



राष्ट्रीय औषधीय शिक्षा तथा अनुसंधान संस्थान गुवाहाटी
**NATIONAL INSTITUTE OF PHARMACEUTICAL
EDUCATION AND RESEARCH-GUWAHATI**

(Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, Govt. of India)
SilaKatamur (Halugurisuk), P.O.: Changsari, Dist: Kamrup, Assam, Pin: 781101.

No. NIPER-G/166/S&P/HPLC/2021-22

Date: 28/02/2022

CORRIGENDUM

Subsequent to the pre-bid meeting held on 25/02/2022 in reference to the tender enquiry no. NIPER-G/166/S&P/HPLC/2021-22 dated 21/02/2022, please note the following amendments:

Original Tender Specifications as per the tender referred above	Amended Tender Specification after the pre bid meeting held on 25/02/2022
<p><u>Pump</u></p> <ol style="list-style-type: none">1. Precise high-pressure mixing quaternary gradient Pump for flow rates up to 150 mL/min or better and can withstand pressure at 5000 psi and above.2. The pump should support both analytical as well as preparative flow rates in a single unit3. Flow range Set points from 0.01 to 150 mL/min or higher4. Composition precision $\leq 0.5\%RSD$5. Flow accuracy $\pm 1\%$6. Extended seal lifetime with automated seal wash and capability to handle wide pH range between 1-10 or better.7. Upper and lower pressure limits for increased safety in case of column blockage or leakage.8. Equipped with safe leak handling and leak detection.9. Flow path must be metal-free for handling protein samples10. Entire system should be suitable for reversed phase and normal phase operation	<ol style="list-style-type: none">1. Precise high-pressure mixing binary/quaternary gradient Pump for flow rates up to 150 mL/min or better and can withstand pressure at 5000 psi and above.2. No change3. Flow range Set points from 0.5 to 150 mL/min or higher4. No change5. No change6. Extended seal lifetime with automated seal wash and capability to handle wide pH range between 1-10 or better biocompatible.7. No change8. No change9. Flow path must be metal-free for handling protein samples or compatible technology10. No change
<p><u>Combined Fraction Collector cum Auto sampler or equivalent</u></p> <ol style="list-style-type: none">1. Sample cooling Facility: - 2 °C / + 4 °C or better	<p><u>Combined Fraction Collector cum Autosampler or equivalent</u></p> <ol style="list-style-type: none">1. No change2. No change

<ol style="list-style-type: none"> 2. Sample Temperature Stability: ± 1 °C or better 3. Fully automated combined open bed injector and fraction collector with both analytical and prep injection facility, flexible sample injection and collection tubes 4. Multipurpose fraction collector for sample preparation like dilutions, mixing, auto sampler injection and fraction collection, re-injection unattended. 5. System should have Automatic delay calibration. 6. Prep injection loop 2, 5, 10, and 20mL must be provided. 7. 1 set of auto sampler vials of 5mL or equivalent volume with appropriate holder/tray must be included. 8. 1 set of auto sampler vials of 1.5/2mL with appropriate holder/tray must be included. 9. 2 Sets of Fraction collection tubes between 5-15mL with appropriate tray/holder, Qty-250 each 10. 2 Sets of Fraction collection tubes between 30-50mL with appropriate tray/holder, Qty-100 each 11. Fraction collector should have peak based and time-based triggering modes or equivalent 12. Appropriate tubing, connections, and accessories must be provided for the smooth functioning of the system. 13. One 2pos/10port valve for switching between analytical to prep flow paths with suitable valve drive and appropriate tubing for connections. 14. Needle rinse capability both before and after sampling should be possible 15. Purging of syringe & rinsing of needle interior, as well as exterior, should be possible 	<ol style="list-style-type: none"> 3. No change 4. No change 5. No change 6. No change 7. No change 8. No change 9. No change 10. No change 11. No change 12. No change 13. One 2pos/10port valve for switching between analytical to prep flow paths with suitable valve drive and appropriate tubing for connections with appropriate splitter for ESI MS source connectivity 14. No change 15. No change 16. Peak tubing (2 nos) and plastic ferrules(10 nos) should be quoted 17. Suitable Glass tubes (15 mL)for fraction collection should be provided (2000 nos) 18. Suitable samples vials with caps septa, insert (2000 nos each) should be provided 19. Solvent bottles with caps (1, 2, and 5L)-5 nos each should be provided 20. Solvent filtration assembly (up to 5-liter volume) with vacuum pump should be quoted with a system for solvent filtration
<p><u>Column</u></p> <ol style="list-style-type: none"> 1. A suitable column holder which can hold a minimum of 2 columns. 2. Must be equipped with leak sensor 3. Column compartment temperature range 5-80 degrees C or better 4. Column number: Minimum 10 numbers or higher for automated method scouting 5. One Analytical C-18 Column (5μm, 4.6x250) & one Silica Column (5μm, 4.6x250) should be supplied along with Preparative LC system 	<p><u>Column</u></p> <ol style="list-style-type: none"> 1. No change 2. No change 3. No change 4. One preparative C-18 Column (20μm, 30x150) & one Silica Column (30μm, 50x250) should be supplied along with the Preparative LC system. 5. One Analytical immobilized Chiral column (5μm, 4.6x150)mm
<p>Columns must be quoted as optional items.</p> <ol style="list-style-type: none"> 1. C18 Analytical (250 x 4.6mm, 5μm) with Guard 	<p>Columns must be quoted as optional items.</p> <ol style="list-style-type: none"> 1. C18 (250 x 30mm, 30μm) with Guard

<p>column and Guard Hardware/Fitting Kit -1 Nos.</p> <ol style="list-style-type: none"> C18 Semi-Preparative (250 x 10/9.4mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. C18 Preparative (250 x 20/21.2mm, 5µm) with Guard column and Guard Hardware/Fitting Kit 1 Nos. Cyano Analytical (250 x 4.6mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Cyano Semi-Preparative (250 x10/9.4mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Phenyl column Analytical (250 x 4.6mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Semi preparative phenyl column (250 x10/9.4mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Silica (Normal phase) Analytical (250 x 4.6mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. 	<p>column and Guard Hardware/Fitting Kit -1 Nos.</p> <ol style="list-style-type: none"> C18 Semi-Preparative (250 x 10/9.4mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. C18 (250 x 20/21.2mm, 30µm) with Guard column and Guard Hardware/Fitting Kit 1 Nos. Cyano (250 x 30mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Cyano Semi-Preparative (250 x10/9.4mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Phenyl column preparative (250 x 30mm, 30µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Semi preparative phenyl column (250 x10/9.4mm, 5µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Silica (Normal phase) preparative (250 x 30mm, 20µm) with Guard column and Guard Hardware/Fitting Kit -1 Nos. Immobilized Amylose tris (3-chloro-5-methyl phenyl carbamate (30x250) mm, 5 microns column
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<p><u>Detector</u></p> <ol style="list-style-type: none"> Diode Array Detector with Preparative flow cell with a path length of 0.3mm or 0.5mm Wavelength range between 190-800nm or better Number of signals: Simultaneous acquisition of up to 8 compound-specific wavelengths Noise <math>< \pm 1 \times 10^{-5}</math> AU or better Data acquisition rate of >80 Hz Drift $\leq 1 \times 10^{-3}$ AU/h after adequate warm-up. Detector type: >512 element photodiode array Flow cell and lamps to be automatically detected by the system when installed and must store information such as the number of lamp hours. 	<p><u>Detector</u></p> <ol style="list-style-type: none"> Diode Array Detector with Preparative flow cell with a path length of 0.3mm or 0.5mm or 0.7mm or suitable flow cell (4 nos) No change No change No change No change No change No change No change Two UV lamps should be quoted
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<p><u>Single Quadrupole Mass Spectrometer Detector:</u></p> <ol style="list-style-type: none"> Single Quadrupole Mass Spectrometer is intended for mass-directed auto purification purposes. This LCMS should have below specifications Mass range should be 10 to 2000 m/z Scanning speed should be 10,000 u/sec or better Polarity switching time should be 30ms or better ESI and APCI source should be supplied along with LCMS system with a suitable flow rate Should have sensitivity in 10pg levels on column 	<p><u>Single Quadrupole Mass Spectrometer Detector:</u></p> <ol style="list-style-type: none"> No change No change No change No change No change Should have sensitivity in 10pg levels on column with a sensitivity of 400:1 or better No change
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<p>with a sensitivity of 100:1 or better</p> <p>7. Mass accuracy: Should be ± 0.1 Da or better</p> <p>8. Suitable software should be supplied along with this LCMS system which should be able to control Preparative LC also</p> <p>9. Autotuning facility for LCMS should be available</p> <p>10. Nitrogen gas consumption for LCMS should be less than 30L/min or better. Suitable imported make nitrogen gas generator with built-in compressor shall be supplied with LCMS system.</p> <p>11. All tuning, as well as calibration solutions, shall be supplied with LCMS system</p> <p>12. Cleaning & maintenance of ionization assembly/desolvation should be simple & be able to carry out without breaking the vacuum</p> <p>13. Roughing pump & turbo pump should be an integral part of the LCMS system</p> <p>14. Suitable analytical make-up pump for LCMS should be supplied as standard</p> <p>15. Suitable flow control / divert valve for LCMS should be provided</p> <p>16. Suitable start-up kit for LCMS should be supplied as standard</p>	<p>8. No change</p> <p>9. No change</p> <p>10. No change</p> <p>11. No change</p> <p>12. No change</p> <p>13. Roughing pump (oil-free) & turbo pump should be an integral part of the LCMS system.</p> <p>14. No change</p> <p>15. No change</p> <p>16. No change</p> <p>17. 3 Capillary inlet tubes along with necessary accessories should be quoted</p> <p>18. Any gas cylinder for the working of the system shall be provided a minimum of two number with all accessories such as regulator: cylinder cage or Bracket etc.</p> <p>19. Preparative HPLC waste reservoir 2 numbers: Capacity upto 8-10 L, compatible for storage of polar and non-polar solvents. Should be supplied with 10 meters connecting tube</p>
<p>Software</p> <p>1. Single software requires to control and acquire data from the complete system.</p> <p>2. Software should be latest, licensed, and have the capacity to work for analytical and preparative analysis.</p> <p>3. The collection method must have the ability to collect waste</p> <p>4. Software must provide peak purity and spectra for the PDA detector.</p> <p>5. The software must have the capability to perform automated scale-up from analytical to preparative with the help of focused gradients.</p> <p>6. Software must be able to perform scale-up irrespective of column dimensions, flow rates, etc.</p> <p>7. Automated Boolean logic of UV and mass signal for fraction triggering</p> <p>8. Real-time triggers to react to the condition i.e., to take action on Fault, Leakage, Stop, Start, wavelength switching, injection, etc.</p>	<p>Software</p> <p>1. No Change</p> <p>2. No Change</p> <p>3. No Change</p> <p>4. No Change</p> <p>5. No Change</p> <p>6. No Change</p> <p>7. No Change</p> <p>8. No Change</p>
<p>Workstation and others</p> <p>1. Suitable WIFI enabled computational workstation (Dell/Lenovo/HP or equivalent) to</p>	<p>Workstation and others</p> <p>1. No Change</p> <p>2. No Change</p>

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<p>be provided to support the whole instrument including LAN connection port.</p> <ol style="list-style-type: none"> The workstation must be 9th or 10th generations with I7 or better processor, 32-inch monitor with the latest configuration, 1 TB SSD + 4 TB HDD, GB graphics card and 64 GB RAM, original licensed Microsoft Windows-based or better configuration. It should have Microsoft officed original (license) along with optical DVD drive DVD read/write. One extra licensed copy of the software to work offline on other computers to process raw data. Vendor may also quote all in one computer with same specifications for data analysis 	<ol style="list-style-type: none"> No Change No Change No Change
<p>UPS:</p> <ol style="list-style-type: none"> UPS shall include 5 KVA On-Line UPS PWM IGBT Based with inbuilt isolation transformer Single Phase with Output 220 ±1 V. Battery backup 120 min. The batterymakes Branded with a battery rack and Battery interconnector cable. The vendor must quote relevant accessories which are required to make it functional. 	<p>UPS:</p> <ol style="list-style-type: none"> No Change
<p>Requirements:</p> <ol style="list-style-type: none"> 3 Years comprehensive warranty for all the parts including nitrogen generator from the date of installation. Internal standards for the calibration of instrument/instrument part/ methods should be provided by the vendor. Other accessories like necessary solvents for primary standardization (Acetonitrile, Methanol, and Water) for the fulfillment of application should be provided. A minimum of 7 days of training should be provided on the experimental and data analysis part by the vendor with no extra cost. Later training cum workshop should be provided for another 7 days on demand within a year with free of cost. The vendor should quote IQ, OQ, and PQ (Qualification) for the supplier along with the software. The vendor should quote qualification kits and a defined list of items along with the valid cat. no. and product no. Price details for additional five years of AMC after completion of three years of warranty and five years of CMC to be quoted. Direct infusion: Syringe pump or equivalent to 	<ol style="list-style-type: none"> No Change No Change No Change No Change No Change No Change Direct infusion: Syringe pump or equivalent to inject samples directly to the instrument for MS analysis. Spare glass Syringes- 10 Nos.

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inject samples directly to the instrument for MS analysis. Spare Syringes- 10 Nos.

This is for information of all the bidders.

Eraveer Ray 28/12/22
 Stores & Purchase Officer

NIPER-Guwahati
 भंडार एवं क्रय अधिकारी | Stores & Purchase Officer
 नाइंपर गुवाहाटी, असम (भारत) | NIPER Guwahati, Assam (India)