

Global Tender

This is a Request for a quote (RFQ) from Global manufacturers or their authorized Indian distributor for the procurement of **High-performance liquid chromatography (RI and UV detectors)** at the Centre for Sustainable Technologies (CST), Indian Institute of Science, Bangalore.

All interested vendors shall submit a response demonstrating their capabilities to produce the requested equipment to the primary point of contact listed below.

The deadline for submission of bids is 30 January 2023 (5 PM IST). Proposals should arrive at the Department Office, Room No. 405, Centre for Sustainable Technologies, Indian Institute of Science, Bangalore, Karnataka 560012, India.

Direct all questions concerning the acquisition to **Dr. Navneet Kumar Gupta** by email only at: nkgupta@iisc.ac.in

General Terms and Conditions

1. Quote should come only from the Global Manufacturers or their authorized Indian distributor.
2. The bid should be submitted in the two-cover system, i.e., technical bid and commercial bid separately in sealed covers. The technical bid should contain all commercial terms and conditions except the price.
3. The technical bid must contain a point-by-point technical compliance document. The technical proposal should contain a compliance table that should describe your compliance in a "yes" or "no" response against each of the items in the table listed in this RFQ. If the response is "no", the second column should state the extent of the deviation. The third column should state the reason for the deviation, if any. The fourth column can be used to compare your tool with that of your competitors or provide details as requested in the technical requirement table below.
4. Price of every line item in the commercial bid should be quoted along with the total quoted price for the instrument to be operational (installed and ready to use) in our facility. Please quote the price of each optional line item separately.
5. The vendor should have qualified technical service personnel for the equipment based in India (preferably in Bangalore).
6. The lead time for the delivery of the equipment should not be more than 3 months from the date of receipt of our purchase order. It should be clearly mentioned in the technical and commercial bids.
7. All quotations must be valid for at least 90 days at the time of submission.
8. List of customers and references: The Bidder should have supplied similar equipment in Central Universities, preferably in centrally Funded Technical Institutes (IITs, IISc, IISERs, NITs, CSIR Labs, etc.). Please provide the details and contact information.
9. The Bidder must NOT be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
10. Items in addition to that listed in the technical table that you would like to bring to our attention, such as data sheets, technical plots, etc., can be listed at the end of the compliance table.
11. Vendors are encouraged to highlight the advantage of their tools over comparable tools from the competitors.
12. If needed, a meeting for any technical clarifications can be scheduled with the undersigned by sending an email.

13. The Institute reserves the right to accept or reject any bid or to annul the bidding process and reject all bids, at any time prior to the award of the contract without thereby incurring any liability of the affected bidder or bidders.
14. After the award of the purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.
15. The vendor should have a good track record of having previously supplied similar equipment in IISc and other centrally funded universities/institutes.
16. The vendor should be able to provide End User Certificates from at least five users.
17. The vendor is encouraged to provide recommendation letters from the user's university/institute, and the contact of people with the PO number.
18. If the goods are found to be defective, they have to be replaced or rectified at the cost of the supplier within 30 days from the date of receipt of written communication from us.
19. The detailed technical literature and make of each component should be submitted by the bidders.
20. The quotations should be on CIF terms FOR-IISc Bangalore basis.

Service, Training, and Warranty

1. The vendor must have local dedicated Sales & Service team & Application lab in Karnataka.
2. The vendor must demonstrate that it has a proven appropriate set-up and capability to provide after-sales service efficiently and effectively. The supplier should have a similar system in their facility to that proposed in this tender for training purposes.
3. On-site installation, commissioning, and training shall be conducted by a qualified factory-trained engineer.
4. Support should be available from Monday to Friday, 8:30 am to 5:30 pm (excluding Public Holidays), local time.
5. A declaration of Conformity certificate, and System Validation certificate must be provided. All modules must be GLP compliant.
6. Please specify the service plan, like whether the local distributor will address the issue or the parent company.
7. Three years of complete system warranty should be given for all the components. If the system requires service during the warranty period, the vendor must guarantee or replace of instrument for free. Vendor to have logistic support to ensure that over at least 95% of the service parts are readily available and upkeep delivery within 3 days.
8. Terms and conditions for the annual maintenance contract beyond the warranty period should be mentioned.
9. Vendor to provide a copy of the Site-Preparation checklist.
10. If there is any delay in replacement or rectification, the warranty period should be extended accordingly.
11. Any problems that occurred during the warranty period should be rectified within 2 weeks.

Technical requirements: Please note that the requirements listed below are only guidelines. Vendors are requested to quote for equipment that meets the criteria to the best extent possible and list deviations, if any. Deviations are NOT an automatic reason for disqualification. They will be discussed by a technical group prior to making an informed decision.

Technical Specification: High-Performance Liquid Chromatography (RI and UV detectors) should be quoted as per the following specifications.

High-Performance Liquid Chromatography (RI and UV detectors)	
<p>The HPLC system shall include the following individual stackable self-contained modules. The HPLC system must be controllable, monitored, and capable of performing system maintenance using the Microsoft Internet Explorer web browser. Modules must be connected via fiber optic noise-resistant high-speed transmission technology to enhance the reliability and sensitivity of the HPLC.</p>	
Solvent Delivery System for Micro, Semi-Micro, Analytical, and Semi-Prep flow rates	<ul style="list-style-type: none"> • It must be a quaternary gradient pump that should provide error-free programming of pump parameters, including flow rates, operating pressure limits, compressibility compensation, calibration, and diagnostics. Must have precise servo-controlled pistons to adjust the stroke volume according to your chosen flow rate. • The flow rate should be stable 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 the set value, whichever is larger • Flow rate precision must be less than $\pm 0.08\%$ RSD • Pressure setting range should be 5800 psi or better • The gradient formation should be produced through quaternary low-pressure gradient mixing • The precision of composition must be less than 0.3% RSD or better • It should employ active check valves that allow stable delivery of even non-polar organic solvents such as hexane • Automatic rinsing of the plunger must be available • It should be capable of standalone operation • It must have a leak sensor as a safety feature • It should have functions for maintenance and validation, which are accessible by a dedicated operation button
Degassing Unit	<ul style="list-style-type: none"> • Membrane degassing unit for 4 flow lines or better • The degasser must be integrated without the addition of any module • The liquid contact surfaces of the degasser should employ special synthetic polymers designed for all solvents
Autosampler	<ul style="list-style-type: none"> • Sample injection volume should be variable between 0.1 μl to 100μl • Injection system should be a variable injection volume type with zero sample loss during the injection • It must be capable of a fast injection time of 20sec/sample or better • Number of samples to be processed automatically, random access up to 70 positions for 1.5ml • Flow line rinse capability both before and after sampling should be possible • It must be capable of a carry-over of no more than 0.004 % or better • The injection precision should be less than 0.3% of the RSD value • It should have a leak sensor, automatic rack, and vial recognition as a safety feature

	<ul style="list-style-type: none"> • It should have functions for maintenance and validation, which are accessible by a dedicated operation button • customized advanced injections as well as for sample preparation steps must be possible in the sampler • Supply of at least 100 sample vials of 1.5ml capacity, complete with caps and septa should be included
Column Oven	<ul style="list-style-type: none"> • It should be a block heating type for uniform temperature distribution with a quick feedback mechanism to maintain a constant temperature level even when power source voltage fluctuates • The temperature range should be ambient (ambient - 15°C) to (ambient + 60°C) • Temperature control precision should be $\pm 0.1^\circ\text{C}$ • The oven should have leak sensors and maintenance and safety features • It should have functions for maintenance and validation, which are accessible by a dedicated operation button • Column oven must have solvent pre-heating to prevent band broadening • It should have built-in slots for valve control functions • It should be able to handle up to 2 x 25 cm columns
Dual Wavelength UV-Vis Detector	<ul style="list-style-type: none"> • Both sensitivity and resolution must be optimized with a fixed slit width design and available simultaneously without sacrificing one for the other. • The Bandwidth should be 8nm • Wavelength range must be from 190nm to 600nm or better • Wavelength accuracy must be ± 1 nm maximum • Wavelength reproducibility must be ± 0.1 nm • Drift should be less than 1×10^{-4} AU/Hour • Noise level should be $\pm 0.5 \times 10^{-5}$ AU • Must have time program capability in standalone mode • Ratio chromatogram display at 2 wavelengths must be possible • It should be able to monitor and quantitate 2 wavelengths simultaneously • A Conventional flow cell [14 μL volume, 10 mm cell path length, 40 bar (588 psi) pressure max.] with temperature control should be available as standard • Linearity should be equal to or more than 2.5AU (ASTM method) • It should have a self-aligning mechanism for the light sources and cell to allow alignment-free installation from the front • It should have a mechanism where cell and the light source must be aligned • It should have self-diagnostics in standalone mode • A leak sensor and lamp replacement protection system (lamp automatically turned OFF) should be available
Refractive Index Detector	<ul style="list-style-type: none"> • Refractive index measurement 1 to 1.75 RIU • Noise level ≤ 2.5 nRIU • Drift ≤ 0.1 $\mu\text{RIU/h}$ • Measurement range: $\pm 600 \cdot 10^{-6}$ RIU or better • Polarity switching should be available • Maximum operating flow rate 5 mL/min or better • Optics temperature control: 5 °C above ambient to 55 °C • Cell capacity 9 μL or less
System	<ul style="list-style-type: none"> • It should function as a communication bus module with data buffering

Controller	<p>capability</p> <ul style="list-style-type: none"> • It should acquire up to 24 hours for one analysis at a 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 the Internet Explorer Web browser • It must be compatible with wireless networking • It must come with an Expert function in that if the pressure falls below the specified value, the expert function will automatically purge the mobile phase • It should store up to 20 analysis files with a total of up to 400 steps of time programs
Chromatographic Software	<ul style="list-style-type: none"> • Operation of the system should be very easy and intuitive via a state-of-the-art Windows 10-based software • It should cover full one-point digital instrument control, qualitative and quantitative processing, report creation and self-diagnosis • Sample schedule wizard function should be standard • There should be an online help function context sensitive • 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 the 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 • System software should have the feature to support method development activity. • With privileges, should monitor instrument performance and monitor live analysis reports remotely.
Computer Features	<ul style="list-style-type: none"> • Latest Branded 64-bit computer with Intel i5 or better processor, minimum 8 GB RAM, 2 TB HDD, DVD drive, minimum 7200 RPM SATA hard drive, minimum 20" branded monitor, keyboard and mouse with Licensed Windows® 10 OS • Original software with a license to control HPLC, data acquisition, and data analysis • Monochrome laser printer
Accessories	<ul style="list-style-type: none"> • The system must be able to work with the voltage available in Indian conditions (220-240 V) (50/60 Hz) without any major power conversion. If such power conversion is required, such a convertor must be provided along with the. • The system must have a tray for holding the solvent bottles safely and securely, minimizing the risk of spillage. Solvent bottles and appropriate suction tubes with inline metal/ceramic or equivalent filters must be provided for use with HPLC-grade solvents. • Clear and easy valves and methods for purging must be available. The tools required for the purging must be provided along with the system.

	<ul style="list-style-type: none"> • 1000L capacity 5nos solvent bottles. • 100nos 1.5ml sample vials. • Solvent inlet filters 5nos. • Additional sets of spare consumables (such as inline filters, PEEK tubing, ferrules, etc.) must be provided. • 1 spare guard column with cartridges. • Two additional suitable microsyringes should be provided
Column	One column should be provided: C-18 analytical. Also, one additional acidic/equivalent column (hydrogen ionic form, column size: 300 * 7.8 mm) should be provided for acids and sugars analysis.
Installation and commissioning	Installation and commissioning should be done within a week of delivery, and complete training should be provided to personnel at IISc

Warranty: Three years standard warranty to be offered on the entire system.

Training: The system should be accompanied by a Conformity Certificate.
Onsite demonstration and training for the faculty/scientists/students to be provided periodically for the handling of the system and its application.
A declaration of Conformity certificate & System Validation Certificate must be provided.
Suppliers should have an application lab and a local office in Karnataka.

Optional items: Total warranty of 3 years + 2 years AMC optional

Other Requirements

1. The payment terms should be specified in the commercial proposal, which should be consistent with IISc's purchase policies.
2. Please provide details of the number of trained personnel in India, the number in the southern region, or Bangalore who can service the instrument.
3. Please include other options currently available which can be added in the future.
4. The vendor should attach product brochures along with the technical bid.
5. A set of basic experiments for performing routine checks of acceptable operation with clear instructions to be provided. A standard sample to estimate column efficiency should be included.
6. The quotations should be in USD or INR only.

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