

Empower Processed Datasets - Waters

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.

Empower is a chromatography data software (CDS) package for advanced data acquisition, management, processing, reporting, and distribution.

DETAILS

There are two ways to import Empower-processed data into LINK:

1. Directly from Area Count or Peak Results TXT reports. If associated PDF reports are available in the same folder, they will be copied to the LINKdb as Measurement Series Attachment. If the specific TXT report is not imported into LINK, please contact Lumetics to request an update that supports your specific report format.

The Empower TXT report file example is as follows:

```

1 Injection Id      Date Acquired      Channel Vial      SampleName
2 "6946, 6952, 6735, 6741, 6749, 6759, 6767, 6773, 6785, 6791, 6798, 6808, 6815, 6821, 6833, 6839, 6846, 6856.
3 # Name          Retention Time    Injection Id      Date Acquired      Channel Vial      SampleName      Area      % Area
4 1 HMW 7.724      6946             4/27/2017 10:40:18 PM CEST DAD.0.6 "1:A,2" Sample A      94955      3.2
5 2 Monomer 10.512 6946             4/27/2017 10:40:18 PM CEST DAD.0.6 "1:A,2" Sample A      2857809   96.45
6 3 LMW 11.94     6946             4/27/2017 10:40:18 PM CEST DAD.0.6 "1:A,2" Sample A      10314     0.35
7 4 Total         6946             4/27/2017 10:40:18 PM CEST DAD.0.6 "1:A,2" Sample A      2963078   100

```

2. From a peak results TXT data file and optional corresponding chromatogram ARW data file created from an **Empower Export Method**. Additionally, if the export method includes an associated PDF report, it will be imported to LINK and be available as a Measurement Series Attachment. To create the export method, select the Empower Export Method Editor option and:
 - a) Select the **Fields** tab
 - Select a root Filename (e.g., Lumetics Empower Export)
 - Select **File** and **ASCII**
 - Select the **Summary by Individual** for the Report Type
 - Select **tab** for the Column Delimiter
 - Select **Fields First** for the Export Order
 - Select **Include Table/Export Table Data** and **Include/Export Row Number**
 - Select **Edit Table** and begin with the first column in the table, add **Peak Name** in the first column. Add any other peak integration parameters of interest in the remaining table columns (e.g., % Area etc...).
 - Select **Export Fields/Export Field Data** and **Row** for Label Orientation
 - Select desired instrument/analysis metadata fields of interest. Ensure that **Injection ID**, **Date Acquired**, **Sample Name**, **Channel** are included.
 - b) Select the **Raw Data** tab
 - Select a root Filename (e.g., Lumetics Export)
 - Select **File** and **ASCII**
 - Under **X-axis Data**, select **Export Time Column**

- Select **tab** for the column delimiter
 - Select the **Export Fields** checkbox
 - Select **Injection ID**, **Date Acquired**, and **Channel**.
- c) OPTIONAL - Select the **Report** tab
1. Select the PDF report for a given processing method

The Empower ARW report file example is as follows:

```

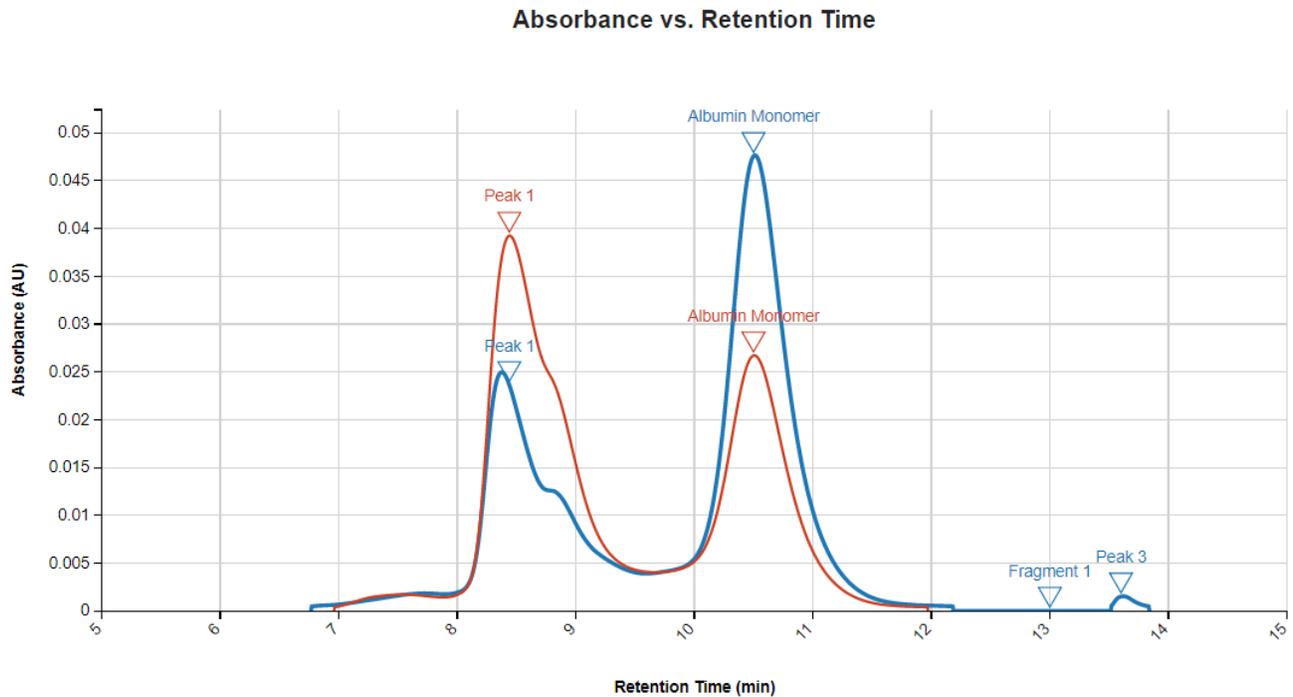
1  "Injection Id"  "Date Acquired"  "Channel"
2  8497  "Tuesday, July 05, 2016 3:10:56 PM EDT -04:00"  "PDA Ch1 280nm@4.8nm"
3  0  -3.3e-006
4  0.0008333333  -3.5e-006
5  0.0016666667  -2.4e-006
6  0.0025  -2.3e-006
7  0.0033333333  9e-007
8  0.0041666667  4.1e-006
9  0.005  6.2e-006
10  0.0058333333  6.7e-006
11  0.0066666667  7.7e-006
12  0.0075  7e-006

```

EXAMPLES

Included below is an example dashboard from Empower measurement files:

1. Line Chart plotting raw data curves for Absorbance vs. Retention Time



2. Tabular Summary examples

Measurement Summary Table – Measurement Results

LINK Record ID #	Sample Name	Absorbance (AU) (Retention Time (min) >=1) - AVG	Total % Area	HMW % Area	HMW Area	LMW % Area	LMW Area	LMW Retention Time	HMW Retention Time
101	Sample A	7.48	100	3.20	94955	0.35	10314	11.94	7.72
102	Sample A	7.27	100	3.20	92910	0.43	12329	11.86	7.73
103	Sample B	7.21	100	2.96	85559	0.47	13567	11.69	7.54
104	Sample B	7.17	100	2.91	83957	0.44	12754	11.73	7.53
105	Sample C	6.87	100	2.87	79077	0.48	13135	11.72	7.55
106	Sample C	6.86	100	2.88	79151	0.42	11658	11.77	7.53

Measurement Summary Table – Instrument Settings

LINK Record ID #	InstrumentName	Sample Name	File Name	Injection Id	System Id	Vial Id	# of Results Stored	Sample Set Start Date	Sample Set Finish Date
101	Empower (ASCI...	Sample A	Lumetics Empo...	6946	EM1234	245	2	11-01-2019	11-27-2019
102	Empower (ASCI...	Sample A	Lumetics Empo...	6952	EM1234	245	2	11-01-2019	11-27-2019
103	Empower (ASCI...	Sample B	Lumetics Empo...	6735	EM1234	765	5	11-01-2019	11-27-2019
104	Empower (ASCI...	Sample B	Lumetics Empo...	6741	EM1234	765	5	11-01-2019	11-27-2019
105	Empower (ASCI...	Sample C	Lumetics Empo...	6749	EM1234	832	3	11-01-2019	11-27-2019
106	Empower (ASCI...	Sample C	Lumetics Empo...	6759	EM1234	832	3	11-01-2019	11-27-2019

CONTACT LUMETICS

For direct assistance, please contact Lumetics LINK™ Support:

E-mail: support@lumetics.com

Phone: 1.613.417.1839

Website: <http://lumetics.com/>

