



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.

**Amendment to the Tender Document**

**Item Description:** Triple Quad LC-Ms/Ms

**Tender Enquiry No:** NIPER-G/148/EQP/TQLC-MS/MS/GAP-125/2020-21 dated: 12.02. 2021.

With reference to the tender enquiry No: NIPER-G/148/EQP/TQLC-MS/MS/GAP-125/2020-21 dated: 12.02. 2021 NIPER-G has been invited open tender enquiry for the procurement of Triple Quad Lc-Ms/ms. The following points has been discussed during the pre-bid meeting held on 22.02.2021 and the necessary amendments has been made in the tender document. Bidders are here by requested to quote the bids accordingly.

a) General Terms and Conditions

<b>General terms and Conditions</b>	<b>Revised Terms and Conditions</b>
<p>11 a For imported items: A letter of credit will be established for 100% value with the following stipulations: I. 50% payment will be released against physical delivery of items at NIPER-Guwahati in good condition. II. 40% payment deducting Indian agency commission component after satisfactory installation, commissioning, demonstration, training etc. The component of Indian agency commission will be released separately in equivalent Indian currency to Indian agent against submission of their claim. III. Balance 10% will be released after receiving performance bank guarantee to cover warranty obligation</p>	<p><b>The payment terms Remains same as mentioned in the tender document.</b></p>

**Technical Specifications:**

S. No.	Major headings	Tender specifications	Amended specifications
1.	LC-MSMS (Triple Quadrupole)	A Bench Top Highly Sensitive Triple/Tandem Quadrupole LCMS/MS System with facility to either use as standalone or connect to a Fast Liquid Chromatography system using lesser than 2 µm particle size columns for high sensitivity for both qualitative and quantitative analysis	No change
2.	Mass range	5-2000 amu or better	5-1250 amu or better
3.	Scan speed	Should have the scan speed of minimum 15,000 amu/sec in QQQ mode	No change
4.	Mass stability	<0.1 Da over a 24 hour period	No change
5.	Interference	Dual/orthogonal or off axis source or any other equally efficient technology capable of avoiding interferences from solvents and other extraneous matter, handling large batches of complex sample matrix over a long period of time without performance degradation.	No change

S. No.	Major headings	Tender specifications	Amended specifications
6.	Ionization source	<p>Combined or dedicated ESI and APCI sources to be provided, with facility of interchanging easily by the user, and auto-detection of installed source by the instrument and software.</p> <p>The source should be easily removable from the system to facilitate user cleaning without venting the vacuum, with automatic standby of system while the source / probe is being removed</p> <p>The source shall have a flow rate compatibility from 50 µL/min to 2000 µL/min, without flow splitting in both ESI and APCI modes</p> <p>Desolvation temperature for sources should be 500° Celsius or better</p> <p>All source parameters to be adjustable through software.</p>	No change
7.	Source cleaning	Should be done without venting the system and facility to vacuum interlock	No change
8.	Infusion Device	<p>Infusion device must be integral to the instrument and must be controllable from the instrument software.</p> <ul style="list-style-type: none"> <li>• Easy calibration of the system as and when required.</li> </ul>	No change
9.	Vacuum pump	A robust high efficiency vacuum system with minimum maintenance and utility with low noise level and automatic vacuum lock system.	No change
10.	Triple Quadrupole	Quadrupoles having high standards of mechanical tolerances and minimum coefficient of Thermal expansion to ensure highest mass stability with Prealignedpre filters to ensure excellent focusing of Ions into all the Quadrupoles for high sensitivity and resolution in both Q1 and Q3.	No change

S. No.	Major headings	Tender specifications	Amended specifications
11.	Mass Resolution	Must be automatically adjusted to desired resolution (0.50 Da, 0.75 Da or 1.00 Da FWHM)	No change
12.	Sensitivity	MRM ESI +ve 1pg on column reserpine or equivalent standard should give chromatographic S /N greater than 3,50,000:1 without smoothing for the transition of the protonated molecular ion at m/z 609 to the fragment ion at m/z 195 when operated in selected reaction monitoring (SRM) mode with Q1 and Q3 resolution both set to 0.7 Da FWHM Documentary evidence to be submitted along with quotation. For ten injections, %RSD should be <5%. Chromatograms to be provided, with details of mobile phase, column and injection volume. Statistical treatment used to determine S/N ratio is to be specified along with raw data	No change
13.	Collision cell	Specially designed collision cell to allow use of very low Dwell times (1 milliseconds) without sacrificing sensitivity and eliminate Cross-Talk to enable Multiple MRM Transition Studies within a single run.	No change
14.	MRM Acquisition rate	Should be capable of minimum 500 MRM data points /sec in a single time period, with no loss in sensitivity for co-eluting components at any one point of time.	No change

S. No.	Major headings	Tender specifications	Amended specifications
15.	Operating modes	<p>Tandem mass spectrometry should have following scan options</p> <p>a) Full scan</p> <p>b) Selected ion monitoring/recording (SIM/SIR)</p> <p>c) Product ion scanning</p> <p>d) Precursor ion scanning</p> <p>e) Neutral loss/gain scanning</p> <p>f) Multiple reaction monitoring</p> <p>g) Simultaneous full scan and MRM along with matrix monitoring to be performed in a single run</p> <p>h) +ve / -ve polarity switching time between alternate MRM scans is minimum 25 ms</p> <p>i) Automatic and manual tuning.</p>	<p>Tandem mass spectrometry should have following scan options</p> <p>a) Full scan</p> <p>b) Selected ion monitoring/recording (SIM/SIR)</p> <p>c) Product ion scanning</p> <p>d) Precursor ion scanning</p> <p>e) Neutral loss/gain scanning</p> <p>f) Multiple reaction monitoring</p> <p>g) Simultaneous full scan and MRM along with matrix monitoring to be performed in a single run</p> <p>h) +ve / -ve polarity switching time between alternate MRM scans is minimum <b>15 ms</b></p> <p>i) Automatic and manual tuning.</p>
16.	Dynamic range	5 orders of magnitude or better	6 orders of magnitude or better
17.	Detector	<p>Long life highly efficient electron multiplier or photomultiplier detector</p> <ul style="list-style-type: none"> <li>• Must operate both +ve and -ve ion mode and back</li> </ul>	No change
18.	UHPLC	<p>The Ultra-High-Pressure Liquid Chromatography (UHPLC) system should be capable of running with &lt;2 micrometer particle size columns</p> <p>System should have a binary/quaternary operating pump with an operating pressure of minimum 15000 psi or higher. Purging of pumps must be automated through the software.</p> <p>The flow rate range should be 0.010 to 2.000 mL/min, in 0.001 mL increments.</p> <p>The instrument should have in-built Vacuum degasser facility to remove dissolved air online.</p>	No change

S. No.	Major headings	Tender specifications	Amended specifications
19.		<p>System Delay Volume should be less than &lt; 400 microlitre, independent of system backpressure &amp; with suitable mixer for higher sensitivity.</p> <p>The system should have an auto-sampler capable of holding approx 90 vials 2ml or more. The auto-sampler should have cooling facility upto 5 °C or better and heating upto 40 °C or better.</p> <p>Programmable injection volume from 0.1 microlitre to 10 microlitre or better must be available with Integral, Active &amp; Programmable needle wash. The carryover of the autosampler must be less than 0.005% or better. Injection Precision should be &lt;0.25 % RSD or better. The system should incorporate a column oven with a temperature control of ambient to 80-degree C or better</p> <p>The system should incorporate PDA detector capable of scanning from 190-800 nm or better. Should be equipped with suitable low volume flow cell and the flow cell volume should be less ≤500nl</p>	<p>System Delay Volume should be less than &lt; 400 microlitre, independent of system backpressure &amp; with suitable mixer for higher sensitivity.</p> <p>The system should have an auto-sampler capable of holding approx 90 vials 2ml or <b>1.5mL</b> or more.</p> <p>The auto-sampler should have cooling facility upto 5 °C or better and heating upto 40 °C or better.</p> <p>Programmable injection volume from 0.1 microlitre to 10 microlitre or better must be available with Integral, Active &amp; Programmable needle wash. The carryover of the autosampler must be less than 0.005% or better. Injection Precision should be &lt;0.25 % RSD or better. The system should incorporate a column oven with a temperature control of ambient to 80-degree C or better</p> <p>The system should incorporate PDA detector capable of scanning from <b>190-700 nm along with 1024 diode elements</b> with 10mm path length or better. Should be equipped with suitable low volume flow cell and the flow cell volume should be less <b>≤1µL</b></p>

S. No.	Major headings	Tender specifications	Amended specifications
20.	Quantification software system	<p>Original company licensed software application software for quantitative applications having the additional requirement of Quality Control (QC) checks must be available. Automated calibration, auto tuning, automated switching from MS to MS/MS and should have all Ion MS mode and effective data mining tools.</p> <p>Automated quantitative and qualitative data processing capability Quantification and QC parameters must be stored for each compound and individually selected and loaded into new methods. It should be able to access and use the compound library, should include a tools for empirical formula calculation, structure correlation for annotation of unknown compounds. Software should include free upgrades up to 5 years. All software (and potential upgrades) should be compatible with the given operating system.</p>	No change
21.	Database	<p>Latest database of (Antibiotic, veterinary drugs residue, Dyes, Mycotoxins, Vitamins, Pesticides, Phytochemical, etc.) need to be quoted</p>	No change

S. No.	Major headings	Tender specifications	Amended specifications
22.	Computer Workstation with inbuildwifi	<p>A Workstation should be provided for controlling the mass spectrometer with data acquisition &amp; for data processing and analysis with following specification: •</p> <ul style="list-style-type: none"> <li>Memory: 32 GB, DDR4</li> <li>Hard disk: 8 TB or better</li> <li>Processor: Core i7 or Suitable processor with clock speed 3.2 GHz or better and HD graphics or equivalent upgraded technology</li> <li>Operating system: Windows 7/10, 64 - bit or better.</li> <li>27 inch LCD monitor or larger.</li> <li>1 Multi-functional Duplex laser color printer with USB 2.0; Host USB; Ethernet; Wireless 802.11b/g/n ports.</li> <li>DVD RW Drive</li> <li>1 monochrome laser printer</li> </ul> <p>All hardware and software including drivers, monitor, device interfaces cards/network must be preinstalled and preconfigured on the computer provided.</p>	Suitable antivirus for five year should be quoted with the system is omitted rest will remain same for serial number 22.
23.	Instrument and Software Qualification Service & Certification	<p>The instrument must be “Qualified” along with the Software. Necessary reagents along with Documents must be provided for valid “Instrument Qualification, Operational &amp; Performance Qualification” of the instrument along with Specification check during the installation. The vendors must quote the Qualification kits with defined list of items along with valid Cat. No./Product ID etc.</p>	No change



S. No.	Major headings	Tender specifications	Amended specifications
24.	Start up Kit	LC-MS/MS start up kit should be supplied as standard	No change
25.	Additional Equipment for Sample Preparation	Suitable vacuum manifold with oil free pump along with SPE cartridges for application in food, natural products, biological fluids, etc.	Suitable vacuum manifold with oil free pump along with SPE cartridges (500 no.) for application in food, natural products, biological fluids, etc.
26.	Nitrogen Generator with in-built compressor & Gas Cylinder	A suitable imported noise free nitrogen gas generator with in-built compressor, filters, or any other accessory required for functioning of system, should be supplied to take care gas requirements for ionization source. Also, two numbers of suitable gas cylinders for fragmentation purposes including regulators, tubings, filters, etc. need to be supplied.	No change
27.	On line UPS	A suitable online UPS of 10 KVA capacity with at least 60 mins back up for the complete system with isolation transformer should be provided.	No change
28.	After sales service	Should have a good after sales service/technical support capable of reaching at short notice the places where LC-MS/MS is proposed to be installed. Visits and unlimited breakdown calls by service/application support, engineers should attend immediately without fail for LC-MSMS including Nitrogen Generator	No change

S. No.	Major headings	Tender specifications	Amended specifications
29.	Training of personnel	Basic training for a period of not less than one weeks after installation of the equipment to technical personnel should be provided, free of cost. Trouble shooting training as and when required	No change
30.	Experience	The supplier should have at least ten successful installations of the quoted model at government organization in India. Satisfactory performance certificate taken from government organization along with technical bid shall be submitted. The Complete users list for the quoted model in India, with contact addresses, emails and phone numbers should be provided.	No change
31.	Other	Suppliers should ensure item wise compliance/deviation report. If the bidder is unable to show the proof for the technical compliance of specified points in the tender either in the brochure or technical data sheet or instruction manuals should available in the website for the specific point will be considered as does not complies the institutional specification. Standards/reagents and solvent required for successful installation must be supplied. All provided major technical data sheets should be available in supplier's public website.	No change

S. No.	Major headings	Tender specifications	Amended specifications
32.	Hardware	Both MS and LC should be from same manufacturer or if different vendor then it should be compatible and compliance statement should be attached with the tender file.	No change
33.	Other requirements	<p>1. Warranty: Warranty must be 5 (five) years from the date of installation and commissioning.</p> <p>2. Availability of spares&amp; Consumables: Quoted model should be launched within last five years in the global market and manufacturer should guarantee the supply of spares till 10 years from the date of installation</p> <p>3. Post warranty, AMC rates (at least for 5 years after warranty) with 2 (two) preventive and 1 (one) breakdown visit for each year should be mentioned in the offer but it will not be taken for price comparison and decision for AMC will be taken afterwards.</p> <p>4. Training on operation and maintenance of the machine are to be imparted by the firm for atleast 7 (seven) days during installation and commissioning.</p> <p>5. Performance certificate from at least 5 users of reputed organizations in India is to be attached along with technical bid.</p> <p>6. The genuine part numbers of major accessories should be available in supplier's public website</p> <p>7. Petty consumables like injection syringes, tubings, gaskets, seals, spares, etc. should be quoted for the entire warranty period.</p> <p>8. The MS system should be compatible with other UHPLC systems.</p>	<p>1. Warranty: Warranty must be 3 (five) years from the date of installation and commissioning. Please quote 2 year additional AMC as optional item. <b>(The same will be considered for financial comparison)</b></p> <p>2. Availability of spares&amp; Consumables: Quoted model should be launched within last five years in the global market and manufacturer should guarantee the supply of spares till 10 years from the date of installation</p> <p>3. Post warranty, AMC rates (at least for 5 years after warranty) with 2 (two) preventive and 1 (one) breakdown visit for each year should be mentioned in the offer but it will not be taken for price comparison and decision for AMC will be taken afterwards.</p> <p>4. Training on operation and maintenance of the machine are to be imparted by the firm for at least <b>15 (fifteen) working days</b> during installation and commissioning.</p> <p>5. Performance certificate from at least 5 users of reputed organizations in India is to be attached along with technical bid.</p> <p>6. The genuine part numbers of major accessories should be available in supplier's public website</p> <p>7. Petty consumables like injection syringes, tubings, gaskets, seals, spares, etc. should be quoted for the entire warranty period.</p>

S. No.	Major headings	Tender specifications	Amended specifications
34.	Column and accessories (All these items should be quoted as optional)	Suitable sub 2 micron particle size column (100mm length x 2.1 mm diameter) of C18 – 1 no. Suitable sub 2 micron particle size column (100mm length x 2.1 mm diameter) of Phenylhexyl chemistry– 1 no. Suitable sub 2 micron particle size column (100mm length x 2.1 mm diameter) of Phenyl chemistry – 1 no. Suitable sub 2 micron particle size column (100mm length x 2.1 mm diameter) of suitable chemistry for lipid analysis (PIP 1,2 and 3) – 2 no. Vial with Cap and Pre-slit PTFE/Silicone Septa – 2000 nos Glass inserts-2000 numbers with legs Suitable Peek Tube Cutter – 2 no Suitable Stainless Steel Tubing Cutter with Blades – 2 no Solvent bottles (10 no.=250 ml, 10 no.= 100mL)	No change
35.	UPLC waste reservoir	2 numbers: Capacity up to 8-10 liters, compatible for storage of polar and nonpolar solvents. Should be supplied with 30 meters connecting tube	No change
36.	Furniture (optional)	Vendor should quote as per specifications. NIPER-Guwahati will provide only empty room with electrical connections. Vendors will have to make arrangements for all the suitable furniture including granite table with chair, lab stool (02 numbers) and other accessories for the successful operation of the equipment.	<b>Pl quote as optional item*</b>

S. No.	Major headings	Tender specifications	Amended specifications
37.	Manpower	Manpower for 3 year PhD Pharmacy/Analytical Chemistry/Chemistry or M.Sc. (Analytical chemistry/chemistry) With 4 years' experience Prior experience in Mass spectrometer/HPLC/LC- MS handling preferable.	<b>No Change</b>

Note: All the optional items must be quoted otherwise the bid will be technically rejected.

The Remaining other terms and Conditions will be remains same as mentioned in the tender document.

Sd/

Stores and Purchase officer

Sd/

Registrar