

SynerJY / FluorEssence Version 3.5: Release Notes

Product Release Information

Product	FluorEssence / SynerJY Software
Release Number	3.5
Release Date	11/29/2010
Customer Support	

What's New

1. Origin Workbooks with Graph, Data and Notes tabs
 - a. Workbook formats are now being utilized in all collected data. Graphs, Data worksheets, and notes pages are contained in a single workbook under the name of the user-defined Data Identifier.
2. Integrated PLQY / Chromaticity Functions
 - a. Quantum Yield calculator button: opens a wizard to be used with data collected from the integrating sphere accessory (model F-3018 sphere or new Quanta-Phi model). This wizard calculates quantum yields and colorimetry indices: CIE 1913 and CIE 1976.
3. Multigroup Data Transfer Direct to Origin
 - a. Multigroup Utility contains an Export to Origin function that exports all or selected data to a new Origin project file.
4. Distribution to DVD Media
5. Windows 7 Support in Compatibility Mode
6. Ganged Monos (Double Monos from Single Spectrometers)
7. CCD Multiple Cycle performance improvements
8. Support multiple channel reads on SR8xx Lockin Amplifiers and EG&G 7265 Lock-In Amplifiers
9. FluorEssence Mono Page more usable
10. HJY Tools can now be found under the Analysis Menu and as Buttons in the main toolbar and contains many new tools for fluorescence analysis:
 - a. Experiment Info: Shows experiment parameters in a pop-up window.

- b. Extract Experiment file from Notes: creates an experiment file (.XML) from a previous experiment result workbook.
 - c. Overlay Graph(s): Overlays two or more graphs.
 - d. Blank Subtract: Subtracts one set of data from another.
 - e. PostMcorrect: Applies emission correction factors to a set of chosen data after collection.
 - f. Normalize: Normalizes data to a minimum, maximum, or user chosen value and replots the normalized data in a graph.
 - g. Simple Math: Applies addition, subtraction, multiplication or division of data from two graphs.
 - h. Rayleigh Masking: sets the region of Rayleigh scatter in a 3D graph to zero for the first and/or second harmonic generated scatter peaks.
 - i. Quick Polarization: A user can input two or four data sets measured separately with different polarization conditions (VV, VH, HV, HH) to calculate the anisotropy and polarization from the input data.
 - j. Absorbance/ Transmission: Calculates the absorbance or transmission curve from a reference signal and signal from a sample as measured through the Absorbance/Transmission accessory photodiode.
 - k. Water Raman S/N: Calculates the water Raman signal-to-noise ratio from a standard emission scan of water.
 - l. SphereCorrect: Calculates the correction factors of the integrating sphere.
11. Reabsorbance Correction: Applies reabsorption/ inner filter effect correction to fluorescence curves (3D scans) of samples with an absorbance value of over 0.05.
 12. Multigroup Direct Data Transfer to Origin
 13. FluoroMax USB Lamp Control Utility Added
 14. Ability to run multiple copies of FluorEssence / SynerJY without "License Expired" message
 15. 3D scans now create and store a contour plot for each signal automatically in the resulting workbook.
 16. In the Batch Scan menu, an option to run experiments in Batch with changing temperatures has been added.
 17. Anisotropy vs. Single point now allows the user to input the target standard error between measurements and the maximum number of trials.
 18. Anisotropy vs. Emission, Excitation, and Single point allows the user to save the data as a "blank" file in SPC format and load it into a measurement for blank-subtracted anisotropy data.
 19. Convert XYY Data to Contour plot (button) takes 3-dimensional XYY data and converts it to XYZ data and using this, creates a contour plot.
 20. MicroMax plate reader accessory software now utilizes blanks. When a cell position is labeled as "blank" in the accessories tab of the experimental setup, the blank data is listed and plotted

in a separate tab of the resulting workbook as the standard and unknown data. This enables a user to do blank subtractions more easily from standard and unknown sample data.

21. Spectraq2 TTL Triggers now controllable

Installation and Upgrade Notes

Patch can be applied to any 3.x Version

Full Uninstall / Clean System required for Upgrade from 2.x FluorEssence or 1.x SynerJY installations

Recent Changes

Type	Description
Enhancement	Timestamp for multiple cycles single channel detectors
Enhancement	Access to version info in SDK interface
Fix	Stop Blast Mode / Hardware Based CCD Multiacq doesn't work
Enhancement	Added indicator for Clipping in RTC
Enhancement	Added Pause capability to Multigroup
Fix	2 CCD's in Range mode – Gluing on 2 nd detector incorrect
Fix	Anisotropy vs Time with Anti photo bleach option not working properly
Fix	Menus updated to reflect Standard Origin Menus where appropriate
Fix	Multigroup: Polarizers left in place with multigroup
Fix	Getting 0 data for GPIB connection
Fix	Micromax custom plates didn't always fit on screen (eg. 3x2)
Fix	Added optional port setting for Microscope stage
Fix	Improvement of T and A units
Fix	Polarizer alignment didn't take system out of phos mode
Fix	Fluoromax USB had kinetics scan limitation of less than 60 minutes
Fix	More than 4 detectors hung software
Fix	Cosmic Removal doesn't work in Range Mode
Fix	2 CCD's in system caused shutter problems
Fix	HR Link using wrong number of steps
Fix	Improved correction file use for Single Point
Fix	Long kinetic scans (multiple hours) causing a memory leak has been repaired.
Fix	Blank subtraction of the unknown sample intensity is now implemented in the calculation of the unknown concentration from a created calibration curve
Fix	In Single Point, the calculation of standard error is only set and performed for trials greater than or equal to 3
Fix	PostMcorrect is now working for 3D graphs.
Fix	The heading for std error in single point and anisotropy vs. single point measurements is now in %.
Fix	Anisotropy vs. time axes labels are correct.
Fix	Labels on 3D graphs when using angstrom units instead of nm is now

	correct.
Fix	For Phosphorescence experiments, the experiment type in the notes page is now correct

Known Problems and Workarounds

Description	Workaround
Cycles and summed accumulations not working together with CCD emission experiments	
CCD range shows zeros in experimental setup, before measurement	Not necessary, data not affected.
Unable to perform intensity vs. temperature.	Batch workaround: Save single point measurement as an XML file and repeat in batch mode with changing temperature.
Anisotropy vs. time times shown fluctuate.	shows closest time. User should close all other programs on PC while running kinetics scans.
Anisotropy Kinetics may show incorrect time.	
Normalization does not always work properly with multiple y-columns.	Right click, normalize, create new graph using resulting data.
Blue background makes printouts have low contrast.	Double click on background, highlight Layer properties, Display, change blue background to no background (or other color preferred.)
Legends should contain sample information/ data identifier and signal label	Double click to manually change legend text.
Last line of 3D data contains zeros when certain Rayleigh masking coverages are input into experimental setup.	Measure 3D data to emission range further than needed or change Rayleigh masking region (sum of slit widths).
When creating a new workbook or graph, HJY analysis tools do not recognize multiple Y-columns.	Create new workbooks with separate columns by copying and pasting data manually.
HJY Export only works on experiment-created graphs (not on user-created graphs or graphs which are the results of analyses.)	Use Origin Export.

Temperature control error when different tolerances are given in a temperature scan increasing and decreasing in the same experiment.	Run temperature increasing in separate experiment as temperature decreasing.
Incorrect labels and units for Accessories using Formulas (i.e. T1c/R1c for temperature, time, sample position, etc.)	Manually change the labels and units on any incorrect graph created
CCD Multiple Accumulations Averaged doesn't operation properly in some circumstances	Use summed mode instead