



Ref: ChE/2019-20/Vs/09

Date: 07 June 2019

ANNEXURE-I

DEPARTMENT OF CHEMICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY (IIT) VARANASI

ENQUIRY

Due Date: 28 June 2019

Date: 07 June 2019

Dear Sir,

Please submit your lowest quotation for supplying the under mentioned items. Quotation must reach us before the date marked above and should contain the following information:

1. Full specification and make of the item offered and its rate F.O.R. Varanasi/CIF New Delhi.
2. Sales tax at concessional rate as applicable to educational institution.
3. Your sales tax registration number and TAN number.
4. Conditions of supply and terms of payment.
5. If you are a manufacture of the item or if you have proprietary right over it, please mention it in the quotation and provide a certificate.
6. Please mention your agency commission in Indian currency. If applicable (in case of imported items).
7. Please give undertaking as per annexure-I-B

Quotation must be sent in a **sealed envelope** with word "QUOTATION", our reference number, and due date as given above, clearly marked over it to the address: **Dr. Vijay Shinde, Assistant Professor, Department of Chemical Engineering, Indian Institute of Technology (IIT) VARANASI 221005.**

Technical specifications for Gas Chromatograph

1. Main Unit: 01 set

- Micro controller based temperature control unit
- Auto cooling facility
- Large graphical display to show set and actual temperature of all the heating zone on single page.
- Uses Large Screen with Backlight lattice LCD.
- Intelligent Breakdown Self-Checking and Alarm Function.
- Carrier out protection for column
- User friendly operations of system

2. Installation Kit: 01 set

- Silicon Rubber Septums: two Pkt of 40 Nos.
- Hamilton Gas Tight Syringe: 1 ml capacity
- Tedler Gas Bag 0.5-liter (Polyethylene fittings): 02 set
- Soap Bubble Flow meter and require fittings.

3. Flame Ionisation Detector with Control Module: 01 set

4. SS Packed Columns, suitable for following applications



भारतीय प्रौद्योगिकी संस्थान  
**INDIAN INSTITUTE OF TECHNOLOGY**  
(काशी हिन्दू विश्वविद्यालय)  
**(BANARAS HINDU UNIVERSITY)**  
रासायनिक अभियांत्रिकी एवं प्रौद्योगिकी विभाग  
**DEPARTMENT OF CHEMICAL ENGINEERING & TECHNOLOGY**  
(ऊच्चावुशीलन केन्द्र एवं डी एस टी प्रायोजित 'फिस्ट' विभाग)  
(CENTRE OF ADVANCED STUDY & DST DEPARTMENT UNDER FIST)  
(वाराणसी - २२१००५) Varanasi - 221005

- **Mixture 1:** Acetone, Methanol, Ethanol, Acetaldehyde, Acetic Acid, Diethyl ether (2-10 % Ethanol+ 90 % water)
  - **Mixture 2:** Benzene, Toluene, styrene Ethylbenzene, (1% moisture in the sample)
5. Data Acquisition Software
- Single channel data acquisition hardware
  - USB dongle and cables
  - Single channel chromatograph software with operation manual.
6. Gas Cylinders
- H<sub>2</sub>, Ar/N<sub>2</sub> and zero Air Gas cylinder filled with UHP gases
  - Valid Explosive License Certificate for each cylinder
  - Capacity : 47 ltrs
7. Three Stage Gas purification and Control Panel
- Silica Gel & Molecular sieves Moisture Trap filter
  - Char coal filter for Hydrocarbon Trap
  - Oxytrap filter
  - Inlet and outlet pressure gauge and regulators
  - On/Off toggle valve for Ar/N<sub>2</sub>, H<sub>2</sub> and Zero Air Gases
  - Tubing SS 1/8" with colour Sleeve

**Other non-technical specifications**

1. Supplier must have supplied the aforementioned item to IITs/Central Universities in India.
2. At least one customer satisfaction certificate is required.

HOD/COS/PI



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