



Spectradyne Tools Release History:

Version 3.7.0.1, Released 10/10/2025

Major Update from version 3.65.x.x to 3.7.x.x

New Features:

- 1) Run report overhaul:
 - a. New, more intuitive layout
 - b. PDF format output
 - c. Component files listed in run reports created from combined files
 - d. ARC Specific: Run report includes fluorescence plots and key metrics
- 2) AA Engine UI reorganization
- 3) Faster Stats generation
- 4) Air leak detection
- 5) ARC-specific:
 - a. Faster autofocus and align routine without planar mapping
 - b. Automatic threshold determination during stats generation
 - c. Thresholds and MFI shown in FLx brightness distribution plots
 - d. Live colocalization scatter plot available
 - e. When creating a new template, perform additional fine focus step
- 6) Bug fixes and performance improvements

Version 3.6.0.2, Released 3/12/2025

Major Update from version 3.5.x.x to 3.6.x.x

New Features:

- 1) nCS2/ARC - Live plots now display normalized acquisition data, split plot
- 2) ARC - More multiparametric gating capabilities
- 3) nCS2/ARC - Support for 21 CFR compliance
- 4) ARC - MRPS only mode for ARC
- 5) nCS2/ARC - Bug fixes and performance improvements
- 6) nCS2/ARC - Fill monitors updated throughout run
- 7) nCS2/ARC - Automated bubble detection in buffer lines
- 8) CS2/ARC - Automated leak checking on top of cartridge
- 9) nCS2/ARC - Automated clearing of bubbles in buffer lines
- 10) ARC Improved autofocus and align routine includes focal plane mapping
- 11) nCS2/ARC - Automated air system pressure test
- 12) ARC - change to default fluor units of V, from ERF
- 13) nCS2/ARC (Viewer) - Change flag/unflag to hide/unhide



Version 3.5.0.65, Released 7/26/2024:

Major Update from version 2.5.x.x to 3.5.x.x

Look and feel:

- 1) New application names:
 - i. Use 'Acquire' to operate the instrument and view live results
 - ii. Use 'Analyze' for in-depth data analysis
- 2) Simplified, work-flow-centric UI
- 3) Adaptive UI for different instruments and use cases
- 4) For a summary of UI changes check out our [UI Essentials Guide](#)

New Features:

- 1) General:
 - i) Stability improvements throughout
- 2) Acquire:
 - i) Faster priming
 - ii) Faster data processing
 - iii) New live data visualization options:
 - (1) Quadrant analysis in live parametric scatter plots
 - (2) Display parametric data over time through a measurement
 - iv) New option for clearing constriction
 - v) More informative connection status report on startup
 - vi) Update mold calibration file directly from the Acquire software without having to reboot
 - vii) New 'Help' frame with cloud-based links to support resources
- 3) Analyze:
 - i) View and Edit components of a combined file using right-click context menu
 - ii) New export format to .FCS
 - iii) Dedicated buttons for common plotting functions
 - iv) Click-and drag quadrant analysis for analyzing subpopulations

Version 2.5.0.325, Released 11/1/2022:

New Features:

- 1) Live parametric plotting of particle parameters as a function of time – monitor these parameters in real time during a run.
- 2) Supply pressure is now checked on startup of the instrument
- 3) Various bug fixes and performance improvements.

Version 2.5.0.319, Released 5/13/2022:

New Features:



- 1) Dynamic Concentration Analysis – an improved method for calculating the sample volume analyzed during a measurement. Read more about this method by reading the tech brief [here](#).
- 2) Live parametric plotting of particle transit time vs. diameter in the Autoanalysis engine.
- 3) Improved handling of priming routine time-outs and resets.
- 4) User is reminded to check levels in the waste and buffer bottles at startup and shutdown.
- 5) Range reports can now be generated with background subtract mode on.
- 6) Users prompted to update moldCal when required by a new version of the software.
- 7) Various other bug fixes and performance improvements.

Version 2.5.0.297, Released 11/24/2021:

New Features:

- 1) Users prompted to update software when required by the moldCal.
- 2) New button to check for updates (internet connection required).
- 3) Valve terminology renamed in acquisition software.
- 4) Cartridge priming cancels for timeout and too many reset events.
- 5) Faster instrument prime routine.
- 6) Faster cleaning cartridge routine
- 7) Eliminate dripping after shutdown by active draining of the bottle lines.
- 8) End run routine runs automatically after cancelled prime.
- 9) Improved rejection of periodic electrical noise
- 10) Other bug fixes and performance improvements.

Version 2.5.0.285, Released 7/30/2021:

New Features:

- 1) User can now specify prefix when saving any combined file in the Viewer.
- 2) Support for pressure sensing hardware in some instruments.
- 3) Support for new mold ID format NNNX, where NNN is a three-digit number and X is a letter.
- 4) Other bug fixes and performance improvements.

Version 2.5.0.275, Released 3/1/2021:

New Features:

- 1) Improved 60Hz noise rejection for X-10k cartridges.
- 2) Minor bug fixes and performance improvements.

Version 2.5.0.273, Released 2/25/2021:

New Features:

- 1) Further modifications to cartridge priming routine to improve sample wetting into fluidics.



- 2) Fixed potential conflict when Bluetooth devices are connected to the instrument computer.
- 3) Minor bug fixes and performance improvements.

Version 2.5.0.270, Released 1/12/2021:

New Features:

- 1) Cartridge priming routine modified to improve sample wetting into fluidics.
- 2) Faster sequence for zeroing pressures.
- 3) Various bug fixes and performance improvements.

Version 2.5.0.261, Released 6/30/2020:

New Features:

- 1) Users now received data quality feedback in real time in the raw data window.
- 2) Instrument Prime button moved to main panel of acquisition software.
- 3) Background changes for hardware support.
- 4) Various bug fixes and performance improvements.

New Features:

- 1) Run report feature added: automatically generates a standard report (.xlsx) every time a new combined file is created in auto-analysis engine. The 1-page formatted report includes linear and log particle size distributions, run metadata, total concentration over designated range, etc. plus diameter vs. transit time plot including what filters have been applied. Report can also be made for any stats or combined file in Data Viewer.
- 2) Background subtraction (electrical noise) can now be exported to excel.
- 3) Cartridge Box Date is now required prior to run. This enables the use of cartridge calibration values that are production date-dependent.
- 4) New "About this Instrument" button in acquisition software reports hardware information.
- 5) Windows username now stored in metadata for raw data and stats files at time of creation.
- 6) Non-ascii characters eliminated from sample description, Windows username (could cause issues in past).
- 7) TS-300 plot default lower parameter now 50nm (was 60).
- 8) Improved hardware support for new tower.
- 9) Improved messaging to user.
- 10) Various other bug fixes and performance improvements.

Version 2.4.0, Released 11/15/18:

New features:

- 1) Data acquisition can be automatically stopped upon storing a user-chosen number of points or by reaching a pre-chosen % counting error. The user can also define over what size range this count or error is measured in.



- 2) Data in auto-analysis engine (stats files) can be automatically filtered using default diameter and transit time filters prior to saving as a combined file, eliminating the need for post-processing. All of the original data is still available for regular post-processing in Viewer if desired.
- 3) Button added to “Finish Priming Manually” for non-standard samples
- 4) D10, D50, D90 can be reported for integration ranges
- 5) CSD Measurements can be displayed in volume-normalized mode
- 6) In Viewer, CSD integration ranges can now be typed in explicitly (in addition to interactive mode already present)
- 7) Ability to subtract one CSD from another added in Viewer. For example, a “blank” buffer run can be subtracted from a sample run to yield difference
- 8) User is now notified in bias has been turned off prior to acquisition
- 9) Increase in type point size on scatter plot legend
- 10) Various other bug fixes and performance improvements

Version 2.3.6, Released 12/28/17:

New features:

- 1) Ability to name and designate output data file folders
- 2) Ability to designate a “run prefix” to the file-naming convention prior to run
- 3) Button added to auto-analysis engine (acquisition) to generate combined file after completion of run
- 4) Ability to store and load custom scaling factors for size and concentration
- 5) Numerous additions to data plotting capabilities:
 - a. Plot with volume weighting
 - b. Ability to create custom report with user-definable bins
 - c. User-definable bin widths, linear or percentage, set values for each
 - d. Display absolute concentration on Y-axis
 - e. Option to plot with legend off data
- 6) In multi-mode, ability to hover over individual CSD to highlight file name
- 7) When plotting on log scale, no zero points are displayed (eliminates heavy, distracting lines on zero points)
- 8) Added Mold Class (i.e. “TS-300”, “TS-2000”) to the metadata, based upon supplied MoldID
- 9) “End Run” button also stops acquisition, eliminating one step (single click to end)
- 10) “Clear Constriction” button also stops acquisition (similar to 7); also, if in “Continuous” acquisition mode, will automatically restart acquisition after clear constriction is finished
- 11) Added button to “restart” auto-analysis engine if CSD display stops updating (rare occurrence; this is a “fix” until we can find bug in Windows)
- 12) Improved sizing linearity when processing raw data
- 13) Output to Lumetecs LINK data management and analysis software (<http://lumetecs.com/products/>)
- 14) Various bug fixes

Version 2.2.1, Released 9/7/17:



New features:

- 1) Added “real-time CSD” display during acquisition: raw files flagged as “good” are automatically processed into a size distribution in real-time
- 2) Real-time CSD graph can display integrated absolute concentration across user-set arbitrary size range (displays concentration, number of particles measured, and positive/negative counting error)
- 3) One-click operation after cartridge insertion; simply click “Go” and priming routine starts, followed by data acquisition once priming is completed
- 4) Much improved speed of processing raw files to CSD (takes advantage of multiple processor cores)
- 5) Faster priming sequences
- 6) Various bug fixes