

## MasterSizer – Malvern Panalytical

2000 & 3000 & 3000E

### 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 Mastersizer laser diffraction particle size analyzer delivers accurate particle size distributions for both wet and dry dispersions.

### DETAILS

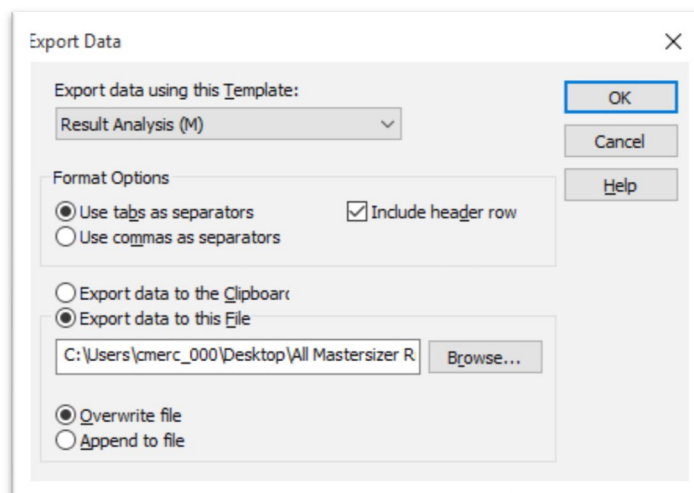
LINK requires the TXT data field for importing MasterSizer results.

The following raw curve data may be imported, in addition to all available instrument/analysis settings and parameters calculated by the instrument software:

- Volume (%) vs. Particle Size
- Number (%) vs. Particle Size
- Mass (%) vs. Particle Size

LINK requires the data files to be exported from the MasterSizer software, as shown in the **Export Data** dialog box figure below. An export template is not provided by Lumetics, therefore one may need to be created. The following conditions need to be followed:

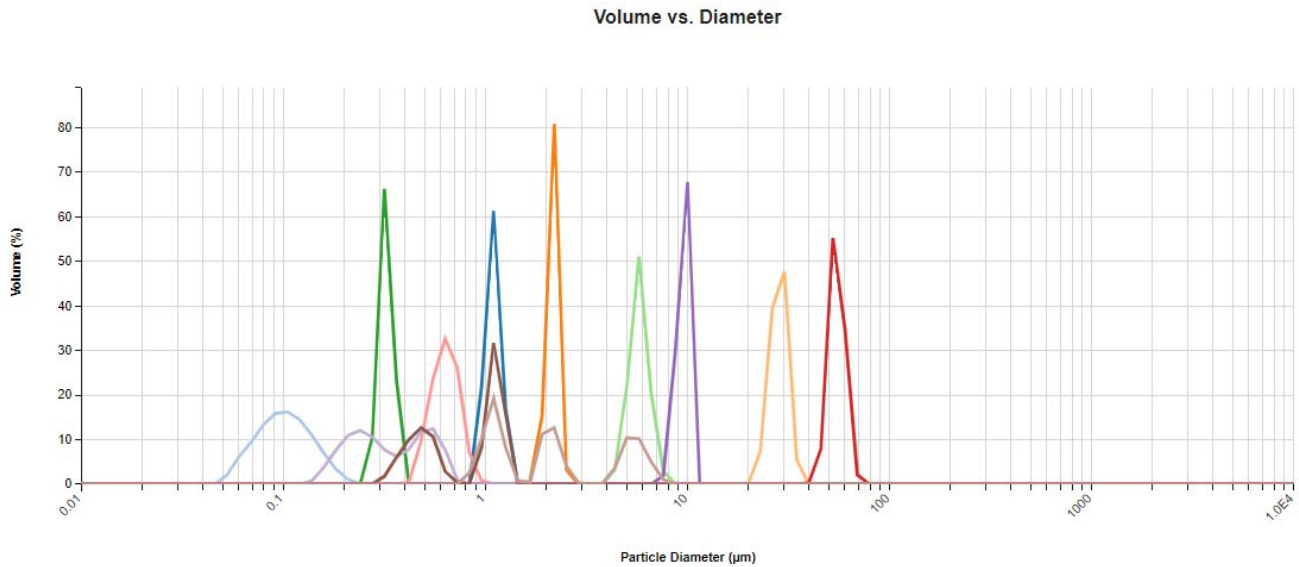
- The exported measurements should be in a tab-delimited format and include a header row
- LINK cannot support appended measurements, do not select this option
- Measurement Date, Sample Name, and Results Units must be present in the TXT file, as LINK will search the Results Units column to determine what type of data it is
- The last columns in the export file must include either Volume (%) vs. Particle Diameter, or Number (%) vs. Particle Diameter, or Mass (%) vs. Particle Diameter



**EXAMPLES**

Included below is a sample dashboard from MasterSizer measurement files:

**1. Line Chart plotting raw data curves for Volume (%) vs. Particle Diameter**



**2. Tabular Summary examples**

Measurement Summary Table – Measurement Results

LINK Record ID #	Particle refractive index - AVG	Concentration	d (0.1) - AVG	d (0.5) - AVG	d (0.9) - AVG	D [4, 3] - Volume weighted mean - AVG	D [3, 2] - Surface weighted mean - AVG	Specific surface area - AVG	Dispersant refractive index - AVG
1	1.59	8.8e-3	0.06	0.09	0.14	0.10	0.09	64.00	1.33
2	1.59	2.8e-3	0.28	0.30	0.33	0.30	0.30	19.10	1.33
3	1.59	8.0e-4	0.48	0.59	0.71	0.60	0.58	9.83	1.33
4	1.59	6.0e-4	0.93	1.01	1.12	1.02	1.01	5.63	1.33
5	1.59	1.1e-3	1.85	2.02	2.14	2.01	2.00	2.86	1.33
6	1.59	3.9e-3	4.72	5.34	6.10	5.39	5.33	1.07	1.33
7	1.59	5.9e-3	7.96	9.02	9.66	8.92	8.88	0.64	1.33
8	1.59	3.4e-3	23.31	26.45	28.82	26.40	26.22	0.23	1.33
9	1.59	3.4e-3	46.14	50.98	56.99	51.28	50.87	0.12	1.33
10	1.59	1.8e-3	0.18	0.30	0.54	0.34	0.28	20.40	1.33
11	1.59	1.0e-3	0.38	0.94	1.12	0.78	0.63	9.02	1.33
12	1.59	1.5e-3	0.93	1.86	5.44	2.55	1.62	3.52	1.33
13	1.59	6.6e-3	0.11	1.09	5.25	1.93	0.35	17.40	1.33
14	1.59	8.7e-3	0.13	2.11	44.26	11.60	0.46	13.00	1.33

Measurement Summary Table – Instrument Settings

LINK Record ID #	Uniformity - AVG	Size Bins	Last result channel size - AVG	Dispersant name	Analysis model	Specific surface area - AVG	Particle absorption index - AVG
1	0.27	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	64.00	0
2	0.07	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	19.10	0
3	0.13	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	9.83	0
4	0.07	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	5.63	0
5	0.03	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	2.86	0
6	0.09	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	1.07	0
7	0.05	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	0.64	0
8	0.05	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	0.23	0
9	0.08	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	0.12	0
10	0.41	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	20.40	0
11	0.30	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	9.02	0
12	0.76	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	3.52	0
13	1.39	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	17.40	0
14	5.13	0.01,0.011482,0.0...	2000	Water	Multiple narrow m...	13.00	0

### DASHBOARD DOWNLOAD

Included below is a link to downloadable dashboards for MasterSizer measurement files:

<http://lumetics.com/dashboards/MasterSizer/MasterSizer.zip>

### CONTACT LUMETICS

For direct assistance, please contact Lumetics LINK™ Support:

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**Phone:** 1.613.614.874

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