

Multisizer 4e – Beckman Coulter

INTRODUCTION

The Lumetics LINK™ software platform scans network locations for new measurement data files, copies data directly to a centralized database, and provides a powerful user interface for rapid multi-measurement multi-technique data aggregation, visualization, analysis, and reporting. LINK employs a client/server-based architecture where the LINK server hardware is provided by the end user and resides on the end user’s network. The LINK client is a portable web-based application that may be placed on any computer with network connectivity to the LINK server. For successful import, the LINK webserver requires read access to the folders where user data resides.

The MultiSizer is a highly versatile particle counting and characterization system. It uses the Coulter principle to detect particles via electrical zone sensing, regardless of the particle’s nature or optical properties.

DETAILS

LINK requires the *.#M3 or *.#M4 data files to import MultiSizer data. The data files are generated automatically by the MultiSizer software.

Particle count/concentration for each supported morphological parameter occurs at a pre-defined bin spacing upon import. This will result in significant data compression and reduction in memory usage. The measurement size ranges and associated bin widths for various apertures are as represented in a table in the Users manual. Particle Volume % for the number of particles in each size bin is calculated automatically and imported to LINK. (Particle Volume % = volume of particles in a given size range bin divided by the volume of particles in all bins, assuming particles are spherical in volume).

The MultiSizer #M4 data file example is as follows:

```

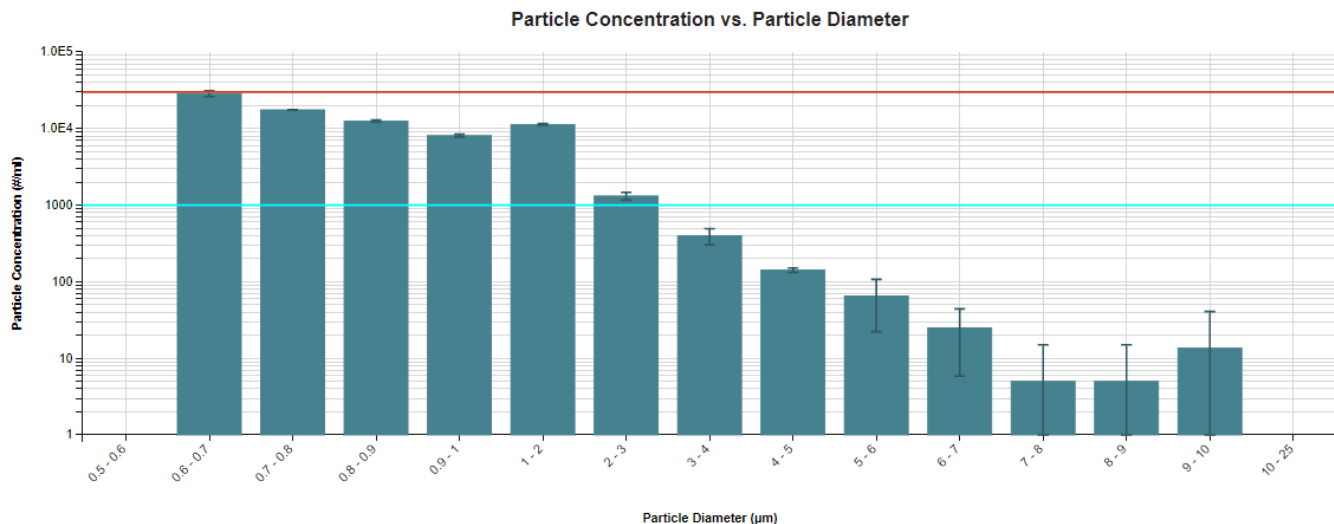
1  [common]
2  Program=Beckman Coulter Multisizer
3  CName=ANSI code page 1252 Latin 1 (US, Western Europe)
4  SavePC=Version 4.01 6 May 2008
5  VersionMajorPC= 4
6  VersionMinorPC= 1
7  VersionExpePC= 74
8  ftype= 300 Multisizer data
9  Format= 300
10 MType= 4
11 multitype= 110
12 Filename=File ID_Sample ID_Operator_Bar code_ 3 Apr 2014_10-14_1_01.#m4
13 Pathname=D:\Coulter counter\Development\Lumetica\To Lumetica\sample name\File ID_Sample ID_Operator_Bar code_ 3 Apr 2014_10-14_1_01.#m4
14 Import=
15 Export=D:\Coulter counter\Development\Lumetica\To Lumetica\sample name\File ID_Sample ID_Operator_Bar code_ 3 Apr 2014_10-14_1_01.#m4.XLS
16 Saved= 1396512863 10:14:23 3 Apr 2014
17 ReSaved= 0
18 SavedTI= -120,W. Europe Daylight Time
19 ReSavedTI= -60,W. Europe Standard Time
20 Comment=Comment
21 Operator=Operator
22 BarCode=Bar code
23 RunNum= 1
24 [#Saves]
25 1396512863 10:14 3 Apr 2014
26 0
27 [#SaveFlags]
28 262144
29 0
30 [Save0]
31 Pathname=D:\Coulter counter\Development\Lumetica\To Lumetica\sample name\File ID_Sample ID_Operator_Bar code_ 3 Apr 2014_10-14_1_01.#m4
32 Time= 1396512863 10:14:23 3 Apr 2014
33 TI= -120,W. Europe Daylight Time
34 Flags= 262144
35 LoginName=
36 RealName=
37 ID=
38 a= 2
39 b= 0
40 c= 16
41 User=riosa3
42 Computer=RBANWFRLAB0781
43 WinVer=6.1
44 DosVer=9.177
45 Comment=
46 CName=ANSI code page 1252 Latin 1 (US, Western Europe)
47 [ISave0]
48 Comment=Comment
49 Operator=Operator
50 GroupID=File ID
51 SampleID=Sample ID
52 BarCode=Bar code
53 IsControl= 0
54 Density= 0
55 RunNumber= 1
56 Shape= 0
57 Electro=0.94 Sodium Chloride in Water
58 Disperse=None
59 Var1= 0
60 Var2= 0
61 Mass= 0
62 DilF= 1
63 UseDilF= 1
64 PreDilF= 0
65 UsePreDilF= 0
66 SampleVol= 3
67 ElectroVol= 3
68 Valid= 0
69 [CPsave0]
70 PBins= 100
71 PGC= 1
    
```



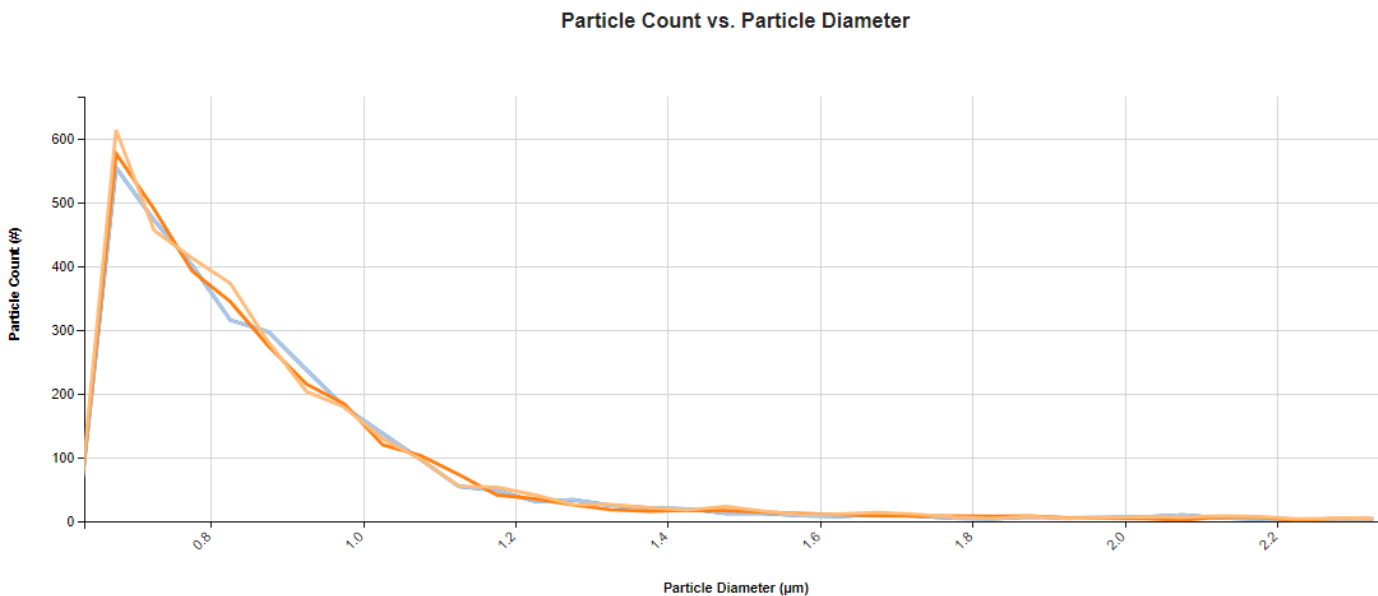
EXAMPLES

Included below are sample dashboards from MultiSizer measurement files:

1. Histogram plotting binned raw data for Particle Concentration vs. Particle Diameter



2. Line Chart plotting raw data curves for Particle Count vs. Particle diameter and split by sample name



3. Tabular Summary examples

Measurement Summary Table – Measurement Results

LINK Record ID #	Sample Name	Total Particle Count (#) - AVG	Total Particle Concentration (#/ml) - AVG	Particle Count (#) (Particle Diam. (µm) >=1) - AVG	Particle Conc. (#/ml) (Particle Diam. (µm) >=1) - AVG	Volume Analyzed (ml)	RawCount - AVG	ConcMin - AVG	ConcMax - AVG	Count (Particle Diam. (µm) >=1) - AVG
25	Lumetics 2	3895.00	77900.00	657.06	13141.14	0.05	-1	0	10	84.82
26	Lumetics 3	3895.00	77900.00	657.06	13141.14	0.05	-1	0	10	84.82
27	Lumetics 4	4044.00	80880.00	645.37	12907.49	0.05	-1	0	10	84.06
28	Lumetics 5	4199.00	83980.00	702.15	14043.01	0.05	-1	0	10	84.62



Measurement Summary Table – Instrument Settings

LINK Record ID #	Sample Name	Analysis Date	SumNoise - AVG	Test Volume (ml) - AVG	XScale	CountsMin - AVG	CountsMax - AVG	CountsDelta - AVG	Control - AVG	Cal - AVG	Blank - AVG	BarCode	AutoFlush - AVG	Version - AVG
25	Lumetics 2	2014-04-03 1...	274	3	70.0.0.0	405	1595	40	3	0	0	Bar code	0	4.01
26	Lumetics 3	2014-04-03 1...	274	3	70.0.0.0	405	1595	40	3	0	0	Bar code	0	4.01
27	Lumetics 4	2014-04-03 1...	304	3	70.0.0.0	405	1595	40	3	0	0	Bar code	0	4.01
28	Lumetics 5	2014-04-03 1...	372	3	70.0.0.0	405	1595	40	3	0	0	Bar code	0	4.01

MULTISIZER DASHBOARDS

LINK contains an extensive built-in dashboard library from LINK version 2.4.0.210401 and later. This function contains specific pre-created dashboards for all instruments and application groups.

CONTACT LUMETICS

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