Department of Biochemical Engineering and Biotechnology

November 30, 2012

Quotations are invited for one Binary gradient HPLC system with PDA, RI detector fraction collector & integrator having the following specifications. Technical and financial bids are to be submitted in separate sealed envelopes and placed together in a sealed cover, super scribed "**Quotations for HPLC with PDA, RI detector fraction collector & integrator"** The quotations should be submitted to **"Professor A.K. Srivastava, Department of Biochemical Engineering and Biotechnology, IIT Delhi, New Delhi 110016**" on or before 24 December 2012.

Specifications for HPLC with PDA, RI detector fraction collector & integrator -

General specifications –

Solvent System (Binary Gradient)

Flow rate 0.001 to 20.0 mL/min. with increment of 0.001mL/min.
Flow precision: 0.1% RSD
Flow accuracy: $\pm$1%
Max operating pressure: 6000psi
Flow calibration: Programmable.
Operating pressure limits: Programmable high and low pressure limits, user selectable in psi, bar & kPa.

Gradient Mixer and Pump Control Module should be included in the quote

Manual Injector Rheodyne & Stand kit:

A front end pressure screw for easy seal adjustment
Wide port angles for improved access to fittings
Internal position switch.
Operating pressure upto 5000 psi.
5, 50, 100 µl 200 µl & 5mL,10mL,20mL sample loops should be quoted.
25µl syringe (two no.) should be included. 10 mL syringe (2 Nos) should be included

Photo Diode Array Detector:

Wavelength Range : 190-800nm
Wavelength Accuracy : $\pm$1nm
Wavelength Repeatability: $\pm$0.1nm
Photodiodes should be at least 512 or more
Optical resolution: 1.2 nm or better
Linearity range: $\leq$ 5% at 2 AU, propylparaben at 257nm
Base line noise: 10×10^{-6} AU, 10nm cell at 254nm
Drift: $\leq 1.0 \times 10^{-3}$/AU/hr/°C, dry cell at 254nm
Data acquisition rate: Up-to 80Hz.

Light source: Deuterium lamp with 2000 hour warranty

Refractive Index Detector.

Measurement range: $7.0x10^{-9}$ to $5.0x10^{-4}$ RIU.
Flow rate: 0.1 to 10.0 ml/min., analytical to narrow bore applications.
Cell volume: 10µl.
Cell pressure: <100psi maximum with built-in pressure relief valve.
Linear Dynamic Range: <5% over +/- 5.0 x 10^{-4}RIU.
Temperature control: Internal oven: 30 - 55^{0}C, +/- 0.5^{o}C, settable in 1^{o}C increments.
Refractive Index range: 1.00 to 1.75 RIU
Noise: < 1.5 x 10^{-9} RIU mode.
Drift: < 1.0 x 10^{-7} RIU/hr.
Columns : C18, 4.6X250, 5 µ & Columns for proteins and peptide analysis.

Column compartment

Workable temperature range Ambient to 100ºC.
For column length 300 mm and minimum 3 columns should be accommodated.

Fraction Collector

Fraction Collector with rack, up-to 120 tubes
Pre-Programmed 4-Microtiter Plate Rack holds up to four (4) SBS compliant microtiter plates, standard 96, 384 or deep wells.
Pre-Programmed 128 Position Funnel Rack with Four No. of 4x8 Prep Funnels.
New Event Marker Polarity and Functionality
Independent RS-232 Commands for Dispenser Movement and Valve Operation
Automated peak detection and collection, using an analog detector input of the LC System to permit fully automated collection of only the peak(s) of interest.
A divert valve should allow collection of peaks extraneous solvent and/or unwanted peaks (which divert to waste), maximizing fraction collection efficiency and overall preparative LC system productivity

Chromatography Manager Software:

Soft ware for acquiring controlling and processing of HPLC data should be quoted
Windows 7 Environment, Pre-made templates, customizable data reports, online help and answer wizard, report publisher, versatility for multitasking without multiple software package.

Suitable PC and Laser Printer and UPS with 30 min. backup should be included in the quote.

Terms and Conditions -

1. The prices quoted should be for F.O.B. basis.

2. **Taxes, if any, should be indicated separately**
3. Letter from the manufacturers in original to be attached for authenticity as authorized service provider.
4. Technical bid should contain **compliance chart** based on specifications as per NIQ, but must not contain any commercial information
5. The Institute has the right to reject any bid with-out assigning any reason thereof.
6. The material should be delivered at DBEB, IIT Delhi and installation of HPLC should be done satisfactorily by vendors free of cost.
7. Delivery should be with-in 4-6 week after receiving the purchase order
8. Payment : 100 % after delivery and installation
9. Quote must be valid for 90 days from the date of the offer.