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

Dated: 17th Feb 2012

NOTICE INVITING QUOTATIONS

Sub: Purchase of Quaternary Gradient HPLC system with Diode Array Detector

Sealed quotations in ***separate envelops of technical and commercial bid*** kept in one sealed outer envelope are invited for purchase of Quaternary Gradient HPLC system with Diode Array Detector as per the specifications given below. Your sealed quotation should reach latest by 5 PM on 5th March 2012 to **Dr. Nidhi Jain, Department of Chemistry, Indian Institute of Technology – Delhi (IIT Delhi), Hauz Khas, New Delhi - 110016**. Your quotation should be superscribed "**Purchase of Quaternary Gradient HPLC system with Diode Array Detector** due on 5th March 2012".

SPECIFICATIONS FOR QUATERNARY GRADIENT HPLC SYSTEM

1. **Pump Delivery System**
    - Hydraulic system   : Dual piston in series reciprocating pump.
    - Flow Rate range   : 0.001 to 10.0 ml/min
    - Maximum Pressure   : 35 - 40 MPa (0.001 ml/min to 5.000 ml/min)
      18 - 20 MPa (5.001 ml/min to 10.0 ml/min)
    - Flow rate accuracy   : ±1% or 2 µL/min (0.01 to 2.0ml/min)
      ±2% (0.101 to 8.0 ml/min)
    - Flow rate stability   : < 0.075% RSD at 1mL/min
    - Pump must be usable as isocratic and binary/ternary/quaternary gradient system (with suitable gradient kit).
2. **Gradient System** :
    - No. of solutions mixable   : 4 (low pressure quaternary mixing)
    - Mixing System   : Solenoid valve opening/closing time control system.
    - Gradient kit should be housed inside the pump chamber.
3. **Degasser**
    - Number of liquid flow paths : 4
    - Degasser should be integrated within the pump chamber.
4. **Manual Injector** with position sensor, 20 µL loop, 50 µL loop, 100 µL loop, and 500 µL loop.

5. **Column oven:**
   - Temperature setting range : 1 to 65°C (in 1°C steps)
   - Temperature control range : At least 15^0C lower than Room Temperature to 65^0C
   - Temperature control accuracy : ±0.1°C
   - Column accommodated : Minimum three columns of 25 cm length.
   - Temperature control system : Block heating + Air circulation.
   - Solvent must be preheated by the block heater before entering into column.

6. **Diode Array Detector:**
   - No. of photodiode bits : 512 or more
   - Wavelength Range : 190 –900nm
   - Wavelength accuracy : ± 1nm
   - Wavelength resolution : <0.8 nm/bit
   - Slit width : 1 nm and 4 nm (2 options)
   - Lamp : Deuterium Lamp, Tungsten lamp and Hg lamp
   - Noise : <0.5 x 10^{-5} AU
   - Drift : <0.5 x 10^{-3} AU/hr
   - Spectrum acquisition cycle : Selectable from 50, 100, 200, 400, 800, 1600 & 3200 msec
   - Following features should be available in connection with Chromatography Software

     - 3D Chromatogram
     - Library search
     - Peak purity check

   - GLP functions: Date of lamp replacement, number of ignitions, ignition time, energy, automatic wavelength check.

7. **Suitable software** for controlling the HPLC and detector for data processing.
8. **C-18** reverse phase analytical and semi-preparative columns**.**
9. **Injection adapter and four microlitre syringes** (25, 50, 100, and 500 µL).
10. **PC** having latest configuration to be quoted.
11. **Sample filtration kit.**

TERMS AND CONDITIONS:

1. The quotations must have validity of at least three months.
2. Quotations must include insurance and air-freight charges, delivery period of the items addresses to "The Indian Institute of Technology, Delhi, India (CIF, New Delhi)." Rate should be inclusive of installation and training.
3. The products will be used for educational purposes. Any applicable academic institution discounts should be offered and state. Detailed brochures should accompany the offer.
4. If the bidder is an authorized dealer then the authorized Indian dealership certificate from the principles should be enclosed.
5. Please indicate the warranty for the system, and deuterium lamp (minimum 2000hrs or one year).
6. In case the items are proprietary products of the company, a proprietary item certificate stating the same must be provided.
7. Financial bid will be opened, those who meet the technical specifications.
8. Institute reserves the right to accept or reject any or all the quotations without assigning reasons thereof.