

Hound – Unchained Labs

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.

Particles screw up the quality of your drug and can even shut down production. Hound is the only tool out there that combines microscopy, Raman and Laser-Induced Breakdown Spectroscopy (LIBS) to forensically identify particles by their chemical and elemental fingerprints

DETAILS

LINK requires LPE extension file produced by the Hound system and either one or both of "All Analyzed Particle File.txt" or "Global Particle File Final.txt. Particle size distribution data will be imported (if present), as well as the Raman/LIBS particle ID data along with associated spectra (if present). Within the LINK analysis template, the two assays will have different values for Instrument. The particle size/morphology distribution data will be noted as “Hound”, while the particle ID assay data will be noted as “Hound (Raman/LIBS) “.

Note:

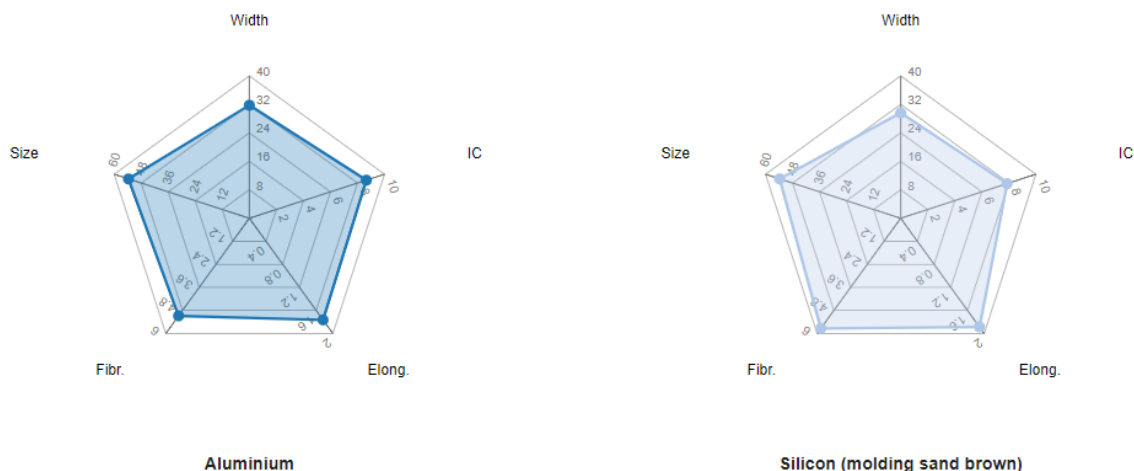
- Sample Name is automatically populated with values of Time Stamp + X + Y +Level 0 Substance + Level 0 Rank + Size
- Particle image and spectra image are imported for each particle ID, along with the full Raman or LIBS spectra curve data.
- Particle count /concentration for each supported morphological parameter occurs at a pre-defined bin spacing and measurement range as per the table in the Users Manual.

EXAMPLES

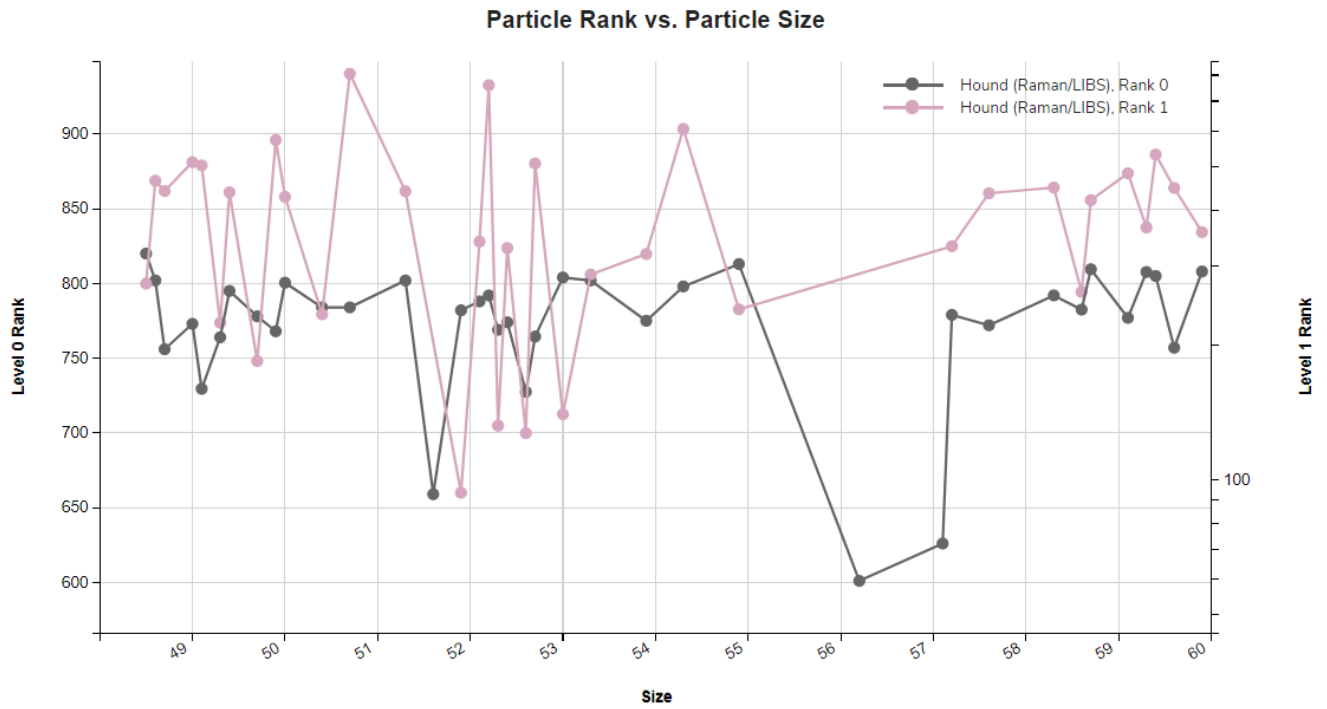
Included below are example dashboards from Hound measurement files:

1. Radar Chart plotting multiple morphological parameters

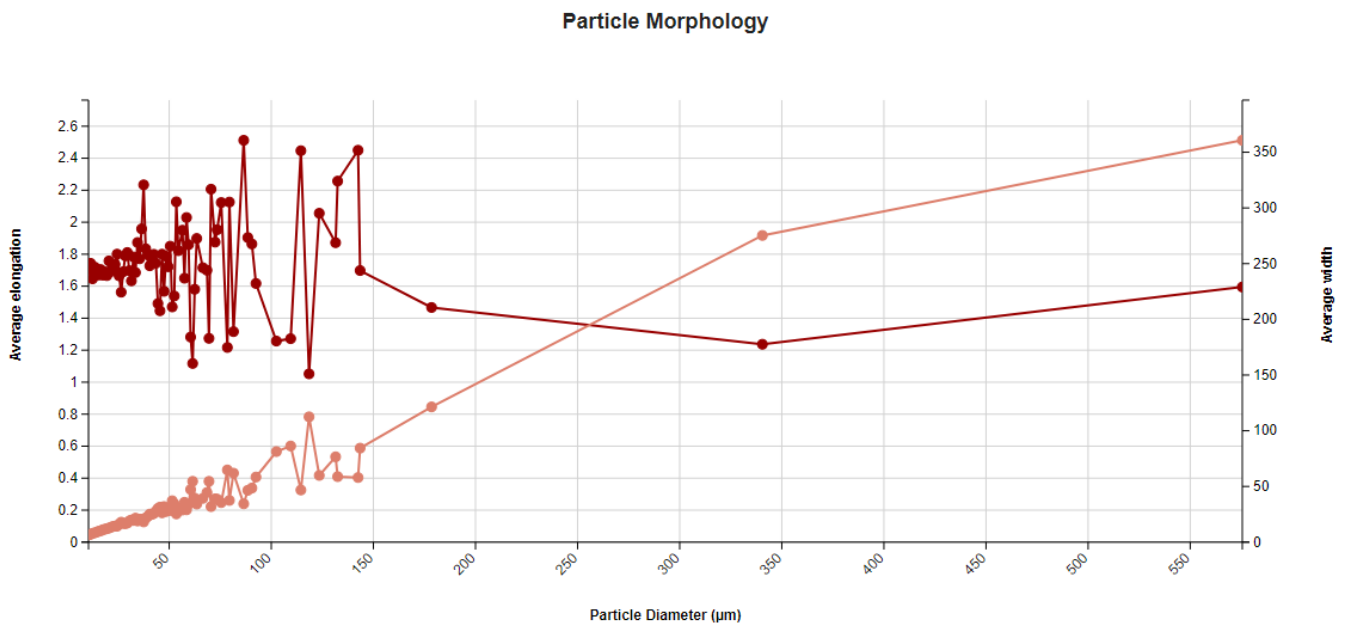
Multiple Particle Morphological Parameters



2. XY Line/Scatter chart plotting Rank vs. Size particle data



3. Line Chart plotting raw data based on particle morphology for Elongation & Width vs. Diameter



5. Tabular Summary examples

Measurement Summary Table – Instrument Settings

LINK Record ID #	Analysis Date	S/N - AVG	Measurement Type	Measured Volume	Lens	Imaging Parameters	Exp.(s) - AVG	Device Serial
1	2019-03-29 15:5...	57.00	metal.ID (LIBS)	100.0 ml	10.0x	Exposure	1	Hound-0008
2	2019-03-29 15:5...	124.40	metal.ID (LIBS)	100.0 ml	10.0x	Exposure	1	Hound-0008
3	2019-03-29 15:5...	181.20	metal.ID (LIBS)	100.0 ml	10.0x	Exposure	1	Hound-0008
4	2019-03-29 15:5...	56.10	metal.ID (LIBS)	100.0 ml	10.0x	Exposure	1	Hound-0008
5	2019-03-29 15:5...	148.10	metal.ID (LIBS)	100.0 ml	10.0x	Exposure	1	Hound-0008
6	2019-03-29 15:5...	463.60	metal.ID (LIBS)	100.0 ml	10.0x	Exposure	1	Hound-0008
7	2019-03-29 15:5...	429.20	metal.ID (LIBS)	100.0 ml	10.0x	Exposure	1	Hound-0008

Measurement Summary Table – Measurement Results

LINK Record ID #	Level 0 Substance	Level 0 Rank - AVG	Level 1 Substance	Level 1 Rank - AVG	Size - AVG	Width - AVG	Fibr. - AVG	Elong. - AVG	F/P - AVG	IC - AVG	Rect. - AVG
14	Aluminium	798	Aluminium	556	52.70	40.70	4.67	1.30	18.60	9.10	0.28
15	Aluminium	804	Aluminium	140	53.00	25.00	5.39	2.11	21.70	8.40	0.39
16	Aluminium	808	Aluminium	175	57.20	36.80	4.54	1.56	17.20	11.20	0.34
17	Aluminium	769	Aluminium	132	52.30	35.90	5.06	1.46	17.24	7.70	0.29
18	Aluminium	802	Aluminium	287	53.30	22.10	6.69	2.40	21.60	6.30	0.36
19	Aluminium	808	Aluminium	357	59.90	28.10	6.71	2.13	17.15	7.70	0.32

HOUND 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:

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