

Specification Requirement for low cost FTIR Spectrometer for teaching laboratory - 02 nos.

The Instrument	Low cost FTIR spectrometer for teaching laboratory
Optics	Sealed and desiccated, all mirrors gold coated. Quotations may be provided for both KBr/ZnSe beam splitter optics.
Spectral range:	600-4000 cm ⁻¹ or better
Spectral resolution:	2cm ⁻¹ or better
Wavelength accuracy	≤0.05 cm ⁻¹ @ 1576cm ⁻¹
Stability 100% line:	≤0.08%
Interferometer:	Permanently aligned, high stability
Detector:	High sensitivity DLATGS
A/D convertor:	True 24 bit dynamic range
Interface:	Appropriately interfaced to a PC using Windows Operating system, 240 AC/50 Hz operation with Indian electrical connectivity.
Printer	A network Laser printer should be included in the quote.
Software:	Software for instrument control, data acquisition, data processing (such as FFT, baseline correction, spectral subtraction, etc.). Details of software must be clearly mentioned.
Accessories:	Must include basic accessories, such as KBr pellet holder, liquid cells. Pellet press (Indian make) for making KBr pellets with all safety features.
Extra accessories:	Please quote for ATR cell and gas cell as additional items.
Installation and training	Installation and training should be provided at the customer site. Installation requirement should be intimated in advance.
List of users	A list of users with full contact details (in India) of the proposed system should be provided.
Warranty	A minimum of 2 (two) years warranty is required. A Comprehensive Annual Maintenance Contract (CAMC) for additional 3 (three) years must be included. (Quote separately).
Customer service	Historical data should be provided from current users.
UPS	Suitable UPS should be provided in a separate quote.
Company profile in India	Document on the market share of the company in India should be provided. Proof of authorization from the parent company to sell and service the equipment in India must be supplied by the vendor.

Specifications for a steady state fluorimeter – 01 no.

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. Four non-fluorescent, fused-silica, four-sides-clear cuvettes should be included with the instrument.
9. Response time for detection must be software selectable.
10. 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.
11. 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.
12. The system must have an appropriate and standard interface to the computer, for data acquisition and control of the spectrometer.
13. The system must operate on 240 V/50Hz.
14. 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, f) gas cell for gas phase measurements.
15. 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.
16. A minimum of two years of warranty must be included in the quote. An additional CAMC for the next three years must be quoted.
17. A list of users (with contact details of the user) of the quoted instrument must be included with the quote.

Specification Requirement for Double Beam UV-VIS Spectrometer – 02nos.

The Instrument	Microprocessor based UV-VIS Spectrophotometer with high resolution LCD display and keypad
Optics	Double beam with holographic grating in monochromator
Wavelength range	190-1100nm
Spectral bandwidth	Variable (specify the range) or fixed (Better than 2nm)
Wavelength accuracy	Better than $\pm 0.3\text{nm}$
Wavelength reproducibility	Better than $\pm 0.1\text{nm}$
Baseline stability	Better than 0.0004 Abs/h
Photometric accuracy	$\pm 0.002 \text{ Abs}$ or better in 0-0.5 Abs, $\pm 0.004 \text{ Abs}$ or better in 0.5-1.0 Abs, $\pm 0.3\%$ (0-100%T)
Photometric reproducibility	$\pm 0.001 \text{ Abs}$ or better in 0-0.5 Abs, $\pm 0.002 \text{ Abs}$ or better in 0.5-1.0 Abs, $\pm 0.15\%$ (0-100%T)
Monochromator	Grating with min 1200 l/mm
Lamps	Should be provided with Tungsten halogen lamp and Deuterium lamp with automatic changeover
Detector	High sensitivity matched pair silicon photodiode detector
Cuvettes	2 pairs of Quartz cuvettes of 10mm path length.
Computer, software and printer	Desktop computer should be provided by the supplier with preloaded software along with original CDs. A network printer should be quoted separately.
Installation and training	Installation and training should be provided at the customer site. Installation requirement should be intimated in advance.
List of users	A list of users with full contact details (in India) of the proposed system should be provided.
Warranty	A minimum of 2 (two) years warranty is required. A Comprehensive Annual Maintenance Contract (CAMC) for additional 3 (three) years must be included. (Quote separately).
Customer service	Historical data should be provided from current users.
UPS	Suitable UPS should be provided in a separate quote.
Company profile in India	Document on the market share of the company in India should be provided. Proof of authorization from the parent company to sell and service the equipment in India must be supplied by the vendor.