

Department of Chemical Engineering, IIT Delhi

NIQ

Date: 9.03.2012

Dr. Sanat Mohanty, Associate Professor in the Department of Chemical Engineering at Indian Institute of Technology, Delhi, wishes to purchase High Pressure Liquid Chromatograph with the following specifications. Technical specifications and financial bids must be submitted separately and reach the undersigned by 5.4.2012

HPLC

An automatic computer controlled high performance liquid chromatograph system equipped with a suitable gradient solvent delivery system with Auto sampler, UV-VIS Detector & Data acquisition system software to perform chromatographic operations and control of different modules of HPLC is required.

1. Gradient Pumps: (2 Nos)

The delivery unit should be capable of working in both Isocratic & Gradient operation (3/4 solvents). It should provide error-free programming of pump parameters including flow rates, operating pressure limits, compressibility compensation, calibration and diagnostics.

Two gradient pumps capable of running independent gradient programs one for analysis and another simultaneous for column washing/column flushing & column equilibration.

Programmable flow rate range: 0.1 to 10 mL/min.

Max. Operating pressure: 8000 psi or more.

Flow precision: 1 % RSD or less.

Flow rate accuracy: < 0.5 %

Delay Volume: 900 uL or less.

Automatic piston seal washing facility should be available.

The pump should have GLP features like maintenance feedback for continuous tracking of instrument usage with user settable limits and feedback messages.

Online vacuum degasser for both pumps.

2. Auto sampler

Injection volume range: Upto 100 uL or more.

Auto dilution & reagent transfer facility should be available in sampler.

Auto sampler carryover should not be more than 0.005 % RSD or better.

Sample delivery precision <0.5% RSD or better

Standard vials of 2, 4 & 8 mL can be used with the system.

At least 100 samples should be accommodated.

Additional 100 Sample vials should be provided with the system.

3. UV-VIS Detector.

Wavelength range: 190 – 800 nm or better.

Light source: Pre-aligned Deuterium lamp and Tungsten (W) lamp

Data acquisition rate: 80 Hz or more.

Wavelength accuracy: +/- 1nm or better.

Bandwidth: 6 nm or less

Wavelength Accuracy: +/- 1 nm

4. Chromatography Software

Chromatography Software should have client/server, 32-bit design for windows 2000 & XP Professional .Network control chromatographs, view real time data acquisition. Customized views and reports as per the choice of the customer with report items, graphical plots, controls & customized calculation. Real time triggers to react the condition i.e. to take action on Fault, .Leakage, Stop, Start, wavelength switching, injection etc.

The software should be GLP/GMP/21 CFR Complaint with electronic signatures etc.

5. Columns

C18 Analytical Column (5 Micron) – 01Nos

C-8 Analytical Column (5 Micron) - 01 Nos

OPTIONAL

Computer Compatible with HPLC with suitable printer.

Online 2 KVA UPS suitable for HPLC instrument

Mandatory Requirements:

- The supplier fulfilling the desired specifications will be required to arrange the live demonstration of the quoted Instrument and the software to a team of scientists. All the functional requirement and product specifications mentioned above will have to be demonstrated prior to any purchase decision.
- The supplier will be required to install the equipment and accessories completely in place and also demonstrate the Instrument and the software vis-à-vis the tender specifications. Training will also be required to be given to the users on the operation and applications on different food products after the Instrument is accepted.
- The supplier should enclose the authorization letter in original from the Manufacturer to submit quotation against the present tender. The quotation must be submitted either by the manufacturer or by their exclusive representatives in India. Quotations from re-sellers / dealers / representative offices or individuals will not be accepted even if it is accompanied by Authority letter from the exclusive representatives of the manufacturer.
- The Indian Agent and the manufacturer must have supplied sufficient number of HPLC particularly to Indian organizations.
- The supplier should enclose worldwide and Indian users list / references and special mention to be

made for the supplies made in last Five years. The names, postal address, department and the phone numbers of the users in India must accompany the quotation.

- The supplier should provide 1 year warranty for the equipment