

## **(8. E- Tender for ESI/APCI-UHPLC-HRMS)**

National Institute of Pharmaceutical Education and Research (NIPER) invites online e-tenders in two –bid format **ESI/APCI-UHPLC-HRMS** at the Institute as per the specification given in the tender documents and other details can be obtained from the website: [www.tenderwizard.com/NIPER](http://www.tenderwizard.com/NIPER) and official website of the NIPER <http://www.niper.gov.in>. The e-tender also available on Govt. of India's Central Public Procurement Portal (e –procurement) i.e. <http://eprocure.gov.in/>.

1	Downloading of e-tender document	Start Date: 25.03.2019 at 09.00 AM End Date : 14.05.2019 at 01.00 P.M
2	Date of submission of e-tender	Start Date : 25.03.2019 at 10.00AM End Date : 14.05.2019 at 05.00 P.M
3	Physical submission of Tender fee and EMD ( offline)	Start Date : 25.03.2019 at 10.00AM End Date : 14.05.2019 at 05.00 P.M
4	Opening of Technical Bid (online)	15.05.19 at 11.00 A.M

**Director, NIPER reserves the right to reject any or all tenders without assigning any reasons. Corrigendum/Addendum or Cancellation of this advertisement, if any, shall be published on NIPER Website and [www.tenderwizard.com/NIPER](http://www.tenderwizard.com/NIPER).**

**For participating in the above e-tender, the bidder shall have to get themselves registered with <http://tenderwizard.com/NIPER> and get user ID & password. Class 3 Digital Signature Certificate (DSC) is mandatory to participate in the e-tendering process. It is advisable to complete the online submission process well before time to avoid any delay in submission. For any clarification/difficulty regarding e-tendering Process flow please contact on helpdesk numbers 09257209340, 08045628821, 0172-5035950.**

**Officiating Registrar**

## Specifications for a ESI /APCI-UHPLC-HRMS

### 01 Nos.

S. No.	<b>Technical Specifications for High Resolution Mass Spectrometer System (HR-MS):</b> High-resolution Mass spectrometry system for Small Molecules, Chemical Compounds, Drugs, Environmental Compounds, Metabolites, Biopolymers, Proteins, Peptides and Biomolecules studies with a Quadrupole Time Of Flight / Hybrid Quadrupole Ion Trap or equivalent MS-MS workstation for exact mass and true isotopic measurements.
2	<b>Ion Source:</b> <ul style="list-style-type: none"><li>• The instrument must be equipped with an atmospheric pressure ionization (API) interface that includes the source and spraying elements. Combined or Separate ESI and APCI should be provided with the system. Samples may be introduced by direct infusion, or the system may be interfaced directly to an Ultra High Performance LC system.</li><li>• Positive and negative ionization capabilities must be included as standard on the instrument.</li><li>• Suitable accessory for sample introduction by direct infusion in the system must be supplied.</li><li>• System should have latest technology of ion focusing to the analyser.</li><li>• Desolvation temperature should be 400 degree C or higher.</li><li>• Electrospray Ionization Source range from 200µl/min to 2.0ml/min. without splitting.</li><li>• Atmospheric pressure chemical ionization source range 200µl/min to 1.0ml/min without splitting.</li></ul>
3	<b>Mass Analyzer:</b> Mass Analyzer should be equipped with quadrupole analyzer and collision cell followed by high resolution Time of flight or equivalent mass analyzer system/ hybrid quadrupole ion trap. System should have CID for fragmentation & MS/MS, with efficient ion transmission using the latest technology.
4.	<b>Quadrupole Mass Range:</b> 50 m/z to 2000 m/z or Better
5.	<b>Mass Resolution:</b> The resolution of the system should be 60000 FWHM or Better.
6.	<b>Mass Accuracy:</b> Internal calibration $\leq 1$ ppm and External calibration $\leq 3$ ppm.
7	<b>Sensitivity:</b> Reserpine 1pg on column , S/N 1500:1
8.	<b>Reference mass introduction:</b>

	Capable of internal reference mass correction for MS and MS/MS operation without losing sensitivity standard has to be quoted.
9.	<b>Acquisition modes:</b> Qualitative and quantitative expression in ESI and APCI. The instrument should have variable collision energy between low and high-energy in the collision cell
10.	<b>Operating software:</b> Multitasking suite of analytical applications and instrument management software operating in Microsoft Windows environment, <ul style="list-style-type: none"> <li>• Mass Spectrometer Control Software</li> <li>• System parameter checking and alerts</li> <li>• LC/MS System Check – automated on-column performance test</li> <li>• Complete integrated software to control MS, LC and Autosampler.</li> <li>• Spectrum Review and Processing</li> <li>• Auto-calibration / tuning, accurate mass measurements, elemental composition determination (automatic formula generation by matching true isotopic pattern with parent and fragment ions), MS/MS experiments and quantification</li> <li>• Automatic library searching against Free and commercially available libraries</li> <li>• Automatic library searching against user defined libraries</li> <li>• Should be capable of qualitative, quantitative and characterization with suitable library system</li> <li>• Pesticide residual analysis, toxin analysis and antibiotic and pharma compound analysis.</li> <li>• Semi-quantitative reporting of Deconvoluted component concentrations</li>   <li>• Necessary software for metabolite, polymer and oligomers and organic</li> <li>• Targeted accurate mass screening, for presence/absence/confirmation of large number of compound in complex mixtures. Automated quantification and reporting of acquired samples</li> <li>• Software for empirical formula calculation.</li> <li>• 5 Nos licences for data processing / interpretation.</li> </ul>
11.	<b>Computer and Printer:</b> One branded desk top computer processor intel core i7 @ 3.40 GHz Ram 16 GB, Memory 1TB, Screen 23 inch or more , DVD write drive, key board and mouse with laser jet multi functional printer with high speed USB , wireless connect, up to 26 pages per minute and toner capacity 1200 pages or more for running the equipment and software. Vendor may also quote all in one computer with same specifications. License version of windows professional OS & MS-Office professional and driver with original CD.
12.	<b>Power Rating:</b>  As per Indian standard

13.	<p><b>Nitrogen Gas Generator:</b> A suitable imported gas generator with compressor capable of providing nitrogen gas at the required 99% purity, pressure and flow rate for the Mass Spectrometer must be quoted. The compressor should be noise-free.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 70%;">Helium Cylinders</td> <td style="width: 30%;">2 Nos</td> </tr> <tr> <td>Helium Regulators (S.S.)</td> <td>2 Nos</td> </tr> <tr> <td>Moisture / hydrocarbon trap</td> <td>1 Nos</td> </tr> </table> <p>must be supplied.</p>	Helium Cylinders	2 Nos	Helium Regulators (S.S.)	2 Nos	Moisture / hydrocarbon trap	1 Nos
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Moisture / hydrocarbon trap	1 Nos						
14.	<p><b>DIRECT INFUSION:</b> Syringe pump or equivalent to inject samples directly to the instrument for MS and MS/MS analysis. <b>Spare Syringes- 10 Nos.</b></p>						
15.	<p><b>LIQUID CHROMATOGRAPHY UHPLC SYSTEM:</b> A liquid chromatography system should provide an integrated configuration for solvent and sample management with the following specifications</p> <p><b>Pump:</b> Quaternary Gradient Pump Vacuum degassing capability of solvents. Operating Flow Rate Range 0.2 to 2 ml/min or better Maximum Operating Pressure 15,000 psi or above.</p> <p><b>Auto Sampler:</b> Number of Samples: 90 vials or more of 1 ml or more capacity. Injection Volume Range 0.5 to 50uL or better. Sample Temperature 4 – 40 deg. C</p> <p><b>Column Thermostat:</b> Column Temperature Control Up to 80 deg.</p> <p><b>Detector-</b> PDA/DAD Detector Wavelength Range: 190-800 nm with accuracy 1nm or better.</p> <p><b>Column-</b> 5 Nos. C-18 or equivalent. <b>Sample vials</b> -500 Nos.</p>						
16	<p><b>UPS.</b> Appropriate 15 KVA UPS cum stabilizer with at least 3-4 hour backup must be supplied.</p>						
17	<p><b>SPECIAL REQUIREMENTS:</b></p> <p>a. As the HR-MS instrument is an expensive and advanced equipment, it is mandatory that the facility must be multiple-user specific. Also, it is important that the equipment is stable and run for a long time. Thus it is important for the vendors that they must supply appropriate documents specifying their users in higher academic institutions in India. Appropriate certificates from the users for the last three year for the model quoted must be supplied justifying the stability, ease of operation and maintenance requirement such that we have the option to choose the best system in terms of performance and not mere specifications alone.</p>						

	<p>b. Further, as the instrument is expensive and multi user equipment, One year standard warranty followed by AMC for 5 years is a must and this must be specifically mentioned in the quotation by the vendor/ principal. In case, the vendor provides the warranty, the principal should certify (authenticate). Appropriate documents must be attached along with the quotation in this regard.</p> <p>c. A certificate will be required from the original equipment manufacturer that technical support along with all essential spares will be provided / made available for at least 10 years after the expiry of one year standard warranty period.</p>
	<p><b>General:</b> Vendor should quote as per specifications. NIPER will provide only empty room with electrical connections &amp; A/c provisions. Vendors will have to make arrangements for all the other accessories, infrastructure (aluminum partition) including UPS essential for the successful operation of the equipment. Installation certificate will be issued only after satisfactory working of the instrument (Demo of all the modules) &amp; onsite training. The instrument will consist of Ion source API (ESI /APCI), mass analyzers (Quadruple Time of flight / hybrid quadrupled ion trap MS-MS or equivalent system), data analyzing system and Nitrogen generator.</p>
18	<p><b>Onsite Training</b> Training to be divided in parts three weeks training at the time of installation and three weeks training after three month of successfully installation of the system at the user place.</p>
19.	<p><b>Optional Items</b> Price details for additional five years of AMC after completion of one year of warranty and five years of AMC to be quoted.</p>

## **NOTICE INVITING e-TENDERS**

1. The Bidders shall have to submit their Bids online in Electronic Format Digital Signatures. For participation in the e-tendering process, the Bidders need to register themselves at <http://tenderwizard.com/NIPER> and get user ID and password. Class 3 Digital Signature Certificate (DSC) is mandatory to participate in the e-tendering process. ( Helpdesk No. for registration – 09257209340 & 08054628821).
2. E-Tender processing fee shall be payable to M/s ITI Limited through their e-gateway by credit/debit card, internet banking facility and non refundable.
3. No tender will be accepted in physical form and in case it has been submitted in Physical it shall be rejected without any communication to the sender.
4. Bids will be opened online as per time schedule mentioned in tender document.
5. The tenderer are requested to read the tender document carefully and ensure to compliance with all the instructions herein. Non –Compliance of the instructions contained in this document will disqualify the tenderer from the tendering exercise.
6. Before submission of online bids, bidders must ensure that scanned copies of all the necessary documents have been uploaded with the bid.
7. Director NIPER SAS Nagar will not be responsible for any delay in online submission of bids due to any reason whatsoever.
8. The tenderer shall be required to submit the Earnest Money Deposit (EMD) for an amount of Rs. **4,00,000/-** (Rupees Four Lac only) which is refundable and a non-refundable tender fee for an amount of **Rs. 5000/-** (Rupees Five Thousand only) by way of demand drafts only. The demand drafts shall be drawn in favour of “Director NIPER” payable at Mohali / Chandigarh. The demand drafts for earnest money and tender fee should be send through registered post to “Director NIPER, Sector 67 SAS Nagar, Punjab” so as to reach NIPER before the date of opening of the technical bids. It is further required that the scanned copies of the Demand Drafts should be forwarded through e\_tendering mode along with other relevant documents. In case of non receipt of tender fee and earnest money in physical form before the opening of tender, the tender will be straightway rejected.
9. The details of the tender fee and Earnest Money Deposit specified in the tender document should be same as uploaded scanned copies of the Demand drafts and send through registered post.
10. The Financial Bid through e –tendering of only those bidders shall be opened who will qualify in the technical bid and are approved by the technical Committee.
11. **This Institute is registered with DSIR for duty free imports under duty exemption certificate. Preference shall be given to those tenderer who shall offer duty free prices for direct import. we will also provide you GST Concessional Certificate alongwith our purchase order, if required. (Notification No. 45/2017-Central Tax (Rate) Dt. 14<sup>th</sup> Nov. 2017).**
12. Only manufacturers or their authorized distributors/agents are entitled to submit the proforma invoice/quotation. Manufacturers are requested to furnish themselves the proforma invoice where enquiries have been addressed to them. Foreign manufacturers may, however, direct their Indian Agent to quote on their behalf in which case the Indian Agent should attach with his quotation a copy of the letter from the foreign manufacturers directing the Indian Agents to quote on their behalf against this quotation enquiry (General authority letter will not suffice).
13. The quotation/proforma invoice for the imported items should be prepared as under :
  - i. Complete description, catalogue no., make, name of the manufacturer, model, quantity, rate of each item and total amount.
  - ii. Total FOB value of all items.
  - iii. Indian Agency Commission payable to the Indian agent, if any.
  - iv. Net FOB value (i.e., total FOB value as in (ii) above, less Indian Agency Commission as in (iii) above.

- v. Add freight charges upto New Delhi (India)
- vi. Insurance upto destination at NIPER, S.A.S. Nagar, Mohali (Payable on actual).
- vii. Total CIF value (iv + v + vi)

**Note: NIPER is an academic non-profit research Institution. You are, therefore, requested to offer maximum possible discount in the first instance.**

- viii) Quorate may be evaluated on FOB value. The Institute may also go for domestic insurance from warehouse to warehouse. The complete description viz. make and model of the equipment and name of the manufacturer must be indicated clearly in the proforma invoice/quotation failing which the same shall be liable to rejection.
  - ix) The spare parts/wear & tear consumables, if any, required for trouble free operation of equipment for 3 years shall be quoted separately giving the full nomenclature, rate, quantity and shelf life of each item. The value of such spare parts/wear & tear, consumables may not exceed 2% of the FOB value. (The cost of such spare parts/wear & tear consumables will not be considered while evaluating the quotations).
  - x) In case no Indian Agency Commission is payable, then this fact must be very clearly mentioned in the quotation.
  - xi) The tenderer firm should furnish along with the bid a certificate that the entire Indian Agency Commission shall be payable in India in Indian Rupees and that no Indian Agency Commission other than that stipulated in the Proforma Invoice is payable by the foreign manufacturers to Indian Agent.
  - xii) The items which can/are to be procured indigenously may be listed separately.
14. The Tenderers must confirm in their bid acceptance in full of the terms and conditions in this enquiry. Tenderers must note carefully that any conditional offer or any deviation from the terms and conditions of this enquiry may render the quotation liable for rejection.
15. The manufacturers must guarantee that the quoted item(s) is/are new and not the one used/sold earlier.
- 16. It is specifically required that the tenderer will supply all the operating and service manuals circuit diagrams alongwith the equipment.**
17. In addition to quoting for the equipment, the tenderers are also requested to quote separately, the charges and terms and conditions of SERVICE CONTRACT FOR A PERIOD OF FIVE YEARS, for maintaining the equipment at this institute after the expiry of the period of guarantee/warranty. The terms and conditions of the Service Contract are given in **Annexure 'B'**. It may be noted that the service contract charges may also be considered along with the cost of equipment while evaluating the quotations. Price List of Spares parts must be quoted.
- 18. The equipment should be quoted only for 220 volts and 50Hz electricity supply.** The extra requirement of line voltage, current rating etc. and the optimum climate and environment required for the equipment must be stated precisely. Voltage stabilizers/isolation transformers/CVT/UPS etc., as may be required shall be listed separately. The full technical specifications and literature in respect of the voltage stabilizer etc., must be furnished.
19. The successful firm or his Agent will be required to furnish a performance guarantee bond in the shape of Bank Guarantee for an amount equivalent to 10% of the FOB value of the equipment towards execution of supply order and ensuring timely supplies/satisfactory installation and handing over the equipment in good working conditions within stipulated period and for carrying out after sales services

during warranty/guarantee period. The Bank guarantee will be submitted within a period of 15 days after the placement of the supply order failing which the order will be liable to be cancelled.

20. The successful firm will be required to agree for payment of penalty for exceeding permissible downtime during guarantee/warranty period as defined in **Annexure 'A'**.
  - a. In case total downtime exceeds the permissible limit, the guarantee/warranty shall be extended by the period in excess of the permissible downtime.
  - b) In case total downtime exceeds the permissible limit then in that event a penalty in Indian Rupees at the rate of 1/365 percent of FOB value of the equipment shall be recovered for each day in excess of the permissible downtime. The conversion of FOB value into Indian Rupees for the above purpose shall be the TT selling rate prevalent on the date of the releasing of the LC documents by the bankers.
21. If during the guarantee/warranty period, the equipment does not perform as per claims, the supplier will be asked to replace the entire unit or part thereof failing which the supplier will have to bear the cost of liquidated damages.
22. The compliance sheet as per **Annexure 'C'** may be filled and submitted online along with necessary documents maximum upto 4 pages.
23. The Indian agents are allowed to quote for only one manufacturer in a parallel/subsequent tenders for the same item.
24. **ELIGIBILITY CONDITIONS:** The firm should have experience of performing job contract of similar nature in reputed Govt. / Semi Govt. / Govt. undertaking / University establishment and other government / private establishments. The firm must have Service Tax Registration (if applicable), Registration of Declaration of ownership under Indian Registration Act, 1908 (or any other Act, as applicable), PAN / TIN and a valid Labour License as on the date of submission of tenders. The firm should have technical competence, financial resources, reputation and the personnel, to perform this contract.
25. The tenderer is being permitted to tender in consideration of the stipulation on his / her part that after submitting his / her tender, he / she will not refuse his / her offer or modify the terms and conditions thereof. Should the tenderer fail to observe and comply with the foregoing stipulations, the earnest money will be forfeited by the Institute. In the event of the offer made by the tenderer not being accepted, the amount of earnest money deposited by the tenderer will be refunded to him / her, in the manner prescribed by the Institute.
26. In case of partnership firms, where no authority has been given to any partner to execute the contract / agreement concerning the business of the partnership, the tenders and all other related documents must be signed by each partner of the firm. A person signing the tender form or any other documents forming part of the contract on behalf of another shall be deemed to warranty that he has the authority to bind such other & if, on enquiry, it appears that the persons so signing had no authority to do so, the Institute shall without prejudice to other civil and criminal remedies cancel the contract and hold the signatory liable for all costs and damages. Each page of the tender and the schedules to the tender and annexure, if any, should be signed by the tenderer.
27. GST or any other tax applicable or made applicable after awarding the contract in respect of this contract shall be payable by contractor and NIPER, Mohali will not entertain any claim whatsoever in this respect. However the TDS or any other tax which is as per the rules of the Govt., shall be



deducted at source from the bills of the successful tenderer, as per rules / instructions made applicable from time to time by the government

28. The Director, NIPER reserves the right to reduce or increase the quantum of supplies or place repeat orders within a period of one year of date of order (on same rates and terms & conditions) or may also terminate the contract in the interest of the Institute, for any justifiable reasons, not mandatory to be communicated to the tenderer. His decision shall be final & binding on all parties for any aspect of contract. Any dispute arising on the contract will be settled at his level by mutual consultation and in case of failure of settlement; the dispute shall be referred to the sole arbitrator to be appointed by him. The decision of the sole Arbitrator so appointed shall be final and binding on both parties. Arbitration proceedings shall be governed by the Arbitration & Conciliation Act, 96.
29. Acceptance by the Institute will be communicated by e-mail, FAX, Express letter or any other form of communication. Formal letter of acceptance and work order of the Tenders will be forwarded as soon as possible, but the earlier instructions in the FAX / e-mail / Express letter, etc. should be acted upon immediately. The quotation shall remain valid for a period of 120 days from the closing date of receipt of bids. The Contractor shall not sub-let the contract.
30. The tenderer will also have to furnish particulars relating to Income Tax clearance certificates, turnover, infrastructure status, etc.
31. In case of any loss or damage done to the property / existing infrastructure of the Institute attributable to the personnel of the contractor, the full damages will be recovered from the Agency / Contractor and decision of the Competent Authority of institute in this regard will be final and binding on the contractor.
32. Any information furnished by the bidder found incorrect at any later stage, shall make the agency liable to be debarred from future tendering / taking up the works in NIPER. The department reserves the right to verify the particulars furnished by the bidders independently.
33. In case the bidder(s) is/are of the opinion that the specification of the equipment are not generalized and favors a particular make or brand then it should intimate this Institute with relevant supporting documents.

#### **34. Arbitration**

1. In the event of failure to carry out the contractual obligations, within the stipulated period or extended period and determination of the contract for any reason. Violation of the warranties etc. the NIPER Mohali shall have the right to carry out the unfinished obligation at the exclusive cost and risk of the bidder/firm, after due notice and the difference so accrued shall be recoverable from the bidder/firm.
2. The provision of the Arbitration and conciliation Act, 1996 or as at relevant time and of rules framed there under and any statutory modifications thereof shall be deemed to apply and be incorporated in this agreement.
3. Upon every or any such reference, the cost of any incidentals to the reference and award(s) respectively shall be at the reasonable discretion of the Arbitrators or in the event of their not agreeing, of the Umpire appointed the amount thereof or direct the same

- to be fixed as between solicitors and client or as between parties and shall be direct by whom and in what manner the same shall be borne and paid.
4. Panel of arbitrators will be provided by NIPER Mohali out of which the bidder will have to select one.
  5. The bidder shall have no objection if the officer who has dealt with the case at any stage is nominated as an arbitrator. Further, that one of the arbitrator's shall be Accounts Expert.
  6. In case of vacancy being caused due to resignation, death or incapacity of the arbitrator's to function as such, the same shall be provided in the aforesaid manner and the new arbitrator's shall proceed from the stage at which vacancy is caused.
35. **Jurisdiction:** The court of Mohali alone will have the jurisdiction to try any matter, dispute or difference between the parties arising out of his tender/contract. It is specifically agreed that no Court outside and other than Mohali court shall have jurisdiction in this matter.
  36. **Fore Majuere:** Any failure of omission or commission to carry out the provision of this contract by the supplier shall not give rise to any claim by one party, one against the other, if such failure of omission or commission arises from an act of God; which shall include all acts of natural calamities such as fire, flood, earthquake, hurricane or may pestilence or from civil strike, compliance with any statute and/or regulations of the Government, lockouts and strikes, riots embargoes or from any political or other reason beyond the supplier's control including war (whether declared or not) civil war or stage of insurrection, provided that notice of the occurrence of any event by either party to the other shall be given within two weeks from the date of occurrence of such an event which could be attributed to Force Majuere conditions.
  37. **Risk & Cost** In the event of failure to carry out the obligations, within the stipulated period or extended and determination of the contract for any reason, violation of warranties etc. The NIPER Mohali shall have the right to carry out the unfinished obligation at the exclusive cost and risk of the bidder/firm, after due notice and the difference so accrued shall be recoverable from the bidder/firm.
  38. **The Material** found defective upon opening by the supplier representative in presence of Central stores personnel/indenter of NIPER Mohali or not as per tendered specifications will be lifted back at the cost and risk of the supplier. The material lying in the NIPER Mohali premises would be at the supplier's risk and cost.
  39. **Liquidated Damages:** In case the firm fails to execute the supply as per the purchase order in whole or in part as per the terms and conditions of PO, NIPER Mohali can impose the penalty @1% per week of the undelivered stores, subject to a maximum of 10%. It will also be open to the institute to procure the required item(s) from any other source at the risk and expense of the firm.

**Note: The Director, NIPER Mohali reserves the right to accept/reject any or all tenders without assigning any reason thereof and also to reject the material if the same is not found conforming to the specifications, with further right to affect risk and cost of the purchases.**

## **CERTIFICATE OF GUARANTEE/WARRANTY**

(This certificate may be reproduced)

- i) I/We certify that the guarantee/warranty shall be for a period of 12 months starting from the date of satisfactory installation, commissioning and handing over of the equipment and of works conducted therewith covered under the Supply order in working Condition. During the guarantee/warranty period I/We shall provide “after sale service” and the replacement of any part(s) of the equipment or rectification of defects of work of the equipment will be free of cost. The replacement of the parts shall be arranged by us, at our own cost and responsibility. We undertake that the above guarantee/ warranty shall begin only from the date of installation, commissioning and handing over the equipment in working order. The benefit of change in dates of the guarantee/warranty period shall be in the interest of the user/your Institute.
- ii) During the warranty period, we shall provide at least three preventive maintenance visits & all breakdown services without any charges.
- iii) Uptime Guarantee : During the guarantee/warranty period, we will be responsible to maintain the equipment in good working condition for a period of 328 days (i.e., 90% uptime) in a block of 365 days. All the complaints will be attended by us within 5 days of receipt of the complaint in our office. In case there is delay of more than 5 days in attending to a complaint from our side then you can count the number of days in excess of the permissible response time in the downtime.
- iv) We certify that the equipment being offered/quoted is the latest model and that spares for the equipment will be available for a period of at least 10 years and we also guarantee that we will keep the Institute informed of any up-date of the equipment over a period of 5 years.
- v) We guarantee that we will supply spare parts if and when required on agreed basis for an agreed price. The agreed basis could be an agreed discount on the published catalogue price or an agreed percentage of profit on the landed cost.
- vi) We guarantee to the effect that before going out of production of spare parts, we will give adequate advance notice to you so that you may undertake to procure the balance of the life time requirements of spare parts.
- vii) We guarantee the entire unit against defects of manufacture, workmanship and poor quality of components.

Date :

**Authorised  
Signatory  
(With Seal)**

Place :

**TERMS AND CONDITIONS OF THE SERVICE CONTRACT**

- i) During the service contract period, the firm shall provide at least THREE preventive maintenance visits and attend to all emergent and break-down calls per year.
- ii) Rate of AMC will be quoted for the period after completion of warranty period and order for AMC be placed after completion of warranty (if required)
- iii) The service contract charges must be quoted separately for each year strictly.
- iv) The service contract charges should be quoted only for services and travel cost etc. and should not include the cost of any replacement parts/components which shall be arranged by the Institute at its own cost. However, a price list of all spares must be provided to the Institute.
- v) The removed/un serviced spare parts shall be the property of NIPER , Mohali and shall be handed over to Indenter by the service provider alongwith service report.
- vi) In each block of 365 days during the entire service contract period the firm will be responsible to maintain the equipment in good working condition for a period of 328 days (i.e. 90% uptime). The time taken by the Institute in providing to the firm the spare parts shall not count towards the downtime. All the complaints will be attended by the firm within 5 days of the dispatch of the complaint to their office. In case there is delay of more than 5 days in attending to a complaint then the number of days in excess of the permissible response time shall be counted in the downtime. The above said response time of 5 days for attending to a complaint will not be counted in the downtime. In case total downtime exceeds the permissible limit as defined above, the service contract shall be extended by the period in excess of the permissible downtime subject to limit of 30 days in a block of 365 days. However, for the period of the downtime in excess of 30 days in block of 365 days, a fine equivalent of double the daily service contract charges shall be recovered from the firm.
- vii) The replaced parts shall remain the property of the Institute.
- viii) The firm will deposit a security in form of Bank Guarantee equivalent to 50% of the additional value of the Annual service contract towards execution of the service contract and to cover the service contract period of five years. This will be furnished within a period of 15 days after the expiry of the guarantee/warranty period. No Advance payment of AMC shall be made under normal circumstances.
- ix) The firm shall try to repair the equipment at Institute itself. However, the equipment may be taken to their site, on their own expenses if in case it is not possible to repair the same at NIPER, the firm shall take the entire responsibility for the safe custody and transportation of the equipment taken out for repairs till this is handed over to purchaser after repair. Any loss of equipment or its accessories on account of theft, fire or any such reasons shall be the sole risk and responsibility of the firm who will compensate the Institute for such losses at FOB value of the damaged/lost equipment/part including accessories.
- x) During the service contract period the parts/components that may be needing replacement shall be made available by the Institute at their own expenses and all import formalities, payment of custom duty etc., shall be complied with/borne by the Institute.
- xi) All service contract charges will be invoiced thrice in each year. The payment of the invoice will be made in arrears after satisfactory servicing within 30 days of the date of submission of the invoice.
- xii) No price revision will be accepted by the Institute during the entire tenure of the service contract agreement.

<b><u>Specifications for a ESI /APCI- UHPLC-HRMS</u></b> <b><u>01 Nos.</u></b>		Compliance of the quoted model	Compliance of alternate model, if any	Remarks
S. No.	<b>Technical Specifications for High Resolution Mass Spectrometer System (HR-MS):</b> High-resolution Mass spectrometry system for Small Molecules, Chemical Compounds, Drugs, Environmental Compounds, Metabolites, Biopolymers, Proteins, Peptides and Biomolecules studies with a Quadrupole Time Of Flight / Hybrid Quadrupole Ion Trap or equivalent MS-MS workstation for exact mass and true isotopic measurements.			
2	<b>Ion Source:</b> <ul style="list-style-type: none"> <li>• The instrument must be equipped with an atmospheric pressure ionization (API) interface that includes the source and spraying elements. Combined or Separate ESI and APCI should be provided with the system. Samples may be introduced by direct infusion, or the system may be interfaced directly to an Ultra High Performance LC system.</li> <li>• Positive and negative ionization capabilities must be included as standard on the instrument.</li> <li>• Suitable accessory for sample introduction by direct infusion in the system must be supplied.</li> <li>• System should have latest technology of ion focusing to the analyser.</li> <li>• Desolvation temperature should be 400 degree C or higher.</li> <li>• Electrospray Ionization Source range from 200µl/min to 2.0ml/min. without splitting.</li> <li>• Atmospheric pressure chemical ionization source range 200µl/min to 1.0ml/min without splitting.</li> </ul>			
3	<b>Mass Analyzer:</b> Mass Analyzer should be equipped with quadrupole analyzer and collision cell followed by high resolution Time of flight or equivalent mass analyzer system/ hybrid quadrupole ion trap. System should have CID for fragmentation & MS/MS, with efficient ion transmission using the latest technology.			
4.	<b>Quadrupole Mass Range:</b> 50 m/z to 2000 m/z or Better			
5.	<b>Mass Resolution:</b> The resolution of the system should be 60000 FWHM or Better.			
6.	<b>Mass Accuracy:</b> Internal calibration ≤ 1 ppm and External calibration ≤ 3 ppm.			
7	<b>Sensitivity:</b> Reserpine 1pg on column , S/N 1500:1			
8.	<b>Reference mass introduction:</b> Capable of internal reference mass correction for MS and MS/MS operation without losing sensitivity standard has to be quoted.			
9.	<b>Acquisition modes:</b>			

	Qualitative and quantitative expression in ESI and APCI. The instrument should have variable collision energy between low and high-energy in the collision cell									
10.	<p><b>Operating software:</b></p> <p>Multitasking suite of analytical applications and instrument management software operating in Microsoft Windows environment,</p> <ul style="list-style-type: none"> <li>• Mass Spectrometer Control Software</li> <li>• System parameter checking and alerts</li> <li>• LC/MS System Check – automated on-column performance test</li> <li>• Complete integrated software to control MS, LC and Autosampler.</li> <li>• Spectrum Review and Processing</li> <li>• Auto-calibration / tuning, accurate mass measurements, elemental composition determination (automatic formula generation by matching true isotopic pattern with parent and fragment ions), MS/MS experiments and quantification</li> <li>• Automatic library searching against Free and commercially available libraries</li> <li>• Automatic library searching against user defined libraries</li> <li>• Should be capable of qualitative, quantitative and characterization with suitable library system</li> <li>• Pesticide residual analysis, toxin analysis and antibiotic and pharma compound analysis.</li> <li>• Semi-quantitative reporting of Deconvoluted component concentrations</li>   <li>• Necessary software for metabolite, polymer and oligomers and organic</li> <li>• Targeted accurate mass screening, for presence/absence/confirmation of large number of compound in complex mixtures. Automated quantification and reporting of acquired samples</li> <li>• Software for empirical formula calculation.</li> <li>• 5 Nos licences for data processing / interpretation.</li> </ul>									
11.	<p><b>Computer and Printer:</b></p> <p>One branded desk top computer processor intel core i7 @ 3.40 GHz Ram 16 GB, Memory 1TB, Screen 23 inch or more , DVD write drive, key board and mouse with laser jet multi functional printer with high speed USB , wireless connect, up to 26 pages per minute and toner capacity 1200 pages or more for running the equipment and software. Vendor may also quote all in one computer with same specifications. License version of windows professional OS &amp; MS-Office professional and driver with original CD.</p>									
12.	<p><b>Power Rating:</b></p> <p>As per Indian standard</p>									
13.	<p><b>Nitrogen Gas Generator:</b></p> <p>A suitable imported gas generator with compressor capable of providing nitrogen gas at the required 99% purity, pressure and flow rate for the Mass Spectrometer must be quoted. The compressor should be noise-free.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">Helium Cylinders</td> <td style="width: 30%;">2 Nos</td> </tr> <tr> <td>Helium Regulators (S.S.)</td> <td>2 Nos</td> </tr> <tr> <td>Moisture / hydrocarbon trap</td> <td>1 Nos</td> </tr> </table> <p>must be supplied.</p>	Helium Cylinders	2 Nos	Helium Regulators (S.S.)	2 Nos	Moisture / hydrocarbon trap	1 Nos			
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Helium Regulators (S.S.)	2 Nos									
Moisture / hydrocarbon trap	1 Nos									
14.	<p><b>DIRECT INFUSION:</b></p> <p>Syringe pump or equivalent to inject samples directly to the instrument for MS and MS/MS analysis.</p> <p><b>Spare Syringes- 10 Nos.</b></p>									
15.	<p><b>LIQUID CHROMATOGRAPHY UHPLC SYSTEM:</b></p> <p>A liquid chromatography system should provide an integrated configuration for solvent and sample management with the following specifications</p> <p><b>Pump:</b> Quaternary Gradient Pump Vacuum degassing capability of solvents. Operating Flow Rate Range 0.2 to 2 ml/min or better Maximum Operating Pressure 15,000 psi or above.</p> <p><b>Auto Sampler:</b></p>									

	<p>Number of Samples: 90 vials or more of 1 ml or more capacity.  Injection Volume Range 0.5 to 50uL or better.  Sample Temperature 4 – 40 deg. C  <b>Column Thermostat:</b>  Column Temperature Control Up to 80 deg.  <b>Detector-</b> PDA/DAD Detector Wavelength Range: 190-800 nm with accuracy 1nm or better.  <b>Column-</b> 5 Nos. C-18 or equivalent.  <b>Sample vials</b> -500 Nos.</p>			
16	<p><b>UPS.</b>  Appropriate 15 KVA UPS cum stabilizer with at least 3-4 hour backup must be supplied.</p>			
17	<p><b>SPECIAL REQUIREMENTS:</b></p> <ol style="list-style-type: none"> <li>a. As the HR-MS instrument is an expensive and advanced equipment, it is mandatory that the facility must be multiple-user specific. Also, it is important that the equipment is stable and run for a long time. Thus it is important for the vendors that they must supply appropriate documents specifying their users in higher academic institutions in India. Appropriate certificates from the users for the last three year for the model quoted must be supplied justifying the stability, ease of operation and maintenance requirement such that we have the option to choose the best system in terms of performance and not mere specifications alone.</li> <li>b. Further, as the instrument is expensive and multi user equipment, One year standard warranty followed by AMC for 5 years is a must and this must be specifically mentioned in the quotation by the vendor/ principal. In case, the vendor provides the warranty, the principal should certify (authenticate). Appropriate documents must be attached along with the quotation in this regard.</li> <li>c. A certificate will be required from the original equipment manufacturer that technical support along with all essential spares will be provided / made available for at least 10 years after the expiry of one year standard warranty period.</li> </ol>			
	<p><b>General:</b>  Vendor should quote as per specifications. NIPER will provide only empty room with electrical connections &amp; A/c provisions. Vendors will have to make arrangements for all the other accessories, infrastructure (aluminum partition) including UPS essential for the successful operation of the equipment. Installation certificate will be issued only after satisfactory working of the instrument (Demo of all the modules) &amp; onsite training. The instrument will consist of Ion source API (ESI /APCI), mass analyzers (Quadruple Time of flight / hybrid quadrupled ion trap MS-MS or equivalent system), data analyzing system and Nitrogen generator.</p>			
18	<p><b>Onsite Training</b>  Training to be divided in parts three weeks training at the time of installation and three weeks training after three month of successfully installation of the system at the user place.</p>			
19.	<p><b>Optional Items</b>  Price details for additional five years of AMC after completion of one year of warranty and five years of AMC to be quoted.</p>			

## MANDATE FORM FOR PAYMENT

Sr.No.	Supplier Details	
1	Vendor Name	
2	Father/ Husband Name	
3	DOB	
4	PAN Number	
5	Aadhaar Number	
6	TIN Number	
7	Service Tax No.	
9	Address1	
10	City	
11	Country	
12	State	
13	District	
14	Pin code	
15	Mobile No.	
16	Phone	
17	Email	
18	Bank Name	
19	IFSC Code	
20	Account Number	
21	Others	

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**Bidder(s)/Authorized Signatory (ies)**