



Spectradyne Tools Acquire Software: GUI Essentials

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Startup and Shutdown

- 1 **Instrument Prime***: Use with Cleaning Cartridge to prepare the instrument for measurement
- 2 **Instrument Shutdown**: Use to shutdown the instrument after measurement

Run Details

- 1 **Mold ID***: Enter the Mold ID of the measurement cartridge listed on the Cartridge Box (e.g. 103K)
- 2 **Box Number***: Enter the Box Number of the cartridge listed on the Cartridge Box (e.g. 240517)
- 3 **File Prefix**: Enter a prefix that will be added to the data files for organization/identification
- 4 **Sample Description**: Enter a description of the sample that will be added to the files' metadata

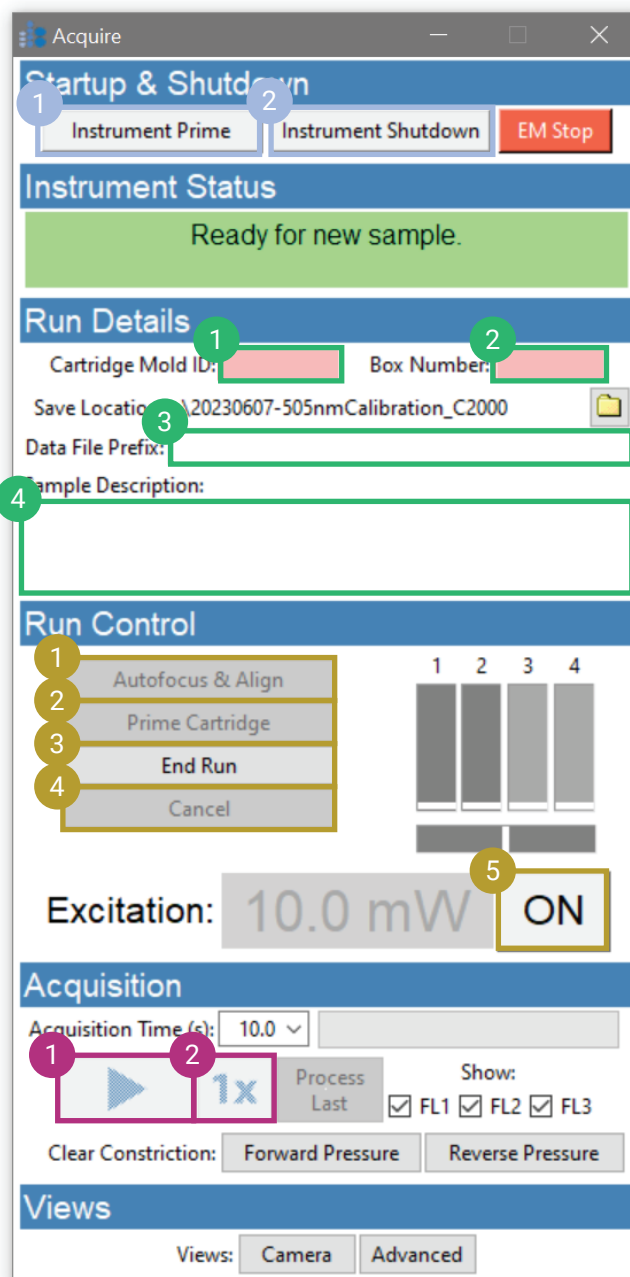
Run Control

- 1 **Autofocus & Align†**: Aligns the optics for fluorescence measurements (use before Prime Cartridge)
- 2 **Prime Cartridge***: Prepares the measurement cartridge for measurement
- 3 **End Run**: Depressurizes the instrument to allow for loading another cartridge or shutdown
- 4 **Cancel**: Halts the priming process should there be an issue
- 5 **Activate Laser†**: Turns on the excitation laser for fluorescence measurements

Acquisition

- 1 **Start/Pause Acquisition**: Either begins or pauses data acquisition after the cartridge is primed
- 2 **Single Acquisition**: Takes one acquisition without processing the raw data (use to test data quality)

*Required to begin measurement
†ARC only



Spectradyne Tools

Analyze Software: GUI

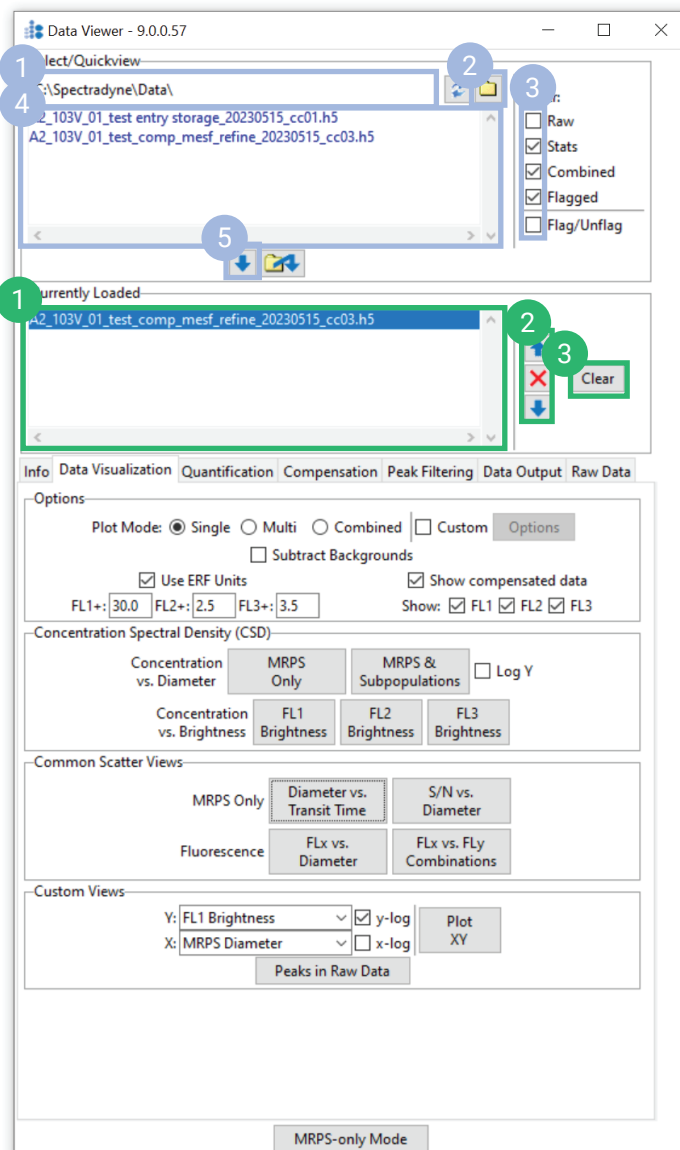
Essentials - Data Management

Select and Quickview

- 1 **Currently Active Directory**
- 2 **Select Directory**
- 3 **Filter:** Select what types of files to display from the active directory, only Stats or Combined files can be plotted
- 4 **Quickview:** Displays the selected file types (see above) in the active directory, use to select what data to load (see below)
- 5 **Load Data:** Loads the selected (highlighted) data in the Quickview panel for analysis/plotting

Loaded Data Panel

- 1 **Currently Loaded:** Displays the loaded data, the highlighted data is the active data set for single mode plotting, scaling, and filtering
- 2 **Data Navigation:** Choose the active data set or remove the highlighted data
- 3 **Clear:** Clears all loaded data sets



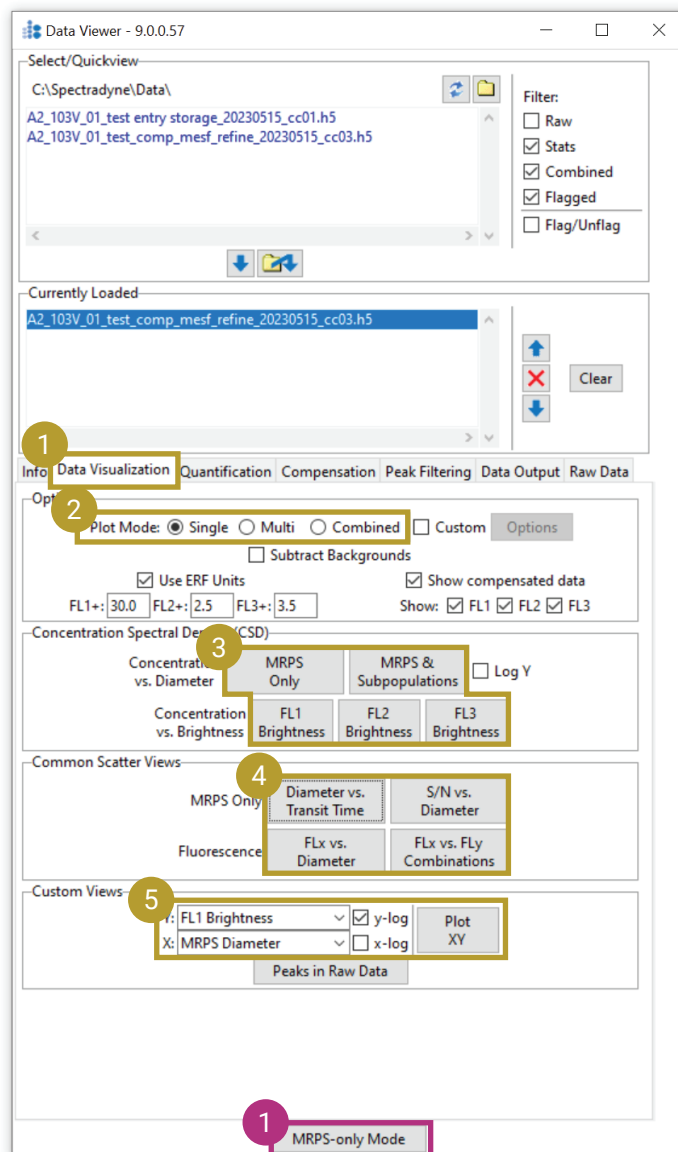
Data Visualization Tab

- 1 Opens Data Visualization Tab
- 2 **Plot Mode:** Select between Single Plot Mode (only active data set), Multi Plot Mode (individual plots of all of the loaded data sets), or Combined Plot Mode (all active data sets combined into one plot)
- 3 **CSD (Concentration Spectral Density) Plotting:** Displays a Concentration vs. Diameter or Brightness[†] plot of the active data set
- 4 **Scatter Plotting:** Displays a scatterplot of the given variables
- 5 **Custom Views:** Create a custom CSD plot of the selected variables

Change Analyze Mode

- 1 **Mode Toggle:** Switches between MRPS and F-MRPS[†] modes

[†]ARC only



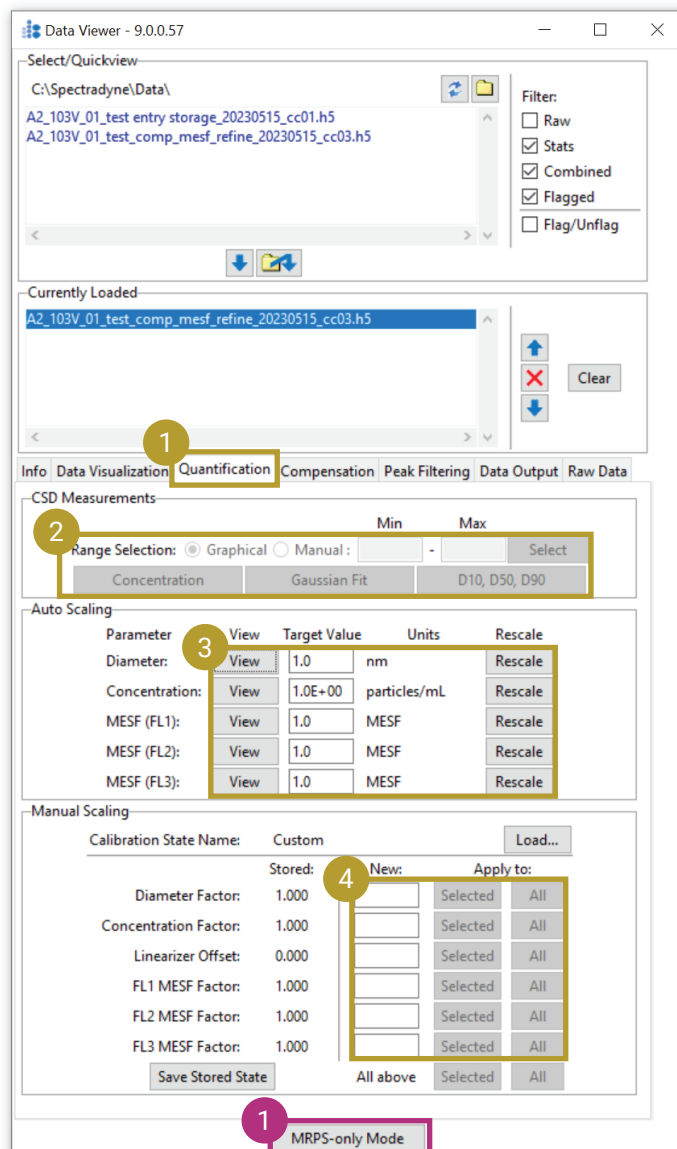
Quantification Tab

- 1 **Opens Quantification Tab**
- 2 **Range Selection:** Select the range you intend to quantify graphically (click and drag on the CSD plot) or by manually entering in values and pressing the desired quantification metric
- 3 **Auto Scaling:** Scales the most recently selected range to a given value
- 4 **Manual Scaling:** Scales the data set based on an entered multiple for a given factor

Change Analyze Mode

- 1 **Mode Toggle:** Switches between MRPS and F-MRPS* modes

*ARC only



The screenshot shows the 'Data Viewer - 9.0.0.57' application window. The 'Quantification' tab is active. Callout 1 points to the 'Currently Loaded' list. Callout 2 points to the 'Range Selection' section, which includes 'Graphical' and 'Manual' radio buttons and a 'Select' button. Callout 3 points to the 'Auto Scaling' table. Callout 4 points to the 'Manual Scaling' section, specifically the 'New' column of the 'Apply to' table. At the bottom, a 'MRPS-only Mode' button is highlighted with callout 1.

Currently Loaded

- A2_103V_01_test_comp_mesf_refine_20230515_cc03.h5

Filter:

- Raw
- Stats
- Combined
- Flagged
- Flag/Unflag

Info | **Data Visualization** | **Quantification** | **Compensation** | **Peak Filtering** | **Data Output** | **Raw Data**

CSD Measurements

Min Max

Range Selection: Graphical Manual : [] - [] **Select**

Concentration Gaussian Fit D10, D50, D90

Auto Scaling

Parameter	View	Target Value	Units	Rescale
Diameter:	View	1.0	nm	Rescale
Concentration:	View	1.0E+00	particles/mL	Rescale
MESF (FL1):	View	1.0	MESF	Rescale
MESF (FL2):	View	1.0	MESF	Rescale
MESF (FL3):	View	1.0	MESF	Rescale

Manual Scaling

Calibration State Name: Custom **Load...**

	Stored:	New:	Apply to:
Diameter Factor:	1.000	[]	Selected All
Concentration Factor:	1.000	[]	Selected All
Linearizer Offset:	0.000	[]	Selected All
FL1 MESF Factor:	1.000	[]	Selected All
FL2 MESF Factor:	1.000	[]	Selected All
FL3 MESF Factor:	1.000	[]	Selected All
		All above	Selected All

Save Stored State

MRPS-only Mode

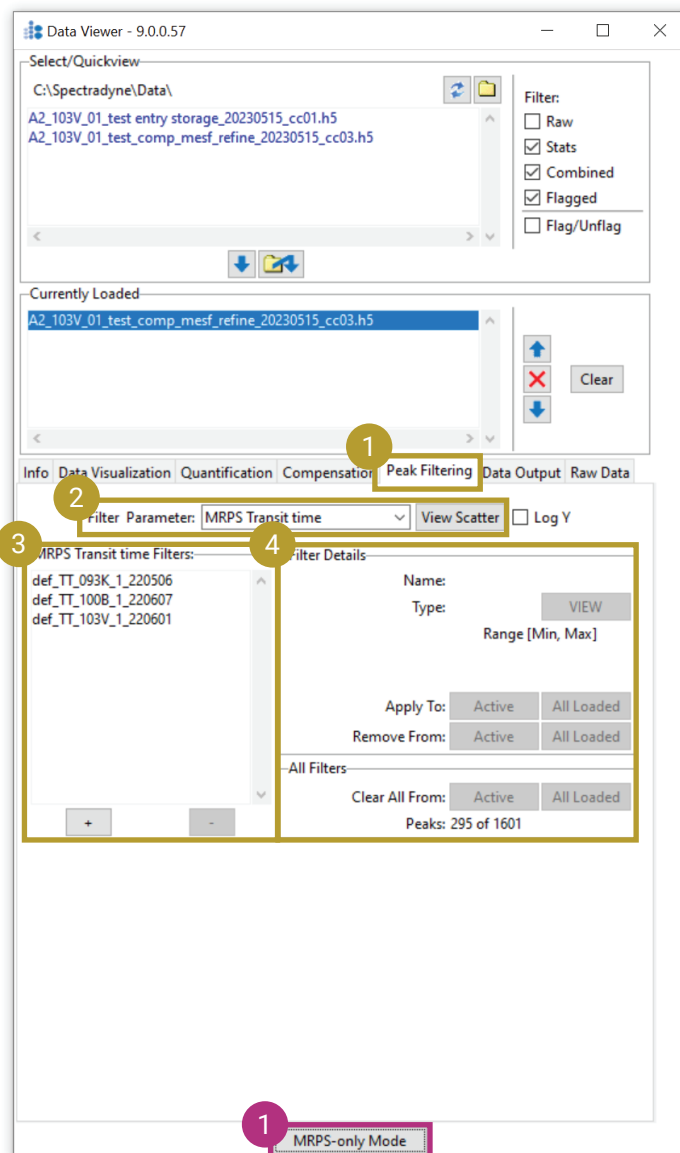
Spectradyne Tools Analyze Software: GUI Essentials - Peak Filtering

Peak Filtering Tab

- 1 Opens Peak Filtering Tab
- 2 **Filter Parameter:** Select which parameter you want to filter and display a scatterplot of the selected parameter vs. diameter
- 3 **Filter List:** Displays the available filters for the selected parameter, highlighted filters are currently active, use the +/- buttons to create or delete filters
- 4 **Filter Details:** Displays details of the selected filter, use the 'Apply To/Remove From' buttons to add/remove the selected filter from the selected data set or all currently loaded data

Change Analyze Mode

- 1 **Mode Toggle:** Switches between MRPS and F-MRPS[†] modes



Data Output Tab

- 1 **Opens Data Output Tab**
- 2 **Save:** Saves a new version of the selected file in the Loaded Data panel or all loaded files
- 3 **Combine Data & Generate Run Report:** Creates a combined file of all loaded data and generates a Run Report in Excel format
- 4 **Export:** Exports the selected data or all loaded data in a variety of formats. Includes a 'Subtract CSDs' function to subtract two data sets from each other

Change Analyze Mode

- 1 **Mode Toggle:** Switches between MRPS and F-MRPS[†] modes

[†]ARC only

