



मुंबई विद्यापीठ

**Department of Biophysics, University of Mumbai, Vidyanagri, Santacruz (E),
Mumbai 400098**

Tel- 022-26524288, 26543492

Email- drpmdongre@yahoo.co.in, drpmdongre@biophysics.mu.ac.in

Tender Document

No: Biophysics/Tender/01/2014-15/FT-IR

FOURIER TRANSFORM INFRARED (FT-IR) SPECTROMETER

20th February 2015

Part A- Terms and Conditions

Part B- Specifications

Price- Rs 500/- (non-refundable)

Important Dates:

| | |
|--------------------------------------|-------------------------------------|
| Last date of Sale of Tender Document | 7 th March 2015, 4.00 pm |
| Last Date of Receiving sealed Bids: | 9 th March 2014, 4.00 pm |

Dept of Biophysics,
University of Mumbai, Vidyanagari,
Santacruz (E), Kalina, Mumbai 400098

Wax Sealed Tender bids for **FOURIER TRANSFORM INFRARED (FT-IR) SPECTROMETER** for the Dept of Biophysics are invited for and on behalf of University of Mumbai by the head of the dept so as reach in the office latest by 9th March 2015 by 4.00 pm.

Tender Document containing terms and conditions and technical specifications are available in the Office of the University Dept of Biophysics, University of Mumbai, Vidyanagri, Santacruz (E), Mumbai 400098, on all working days between 11.00 a.m. & 4.00 p.m. from **20th February 2015 to 7th March 2015**. Terms & conditions and technical specifications can also be downloaded from **<http://www.mu.ac.in/tenders.html>** The tender bids duly complete in all respects, along with the necessary documents should be submitted to the above mentioned address, latest by 4.00 p.m. by 9th March 2015.

The Right to reject any or all tenders, without assigning any reason is reserved by the University of Mumbai.

Head Dept of Biophysics
University of Mumbai

Part A - Terms and Conditions

Quantity-1 (One)

Terms and Conditions of Supply:

1. Last date and time for acceptance of bids is 9th March 2015 upto 4.00 p.m
2. Suppliers shall submit the following documents along with their quotations.
 - (a) Income- Tax clearance certificate from the Income-Tax Officer concerned, certifying that the tenderer has cleared all the Income-Tax dues.
 - (b) Suppliers should be either manufacturer or authorized dealer of the said equipment and should submit the proof for the same. Also, the suppliers should state whether they are a Proprietary Firm, Partnership Firm or a Private/Public Limited Company and furnish the proof of the same.
 - (c) The names of the organizations and laboratories to which similar equipment have supplied.
 - (d) Earnest Money Deposit shall be in the form of a Demand Draft drawn in favour of **“Finance and Accounts officer, University of Mumbai, Fort Campus Mumbai 400032”** on any Scheduled/ Nationalized Bank, payable at Mumbai. The amount of Earnest Money Deposit shall be 3% of the cost of supply subject to maximum Rs 1 lakh.
 - (e) VAT Registration No. s
 - (f) Technical specifications offered by the Supplier.
 - (g) Technical compliance table
 - (h) Propriety certificate, if any
3. The rates should be mentioned in the **Schedule** attached with the Tender Document. Each page of the tender shall be signed in full and stamped with the seal by the supplier. The supplier must clearly state in what capacity he or she is signing the tender.
4. The supplier shall submit the tender in two envelopes. The first envelope (Technical Bid) shall contain all the documents referred to in **para two above** and sealed. The second envelope (Commercial Bid) shall contain the **Schedule**, in which the supplier shall register the rates of supply. The second envelope shall also, likewise, be sealed. Both the envelope then should be put together, and shall be sealed in an envelope, and shall prescribed time and date. The Technical Bid shall be opened first to ensure that supplier have submitted all the requisite documents.

If the Technical Bids are not in order or are deficient in some respect, the commercial bids in respect of such tenders shall not be opened. The date and time of opening the financial bids shall be announced immediately after opening all the Technical bids.

5. Tender bids not accompanied by the requisite amount of Earnest Money Deposit are liable to be rejected

6. The Earnest Money Deposit paid by the supplier shall be forfeited, if the supplier fails to pay the necessary security deposit in the event of his tender being accepted.

7. The amount of Security Deposit/Performance Guarantee shall be 5 % of the cost. In case of successful tenderer the amount of Earnest Money Deposit shall be converted in Security Deposit/Performance Guarantee. Security Deposit/Performance Guarantee shall be refunded after the warranty period is over. The Security Deposit/Performance Guarantee can be paid in the form of a Bank Guarantee from a scheduled bank.

8. Supplier should read carefully all the instructions and terms and conditions, etc before registering rates in prescribed schedule of the tender. Taxes and duties etc., should be shown separately.

9. The offers made by the suppliers shall be open for acceptance within 120 days after the last date of submission of tender.

10. The Technical Documents shall be opened by the Head of the departments of Biophysics, Vidyanagri, Santacruz (E), Kalina, Mumbai for those bids for which minimum three Vendors have participated. The tenderers or their authorized representatives shall be allowed to be present at the time of opening of the tenders. Financial bids of only qualified tenderers shall be opened.

Tender opening (if minimum 3 bids are received), first extension of two weeks starts, if less than 3 bids are received in the 1st extension, last date of the first extension (opening of the technical bids on the same day, if 3 bids received), second extension of the second week starts if less than bids are received in the first extension, last date of second extension (opening of technical bids on same day even if less than 3 bids are received.)

The date and time of opening the bids (technical as well as financial) shall be announced on the Mumbai University website after the last date of the receipt of the tenders

11. In case of imported items/equipments, the rates should be quoted in the light of exemptions enjoyed by educational institutions. University is exempted from the payment of Octroi and the necessary certificate/form can be issued by the University. The customs duty applicable to the University of Mumbai is maximum 5% of the invoice.

12. Technical specifications of the instruments/equipments/articles are given in **Annexure** to these papers (Part B). Vendors are required to fill the Part C appropriately after studying the technical specifications as in Part B

13. The delivery, installation & operational training of the instruments/equipment should be completed within 3 months from placing of the order, in case of the imported equipment and within 15 days if the instrument/equipment is made in India. No extension shall be granted to the contractors/suppliers for the period of delivery, under any circumstances.

14. If the supplier fails to deliver the article as per the delivery schedule, the University of Mumbai shall be free to procure the balance/undelivered supply, at the risk and cost of the supplier, from other such suppliers

15. The goods, articles, materials supplied by the supplier shall be accepted after inspection by an officer authorized by the competent authority. No articles/materials which do not conform to the specifications laid down in the terms and conditions or damaged in transit be accepted.

16. The bills of the suppliers shall be paid by the University after all the materials /articles/equipments have been received, inspected as above.

17. Vendor must submit Compliance statement in tabular form comparing each specification of the quoted item with that given in the Tender Document part B. The Vendor also must supply a soft copy of the Table only Microsoft in word 2007 format or latest if any.

18. If the equipment is imported and requires PC, printer other peripherals, they can be bought from India and should be of International brand. The monitor should LCD/TFT screen. The printer should be LaserJet printer. The processor should be Intel Core2 Duo. The amount quoted for the items bought in India, installation; servicing etc. can be in Indian Rupees and the imported items can be quoted in foreign currency.

19. The warranty period shall be for three years.

20. As the suppliers shall be responsible for the supply and installation (wherever necessary) of equipment at Mumbai, the cost towards insurance until destination in the University, shall be borne by suppliers.

21. In the event of any breach of the terms and conditions of the supply, the University of Mumbai may terminate the contract placed with the supplier and forfeit the security deposit or the supplier.

22. Proprietary certificate, if any, should be included in the technical bid.

23. The basic operator training should be provided by the competent Engineer during the time of installation

24. Charges for AMC after one year of warranty for next four years (minimum 4 visits per year) should be clearly mentioned separately as optional item. A list of all the necessary accessories required to make the unit functional should be provided. Names and phone numbers of the persons responsible for Sales and Service for this territory should be mentioned.

SCHEDULE TO TENDER

Note:

1. Tenderers are advised to read carefully the Terms and Conditions of supply and "the Instructions to the Tenderers" before recording the rates in this schedule.
2. No erasures or overwriting shall be allowed, unless they are authenticated under the full signature and the seal of the tenderer.
3. The Rates shall be FOR, at destinations/godowns/places indicated in the delivery

| Item no | Description of goods with details of specifications | Number/ quantity | Price/Ra te per Unit | Taxes | Duties | etc |
|---------|---|------------------|----------------------|-------|--------|-----|
| | | | | | | |

Signature of the Tenderer

Seal of the Firm

PART B

FOURIER TRANSFORM INFRARED (FT-IR) SPECTROMETER

| Specifications | |
|--|--|
| <p>High Resolution FTIR Spectrometer specially dedicated for studying the protein analysis such as conformational/ stability, secondary structures, protein dynamics etc in aqueous solution including specialised accessories and software. System should be upgraded to TGA/DSC/IR Imaging Microscope in future.</p> | |
| Technical specification | |
| Basic system | High performance, high resolution FTIR system should be fully external PC controlled system through Windows based software's. |
| Optical range | 8000 – 350cm ⁻¹ KBr optics 6000-500 cm ⁻¹ ZnSe optics |
| Wave length accuracy | ± 0.01 cm ⁻¹ |
| Peak-peak signal – to –noise ratio | > 45,000:1 (1min measurement time, 4cm ⁻¹ scan) |
| Spectral resolution | 0.4cm ⁻¹ or better |
| Optics | High humidity ZnSe/KBr optics. ZnSe optics is preferred. Gold coated optics for maximum light throughput. |
| Interferometer | Michelson interferometer capable of providing high energy throughputs in to the sample compartment for highest sensitivity with fast response with continues dynamic/ permanent alignment facility. Bearing mechanism must be wear free (friction less design). Interferometer must be provided with at least 8 years of warranty. |
| System must solid state laser | He- Ne /Diode laser |
| Detector | High sensitivity DTGS/DLaTGS & upgradable to PMCT detector |
| Optical component such as detector, source and beamsplitter must be electronically coded, so that these components are automatically recognized when placed in the spectrometer or removed | |
| Spectrometer must be sealed in its standard configuration and prepared for purge operation. | |
| The FTIR spectrometer should be Fully digital, with dual channel A/D convertor integrated with the detector. The system A/D convertor must have a 24 bit dynamic range for accurate representation of spectra. | |
| Communication between the spectrometer and controlling PC must be performed using an Ethernet Protocol. | |
| System should have built in validation wheel. | |

Software and upgradeability:

- Data acquisition, processing and data evaluation should be controlled by the spectrometer software.
- The software must be "all-in-one" software for data measurement, manipulation and evaluation.
- 3D data must be viewed, manipulated and evaluated within the operating software.
- The software should include calibrations for protein concentration and secondary structure of proteins (alpha-helix, beta-sheet). Using this internal calibration the system automatically should determine the secondary structure and the protein concentration of each measurement performed with the protein transmission cell.
- The spectrometer software should further allow driving temperature ramps with the protein ATR cell automatically. As result of the temperature ramp measurement the software should automatically provide protein absorbance spectra ready for analysis.
- Measurements performed by this FTIR system should result in protein spectra which have not to be further processed or corrected for water vapour interference or path length differences.
- Spectral library of proteins with known 3D-structure should be included. The system further includes a spectral calibration for protein concentration.
- Advanced quantification software should be included along with FTIR spectrometer.

Kindly Quote Following Sample Accessories in option

| | |
|-------------------------------------|---|
| Flow Through Type Transmission Cell | It should be transmission type cell, temperature controlled (stability better than 0.1K), prevent protein aggregation. Temperature range 4 ⁰ -50 ⁰ C. |
| Detector | Photovoltaic MCT detector for better sensitivity for protein samples. |
| Flow Through type ATR cell | ATR cell for aqueous and non-aqueous protein solutions. It should require only a very small sample volume (Typically <15 µl) for measurement. This ATR cell should be temperature controlled and should be suitable for temperature ramps from 4-95°C to monitor temperature induced conformational changes in solvated proteins. It should have inert sample interface. The supplier should include a water circulator with a temperature accuracy of 0.02K (at -10°C) or better. |

Please Note: Vendor must provide original flayer of equipments for validation of specification. They must highlight specifications on flayer with marker pen.

PART C

Tick the appropriate specifications whether provided or not columns in the columns as below and highlight the specifications if provided in the equipment brochures that are to be attached.

| Specification offered by Department | Specifications provided by the vendor | | |
|-------------------------------------|---------------------------------------|-----------|---------|
| | Compiled | Specified | Remarks |
| | | | |