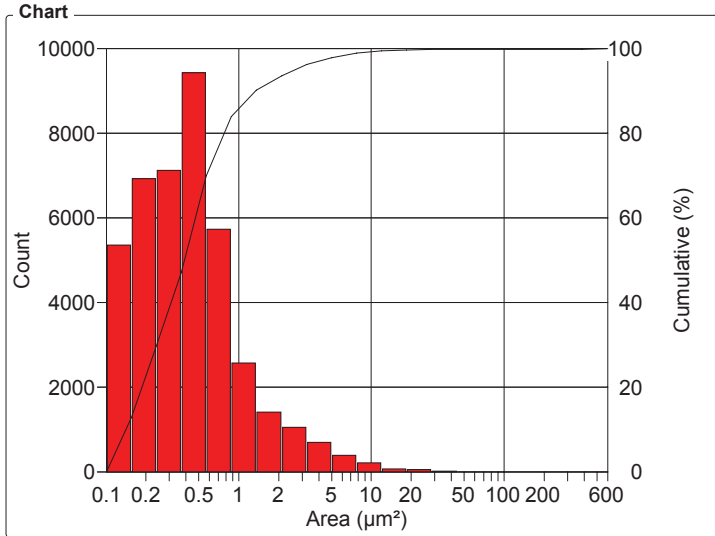
S5 IS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:59:00 PM**
 Sample: **S5 IS1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

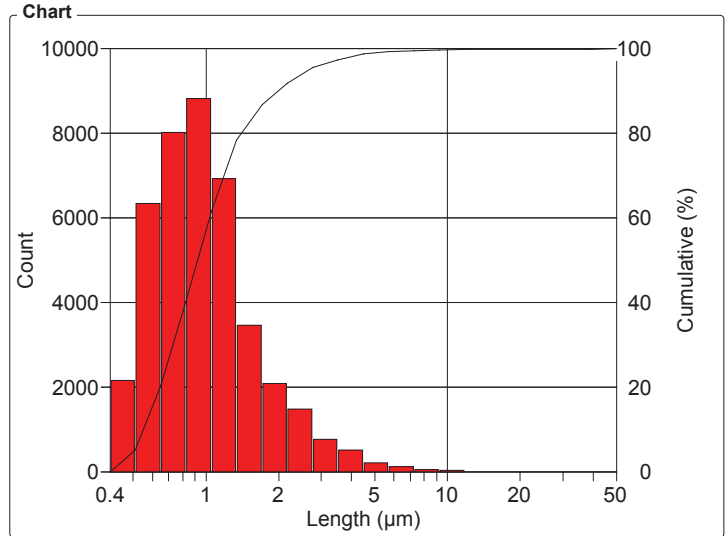


Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.2	5358	13.01	13.01
0.2 - 0.2	6942	16.85	29.86
0.2 - 0.4	7133	17.31	47.17
0.4 - 0.6	9431	22.89	70.06
0.6 - 0.9	5746	13.95	84.01
0.9 - 1.4	2583	6.27	90.28
1.4 - 2.1	1412	3.43	93.71
2.1 - 3.2	1066	2.59	96.29
3.2 - 5	705	1.71	98.00
5 - 7.7	401	0.97	98.98
7.7 - 12	222	0.54	99.52
12 - 18	87	0.21	99.73
18 - 29	60	0.15	99.87
29 - 44	22	0.05	99.93
44 - 68	7	0.02	99.94
68 - 105	5	0.01	99.96
105 - 163	6	0.01	99.97
163 - 251	7	0.02	99.99
251 - 388	0	0	99.99
388 - 600	5	0.01	100

Statistics		
Minimum:	0.1	μm^2
Maximum:	504.0	μm^2
Mean:	0.880	μm^2
Std Dev.:	6.17	μm^2
Sum:	36263.4	μm^2
Count:	41198	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.1	μm^2
D50:	0.4	μm^2
D90:	1.3	μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	2178	5.29	5.29
0.5 - 0.6	6348	15.41	20.70
0.6 - 0.8	8031	19.49	40.19
0.8 - 1.0	8833	21.44	61.63
1.0 - 1.3	6930	16.82	78.45
1.3 - 1.7	3469	8.42	86.87
1.7 - 2.2	2097	5.09	91.96
2.2 - 2.8	1489	3.61	95.58
2.8 - 3.5	783	1.90	97.48
3.5 - 4.5	528	1.28	98.76
4.5 - 5.7	226	0.55	99.31
5.7 - 7.2	127	0.31	99.61
7.2 - 9.2	70	0.17	99.78
9.2 - 11.7	49	0.12	99.90
11.7 - 15	16	0.04	99.94
15 - 19	10	0.02	99.97
19 - 24.2	8	0.02	99.99
24.2 - 30.9	2	4.85e-03	99.99
30.9 - 39	3	7.28e-03	100.00
39 - 50	1	2.43e-03	100

Statistics		
Minimum:	0.4	μm
Maximum:	40.2	μm
Mean:	1.16	μm
Std Dev.:	1.04	μm
Sum:	47647.4	μm
Count:	41198	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.5	μm
D50:	0.9	μm
D90:	2.0	μm

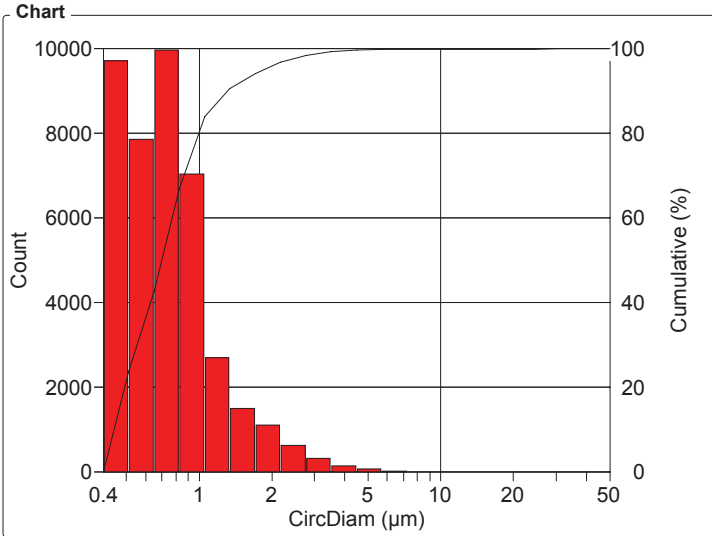
S5 IS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:59:00 PM**
 Sample: **S5 IS1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

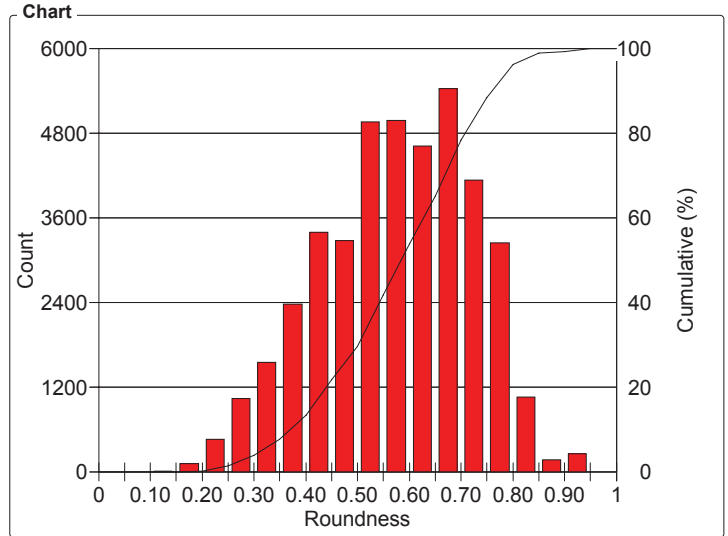


CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	9731	23.62	23.62
0.5 - 0.6	7866	19.09	42.71
0.6 - 0.8	9975	24.21	66.93
0.8 - 1.0	7038	17.08	84.01
1.0 - 1.3	2708	6.57	90.58
1.3 - 1.7	1505	3.65	94.24
1.7 - 2.2	1116	2.71	96.94
2.2 - 2.8	637	1.55	98.49
2.8 - 3.5	330	0.80	99.29
3.5 - 4.5	159	0.39	99.68
4.5 - 5.7	74	0.18	99.86
5.7 - 7.2	29	0.07	99.93
7.2 - 9.2	7	0.02	99.94
9.2 - 11.7	5	0.01	99.96
11.7 - 15	8	0.02	99.98
15 - 19	5	0.01	99.99
19 - 24.2	4	9.71e-03	100.00
24.2 - 30.9	1	2.43e-03	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics	
Minimum:	0.4 µm
Maximum:	25.3 µm
Mean:	0.831 µm
Std Dev.:	0.656 µm
Sum:	34244.4 µm
Count:	41198
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.4 µm
D50:	0.7 µm
D90:	1.3 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	2	4.85e-03	4.85e-03
0.10 - 0.15	19	0.05	0.05
0.15 - 0.20	119	0.29	0.34
0.20 - 0.25	462	1.12	1.46
0.25 - 0.30	1042	2.53	3.99
0.30 - 0.35	1554	3.77	7.76
0.35 - 0.40	2381	5.78	13.54
0.40 - 0.45	3405	8.26	21.81
0.45 - 0.50	3289	7.98	29.79
0.50 - 0.55	4971	12.07	41.86
0.55 - 0.60	4989	12.11	53.97
0.60 - 0.65	4625	11.23	65.19
0.65 - 0.70	5441	13.21	78.40
0.70 - 0.75	4141	10.05	88.45
0.75 - 0.80	3249	7.89	96.34
0.80 - 0.85	1070	2.60	98.93
0.85 - 0.90	180	0.44	99.37
0.90 - 0.95	259	0.63	100
0.95 - 1	0	0	100

Statistics	
Minimum:	0.10
Maximum:	0.91
Mean:	0.575
Std Dev.:	0.146
Count:	41198
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.37
D50:	0.59
D90:	0.75

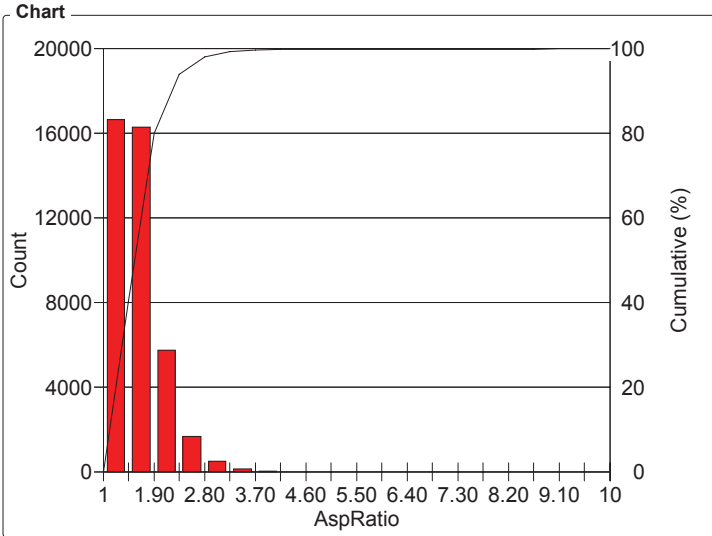
S5 IS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:59:00 PM**
 Sample: **S5 IS1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

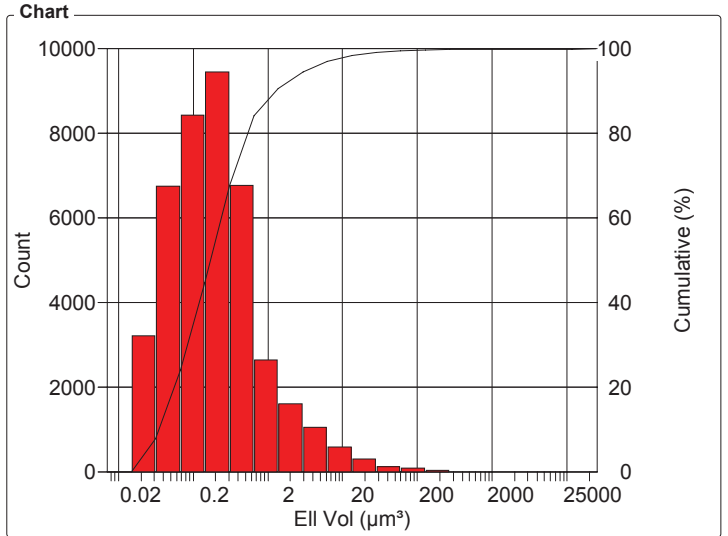


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	16665	40.45	40.45
1.45 - 1.90	16303	39.57	80.02
1.90 - 2.35	5757	13.97	94.00
2.35 - 2.80	1714	4.16	98.16
2.80 - 3.25	526	1.28	99.43
3.25 - 3.70	151	0.37	99.80
3.70 - 4.15	46	0.11	99.91
4.15 - 4.60	14	0.03	99.95
4.60 - 5.05	10	0.02	99.97
5.05 - 5.50	3	7.28e-03	99.98
5.50 - 5.95	1	2.43e-03	99.98
5.95 - 6.40	7	0.02	100.00
6.40 - 6.85	0	0	100.00
6.85 - 7.30	0	0	100.00
7.30 - 7.75	0	0	100.00
7.75 - 8.20	0	0	100.00
8.20 - 8.65	0	0	100.00
8.65 - 9.10	1	2.43e-03	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics	
Minimum:	1.02
Maximum:	9
Mean:	1.62
Std Dev.:	0.416
Count:	41198
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	1.23
D50:	1.50
D90:	2.12

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Ell Vol Intervals (μm^3)	Count	%	Cumul%
7.0e-03 - 15.0e-03	12	0.03	0.03
15.0e-03 - 32.0e-03	3226	7.83	7.86
32.0e-03 - 67.0e-03	6753	16.39	24.25
67.0e-03 - 0.1	8444	20.50	44.75
0.1 - 0.3	9459	22.96	67.71
0.3 - 0.6	6779	16.45	84.16
0.6 - 1.4	2655	6.44	90.61
1.4 - 2.9	1612	3.91	94.52
2.9 - 6.2	1054	2.56	97.08
6.2 - 13	592	1.44	98.51
13 - 28	308	0.75	99.26
28 - 60	135	0.33	99.59
60 - 127	90	0.22	99.81
127 - 270	37	0.09	99.90
270 - 575	16	0.04	99.94
575 - 1223	9	0.02	99.96
1223 - 2600	9	0.02	99.98
2600 - 5529	3	7.28e-03	99.99
5529 - 11757	4	9.71e-03	100.00
11757 - 25000	1	2.43e-03	100

Statistics	
Minimum:	7.3e-03 μm^3
Maximum:	20520.1 μm^3
Mean:	3.55 μm^3
Std Dev.:	145.1 μm^3
Sum:	146110.7 μm^3
Count:	41198
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	37.1e-03 μm^3
D50:	0.2 μm^3
D90:	1.3 μm^3

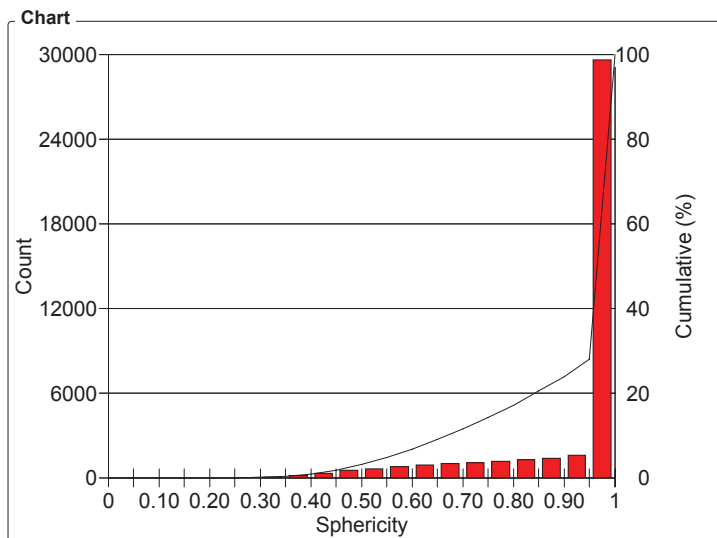
S5 IS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 19:59:00 PM**
 Sample: **S5 IS1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	1	2.43e-03	2.43e-03
0.10 - 0.15	2	4.85e-03	7.28e-03
0.15 - 0.20	12	0.03	0.04
0.20 - 0.25	37	0.09	0.13
0.25 - 0.30	50	0.12	0.25
0.30 - 0.35	96	0.23	0.48
0.35 - 0.40	206	0.50	0.98
0.40 - 0.45	355	0.86	1.84
0.45 - 0.50	587	1.42	3.27
0.50 - 0.55	680	1.65	4.92
0.55 - 0.60	819	1.99	6.91
0.60 - 0.65	940	2.28	9.19
0.65 - 0.70	1023	2.48	11.67
0.70 - 0.75	1107	2.69	14.36
0.75 - 0.80	1214	2.95	17.30
0.80 - 0.85	1337	3.25	20.55
0.85 - 0.90	1434	3.48	24.03
0.90 - 0.95	1658	4.02	28.05
0.95 - 1	29640	71.95	100

Statistics

Minimum: 0.09
 Maximum: 1
 Mean: 0.920
 Std Dev.: 0.152
 Count: 41198
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 0.67
 D50: 1.00
 D90: 1.00

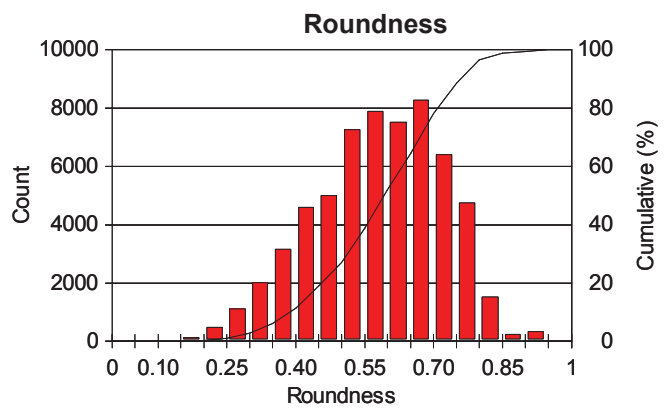
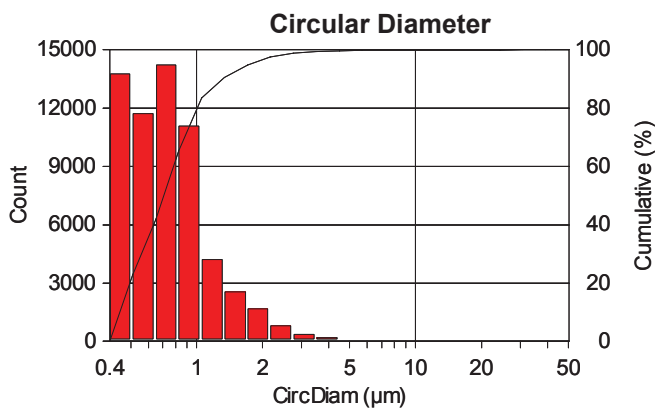
Sample # 6 - Automated Report

Particle Size Analysis

Date: 2007-Aug-19, 8:36:59 PM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer ...)
Sample ID: S6 IS2

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 60757

Figure 1: Field containing the largest measured particle.



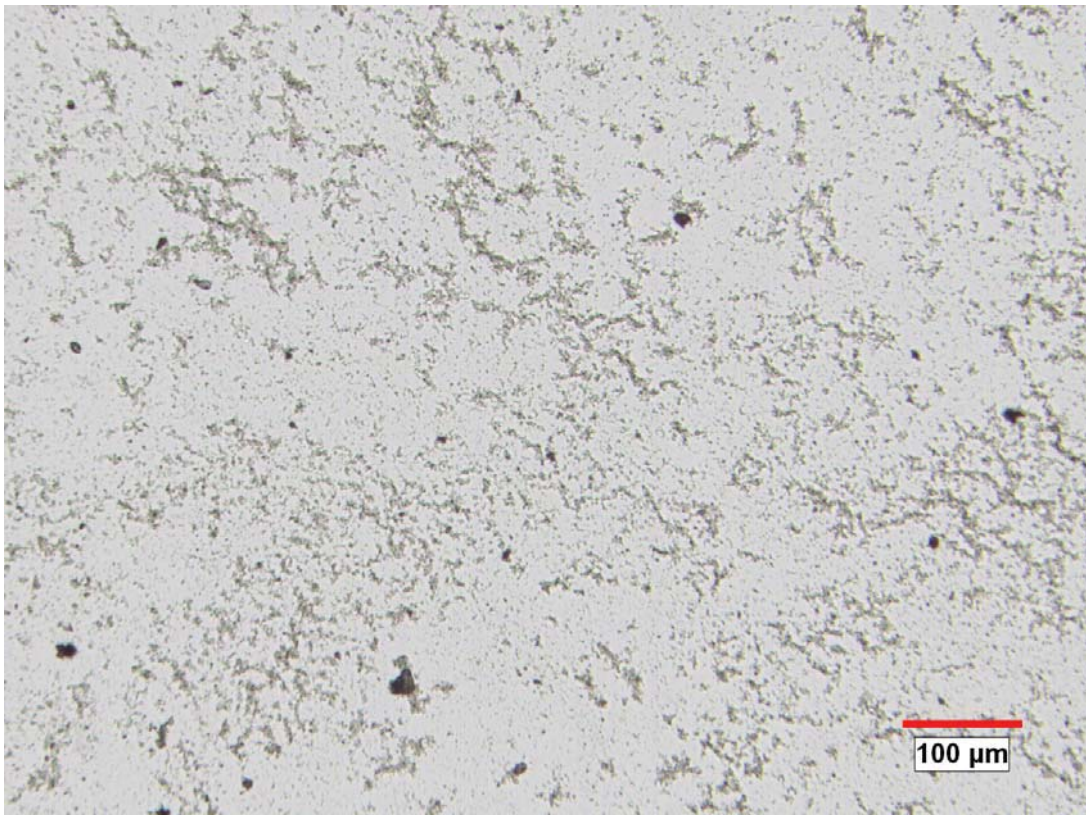
Min: 0.37
Max.: 26.19
Mean: 0.82
Std. Dev.: 0.56
D10: 0.41
D50: 0.70
D90: 1.30

Min: 0.11
Max.: 0.93
Mean: 0.58
Std. Dev.: 0.14
D10: 0.39
D50: 0.60
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 6 - Printed Results

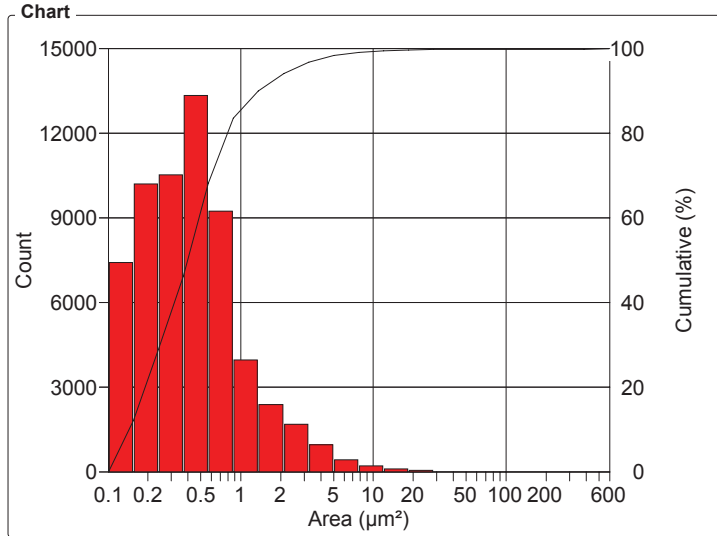
S6 IS2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 20:39:52 PM**
 Sample: **S6 IS2**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

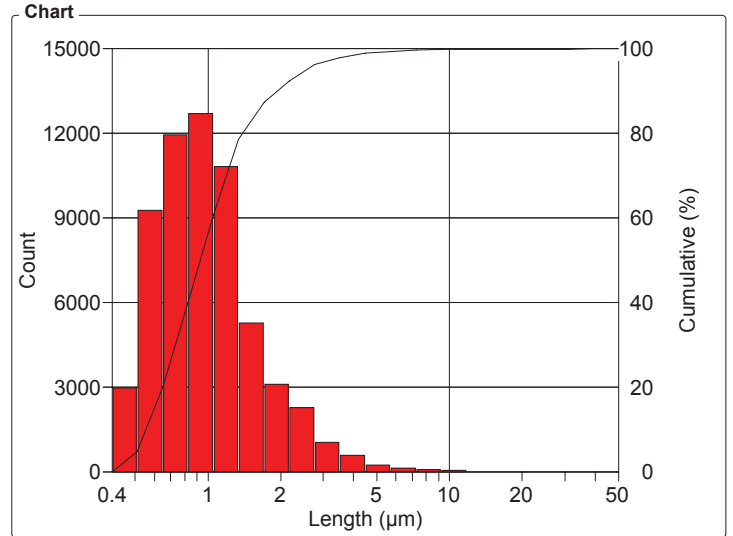


Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.2	7433	12.23	12.23
0.2 - 0.2	10210	16.80	29.04
0.2 - 0.4	10528	17.33	46.37
0.4 - 0.6	13364	22.00	68.36
0.6 - 0.9	9251	15.23	83.59
0.9 - 1.4	3988	6.56	90.15
1.4 - 2.1	2407	3.96	94.11
2.1 - 3.2	1688	2.78	96.89
3.2 - 5	968	1.59	98.49
5 - 7.7	445	0.73	99.22
7.7 - 12	240	0.40	99.61
12 - 18	111	0.18	99.80
18 - 29	74	0.12	99.92
29 - 44	22	0.04	99.95
44 - 68	14	0.02	99.98
68 - 105	4	6.59e-03	99.98
105 - 163	2	3.29e-03	99.99
163 - 251	4	6.58e-03	99.99
251 - 388	3	4.94e-03	100.00
388 - 600	1	1.65e-03	100

Statistics	
Minimum:	0.1 μm^2
Maximum:	538.7 μm^2
Mean:	0.783 μm^2
Std Dev.:	3.91 μm^2
Sum:	47572.0 μm^2
Count:	60757
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	0.1 μm^2
D50:	0.4 μm^2
D90:	1.3 μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	2996	4.93	4.93
0.5 - 0.6	9277	15.27	20.20
0.6 - 0.8	11964	19.69	39.89
0.8 - 1.0	12712	20.92	60.81
1.0 - 1.3	10826	17.82	78.63
1.3 - 1.7	5284	8.70	87.33
1.7 - 2.2	3132	5.15	92.48
2.2 - 2.8	2297	3.78	96.27
2.8 - 3.5	1060	1.74	98.01
3.5 - 4.5	604	0.99	99.00
4.5 - 5.7	258	0.42	99.43
5.7 - 7.2	154	0.25	99.68
7.2 - 9.2	100	0.16	99.85
9.2 - 11.7	57	0.09	99.94
11.7 - 15	22	0.04	99.98
15 - 19	6	9.88e-03	99.99
19 - 24.2	2	3.29e-03	99.99
24.2 - 30.9	5	8.23e-03	100.00
30.9 - 39	1	1.65e-03	100
39 - 50	0	0	100

Statistics	
Minimum:	0.4 μm
Maximum:	33.9 μm
Mean:	1.13 μm
Std Dev.:	0.906 μm
Sum:	68871.3 μm
Count:	60757
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	0.5 μm
D50:	0.9 μm
D90:	1.9 μm

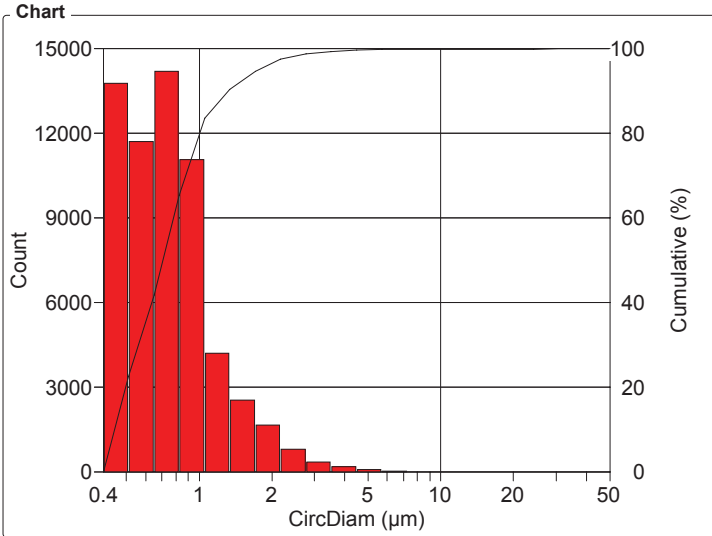
S6 IS2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 20:39:52 PM**
 Sample: **S6 IS2**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

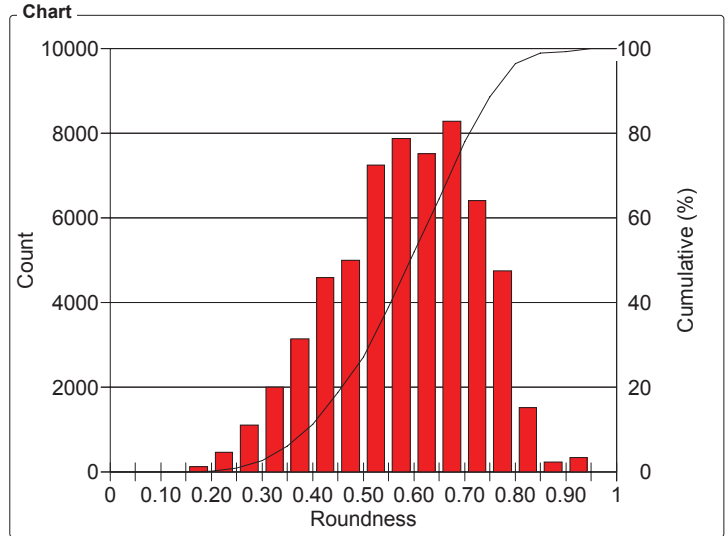
CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	13773	22.67	22.67
0.5 - 0.6	11722	19.29	41.96
0.6 - 0.8	14215	23.40	65.36
0.8 - 1.0	11076	18.23	83.59
1.0 - 1.3	4217	6.94	90.53
1.3 - 1.7	2568	4.23	94.76
1.7 - 2.2	1671	2.75	97.51
2.2 - 2.8	811	1.33	98.84
2.8 - 3.5	368	0.61	99.45
3.5 - 4.5	190	0.31	99.76
4.5 - 5.7	82	0.13	99.89
5.7 - 7.2	33	0.05	99.95
7.2 - 9.2	16	0.03	99.98
9.2 - 11.7	5	8.23e-03	99.98
11.7 - 15	2	3.29e-03	99.99
15 - 19	6	9.88e-03	100.00
19 - 24.2	1	1.65e-03	100.00
24.2 - 30.9	1	1.65e-03	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics

Minimum: 0.4 µm
 Maximum: 26.2 µm
 Mean: 0.825 µm
 Std Dev.: 0.563 µm
 Sum: 50120.6 µm
 Count: 60757
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.4 µm
 D50: 0.7 µm
 D90: 1.3 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	10	0.02	0.02
0.15 - 0.20	125	0.21	0.22
0.20 - 0.25	477	0.79	1.01
0.25 - 0.30	1122	1.85	2.85
0.30 - 0.35	2012	3.31	6.17
0.35 - 0.40	3157	5.20	11.36
0.40 - 0.45	4593	7.56	18.92
0.45 - 0.50	5002	8.23	27.15
0.50 - 0.55	7259	11.95	39.10
0.55 - 0.60	7887	12.98	52.08
0.60 - 0.65	7523	12.38	64.46
0.65 - 0.70	8287	13.64	78.10
0.70 - 0.75	6417	10.56	88.67
0.75 - 0.80	4766	7.84	96.51
0.80 - 0.85	1522	2.51	99.02
0.85 - 0.90	249	0.41	99.43
0.90 - 0.95	349	0.57	100
0.95 - 1	0	0	100

Statistics

Minimum: 0.11
 Maximum: 0.93
 Mean: 0.583
 Std Dev.: 0.140
 Count: 60757
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.39
 D50: 0.60
 D90: 0.75

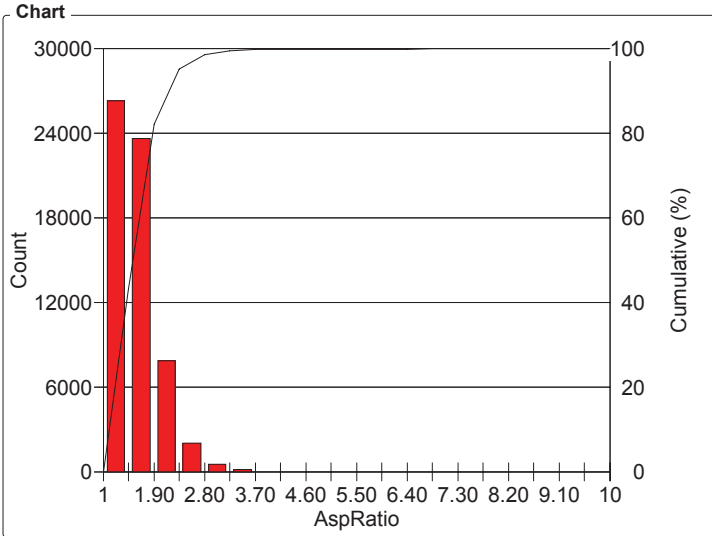
S6 IS2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 20:39:52 PM**
 Sample: **S6 IS2**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

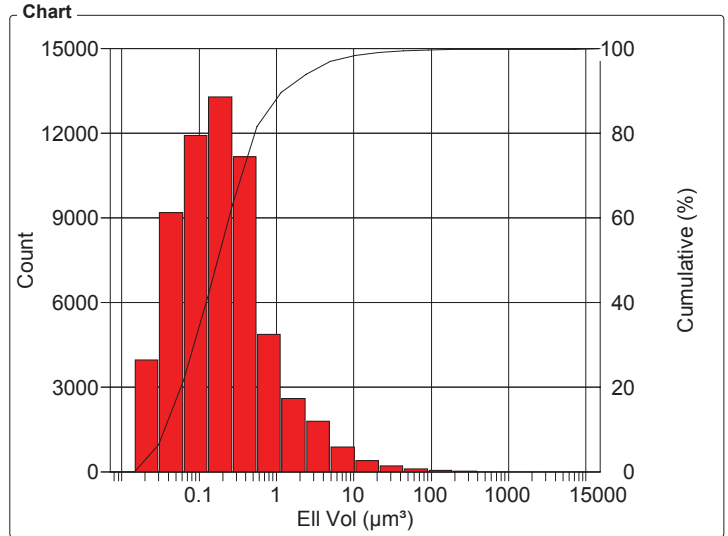


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	26348	43.37	43.37
1.45 - 1.90	23663	38.95	82.31
1.90 - 2.35	7903	13.01	95.32
2.35 - 2.80	2043	3.36	98.68
2.80 - 3.25	566	0.93	99.61
3.25 - 3.70	163	0.27	99.88
3.70 - 4.15	45	0.07	99.96
4.15 - 4.60	13	0.02	99.98
4.60 - 5.05	1	1.65e-03	99.98
5.05 - 5.50	3	4.94e-03	99.99
5.50 - 5.95	0	0	99.99
5.95 - 6.40	8	0.01	100.00
6.40 - 6.85	1	1.65e-03	100
6.85 - 7.30	0	0	100
7.30 - 7.75	0	0	100
7.75 - 8.20	0	0	100
8.20 - 8.65	0	0	100
8.65 - 9.10	0	0	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics	
Minimum:	1.02
Maximum:	6.70
Mean:	1.59
Std Dev.:	0.384
Count:	60757
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	1.23
D50:	1.50
D90:	2.06

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Ell Vol Intervals (μm^3)	Count	%	Cumul%
7.0e-03 - 15.0e-03	9	0.01	0.01
15.0e-03 - 30.0e-03	3978	6.55	6.56
30.0e-03 - 62.0e-03	9208	15.16	21.72
62.0e-03 - 0.1	11933	19.64	41.36
0.1 - 0.3	13304	21.90	63.26
0.3 - 0.6	11191	18.42	81.67
0.6 - 1.2	4899	8.06	89.74
1.2 - 2.4	2624	4.32	94.06
2.4 - 4.9	1821	3.00	97.05
4.9 - 10	884	1.45	98.51
10 - 21	426	0.70	99.21
21 - 44	240	0.40	99.60
44 - 91	109	0.18	99.78
91 - 189	79	0.13	99.91
189 - 392	29	0.05	99.96
392 - 813	11	0.02	99.98
813 - 1684	5	8.23e-03	99.99
1684 - 3491	4	6.59e-03	100.00
3491 - 7237	2	3.29e-03	100.00
7237 - 15000	1	1.65e-03	100

Statistics	
Minimum:	7.3e-03 μm^3
Maximum:	12535.7 μm^3
Mean:	1.88 μm^3
Std Dev.:	67.2 μm^3
Sum:	114358.8 μm^3
Count:	60757
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	40.5e-03 μm^3
D50:	0.2 μm^3
D90:	1.3 μm^3

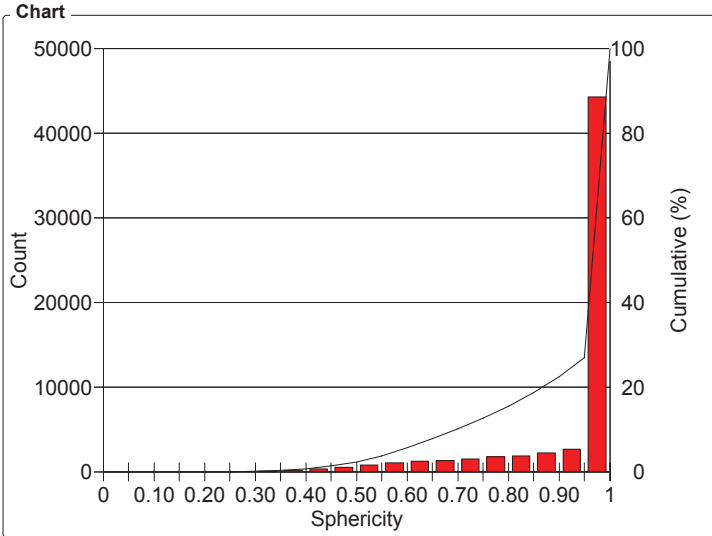
S6 IS2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 20:39:52 PM**
 Sample: **S6 IS2**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	3	4.94e-03	4.94e-03
0.15 - 0.20	14	0.02	0.03
0.20 - 0.25	35	0.06	0.09
0.25 - 0.30	74	0.12	0.21
0.30 - 0.35	99	0.16	0.37
0.35 - 0.40	214	0.35	0.72
0.40 - 0.45	440	0.72	1.45
0.45 - 0.50	614	1.01	2.46
0.50 - 0.55	891	1.47	3.92
0.55 - 0.60	1105	1.82	5.74
0.60 - 0.65	1294	2.13	7.87
0.65 - 0.70	1414	2.33	10.20
0.70 - 0.75	1534	2.52	12.72
0.75 - 0.80	1796	2.96	15.68
0.80 - 0.85	1933	3.18	18.86
0.85 - 0.90	2271	3.74	22.60
0.90 - 0.95	2685	4.42	27.02
0.95 - 1	44341	72.98	100

Statistics

Minimum: 0.14
 Maximum: 1
 Mean: 0.927
 Std Dev.: 0.143
 Count: 60757
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 μm^2
 Total Area: 1237991.1 μm^2
 D10: 0.70
 D50: 1.00
 D90: 1.00

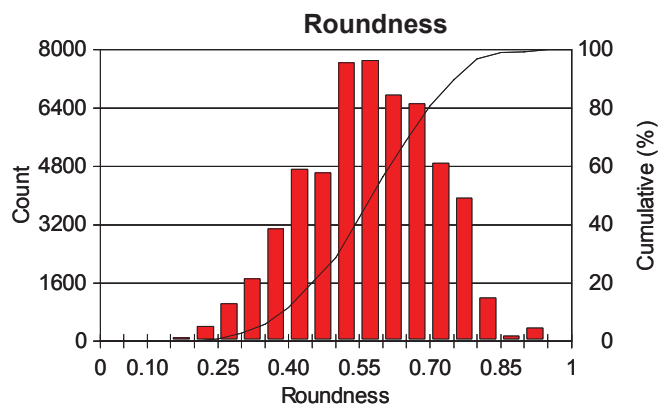
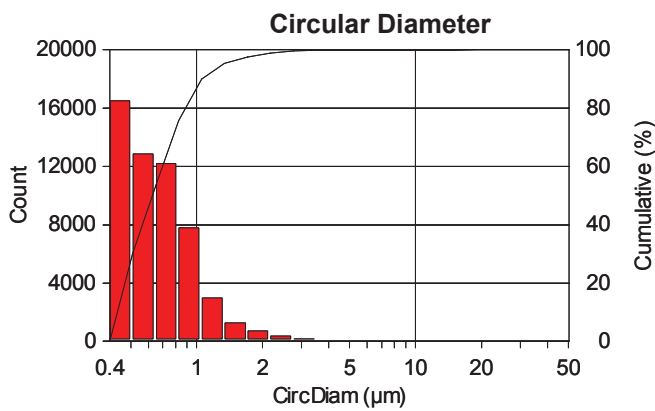
Sample # 7 - Automated Report

Particle Size Analysis

Date: 2007-Aug-19, 9:23:51 PM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer...)
Sample ID: S7 PC1

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 54869

Figure 1: Field containing the largest measured particle.



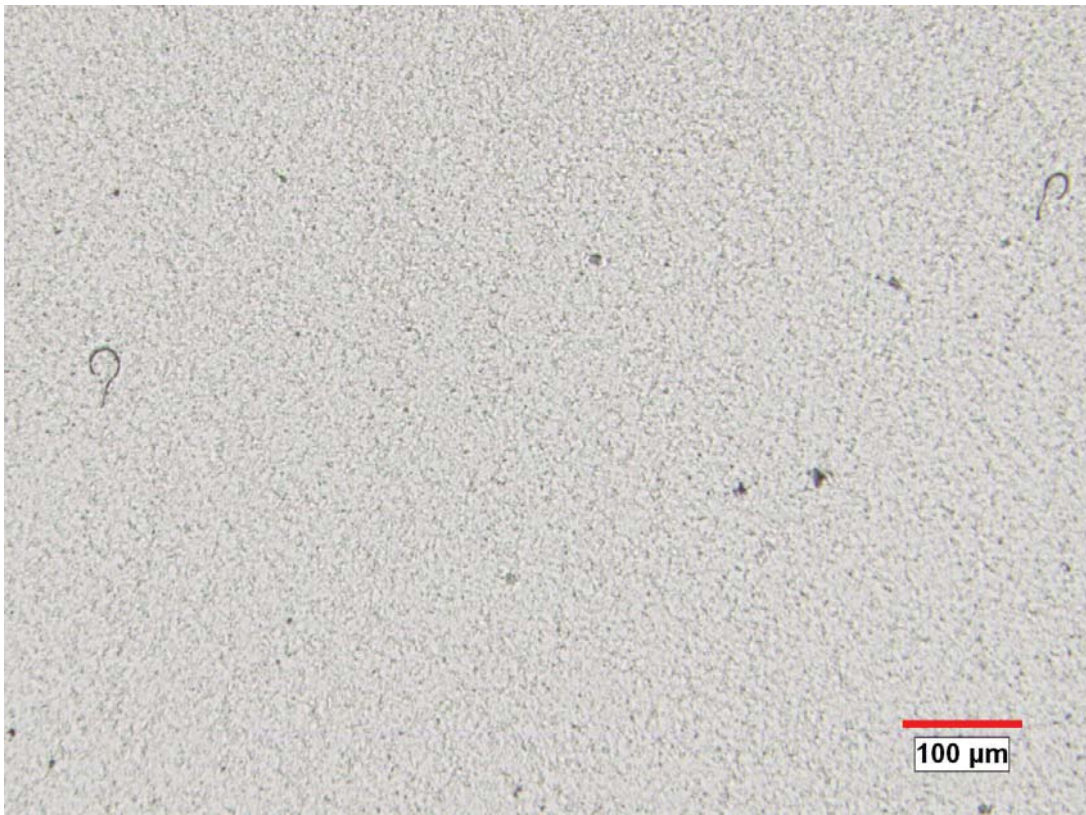
Min: 0.37
Max.: 16.57
Mean: 0.71
Std. Dev.: 0.37
D10: 0.39
D50: 0.61
D90: 1.05

Min: 0.11
Max.: 0.93
Mean: 0.57
Std. Dev.: 0.14
D10: 0.39
D50: 0.58
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 7 - Printed Results

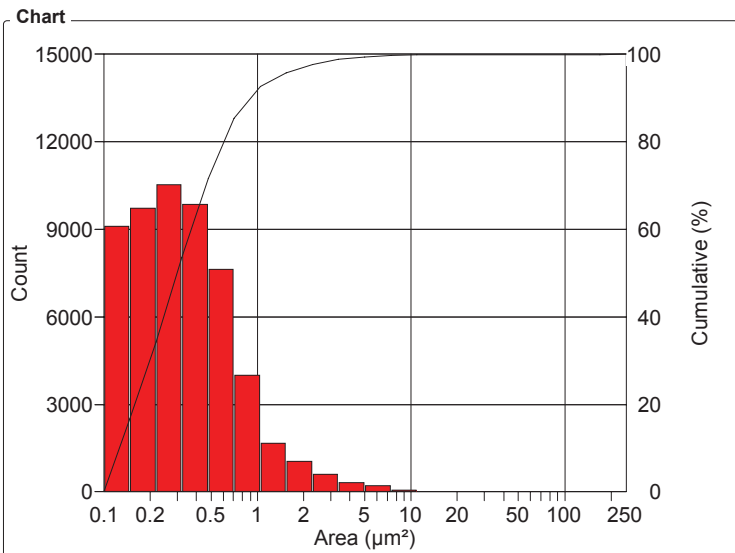
S7 PC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 21:27:17 PM**
 Sample: **S7 PC1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

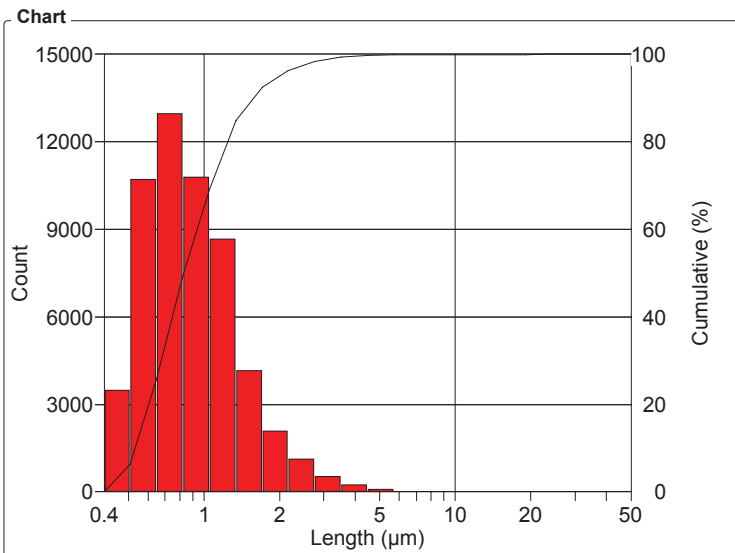


Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.1	9117	16.62	16.62
0.1 - 0.2	9734	17.74	34.36
0.2 - 0.3	10531	19.19	53.55
0.3 - 0.5	9870	17.99	71.54
0.5 - 0.7	7637	13.92	85.46
0.7 - 1.0	3991	7.27	92.73
1.0 - 1.5	1683	3.07	95.80
1.5 - 2.3	1058	1.93	97.73
2.3 - 3.4	599	1.09	98.82
3.4 - 5	331	0.60	99.42
5 - 7.4	215	0.39	99.81
7.4 - 10.9	75	0.14	99.95
10.9 - 16.2	14	0.03	99.97
16.2 - 24	8	0.01	99.99
24 - 35	1	1.82e-03	99.99
35 - 52	2	3.65e-03	99.99
52 - 77	1	1.82e-03	100.00
77 - 114	0	0	100.00
114 - 169	0	0	100.00
169 - 250	2	3.65e-03	100

Statistics		
Minimum:	0.1	μm^2
Maximum:	215.6	μm^2
Mean:	0.500	μm^2
Std Dev.:	1.47	μm^2
Sum:	27445.4	μm^2
Count:	54869	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.1	μm^2
D50:	0.3	μm^2
D90:	0.9	μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	3481	6.34	6.34
0.5 - 0.6	10720	19.54	25.88
0.6 - 0.8	12959	23.62	49.50
0.8 - 1.0	10789	19.66	69.16
1.0 - 1.3	8675	15.81	84.97
1.3 - 1.7	4151	7.57	92.54
1.7 - 2.2	2098	3.82	96.36
2.2 - 2.8	1114	2.03	98.39
2.8 - 3.5	530	0.97	99.36
3.5 - 4.5	249	0.45	99.81
4.5 - 5.7	78	0.14	99.95
5.7 - 7.2	14	0.03	99.98
7.2 - 9.2	6	0.01	99.99
9.2 - 11.7	1	1.82e-03	99.99
11.7 - 15	2	3.64e-03	100.00
15 - 19	0	0	100.00
19 - 24.2	2	3.65e-03	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	μm
Maximum:	21.3	μm
Mean:	0.967	μm
Std Dev.:	0.556	μm
Sum:	53049.4	μm
Count:	54869	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.5	μm
D50:	0.8	μm
D90:	1.5	μm

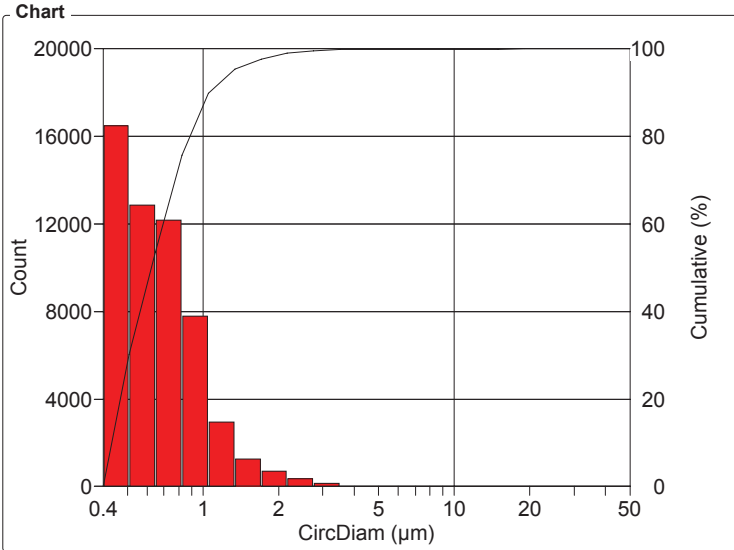
S7 PC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 21:27:17 PM**
 Sample: **S7 PC1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

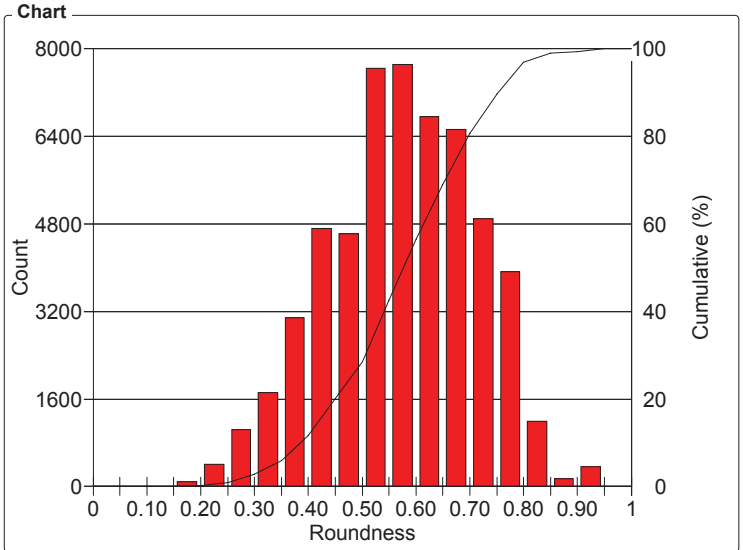


CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	16510	30.09	30.09
0.5 - 0.6	12872	23.46	53.55
0.6 - 0.8	12182	22.20	75.75
0.8 - 1.0	7790	14.20	89.95
1.0 - 1.3	2960	5.39	95.34
1.3 - 1.7	1270	2.31	97.66
1.7 - 2.2	717	1.31	98.96
2.2 - 2.8	369	0.67	99.64
2.8 - 3.5	163	0.30	99.93
3.5 - 4.5	21	0.04	99.97
4.5 - 5.7	10	0.02	99.99
5.7 - 7.2	1	1.82e-03	99.99
7.2 - 9.2	2	3.64e-03	100.00
9.2 - 11.7	0	0	100.00
11.7 - 15	0	0	100.00
15 - 19	2	3.65e-03	100
19 - 24.2	0	0	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics	
Minimum:	0.4 µm
Maximum:	16.6 µm
Mean:	0.707 µm
Std Dev.:	0.369 µm
Sum:	38818.7 µm
Count:	54869
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.4 µm
D50:	0.6 µm
D90:	1.1 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	4	7.29e-03	7.29e-03
0.15 - 0.20	96	0.17	0.18
0.20 - 0.25	407	0.74	0.92
0.25 - 0.30	1038	1.89	2.82
0.30 - 0.35	1721	3.14	5.95
0.35 - 0.40	3084	5.62	11.57
0.40 - 0.45	4716	8.60	20.17
0.45 - 0.50	4627	8.43	28.60
0.50 - 0.55	7648	13.94	42.54
0.55 - 0.60	7713	14.06	56.60
0.60 - 0.65	6759	12.32	68.92
0.65 - 0.70	6534	11.91	80.82
0.70 - 0.75	4893	8.92	89.74
0.75 - 0.80	3927	7.16	96.90
0.80 - 0.85	1191	2.17	99.07
0.85 - 0.90	149	0.27	99.34
0.90 - 0.95	362	0.66	100
0.95 - 1	0	0	100

Statistics	
Minimum:	0.11
Maximum:	0.93
Mean:	0.574
Std Dev.:	0.137
Count:	54869
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.39
D50:	0.58
D90:	0.75

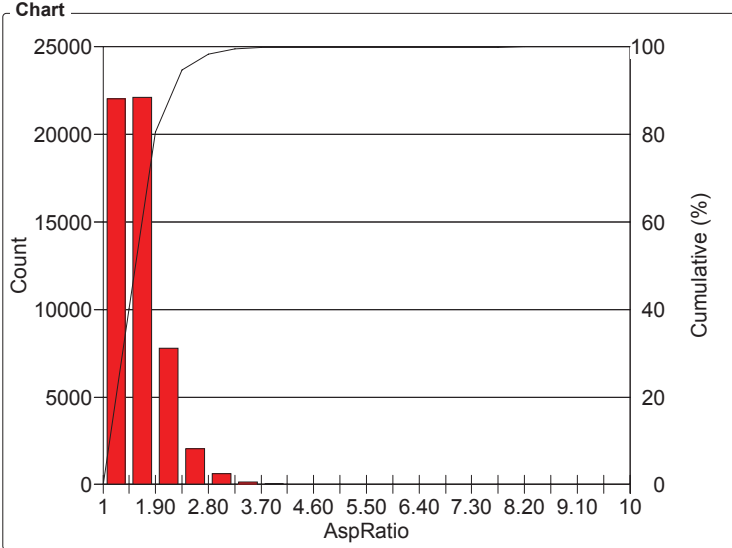
S7 PC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 21:27:17 PM**
 Sample: **S7 PC1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

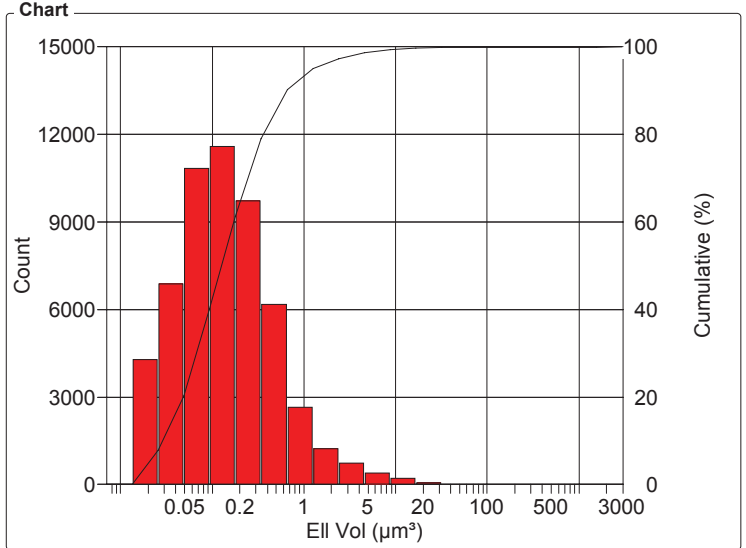


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	22051	40.19	40.19
1.45 - 1.90	22113	40.30	80.49
1.90 - 2.35	7782	14.18	94.67
2.35 - 2.80	2062	3.76	98.43
2.80 - 3.25	624	1.14	99.57
3.25 - 3.70	153	0.28	99.85
3.70 - 4.15	54	0.10	99.95
4.15 - 4.60	9	0.02	99.96
4.60 - 5.05	5	9.11e-03	99.97
5.05 - 5.50	1	1.82e-03	99.97
5.50 - 5.95	2	3.65e-03	99.98
5.95 - 6.40	7	0.01	99.99
6.40 - 6.85	1	1.82e-03	99.99
6.85 - 7.30	4	7.29e-03	100.00
7.30 - 7.75	0	0	100.00
7.75 - 8.20	1	1.82e-03	100
8.20 - 8.65	0	0	100
8.65 - 9.10	0	0	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics	
Minimum:	1.04
Maximum:	8
Mean:	1.62
Std Dev.:	0.399
Count:	54869
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	1.24
D50:	1.50
D90:	2.09

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Ell Vol Intervals (µm³)	Count	%	Cumul%
7.0e-03 - 13.0e-03	12	0.02	0.02
13.0e-03 - 26.0e-03	4282	7.80	7.83
26.0e-03 - 49.0e-03	6877	12.53	20.36
49.0e-03 - 94.0e-03	10845	19.77	40.12
94.0e-03 - 0.2	11584	21.11	61.24
0.2 - 0.3	9733	17.74	78.98
0.3 - 0.7	6169	11.24	90.22
0.7 - 1.3	2664	4.86	95.07
1.3 - 2.4	1227	2.24	97.31
2.4 - 4.6	737	1.34	98.65
4.6 - 8.8	410	0.75	99.40
8.8 - 17	225	0.41	99.81
17 - 32	75	0.14	99.95
32 - 61	17	0.03	99.98
61 - 117	7	0.01	99.99
117 - 224	1	1.82e-03	99.99
224 - 429	2	3.64e-03	100.00
429 - 820	0	0	100.00
820 - 1569	1	1.82e-03	100.00
1569 - 3000	1	1.82e-03	100

Statistics	
Minimum:	7.3e-03 µm ³
Maximum:	2637.3 µm ³
Mean:	0.506 µm ³
Std Dev.:	13.2 µm ³
Sum:	27741.1 µm ³
Count:	54869
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	32.4e-03 µm ³
D50:	0.1 µm ³
D90:	0.6 µm ³

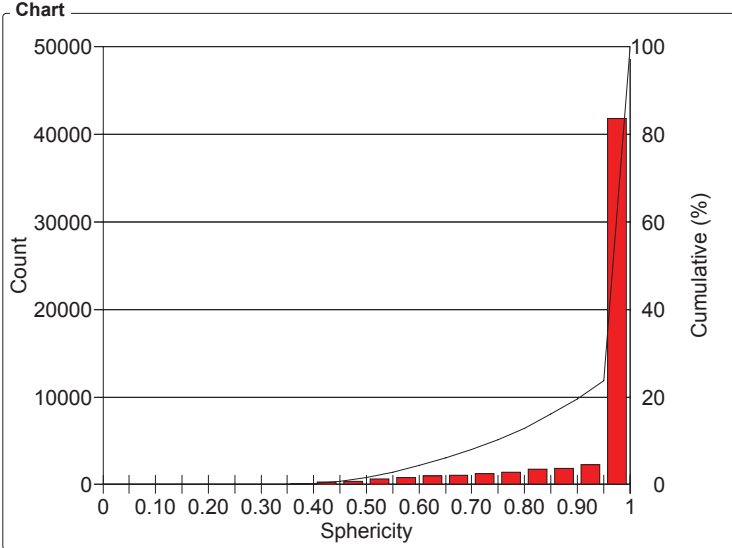
S7 PC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 21:27:17 PM**
 Sample: **S7 PC1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	0	0	0
0.15 - 0.20	0	0	0
0.20 - 0.25	2	3.65e-03	3.65e-03
0.25 - 0.30	13	0.02	0.03
0.30 - 0.35	29	0.05	0.08
0.35 - 0.40	131	0.24	0.32
0.40 - 0.45	268	0.49	0.81
0.45 - 0.50	428	0.78	1.59
0.50 - 0.55	685	1.25	2.84
0.55 - 0.60	833	1.52	4.35
0.60 - 0.65	959	1.75	6.10
0.65 - 0.70	1063	1.94	8.04
0.70 - 0.75	1255	2.29	10.33
0.75 - 0.80	1441	2.63	12.95
0.80 - 0.85	1778	3.24	16.19
0.85 - 0.90	1864	3.40	19.59
0.90 - 0.95	2296	4.18	23.77
0.95 - 1	41824	76.23	100

Statistics

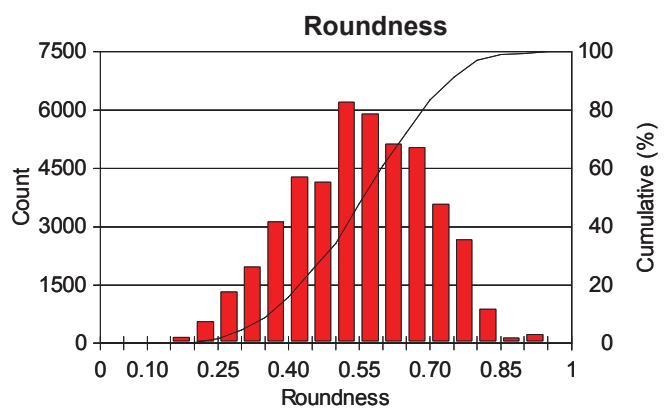
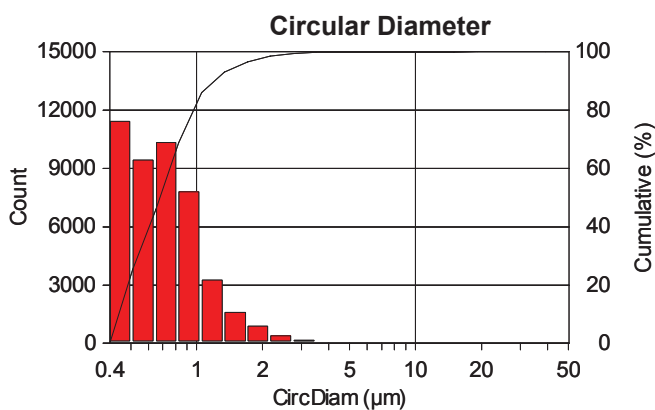
Minimum:	0.22
Maximum:	1
Mean:	0.940
Std Dev.:	0.128
Count:	54869
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.74
D50:	1.00
D90:	1.00

Sample # 8 - Automated Report

Particle Size Analysis

Date:	2007-Aug-19, 9:44:35 PM -04'00'	Magnification:	500X
Company:	Clemex Technologies Inc.	Calibration:	0.1327 $\mu\text{m}/\text{pixel}$
Department:	Laboratory	Units:	microns
User Name:	Myriam Savard (signer ...)	# Fields:	49
Sample ID:	S8 PD1	Count:	45367

Figure 1: Field containing the largest measured particle.



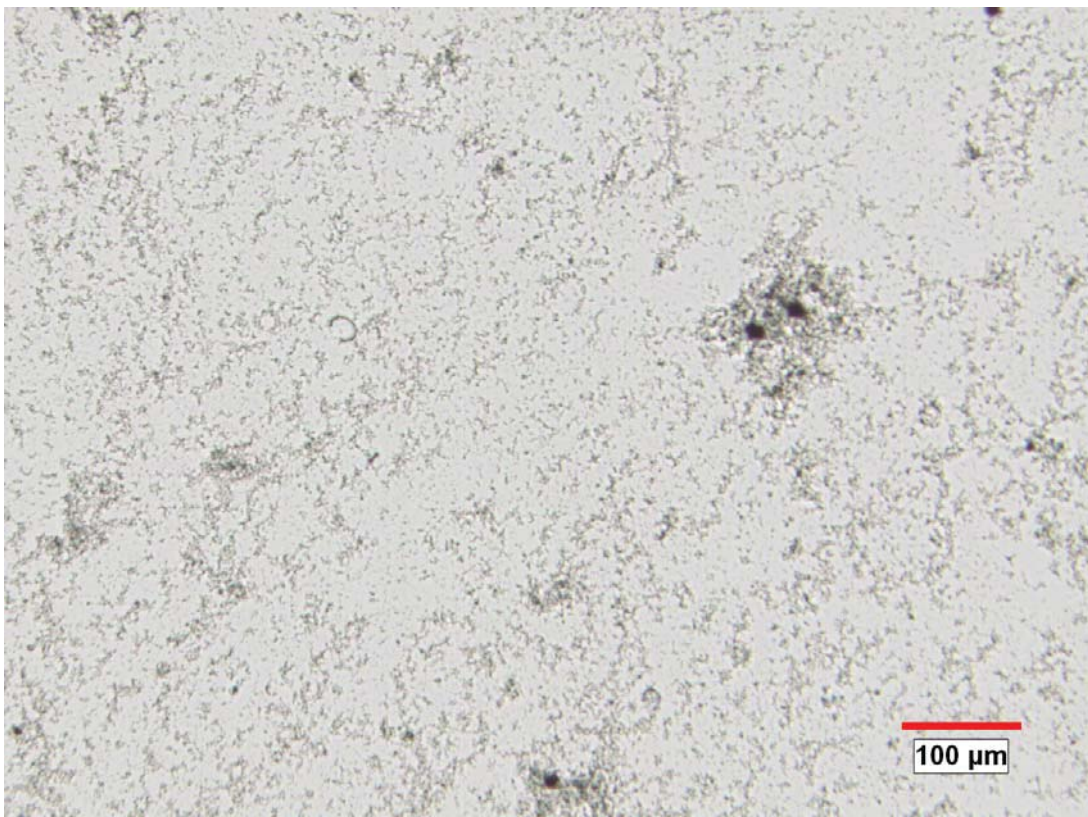
Min: 0.37
Max.: 15.41
Mean: 0.77
Std. Dev.: 0.42
D10: 0.40
D50: 0.67
D90: 1.16

Min: 0.10
Max.: 0.93
Mean: 0.55
Std. Dev.: 0.14
D10: 0.36
D50: 0.56
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 8 - Printed Results

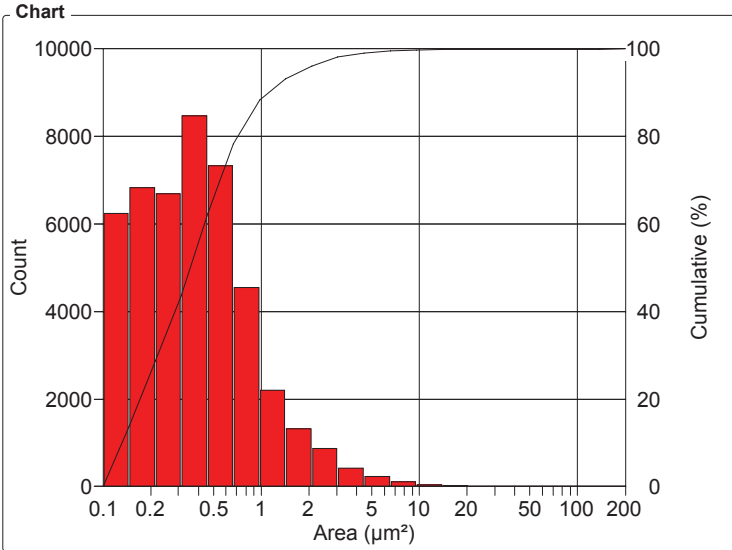
S8 PD1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 21:46:44 PM**
 Sample: **S8 PD1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

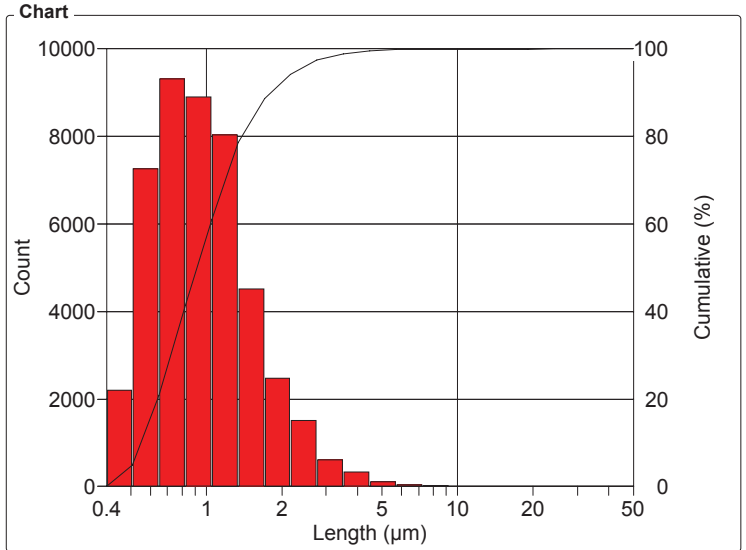


Area Intervals (µm²)	Count	%	Cumul%
0.1 - 0.1	6235	13.74	13.74
0.1 - 0.2	6826	15.05	28.79
0.2 - 0.3	6690	14.75	43.54
0.3 - 0.5	8464	18.66	62.19
0.5 - 0.7	7338	16.17	78.37
0.7 - 1.0	4551	10.03	88.40
1.0 - 1.4	2199	4.85	93.25
1.4 - 2.1	1324	2.92	96.16
2.1 - 3.1	879	1.94	98.10
3.1 - 4.5	424	0.93	99.04
4.5 - 6.5	241	0.53	99.57
6.5 - 9.6	112	0.25	99.81
9.6 - 14	48	0.11	99.92
14 - 20.5	20	0.04	99.96
20.5 - 30	5	0.01	99.98
30 - 44	3	6.62e-03	99.98
44 - 64	2	4.40e-03	99.99
64 - 94	4	8.82e-03	100.00
94 - 137	1	2.21e-03	100.00
137 - 200	1	2.21e-03	100

Statistics		
Minimum:	0.1	µm²
Maximum:	186.5	µm²
Mean:	0.604	µm²
Std Dev.:	1.68	µm²
Sum:	27408.6	µm²
Count:	45367	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm²
Total Area:	1237991.1	µm²
D10:	0.1	µm²
D50:	0.3	µm²
D90:	1.1	µm²

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Length Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	2195	4.84	4.84
0.5 - 0.6	7260	16.00	20.84
0.6 - 0.8	9322	20.55	41.39
0.8 - 1.0	8899	19.62	61.00
1.0 - 1.3	8048	17.74	78.74
1.3 - 1.7	4520	9.96	88.71
1.7 - 2.2	2483	5.47	94.18
2.2 - 2.8	1503	3.31	97.49
2.8 - 3.5	617	1.36	98.85
3.5 - 4.5	341	0.75	99.61
4.5 - 5.7	106	0.23	99.84
5.7 - 7.2	39	0.09	99.93
7.2 - 9.2	19	0.04	99.97
9.2 - 11.7	7	0.02	99.98
11.7 - 15	4	8.82e-03	99.99
15 - 19	3	6.61e-03	100.00
19 - 24.2	1	2.21e-03	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	µm
Maximum:	19.5	µm
Mean:	1.08	µm
Std Dev.:	0.675	µm
Sum:	48881.5	µm
Count:	45367	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm²
Total Area:	1237991.1	µm²
D10:	0.5	µm
D50:	0.9	µm
D90:	1.8	µm

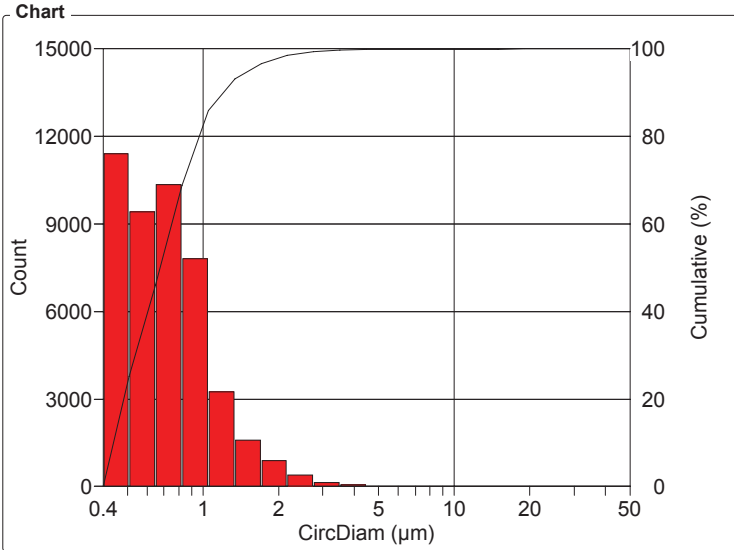
S8 PD1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 21:46:44 PM**
 Sample: **S8 PD1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

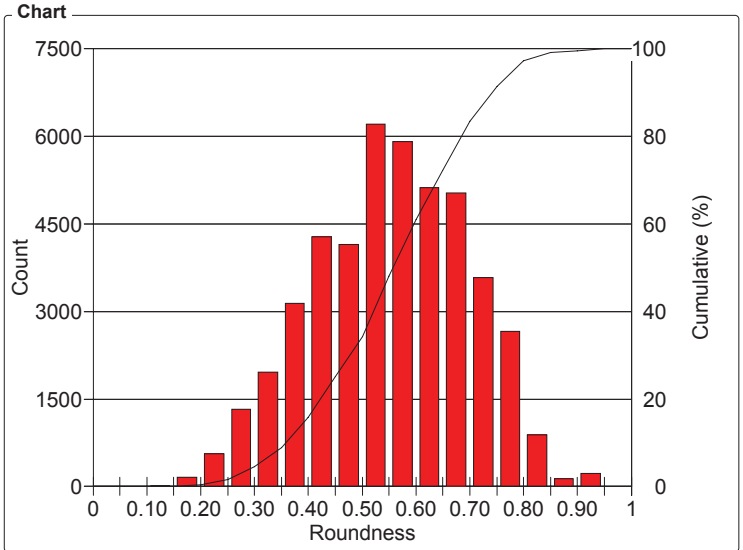


CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	11424	25.18	25.18
0.5 - 0.6	9427	20.78	45.96
0.6 - 0.8	10353	22.82	68.78
0.8 - 1.0	7811	17.22	86.00
1.0 - 1.3	3240	7.14	93.14
1.3 - 1.7	1593	3.51	96.65
1.7 - 2.2	885	1.95	98.60
2.2 - 2.8	398	0.88	99.48
2.8 - 3.5	154	0.34	99.82
3.5 - 4.5	58	0.13	99.95
4.5 - 5.7	13	0.03	99.98
5.7 - 7.2	3	6.62e-03	99.98
7.2 - 9.2	2	4.40e-03	99.99
9.2 - 11.7	4	8.82e-03	100.00
11.7 - 15	1	2.21e-03	100.00
15 - 19	1	2.21e-03	100
19 - 24.2	0	0	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	µm
Maximum:	15.4	µm
Mean:	0.767	µm
Std Dev.:	0.425	µm
Sum:	34813.4	µm
Count:	45367	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm ²
Total Area:	1237991.1	µm ²
D10:	0.4	µm
D50:	0.7	µm
D90:	1.2	µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	13	0.03	0.03
0.15 - 0.20	160	0.35	0.38
0.20 - 0.25	563	1.24	1.62
0.25 - 0.30	1322	2.91	4.54
0.30 - 0.35	1960	4.32	8.86
0.35 - 0.40	3137	6.91	15.77
0.40 - 0.45	4279	9.43	25.20
0.45 - 0.50	4153	9.15	34.36
0.50 - 0.55	6213	13.69	48.05
0.55 - 0.60	5908	13.02	61.08
0.60 - 0.65	5122	11.29	72.37
0.65 - 0.70	5035	11.10	83.46
0.70 - 0.75	3585	7.90	91.37
0.75 - 0.80	2667	5.88	97.24
0.80 - 0.85	889	1.96	99.20
0.85 - 0.90	138	0.30	99.51
0.90 - 0.95	223	0.49	100
0.95 - 1	0	0	100

Statistics		
Minimum:	0.10	
Maximum:	0.93	
Mean:	0.554	
Std Dev.:	0.143	
Count:	45367	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm ²
Total Area:	1237991.1	µm ²
D10:	0.36	
D50:	0.56	
D90:	0.75	

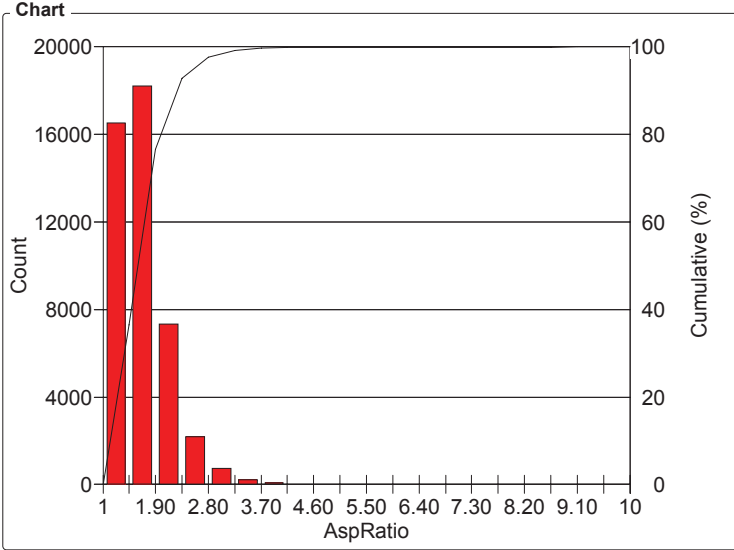
S8 PD1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 21:46:44 PM**
 Sample: **S8 PD1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

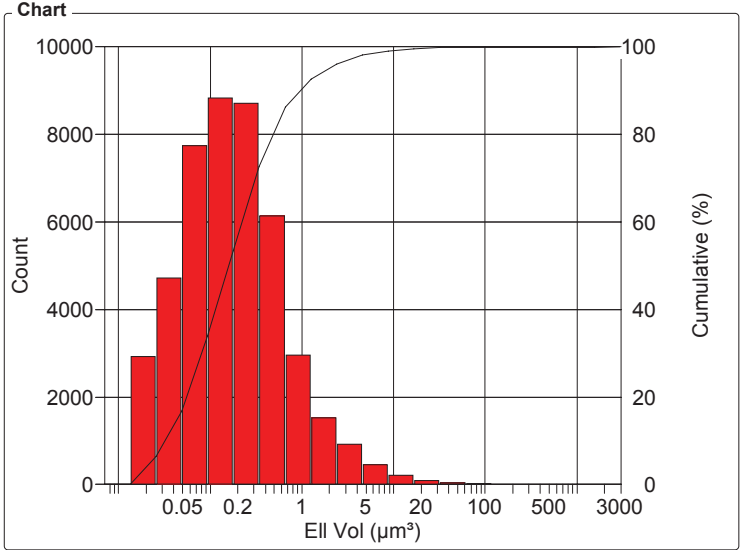


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	16536	36.45	36.45
1.45 - 1.90	18214	40.15	76.60
1.90 - 2.35	7350	16.20	92.80
2.35 - 2.80	2192	4.83	97.63
2.80 - 3.25	726	1.60	99.23
3.25 - 3.70	226	0.50	99.73
3.70 - 4.15	83	0.18	99.91
4.15 - 4.60	21	0.05	99.96
4.60 - 5.05	7	0.02	99.97
5.05 - 5.50	2	4.41e-03	99.98
5.50 - 5.95	0	0	99.98
5.95 - 6.40	6	0.01	99.99
6.40 - 6.85	0	0	99.99
6.85 - 7.30	2	4.40e-03	100.00
7.30 - 7.75	0	0	100.00
7.75 - 8.20	1	2.21e-03	100.00
8.20 - 8.65	0	0	100.00
8.65 - 9.10	1	2.21e-03	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics	
Minimum:	1.02
Maximum:	9
Mean:	1.67
Std Dev.:	0.437
Count:	45367
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	1.25
D50:	1.55
D90:	2.20

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Ell Vol Intervals (µm ³)	Count	%	Cumul%
7.0e-03 - 13.0e-03	9	0.02	0.02
13.0e-03 - 26.0e-03	2935	6.47	6.49
26.0e-03 - 49.0e-03	4722	10.41	16.90
49.0e-03 - 94.0e-03	7744	17.07	33.97
94.0e-03 - 0.2	8834	19.47	53.44
0.2 - 0.3	8717	19.21	72.65
0.3 - 0.7	6147	13.55	86.20
0.7 - 1.3	2963	6.53	92.73
1.3 - 2.4	1526	3.36	96.10
2.4 - 4.6	925	2.04	98.14
4.6 - 8.8	451	0.99	99.13
8.8 - 17	224	0.49	99.63
17 - 32	97	0.21	99.84
32 - 61	36	0.08	99.92
61 - 117	20	0.04	99.96
117 - 224	6	0.01	99.98
224 - 429	5	0.01	99.99
429 - 820	3	6.62e-03	99.99
820 - 1569	1	2.20e-03	100.00
1569 - 3000	2	4.41e-03	100

Statistics	
Minimum:	7.3e-03 µm ³
Maximum:	2545.1 µm ³
Mean:	0.802 µm ³
Std Dev.:	17.9 µm ³
Sum:	36398.1 µm ³
Count:	45367
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	35.3e-03 µm ³
D50:	0.2 µm ³
D90:	0.9 µm ³

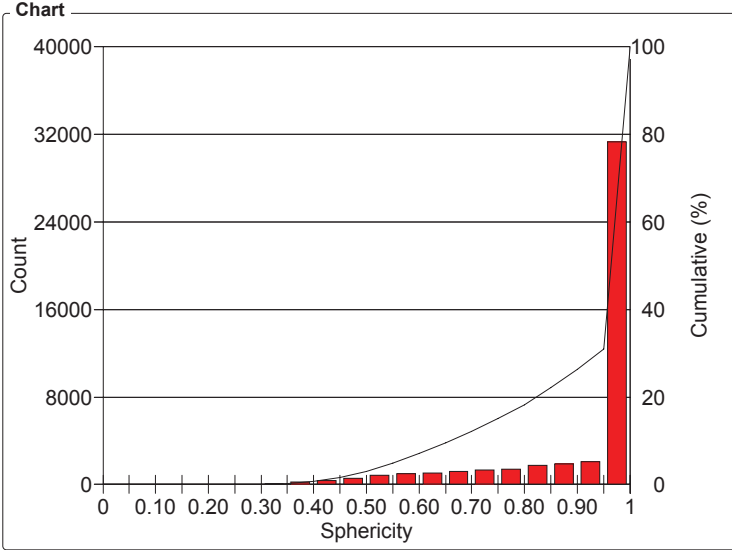
S8 PD1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **19/08/2007 21:46:44 PM**
 Sample: **S8 PD1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	1	2.20e-03	2.20e-03
0.10 - 0.15	1	2.20e-03	4.41e-03
0.15 - 0.20	1	2.20e-03	6.61e-03
0.20 - 0.25	8	0.02	0.02
0.25 - 0.30	27	0.06	0.08
0.30 - 0.35	85	0.19	0.27
0.35 - 0.40	220	0.48	0.76
0.40 - 0.45	405	0.89	1.65
0.45 - 0.50	587	1.29	2.94
0.50 - 0.55	863	1.90	4.84
0.55 - 0.60	1027	2.26	7.11
0.60 - 0.65	1097	2.42	9.53
0.65 - 0.70	1229	2.71	12.24
0.70 - 0.75	1331	2.93	15.17
0.75 - 0.80	1398	3.08	18.25
0.80 - 0.85	1786	3.94	22.19
0.85 - 0.90	1874	4.13	26.32
0.90 - 0.95	2088	4.60	30.92
0.95 - 1	31339	69.08	100

Statistics

Minimum:	0.08
Maximum:	1
Mean:	0.915
Std Dev.:	0.152
Count:	45367
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.66
D50:	1.00
D90:	1.00

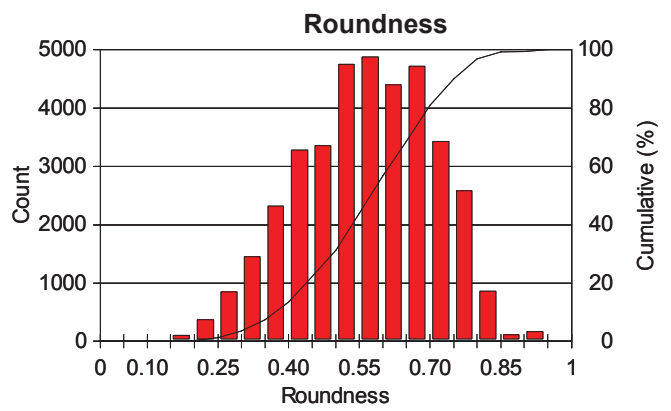
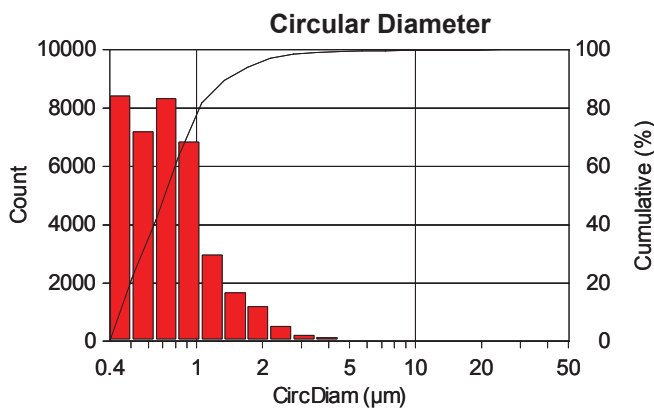
Sample # 9 - Automated Report

Particle Size Analysis

Date: 2007-Aug-20, 6:06:11 AM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer ...)
Sample ID: S9 PS1

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 37654

Figure 1: Field containing the largest measured particle.



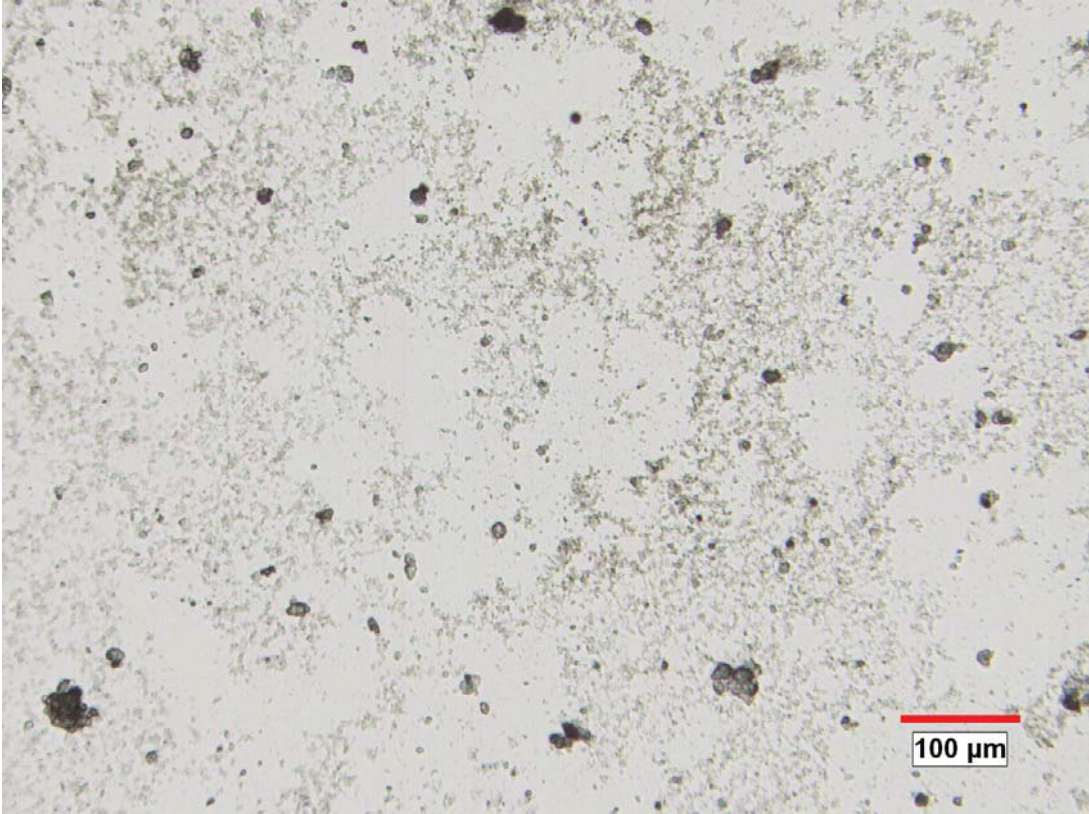
Min: 0.37
Max.: 21.32
Mean: 0.86
Std. Dev.: 0.70
D10: 0.41
D50: 0.71
D90: 1.37

Min: 0.10
Max.: 0.93
Mean: 0.57
Std. Dev.: 0.14
D10: 0.37
D50: 0.57
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 9 - Printed Results

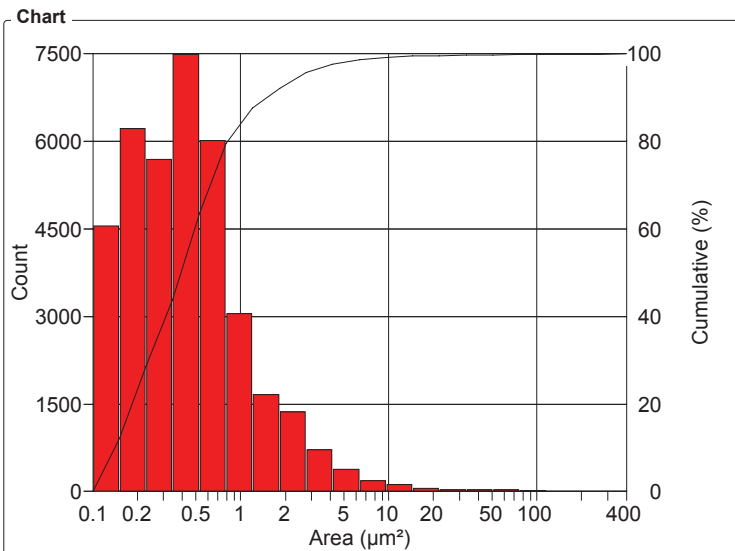
S9 PS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 6:07:57 AM**
 Sample: **S9 PS1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

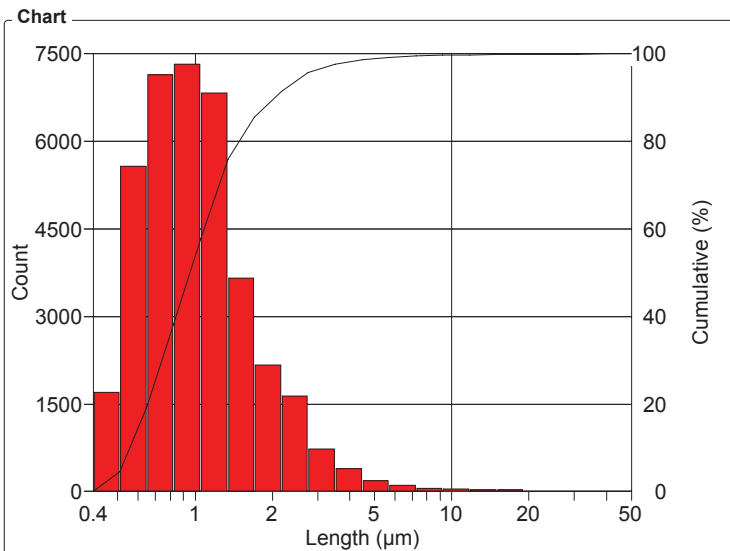


Area Intervals (µm²)	Count	%	Cumul%
0.1 - 0.2	4556	12.10	12.10
0.2 - 0.2	6219	16.52	28.62
0.2 - 0.3	5688	15.11	43.72
0.3 - 0.5	7491	19.89	63.62
0.5 - 0.8	6020	15.99	79.60
0.8 - 1.2	3056	8.12	87.72
1.2 - 1.8	1664	4.42	92.14
1.8 - 2.8	1364	3.62	95.76
2.8 - 4.2	716	1.90	97.66
4.2 - 6.3	381	1.01	98.67
6.3 - 9.6	186	0.49	99.17
9.6 - 14.5	118	0.31	99.48
14.5 - 22	59	0.16	99.64
22 - 33	34	0.09	99.73
33 - 50	34	0.09	99.82
50 - 76	32	0.08	99.90
76 - 115	20	0.05	99.96
115 - 175	8	0.02	99.98
175 - 264	6	0.02	99.99
264 - 400	2	5.31e-03	100

Statistics		
Minimum:	0.1	µm²
Maximum:	357.1	µm²
Mean:	0.966	µm²
Std Dev.:	5.35	µm²
Sum:	36374.5	µm²
Count:	37654	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm²
Total Area:	1237991.1	µm²
D10:	0.1	µm²
D50:	0.4	µm²
D90:	1.5	µm²

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Length Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	1707	4.53	4.53
0.5 - 0.6	5581	14.82	19.36
0.6 - 0.8	7145	18.98	38.33
0.8 - 1.0	7323	19.45	57.78
1.0 - 1.3	6831	18.14	75.92
1.3 - 1.7	3659	9.72	85.64
1.7 - 2.2	2170	5.76	91.40
2.2 - 2.8	1640	4.36	95.76
2.8 - 3.5	737	1.96	97.71
3.5 - 4.5	392	1.04	98.75
4.5 - 5.7	184	0.49	99.24
5.7 - 7.2	104	0.28	99.52
7.2 - 9.2	63	0.17	99.69
9.2 - 11.7	42	0.11	99.80
11.7 - 15	34	0.09	99.89
15 - 19	27	0.07	99.96
19 - 24.2	7	0.02	99.98
24.2 - 30.9	6	0.02	99.99
30.9 - 39	2	5.31e-03	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	µm
Maximum:	36.2	µm
Mean:	1.19	µm
Std Dev.:	1.12	µm
Sum:	44993.4	µm
Count:	37654	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm²
Total Area:	1237991.1	µm²
D10:	0.5	µm
D50:	0.9	µm
D90:	2.0	µm

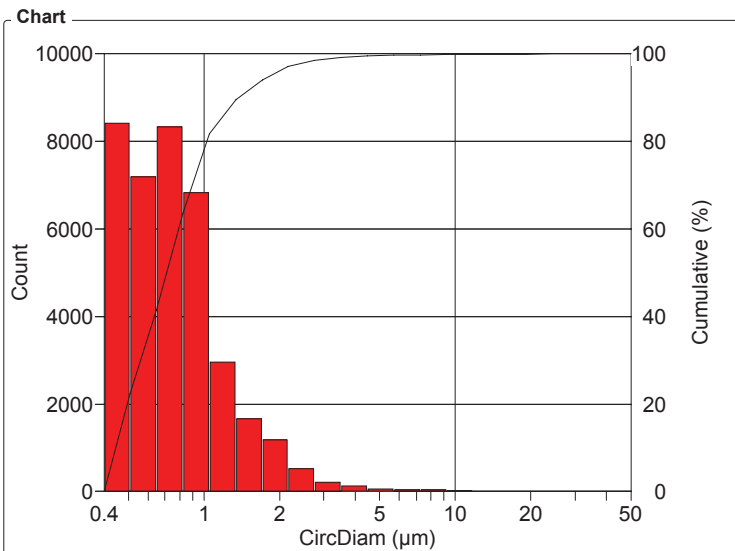
S9 PS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 6:07:57 AM**
 Sample: **S9 PS1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

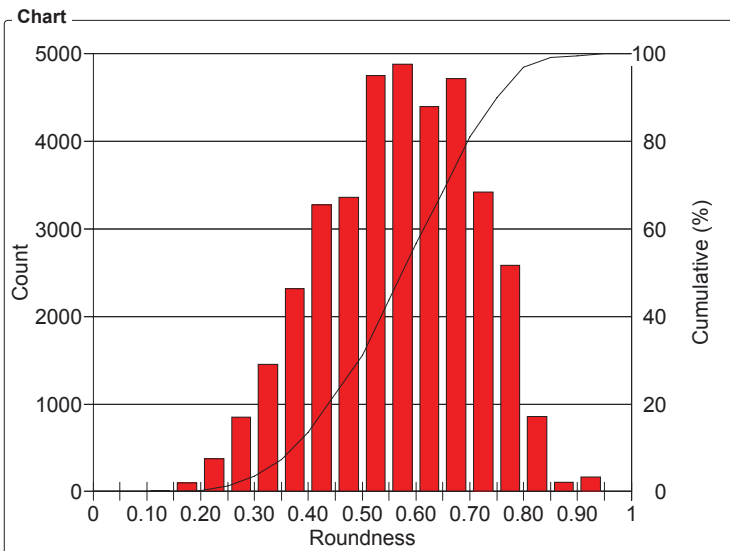


CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	8421	22.36	22.36
0.5 - 0.6	7196	19.11	41.48
0.6 - 0.8	8337	22.14	63.62
0.8 - 1.0	6831	18.14	81.76
1.0 - 1.3	2963	7.87	89.63
1.3 - 1.7	1671	4.44	94.06
1.7 - 2.2	1187	3.15	97.22
2.2 - 2.8	524	1.39	98.61
2.8 - 3.5	212	0.56	99.17
3.5 - 4.5	134	0.36	99.53
4.5 - 5.7	56	0.15	99.68
5.7 - 7.2	38	0.10	99.78
7.2 - 9.2	37	0.10	99.88
9.2 - 11.7	30	0.08	99.95
11.7 - 15	10	0.03	99.98
15 - 19	5	0.01	99.99
19 - 24.2	2	5.31e-03	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	µm
Maximum:	21.3	µm
Mean:	0.857	µm
Std Dev.:	0.704	µm
Sum:	32269.0	µm
Count:	37654	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm ²
Total Area:	1237991.1	µm ²
D10:	0.4	µm
D50:	0.7	µm
D90:	1.4	µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	9	0.02	0.02
0.15 - 0.20	102	0.27	0.29
0.20 - 0.25	376	1.00	1.29
0.25 - 0.30	853	2.27	3.56
0.30 - 0.35	1453	3.86	7.42
0.35 - 0.40	2322	6.17	13.58
0.40 - 0.45	3280	8.71	22.30
0.45 - 0.50	3362	8.93	31.22
0.50 - 0.55	4754	12.63	43.85
0.55 - 0.60	4880	12.96	56.81
0.60 - 0.65	4398	11.68	68.49
0.65 - 0.70	4718	12.53	81.02
0.70 - 0.75	3426	9.10	90.12
0.75 - 0.80	2587	6.87	96.99
0.80 - 0.85	857	2.28	99.26
0.85 - 0.90	110	0.29	99.56
0.90 - 0.95	167	0.44	100
0.95 - 1	0	0	100

Statistics		
Minimum:	0.10	
Maximum:	0.93	
Mean:	0.568	
Std Dev.:	0.142	
Count:	37654	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm ²
Total Area:	1237991.1	µm ²
D10:	0.37	
D50:	0.57	
D90:	0.75	

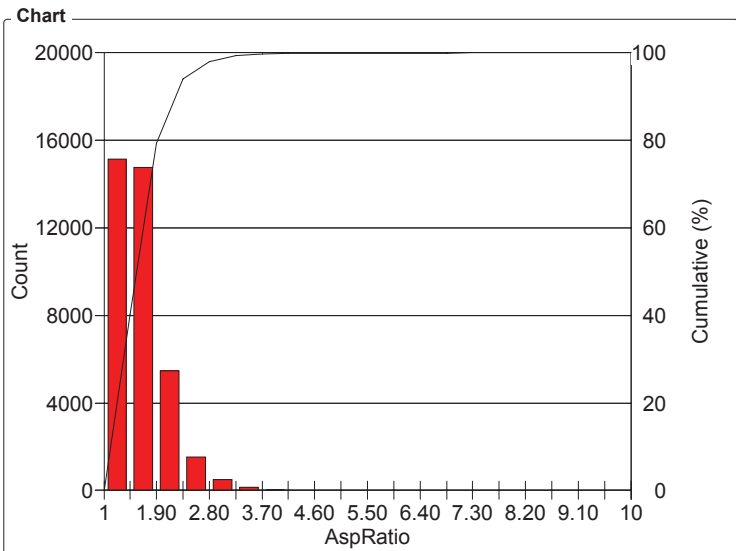
S9 PS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 6:07:57 AM**
 Sample: **S9 PS1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

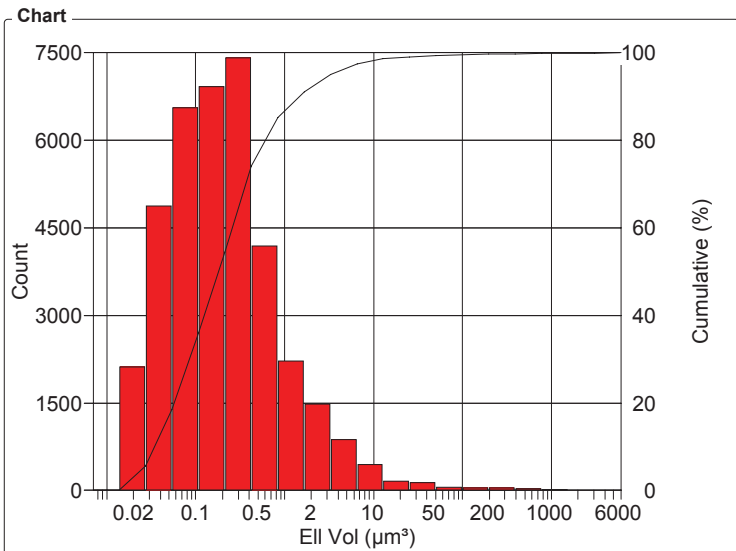


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	15130	40.18	40.18
1.45 - 1.90	14771	39.23	79.41
1.90 - 2.35	5487	14.57	93.98
2.35 - 2.80	1547	4.11	98.09
2.80 - 3.25	484	1.29	99.38
3.25 - 3.70	166	0.44	99.82
3.70 - 4.15	42	0.11	99.93
4.15 - 4.60	10	0.03	99.95
4.60 - 5.05	6	0.02	99.97
5.05 - 5.50	1	2.65e-03	99.97
5.50 - 5.95	0	0	99.97
5.95 - 6.40	8	0.02	99.99
6.40 - 6.85	1	2.65e-03	100.00
6.85 - 7.30	1	2.66e-03	100
7.30 - 7.75	0	0	100
7.75 - 8.20	0	0	100
8.20 - 8.65	0	0	100
8.65 - 9.10	0	0	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics	
Minimum:	1.02
Maximum:	7
Mean:	1.63
Std Dev.:	0.416
Count:	37654
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	1.24
D50:	1.50
D90:	2.13

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Ell Vol Intervals (μm^3)	Count	%	Cumul%
7.0e-03 - 14.0e-03	9	0.02	0.02
14.0e-03 - 27.0e-03	2118	5.62	5.65
27.0e-03 - 54.0e-03	4877	12.95	18.60
54.0e-03 - 0.1	6564	17.43	36.03
0.1 - 0.2	6930	18.40	54.44
0.2 - 0.4	7422	19.71	74.15
0.4 - 0.8	4193	11.14	85.28
0.8 - 1.7	2224	5.91	91.19
1.7 - 3.3	1488	3.95	95.14
3.3 - 6.5	878	2.33	97.47
6.5 - 13	449	1.19	98.67
13 - 25	160	0.42	99.09
25 - 50	132	0.35	99.44
50 - 100	60	0.16	99.60
100 - 197	44	0.12	99.72
197 - 390	39	0.10	99.82
390 - 773	33	0.09	99.91
773 - 1531	18	0.05	99.96
1531 - 3030	11	0.03	99.99
3030 - 6000	5	0.01	100

Statistics	
Minimum:	7.3e-03 μm^3
Maximum:	5627.0 μm^3
Mean:	3.55 μm^3
Std Dev.:	73.1 μm^3
Sum:	133489.7 μm^3
Count:	37654
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 μm^2
Total Area:	1237991.1 μm^2
D10:	38.2e-03 μm^3
D50:	0.2 μm^3
D90:	1.4 μm^3

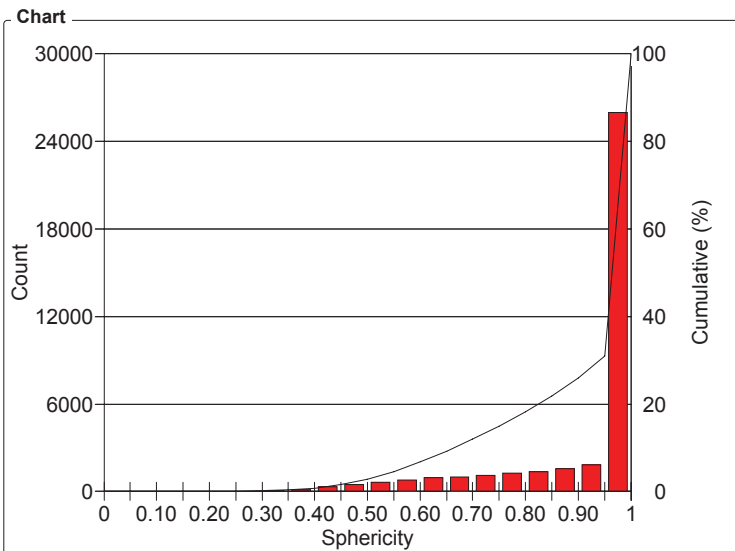
S9 PS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 6:07:58 AM**
 Sample: **S9 PS1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	1	2.66e-03	2.66e-03
0.10 - 0.15	7	0.02	0.02
0.15 - 0.20	9	0.02	0.05
0.20 - 0.25	24	0.06	0.11
0.25 - 0.30	37	0.10	0.21
0.30 - 0.35	86	0.23	0.44
0.35 - 0.40	140	0.37	0.81
0.40 - 0.45	316	0.84	1.65
0.45 - 0.50	474	1.26	2.91
0.50 - 0.55	654	1.74	4.64
0.55 - 0.60	810	2.15	6.79
0.60 - 0.65	935	2.48	9.28
0.65 - 0.70	995	2.64	11.92
0.70 - 0.75	1110	2.95	14.87
0.75 - 0.80	1260	3.35	18.21
0.80 - 0.85	1388	3.69	21.90
0.85 - 0.90	1566	4.16	26.06
0.90 - 0.95	1865	4.95	31.01
0.95 - 1	25977	68.99	100

Statistics

Minimum:	0.10
Maximum:	1
Mean:	0.916
Std Dev.:	0.151
Count:	37654
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.66
D50:	1.00
D90:	1.00

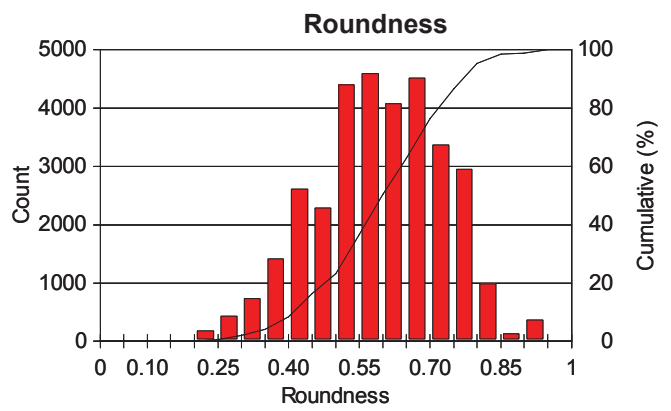
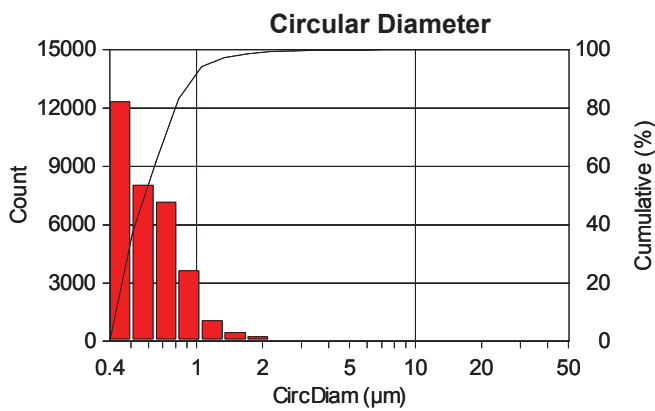
Sample # 10 - Automated Report

Particle Size Analysis

Date: 2007-Aug-20, 6:35:28 AM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer ...)
Sample ID: S10 SC1

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 33104

Figure 1: Field containing the largest measured particle.



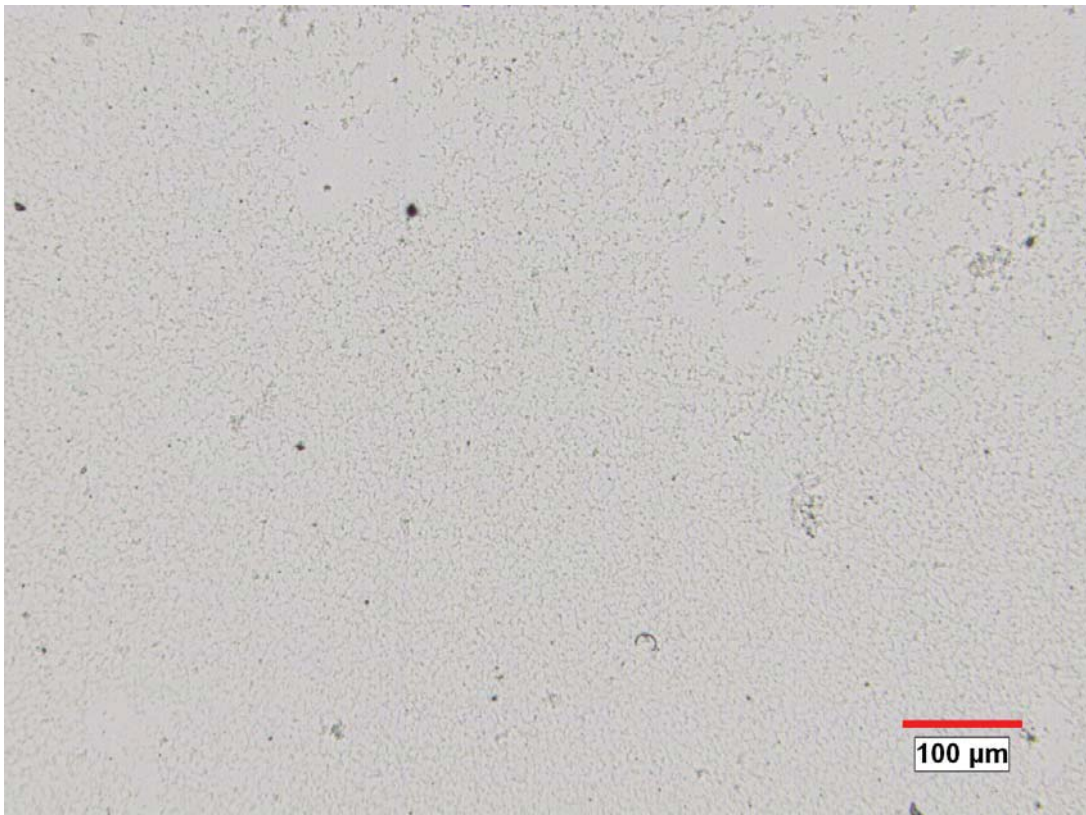
Min: 0.37
Max.: 7.04
Mean: 0.64
Std. Dev.: 0.30
D10: 0.38
D50: 0.56
D90: 0.92

Min: 0.05
Max.: 0.93
Mean: 0.60
Std. Dev.: 0.14
D10: 0.41
D50: 0.60
D90: 0.78

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 10 - Printed Results

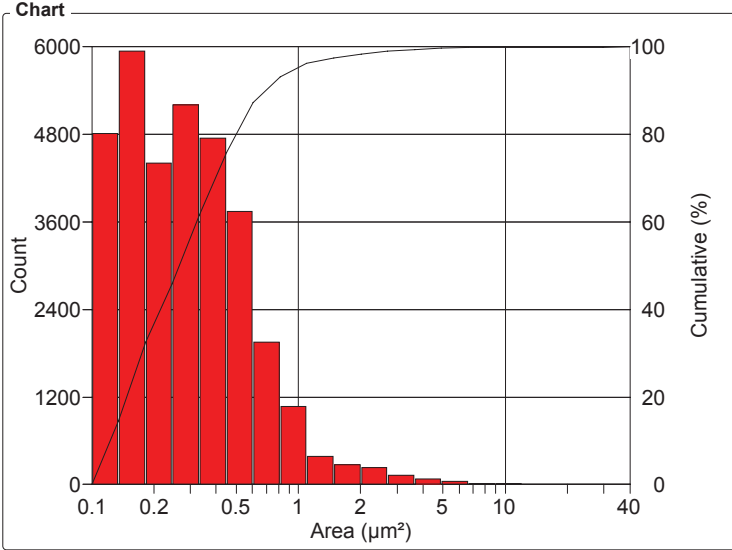
S10 SC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 6:36:52 AM**
 Sample: **S10 SC1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

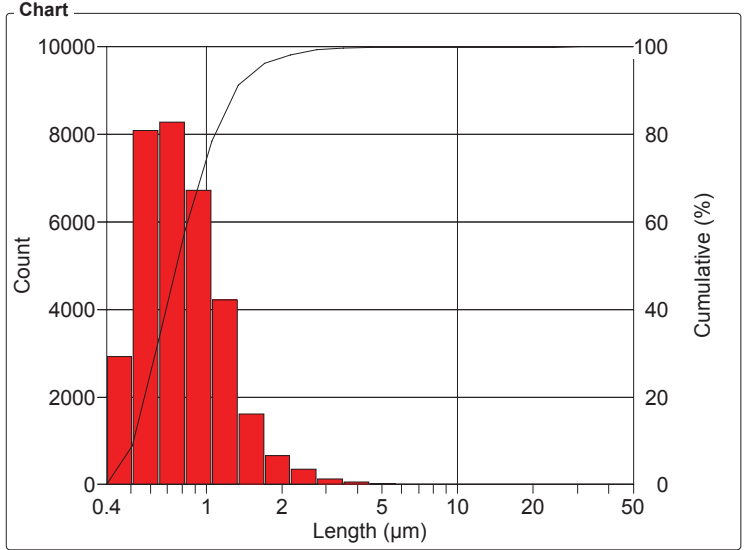
Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.1	4814	14.54	14.54
0.1 - 0.2	5938	17.94	32.48
0.2 - 0.2	4414	13.33	45.81
0.2 - 0.3	5207	15.73	61.54
0.3 - 0.4	4750	14.35	75.89
0.4 - 0.6	3751	11.33	87.22
0.6 - 0.8	1958	5.91	93.14
0.8 - 1.1	1068	3.23	96.36
1.1 - 1.5	389	1.18	97.54
1.5 - 2	279	0.84	98.38
2 - 2.7	233	0.70	99.08
2.7 - 3.6	126	0.38	99.47
3.6 - 4.9	81	0.24	99.71
4.9 - 6.6	43	0.13	99.84
6.6 - 8.9	19	0.06	99.90
8.9 - 12.1	15	0.05	99.94
12.1 - 16.3	9	0.03	99.97
16.3 - 22	5	0.02	99.98
22 - 30	2	6.04e-03	99.99
30 - 40	3	9.06e-03	100

Statistics

Minimum:	0.1	μm^2
Maximum:	38.9	μm^2
Mean:	0.396	μm^2
Std Dev.:	0.722	μm^2
Sum:	13105.6	μm^2
Count:	33104	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.1	μm^2
D50:	0.2	μm^2
D90:	0.7	μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	2923	8.83	8.83
0.5 - 0.6	8086	24.43	33.26
0.6 - 0.8	8278	25.01	58.26
0.8 - 1.0	6722	20.31	78.57
1.0 - 1.3	4229	12.77	91.34
1.3 - 1.7	1615	4.88	96.22
1.7 - 2.2	665	2.01	98.23
2.2 - 2.8	360	1.09	99.32
2.8 - 3.5	125	0.38	99.69
3.5 - 4.5	54	0.16	99.86
4.5 - 5.7	26	0.08	99.94
5.7 - 7.2	14	0.04	99.98
7.2 - 9.2	2	6.04e-03	99.98
9.2 - 11.7	0	0	99.98
11.7 - 15	2	6.04e-03	99.99
15 - 19	2	6.04e-03	100.00
19 - 24.2	0	0	100.00
24.2 - 30.9	1	3.02e-03	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics

Minimum:	0.4	μm
Maximum:	26.4	μm
Mean:	0.857	μm
Std Dev.:	0.481	μm
Sum:	28375.5	μm
Count:	33104	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.5	μm
D50:	0.7	μm
D90:	1.3	μm

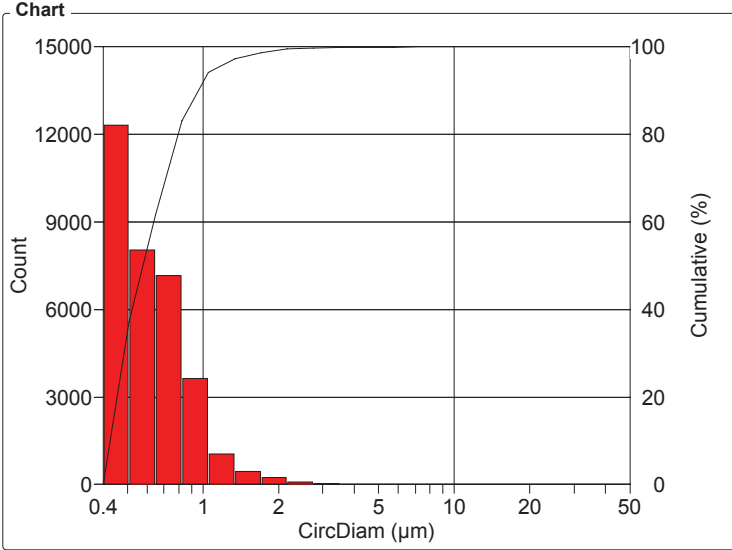
S10 SC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 6:36:52 AM**
 Sample: **S10 SC1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

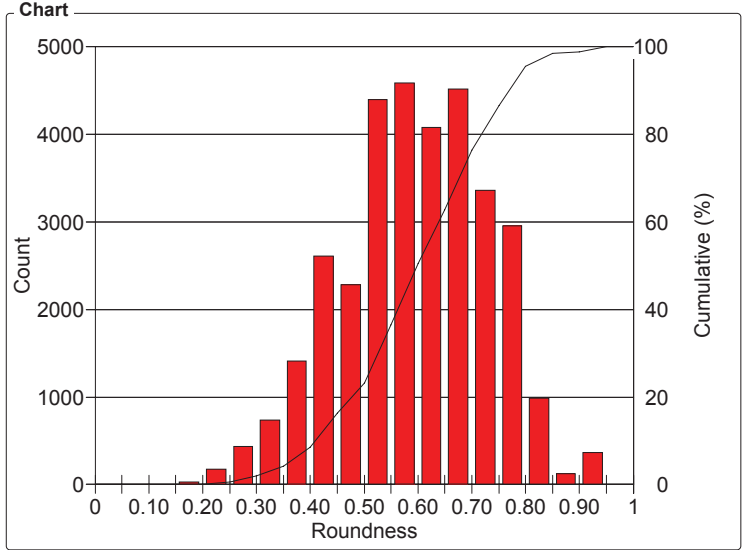


CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	12327	37.24	37.24
0.5 - 0.6	8046	24.31	61.54
0.6 - 0.8	7167	21.65	83.19
0.8 - 1.0	3645	11.01	94.20
1.0 - 1.3	1060	3.20	97.41
1.3 - 1.7	452	1.37	98.77
1.7 - 2.2	243	0.73	99.50
2.2 - 2.8	94	0.28	99.79
2.8 - 3.5	41	0.12	99.91
3.5 - 4.5	19	0.06	99.97
4.5 - 5.7	6	0.02	99.99
5.7 - 7.2	4	0.01	100
7.2 - 9.2	0	0	100
9.2 - 11.7	0	0	100
11.7 - 15	0	0	100
15 - 19	0	0	100
19 - 24.2	0	0	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	µm
Maximum:	7.0	µm
Mean:	0.643	µm
Std Dev.:	0.301	µm
Sum:	21283.4	µm
Count:	33104	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm ²
Total Area:	1237991.1	µm ²
D10:	0.4	µm
D50:	0.6	µm
D90:	0.9	µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	1	3.02e-03	3.02e-03
0.05 - 0.10	2	6.04e-03	9.06e-03
0.10 - 0.15	4	0.01	0.02
0.15 - 0.20	30	0.09	0.11
0.20 - 0.25	179	0.54	0.65
0.25 - 0.30	437	1.32	1.97
0.30 - 0.35	738	2.23	4.20
0.35 - 0.40	1416	4.28	8.48
0.40 - 0.45	2612	7.89	16.37
0.45 - 0.50	2288	6.91	23.28
0.50 - 0.55	4404	13.30	36.58
0.55 - 0.60	4592	13.87	50.46
0.60 - 0.65	4077	12.32	62.77
0.65 - 0.70	4519	13.65	76.42
0.70 - 0.75	3367	10.17	86.59
0.75 - 0.80	2956	8.93	95.52
0.80 - 0.85	988	2.98	98.51
0.85 - 0.90	127	0.38	98.89
0.90 - 0.95	367	1.11	100
0.95 - 1	0	0	100

Statistics		
Minimum:	0.05	
Maximum:	0.93	
Mean:	0.596	
Std Dev.:	0.135	
Count:	33104	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm ²
Total Area:	1237991.1	µm ²
D10:	0.41	
D50:	0.60	
D90:	0.78	

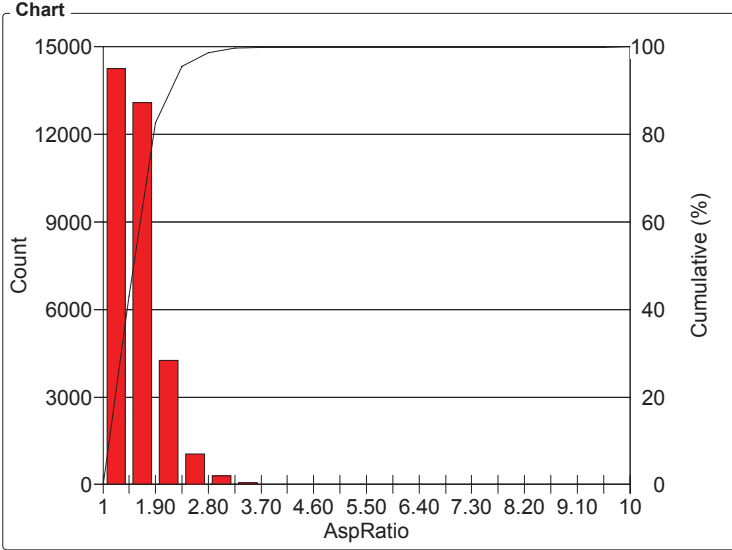
S10 SC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 6:36:52 AM**
 Sample: **S10 SC1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

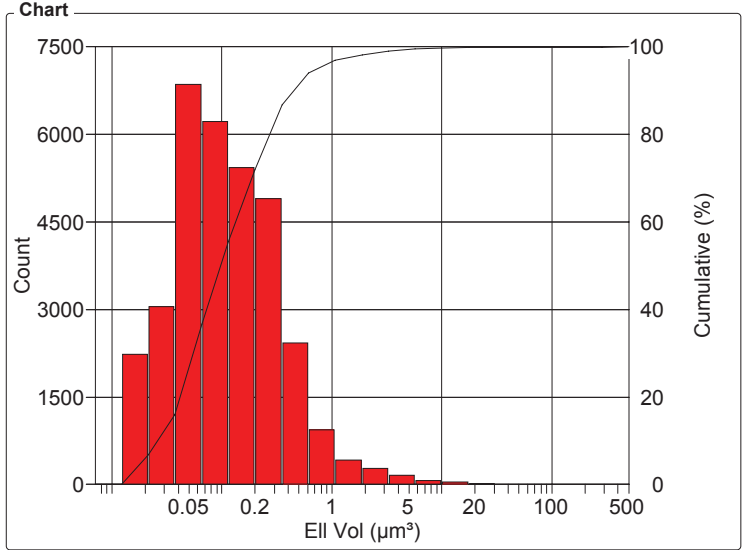


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	14272	43.11	43.11
1.45 - 1.90	13105	39.59	82.70
1.90 - 2.35	4273	12.91	95.61
2.35 - 2.80	1043	3.15	98.76
2.80 - 3.25	297	0.90	99.66
3.25 - 3.70	73	0.22	99.88
3.70 - 4.15	24	0.07	99.95
4.15 - 4.60	8	0.02	99.97
4.60 - 5.05	3	9.06e-03	99.98
5.05 - 5.50	1	3.02e-03	99.98
5.50 - 5.95	0	0	99.98
5.95 - 6.40	2	6.04e-03	99.99
6.40 - 6.85	0	0	99.99
6.85 - 7.30	2	6.04e-03	100.00
7.30 - 7.75	0	0	100.00
7.75 - 8.20	0	0	100.00
8.20 - 8.65	0	0	100.00
8.65 - 9.10	0	0	100.00
9.10 - 9.55	0	0	100.00
9.55 - 10	1	3.02e-03	100

Statistics	
Minimum:	1.02
Maximum:	9.65
Mean:	1.59
Std Dev.:	0.381
Count:	33104
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm²
Total Area:	1237991.1 µm²
D10:	1.23
D50:	1.50
D90:	2.06

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Ell Vol Intervals (µm³)	Count	%	Cumul%
7.0e-03 - 12.2e-03	3	9.06e-03	9.06e-03
12.2e-03 - 21.0e-03	2236	6.75	6.76
21.0e-03 - 37.0e-03	3047	9.20	15.97
37.0e-03 - 65.0e-03	6858	20.72	36.68
65.0e-03 - 0.1	6228	18.81	55.50
0.1 - 0.2	5440	16.43	71.93
0.2 - 0.3	4900	14.80	86.73
0.3 - 0.6	2425	7.33	94.06
0.6 - 1.1	938	2.83	96.89
1.1 - 1.9	423	1.28	98.17
1.9 - 3.3	281	0.85	99.02
3.3 - 5.7	166	0.50	99.52
5.7 - 10	76	0.23	99.75
10 - 17	42	0.13	99.88
17 - 31	21	0.06	99.94
31 - 53	11	0.03	99.97
53 - 94	4	0.01	99.98
94 - 164	1	3.02e-03	99.99
164 - 286	2	6.04e-03	99.99
286 - 500	2	6.04e-03	100

Statistics	
Minimum:	7.3e-03 µm³
Maximum:	493.8 µm³
Mean:	0.317 µm³
Std Dev.:	3.89 µm³
Sum:	10486.3 µm³
Count:	33104
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm²
Total Area:	1237991.1 µm²
D10:	25.9e-03 µm³
D50:	99.7e-03 µm³
D90:	0.4 µm³

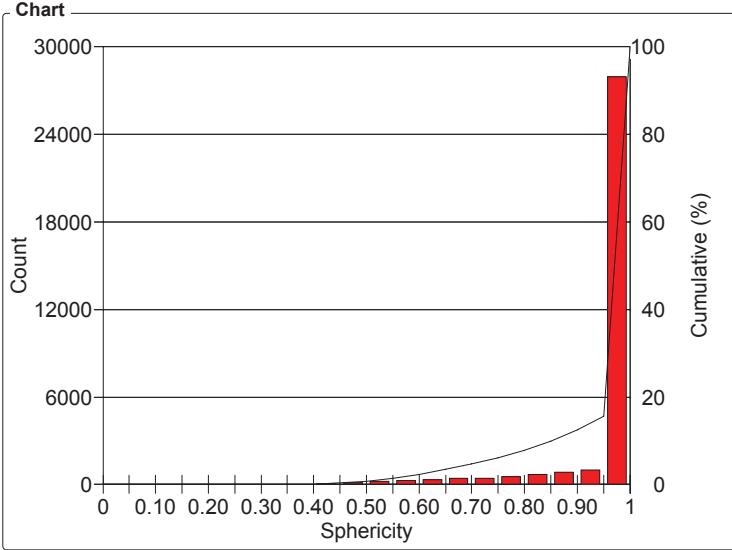
S10 SC1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 6:36:52 AM**
 Sample: **S10 SC1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	1	3.02e-03	3.02e-03
0.10 - 0.15	1	3.02e-03	6.04e-03
0.15 - 0.20	1	3.02e-03	9.06e-03
0.20 - 0.25	1	3.02e-03	0.01
0.25 - 0.30	3	9.06e-03	0.02
0.30 - 0.35	12	0.04	0.06
0.35 - 0.40	37	0.11	0.17
0.40 - 0.45	71	0.21	0.38
0.45 - 0.50	136	0.41	0.79
0.50 - 0.55	224	0.68	1.47
0.55 - 0.60	304	0.92	2.39
0.60 - 0.65	354	1.07	3.46
0.65 - 0.70	425	1.28	4.74
0.70 - 0.75	448	1.35	6.10
0.75 - 0.80	560	1.69	7.79
0.80 - 0.85	718	2.17	9.96
0.85 - 0.90	839	2.53	12.49
0.90 - 0.95	1017	3.07	15.56
0.95 - 1	27952	84.44	100

Statistics

Minimum:	0.07
Maximum:	1
Mean:	0.963
Std Dev.:	0.101
Count:	33104
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.85
D50:	1.00
D90:	1.00

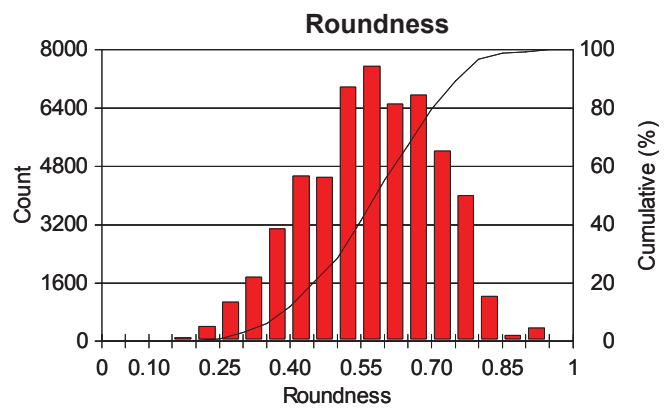
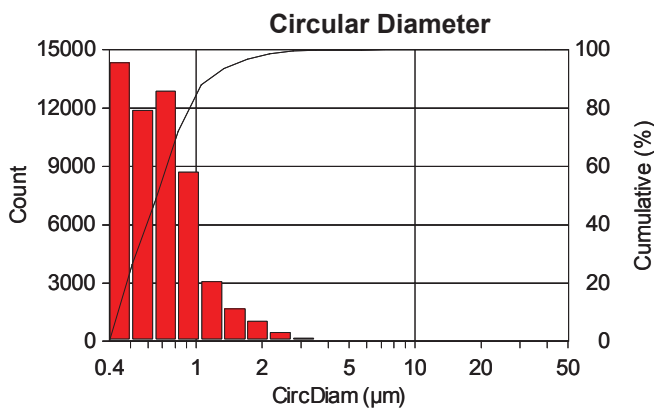
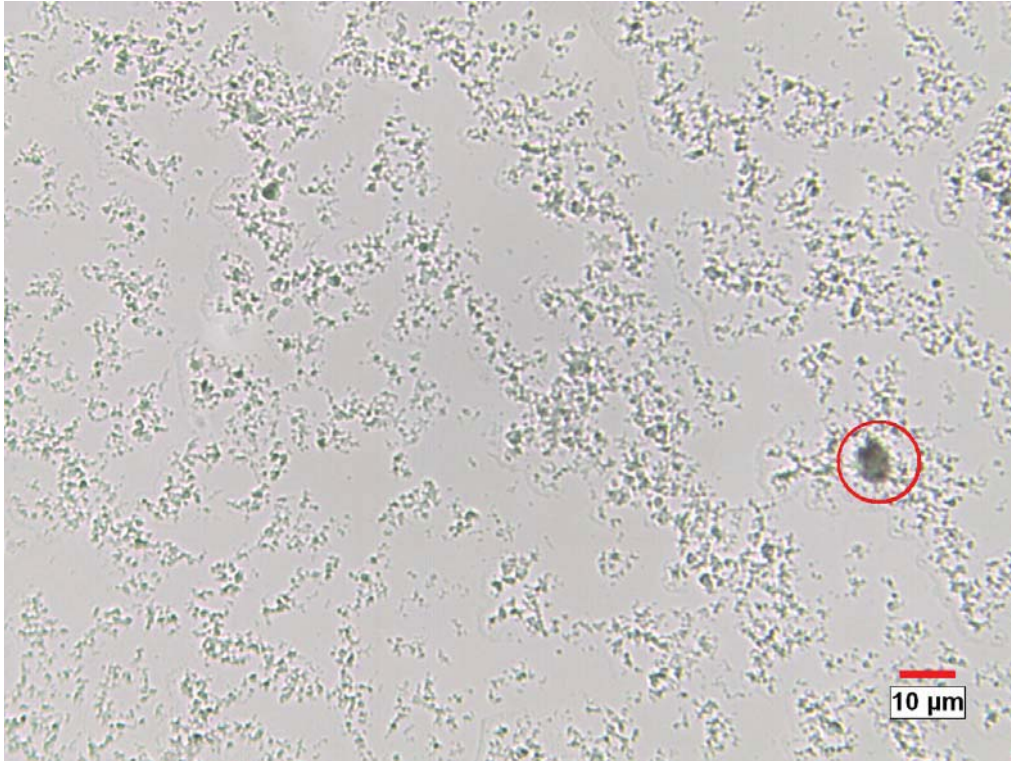
Sample # 11 - Automated Report

Particle Size Analysis

Date: 2007-Aug-20, 6:59:31 AM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer...)
Sample ID: S11 SD1

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 54293

Figure 1: Field containing the largest measured particle.



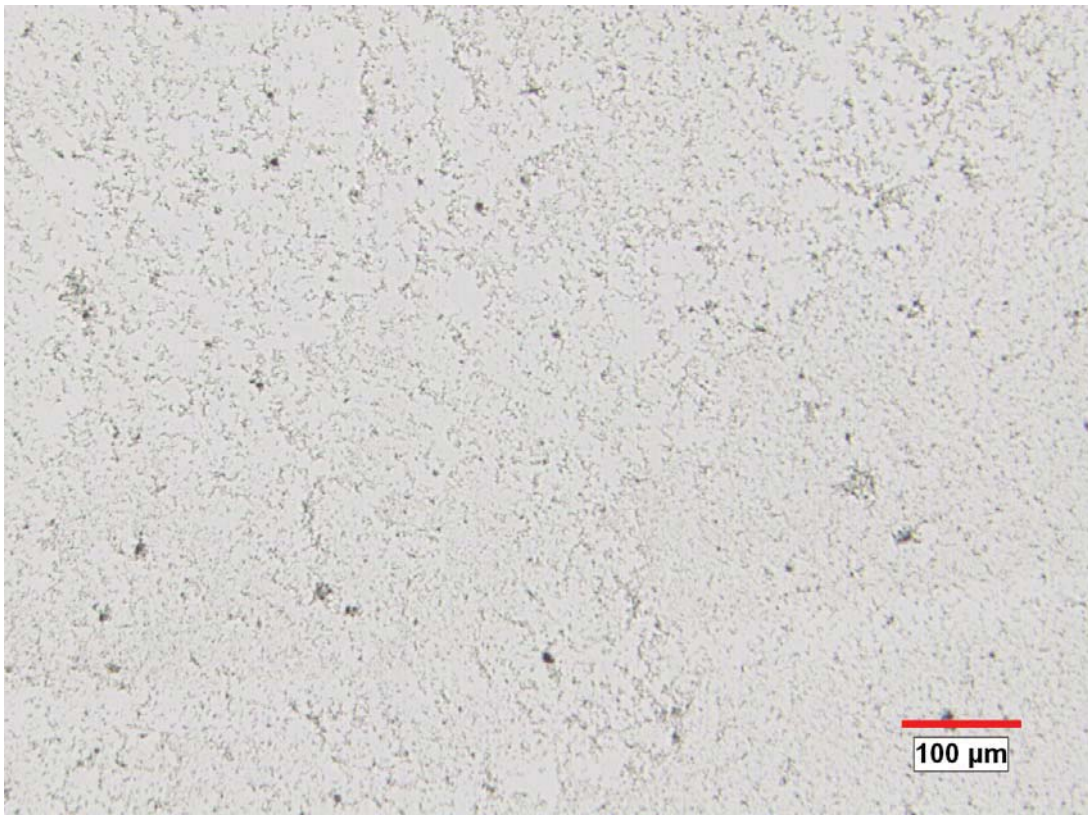
Min: 0.37
Max.: 6.29
Mean: 0.74
Std. Dev.: 0.38
D10: 0.40
D50: 0.65
D90: 1.11

Min: 0.12
Max.: 0.93
Mean: 0.58
Std. Dev.: 0.14
D10: 0.39
D50: 0.58
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 11 - Printed Results

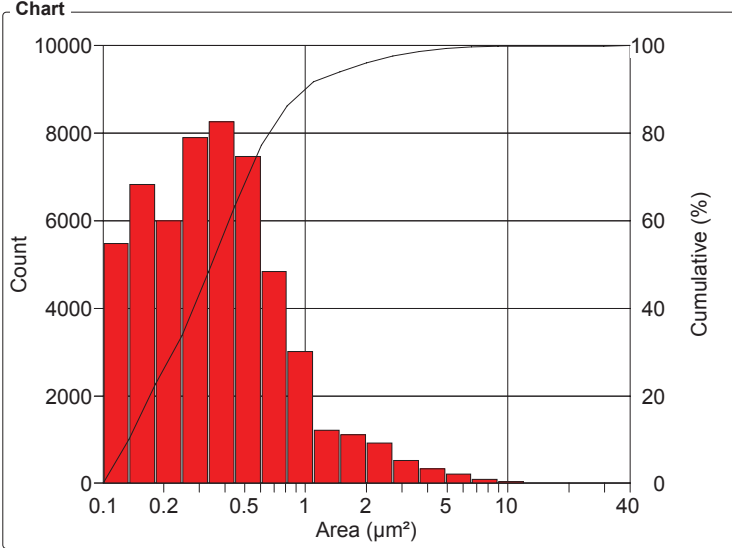
S11 SD1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 7:00:49 AM**
 Sample: **S11 SD1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

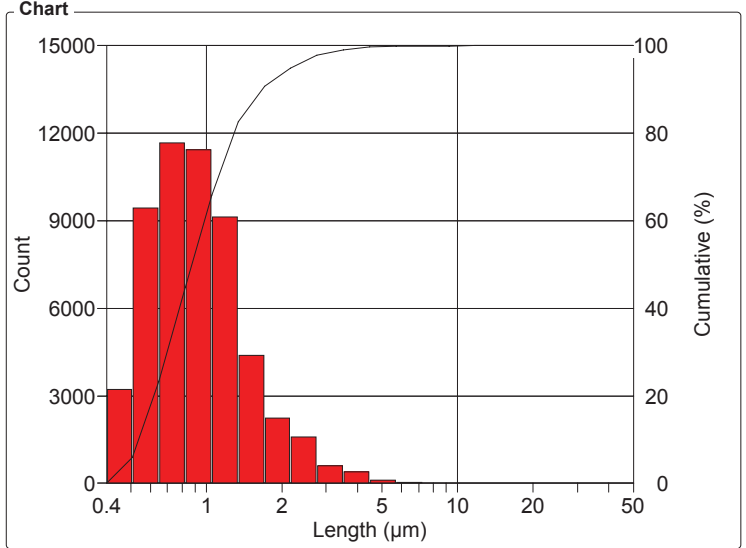
Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.1	5486	10.10	10.10
0.1 - 0.2	6823	12.57	22.67
0.2 - 0.2	6002	11.05	33.73
0.2 - 0.3	7909	14.57	48.29
0.3 - 0.4	8265	15.22	63.52
0.4 - 0.6	7472	13.76	77.28
0.6 - 0.8	4840	8.91	86.19
0.8 - 1.1	3009	5.54	91.74
1.1 - 1.5	1221	2.25	93.98
1.5 - 2	1117	2.06	96.04
2 - 2.7	921	1.70	97.74
2.7 - 3.6	528	0.97	98.71
3.6 - 4.9	336	0.62	99.33
4.9 - 6.6	210	0.39	99.72
6.6 - 8.9	93	0.17	99.89
8.9 - 12.1	36	0.07	99.95
12.1 - 16.3	10	0.02	99.97
16.3 - 22	11	0.02	99.99
22 - 30	3	5.53e-03	100.00
30 - 40	1	1.84e-03	100

Statistics

Minimum:	0.1	μm^2
Maximum:	31.1	μm^2
Mean:	0.547	μm^2
Std Dev.:	0.848	μm^2
Sum:	29719.6	μm^2
Count:	54293	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.1	μm^2
D50:	0.3	μm^2
D90:	1.0	μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	3224	5.94	5.94
0.5 - 0.6	9450	17.41	23.34
0.6 - 0.8	11670	21.49	44.84
0.8 - 1.0	11444	21.08	65.92
1.0 - 1.3	9125	16.81	82.72
1.3 - 1.7	4395	8.09	90.82
1.7 - 2.2	2246	4.14	94.96
2.2 - 2.8	1581	2.91	97.87
2.8 - 3.5	601	1.11	98.97
3.5 - 4.5	389	0.72	99.69
4.5 - 5.7	124	0.23	99.92
5.7 - 7.2	29	0.05	99.97
7.2 - 9.2	12	0.02	99.99
9.2 - 11.7	3	5.53e-03	100
11.7 - 15	0	0	100
15 - 19	0	0	100
19 - 24.2	0	0	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics

Minimum:	0.4	μm
Maximum:	10.4	μm
Mean:	1.02	μm
Std Dev.:	0.603	μm
Sum:	55306.0	μm
Count:	54293	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.5	μm
D50:	0.9	μm
D90:	1.6	μm

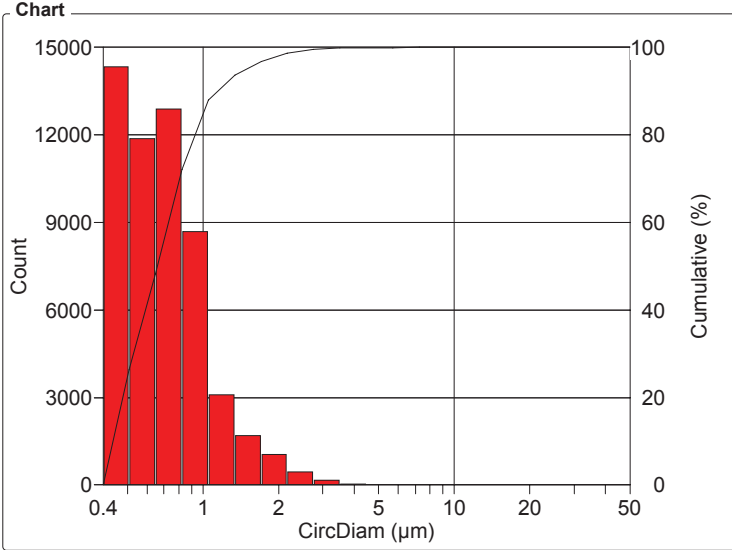
S11 SD1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 7:00:49 AM**
 Sample: **S11 SD1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

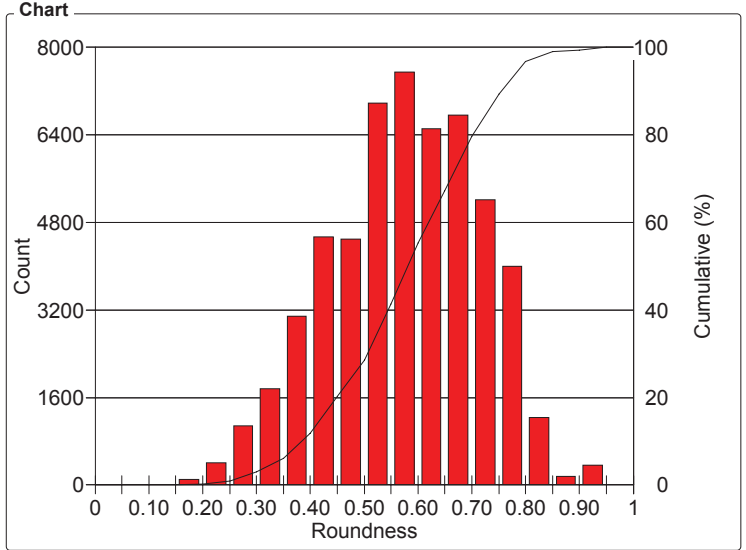


CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	14339	26.41	26.41
0.5 - 0.6	11881	21.88	48.29
0.6 - 0.8	12884	23.73	72.02
0.8 - 1.0	8702	16.03	88.05
1.0 - 1.3	3085	5.68	93.73
1.3 - 1.7	1690	3.11	96.85
1.7 - 2.2	1038	1.91	98.76
2.2 - 2.8	464	0.85	99.61
2.8 - 3.5	166	0.31	99.92
3.5 - 4.5	28	0.05	99.97
4.5 - 5.7	13	0.02	99.99
5.7 - 7.2	3	5.53e-03	100
7.2 - 9.2	0	0	100
9.2 - 11.7	0	0	100
11.7 - 15	0	0	100
15 - 19	0	0	100
19 - 24.2	0	0	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics	
Minimum:	0.4 µm
Maximum:	6.3 µm
Mean:	0.743 µm
Std Dev.:	0.381 µm
Sum:	40334.1 µm
Count:	54293
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.4 µm
D50:	0.6 µm
D90:	1.1 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	10	0.02	0.02
0.15 - 0.20	97	0.18	0.20
0.20 - 0.25	408	0.75	0.95
0.25 - 0.30	1084	2.00	2.95
0.30 - 0.35	1762	3.25	6.19
0.35 - 0.40	3089	5.69	11.88
0.40 - 0.45	4539	8.36	20.24
0.45 - 0.50	4500	8.29	28.53
0.50 - 0.55	6987	12.87	41.40
0.55 - 0.60	7549	13.90	55.30
0.60 - 0.65	6511	11.99	67.29
0.65 - 0.70	6758	12.45	79.74
0.70 - 0.75	5222	9.62	89.36
0.75 - 0.80	4004	7.37	96.73
0.80 - 0.85	1240	2.28	99.02
0.85 - 0.90	164	0.30	99.32
0.90 - 0.95	369	0.68	100
0.95 - 1	0	0	100

Statistics	
Minimum:	0.12
Maximum:	0.93
Mean:	0.576
Std Dev.:	0.139
Count:	54293
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.39
D50:	0.58
D90:	0.75

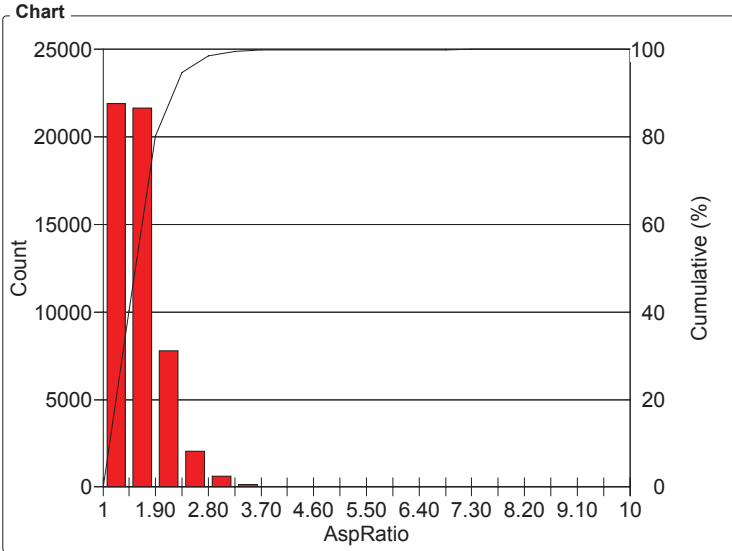
S11 SD1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 7:00:49 AM**
 Sample: **S11 SD1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

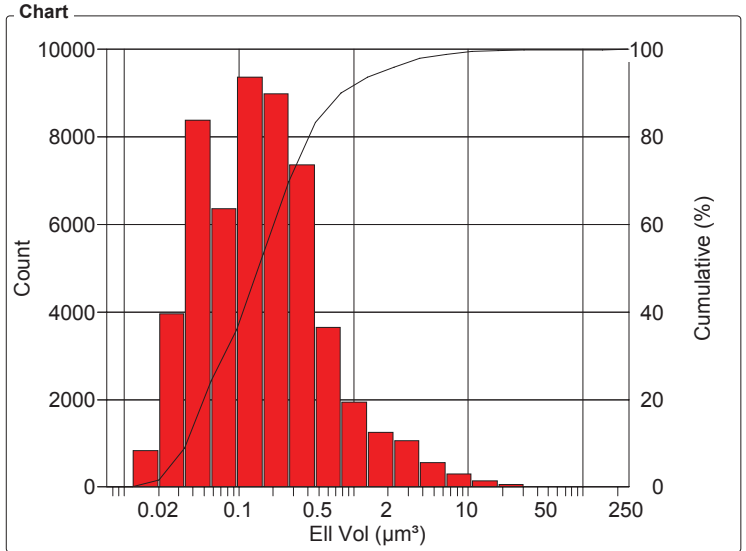


AspRatio Intervals		Count	%	Cumul%
1	- 1.45	21933	40.40	40.40
1.45	- 1.90	21664	39.90	80.30
1.90	- 2.35	7798	14.36	94.66
2.35	- 2.80	2058	3.79	98.45
2.80	- 3.25	617	1.14	99.59
3.25	- 3.70	155	0.29	99.87
3.70	- 4.15	41	0.08	99.95
4.15	- 4.60	13	0.02	99.97
4.60	- 5.05	8	0.01	99.99
5.05	- 5.50	0	0	99.99
5.50	- 5.95	0	0	99.99
5.95	- 6.40	4	7.37e-03	100.00
6.40	- 6.85	0	0	100.00
6.85	- 7.30	2	3.68e-03	100
7.30	- 7.75	0	0	100
7.75	- 8.20	0	0	100
8.20	- 8.65	0	0	100
8.65	- 9.10	0	0	100
9.10	- 9.55	0	0	100
9.55	- 10	0	0	100

Statistics	
Minimum:	1.02
Maximum:	7
Mean:	1.62
Std Dev.:	0.395
Count:	54293
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	1.24
D50:	1.50
D90:	2.11

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Ell Vol Intervals (µm³)		Count	%	Cumul%
7.0e-03	- 11.8e-03	6	0.01	0.01
11.8e-03	- 20.0e-03	841	1.55	1.56
20.0e-03	- 34.0e-03	3957	7.29	8.85
34.0e-03	- 57.0e-03	8377	15.43	24.28
57.0e-03	- 96.0e-03	6370	11.73	36.01
96.0e-03	- 0.2	9365	17.25	53.26
0.2	- 0.3	8998	16.57	69.83
0.3	- 0.5	7362	13.56	83.39
0.5	- 0.8	3645	6.71	90.11
0.8	- 1.3	1951	3.59	93.70
1.3	- 2.2	1244	2.29	95.99
2.2	- 3.8	1056	1.95	97.94
3.8	- 6.4	556	1.02	98.96
6.4	- 10.8	306	0.56	99.52
10.8	- 18	152	0.28	99.80
18	- 31	69	0.13	99.93
31	- 52	15	0.03	99.96
52	- 88	14	0.03	99.98
88	- 148	7	0.01	100.00
148	- 250	2	3.68e-03	100

Statistics	
Minimum:	7.3e-03 µm ³
Maximum:	225.8 µm ³
Mean:	0.503 µm ³
Std Dev.:	2.51 µm ³
Sum:	27294.0 µm ³
Count:	54293
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	34.6e-03 µm ³
D50:	0.1 µm ³
D90:	0.8 µm ³

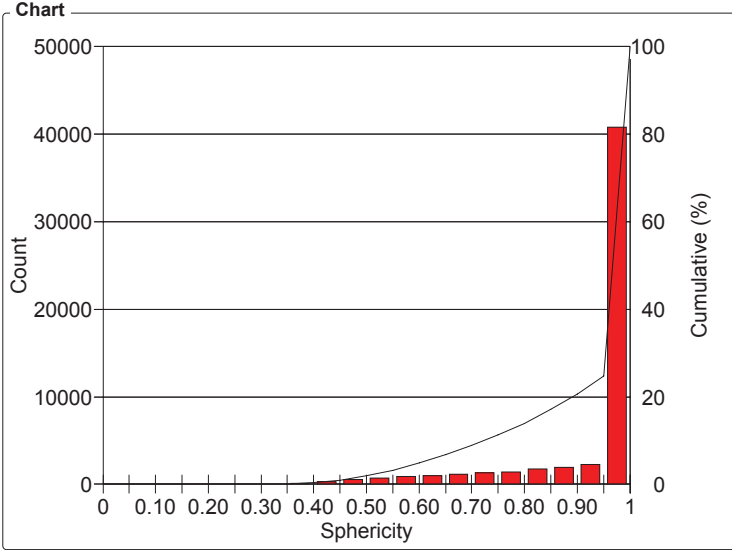
S11 SD1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 7:00:49 AM**
 Sample: **S11 SD1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	0	0	0
0.15 - 0.20	0	0	0
0.20 - 0.25	5	9.21e-03	9.21e-03
0.25 - 0.30	14	0.03	0.03
0.30 - 0.35	59	0.11	0.14
0.35 - 0.40	164	0.30	0.45
0.40 - 0.45	283	0.52	0.97
0.45 - 0.50	524	0.97	1.93
0.50 - 0.55	723	1.33	3.26
0.55 - 0.60	915	1.69	4.95
0.60 - 0.65	983	1.81	6.76
0.65 - 0.70	1141	2.10	8.86
0.70 - 0.75	1302	2.40	11.26
0.75 - 0.80	1430	2.63	13.89
0.80 - 0.85	1768	3.26	17.15
0.85 - 0.90	1927	3.55	20.70
0.90 - 0.95	2246	4.14	24.84
0.95 - 1	40809	75.16	100

Statistics

Minimum:	0.22
Maximum:	1
Mean:	0.935
Std Dev.:	0.133
Count:	54293
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.72
D50:	1.00
D90:	1.00

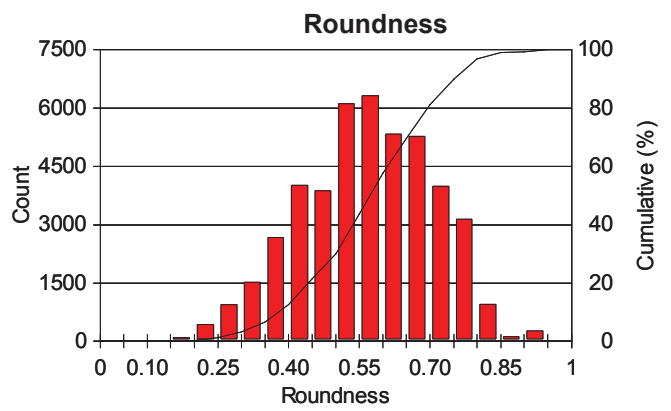
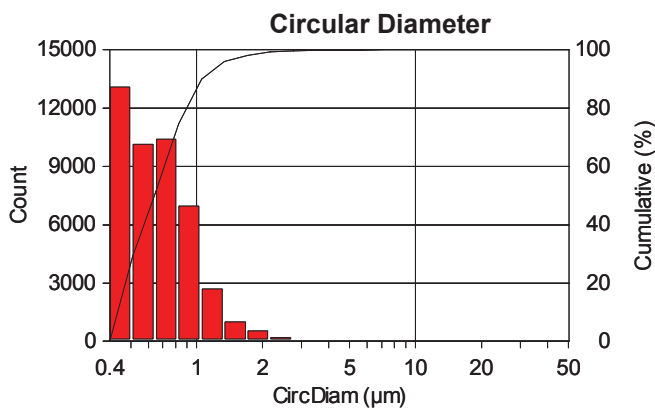
Sample # 12 - Automated Report

Particle Size Analysis

Date: 2007-Aug-20, 7:43:24 AM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer ...)
Sample ID: S12 SD2

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 45098

Figure 1: Field containing the largest measured particle.



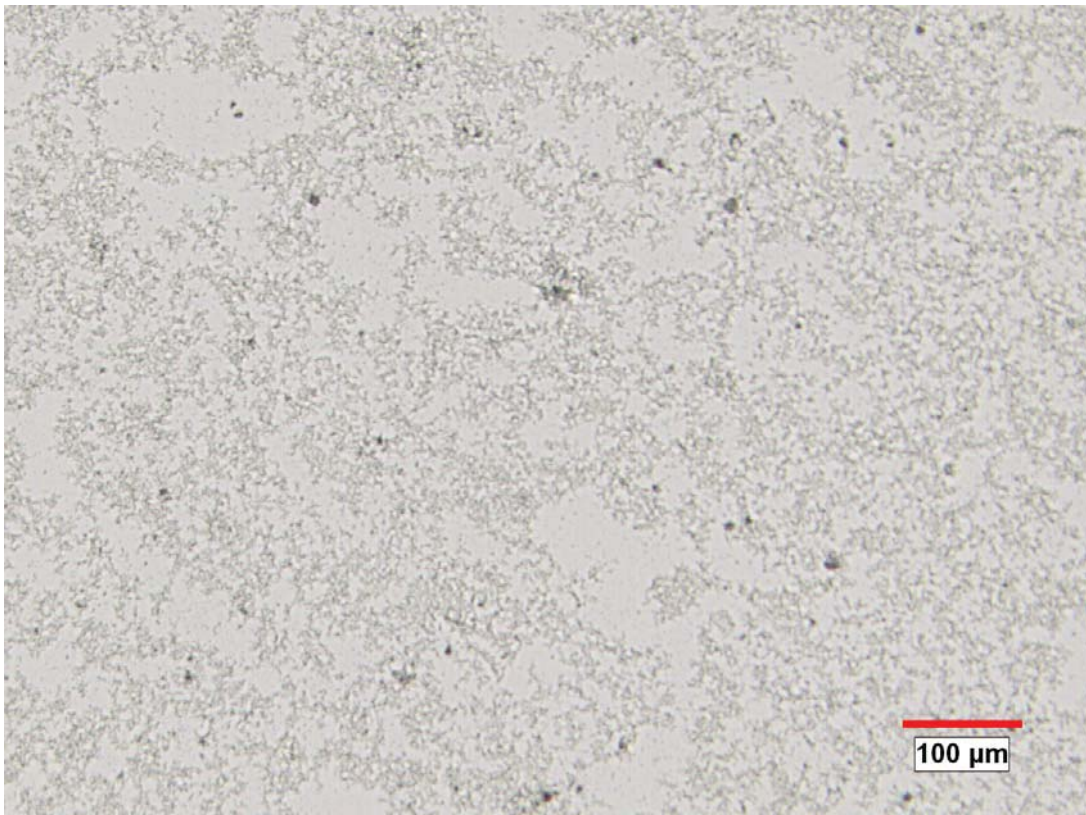
Min: 0.37
Max.: 6.50
Mean: 0.71
Std. Dev.: 0.33
D10: 0.39
D50: 0.62
D90: 1.05

Min: 0.12
Max.: 0.93
Mean: 0.57
Std. Dev.: 0.14
D10: 0.38
D50: 0.57
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 12 - Printed Results

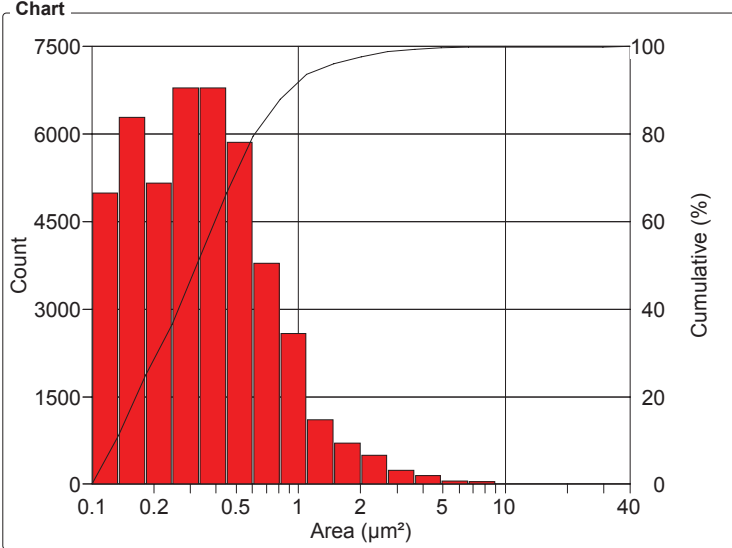
S12 SD2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 7:48:15 AM**
 Sample: **S12 SD2**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

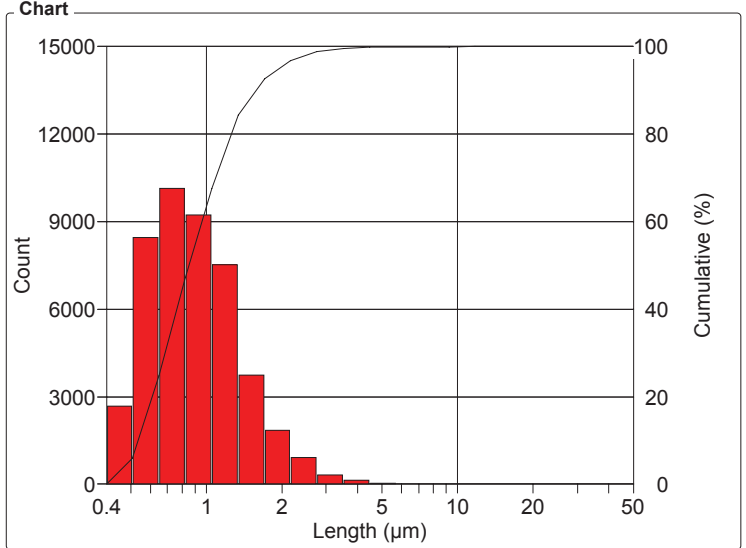


Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.1	4996	11.08	11.08
0.1 - 0.2	6291	13.95	25.03
0.2 - 0.2	5164	11.45	36.48
0.2 - 0.3	6790	15.06	51.53
0.3 - 0.4	6789	15.05	66.59
0.4 - 0.6	5860	12.99	79.58
0.6 - 0.8	3791	8.41	87.99
0.8 - 1.1	2580	5.72	93.71
1.1 - 1.5	1113	2.47	96.18
1.5 - 2	700	1.55	97.73
2 - 2.7	493	1.09	98.82
2.7 - 3.6	242	0.54	99.36
3.6 - 4.9	150	0.33	99.69
4.9 - 6.6	63	0.14	99.83
6.6 - 8.9	42	0.09	99.92
8.9 - 12.1	12	0.03	99.95
12.1 - 16.3	6	0.01	99.96
16.3 - 22	8	0.02	99.98
22 - 30	7	0.02	100.00
30 - 40	1	2.22e-03	100

Statistics		
Minimum:	0.1	μm^2
Maximum:	33.2	μm^2
Mean:	0.478	μm^2
Std Dev.:	0.730	μm^2
Sum:	21566.0	μm^2
Count:	45098	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.1	μm^2
D50:	0.3	μm^2
D90:	0.9	μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	2687	5.96	5.96
0.5 - 0.6	8464	18.77	24.73
0.6 - 0.8	10155	22.52	47.24
0.8 - 1.0	9225	20.46	67.70
1.0 - 1.3	7519	16.67	84.37
1.3 - 1.7	3755	8.33	92.70
1.7 - 2.2	1857	4.12	96.82
2.2 - 2.8	920	2.04	98.86
2.8 - 3.5	315	0.70	99.55
3.5 - 4.5	142	0.31	99.87
4.5 - 5.7	36	0.08	99.95
5.7 - 7.2	18	0.04	99.99
7.2 - 9.2	3	6.65e-03	100.00
9.2 - 11.7	2	4.43e-03	100
11.7 - 15	0	0	100
15 - 19	0	0	100
19 - 24.2	0	0	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	μm
Maximum:	11.0	μm
Mean:	0.970	μm
Std Dev.:	0.511	μm
Sum:	43764.5	μm
Count:	45098	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.5	μm
D50:	0.8	μm
D90:	1.5	μm

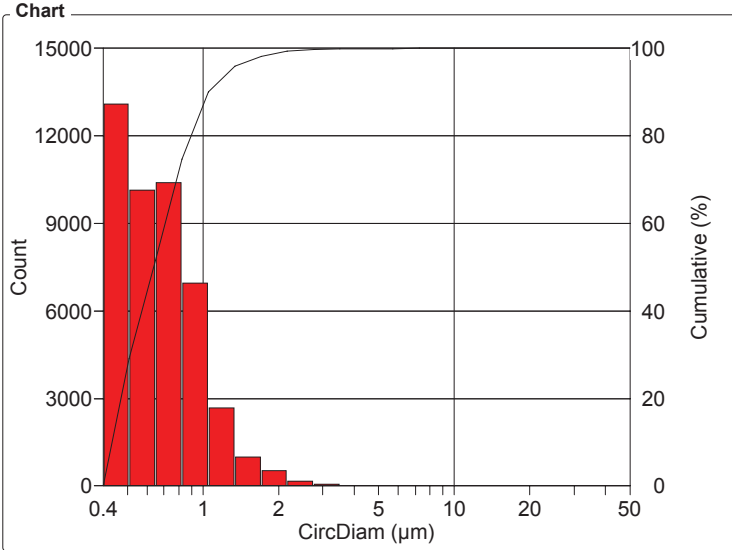
S12 SD2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 7:48:16 AM**
 Sample: **S12 SD2**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

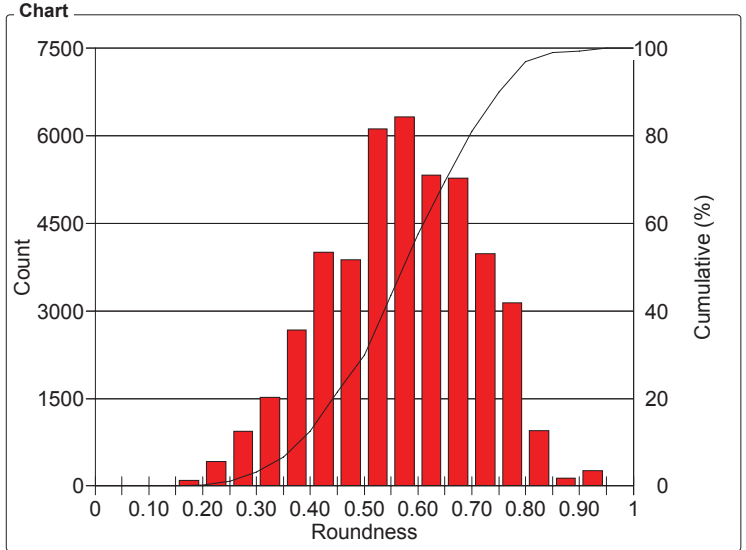


CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	13097	29.04	29.04
0.5 - 0.6	10144	22.49	51.53
0.6 - 0.8	10410	23.08	74.62
0.8 - 1.0	6949	15.41	90.03
1.0 - 1.3	2691	5.97	95.99
1.3 - 1.7	999	2.22	98.21
1.7 - 2.2	535	1.19	99.39
2.2 - 2.8	178	0.39	99.79
2.8 - 3.5	65	0.14	99.93
3.5 - 4.5	14	0.03	99.96
4.5 - 5.7	12	0.03	99.99
5.7 - 7.2	4	8.87e-03	100
7.2 - 9.2	0	0	100
9.2 - 11.7	0	0	100
11.7 - 15	0	0	100
15 - 19	0	0	100
19 - 24.2	0	0	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	µm
Maximum:	6.5	µm
Mean:	0.707	µm
Std Dev.:	0.331	µm
Sum:	31866.1	µm
Count:	45098	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm ²
Total Area:	1237991.1	µm ²
D10:	0.4	µm
D50:	0.6	µm
D90:	1.0	µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	10	0.02	0.02
0.15 - 0.20	92	0.20	0.23
0.20 - 0.25	427	0.95	1.17
0.25 - 0.30	938	2.08	3.25
0.30 - 0.35	1521	3.37	6.63
0.35 - 0.40	2676	5.93	12.56
0.40 - 0.45	4013	8.90	21.46
0.45 - 0.50	3875	8.59	30.05
0.50 - 0.55	6125	13.58	43.63
0.55 - 0.60	6322	14.02	57.65
0.60 - 0.65	5329	11.82	69.47
0.65 - 0.70	5279	11.71	81.17
0.70 - 0.75	3989	8.85	90.02
0.75 - 0.80	3147	6.98	97.00
0.80 - 0.85	956	2.12	99.12
0.85 - 0.90	130	0.29	99.40
0.90 - 0.95	269	0.60	100
0.95 - 1	0	0	100

Statistics		
Minimum:	0.12	
Maximum:	0.93	
Mean:	0.569	
Std Dev.:	0.139	
Count:	45098	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	µm ²
Total Area:	1237991.1	µm ²
D10:	0.38	
D50:	0.57	
D90:	0.75	

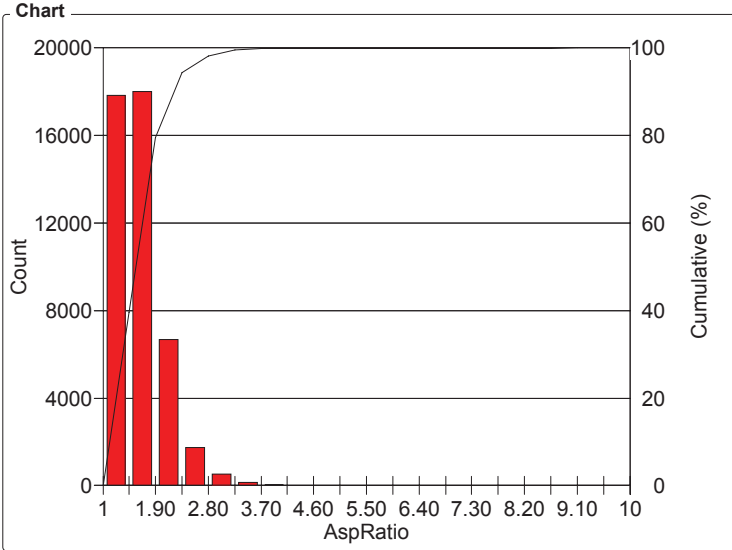
S12 SD2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 7:48:16 AM**
 Sample: **S12 SD2**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

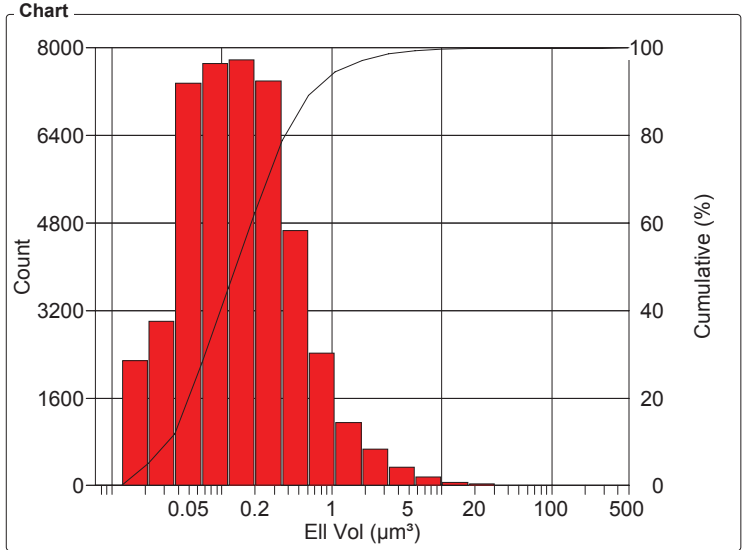


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	17850	39.58	39.58
1.45 - 1.90	18027	39.97	79.55
1.90 - 2.35	6686	14.83	94.38
2.35 - 2.80	1754	3.89	98.27
2.80 - 3.25	550	1.22	99.49
3.25 - 3.70	161	0.36	99.84
3.70 - 4.15	50	0.11	99.96
4.15 - 4.60	9	0.02	99.98
4.60 - 5.05	4	8.87e-03	99.98
5.05 - 5.50	2	4.43e-03	99.99
5.50 - 5.95	0	0	99.99
5.95 - 6.40	4	8.87e-03	100.00
6.40 - 6.85	0	0	100.00
6.85 - 7.30	0	0	100.00
7.30 - 7.75	0	0	100.00
7.75 - 8.20	0	0	100.00
8.20 - 8.65	0	0	100.00
8.65 - 9.10	1	2.22e-03	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics	
Minimum:	1.02
Maximum:	9
Mean:	1.63
Std Dev.:	0.405
Count:	45098
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	1.24
D50:	1.50
D90:	2.12

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Ell Vol Intervals (µm³)	Count	%	Cumul%
7.0e-03 - 12.2e-03	4	8.87e-03	8.87e-03
12.2e-03 - 21.0e-03	2288	5.07	5.08
21.0e-03 - 37.0e-03	3010	6.67	11.76
37.0e-03 - 65.0e-03	7364	16.33	28.09
65.0e-03 - 0.1	7723	17.12	45.21
0.1 - 0.2	7788	17.27	62.48
0.2 - 0.3	7400	16.41	78.89
0.3 - 0.6	4657	10.33	89.21
0.6 - 1.1	2422	5.37	94.59
1.1 - 1.9	1153	2.56	97.14
1.9 - 3.3	676	1.50	98.64
3.3 - 5.7	332	0.74	99.38
5.7 - 10	164	0.36	99.74
10 - 17	59	0.13	99.87
17 - 31	30	0.07	99.94
31 - 53	11	0.02	99.96
53 - 94	12	0.03	99.99
94 - 164	2	4.43e-03	99.99
164 - 286	2	4.43e-03	100.00
286 - 500	1	2.22e-03	100

Statistics	
Minimum:	7.3e-03 µm ³
Maximum:	418.1 µm ³
Mean:	0.397 µm ³
Std Dev.:	3.01 µm ³
Sum:	17909.8 µm ³
Count:	45098
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	34.3e-03 µm ³
D50:	0.1 µm ³
D90:	0.6 µm ³

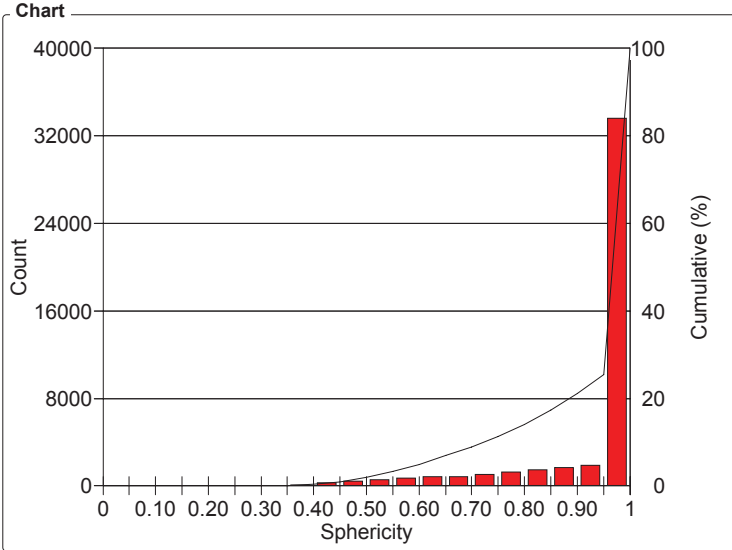
S12 SD2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 7:48:16 AM**
 Sample: **S12 SD2**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	1	2.22e-03	2.22e-03
0.15 - 0.20	0	0	2.22e-03
0.20 - 0.25	1	2.22e-03	4.43e-03
0.25 - 0.30	19	0.04	0.05
0.30 - 0.35	37	0.08	0.13
0.35 - 0.40	116	0.26	0.39
0.40 - 0.45	287	0.64	1.02
0.45 - 0.50	447	0.99	2.01
0.50 - 0.55	620	1.37	3.39
0.55 - 0.60	719	1.59	4.98
0.60 - 0.65	888	1.97	6.95
0.65 - 0.70	887	1.97	8.92
0.70 - 0.75	1061	2.35	11.27
0.75 - 0.80	1271	2.82	14.09
0.80 - 0.85	1511	3.35	17.44
0.85 - 0.90	1699	3.77	21.21
0.90 - 0.95	1917	4.25	25.46
0.95 - 1	33617	74.54	100

Statistics

Minimum:	0.12
Maximum:	1
Mean:	0.934
Std Dev.:	0.134
Count:	45098
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.72
D50:	1.00
D90:	1.00

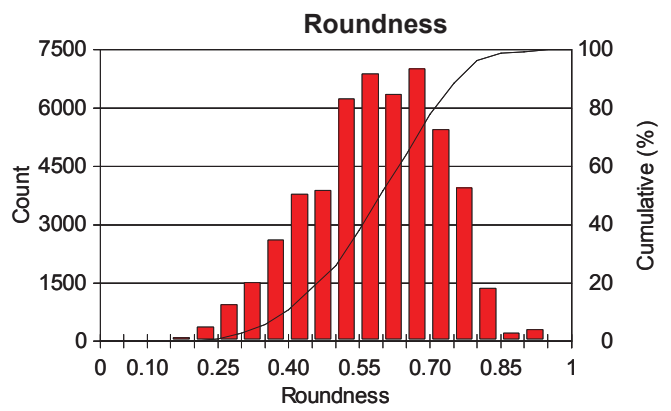
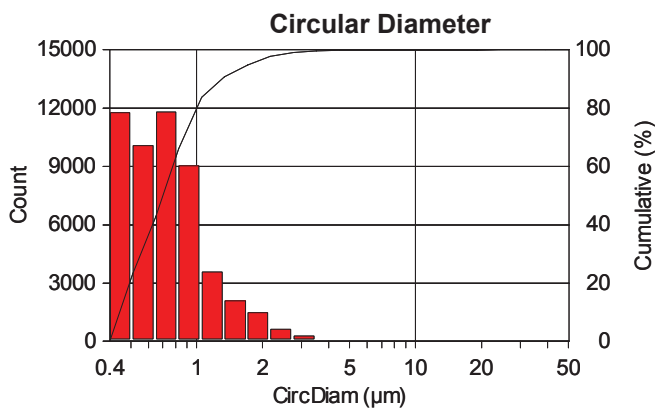
Sample # 13 - Automated Report

Particle Size Analysis

Date: 2007-Aug-20, 8:20:37 AM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer...)
Sample ID: S13 SS1

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 50966

Figure 1: Field containing the largest measured particle.



Min: 0.37
Max.: 21.43
Mean: 0.81
Std. Dev.: 0.53
D10: 0.41
D50: 0.69
D90: 1.28

Min: 0.14
Max.: 0.93
Mean: 0.59
Std. Dev.: 0.14
D10: 0.39
D50: 0.60
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).

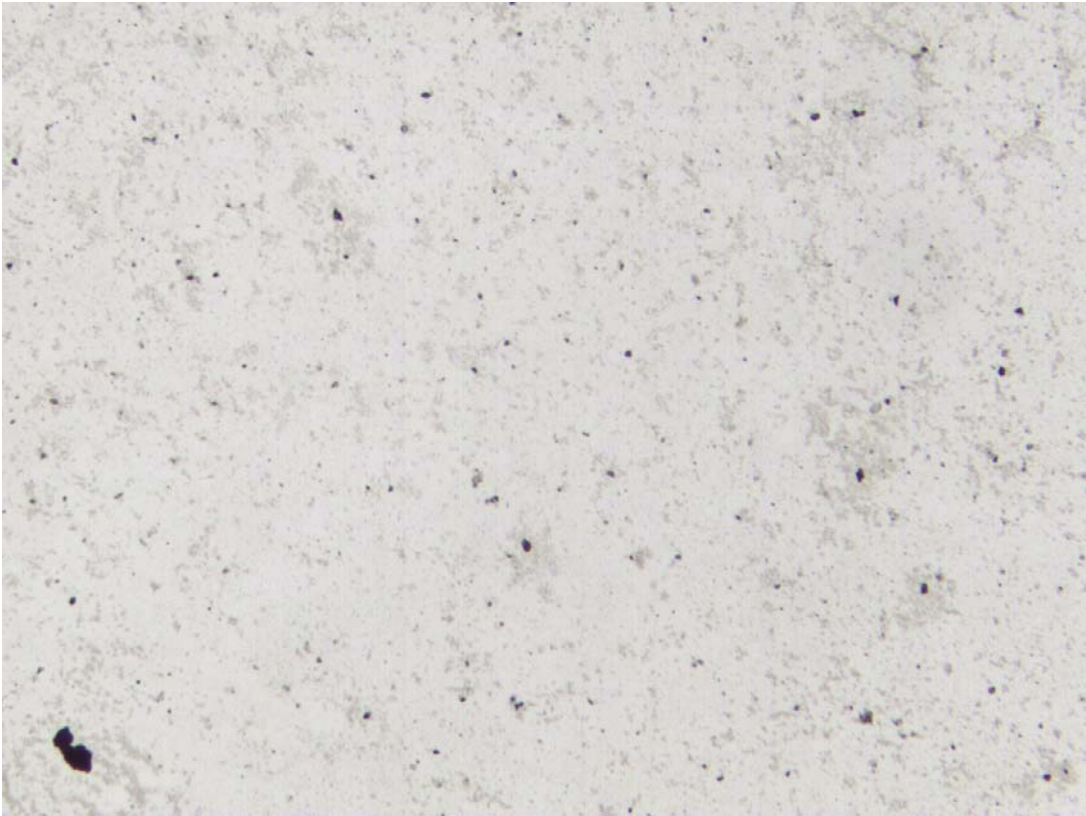
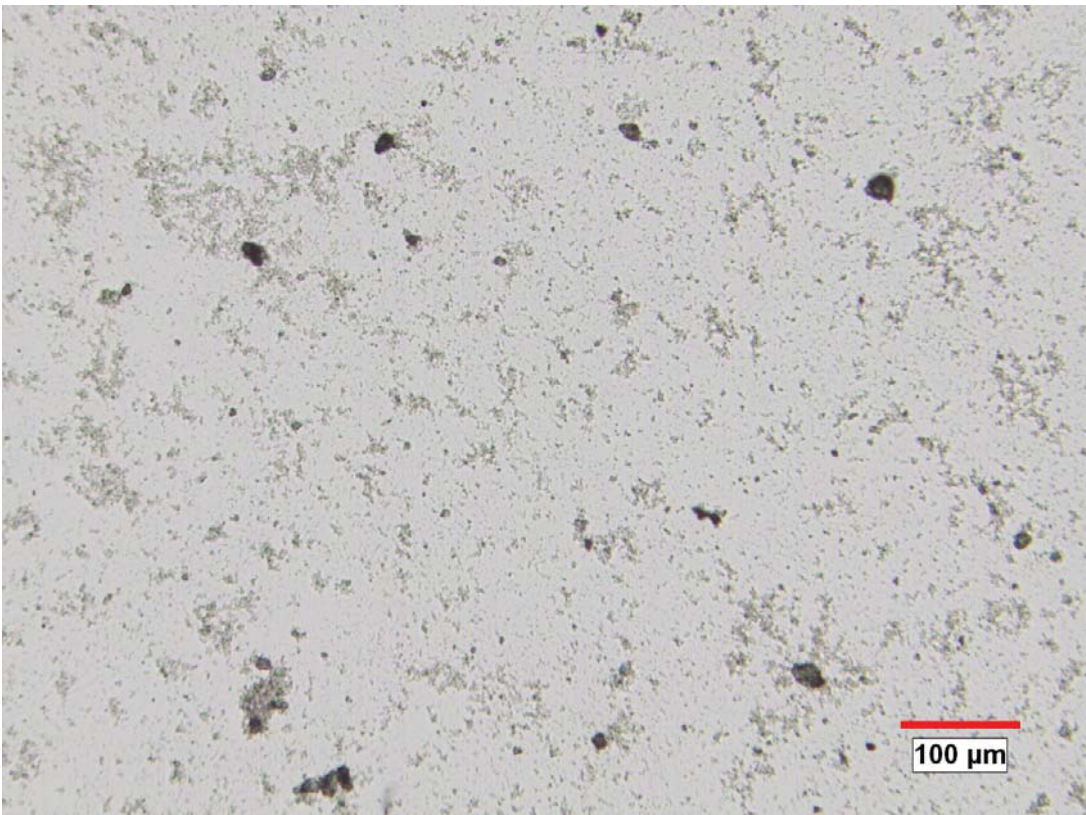


Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 13 - Printed Results

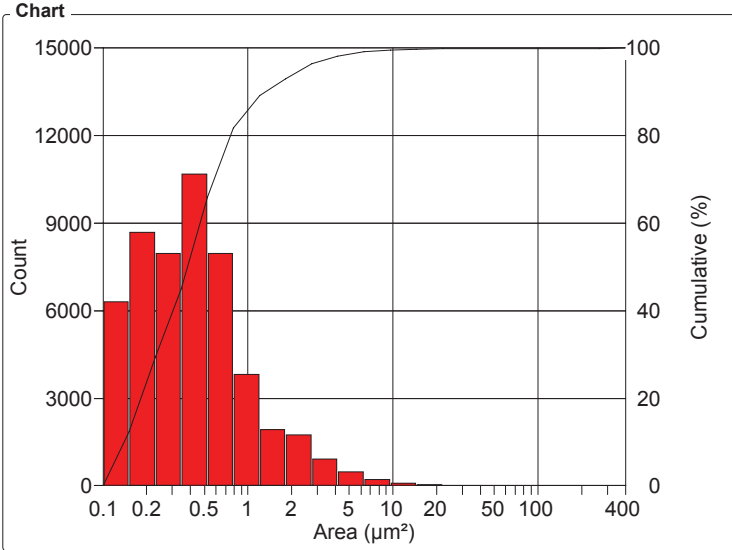
S13 SS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 9:28:17 AM**
 Sample: **S13 SS1**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles

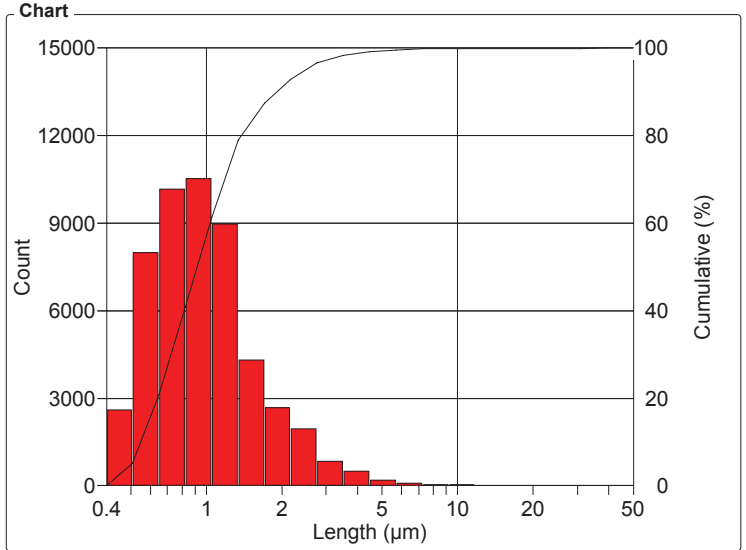


Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.2	6310	12.38	12.38
0.2 - 0.2	8697	17.06	29.45
0.2 - 0.3	7963	15.62	45.07
0.3 - 0.5	10694	20.98	66.05
0.5 - 0.8	7977	15.65	81.70
0.8 - 1.2	3809	7.47	89.18
1.2 - 1.8	1926	3.78	92.96
1.8 - 2.8	1754	3.44	96.40
2.8 - 4.2	932	1.83	98.23
4.2 - 6.3	481	0.94	99.17
6.3 - 9.6	226	0.44	99.61
9.6 - 14.5	99	0.19	99.81
14.5 - 22	41	0.08	99.89
22 - 33	17	0.03	99.92
33 - 50	20	0.04	99.96
50 - 76	10	0.02	99.98
76 - 115	5	9.81e-03	99.99
115 - 175	1	1.96e-03	99.99
175 - 264	2	3.93e-03	100.00
264 - 400	2	3.92e-03	100

Statistics		
Minimum:	0.1	μm^2
Maximum:	360.9	μm^2
Mean:	0.740	μm^2
Std Dev.:	3.26	μm^2
Sum:	37729.2	μm^2
Count:	50966	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.1	μm^2
D50:	0.4	μm^2
D90:	1.3	μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	2616	5.13	5.13
0.5 - 0.6	7986	15.67	20.80
0.6 - 0.8	10177	19.97	40.77
0.8 - 1.0	10538	20.68	61.45
1.0 - 1.3	8982	17.62	79.07
1.3 - 1.7	4310	8.46	87.53
1.7 - 2.2	2693	5.28	92.81
2.2 - 2.8	1946	3.82	96.63
2.8 - 3.5	852	1.67	98.30
3.5 - 4.5	503	0.99	99.29
4.5 - 5.7	186	0.36	99.65
5.7 - 7.2	90	0.18	99.83
7.2 - 9.2	38	0.07	99.90
9.2 - 11.7	27	0.05	99.96
11.7 - 15	13	0.03	99.98
15 - 19	4	7.85e-03	99.99
19 - 24.2	1	1.96e-03	99.99
24.2 - 30.9	3	5.89e-03	100.00
30.9 - 39	1	1.96e-03	100
39 - 50	0	0	100

Statistics		
Minimum:	0.4	μm
Maximum:	33.9	μm
Mean:	1.11	μm
Std Dev.:	0.824	μm
Sum:	56523.1	μm
Count:	50966	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.5	μm
D50:	0.9	μm
D90:	1.9	μm

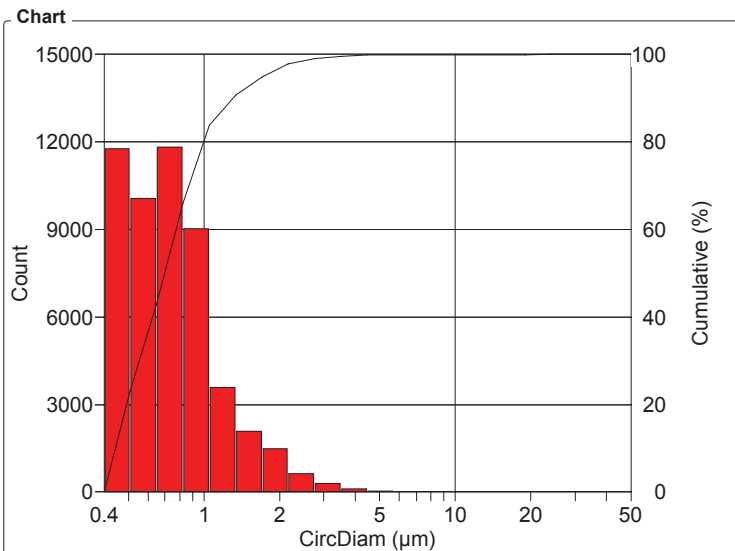
S13 SS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 9:28:18 AM**
 Sample: **S13 SS1**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

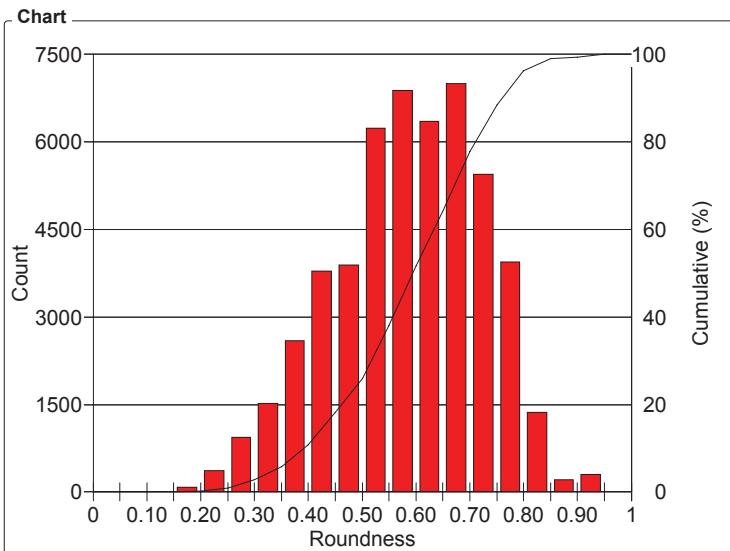
CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	11776	23.11	23.11
0.5 - 0.6	10072	19.76	42.87
0.6 - 0.8	11816	23.18	66.05
0.8 - 1.0	9030	17.72	83.77
1.0 - 1.3	3586	7.04	90.81
1.3 - 1.7	2082	4.09	94.89
1.7 - 2.2	1484	2.91	97.80
2.2 - 2.8	642	1.26	99.06
2.8 - 3.5	286	0.56	99.62
3.5 - 4.5	104	0.20	99.83
4.5 - 5.7	38	0.07	99.90
5.7 - 7.2	25	0.05	99.95
7.2 - 9.2	12	0.02	99.97
9.2 - 11.7	6	0.01	99.99
11.7 - 15	3	5.88e-03	99.99
15 - 19	2	3.93e-03	100.00
19 - 24.2	2	3.92e-03	100
24.2 - 30.9	0	0	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics

Minimum: 0.4 µm
 Maximum: 21.4 µm
 Mean: 0.814 µm
 Std Dev.: 0.530 µm
 Sum: 41472.1 µm
 Count: 50966
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.4 µm
 D50: 0.7 µm
 D90: 1.3 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	4	7.85e-03	7.85e-03
0.15 - 0.20	89	0.17	0.18
0.20 - 0.25	375	0.74	0.92
0.25 - 0.30	944	1.85	2.77
0.30 - 0.35	1517	2.98	5.75
0.35 - 0.40	2601	5.10	10.85
0.40 - 0.45	3791	7.44	18.29
0.45 - 0.50	3895	7.64	25.93
0.50 - 0.55	6232	12.23	38.16
0.55 - 0.60	6879	13.50	51.66
0.60 - 0.65	6353	12.47	64.12
0.65 - 0.70	7004	13.74	77.86
0.70 - 0.75	5452	10.70	88.56
0.75 - 0.80	3947	7.74	96.31
0.80 - 0.85	1362	2.67	98.98
0.85 - 0.90	215	0.42	99.40
0.90 - 0.95	306	0.60	100
0.95 - 1	0	0	100

Statistics

Minimum: 0.14
 Maximum: 0.93
 Mean: 0.586
 Std Dev.: 0.138
 Count: 50966
 Under: 0
 Over: 0
 Accepted: 100 %
 Field Count: 49
 Field Area: 25265.1 µm²
 Total Area: 1237991.1 µm²
 D10: 0.39
 D50: 0.60
 D90: 0.75

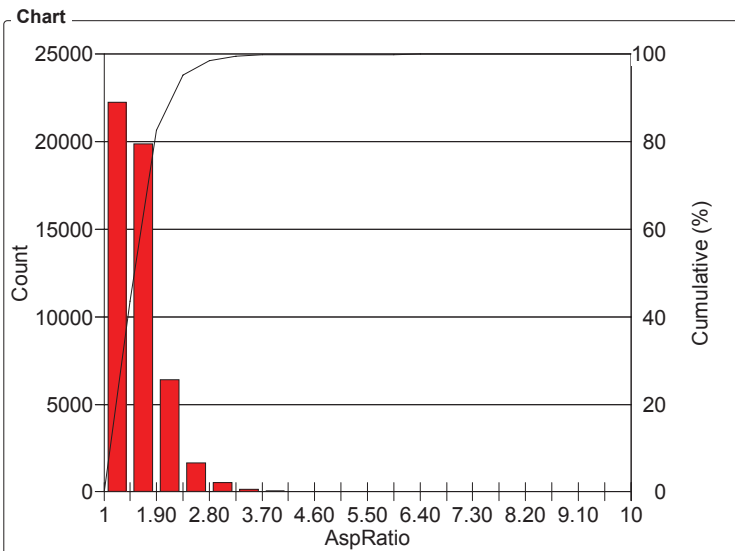
S13 SS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 9:28:18 AM**
 Sample: **S13 SS1**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

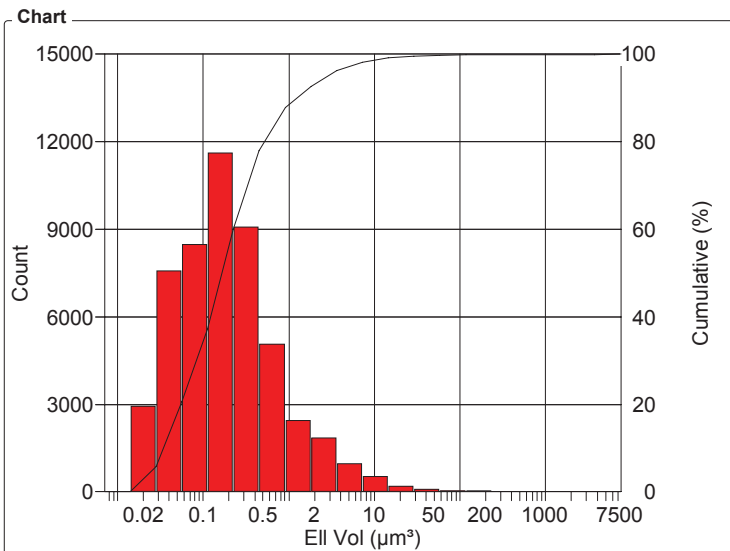


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	22265	43.69	43.69
1.45 - 1.90	19894	39.03	82.72
1.90 - 2.35	6416	12.59	95.31
2.35 - 2.80	1662	3.26	98.57
2.80 - 3.25	525	1.03	99.60
3.25 - 3.70	132	0.26	99.86
3.70 - 4.15	57	0.11	99.97
4.15 - 4.60	10	0.02	99.99
4.60 - 5.05	2	3.92e-03	99.99
5.05 - 5.50	0	0	99.99
5.50 - 5.95	0	0	99.99
5.95 - 6.40	3	5.89e-03	100
6.40 - 6.85	0	0	100
6.85 - 7.30	0	0	100
7.30 - 7.75	0	0	100
7.75 - 8.20	0	0	100
8.20 - 8.65	0	0	100
8.65 - 9.10	0	0	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics	
Minimum:	1.02
Maximum:	6
Mean:	1.59
Std Dev.:	0.384
Count:	50966
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	1.23
D50:	1.50
D90:	2.06

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Ell Vol Intervals (µm³)	Count	%	Cumul%
7.0e-03 - 14.0e-03	2	3.92e-03	3.92e-03
14.0e-03 - 28.0e-03	2945	5.78	5.78
28.0e-03 - 56.0e-03	7572	14.86	20.64
56.0e-03 - 0.1	8486	16.65	37.29
0.1 - 0.2	11613	22.79	60.08
0.2 - 0.4	9090	17.84	77.91
0.4 - 0.9	5074	9.96	87.87
0.9 - 1.8	2444	4.80	92.66
1.8 - 3.6	1859	3.65	96.31
3.6 - 7.2	966	1.90	98.20
7.2 - 15	525	1.03	99.23
15 - 29	190	0.37	99.61
29 - 58	97	0.19	99.80
58 - 116	39	0.08	99.87
116 - 233	30	0.06	99.93
233 - 467	19	0.04	99.97
467 - 934	8	0.02	99.99
934 - 1871	2	3.92e-03	99.99
1871 - 3746	2	3.92e-03	99.99
3746 - 7500	3	5.89e-03	100

Statistics	
Minimum:	7.3e-03 µm³
Maximum:	6598.5 µm³
Mean:	1.55 µm³
Std Dev.:	50.1 µm³
Sum:	79179.9 µm³
Count:	50966
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm²
Total Area:	1237991.1 µm²
D10:	38.1e-03 µm³
D50:	0.2 µm³
D90:	1.2 µm³

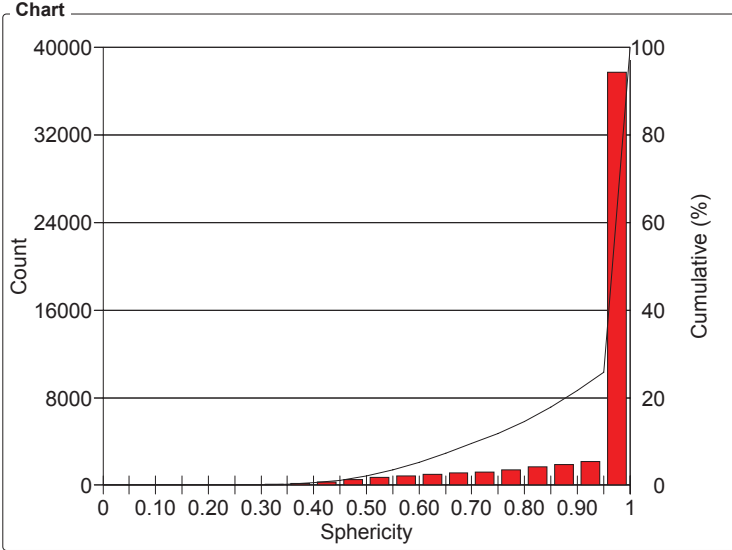
S13 SS1 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 9:28:18 AM**
 Sample: **S13 SS1**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	2	3.92e-03	3.92e-03
0.15 - 0.20	7	0.01	0.02
0.20 - 0.25	11	0.02	0.04
0.25 - 0.30	18	0.04	0.07
0.30 - 0.35	76	0.15	0.22
0.35 - 0.40	154	0.30	0.53
0.40 - 0.45	311	0.61	1.14
0.45 - 0.50	511	1.00	2.14
0.50 - 0.55	749	1.47	3.61
0.55 - 0.60	884	1.73	5.34
0.60 - 0.65	995	1.95	7.30
0.65 - 0.70	1124	2.21	9.50
0.70 - 0.75	1222	2.40	11.90
0.75 - 0.80	1410	2.77	14.66
0.80 - 0.85	1662	3.26	17.93
0.85 - 0.90	1900	3.73	21.65
0.90 - 0.95	2153	4.22	25.88
0.95 - 1	37777	74.12	100

Statistics

Minimum:	0.12
Maximum:	1
Mean:	0.932
Std Dev.:	0.137
Count:	50966
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.71
D50:	1.00
D90:	1.00

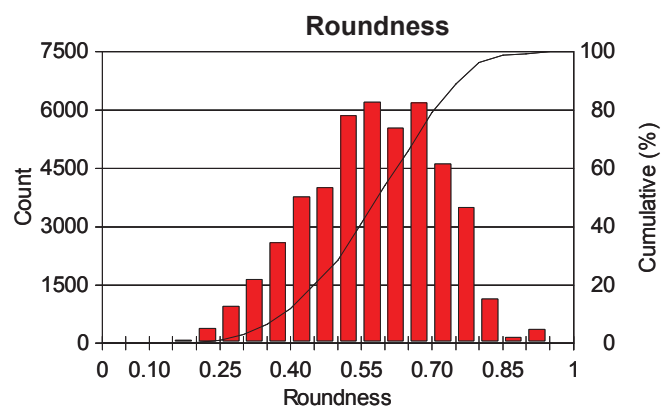
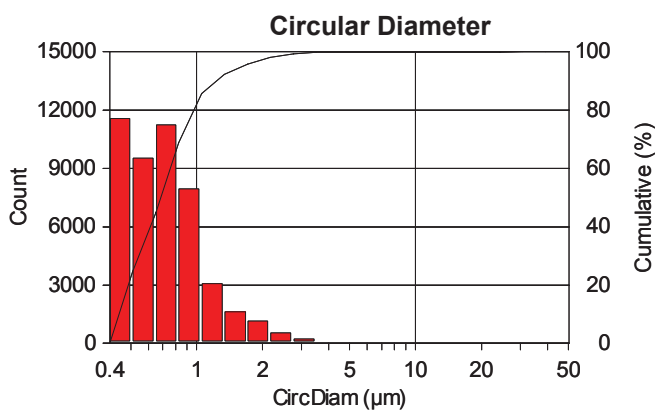
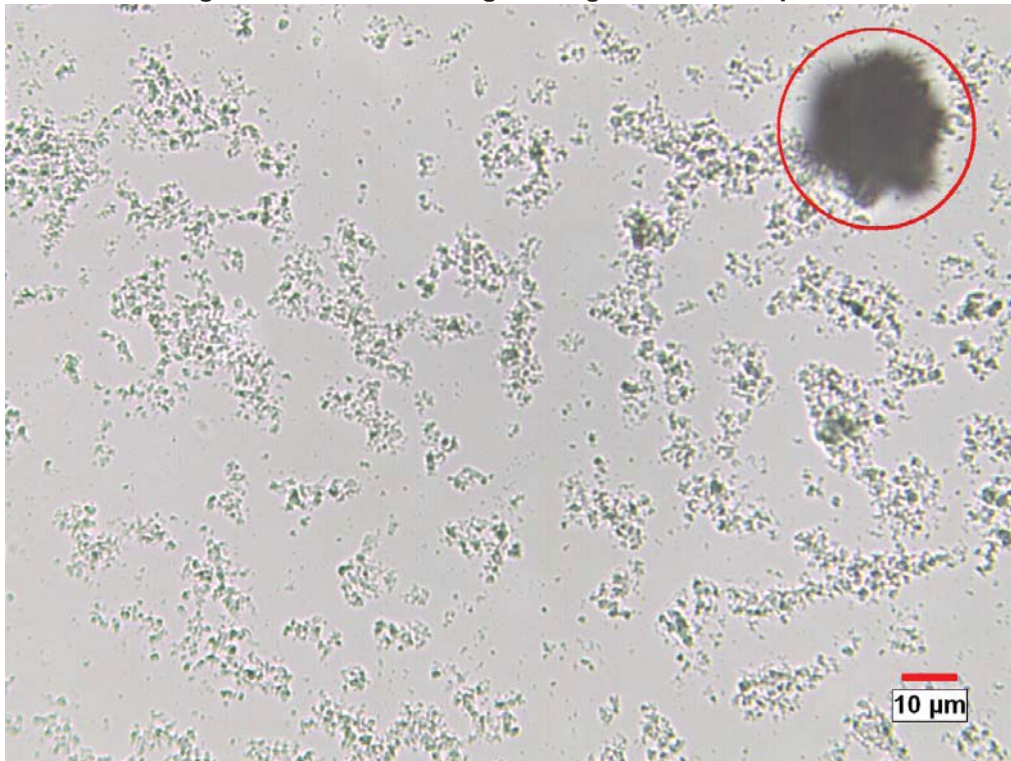
Sample # 14 - Automated Report

Particle Size Analysis

Date: 2007-Aug-20, 9:48:06 AM -04'00'
Company: Clemex Technologies Inc.
Department: Laboratory
User Name: Myriam Savard (signer ...)
Sample ID: S14 SS2

Magnification: 500X
Calibration: 0.1327 $\mu\text{m}/\text{pixel}$
Units: microns
Fields: 49
Count: 46999

Figure 1: Field containing the largest measured particle.



Min: 0.37
Max.: 25.97
Mean: 0.78
Std. Dev.: 0.44
D10: 0.40
D50: 0.67
D90: 1.19

Min: 0.07
Max.: 0.93
Mean: 0.58
Std. Dev.: 0.14
D10: 0.39
D50: 0.59
D90: 0.75

Figure 2: Image from the same sample but captured at 25 x (micros / pixel).



Figure 3: Image from the same sample but captured at 100 x (0.66 micron / pixel).



Sample # 14 - Printed Results

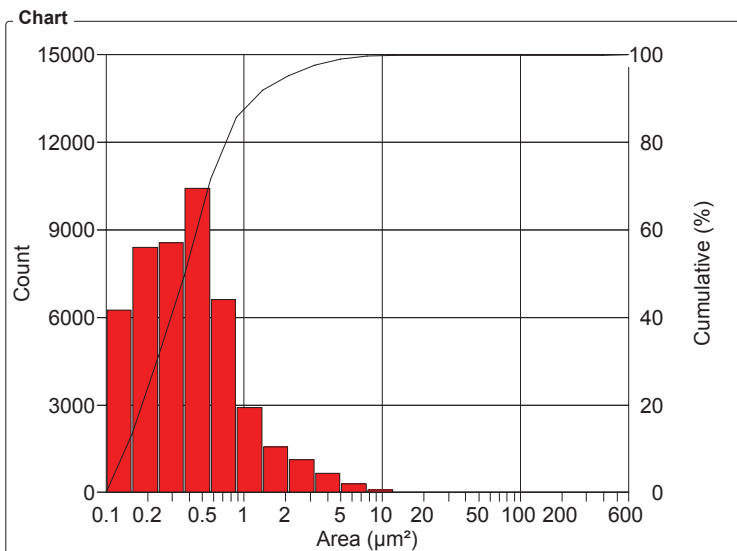
S14 SS2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 9:51:19 AM**
 Sample: **S14 SS2**

OBJM1 Count - Area

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

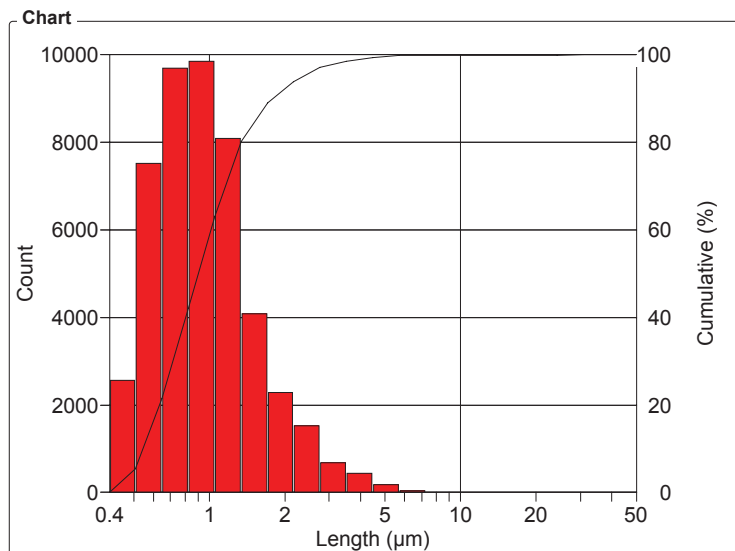
Area Intervals (μm^2)	Count	%	Cumul%
0.1 - 0.2	6266	13.33	13.33
0.2 - 0.2	8395	17.86	31.19
0.2 - 0.4	8567	18.23	49.42
0.4 - 0.6	10438	22.21	71.63
0.6 - 0.9	6626	14.10	85.73
0.9 - 1.4	2926	6.23	91.96
1.4 - 2.1	1557	3.31	95.27
2.1 - 3.2	1127	2.40	97.67
3.2 - 5	657	1.40	99.06
5 - 7.7	299	0.64	99.70
7.7 - 12	101	0.21	99.91
12 - 18	24	0.05	99.97
18 - 29	9	0.02	99.99
29 - 44	6	0.01	100.00
44 - 68	0	0	100.00
68 - 105	0	0	100.00
105 - 163	0	0	100.00
163 - 251	0	0	100.00
251 - 388	0	0	100.00
388 - 600	1	2.13e-03	100

Statistics

Minimum:	0.1	μm^2
Maximum:	529.6	μm^2
Mean:	0.629	μm^2
Std Dev.:	2.66	μm^2
Sum:	29554.8	μm^2
Count:	46999	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.1	μm^2
D50:	0.4	μm^2
D90:	1.1	μm^2

OBJM1 Count - Length

Magn.: 500X Calib.: 0.1327 $\mu\text{m}/\text{pixel}$ Bitplane: Particles



Values

Length Intervals (μm)	Count	%	Cumul%
0.4 - 0.5	2573	5.47	5.47
0.5 - 0.6	7528	16.02	21.49
0.6 - 0.8	9690	20.62	42.11
0.8 - 1.0	9847	20.95	63.06
1.0 - 1.3	8099	17.23	80.29
1.3 - 1.7	4088	8.70	88.99
1.7 - 2.2	2284	4.86	93.85
2.2 - 2.8	1533	3.26	97.11
2.8 - 3.5	674	1.43	98.55
3.5 - 4.5	437	0.93	99.48
4.5 - 5.7	174	0.37	99.85
5.7 - 7.2	44	0.09	99.94
7.2 - 9.2	15	0.03	99.97
9.2 - 11.7	7	0.01	99.99
11.7 - 15	3	6.38e-03	99.99
15 - 19	2	4.26e-03	100.00
19 - 24.2	0	0	100.00
24.2 - 30.9	1	2.13e-03	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics

Minimum:	0.4	μm
Maximum:	28.8	μm
Mean:	1.07	μm
Std Dev.:	0.696	μm
Sum:	50301.5	μm
Count:	46999	
Under:	0	
Over:	0	
Accepted:	100	%
Field Count:	49	
Field Area:	25265.1	μm^2
Total Area:	1237991.1	μm^2
D10:	0.5	μm
D50:	0.9	μm
D90:	1.8	μm

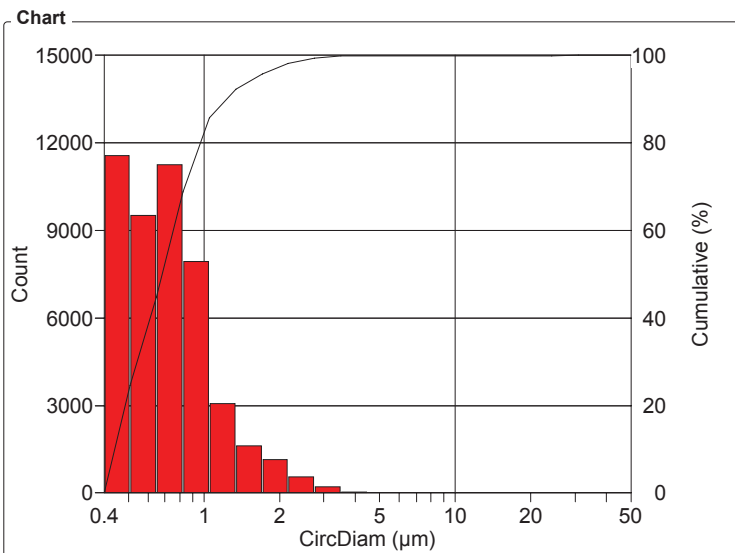
S14 SS2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 9:51:19 AM**
 Sample: **S14 SS2**

OBJM1 Count - CircDiam

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

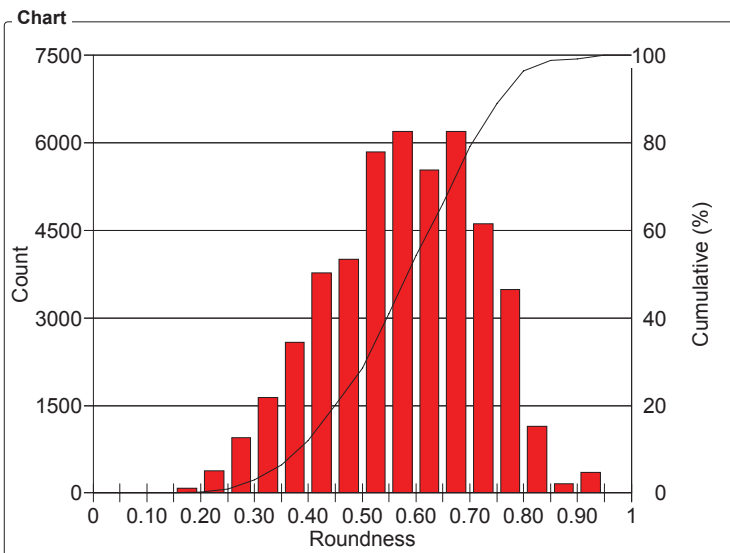


CircDiam Intervals (µm)	Count	%	Cumul%
0.4 - 0.5	11563	24.60	24.60
0.5 - 0.6	9527	20.27	44.87
0.6 - 0.8	11253	23.94	68.82
0.8 - 1.0	7949	16.91	85.73
1.0 - 1.3	3081	6.56	92.28
1.3 - 1.7	1632	3.47	95.76
1.7 - 2.2	1164	2.48	98.23
2.2 - 2.8	548	1.17	99.40
2.8 - 3.5	209	0.44	99.84
3.5 - 4.5	50	0.11	99.95
4.5 - 5.7	14	0.03	99.98
5.7 - 7.2	7	0.01	100.00
7.2 - 9.2	1	2.13e-03	100.00
9.2 - 11.7	0	0	100.00
11.7 - 15	0	0	100.00
15 - 19	0	0	100.00
19 - 24.2	0	0	100.00
24.2 - 30.9	1	2.13e-03	100
30.9 - 39	0	0	100
39 - 50	0	0	100

Statistics	
Minimum:	0.4 µm
Maximum:	26.0 µm
Mean:	0.779 µm
Std Dev.:	0.440 µm
Sum:	36616.3 µm
Count:	46999
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.4 µm
D50:	0.7 µm
D90:	1.2 µm

OBJM1 Count - Roundness

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Roundness Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	2	4.26e-03	4.26e-03
0.10 - 0.15	12	0.03	0.03
0.15 - 0.20	87	0.19	0.21
0.20 - 0.25	383	0.81	1.03
0.25 - 0.30	950	2.02	3.05
0.30 - 0.35	1637	3.48	6.53
0.35 - 0.40	2586	5.50	12.04
0.40 - 0.45	3772	8.03	20.06
0.45 - 0.50	4012	8.54	28.60
0.50 - 0.55	5853	12.45	41.05
0.55 - 0.60	6203	13.20	54.25
0.60 - 0.65	5534	11.77	66.02
0.65 - 0.70	6192	13.17	79.20
0.70 - 0.75	4623	9.84	89.04
0.75 - 0.80	3491	7.43	96.46
0.80 - 0.85	1144	2.43	98.90
0.85 - 0.90	160	0.34	99.24
0.90 - 0.95	358	0.76	100
0.95 - 1	0	0	100

Statistics	
Minimum:	0.07
Maximum:	0.93
Mean:	0.578
Std Dev.:	0.141
Count:	46999
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.39
D50:	0.59
D90:	0.75

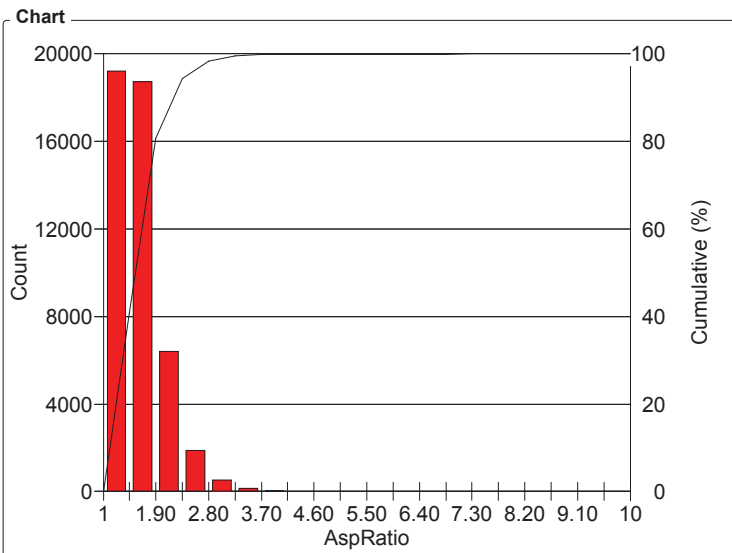
S14 SS2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 9:51:19 AM**
 Sample: **S14 SS2**

OBJM1 Count - AspRatio

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles

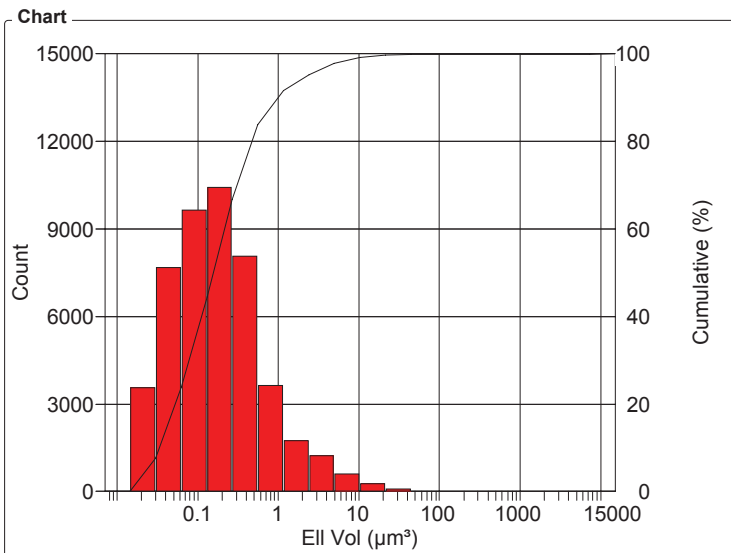


AspRatio Intervals	Count	%	Cumul%
1 - 1.45	19230	40.92	40.92
1.45 - 1.90	18746	39.89	80.80
1.90 - 2.35	6395	13.61	94.41
2.35 - 2.80	1883	4.01	98.41
2.80 - 3.25	535	1.14	99.55
3.25 - 3.70	143	0.30	99.86
3.70 - 4.15	37	0.08	99.94
4.15 - 4.60	11	0.02	99.96
4.60 - 5.05	9	0.02	99.98
5.05 - 5.50	3	6.38e-03	99.99
5.50 - 5.95	0	0	99.99
5.95 - 6.40	4	8.51e-03	99.99
6.40 - 6.85	0	0	99.99
6.85 - 7.30	3	6.38e-03	100
7.30 - 7.75	0	0	100
7.75 - 8.20	0	0	100
8.20 - 8.65	0	0	100
8.65 - 9.10	0	0	100
9.10 - 9.55	0	0	100
9.55 - 10	0	0	100

Statistics	
Minimum:	1.02
Maximum:	7
Mean:	1.62
Std Dev.:	0.400
Count:	46999
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	1.24
D50:	1.50
D90:	2.11

OBJM1 Count - Ell Vol

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Ell Vol Intervals (µm ³)	Count	%	Cumul%
7.0e-03 - 15.0e-03	11	0.02	0.02
15.0e-03 - 30.0e-03	3561	7.58	7.60
30.0e-03 - 62.0e-03	7686	16.35	23.95
62.0e-03 - 0.1	9643	20.52	44.47
0.1 - 0.3	10437	22.21	66.68
0.3 - 0.6	8066	17.16	83.84
0.6 - 1.2	3631	7.73	91.57
1.2 - 2.4	1736	3.69	95.26
2.4 - 4.9	1225	2.61	97.87
4.9 - 10	602	1.28	99.15
10 - 21	283	0.60	99.75
21 - 44	80	0.17	99.92
44 - 91	23	0.05	99.97
91 - 189	10	0.02	99.99
189 - 392	3	6.38e-03	100.00
392 - 813	1	2.13e-03	100.00
813 - 1684	0	0	100.00
1684 - 3491	0	0	100.00
3491 - 7237	0	0	100.00
7237 - 15000	1	2.13e-03	100

Statistics	
Minimum:	7.3e-03 µm ³
Maximum:	10143.3 µm ³
Mean:	0.872 µm ³
Std Dev.:	47.0 µm ³
Sum:	40964.3 µm ³
Count:	46999
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	36.7e-03 µm ³
D50:	0.2 µm ³
D90:	1.0 µm ³

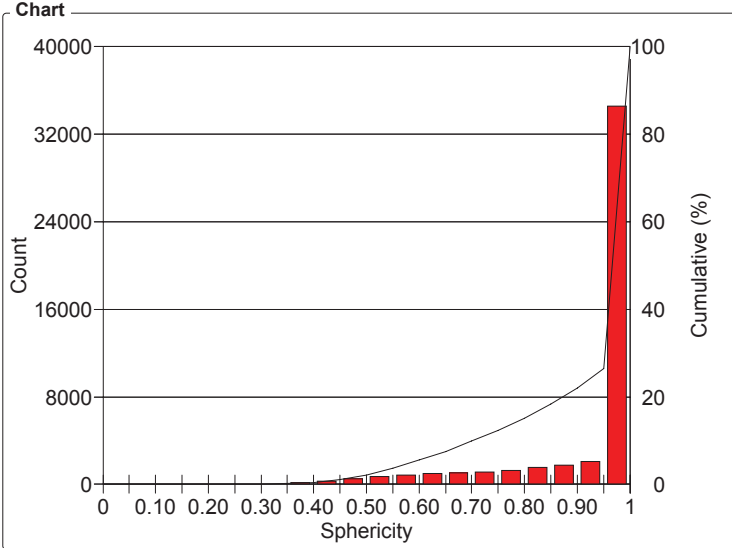
S14 SS2 Results

Organization: **Clemex Technologies Inc.**
 Department: **Laboratory**
 User: **Myriam Savard**

Date & Time: **20/08/2007 9:51:19 AM**
 Sample: **S14 SS2**

OBJM1 Count - Sphericity

Magn.: 500X Calib.: 0.1327 µm/pixel Bitplane: Particles



Values

Sphericity Intervals	Count	%	Cumul%
0 - 0.05	0	0	0
0.05 - 0.10	0	0	0
0.10 - 0.15	1	2.13e-03	2.13e-03
0.15 - 0.20	6	0.01	0.01
0.20 - 0.25	6	0.01	0.03
0.25 - 0.30	23	0.05	0.08
0.30 - 0.35	51	0.11	0.19
0.35 - 0.40	141	0.30	0.49
0.40 - 0.45	298	0.63	1.12
0.45 - 0.50	515	1.10	2.21
0.50 - 0.55	713	1.52	3.73
0.55 - 0.60	847	1.80	5.53
0.60 - 0.65	968	2.06	7.59
0.65 - 0.70	1072	2.28	9.87
0.70 - 0.75	1161	2.47	12.34
0.75 - 0.80	1284	2.73	15.08
0.80 - 0.85	1532	3.26	18.34
0.85 - 0.90	1743	3.71	22.05
0.90 - 0.95	2094	4.46	26.50
0.95 - 1	34544	73.50	100

Statistics

Minimum:	0.14
Maximum:	1
Mean:	0.930
Std Dev.:	0.139
Count:	46999
Under:	0
Over:	0
Accepted:	100 %
Field Count:	49
Field Area:	25265.1 µm ²
Total Area:	1237991.1 µm ²
D10:	0.70
D50:	1.00
D90:	1.00

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