

**Local Tender Notification from Indian Original Equipment Manufacturer (OEM)  
or their Indian authorized distributor for procuring  
"Lab Scale Fast Protein Liquid Chromatography (FPLC) System"  
at the Molecular Biophysics Unit/Center for Infectious Diseases Research (CIDR),  
Indian Institute of Science, Bangalore**

Dear Sir/Madam,

March 21, 2022

**Subject: Fast Protein Liquid Chromatography (FPLC) System for research laboratory use**

**This is a request for local tender quotations from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor meant for the purchase of a "Fast Protein Liquid Chromatography (FPLC) System"** towards the purpose of purifying proteins, protein-ligand complexes and other bio-macromolecular samples using either ion-exchange, affinity, size-exclusion and/or other advanced chromatographic methods at a research laboratory scale. Your quotation should clearly indicate the terms and conditions of the quotation, delivery schedule, entry tax, payment terms, warranty coverage etc. The quotation should be submitted in two parts: **Part I (Technical bid) and Part II (Commercial bid)** and both should be submitted in separate sealed envelopes. The vendor should demonstrate the manufacture of the product within India. The Technical bid should be exactly the same as the Commercial bid except that the prices must not be shown in the Technical bid. The Technical bid should have an item-wise compliance report of all specifications indicated below. Prices quoted should be inclusive of all taxes, duties, delivery of the items to the site and installation. Prices must be in INR and should include the appropriate GST. The last day for submitting the bid is April 1<sup>st</sup>, 2022. The offer should be valid for a period of at least 60 days from the last date of submission of quotes.

Technical specifications for the FPLC system, accessories and controlling software are given below:

1. The system should have an operating flow rate between 0.01 ml/min to 10 ml/min (or above).
2. The system should have an operating pressure reading range between 0 to 20Mpa (or above).
3. The system should have dual pumps with types: Piston pump and metering type/reciprocating piston type.
4. The system should have a gradient mixer and must be capable of creating as well as executing binary gradient elution programs between 0-100% of the elution solvents or solvent mixtures.
5. The system should be supplied with minimum of 2 inlet lines for buffers, an inject valve for sample injection and minimum 2 outlet lines. Additionally, it should have the option of mixer bypass for sample loading through system pumps.
6. The system should be upgradeable to include column switching valve with software-controlled column bypass/forward flow/reverse flow operations as well as connection of up to 5 columns or more.
7. The system should have a temperature integrated conductivity meter, post column position with range of 0.01-999 mS/cm and accuracy of  $\pm 2.0\%$ .

8. The system should come with multi-wavelength detector which enables simultaneous monitoring of 3 or more different wavelengths in the range of 190-800 nm or similar with the following UV-Vis parameters: a UV range of at least 0 to >2 AU with noise of less than 0.1 mA and minimum UV linearity of  $\pm 5.0\%$ .
9. The system should have the option to add a pH valve with flow restrictor at a post column position which can be by-passed using the software. It should be able to monitor pH with an accuracy of  $\pm 0.1$  pH units and with a pH monitoring range between 0-14.
10. The software should be able to incorporate variable delay volume based on the position and length of the column and tubings. Ideally, the delay volume of the system should be less than 250uL.
11. System should be provided with fraction collector which is compatible with various collection racks and capable of supporting different tube sizes. Rack for holding 96-well deep well plates/microplates should be compulsorily provided with the system.
12. The system should be supplied with all accessories like tubing, connectors, ferrules etc., that are bio-compatible and should be equipped with basic tools for routine maintenance and smooth operation of the FPLC system.
13. The system should come with in-built pressure sensor to regulate flow rate and system should be compatible for running in cold cabinet/ cold chamber.
14. All components of the FPLC system should be bio-compatible.
15. The system should have basic control features as well as connectivity of an external computer system for software controls.
16. The system software should be capable of upgradation to US FDA 21CFR Part 11 compliant version.
17. System software should have data backup features for backup and restore of data files.
18. The system software should have an inbuilt feature to queue up various purification methods for attended purification, real time control and modification of pre-designed methods during the run to enable method optimization as well the option to turn off lamp to save lamp capacity.
19. Software should be freely upgradeable along with upgradation of system firmware to allow operations of system through upgraded software.
20. Software should have in-built library of columns from vendor as well as third party vendors.
21. Software should be capable of analyzing data files generated from the same software as well as equivalent external software.
22. System should be provided with sample loops of sizes: 100 ul, 200 or 250 ul, 500 ul, 1 ml, 2 ml and 5 ml for sample loading.
23. Instrument and fraction collector should be supplied with a minimum of 3 years of warranty.
24. Instrument should be provided with a compatible desktop computer with following specifications or similar: 22 inch monitor, i7 processor, 4GB RAM and Windows 10, 64 bit system for software based instrument control, operations and data analysis.
25. The participating vendors/firms should have provided and installed the same system at a minimum of 10 research labs in centrally funded technical institutes (IISc, IITs, NITs) and national research labs within India. Detailed list of users along with contact information of atleast 5 primary users must be provided.

For the FPLC system and software, the participating firms must quote all-inclusive delivery prices in INR and the entire shipment must be insured from the manufacturer's warehouse to the installation site at IISc.

**Important: Please note that the FPLC system should match all technical specifications listed above and shown to be manufactured within India.**

The documents may be addressed to the Chairman, Molecular Biophysics Unit (Kind attention: Dr Vidya Mangala Prasad), Indian Institute of Science, Bangalore 560012. Last date for receiving queries is Mar 25, 2022. Last date for submission of bids is April 1, 2022.

Thank You.

Sincerely,

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Assistant Professor

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