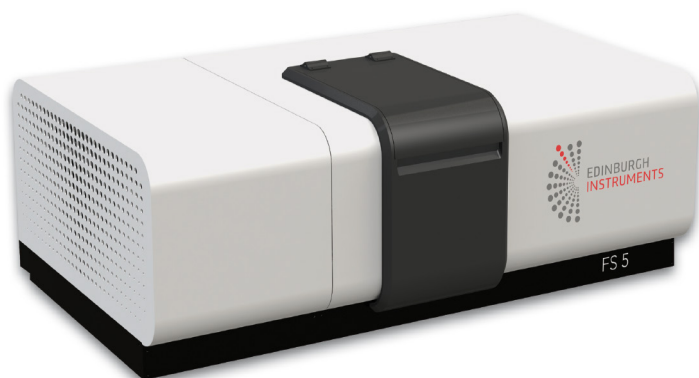


The FS5 Spectrofluorometer

Taking Sensitivity to the Next Level

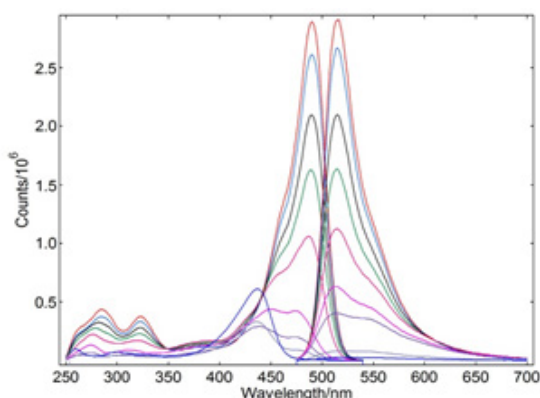


The FS5 is a fully integrated steady state fluorescence spectrometer designed to meet the highest specifications in the research and analytical markets. Ultimate sensitivity, coupled with high speed data acquisition and ease of use, makes the FS5 the ideal plug and play analytical tool. The optical design is the best in its class, utilising specially selected optics to achieve the maximum in signal throughput.

Using single photon counting techniques for the highest detection sensitivity, the FS5 delivers data you can trust for a broad array of samples, from solutions and powders to films.

The standard FS5 has a number of upgrade routes that are unique in its class, including:

- Extended wavelength coverage up to 1650 nm while maintaining the specified sensitivity in the UV and visible spectral range
- Computer-controlled polarisers to allow for automated anisotropy
- Phosphorescence lifetime option with a lifetime range of microseconds to seconds
- Fully integrated fluorescence lifetime option (TCSPC based) for the measurement of lifetimes from picoseconds to microseconds



pH Dependence of Fluorescein

Key Features

Single Photon Counting for the highest sensitivity

Two emission ports and NIR upgradeability makes the FS5 unique in its class

Water Raman SNR >6000:1

225 mm focal length monochromators for high resolution and maximum throughput

Ultrafast data acquisition for steady state & lifetime

Plug & Play sample modules for easy setup and flexibility

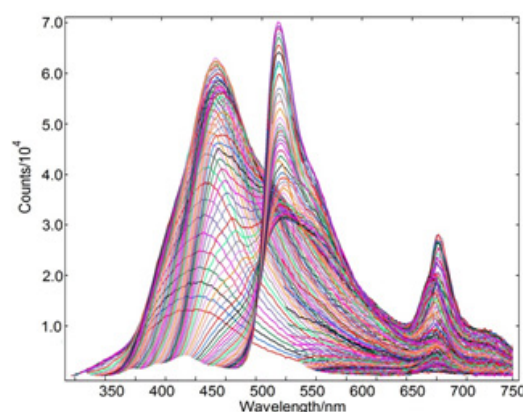
All modes of operation, analysis and presentation controlled by one software package for ease of use

Power saving features as standard - lamp powers down when not in use

Worldwide Service & Support

The FS5 delivers reliable fluorescence excitation and emission spectra. Advanced software enables 2D, 3D, contour and chromaticity plots.

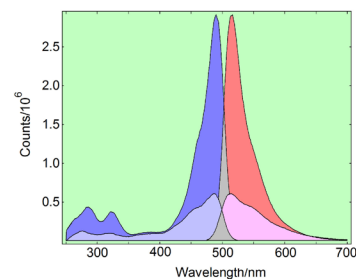
Whether you need to measure excitation and emission spectra, quantum yields, kinetics, temperature and excitation-emission maps, or even phosphorescence and fluorescence lifetimes, the FS5 with its range of advanced accessories sets the new standard for fluorescence spectroscopy.



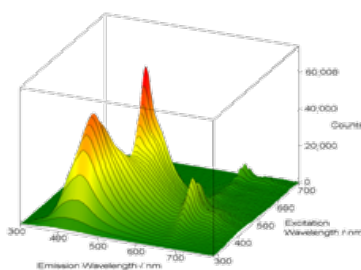
Wuyi, Chinese Green Tea Excitation-Emission Matrix (EEM)

Technical Specifications	
Optics	All-reflective for a wavelength independent focus with high brightness (small focus) at the sample
Source	150 W CW ozone-free xenon lamp
Monochromators	Czerny-Turner design with plane gratings for accurate focus at all wavelengths and minimum stray light
Spectral Coverage – Excitation	230 nm – 1000 nm
Spectral Coverage – Emission	230 nm – 870 nm
Bandpass – Excitation/Emission	0* to 30 nm, continuously adjustable
Wavelength Accuracy – Excitation/Emission	± 0.5 nm
Scan Speed – Excitation/Emission	100 nm/s
Integration Time	1 ms – 200 s
Emission Detector	Photomultiplier R928P, spectral coverage 200 nm – 870 nm, cooled and stabilised
Reference Detector	UV enhanced silicon photodiode
Transmission Detector	UV enhanced silicon photodiode
Water Raman SNR	Signal >400,000 cps at 397 nm emission, excitation 350 nm, 5 nm bandpass, 1 s integration time, SNR >6000:1
Dimensions	104 cm (w) x 59 cm (d) x 32 cm (h)
Weight	55 kg
FS5-MCS (Phosphorescence Lifetime)	
Source	5 W microsecond xenon flashlamp
Lifetime range	<10 µs to >10 s
FS5-TCSPC (Fluorescence Lifetime)	
Sources	Picosecond diode lasers (EPL series) Picosecond pulsed LEDs (ELED series)
Lifetime Range	<150 ps to >10 µs
Lifetime Range of TCSPC+ Version	25 ps to >10 µs (EPL excitation)
FS5-NIR (Near Infra-red)	
Computer Control	Change-over of detectors including associated gratings and spectral correction files
Spectral Coverage	230 nm - 870 nm plus 600 nm - 1010 nm
Spectral Coverage of NIR+ Version	230 nm - 1010 nm plus 950 nm - 1650 nm
FS5-POL (Polarisation)	
Computer Control	In/Out of beam, polarisation angle 0° & 90°
Spectral Coverage	240 nm - 2300 nm (excitation and emission)

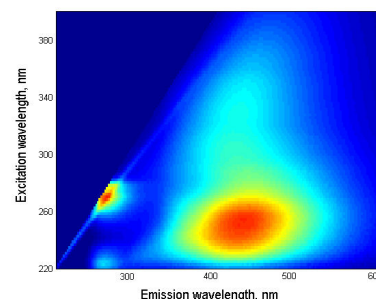
*resolution limit of 0.3 nm



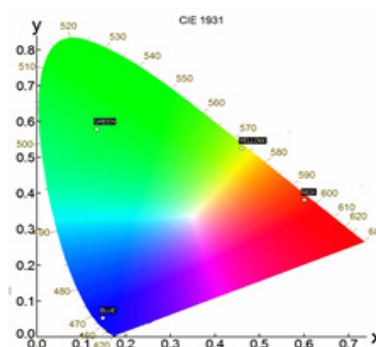
Emission/Excitation Scans



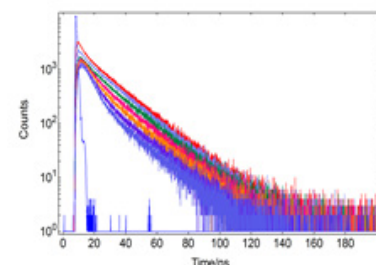
Emission/Excitation Map



Emission/Excitation Map



Chromaticity, CIE Co-ordinates



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