



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान पुणे
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH PUNE

निविदा संख्या पर प्रीबिड स्पष्टीकरण - IISER/PUR/2462/22
PREBID CLARIFICATION ON TENDER NUMBER - IISER/PUR/2462/22

वस्तु विवरण - ऑटो इंजेक्टर के साथ उच्च प्रदर्शन तरल क्रोमैटोग्राफी विश्लेषणात्मक की खरीद

Item Description- Procurement of High Performance Liquid Chromatography -Analytical with Auto Injector

उच्च प्रदर्शन तरल क्रोमैटोग्राफी - ऑटो इंजेक्टर के साथ विश्लेषणात्मक की खरीद के लिए संस्थान की वेबसाइट www.iiserpune.ac.in और 08/02/2023 को सीपीपी पोर्टल पर प्रकाशित एक घरेलू खुली निविदा देखें।

Refer a domestic open tender published on Institute website www.iiserpune.ac.in and on CPP Portal on **08/02/2023** for procurement of High Performance Liquid Chromatography -Analytical with Auto Injector.

प्री-बिड मीटिंग 15/02/2022 को अपराह्न 3.00 बजे आयोजित की गई और बैठक का कार्यवृत्त निम्नानुसार है:

Pre-Bid meeting was held on **15/02/2023** at **3.00 PM** and minutes of meeting is as under:

प्रारंभ में, समिति ने सभी सदस्यों और संभावित बोलीदाताओं के प्रतिनिधियों का स्वागत किया और सामान्य तौर पर निविदा के दायरे की जानकारी दी और उसके बाद कार्यालय अधीक्षक (एसएंडपी) से बोलीदाताओं को निविदा की मुख्य विशेषताओं के बारे में जानकारी देने का अनुरोध किया।

At the outset, the committee welcomed all the Members and the representative of the Prospective Bidders and briefed in general the scope of the tender and thereafter requested Office Superintendent (S&P) to brief the bidders on the salient features of the tender.

उपस्थित प्रतिनिधि दिए गए उत्तरों से संतुष्ट थे और यह सूचित किया गया था कि प्री-बिड कॉन्फ्रेंस के दौरान की गई चर्चा के अनुसार दिए गए सुधार / परिवर्धन / स्पष्टीकरण को IISER पुणे की वेबसाइट पर होस्ट किया जाएगा और सभी संभावित बोलीदाताओं को बोली दस्तावेजों में निर्धारित अनुसार अपनी बोली जमा करने से पहले प्री-बिड सम्मेलन की कार्यवाही का संज्ञान लेना आवश्यक है।

The representatives present were satisfied with the replies given and it was informed that the corrections / additions / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of IISER Pune and all the Prospective Bidders are required to take cognizance of the proceedings of the Pre-Bid Conference before submitting their bids as stipulated in the Bidding Documents.

हमारी आईआईएसईआर वेबसाइट www.iiserpune.ac.in पर जारी नोटिस के अन्य नियम और शर्तें अपरिवर्तित रहेंगी। इस संबंध में और कोई पत्राचार नहीं किया जाएगा

The other terms & conditions of the notice issued on our IISER website www.iiserpune.ac.in will remain unchanged. No more correspondence in this regard will be entertained

बैठक अध्यक्ष के धन्यवाद प्रस्ताव के साथ समाप्त हुई।

The meeting ended with vote of thanks to the Chair

Sd/-

सहायक कुलसचिव (भांडार एवं क्रय)

Assistant Registrar (S&P)

15/02/2023

15/02/2023

TECHNICAL AND COMMERCIAL QUERIES AND CLARIFICATION

PRE-BID CONFERENCE FOR PROCUREMENT OF HIGH PERFORMANCE LIQUID CHROMATOGRAPHY -ANALYTICAL WITH AUTO INJECTOR

S. No	Query/Clarification Sought	Clarification / Amendment
1	<u>Query - Page No. 25, Chapter No.4, Point No. I Sub-point -5* - Operating pressure</u> Pressure Tolerance depends on size of the column. 5u size columns are most commonly used and its pressure tolerance is up to 3000 psi only. 3u size columns will exhibit higher back pressure of 4500 to 5500 psi. Moreover your applications involves SEC columns which are having bigger ID and size. Bigger the size of the column, the lower the back pressure. So we request you please change pressure 400 bar or better	<u>Clarification - Page No. 25, Chapter No.4, Point No. I Sub Point -5* Operating pressure</u> It require approx. 600 bar or better up to 5 ml/min flow rate for isocratic, quaternary and binary systems. It need to analyze and purify wide range of small molecules and biopolymers of various lengths and properties using different types of columns with different particles size and column size. Tender Specifications prevails. The company has a system which matches with the specification. Requested to please quote as per vendor's instrument model.
2	<u>Query - Page No. 25, Chapter No.4, Point No. II Sub-point -1* - Wavelength range</u> Please change wavelength range 190-800nm or better	<u>Page No. 25, Chapter No.4, Point No. II Sub-point -1* - Wavelength range is amended as:</u> Instrument must have dual lamp design (tungsten & deuterium) for optimum sensitivity in the range of 190-800 nm or more. Light source should be deuterium & tungsten lamps. Wavelength range 190-950 nm is preferred.
3	<u>Query - Page No. 26, Chapter No.4, Point No. II Sub-point -4* - Sampling rate</u> Please change 100Hz or better	<u>Clarification - Page No. 26, Chapter No.4, Point No. II Sub-point -4* - Sampling rate</u> Sampling rate (data rate) should be 120 Hz or more. This is very an important requirement for our applications.

		Tender Specifications prevails.
4	<u>Query - Page No. 26, Chapter No.4, Point No. II Sub-point -7* - Optical slit width</u> Please change programmable optical slit width from 1nm to 8 nm	<u>Page No. 26, Chapter No.4, Point No. II Sub-point -7* - Optical slit width is ammended as:</u> It should have programmable optical slit width from 1 nm to 8 nm or more preferred.
5	<u>Query - Page No. 26, Chapter No.4, Point No. III Sub-point -1* - Sample Capacity</u> Please give large range vials capacity like 175 (1 mL vials), 70 (1.5 mL vials), 50 (4 mL vials) 192 (two 96-well MTP/DWP), 768 (two 384-well MTP/DWP)	Tender Specifications prevails. Requested to please quote as per vendor's instrument model.
6	<u>Query - Page No. 26, Chapter No.4, Point No. III Sub-point -8* -Maximum Pressure Operating range</u> Please change operating range 400 bar or above	Tender Specifications prevails.

Apart from satisfying all mandatory specifications the system should have $\geq 306/340$ marks (greater than or equal to 306 marks) based on the table provided below to be considered as technically qualified.

High Performance Liquid Chromatography -Analytical with Auto Injector

Automated HPLC system with quaternary gradient pump capable of pumping four solvents simultaneously with a reliable and stable solvent delivery system which can accommodate a wide range of flow rates and with minimum dead volume. This system must be able to separate, identify and quantify mixtures of small organic molecules, amino acids, nucleosides, peptides and nucleic acids. This system should be equipped with an auto-sampler for high-throughput analysis of mixtures of the compounds mentioned above. The system should be modular with stackable models with a solvent resistant material. The system should be suitable for analytical scale and also semi-prep scale analysis.

The automated HPLC system should comprise modules/configuration with the following technical specifications.

*Mandatory specifications

Apart from satisfying all mandatory specifications the system should have $\geq 306/340$ marks (greater than or equal to 289 marks) based on the table provided below to be considered as technically qualified.

Si.	Specifications	marks
I Quaternary Pump: Solvent Delivery System (80)		
1*	Quaternary Pump with an on-line vacuum degasser should be able to deliver 4 solvents at once with minimum dead volume	10
2	The pump module must contain all the necessary accessories such as solvent cabinet, solvent bottles, tubing, filters, connections etc.	10
3*	Flow Rate Range: from 0.001 to 10.0 ml/min in 0.001 ml/ min increments	5
4	Flow precision should be $< 0.07\%$ RSD or 0.02 SD, based on RT at constant room temperature	5
5*	Operating Pressure: approx. 600 bar or better up to 5 ml/min flow rate for isocratic, quaternary and binary systems.	10
6	Flow rate accuracy: $\pm 1\%$	5
7	Gradient composition precision : $< 0.20\%$ SD, at 0.2 and 1 ml/min	5
8*	The module should be stackable and self-contained with solvent resistant material	10
9	Instrument must have hydraulic dual piston in series	5
10	Active seal wash option should be available for handling eluents of salt buffers.	5
11*	Safe leak handling must be provided with leak sensors. The design must ensure isolation of electrical components from liquid flow path	10

Si.	Specifications	marks
II. Diode Array UV-Visible Detector (70)		
1*	Detector module must be diode array detector with 1024 elements or more & wavelength range must be 190-950 nm, settable in 1 nm increments.	10
2*	Instrument must have dual lamp design (tungsten & deuterium) for optimum sensitivity in the range of 190-950 nm. Light source should be deuterium & tungsten lamps.	10
3	Number of signals must be at least 8 numbers	5

4*	Sampling rate (data rate) should be 120 Hz	10
5	Signal to noise should be $\pm 0.7 \times 10^{-5}$ AU or less at 254	10
6	Wavelength accuracy must be at least ± 1.0 nm.	5
7*	It should have programmable optical slit width from 1 to ~ 16 nm	10
8	Appropriate flow cell for analytical and semi-prep scale analysis should be provided: e.g., 10 mm path length up to 120 bar pressure maximum	10

Si.	Specifications	marks
III Auto-sampler module		(60)
1*	Auto-sampler module should have a sample capacity of 100×2 ml vials in 1 tray (preferred)	10
2*	Should have injection volume of 0.1-100 μ L in 0.1 μ L increments.	10
3	Should be compatible to upgradation for increasing the injection volume in the range of 2 ml using multiple-draw kit.	5
4	Injection precision: $< 0.25\%$ RSD from 5-100 μ l	5
5	Carry over should be $< 0.004\%$ with automated needle wash.	5
6*	Program to clean the needle before or after drawing the sample should be there in the system.	10
7	Injector programming must be possible	5
8*	Maximum pressure operating range: Up to 800 bar is required	10

Si.	Specifications	marks
IV Software for Instrument Control, Data Acquisition and Data Processing		(60)
1*	Original Licensed and latest version of the 32 bit Software to run on Windows operating system should be provided. Software for scanning spectra, peak purity.	10
2	Single keyboard to control the entire system should be provided	5
3*	The Software should be compatible with the diode array, UV/Vis RI and Fluorescence detectors for further upgradation also. It should be compatible with auto-sampler	10
4*	Should be able to process signals from more than one wavelength	5
5	It should be compatible to import and export data.	5
6	Automated peak purity evaluation using peak spectra and peak signal information	5
7*	Must be able to modify set points and time-programs even during a run.	5
8*	For unattended system conditioning it must be possible to switch on the lamp automatically at a pre-selected time and date. It must be possible to switch off the lamp automatically at a pre-selected time and date.	5
9	The system must provide extensive information for diagnostic purposes for example: counters for actual and total lamp on time (since last reset)	5
10	Signal definition parameters (wavelengths and bandwidths), attenuation, response time, zero offset, spectra definition and analog outputs must be user selectable.	5

Si.	Specifications	marks
V Hardware and other specifications		(70)
1*	The system should be modular meaning should have independent modules of pump, auto-sampler with injector, and detector. The modules should be self-contained and stackable to reduce the foot-print.	20
2*	Status indicator must indicate the operational state of the module such as pre-run, run, and error-states.	5
3	Must have the following interfaces to communicate with other modules and computers: CAN, LAN, HP-IB, RS 232, APG remote-start.	5
4	All maintenance parts should be accessible from front (preferred)	5
5*	HPLC system must have provision to upgrade to LC-MS system in future. It should be possible to use above HPLC directly as a LCMS system with appropriate parts, which may be procured later. Upgradation to UHPLC should be possible.	10
6	100 numbers of vials with septa must be included	2
7*	Latest configuration computer with monitor and software loaded should be provide	5
8	Power supply and cables should be of Indian type.	3
9	All standard start-up accessories required for system operation should be included	5
10	Three years full warranty on the system	10

Manual and Installation: Complete manual should be provided. Comprehensive onsite training should be provided for selected students and operators during installation of the instrument.