



Science in Action Duetta™

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN / AFM-RAMAN / TERS
SPECTROSCOPIC ELLIPSOmetry
SPR IMAGING

Absorbance and Fluorescence in
the Blink of an Eye.



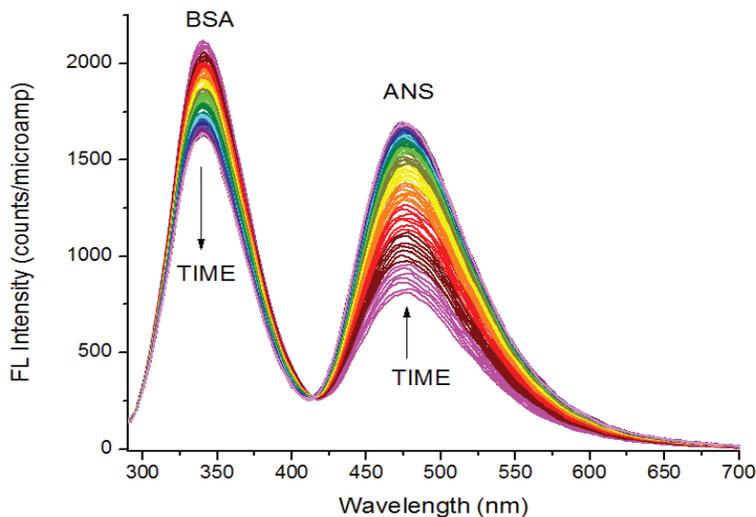
High-end modular PMT fluorometers are abundant in research labs. And now, HORIBA Scientific has developed the perfect supplement for these highly capable research spectrofluorometers.

Duetta™ is the first two-in-one fluorescence and absorbance fluorometer. Duetta is perfect for those who visit your lab to get a quick spectra measurement, since it can collect both fluorescence and absorbance spectra. And with its new super intuitive, touch screen EzSpec™ software, you won't have to spend time training people to run it.

Duetta is super-fast. Data is collected with a CCD. So instead of stepping through your scan point by point with your emission monochromator, the data is collected all at once, in the "blink of an eye." A thousand data points on a PMT could take thousands of seconds to collect. With a CCD, it can be collected in milliseconds.

The emission spectrum on a Duetta goes out to 1100 nanometers. A research-grade single channel standard PMT detector only captures up to 850 nanometers. The Duetta gives you the capability to measure in the NIR.





Kinetic spectral scans of native BSA protein with rapidly added ANS (3×10^{-6} M). Spectra taken every 100ms after ANS addition. As ANS binds to native BSA, the BSA Trp emission decreases and the ANS emission increases as a result of FRET, due to proximity of excited Trp and ANS.

“We actually had a situation where we found out that one customer’s emission wavelength was at a different wavelength than what they originally thought,” HORIBA Scientific’s Sales Manager, Clark Allen said. “We tested it out with a PMT, and the PMT didn’t have the range to see it. The Duetta is more accurate in that range.”

According to Loïc Camenen, Fluorescence Product Specialist, HORIBA France, S.A.S, the Duetta has another advantage over a single channel, detector - you can look at

spectral kinetics changes over time. You can run full emissions scans in sub-seconds, and stack them one by one on the same screen, allowing you to see changes over time - which is useful for many applications.

The accessory trays on Duetta can be changed quickly and have EPROMS that electronically detect the type of sample holder that is being used. The EPROMS adjust the computer’s software settings accordingly. One user won’t foul up another’s application with an incorrect setting.

The Duetta is in the midmarket price category. It is much less expensive than research fluorometers, and light years ahead of any other tabletop fluorometer competitor.

HORIBA is a global precision instruments manufacturer with its headquarters in Kyoto, Japan. The U.S. headquarters for the Fluorescence Division is located in Piscataway, N.J.



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