

Technical Specifications amendments

Name of the instrument: Bench top High Sensitive Triple/Tandem Quadrupole LC-MS/MS System Connected with an UHPLC System

Specs.Sr. No.	Tender Specification	Request for Amendment	User Department Remarks
SPINCOTECH PVT LTD			
Commercial Terms and Conditions			
1		Earnest Money Deposit (EMD) Rs 7,00,000/- With reference to Notification F.9/4/2020-PPD Government of India, we request you to provide exemption for submission of EMD/Bid Security. We shall keep BID security Declaration	The notification referred is not relevant to EMD and as it is pertaining to PSD. Hence, not accepted. Only EMD exemption with valid documents will be accepted.
2		Delivery Period -45 Days We request you to kindly extended delivery date at least 90 days	Accepted For Imported items, delivery time shall be 90 days.
3		Payment terms Against LC in INR	Accepted Payment will be made through LC, on 80 % generation of CRC, 20 % on final acceptance of the instrument
Technical Specifications			

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4	<p>Furniture's: AIIMS Bhopal will provide only empty room with electrical connections. Vendor will make arrangement for all the suitable furniture including granite table with chair, lab stool (4 no's) and other accessories for the successful operation of the equipment</p>	<ul style="list-style-type: none">• We are supplier of main equipment and do don't have any expertise in setting up laboratory hence we request you to kindly remove this point. • For installation of LCMSMS AC room is required. Please confirm	<p>Not Accepted</p> <p>For the successful Installation and operation of LCMSMS, suitable furniture's along with granite table with chair, lab stool and accessories are required along with main equipment</p> <p>Suitable capacity, 1 split AC with 1.5-ton capacity is required to run the LCMSMS in ideal conditions. AIIMS Bhopal will provide one empty room</p>
5	<p>Sensitivity: Positive 350000:1 and Negative 250000:1</p>	<p>We request to increase the sensitivity to 500000:1 for both positive and negative to meet the current and new challenges</p>	<p>Not Accepted</p> <p>S/N ratio should be compared on the basis of raw unsmoothed chromatogram to check the actual sensitivity of the MS system as smoothing the data will reduce the noise in the calculation. When measurements are calculated with applied smoothing - based on 1x standard deviation of at least 3x points of noise which produce the smallest standard deviation, after applying up to 3x Gaussian smooths etc will show the enhanced S: N compared to</p>

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			observed raw data. Hence, the actual sensitivity data should be on the basis of raw without smoothed data.
6	Additional Accessories Refrigerated centrifuge Micropipettes set Nitrogen Concentrator/evaporator Vortex Mixtures Incubator Shaker Sonicator A. Bath Sonicator B. Probe Sonicator Five digit analytical/microbalance Sample/solvent filtration kit Water Purification system pH meter	We are not manufacturer of equipment mentioned under additional accessories. We request you to Kindly procure from directly from OEM in order to get proper service hence kindly remove this point.	Not Accepted

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	Laminar-flow and Fumigator hood Laboratory Dryer Laboratory Vacuum Filtration Distillation Apparatus Micropore Syringes Columns Solid phase extraction unit -one SPE Cartridges		
7	Trained Operator for 6 Months	Please confirm	Accepted For initial 6 months, we need trained technically sound person from the company who can operate and train our Ph.D, PGs, Masters students etc after installation of the instrument
8	Warranty clause for additional items	Please clarify scope of warranty for additional Accessories (Third Party items) mentioned. As these items are bought out from other vendors it is not possible to give the same.	Minimum 1 year or as per manufacturer warranty

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9	Start-up kit for 500 samples	Please confirm for which application it is required	LCMS grade solvents and reagents, acid additives, neutral salts should be provided as a start up kit for 500 samples for the required tests as demand by clinicians to start the diagnostics (TDM, Metabolite identification and Biomarkers tests etc..)
10	CMC price after warranty @5 %	CMC for these items is not possible @5 % as per tender terms and it should be provisioned in the tender to be quoted separately in BOQ	Not Accepted It will be dealt as per the tender terms and conditions
PERKIN ELMER			
1	Mass Range The quadrupole analysers must have an m/z range of 5 to 2000 amu or better	Please change in Mass Range of 5 to 1000 amu or better	Not Accepted Mass range of up to 2000 m/z or better, means that range 5 to 1000 has been already included as broad mass range covers broad range of compounds including proteins and peptides etc. which will be necessary during our analysis.
2	Sensitivity MRM ESI +ve 1pg on column reserpine should give chromatographic signal to noise (S/N) 350,000:1 (RMS) without smoothing data, in MRM mode of reserpine at the transition m/z 609 -m/z	Please change the Sensitivity 500000:1 with or without Smoothing	Not Accepted - S/N ratio should be compared on the basis of raw unsmoothed chromatogram to check the actual sensitivity of the MS system as smoothing the data will reduce the noise in the calculation. When measurements

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	<p>195. (Proof of Statement must be provided)</p> <p>MRM ESI-ve 1pg on column chloramphenicol should give chromatographic signal to noise (S/N) ≥ 200,000:1 (RMS) without smoothing data, in MRM mode at transition 321 >152 m/z. (Proof of Statement must be provided)</p>		<p>are calculated with applied smoothing - based on 1x standard deviation of at least 3x points of noise which produce the smallest standard deviation, after applying up to 3x Gaussian smooths etc will show the enhanced S:N compared to observed raw data. Hence, the actual sensitivity data should be on the basis of raw without smoothed data.</p>
3	<p>MRM Acquisition rate</p> <p>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.</p>	<p>MRM Acquisition Rate 450 MRM Data Points/Single Point</p>	<p>Not Accepted</p> <p>At least 500 MRM data points /sec in a single time period is required as it will provide good sensitivity without any loss for co-eluting components</p>
4	<p>UHPLC</p> <p>Quaternary Pumps/Solvent Manager: Capable of switching between four or more different solvents</p>	<p>UHPLC-Binary/Quaternary Pump/Solvent Manager: Capable of switching between four or more different solvents</p>	<p>Not Accepted: Quaternary system provides flexibility by allowing a scientist to utilize and mix up to four (4) different solvents at the same time. On the other hand, a binary system is restricted to only two (2) different solvents at the same time. Thus, Quaternary system gives better method development flexibility for labs where different multi component methods are to be developed and</p>

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			used for analysis. Also, Quaternary system is the most widely used system everywhere, so easy for method transfer and method adaptability.
5	UHPLC Wavelength Range: 190-800nm	PDA Detector Wavelength Range-190 to 790 nm	Not Accepted
6	High sensitive Photo Diode Array Detector	Please add one point in PDA Detector, No of Diodes-1024 Diode	Not Accepted Depending on the technology the PDA may have 512 or 1024 diode to get 1.2nm optical resolution for better peak purity results. As High no diode will produce more noise and reduce sensitivity. So, 512 diode gives the best results
7	Warranty and Comprehensive Maintenance Contract (CMC)	Please confirm 5 years Warranty required on LCMS/MS only or need on all Accessories as required in Tender along with the instrument	5 years warranty and CMC is required for the main equipment LCMS/MS from the date of installation. For the accessories minimum 1 year warranty or as per manufacturer warranty is required

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8	Additional Accessories	Please remove all additional accessories including Furniture from above Instrument tender. Accessories are not manufactured by an LCMSMS manufacturer. All has to procure from market and quote in above tender may be expensive to AIMS and will not fit in your specified budget.	Not Acceptable The bidder or Prospective bidder are required to quote the specified additional accessories
9		The instrument is imported so request you to accept offer in USD	Accepted Payment will be made through LC, on 80 % generation of CRC, 20 % on final acceptance of the instrument
10		Please clarify how to quote 5 years CMC Year wise or Lump Summ? After completion of 5 years warranty, please make provision in BOQ for the same CMC in 5 % as mentioned in tender is not possible in above instrument	The final price will be arrived based on all the items specified in BOQ including CMC
11		Please clarify 500 consumables quantity for which type of samples you required. Different consumables are required for different samples	LCMS grade solvents and reagents, acid additives, neutral salts should be provided as a start-up kit for 500 samples for the required tests as demand by clinicians to start (TDM, Metabolite identification and Biomarkers tests ..)
12		Please extend the delivery period to minimum 12 weeks and should be linked through clean acceptable LC not with purchase order	Accepted For Imported items, delivery time shall be 90 days

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13		Please remove EMD as per govt notification for bidding	Accepted Bidder has to submit bid security declaration form along with exemption document
14		Please change payment terms in tender payment terms for instrument 100 % through LC against delivery of instrument and submission of PBG.CMC payment advance at the time of contract initiate after completion of warranty	Not Accepted Please refer to query to no 9
15		Please mentioned clearly in the amendment the room with air conditioning system for maintaining temperature 22 c for installation of instrument will be provided by AIIMS	1 split AC with 1.5-ton capacity is required
16		Please make a provision for minimum 15 days to bid above tender from the amendment on AIIMS website	Accepted Sufficient time will be initiated
17		We also request you to accept small deviations in the tender which is not having any effect on analysis quality matching word to word of the tender specifications may not be possible for all vendors. Every manufacturer has its own technology and specifications.	Not Accepted It should be satisfactory to the user department

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1	<p>SCAN SPEED Instrument should have the ultra-fast scan speed of 17,000 amu /sec or higher</p>	Instrument should have the ultra-fast scan speed of 15,000 amu /sec or higher	<p>Not Accepted - Higher scan speed of 17,000 - 20,000 amu/ sec will help to generate best data for your applications like Targeted metabolomics panel of various metabolites (consisting of >21 amino acids, >21 biogenic amines, >35 acyl carnitines, hexose, >76 phosphatidylcholine, 14 lysophosphatidylcholines, 15 sphingomyelins etc</p>
2	<p>MS TO MS/MS switching The instrument must be capable of acquiring data alternating between MS and MS/MS modes. The time taken to switch between modes (inter-scan delay) prior to acquiring data in that each mode must be no more than 3 ms.</p>	Request you to kindly amend this point as below: The instrument must be capable of acquiring data alternating between MS and MS/MS modes. The time taken to switch between modes (inter- scan delay).	Not Accepted
3	<p>Ionization source ESI and APCI Ionization must be achieved using a single probe</p>	ESI and APCI Ionization should be achieved using a single or separate probe.	<p>Not Accepted Dual source is always beneficial for multimcomponent methods. Good tool to identify the ionisation mode of multiple analytes applications; Drug and its metabolites by operating PDA and ESI (+/-), APCI (+/-)</p>

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			simultaneously. Results of separate channels of PDA and ESI (+/-), APCI(+/-) gives easy identification for suitable ionization mode in less experiments thus enabling faster and better method development.
4	Ionization source Switching between ESI and APCI should be ≤ 25 ms	Request you to kindly amend this point as below: Ionization should be dedicated ESI and APCI probe sing single source housing. There should not be a requirement to change complete source housing while switching from ESI to APCI or vice-versa.	Not Accepted The instrument should have the capability to run samples in ESI & APCI with polarity switching to have the widest coverage of molecules in single method to run polar and non-polar analytes. The time to switch between ESI & APCI with dual mode is necessary and should be minimum of < 25 ms (20 ms) to have the best data quality for all analytes in single method.
5	Sensitivity MRM ESI +ve 1pg on column reserpine should give chromatographic signal to noise (S/N) 350,000:1 (RMS) without smoothing data, in MRM mode of reserpine at the transition m/z 609 — m/z 195. (Proof of Statement must be provided) MRM ESI-ve 1pg on column chloramphenicol should give	We are requesting amend ESI positive and negative sensitivity to 5,00,000:1. High sensitive pharmacokinetic applications and further confirmatory testing in New Born Screening, you may require high sensitive instruments. Your current sensitivity specification of 3.5 an 2 lakhs may not be sufficient hence we are requesting you to increase sensitive to 5,00,000:1.	Not Accepted - S/N ratio should be compared on the basis of raw unsmoothed chromatogram to check the actual sensitivity of the MS system as smoothing the data will reduce the noise in the calculation. When measurements are calculated with applied smoothing - based on 1x standard deviation of at least 3x points of noise which produce the

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	chromatographic signal to noise (S/N) \geq 200,000:1 (RMS) without smoothing data, in MRM mode at transition 321>152 m/z. (Proof of Statement must be provided)		smallest standard deviation, after applying up to 3x Gaussian smooths etc will show the enhanced S:N compared to observed raw data. Hence, the actual sensitivity data should be on the basis of raw without smoothed data.
6	Collision Cell Specially designed collision cell to allow use of very low Dwell time (1 milliseconds or better) without sacrificing sensitivity and eliminate Cross-Talk to enable Multiple MRM Transition Studies within a single run.	Specially designed collision cell to allow use of very low Dwell time (1 milliseconds or better) without sacrificing sensitivity and Zero cross-talk to enable Multiple MRM Transition Studies within a single run.	Not Accepted - Instrument Collision cell should have the minimum cross talk at lowest dwell time or inter scan delay time. There is the measurement of the same at lowest dwell time of the instrument. The inter-channel cross talk between two MRM transitions, acquired using an MRM dwell time of 1 ms and an inter-channel delay time of 1 ms, is less than 0.001%.
7	UHPLC Quaternary Pumps/Solvent Manager: Capable of switching between four or more different solvents	Binary pump instead of Quaternary pump	Not Accepted - Quaternary system provides flexibility by allowing a scientist to utilize and mix up to four (4) different solvents at the same time. On the other hand, a binary system is restricted to only two (2) different solvents at the same time. Thus, Quaternary system gives better method development flexibility.

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	<p>High Sensitive Photo Diode Array Detector Flow cell volume must be 0.5µL or better</p>	<p>Flow cell volume must be 2.5µL or better</p>	<p>for labs where different multi component methods are to be developed and used for analysis. Also, Quaternary system is the most widely used system everywhere, so easy for method transfer and method adaptability.</p> <p>Not Accepted - It's to have the best UPLC performance - Lowest flow cell volume of 0.5 µL for analytical pathlength of 10 mm ensures best UPLC peak widths and heights and best sensitivity and maintain the best chromatographic resolution. The instrument should also have the lowest dispersion of less than 10 µL.</p>
<p>8</p>	<p>Database Latest Database: Complete methods library for more than 1000 compounds with MRMs of Pharmaceuticals, Aminoglycosides, Antibiotics, toxins, Veterinary drugs, mycotoxins etc with instrument method details and SOPs related software's and user manuals to be provided</p> <p>Computer and Workstation</p>	<p>Database of at least 10,000 compounds</p> <p>Hard Disk: 1.5 TB or better</p>	<p>Many companies have only 1000 compounds database initially, which is relevant to our application. It can be updated as and when required by running the standards.</p> <p>8 TB is asked in the tender; as more the disk space better the</p>

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			data storage capacity and for the smooth running.
9	Warranty/CMC Warranty of additional accessories	Please confirm the requirement of warranty for additional accessories. Do we need to quote 5 years warranty for additional accessories as well?	For Additional accessories, minimum 1 year warranty or as per the manufacturer warranty is required
10	Delivery Period 45 days	LC-MSMS is advanced mass spectrometer and delivery within 45 days is practically not possible. Requesting you to please allow delivery within 120 days	Accepted Maximum 90 days delivery for imported items will be allowed
11	Room AIIMS will provide room only	Please confirm AC would be available at AIIMS, Bhopal or need to quote by vendors?	Split AC with 1.5 ton capacity is required
12	Tender Due Date 10-02-2023	Request you to please extend the tender submission due date by another 10 days	Sufficient time will be given by AIIMS, Bhopal.

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