Litesizer 500 – Anton Paar

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 Litesizer™ 500 is an instrument for characterizing nano- and microparticles in dispersions and solutions. It determines particle size, zeta potential, and molecular mass by measuring dynamic light scattering (DLS), electrophoretic light scattering (ELS), and static light scattering (SLS).

DETAILS

LINK requires the XLS data files. Files must be exported from the Litesizer software.

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

- Intensity vs. Particle Size
- Autocorrelation vs. Delay Time

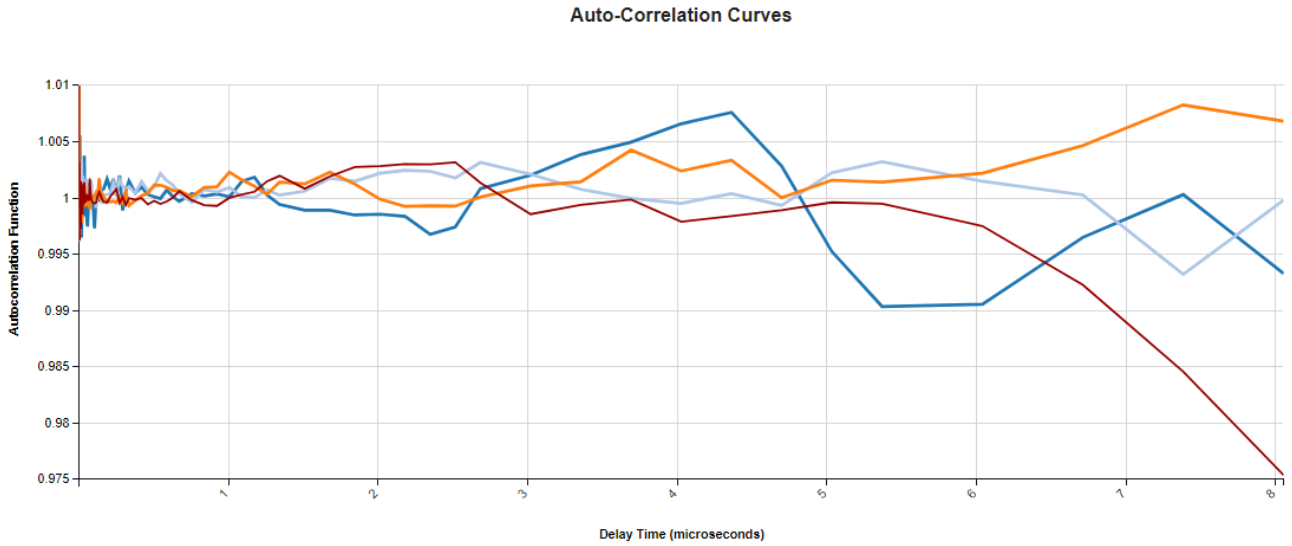
The Litesizer XLS data file example is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Workbook name	Test 1																	
2	Measurement name	Test 1																	
3	Measurement mode	Particle size																	
4																			
5	**Comment**								**Size distribution function**						**Correlation function**			**Intensity trace**	
6						Particle diameter	Relative frequency	Relative frequency	Relative frequency	Undersize	Undersize	Undersize				Cumulant fit			
7	**Results**	Hydrodynamic diameter	219.9745337	nm			Intensity weighted	Volume weighted	Number weighted	Intensity weighted	Volume weighted	Number weighted		Delay time	g2	Advanced		Time	Intensity
8		Polydispersity index	8.491892913	%		[nm]	[%]	[%]	[%]	[%]	[%]	[%]		[s]				[s]	[kcps]
9		Peak intensity 1	203.543824	nm		0.20947418	0	0	0	0	0	0		0.0000002	1.896696101	1.88368827		0.1	314.59
10		Peak intensity 2		nm		0.227146672	0	0	0	0	0	0		2.2E-07	1.890505815	1.88359984		0.2	325.13

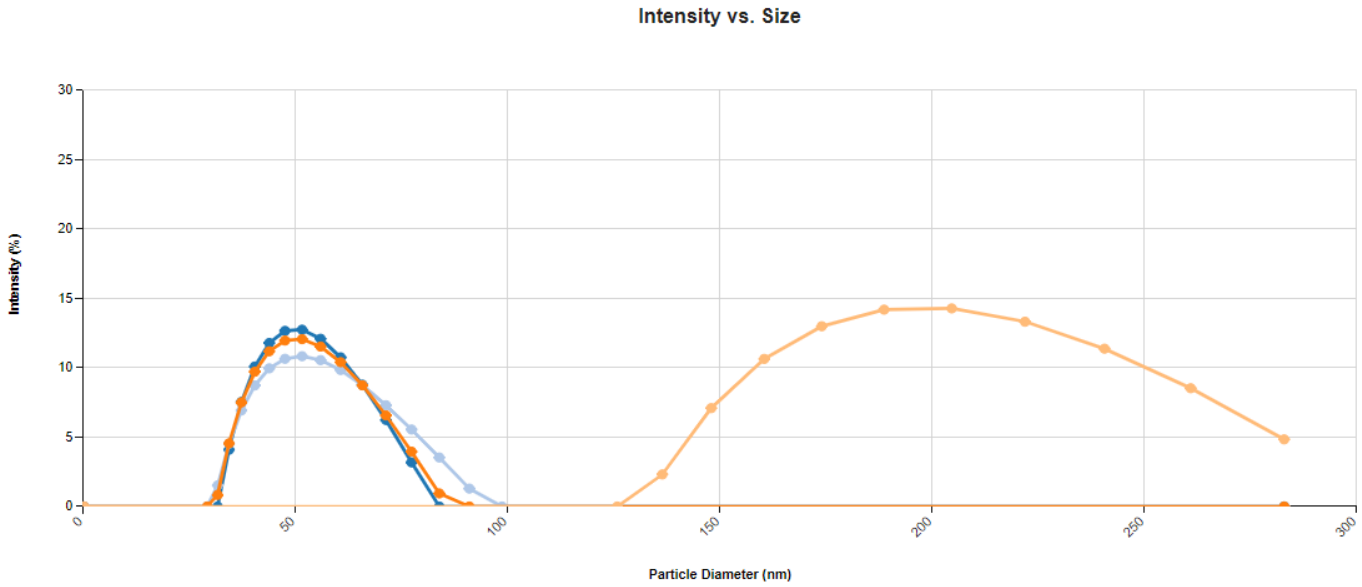
EXAMPLES

Included below are sample dashboards from Litesizer measurement files:

1. Line Chart plotting raw data curves for Autocorrelation Function vs. Delay Time



2. Line Chart plotting raw data curves for Intensity vs. Particle Size



3. Tabular Summary examples

Measurement Summary Table – Measurement Results

LINK Record ID #	InstrumentName	Solvent - Refractive index - AVG	Transmittance (%) - AVG	D10 volume (nm) - AVG	D10 number (nm) - AVG	D10 intensity (nm) - AVG	Volume (%) (Particle Diam. (µm) <=1) - AVG	Intensity (%) (Particle Diam. (µm) <=1) - AVG	Autocorrelation Function (Delay Time (microseconds) >=1) - AVG
5	Litesizer	1.33	44.43	140.33	117.00	148.74	100.00	100.00	24.99
6	Litesizer	1.33	86.34	32.98			100.00	100.00	25.02
7	Litesizer	1.33	86.58	32.89			100.00	100.00	25.05
8	Litesizer	1.33	86.56	33.48			100.00	100.00	24.97

Measurement Summary Table – Instrument Settings

LINK Record ID #	InstrumentName	Analysis Date	Measurement start - Time	Measurement start - Software version	Module - Serial number - AVG	Quality - Max. number of runs - AVG	Instrument - Serial number - AVG	General - Target temperature (°C) - AVG	General - Measurement cell	Focus position (mm) - AVG	Focus - Mode	Filter - Mode
5	Litesizer	2016-10-04 10:...	2016-10-04 10:...	2004-01-04 00:...	81946273	60	81962723	20	Disposable	0	Automatic	Automatic
6	Litesizer	2018-06-28 09:...	2018-06-28 09:...	1.8.4	82381417	60	82384548	25	Disposable	0	Automatic	Automatic
7	Litesizer	2018-06-28 09:...	2018-06-28 09:...	1.8.4	82381417	60	82384548	25	Disposable	0	Automatic	Automatic
8	Litesizer	2018-06-28 10:...	2018-06-28 10:...	1.8.4	82381417	60	82384548	25	Disposable	0	Automatic	Automatic

LITESIZER 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

For direct assistance, please contact Lumetics LINK™ Support:

E-mail: support@lumetics.com
Phone: 1.613.417.1839
Website: http://lumetics.com/