

MAHARSHI DAYANAND UNIVERSITY, ROHTAK

DEPARTMENT OF PHYSICS

Tender Notice

Sealed tenders are invited for purchase of FTIR Spectrometer in Department of Physics are invited, accompanied by (i) a Demand Draft for prescribed Tender Fee and (ii) a Demand Draft for the earnest money equal to 2% of the quoted rates on the total amount involved in favour of Finance Officer, M.D. University, Rohtak so as to reach the Head, Department of Physics upto **14-01-2013**. The tender should comprise of Technical Bid along with DDs for Tender fee and Earnest money in one sealed envelope and Financial Bid in other sealed envelope. For details, visit University website www.mdurohtak.ac.in or contact Dept. office.

REGISTRAR

SPECIFICATIONS FOR FTIR SPECTROMETER

Fully computer controlled FTIR Spectrometer with sealed and desiccated optics and built-in purge facility. System should be complete with all necessary hardware & software. System should have following minimum specifications:

1. **Spectral range:** 10000-50 cm^{-1} and can be increased to cover the range of 25000 – 50 cm^{-1} .
2. **Spectral Resolution:** $\leq 0.2 \text{ cm}^{-1}$ and **Wavenumber accuracy/precision:** $\leq 0.01 \text{ cm}^{-1}$
3. **Photometric Performance:** linearity better than 0.1% T
4. **Signal to noise ratio:** $\geq 50000:1$ peak to peak (at 4 cm^{-1} resolution, measurement time of 1 minute)
5. **Beam-splitters:** Suitable beam splitter to cover the required spectral range.
6. **Detectors:** System should have TE cooled detectors to cover required spectral range which can automatically change through software
7. **Sources:** Suitable source to cover spectral range of 10000-50 cm^{-1} .
8. Software controlled Beam splitter and detector change
9. **Interferometer:** The interferometer should be vibration insensitive with fast continuous dynamic alignment and must have optics with proper coating.
10. **Scan Rates for spectra:** Scan speeds ≥ 55 scans (spectra)/sec at 16 cm^{-1} spectral resolution.
11. **Spectrometer Enclosure:** Should have the capability to be purged and with proper purge controls (automated); purge protection for the core of the spectrometer should be there.
12. **A/D converter:** ≥ 24 bit Analogue-to-Digital Converter (ADC)
13. **Software:** Advanced latest software for complete automatic control of spectrometer, data collection and processing (conversion of Transmission to Absorbance scale; Kubelka-Munk, Kramers-Kronig, derivative spectra), automatic storage of sample and instrument parameter history, automatic recognition of spectrometer components and accessories, complete fault diagnosis, help menu for setting experiments. Software should also have in-built Biochemical library of spectra of ~2000 compounds (including proteins and peptides).
14. **Validation:** System should have built-in validation wheel with NIST traceable standards for automatic software controlled validation of spectrometer.

Accessories (to be supplied along with the FTIR spectrometer)

Diamond ATR and Diffuse reflectance accessory must be supplied with the system along with transmission accessory and KBr die set, 15 Ton hydraulic press, Nujol Oil, Pallet holder, Agate Mortar & Pestle etc.

1. **UPS:** Suitable online UPS to run the complete spectrometer with at least 30 minutes back up should be quoted.
2. **PC:** The system should be quoted with latest Branded PC (Desktop) with colour TFT monitor (21 inches wide) & Color Laser Printer.

3. Upgradation: System should have facilities to upgrade with GC, TGA and microscope attachment and step scan, modulation experiment.
4. Warranty: Two years for Instrument & minimum five years for Source & interferometer.

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TERMS AND CONDITIONS OF THE TENDER FOR SUPPLY OF EQUIPMENTS

The equipment/s as per specification given overleaf /attached are to be purchased for the department. You are requested to kindly quote your rates for the same. The following terms and condition for quoting the rate may kindly be kept in view while you do so.

1. All charges payable by University should clearly be stated.
2. Sealed quotations/ tenders should be addressed to the Head, Department of Physics, M. D. University, Rohtak and reach the office of the undersigned on or before 14.01.2013 quoting our reference and due date of opening on the envelope
3. The quotations/tenders should be submitted only if material is available in your ready stock or can be supplied within one month after the order is place. The Tender should comprise of Technical Bid along with Demand Draft for Tender fee and earnest money in one sealed envelope and Financial Bid in other sealed envelope.
4. The quotations/tenders will be opened in the office of the undersigned by the purchase committee on 16.01.2013 at 11:00 a.m. in the presence of the parties or their representatives whosoever like to be present. The Committee reserves the right for negotiation thereafter if considered necessary.
5. An amount of 2% of quoted amount only in the shape of bank draft in favour of Finance Office, M.D. University, Rohtak as earnest money should accompany the quotations/ tender, in absence of which the quotations/tenders will not be entertained.
6. Tender received without earnest money or after due date shall not be entertained except with special approval of the Registrar. All rates should be quoted for 'FOR' Physics Department, M.D. University, Rohtak. The process of custom clearance will be the responsibility of the supplier. Charges such as transit insurance etc. should be mentioned separately, if any.
7. As far as possible, the rates should be quoted for the make and specifications of the items given. In case any alternative/equivalent item is offered its specification and leaflets may be sent with the tenders/quotations. The sample of material should accompany the tender/ quotations for records.
8. Guarantee/warranty period for equipments should be clearly specified/ mentioned. The AMC charges/ year should be quoted separately.
9. The payment can be made in foreign currency/T.T. as per rules. 100% percent payment will be made on the receipt and inspection of goods/items to ensure the specifications and their good conditions by the inspection Committee. However, this condition may be relaxed in deserving cases.
10. If your rates are approved by the DGS&D and other central or state Agency, the rates of the same must be quoted and the copy of the rate contract be attached.

11. Tender must be submitted by either manufacturer or their authorized dealer/distributors. Authorization letter in proper format must be attached with tender otherwise bids will not be considered. Authorization letter should be on Letter Head of manufacturer and should be signed and stamped. Tenders from dealers will be rejected without proper authorization letter from the manufacturers.
12. The University stands exempted from the payment of Central Excise Duty/Custom Duty. The rates be quoted keeping that fact in view, Necessary certificate will be provided by the University.
13. If a holiday occurs on the opening day, the tenders will be opened on the next working day.
14. The tenders received not in proper sealed cover shall not be considered and will be liable for rejection in a straightway.
15. In the case contractor/supplier backs out of his contract, the earnest money deposited by him shall be forfeited besides any other action as may be considered by the Vice-Chancellor.
16. Dispute if any, will be subject to Rohtak jurisdiction.
17. The University reserves the right to reject any or all quotations/tenders without assigning any reason thereof.

Head,
Department of Physics