

**NIPER-G/PUR/GLOBAL/2018/02**

**Fully automated analytical-cum-semi-preparative high performance liquid chromatograph system with single point software control for all the modules of HPLC with the following specifications and the model quoted should be of latest configuration by the company**

	<b>Specification as per the Tender Notification in Chapter 4</b>	<b>Amended Specifications as per the Pre Bid meeting held on 22-02-2018 in Chapter 4</b>
1.	<b>Solvent delivery system (Pump, Binary gradient)</b>	<b>No change</b>
	<ul style="list-style-type: none"><li>The system should have at least two pumps and support minimum of two solvents with a feature of variable dynamic mixture gradient for optimum performance with high pressure mixing. The system should work in isocratic, gradient and semi-preparative mode</li></ul>	<b>No change</b>
	<ul style="list-style-type: none"><li>Vacuum degassing: The built in online degasser with at least one channel per solvent and one channel for sample manager wash solvents should be quoted. The degassing has a provision to effectively remove/reduce ghost peaks.</li></ul>	<b>No change</b>
	<ul style="list-style-type: none"><li>Operating pressure should be 6000 psi or better suitable for both analytical and semi-preparative applications</li></ul>	Operating pressure should be <b>5500 psi</b> or better suitable for both analytical and semi-preparative applications
	<ul style="list-style-type: none"><li>Flow rate should be 0.01 to 10 mL/min with at least 0.001 ml increments or better</li></ul>	Flow rate should be 0.01 to 10 mL/min <b>or more</b> with at least 0.001 ml increments or better
<ul style="list-style-type: none"><li>It should have leak sensors as standard and safe leak handling</li></ul>	<b>No change</b>	

	<ul style="list-style-type: none"> <li>Flow accuracy should be <math>\pm 1\%</math> or better</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Flow precision should be <math>\pm 0.07\%</math> RSD or better</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Should have pump seal wash function which will be equipped with wash system to flush the rear of the high pressure seal &amp; the plunger</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Injection synchronization between pump and sample manager for retention time reproducibility</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>System should work in the pH range of 2 to 12 or more</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Injection and Fraction collection should perform with same instrumental platform</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The instrument should be able to collect fractions even at 10 ml/min flow rate</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Suitable solvent tray that can accommodate four solvent bottles of 1L capacity and the solvent spill from this tray must not affect the instrument.</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>A suitable fraction collection assembly compatible with the quoted system should be provided. The quoted fraction collector should operate with the same software provided in the quoted HPLC system and it should also have provision to</li> </ul>	<b>No change</b>

	<p>collect the fractions for analytical and semi-preparative samples.</p>	
	<ul style="list-style-type: none"> <li>The auto sampler vials/test tubes for fraction collection with variable volume capacity should be provided in addition to the vials/test tubes coming long with the instrument (500 Nos).</li> </ul> <p>One manual rheodyne injector with all necessary accessories should be quoted. The loops volume of 20 <math>\mu</math>l, 100 <math>\mu</math>l and 500 <math>\mu</math>l should be provided.</p>	<b>No change</b>
2.	<p><b>Auto sampler/Sample manager and column temperature compartment</b></p> <ul style="list-style-type: none"> <li>The auto sampler tray should have capacity to hold minimum of 30 Nos of 12 ml or more and 100 Nos of 1.5 ml vials. The auto sampler should also have provision for 4 ml vials holding capacity (minimum 50 Nos)</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Injection volume range should be 0.1 to 5000 <math>\mu</math>L as standard loop</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Accuracy should be <math>\pm</math>1% or better</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Auto sampler with auto-dilution and auto-addition capabilities is preferable</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>It should have capacity to hold three or more columns in</li> </ul>	<b>No change</b>

	column compartment	
	<ul style="list-style-type: none"> <li>The sample carryover should be less than 0.1% or better</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Design must ensure isolation of electrical components from liquid flow path</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Column temperature range should be programmable from ambient (25°C) to 85°C in 1°C increments</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Safe leak handling must be provided with leak sensors</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>There should be some option to track the column usage information</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Column temperature stability should be <math>\pm 0.1^\circ\text{C}</math> or better</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Column temperature accuracy should be <math>\pm 0.5^\circ\text{C}</math> or better</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Auto sampler vials (500 Nos each of 1.5 ml, 4 ml and 12 ml or more) should be provided in addition to the vials comes along with the instrument</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The columns C<sub>18</sub>, C<sub>8</sub>, HILIC or equivalent columns specific to carbohydrates, amino acids, fatty acids and chiral separations for both analytical semi-preparative applications should be quoted separately (A total of 15 columns should be</li> </ul>	<p>The columns C<sub>18</sub>, C<sub>8</sub>, HILIC or equivalent columns specific to pharmaceutical compounds, biomolecules such as carbohydrates, amino acids, fatty acids and chiral separations for analytical applications should be quoted separately (A total of <b>16 columns</b> should be provided)</p>

	provided)	<ul style="list-style-type: none"> <li>• C18 column: 5<math>\mu</math> particle 4.6 x 150mm: 3 number</li> <li>• C8 column: 5<math>\mu</math> particle 4.6 x 150mm: 3 number</li> <li>• Hilic column: 5<math>\mu</math> particle 4.6 x 150mm: 3 number</li> <li>• Carbohydrate column: 1 number</li> <li>• Aminoacid and fatty acid column: 1 number</li> <li>• Chiral column: 1 number</li> <li>• GPC columns : low, mid and high molecular weight: 1 each</li> <li>• C18 semi preparative column : 1 number</li> </ul>
	<ul style="list-style-type: none"> <li>• Necessary guard columns with respect to above said columns should be quoted separately (A total of 10 Nos should be provided)</li> </ul>	<b>Suitable Guard column for above mentioned column</b>
	<ul style="list-style-type: none"> <li>• <b>Auto sampler syringes (5 Nos each for analytical and semi-preparative injections) should be provided</b></li> </ul>	<b>Should quote optionally</b>
3.	<b>PDA detector</b> <ul style="list-style-type: none"> <li>• Wave length should be in the range of 190-800 nm or more settable in 1 nm increment</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>• The quoted PDA detector should be suitable for both analytical and semi-preparative applications</li> </ul>	<b>No change</b>

	<ul style="list-style-type: none"> <li>The flow cells of detector for analytical applications (2 Nos) and semi-preparative applications (2 Nos) should be quoted in addition to the ones comes along with the instrument. The quoted flow cells should have temperature controlled option for stable baseline and faster stabilization</li> </ul>	
	<ul style="list-style-type: none"> <li>The D<sub>2</sub> lamps (3 Nos) and W lamps (3 Nos) should be quoted separately in addition to the ones comes along with the instrument</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The detector must have linearity of 5% at 2.0 AU</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The detector must have wavelength accuracy of <math>\pm 1</math> nm</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The detector must have guaranteed lamp life of not less than 2000 hours</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The detector should have lamp optimization software facility which guarantees low noise performance without lamp change and compensates for lamp degradation over time</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Data acquisition range should be 80 Hz or more</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The detector must able to operate in 3D and 2D simultaneously</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The detector should have low volume long path length flow cells for optimum performance and to achieve highest sensitivity.</li> </ul>	<b>No change</b>

4.	<b>Evaporative Light Scattering Detector (ELSD)</b>	High-sensitivity ELSD/CAD with latest model with operation up to 100°C or more
	<ul style="list-style-type: none"> <li>High-sensitivity ELSD with operation upto 120°C or more</li> </ul>	
	<ul style="list-style-type: none"> <li>Light source: LED 480 nm or better</li> </ul>	Light source: LED or better source
	<ul style="list-style-type: none"> <li>Detector: Photomultiplier Tube Digital Signal Processing with at least 2000 hr warranty</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Temperature range: Evaporator 25-120°C (in 1°C increments)</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Temperature range: Nebulizer: 25-90°C (in 1°C increments)</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Eluent Flow Rate: 0.2-5 mL/min</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Digital output: 80Hz or better</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Should have safety features such as gas shutoff valve and vapour and leak detection</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The gas cylinders with GC/IOLAR grade gas required for ELSD operations along with joint free SS pipeline with double stage gas regulators and traps (moisture, hydrocarbon etc.) should also be quoted separately with installation expenses.</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>Scattering angle: 60 degrees or better</li> </ul>	<b>No change</b>
5.	<b>Other specifications</b>	<b>No change</b>
	<ul style="list-style-type: none"> <li>The chromatography software should be capable to control all modules such as pump, auto sampler, PDA and RI detector</li> </ul>	

	<p>without any up gradation and have capability to robust peak integration, report formatting, qualitative and quantitative processing with effective detection of low level peaks on noisy or sloping baseline. Should have automatic method transfer capabilities from analytical to semi-preparative applications.</p>	
	<ul style="list-style-type: none"> <li>• A latest suitable and compatible computer (i7/i5 processor, 1 TB HDD, 16GB RAM or more) with 26” TFT monitor and multifunctional laser printer with scanning and auto duplex printing facility for HPLC chromatographs and data (One set)</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>• Necessary tool kit for routine maintenance of quoted system</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>• Compatible UPS system with at least 10 KVA with built-in isolation transformer capable of taking inductive loads with at least 2 hours backup from Libert/APC with vertical batteries stand to support the whole system (One)</li> </ul>	<b>No change</b>
	<p><b>Optional items:</b></p> <ul style="list-style-type: none"> <li>• The quote for the pre-column derivatization kits/system should be provided as an optional item</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>• A stand-alone automated solid-phase extraction system of latest model with at least 6 samples</li> </ul>	<b>No change</b>



	<p>per hour extraction efficiency will all accessories, including computer and software with 21 CFR part 11 compliance should be quoted separately as an optional item</p>	
	<p><b>Important Note(s):</b></p> <ul style="list-style-type: none"> <li>The system should have GLP/GMP compliance and should strictly meet 21 CFR Part 11 guidelines. The system should enable for audit trails, electronic signature and other requirements related to GLP compliance. Further, required IQ and OQ reports should be generated to meet GLP regulatory requirements during installation and operation by your service personnel. All the necessary accessories, consumables, software etc should be quoted</li> </ul>	<p><b>No change</b></p>
	<ul style="list-style-type: none"> <li>On-site training should be provided and off-site training at the vendors' authorized training centre in India should be provided for two persons. All logistics and travel costs should be borne by the vendor.</li> <li>A good after sales service by the Indian agent/Supplier/Manufacturer should be guaranteed</li> </ul>	<p><b>No change</b></p>
	<ul style="list-style-type: none"> <li>All the specifications mentioned above should be in the printed brochure of the company or on the company website and the</li> </ul>	<p><b>No change</b></p>

	technical specifications should be quoted with the manufacturer part number.	
	<ul style="list-style-type: none"> <li>• Full system from the single vendor and no refurbished parts should be added to the system</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>• Cost of accessories and/or spares if required should be quotes item-wise separately</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>• Three years comprehensive warranty should be provided. The warranty shall cover the maintenance of the instrument along with replacement of spares, accessories, consumables etc as and when required for the said warranty period.</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>• Two years AMC should be quoted for the whole instrument including software workstation, HPLC modules etc.</li> </ul>	<b>No change</b>
	<ul style="list-style-type: none"> <li>• Cost of accessories should be quoted item-wise separately</li> </ul>	<b>No change</b>

Sd/-  
Purchase officer

**General Terms and Conditions applicable to all 13 tenders published in newspaper on 19<sup>th</sup> February 2018 and exhibited in NIPER Guwahati website.**

**Following additional information is provided for the information of prospective bidders for 13 different items for which tender inquiry is issued:**

**1. Payment terms:**

Considering the request made by few prospective bidders during the pre-bid conference held in the institute on 22<sup>nd</sup> February 2018, regarding payment terms related with foreign suppliers it is clarified that the **indicated payment terms in the tender documents still remains unchanged.** However Director, NIPER Guwahati **at his own discretion** can consider any other mode of payment requested by suppliers based on the reputation, credentials of foreign suppliers in the field and also protecting the interests of NIPER Guwahati. **No request for advance payment will be considered.**

**2. Clarification with regard to projecting the cost implications of free delivery of the item at NIPER Guwahati premises.**

Subsequent to the Pre-bid conference with regard to projection of price for items coming from abroad, the following guidelines may be followed:

- A) The F.O.B. C.I.F., C.I.P. prices as per the suppliers quote should be indicated in foreign currency only
- B) The additional cost towards payments of custom duty against duty exemption certificated provided by the institute, clearance charges, forwarding consignment from port of clearance to NIPER Guwahati premises etc. can be quoted in Indian currency.

For comparing the price with other bids, the institute at the time of preparing comparative chart for the tenders, the total F.O.B., C.I.F., C.I.P. cost will be converted into equivalent Indian currency at the exchange rate prevailing on the date of tender opening i.e. 13<sup>th</sup> February

2018 at 1500 hours IST and add the equivalent Indian currency value to the clearance and forwarding charges indicated by the supplier.

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