

**INDIAN INSTITUTE OF TECHNOLOGY GOA**

At Goa Engineering College Campus

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PAN: AABAI1653D

TAN: BLRI08261B

**Enquiry No: IITGOA/2019-20/002**

**Date: 16/04/2019**

IIT Goa invites sealed quotations in two bid form for the supply of below mentioned item.

Sl. No.	Description of Item	Qty
1	Fourier Transform Infra-Red (FTIR) Spectrometer <b>(Detailed Specifications Attached)</b>	01 No.

**Terms and conditions:**

1. Quotation must be valid for at least 120 days.
2. The GSTIN should invariably be mentioned in your offer.
3. Kindly attach a compliance certificate along with the technical quote.
4. Prices:

**I) For Import Supplies:**

- a) It is mandatory to quote price in CIF/CIP Mumbai basis only with separate cost breakup of transportation up-to IIT GOA.
- b) In case of Multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- c) All local taxes, customs duty and clearance charges will be borne by the Institute as applicable.
- d) Payment terms: 90% payment by letter of credit and balance 10% will be paid by wire transfer after satisfactory installation and commissioning.

**II) For Indigenous Supplies:**

- a) In case of Multiple options of same product, bidders are requested to quote only one best option and not multiple options.
  - b) Payment terms: Within 30 days after the delivery and installation of the item at IIT GOA.
5. Delivery and installation should be made within 4 – 6 weeks of getting a confirmed order.
  6. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.

7. IIT Goa reserves the right to accept and/or reject any/all bids without assigning any reason.
8. Quotations shall be submitted in two parts;
  - 1) **Part – I (Technical)** should contain all the technical details and specification of the product. It should contain unpriced bid along with terms and conditions, compliance certificates, proprietary certificates (if applicable), any other certificates/details etc. This envelope should be marked as “Technical Bid”
  - 2) **Part -II (Financial)** The financial bid of the above item should be in a sealed envelope marked as “Financial Bid” and should contain financial terms and conditions.
9. For any clarification, you may kindly contact Dr. Shakthi Prasad D. (E-mail: [shakthi@iitgoa.ac.in](mailto:shakthi@iitgoa.ac.in)) and Stores & Purchase Department (E-mail: [purchase@iitgoa.ac.in](mailto:purchase@iitgoa.ac.in)) till 26/04/2019.
10. All sealed quotations must reach to the Assistant Registrar (Stores & Purchase), IIT Goa, at Goa College of Engineering Campus, Farmagudi, Ponda, Goa by 17.00 Hrs on or before 07<sup>th</sup> May, 2019”.

**Sd/-**  
**Asst. Registrar (S&P)**

## Technical Specifications of FTIR Spectrometer:

Features Requirements	Features Requirements
Wavenumber range	6000 cm <sup>-1</sup> – 400 cm <sup>-1</sup> or better
Spectral Resolution	2 cm <sup>-1</sup> or better
Wavenumber Precision	0.001 cm <sup>-1</sup> or better
Wavenumber Accuracy	0.1 cm <sup>-1</sup> or better
Signal to Noise Ratio	Signal to Noise Ratio 30,000: 1 or better, peak-peak, 1 minute
Optics	Kinematically mounted, zero alignment optics, with high reflectivity and a low-angle off axis design. Source intensity should be consistent throughout its life and laser should be solid state or better. Source and laser warranty should be 6 years or more. Free from the table vibration and should be consistence with the spectrum when measured in different locations.
Detectors	DLATGS or better
Samples	Solid, Liquid and Gas
Optical Windows	ZnSe is preferred, in the case of KBr there has to be proof for proper operation of the equipment in larger %RH (>60 %) region for more than 6 years.
Instrument size and weight	Less than 20 kgs and smaller than 500 mm x 500 mm x 500 mm Or Bench top
Compulsory Accessories	<ul style="list-style-type: none"> <li>• ATR Diamond unit</li> <li>• Computer with 1 TB hard drive and 8 Gb RAM and intel i7 processor.</li> <li>• Desiccants kit (for at least 3 years of operation) other standard utilities which will make instrument operational must be quoted.</li> <li>• 5 KVA UPS with minimum 30 mins back-up.</li> <li>• Laser Printer</li> <li>• Magnetic film holder</li> <li>• Demountable cell mount</li> <li>• KBr cell window</li> <li>• Liquid cell</li> <li>• Heated gas cell to perform the FTIR of gas samples.</li> </ul>
Software	<ul style="list-style-type: none"> <li>• Windows based</li> <li>• Real time reference curve capability</li> <li>• Multi-tasking: simultaneous measurement and evaluation</li> <li>• Graphic and data export, allow creating methods</li> <li>• Desiccant status indicator</li> </ul>
Optional Accessory	<ul style="list-style-type: none"> <li>• Variable temperature cell (includes all accessories)</li> <li>• Hyphenation of FTIR with TGA.</li> <li>• Real time reaction monitoring probe</li> </ul>

### Other requirements: -

#### Essentials

- a. Quotation for AMC after warranty period.
- b. User list and contact number from IITs/IISERs/IISc etc. of same quoted model.
- c. Installation report with important specs.
- d. Optional accessory should be quoted separately.

- e. OEM must have annual turnover above 10 cr.
- f. Globally reputed brand indicated by publications.
- g. Condition of purchase: successful demonstration of specs during site installation.

**1. Warranty:**

- a) The complete instrument and accessories excluding consumables should be under warranty for a period of **three years** from the date of installation.
- b) In case of breakdown during the warranty period, service engineer of the supplier should make as many visits as are necessary to rectify the problem and replace the faulty parts. Supplier should provide all spares required for making the instrument operational.

**2. Maintenance and Repair:**

- a) Vendor should be easily accessible and available on demand within 24 hours of any problem in the instrument.
- b) One compulsory visit per year for maintenance must be included apart from the installation visit.
- c) Annual Maintenance Contract (AMC): Financial involvement for two years on site AMC after the expiry of warranty period should be provided.

**3. Installation and Training:**

- a) Vendor should provide training on operation and application for each of the equipment mentioned in the tender at IIT Goa after installation. The training event needs to be performed once a year for three years.

**4. Spares:**

The supplier of the instrument must confirm in writing that the spares for the entire instrument will be available for a period of at least ten years after the installation of the instrument.

**5. Manual:**

One set of operating manual and service manual (in English) should be provided with the instrument. The manual should be presented in both, hard and soft copy.

**6. Pre-installation requirements**

All the necessary pre-installation requisites required for the complete installation of the system.