

## Excel Worksheets

### INTRODUCTION

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LINK is a software solution for automated extraction, processing and reporting of data that has been produced by analytical instruments or process equipment. LINK will search network locations for any new datasets produced by 100's of different analytical instruments/process equipment, parse all useful data from these digital files and copy this data to a centralized LINK database residing on your network. The powerful UI allows up to 5000 distinct sample datasets to be displayed individually, statistically aggregated, and grouped based on user-specified criteria and visualized in the form of comprehensive charts/tables/images. Metadata may be automatically extracted from several different sources and utilized directly to produce dynamic fully customized Word/PDF reports. All LINK functionality is optionally 21 CFR Part11 compliant.

LINK supports the ability to import Excel Worksheets as measurement files. These contain header rows and columns that are then transformed into LINKdb fields and values. Once imported, visualization preferences can be structures around the excel data.

### DESCRIPTION

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LINK requires use of the **Lumetics Excel Measurement Import Template** (located on the Lumetics Website) to import data from Excel. Currently, no raw curve data may be imported from Excel. Therefore, the dashboards that can be utilized to visualize excel data are Column chart, Trend chart, XY scatter, 2D Histogram, and Radar Chart.

#### Notes:

- LINK requires use of the Lumetics Excel Measurement Import Template to import data from Excel.
- Data may be imported from the "Import" worksheet, beginning with cell B2.
- Data from another spreadsheet can be copied directly into the Import tab of the Excel Measurement Import Template worksheet (paste special as values only, is recommended).
- Each column represents data pertaining to that specific Measurement.
- The Instrument type in LINK, will appear as "Excel Instrument".
- Cells must be formatted as General (other formats, such as number, will not import properly).
- New data fields not already in the Lumetics database as either a User or Instrument LINKdb Field, will automatically be created.
- Sample Name must be entered for each measurement, else that measurement will not be imported.
- Measurements are determined to be unique based on the Excel FileName, Sample Name, Analysis Date (if present), Column A representing row number (if present) and optionally Replicate Number if included as a column parameter.
- The 'Excel Row' column may be removed from the Lumetics excel template. Upon doing so, LINK will no longer include this as part of the 'unique measurement identifier', and therefore when the same Sample Name data has been shifted to a different row, it will not be considered a 'new measurement' and added to the project. Note: if Excel Row is removed and Sample Name legitimately appears in say three different rows (e.g., it was tested in triplicate), only one of these will be imported as the rest will be considered duplicates. Therefore, a column called 'Replicate Number' is recognized as part of the unique measurement identifier.
- There can be no blank header columns. LINK will read the empty header column as a trigger to "stop" the import, therefore anything after this column will not be imported. This is rule also applied to the excel rows. If there is a completely empty row (column A must be empty as well), LINK will trigger a 'stop' and not read further rows.
- LINK will read header fields as duplicated if when stripping out the special characters, the root name is the same. (i.e.  $\geq 2 \mu\text{m}$  [FlowCam] removing  $> = + [ ]$  is then the same as  $< 2 \mu\text{m}$  [FlowCam]). Therefore, unique header names are recommended.
- Special Characters (ie. ' + = % \$ #  $\mu\text{m}$ ) are currently not supported.
- For LINK to have a field available as a Y-axis option, all values must be numeric (ie. no text). If a single text value is present, the field will not be available as a Y-axis option but rather as an X-axis option.

## EXAMPLE

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Included below is a snapshot of the Excel Measurement Import Template worksheet (excerpt):

	A	B	C	D	E	F	G	H	I
1		<b>Lumetics LINK Excel Import v2.0</b>							
2		<b>Sample Name MUST be entered for each Measurement - examples of other possible MetaData fields have been provided</b>							
3		Sample Name	MetaData Field 1	MetaData Field 2	MetaData Field 3	MetaData Field 4	MetaData Field 5	MetaData Field 6	MetaData Field 7
4	1	Sample Name 1	value 1	value 1	value 1	value 1	value 1	value 1	value 1
5	2	Sample Name 2	value 2	value 2	value 2	value 2	value 2	value 2	value 2
6	3	Sample Name 3	value 3	value 3	value 3	value 3	value 3	value 3	value 3
7	4								

## CONTACT LUMETICS

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