

CENTRE FOR NANOSCIENCE & NANOTECHNOLOGY

(under the premises of Physics Department)

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)



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Dear Sir,

Please quote your lowest rates in duplicate should be clearly written or typed (cutting avoided) for the item/s list attached given below, specifying make, quality, period of supply of each item along with detailed information and should reach the undersigned on or before **09.12.2014**

1. **Rates quoted should be FOR PU Chandigarh.**
2. The rates of insurance, excise duty, S.T. should be clearly mentioned, original receipts for the insurance charges are required along with the bill of supply.
3. We have been exempted from paying Central Excise Duty, vide Govt. of India notification No.10/97-Central Excise dated March 1, 1997 and is valid upto 31.8.2015.
4. Special Discount for educational institutions, University teaching department may be mentioned.
5. The quotation in a sealed envelope giving our/your reference No./due Date of quotation should be sent.
6. The technical and financial bids be enclosed in separate sealed envelopes duly marked and placed together in a duly sealed envelope giving our reference and due date of quotation.
7. **A compliance table as per the specifications below should be included.**

TECHNICAL SPECIFICATIONS FOR FLUORESCENCE SPECTROMETER

1. Principle: Computer Controlled rationing luminescence spectrometer with the capability of measuring Fluorescence, Phosphorescence or Chemiluminescence and Bioluminescence. Pulse rate, delay and gate times can be varied. Spectrofluorometer should be provided with Quantum yield measurement, Time resolved luminescence (short phosphorescence decay) measurement as a standard.
2. Source: Pulsed xenon flash lamp. Delay (td) and gate time (tg) can be varied to measure phosphorescence. Source can be turned off for measuring chemiluminescence and bioluminescence.
3. Monochromator: Excitation 200 – 800 nm with zero order selectable. Emission: 200-650nm. Synchronous Scanning should be available with constant wavelength or constant frequency difference.
4. Wavelength Accuracy : +/- 1.0 nm
5. Wavelength Reproducibility: +/- 0.5 nm.
6. Spectral band pass: The excitation and emission slits should be fixed 10 mm bandpass.
7. Scanning Speed: 10 – 1500 nm per minute with 1 nm increment.
8. Sensitivity: Minimum signal to noise level using the Raman band of water, excitation 350 nm is 500:1 RMS measuring noise on the Raman peak, and 2000:1 RMS measuring noise on the baseline.
9. Software operating system: Windows environment. The luminescence intensity and the excitation and the emission wavelength can be displayed in real time.

Spectral and time drive data should be displayed in real time and can be stored on disk.
10. Data Analysis: Routines should be available for performing mathematical calculations on stored data. These include arithmetic functions, smoothing, 1-4th order derivatives, area, peak, normalization, merge, difference, interpolate and least squares fit.
11. A wavelength program should be available for storing up to 15 pairs of excitation and emission wavelengths with variable integration and cycle times. Specific applications programs should be provided for determining phosphorescence decay, polarization spectra, intracellular biochemistry programs and simple quantitation. Custom configured programming should be standard with some specimen programs.
12. The system should be quoted with two year warranty

Note: 1. A pair of Quartz Cell for Liquid Samples (3.5 ml. cell volume) should be quoted. 30 ul cell with appropriate holder arrangement should be quoted.

2. The quoted software should have inbuilt Instrument Performance Verification checks

3. Branded PC (Specifications: Intl Pentium Dual Core 5th Generation Processor with 4 GB DDR3 RAM, 500 GB HDD, DVD Writer, Keyboard, Mouse, 20" LED Screen), Window 8 Professional with licensed CD Original with 32 bit with Laser Printer and 2 KVA Online UPS with 30 min. back up with frequency monitoring facility should be supplied with the system.

4. The system should be quoted with at least two year warranty.

Thanking you,

Yours faithfully,

(Dr.Nishima)
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