

Specifications for a steady state fluorimeter

The fluorimeter must be a PC based system with the following specifications:

1. Must be capable of recording excitation, emission, synchronous fluorescence, time course acquisition, quantitation spectra.
2. The system must be equipped with an emission and excitation monochromator operating over the spectral range ~225 nm to ~900 nm.
3. The spectral bandwidth for the two monochromators must be selectable over the range of at least 2 nm to 20 nm.
4. The wavelength accuracy in the monochromators must be better than ± 2 nm.
5. The light source must be a Xe lamp of at least 150 W.
6. The system must be equipped with a feedback system for compensation of the variation of the intensity in the light source, with time and over a wavelength range.
7. The system must have the facility of setting the sensitivity for detection, either in continuous variable mode or in selected settings.
8. Response time for detection must be software selectable.
9. The system must have a signal to noise ratio (S/N) ratio of better than 500 for the Raman lines of distilled water for excitation around 350 nm, spectral bandwidth of 10 nm and 2 second response time.
10. The software must be capable of controlling wavelength setting, wavelength scan range, bandwidth, and scan speed independently in both monochromator. The software must also be capable of displaying excitation, emission, synchronous, Excitation-Emission Matrix Spectral data and quantitation plots.
11. The system must have an appropriate and standard interface to the computer, for data acquisition and control of the spectrometer.
12. The system must operate on 240 V/50Hz.
13. The following accessories must be quoted for as optional items: a) Solid state sample holder, b) cell holders with optics for improved sensitivity, if available, c) Two spare non-fluorescent, fused-silica, four-sides-clear cuvettes, d) One spare photomultiplier tube and e) a set of optical filters to discriminate against unwanted orders.
14. A suitable branded computer having 3GHz Intel i5 processor, 8GB RAM, 64bit Windows 7 Operating System, 500GB HDD, DVD R/W, Microsoft Office Home and Student Edition 2010 with laser B/W printer and a suitable UPS to run the instrument, PC and printer should be included in the quote.
15. A minimum of two years of warranty must be included in the quote. An additional CAMC for the next three years must be quoted.
16. A list of users (with contact details of the user) of the quoted instrument must be included with the quote.