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

Dated: 31/07/2013

## NOTICE INVITING QUOTATIONS

### Sub: <u>Purchase of a Tensiometer</u>

Sealed quotations in separate envelops of technical and commercial bids kept in one sealed outer envelop are invited for purchase of a Tensiometer as per specifications given below. Your sealed quotation should reach latest by 5 PM on 23/08/2013 to **Prof. Siddharth Pandey, Department of Chemistry, Indian Institute of Technology – Delhi (IIT Delhi), Hauz Khas, New Delhi - 110016**. Your quotation should be superscribed "Quotation for Tensiometer due on 23/08/2013".

#### **Specifications:** Tensiometer

The Tensiometer must have the following specifications:

1. It must perform fully automatic measurements of surface tension and interfacial tension in the temperature range ambient to 90°C with in-built magnetic stirrer for stirring the sample.

2. It must measure surface tension and interfacial tension with the help of Wilhelmy plate and Du Noüy ring.

3. Surface and interfacial tensions must be measure in the range 1 to 1000 mN/m with  $\pm 0.01$  mN/m resolution.

4. Measuring range for contact angles must be from  $0^{\circ}$  to  $180^{\circ}$  with  $\pm 0.01^{\circ}$  resolution.

5. Method of measurement must use electronic balance with weighing range must be from 100  $\mu$ g to 210 g with ±100  $\mu$ g resolution.

- 6. Measuring rate must be up to 50 data per second.
- 7. Calibration must be automatic and software controlled through in-built standard weight.
- 8. The Instrument must be modular and upgradable with the following accessories:
  - a. Fully automatic measurement of CMC with Reverse CMC
  - b. Measurement of contact angle of solid, powder, and fiber samples
- 9. The following must be offered with the Tensiometer:

a. Sample vessel with 50 mm diameter suitable for surface tension and interfacial tension measurements made with Borosilicate glass -6 nos.

b. Adapter necessary for using sample vessel with 50 mm diameter.

c. Standard small Wilhelmy Plate with length of 10 mm and width of 9.95 mm – 1 Nos.

d. Special accessories and adapter for measurement of samples with small volume up to 0.2  $\,\rm mL$ 

e. Special measuring Wilhelmy Plate for small volume Samples up to 0.2 mL

f. Sample vessel made of sstainless steel for small volume up to 0.2 mL - 6 Nos.

10. The proof in support of all specifications is acceptable ONLY through original brochure/documents provided by the manufacturer.

#### **TERMS & CONDITIONS:**

1. Please submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes. Mark the two envelopes clearly as "Technical Bid" and "Financial Bid". Both the sealed envelopes should be sent in a single sealed envelope, with clearly marked as "Quotations for Tensiometer due on 23/08/2013". The quote should reach the following address on or before date 23/08/2013 up to 5 PM.

Name:	Prof. Siddharth Pandey
Address:	Department of Chemistry
	Indian Institute of Technology – Delhi (IIT Delhi)
	Hauz Khas, New Delhi – 110016

- 2. Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.
- 3. If the bidder is an authorized dealer of any manufacturer, the authorized Indian dealership certificate from the principles should be enclosed. Similarly, proprietary certificate for proprietary items should be provided.
- 4. IIT Delhi is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information are required.

a. Quotation with details of Basic Price, Rate & Amount on which ED is applicable.

- 5. Please quote prices of imported items at FOB (Freight on Board) IIT Delhi inclusive of all taxes, freight, delivery, installation and onsite training charges. The quotation should provide the total price of the system including all taxes and transportation charges.
- 6. In case IIT Delhi is imposed with demurrage charge due to import on CIF, the entire demurrage charge has to be borne by the Indian Agent of foreign supplier.
- 7. Three years comprehensive warranty be provided and AMC price beyond 3 years should be mentioned separately.
- 8. Payment terms: 100% payment will be made through LC.
- 9. Delivery period: within 1 month from the issue of supply order.
- 10. The quotations must have validity of at least three months.
- 11. The products will be used for educational purposes. Any applicable academic institution discounts should be offered and stated clearly.
- 12. Authority of IIT Delhi reserves the right to reject any or all quotations without assigning any reasons.
- 13. All relevant documents along with justification, i.e., Proprietary Certificate, if applicable, Authorized Agency Certificate from the manufacturer must be attached with the technical bid.

Prof. Siddharth Pandey Project In-charge

> Dr. Shashank Deep Committee Member

> Dr. S. Nagendran Committee Member

Dr. Pramit K. Chowdhury Committee Member