

**DEPARTMENT OF BIOCHEMICAL ENGINEERING AND BIOTECHNOLOGY  
INDIAN INSTITUTE OF TECHNOLOGY DELHI  
HAUZ KHAS, NEW DELHI – 110016**

13.02.2014

Subject: Notice Inviting Quotation (NIQ) for purchase of Kjeldahl Apparatus

Sealed quotations are invited for purchase of 1 (one) Kjeldahl Apparatus in the Department of Biochemical Engineering and Biotechnology IIT Delhi addressed to Dr. Z. A. Shaikh, DBEB, IIT Delhi on or before 27. 02. 2014 by 2:00 P.M. All the interested parties are requested to read the specifications given below carefully before submitting the quote. The quotation must include all taxes, handling, shipping and installation charges. Also all details of guarantee/warranty should be clearly mentioned. The Technical and Financial bids should be in separate sealed envelopes and both should be placed inside a large sealed envelope inscribed with "Quotation for purchase of Kjeldahl Apparatus". The Technical and Financial bids must provide all information about the components asked in the sections "Specifications of Essential Items" and "Specifications of Optional Item".

Item Name: Kjeldahl Apparatus

Quantity: 01 (One)

NOTE: Kindly do not send any unnecessary documents, like advertisements containing the product rang list of vendors/distributors etc., copies of recent PO's of supplies made by vendor, along with the bids.



Dr. Z. A. Shaikh  
DBEB, IIT Delhi

### **Specifications of Essential Items**

The Kjeldahl Apparatus system should comprise of Digestion system & Distillation unit with inbuilt auto titrator

#### **1. Distillation System:**

- I. Fully Automatic distillation unit consisting of automatic alkali addition, dilution water addition, receiver solution addition, tube draining and inbuilt auto titration system.
- II. Inbuilt Titration device should be maintenance free and calibration free
- III. Reproducibility: 1 % RSD
- IV. Variable output steam generator
- V. Polypropylene splash head
- VI. Automatic opening and closing distillation interlocked safety door for protection
- VII. Positive displacement pumps for reagent addition
- VIII. Distillate temperature monitor
- IX. Corrosion resistant cabinet
- X. Cooling water flow control
- XI. Removable drip tray
- XII. Reagent sensors for reagent and waste; Water/Alkali/ Receiver solution /Titrant and Waste fitted with airtight caps on tanks (tanks to be supplied by the manufacturer with instrument no local tanks will be accepted)
- XIII. Display – LCD with illumination, all steps of the analysis and the programming as well as error messages to be displayed, Keypad-Single knob operation, Storage of raw data in instrument
- XIV. Suction and addition of chemicals can be programmed or to be done manually using the chemical resistant keypad
- XV. The Titration by calibratable micro dosing pump. PC based software along with suitable PC to be supplied with Error Indication facility. Possibility of up-gradation the system with auto sampler for 20 samples in future.

#### **2. Digestion System : with a provision for digesting at least 08/ more numbers of samples simultaneously**

- I. Temperature range: 100-440 °C
- II. Temperature setting repeatability: 1°C
- III. Temperature display : digital
- IV. Over temperature protection
- V. Temperature stability :  $\pm 2$  °C
- VI. Time :1 to 1000 minutes
- VII. Safety feature of excess temperature cutoff
- VIII. The system should be provided with inbuilt two tier console, set of 250ml digestion tubes (at least 16), drip tray, Isoversinic tubing for fume suction, Insert rack , Exhaust manifold & jet pump
- IX. System must have the facility for fume removal without scrubber

### **Specifications of Optional Item**

Scrubber : Two stage of Condensation & Neutralization of acid fume.

## NECESSARY TERMS AND CONDITIONS

1. IIT Delhi is exempted from paying custom duty under notification No.51/96 (partially or fully) and necessary "Custom Duty Exemption Certificate" can be issued after providing following information.

a. Shipping details i.e. Master Airway Bill No. and House Airway No. (if exists)

b. Forwarder details i.e. Name, Contact No., etc.

Custom Duty Exemption Certificate will be issued to the shipment in the name of the Institute and Bills of Entry should be submitted to IIT Delhi later on.

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. A special discount/rebate wherever admissible keeping in view that supplies are being made for educational purpose in respect of public institution of national importance may please be indicated.

8. Payment Options (any one to be chosen by the Department)

- Letter of Credit: 90% payment against shipping documents & balance 10% after satisfactory installation. For large purchase i.e. costing over Rs. 1 crore, 100% payment be made through LC.
- Sight Draft: Payment against documents through bank.
- Against Delivery: Payment by wire transfer after receipt of material.
- Advance payment: pre-payment by wire transfer (for orders less than Rs. 5 lakh)
- Against Delivery: Payment by wire transfer after receipt and installation of material.

9. Delivery period: within 1 month from the issue of supply order.

10. Warranty: at least 3 years comprehensive onsite warranty should be provided. AMC price beyond 3 years should be mentioned separately.

11. The quotations must have validity of at least three months.
12. Authority of IIT Delhi reserves the right to reject any or all quotations without assigning any reasons.