



University of Mumbai - Department of Atomic Energy  
**CENTRE FOR EXCELLENCE IN BASIC SCIENCES**

Nalanda, University of Mumbai, Vidyanagri Campus, Santacruz (E),  
Mumbai 400098.

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Tender No. CBS/CA025-016

Date : April 17, 2026

Dear Sir/Madam,

Please send us your lowest quotation for the following requirements:

Sr. No.	Description of Material	Qty.
1.	High Performance Liquid Chromatography System (HPLC) As per the specifications given below.	01

**Note :**

1. You are requested to submit the tender in two parts i.e. technical and financial bids in separate envelope.
2. Prebid Meeting to be held on April 24, 2026 at 11.00 am in UM-DAE CEBS, Nalanda University of Mumbai, Kalina Campus, Santacruz (East), Mumbai - 400098.

Your quotation should indicate make, delivery period, exact taxes applicable and delivery charges, if any. CEBS is an educational institution hence, kindly give an educational discount. **Quotation to be submitted in a sealed envelope** duly superscripted with enquiry No. and date. Your GST Registration Number should be quoted in the quotation.

The due date for submitting your offer against this enquiry is May 8, 2026.

**Specifications:**

Supply, Installation and Commissioning of Quaternary/Binary gradient High Performance Liquid Chromatography (HPLC) system for analytical and semi-preparative applications. It should consists of Gradient Pumps, Photodiode array (PDA) detector, Columns, fraction collector, sampler, required accessories etc. Technical specifications and operational features of different components of HPLC system are as follows:

**1. Solvent delivery system (Pump)**

- a) Low pressure Quaternary/Binary Gradient Solvent delivery system should be provided
- b) Flow rate 0.01 to 20 ml/min or better
- c) Flow rate accuracy  $\pm 1$  % or better
- d) Plunger capacity should be 10  $\mu$ l or less
- e) Gradient Precision should be 0.1% RSD or better
- f) Flow rate precision  $\pm 0.04$ % RSD or better
- g) System pressure: minimum 5,000 psi or better
- h) Safety measures: Liquid-leakage sensor
- i) Vacuum Degasser: Flow lines- 5 or more flow line
- j) The pump system should be supported with constant pressure solvent delivery system  
It must have a leak sensor as safety feature



- k) The pump should have GLP/FDA features compliance like maintenance feedback for continuous tracking of instrument usage.
- l) Front Panel Control with display should be offered facilitating manual control of the system as well as from the PC based Software.
- m) Suitable gradient mixer for both analytical and semi-preparative runs, reservoir tray with 4 Solvent Bottles with complete fittings and rinsing kit for pump washing should be offered

## 2. Sample injector, column organizer etc.

- a) Injection Method: Total-volume sample injection, variable injection volume.
- b) Injection volume setting 0.1  $\mu\text{l}$  to 100 $\mu\text{l}$  or better should be standard and option to add 2 ml loop for semi-preparative application should be available.
- c) The Carry over must be below 0.0025% or better, as lowest carryover is preferred for accurate analysis data.
- d) Injection volume accuracy: 1% or better
- e) Injection precision RSD: 0.2% or better
- f) Number of samples to be processed automatically 70 Nos. of 1.5 ml Vial or more
- g) Auto-sampler should support repeated injection of 30 per sample
- h) Auto sampler should be capable of handling thermally labile samples and should come with sample cooler offering temperature control from 4 to 40  $^{\circ}\text{C}$  or better
- i) Block cooling/heating should be used together with dehumidifying function
- j) Safety Feature: auto leak sensors.

## 3. Column Oven:

- a) Column oven should have both heating and cooling option
- b) Column oven should have capacity to accommodate 2 or more columns of 25 cm size and column switching unit,
- c) Manual column switching valve for switching between two different column/ lines (analytical to semi prep & Vice Versa)
- d) Temperature range should be ambient to 70  $^{\circ}\text{C}$  or better
- e) Temperature precision: 0.5  $^{\circ}\text{C}$  or better

## 4. Photodiode array detector

- a) Wavelength range: 210 nm to 800 nm or higher
- b) Detector should have variable slit width
- c) Wavelength accuracy:  $\pm 1$  nm or better
- d) Wavelength precision:  $\pm 0.1$  nm or better
- e) Noise:  $0.5 \times 10^{-5}$  AU or lesser
- f) Drift:  $1 \times 10^{-3}$  AU/hour or better
- g) Linearity: upto 2.5 AU or more (ASTM standard)
- h) Flow Cell: Optical wavelength; 10 mm, Capacity: 12  $\mu\text{L}$  or more, Pressure: 12 MPa or better
- i) Temperature Controlled Flow cell unit with temperature range ambient to 50 $^{\circ}\text{C}$

## 5. Fraction Collector:

Supplier should include an automatic fraction collector controlled by software or manually operated from the keypad with a flexible collection vessel option. It should be able to handle semi-preparative flow rate upto 20 mL /min or higher. Should have various modes of fraction collection such as time, threshold, volume and manual of repeated runs into a common vessel.

## 6. Columns

- a) Provision for two different column lines for analytical and semi-preparative methods
- b) Manual column switching valve for switching between two different column/ lines (analytical to semi prep & Vice Versa)
- c) Columns- *Analytical*: C18, 25 cm x 4.6 mm id 5 micron should be supplied with the system, chiral column for organic samples. (2 No.)
- d) *Preparatory*: Chiral column for organic samples (2 No.)



## 7. Software

- a) Software should be capable of controlling all the HPLC modules through PC with data acquisition, data control, chromatogram and special analysis facilities.
- b) Should acquire, integrate, quantitate, and report data produced by a chromatography instrument
- c) Should have option for manual & automated integration with strict Audit Trail features
- d) Easy operation with recent Windows based software
- e) System suitability, System security as well as System check functions are provided which comply with Good Laboratory Practice & Good Manufacturing Practice (GLP&GMP). Authentic and 21 CFR part 11 compliance

## 8. Accessories and spares

- a) All required tubing, joints, tool kit etc. essential for running & maintenance of the system shall be supplied along with the system. Complete set of solvent tubing, fittings/connectors, installation and maintenance tool kit, waste tubing, solvent inlet filters, and necessary cables.
- b) Calibration standards to be supplied. Complete system calibration shall be carried out at installation. Performance shall be demonstrated using one laboratory-provided standard and one laboratory-provided sample.
- c) Should be quoted with branded PC (i7 processor, intel) with original Windows o/s, 16 GB RAM, 1 TB Hard disc, LED monitor (22 inches), key board, mouse, etc.,
- d) 3 KVA UPS with 1 hour back up should be provided

## 9. Terms and Conditions

- a) Warranty: Comprehensive warranty for 3 years at no extra cost.
- b) User list: Should provide minimum 3 no's of Performance Certificates (not older than 2022) of quoted HPLC system from Premier government institutes, State/Central Universities, CSIR Labs, IITs, TIFR, BARC etc.
- c) List of Users of the Quoted HPLC System with Phone no, Email id should also be enclosed
- d) On-site Training & Demonstration: Operational training & demonstration programme should be provided onsite by the vendor as and when required by the user scientists. Acceptance of the system shall be based on successful installation, calibration, and satisfactory performance demonstration using one standard and one sample provided by the laboratory.
- e) The offer should clearly mention the Part No and Model Quoted along with the technical specifications. Original brochures and specification sheets should be enclosed in the technical bid of the offer and same should be seen in the website. Detailed compliance Statement highlighting the compliance towards the tender specification should be enclosed along with documentary evidence.
- f) Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page number of original catalogue / data sheet.
- g) Vendor to provide a copy of Site-Preparation checklist

