DEPARTMENT OF PHYSICS
INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS, NEW DELHI- 110016

Date: 16-08-2011

NOTICE INVITING QUOTATIONS

Sub: spectrometers for UV Vis/NIR detection

Please send your quotation for purchase of above said item(s) as per specifications given below. Your quotations should reach latest by **5 PM** on **31-08-2011**. Quotations are solicited only for item manufactured by reputed company with proven past record of sales, supply and after-sale service.

I. Spectrometer1:

Double beam and Double monochromator spectrometer to measure UV-Visible-NIR region absorption, transmission and reflection spectra.

Specification:

1. wavelength range: ~190nm – ~3000nm
2. Accuracy : Wavelength accuracy < 0.2nm (UV-VIS) and <0.8nm (NIR)
3. Slits/spectral bandwidth: variable selection from ~0.1nm to 8nm (Vis) and ~0.1nm to ~20nm (NIR)
4. Baseline accuracy/noise : ~10^{-4}abs
5. Lamps : Halogen and Deuterium lamps with >2000 hrs life (replacement lamps are to be provided/quoted), with selectable/automatic switching capability
6. Detection system: double (pre and main) monochromators with Czerny-Turner turnet and gratings of ~1000groovs/nm (UV-Vis) and ~300groovs/nm (Red-NIR), with control on grating change-over.
7. Detector Modules : three detectors, PMT, InGaAs and PbS detectors
8. Sample Compartment : Double beam
9. Sample Holders : 10mm path length cuvettes as well as solid sample (~2mm thick) holders . two 10mm cuvvetties should be provided.
10. I/O: RS232 or USB (cables should be provided)
11. Software: compatible to windows Vista/7, (and XP), capable to measure absorption, transmission and reflection (both steady steady-state and measurement over time), spectra processing (smooth, peak find, derivative, conversion etc.,)
12. Warranty : 1 year min.

Accessories (optional)

1. Reflection accessory : compatible to the above instrument. Specular reflectance measurements, 5 deg, angle of incidence, min. size of the sample area should be 5mm dia

2. Temperature controller : compatible to the above instrument. Peltier cooler, ~5-60ºC, step selection of 0.1ºC or less , cell path length 10mm. One cell each on sample & reference should be temperature controlled.

II. Spectrometer 2:

Double monochromator spectrometer to measure excitation, emission and synchronous emission spectra in the region 200 to 900nm.

1. Light source: 150W xenon source with ozone free lamp housing
2. Monochromator : ~1200 grvs/mm (or above) gratings both excitation and emission side, F/2.5 monochromators both sides
3. Detector : photomultiplier tube (red extended)
4. Scan range: from 200 to 900 nm (including zero-order) both excitation and emission
5. Slit widths : variable, 1.5 to 20nm (both excitation and emission sides),
6. Accuracy : 1nm or lower wavelength resolution, S/N more than 150
7. scan response and scan speeds : variable and selective
8. Scan mode selection: excitation, emission and synchronous (variable from 1nm to 20nm) scannings
9. Sample Holders : single cell for 10mm path length cuvettes . Solid sample (~2mm thick) holders . 10mm cuvetties should be provided.
10. I/O: RS232 or USB (cables should be provided)
11. Software: compatible to windows Vista/7, capable to measure excitation emission, synchronous spectra (both steady steady-state and measurement over time), spectral processing (smooth, peak find, derivative, conversion etc.,)
12. Warranty : 1 year min.

TERMS & CONDITIONS COVERING SUBMISSION OF QUOTATIONS

1. Technical requirements

1) All items are to be in metric scale only.
2) The quotation must contain the following details, otherwise quotation cannot be considered.
   a. The quote must contain all the items.
   b. The technical bid must contain all the required specifications, drawings, graphs (transmission/reflection/response spectra of components if any) etc.
   c. Along with the technical bid, please enclose support documents related to previous sale of the above items(s) within India.

2. DELIVERY: The rates quoted must be for C.I.F. Delhi (Air Freight) (if required)

3. TERMS OF PAYMENT: **100% payment on delivery and satisfactory installation**

4. INSTITUTE'S RIGHTS : IIT Delhi reserves the rights of acceptance or rejection of any or all quotations.

5. VALIDITY OF QUOTATIONS: Quotations should be valid at least for a period of 3 months.

6. SUBMISSION OF QUOTATIONS: **Both Technical and price bids are to be quoted separately in separate sealed covers. Both these bids** should be sent in a sealed cover marked at the top SUBJECT AND DUE DATE

31st August 2011

Quotations should be sent, on or before due date to:

Dr. G. Vijaya Prakash,
Department of Physics, IIT Delhi, Hauz Khas,
New Delhi 110 016 (India).

G. Vijaya Prakash
PI of the project