



MAHATMA GANDHI UNIVERSITY

Registrar

Tender No: AdBVII/ET/20/SPAP/PHY2/2018

Dated: 04/1/2018

**NOTICE INVITING TENDER**

**Tender No: AdBVII/ET/20/SPAP/PHY2/2018**

**The Registrar, Mahatma Gandhi University, Kottayam** invites online bid (technical and financial bid) for supply and installation of the scientific equipment **FTIR Spectrometer** from reputed firms

1	Name of the scientific equipment	<b>FTIR Spectrometer</b>
2	Earnest money deposit (EMD)	Rs. 20000/-
3	Tender submission fee	Rs. 3000/-
4	Period of supply and installation	Within 60 days from the L/C opening date
5	Mode of submission of Bid	Online
6	Tender Documents	Can be downloaded from the website <a href="http://www.etenders.kerala.gov.in">www.etenders.kerala.gov.in</a>
7	Last date and Time of submission of tender by online	14.02.2018 ,12.00 pm
8	Last date and Time of submission of relevant documents by speed post	16.02.2018 ; 12 .00 pm
9	Date and time of opening of bid opening	16.02.2018 ; 2 .00 pm

General tender documents and tender schedule can be downloaded in A<sub>4</sub> plain size paper free of cost from the website [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in). **Duly filled up and signed tender schedule along with relevant documents should also be sent to**

**The Director  
School of Pure & Applied Physics  
M.G. University,  
Kottayam,**

**Kerala Pin-686560**, by speed post so as to reach before the date and time specified. The cover containing the documents should super scribe the name of the scientific equipment, tender number, and last date of submission of tender.

Documents to be submitted along with bid through online/speed post.

Sl.No	Through online	Through speed post
1	Scanned copy of dealership certificate	Copy of valid dealership certificate
2	Scanned copy of duly filled e-payment form	Duly filled e-payment requisition.
3	Scanned copy of other certificates required, if any, for tender acceptance	Copy of other certificates required, if any, for tender acceptance.
4	Scanned Copy of duly filled preliminary Agreement in stamp paper of Rs.200/-	Preliminary Agreement in original
5	BOQ	Not Required

### **Technical Specification for ATR FTIR Spectrometer**

#### **Specification FTIR**

The instrument must be sealed and desiccated optical unit. Vibration isolated base plate having the following **specification**.

- Wavelength range : 7800cm<sup>-1</sup> to 350 cm<sup>-1</sup>
- Spectral resolution : 0.1 cm<sup>-1</sup> or better
- Wavelength precision : 0.01 cm<sup>-1</sup> or better
- Wavelength accuracy : 0.1 cm<sup>-1</sup> or better
- Signal to Noise Ratio : 40,000:1 peak-peak or better
- Beam splitter : extended range multilayer KBr
- Detector : DTGS detector with temperature stabilization
- Quoted with ATR with diamond Crystal having full wavelength coverage
  - Quoted with HATR - Reflectance Accessory with ZNSe/Diamond/KRS-5 crystal) for liquid, paste and powder.
  - Interferometer : Rotary Michelson interferometer for fast scanning, self-compensating for dynamic alignment changes due to a tilt and shear, incorporating high-reflectivity..
  - Source : Long-life source with hot-spot stabilization. Must be user replaceable.
  - Beam splitter : Multilayer KBr for the study of metal oxides and metal Halides
  - Instrument must have Optics Guard system for extended desiccant life and additional optical component protection.

- Instrument should have the option to upgrade to FTIR Microscope & Far IR range (up to minimum 50 cm<sup>-1</sup>) in future
- Instrument should be capable to interface with TGA for Evolved Gas Analysis
- Nitrogen gas cylinder with regulator to be quoted for purging of the optics
- Instrument must have Atmospheric Compensation to minimize effect of atmospheric water and CO<sub>2</sub> on the sample spectra without the need for reference or calibration spectra.
- The instrument must have provision to attach the third party PIKE, SPECAC etc. accessories ATR, HATR etc..
- Software : A single software platform incorporates all of the functions required for infrared analyses, Such as spectral comparison algorithm and Euclidean searching instrument control, data manipulation and analysis, and flexible report utilities,. Library from respective manufacturers shall be included
- Branded Computer ( preferably HP/DELL i5 configuration, 1 TB Hard disk, 4 GB RAM 20" TFT, with suitable Licensed OS in media) and Color Laser Printer, and 3 KVA UPS with Exide 6EL Tubular battery also to be quoted
- Imported Portable De humidifier to be supplied
- Imported Hydraulic Press (15 tons) , and Die set should be supplied
- Warranty: 3 Year unconditional warranty .
- Installation & demonstration: Free of Cost. Training should be given for staff and students

### **Special Conditions**

1. Instrument should have a warranty of at least **three years** and should have frequent visits from both service engineer and application scientist. Additional 2 years AMC should be quoted as optional.
2. There should be at least one service engineer and one application scientist based in India with onsite training facility on the same quoted instrument. Training should include operation, software applications, analysis, handling and maintenance of system.
2. A good record in supply and service to other research institutes will be considered as a positive point for a particular company. User list of similar equipment supplied recently in India should be provided with the above mentioned specifications.
3. Laboratory floor space, electrical power requirements, earthing, room temperature/ humidity requirements etc. should be mentioned appropriately.

4. All necessary accessories should be supplied with the instrument, as per standard package offered, including complete set of service and operation manuals for diagnosis, trouble shooting, maintenance and electronic circuitry (hard and soft copies).

5. The Delivery Schedule, Payment Terms & Warranty/Guarantee etc must be clearly indicated in the technical bid.

The bids will be opened at the date and time specified. Further details can be had from the Director, School of Pure & Applied Physics on all working days during working hours. The bidders are advised to submit their bid well in advance to avoid any kind of network issues. If relevant documents through speed post are not submitted with in time, the tenders will not be considered.

The undersigned reserves the right to reject any or all the tender without assigning any reason whatsoever.

**Registrar**