



Dr. M. Bakthadoss
Associate Professor

PONDICHERRY UNIVERSITY
DEPARTMENT OF CHEMISTRY
R. V. Nagar, Puducherry – 605 014, India

Ph.No: 04132654830; 9789966003
E-mail: bhakthadoss@yahoo.com

Ref: PU/CHEM/MB/DST-SERB/HPLC/TENDERS/2014-15/

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Sealed quotations are invited for the purchase of Modular High Performance Liquid Chromatography (HPLC) system. The quotations duly signed and sealed should be submitted to the address below. The quotation should be sent by normal/speed post/registered post or by courier. The price quoted should include all the costs such as delivery, installation, testing, etc., and also inclusive of all taxes. Warranty terms should be explicitly specified in your quotation. The technical specifications are given below. Last date for receiving the quotations is on or before 13th March, 2015, at 4.00 PM.

Technical Data/Specifications of High Performance Liquid Chromatography System:

Supply, Delivery, Installation and Commissioning of Completely Modular High Performance Liquid Chromatography System –Required quantity-1No.

(i) Solvent Delivery System for Binary Gradient Application

Two Individual Analytical Pump for Micro, Semi-Micro, Analytical, Semi-Prep flow rates

Should capable to perform High pressure Gradient Application

It must be a high speed double micro-plunger in-parallel pump with automatic pulsation correction mechanism achieving pulse-free solvent delivery.

It should have a flow rate resolution of 3 nl/min

The flow rate should be settable between 0.001 to 10 ml/min from micro to semi-preparative flow rates without any hardware changes

Flow rate accuracy should be $\pm 1\%$ or $\pm 0.5 \mu\text{l}/\text{min}$ of set value whichever is larger

Flow rate precision must be less than $\pm 0.06\%$ RSD

Pressure setting range should be 1-40 MPa

Pressure pulsation must not exceed 0.3 bar (0.03MPa)

The precision of composition must be less than 0.1% RSD.

It should employ active check valves that allow stable delivery of even non-polar organic solvents such as hexane

Automatic rinsing of plunger must be available.

It should be capable of standalone operation

It must have a leak sensor as safety feature.

It should have functions for maintenance and validation which are accessible by a dedicated operation button

Necessary mixer to be provided

(ii) Photo Diode Array (PDA) UV-VIS Detector:

Designed to match UV-VIS detection sensitivity.

512 elements and an element resolution of 1.2 nm/element.

Wavelength range: 190 nm to 800nm.

Operates under 2 modes, high resolution mode at a slit width of 1.2 nm and high sensitivity mode at a slit width of 8 mm.

Semi micro flow cell (2.5 uL volume, 5mm path length, 12 Mpa pressure max) with temp. control flow cell as standard.

Wave length accuracy: +/- 1 nm.

Noise level: Less than +/- 0.6x 10⁻⁵ AU. Linearity: = or > 2.0 AU.

Light source D2, tungsten (W) lamp

(iii) System Controller

It should function as a communication bus module with data buffering capability

It should acquire up to 24 hours for one analysis, at 500ms sampling rate

It must be controllable from a web-based interface via a network. It allows the system to be controlled, monitored and maintained via Internet Explorer Web browser

It must be compatible with wireless networking

It must come with Expert function in that if pressure falls below specified value, the expert function will automatically purge the mobile phase

It should store up to 20 analysis files with a total up to 400 steps of time programs

(iv) Chromatographic Software

Operation of the system should be very easy and intuitive via a state-of-the-art 32 bit Windows 7 based software

Should have capability to control PDA detector and should have 3 D spectrum & Peak purity algorithm functions

The reporting format should be flexible and easy to use in any desired format

The data can be converted to other formats. Spread Sheet software and word-processing software can be readily employed to provide data in tables or graphs through industry standard protocols

The software should allow automatic execution of system checks, auto-purge and baseline checks

Software must have its own log files for complete audit trails

An audio-visual multi-media CD-ROM for Maintenance and Troubleshooting must be provided

System suitability, System security as well as System check functions must be provided which comply with Good Laboratory Practice (GLP) and Regulatory Conformity

SCHEDULE OF TERMS & CONDITIONS

01. Tenders are invited in a sealed cover for the supply of **individual items / equipments** having specifications given above.

02. Tender document/quotation must be submitted in sealed cover super-scribing thereon bidder's name and name of the item. This is to be submitted to **Dr. M. Bakthadoss, Associate Professor, Department of Chemistry, Pondicherry University, R. V. Nagar, Kalapet, Puducherry 605 014** or sent by the registered post / courier service addressed to **Dr. M. Bakthadoss, Associate Professor, Department of Chemistry, Pondicherry University, R. V. Nagar, Kalapet, Puducherry 605 014, India** on or before the tender bid closing time (see below).

03. The Tender document must accompany an EMD of Rs. 25000/- by means of a Demand Draft, drawn in favor of the Finance Officer, Pondicherry University, Payable at Puducherry. The amount is refundable.

04. Last date and time for submission of tender: 13th March, 2015, 4:00 PM

05. Date & time of opening of tenders: 16th March, 2015, 11:30 AM

06. The firm must have the requisite domain expertise with regard to supply, installation and post-sale service of the items they are quoting.

07. All equipments must operate at 230V/50 Hz single phase and / or equivalent three phase electrical power.

08. The offer must be in English. The rates should be indicated both in figures and words. It is preferable that the price be quoted in Indian Rupees or in US Dollars.

09. The taxes / duties / discounts, if applicable, are to be explicitly and separately shown in the bid and **under no circumstances** these components shall be added to the basic price and shown as single price. All the components of taxes, if applicable, should be shown explicitly and separately.

10. The total cost should be quoted for FOB (ex-port, Chennai, India) as well as CIF-Puducherry, India.

11. The prices quoted shall remain firm until equipment is supplied to the Pondicherry University.

12. The validity of each quotation should be at least 120 days from closing date of the bid.

13. The offers will not be considered if received after the bid closing date and time.

14. The offers received through telex / telefax / e-mail will not be accepted by the university under any circumstances.

15. The university shall not be responsible for delay / loss or non-receipt of tenders by post / courier service.

16. No unsolicited correspondence shall be entertained after the submission of the offer.

17. If an order is placed with the firm, the purchase shall be governed by an agreement as per the University rules in force.

18. The University has been granted the benefit of exemption from the payment of the Central Excise Duty and Customs Duty by the Department of Scientific and Industrial Research (DSIR), India, vide their Notification No.10/97 dt.01-03-1997. Customs duties at Indian port, if any, will be to the account of the University.

19. The bidders are encouraged to quote for optional spare parts and accessories (for e.g. a thermos flask or a solvent trap).

20. Please give a recent customer list (within last five years) with contact details including email address.

21. If you have an authorized representative in India, you are requested to inform his technical ability to take care of the problems in the system, if developed later within the warranty and outside the warranty period. The responsibility of the Indian agent must be clearly specified.

22. The bidder from abroad shall obtain, if required, export permission from the appropriate authorities in his country or the country of origin for items to be shipped to India in case of items to be imported. The University shall provide necessary information if required for this purpose.

25. The bidder from within India shall obtain the requisite approval for Imports etc., if required.

26. Additional terms and conditions can be incorporated by the University, if necessary, in the purchase order to safe guard the interests of the University.

27. Tender is not transferable.

28. Pondicherry University reserves the right to accept / reject any offer in full or in part or accept any offer other than the lowest offer without assigning any reason thereof. Any offer containing incorrect and incomplete information shall be liable for rejection.

29. Warranty: The material covered under the purchase order, when installed, shall be warranted for the quality, workmanship, trouble free operation and performance for a period of **at least 36 months (Preferably 3 years) from the date of putting the system into operation** at the Pondicherry University.

If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges including shipping cost both ways.

30. Payment terms: Normally a letter of Credit will be opened for 100% FOB price on receipt of order acknowledgement, however, 90% of the LC amount will be paid on proof of the shipment of the consignment with necessary documents to be detailed at the time of placing of the purchase order.

Balance of 10% of the LC amount shall be made after satisfactory installation and commissioning and against submission of the Installation & Commissioning certificate, duly accepted by the purchaser. Other modes of payment may be considered if agreeable to both parties.

31. In case of any dispute in respect of the tender, all legal matters shall be instituted within the jurisdiction of the place where the purchaser ordinarily resides.

32. No agency commission will be paid to any authorized agent in India.

33. Liquidated damages: Timely supply of the ordered items, installation, commissioning (wherever is applicable) and training etc. is the essence of the contract. In case of failure to supply within the time specified in the Purchase order, a penalty/LD of 0.5% of the total value per week or a part thereof shall be levied subject to a maximum of 7.5% in respect of items which are not supplied. The decision of Pondicherry University shall be final in this regard.

34. For any clarification with respect to technical specifications, please contact **Dr. M. Bakthadoss, Associate Professor, Department of Chemistry, Pondicherry University.**