HORIBA Scientific

EasyLife™ X

Low Cost Fluorescence Lifetime Filter Fluorometer

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING

The easiest, smallest and least expensive lifetime fluorometer

HORIBA PTI

At half the price of a bench-top fluorometer, the EasyLife™ X is the perfect companion to any spectrofluorometer

The EasyLife™ X is an ultra low cost fluorescence lifetime system. Using our patented lifetime fluorescence technique, the EasyLife™ X obtains the maximum information about any molecular system, something you simply cannot get with conventional steady state techniques. Whether you are involved in biology, chemistry, pharmaceutical science, food technology, or materials science, your work will be greatly enriched by utilizing the EasyLife™ X.

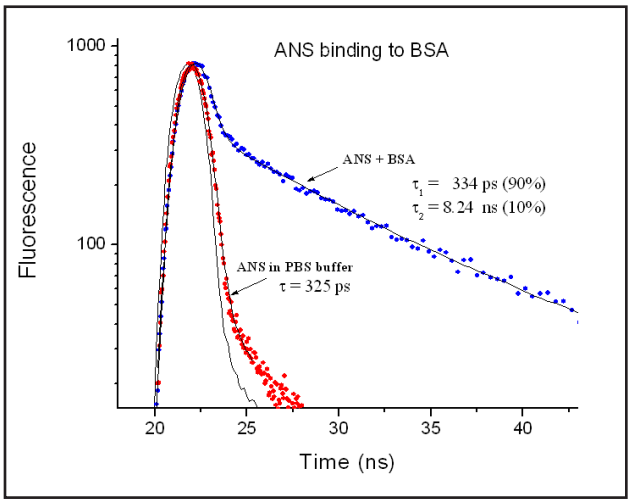
Features and Benefits

- Lifetimes from 150 ps to 4 µs
- Picomolar sensitivity
- Linear and nonlinear timescale for complex decays
- Powerful analysis software includes Maximum Entropy Method (MEM) distribution analysis
- Large selection of state-of-the-art pulsed LEDs
- Stable, snap-in pulsed LEDs provide great reproducibility
- Small footprint
- Fully portable
- Turnkey operation
- Maintenance-free
- Ideal for students or multi-user labs
- Great price!

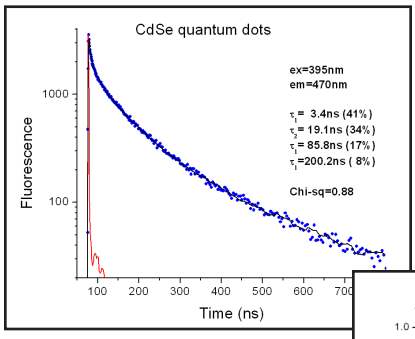
Why Fluorescence Lifetimes?

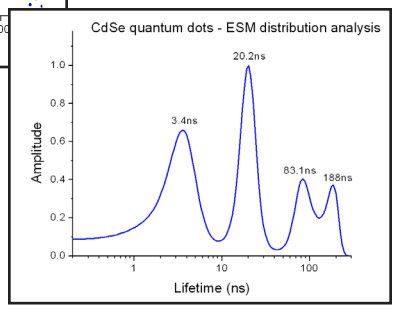
Six important things you can do with lifetimes that you can't do with steady state fluorometers

- Differentiate multiple structural domains and conformations
- Study protein conformation dynamics
- Binding efficiency (bound versus unbound) of fluorescence probes
- TRP localization in protein via fluorescence quenching
- Time-resolved FRET checker: “Is that really FRET you are measuring?”
- Time-resolved anisotropy provides rotational diffusion rates and size of macromolecules



ANS binding to bovine serum albumin was monitored with the EasyLife™ X equipped with a 370 nm LED. The ratio of free ANS to BSA bound ANS (9:1) can be easily determined from the double exponential fit to the fluorescence decay.





Quantum Dots: The fluorescence decay of CdSe quantum dots measured with the EasyLife™ X, showing unique arithmetic timescale acquisition, for improved analysis of multi-exponential decays with a broad range of lifetimes. This resulting 4 exponential fit was validated by the ESM lifetime distribution analysis included with the EasyLife™ X software.

Optional Accessories

- Magnetic stirrer
- Manual sheet polarizers
- Liquid nitrogen dewar
- Solid sample holder
- Microcuvette with adapter
- Bandpass filters
- Long-pass filters
- Neutral density filters

Specifications

Lifetime range	From 150 ps to 4 µs
Size	15 by 13 inches (38.4 by 33.3 cm)
Sensitivity	400 pM fluorescein or better
Excitation	OBB proprietary pulsed nanosecond LEDs
Optical pulse width	1.5 ns (typical)
Excitation range available	265–670 nm (LED dependent)
Emission range	200–650 nm (optional to 900 nm)
Emission wavelength selection	By filters
Detection	OBB patented lifetime detector
Typical acquisition time	20 s (sample dependent)
Timescale (menu selectable)	Linear, arithmetic and logarithmic Fluorescence Decay or Lifetime Kinetics
Sample holder	Single 1 x 1 cm cuvette (micro-cuvettes available)
Software	EasyLife™ X
Lifetime analysis	Complete package: 1-to-4 exp, global, non-exponential, micelle kinetics, lifetime distribution (ESM, MEM), anisotropy, FRET calculator Included

OPTICAL BUILDING BLOCKS

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