



**राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान, भुवनेश्वर**  
(परमाणु उर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान)  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH**  
(AN AUTONOMOUS INSTITUTE UNDER DEPT. OF ATOMIC ENERGY, GOVT. OF INDIA)

**Notice Inviting E-Tender No. NIT-46/2018-NC-001406-CHE-18-19 (2 Part Tender)**

**ESI-Mass Spectrometer**

**Cost of Tender is 1500.00 (Non Refundable)**

## Tender Notice



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH  
JATNI CAMPUS, P.O. - JATNI  
KHURDA – 752050, ODISHA, INDIA**

### **Notice Inviting E-Tender No. NIT-46/2018-NC-001406-CHE-18-19 (2 Part Tender)**

E-Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Jatni from the manufacturers(Indian or Foreign) and their authorised reseller/Indian agent only for supply & installation of the following items:-

<b>Sl. No.</b>	<b>Name of the Items</b>	<b>Tender No.</b>	<b>Name of Department</b>	<b>Indent No.</b>	<b>Qty.</b>	<b>EMD in INR</b>
01	ESI-HRMS Mass Spectrometer System	NIT-46/2018	School of Chemical Science	NC-001406-CHE-18-19	01	350000/-
02	A liquid Chromatography System				01	

Tender can be downloaded and bided from website address: [www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER). Tender documents for viewing only are also available in NISER web-site address: [www.niser.ac.in](http://www.niser.ac.in). further all corrigendum and addendum will b e published on NISER website and tenderwizard portal.

NISER is publishing all its public and limited tender on NISER website.

**FIC (Stores & Purchase)**



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH**  
**JATNI CAMPUS, P.O. –BHIMPUR-PADANPUR, VIA-JATNI**  
**KHURDA – 752050, ODISHA, INDIA**  
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E- Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Jatni from the manufacturers(Indian or Foreign) and their authorised reseller/Indian agent only for supply & installation of the following items:-

**NB: PARTIES REGISTERED WITH SSI/DGS&D/DAE/MSME/NSIC AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD and Tender Fee.**

**Standard e-Tender Terms & Conditions**

1. The details of tender notification can be downloaded from [www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER) under "**Tender Free View**" link.
2. Vendors should obtain the USER ID and PASSWORD from [www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER) by clicking on "**REGISTER ME**" link in the homepage.
3. The Vendor registration fee has to be paid to ITI Ltd for Rs. 1180/- including GST using the e-payment link provided at the time of registration, and the mode of payments are Credit Card, Debit Card and Internet Banking. Vendor Registration is Valid for 01year.
4. For further details on e-Tender participation, please contact ITI Help desk on
  - Telephone: 080-49352000/9686115318
  - Email: [harishkumar.kb@etenderwizard.com](mailto:harishkumar.kb@etenderwizard.com), [ambasa@etenderwizard.com](mailto:ambasa@etenderwizard.com).
5. Tenders should be submitted only through E-Tender portal and obtain the Tender Acknowledgement copy as a proof of successful submission.
6. **For any query regarding tender terms & conditions please sent email to [spo@niser.ac.in](mailto:spo@niser.ac.in).**

**FIC (Stores & Purchase)**



**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH  
NIT OPEN DOCUMENT (2 PART BID)  
SUPPLY & INSTALLATION  
OF  
ESI- MASS SPECTROMETER**

**Notice Inviting E-Tender No. NIT-46/2018-NC-001406-CHE-18-19**

**(2 Part Tender)**

National Institute of Science Education & Research (NISER), Jatni is an Autonomous Institute under Dept of Atomic Energy. NISER would like to procure the following equipment. The Technical Specifications Schedule of Requirements and Allied Technical details are given in Part-1 of tender document.

**•Item: ESI- MASS SPECTROMETER**

- **Tender Enquiry No: NIT-46/2018-NC-001406-CHE-18-19**
- **Last date of submission of E-bid : 25/04/2019 up to 10.00 A.M.**
- **Opening of Technical Bid : 25/04/2019 at 11.00 A.M.**
- **Contact Person – Nagendra Kumar Sharma <nagendra@niser.ac.in>**

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**The Institute can provide following documents.**

1. **Custom Duty exemption certificate (for custom duty @5.15%)**
2. **GST Exemption Certificate (for GST @ 5%)**

**COST OF TENDER IS RS.1500/- (NON REFUNDABLE).**

**This is payable in cash or Demand Draft of a scheduled Bank in favour of Director, NISER payable at Bhubaneswar/Jatni**



**PART - 1**  
**TERMS & CONDITIONS**  
**FOR SUPPLY AND INSTALLATION OF**  
**ESI- MASS SPECTROMETER**  
**FOR**  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI**  
**Notice Inviting E-Tender No. NIT-46/2018-NC-001406-CHE-18-19 (2 Part Tender)**

1. Director, National Institute of Science Education & Research, Jatni (NISER) invites E-Tenders for **ESI- MASS SPECTROMETER** from the Manufacturer and their authorised reseller only having following credentials.
  - A. Should have satisfactorily completed **03 similar supplies** (at least one of them in Central Government/Central Autonomous Body/Central PSU) in last 05 years.
  - B. Similar or Similar Nature of work means** Supply & Installation of **ESI- MASS SPECTROMETER** for any of the following :
    - a) **Government/Autonomous Institutions**
    - b) **Government Research Centres**
    - c) **Universities**
    - d) **Autonomous/Reputed Private Research Centres**
    - e) **Purchase Orders / Completion certificates if any, for supporting above requirements.**

The Bidders are requested to give detailed tender in the prescribed forms in two Bids  
i.e. Part - I Technical Bid.  
Part - II Commercial Bid.

2. **Contact for information** :( Only E-mail enquiries will be entertained)

**For Technical Information of ESI- MASS SPECTROMETER**

**Dr. N. K. Sharma**

School of Chemical Science

E-Mail – Nagendra Kumar Sharma <nagendra@niser.ac.in>

**For Information regarding Commercial& all other Terms & Conditions:**

FIC (Stores & Purchase)

National Institute of Science Education & Research, Jatni

E-Mail-spo@niser.ac.in

**3. Supply means:**

“Supply, Installation, Commissioning and satisfactory demonstration of the whole equipment”.

**4. Tender Document:**

**The Technical Offer should comprise of the following:**

- a) Tenders, which are submitted without following the Two-Bid Offer System, will summarily be rejected.
- b) The technical offer should be complete to indicate that all products and services asked for are quoted.

c) The purpose of certain specific conditions is to get or procure best product/service etc. for NISER. The opinion of Technical Committee shall be the guiding factor for technical short listing.

d) The earnest money deposit as indicated against the item should be sent by post so that it reaches on or before the opening of the technical bid of e-tender system in the form of Account Payee Bank Draft payable on any branch of Nationalised/Schedule Bank at Bhubaneswar/ Jatni in favour of “Director, National Institute of Science Education & Research, Jatni”, in a separate sealed envelope. All tenders submitted without requisite amount of earnest money shall be rejected and their technical and financial bids shall not be opened. No interest is payable on EMD.

The EMD will be returned to the bidders(s)/Agents whose offer is not accepted by NISER within one month from the date of the placing of the final order(s) on the selected bidder(s). In case of the bidder(s) whose offer is accepted the EMD will be returned on submission of Performance Bank Guarantee (if applicable). However, if the return of EMD is delayed for any reason, no interest /penalty shall be payable to the bidders.

#### **EMD EXEMPTION:**

**PARTIES REGISTERED WITH MSME/NSIC/SSI/DGS&D/DAE AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD & TENDER COST. FOREIGN PARTIES QUOTING DIRECTLY UNDER ORIGINAL SEAL AND SIGNATURE (NOT SCANNED) WILL GET THE EXEMPTION.**

#### **The EMD shall be forfeited:**

If the bidder withdraws the bid during the period of bid validity specified in the tender. In case a successful bidder fails to furnish the Performance Bank Guarantee.

a) Undertaking that the successful bidder agrees to give a Performance Bank Guaranty of 10% of the purchase order value in favour of “Director, National Institute of Science Education & Research, Jatni valid till warranty period.

#### **Performance Bank Guarantee:**

**Within ten (10) days of the award of contract, the vendor shall furnish a Performance Bank Guarantee amounting to 10% of the purchase order value in the form of Bank Guarantee in favour of “The Director, National Institute of Science Education & Research”, Jatni valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. BG should be from any Nationalised/Scheduled bank in India.**

**Following documents needs to be uploaded on E-Tender portal.**

a) If the bid is for branded makes, authorization letter from principals clearly indicating that the vendor is the competent authority to sell and provide services towards the items mentioned in the scope of supply given in this tender document.

b) Copy of GST No. and PAN No. allotted by the concerned authorities.

c) List of deliverables / Bill of materials and services.

d) Compliance sheet with any deviation with reference to the terms and specifications.

e) The item should be supplied with manuals and the manuals including technical drawings should be complete in all respects to operate the system without any problem.

#### **“Commercial Bid” shall contain:**

a) Price schedule shall complete in all respects. **Tender with any condition including conditional rebate shall be rejected forthwith.**

b) The combined price offered by the party will be taken in to consideration for placing order but the Cost of all the items should be mentioned clearly and individually in a separate sheet which should be attached.

c) **The Bidders are requested to quote for Educational/Institutional Price for Machine/ Equipment and, since we are eligible for the same.**

d) **Printed conditions of the vendor submitted with the tender will not be binding on NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH.**

## **5. Tender process & award of contract.**

The technical bids will be evaluated to shortlist the eligible bidders. The commercial bids of only the short listed bidders shall be considered for further processing. Bidders whose technical offer is found acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the commercial bid.

- (a) NISER will open commercial bids of only the short listed bidders, The Date and Time of opening the Commercial Bid will be intimated only to pre-qualified and technically acceptable Bidders for the item at a later date.
- (b) ONLY TECHNICALLY accepted competitive bids will be considered for placing Purchase Order.
- (c) **Purchaser's Right to vary Quantities at the time of Award:** NISER reserves the right at the time of award of Contract to increase or decrease the quantity of items specified in the Schedule of Requirements without any change in price or other terms and conditions.

**NOTE: The combined price of all the required items will be taken into consideration for placing Order.**

**6. The Director NISER reserves the right to accept the offer in full or in parts or reject summarily or partly.**

## **7. Delivery Period / Timeliness**

The deliveries, installation must be completed within 120 days, after placement of purchase order. The time is the essence of the contract. It is mandatory for the bidders who respond to this bid to meet these expectations, as they are tightly linked to NISER's plans of completing the project within the time frame.

## **8. Locations for the Supply / Services**

The Laboratory Equipment covered by this document is required to be supplied and installed at School of Chemical Science of NISER, Jatni.

## **9. Order Placement and Release of Payment**

The Purchase Order and payment shall be processed by –

**FIC (Stores & Purchase)**

**National Institute of Science Education & Research,  
Jatni Campus, P.O. – Bhipur-Padanpur, Via-Jatni,  
Khurda – 752050, Odisha, INDIA**

Payment for the items to be supplied by the vendor against the purchase order shall be made by National Institute of Science Education & Research as follows:-

### **Foreign Currency payment:-**

Subject to submission of performance bank guarantee for 10% of P.O. value, 100% payment will be made through Letter of Credit. 80% will be paid after submission original shipping documents & balance 20% will be released after satisfactory installation, commissioning and warranty certificate.

### **INR payment:-**

Subject to submission of performance bank guarantee for 10% of P.O. value, 80% will be released after receipt of material in good condition & balance 20% will be released after satisfactory installation, commissioning and against warranty certificate.

**Agency Commission: Agency Commission to be paid to Indian Agent should be specified separately and same will be paid in INR.**

**The tenderers who are not agreeing to above payment terms are requested not to submit their tender otherwise their EMD will be forfeited.**

**10. NISER** will not provide any accommodation/transportation for the engineers/ representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the Principal Supplier/Indian Agent to make their own arrangements.

**11. The successful bidder**, on award of contract / order, must send the contract / order acceptance in writing, within 7 days of award of contract / order failing which the EMD will be forfeited.

**12. Period of validity of bids**

- (a) Bids shall be valid for a period of 90 days from the date of opening the Technical bid.
- (b) NISER may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD. A bidder agreeing to the request for extension will not be permitted to modify his bid.
- (c) Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

**13. Corrupt or Fraudulent Practices**

NISER requires that the bidders who wish to bid for this project have highest standards of ethics. NISER will reject a bid if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract. NISER may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the execution of contract.

**14. Interpretation of the clauses in the Tender Document / Contract Document**

In case of any ambiguity / dispute in the interpretation of any of the clauses in this Tender Document, Director, NISER's interpretation of the clauses shall be final and binding on all parties.

**15. Price**

- (a) The price quoted shall be considered firm and no price escalation will be permitted at any time. The quotation should be in Indian Rupees or any known foreign currency. Packing, forwarding, freight, insurance, **Agency commission** and commissioning charges, if any extra may be quoted separately in Commercial Bid.
- (b) In case of INR bids the price criteria should be on delivered at NISER, Jatni including Free onsite comprehensive **05 years** warranty, installation, commissioning, Training, demonstration, packing, transportation, insurance, loading & unloading (At NISER) etc. charges. Govt. Levies like GST, etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, GST, etc., if any.
- (c) Please provide GST No. of the firm allotted by the concerned authorities in your quotation.
- (d) In case of Foreign Currency bid: - Price criteria will be FOB nearest International Airport/Sea Port including Free onsite comprehensive **05 years** warranty, installation, commissioning & Training &



demonstration charges. Agency Commission if any is required to be quoted separately in Financial bid which will be paid directly to Indian agent in INR.

#### **16. Pre-installation:**

Pre-installation facilities required for installation may please be intimated in the technical bid. Subsequently, before the consignment lands in NISER, Jatni the bidder shall confirm that the pre-installation requirements are sufficient for installation of the equipments. In other words the bidder should continuously monitor the pre-installation requirements and see that everything is ready before the consignment is taken to the site for installation.

#### **17. Installation, Warranty & Support**

- Bidder shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty and thereafter.
- The items covered by the schedule of requirement shall carry minimum *five (05) years free comprehensive warranty from the date of installation of the equipment* by NISER. Warranty shall include free maintenance of the whole equipment supplied including free replacement of parts. The defects, if any, shall be attended to on immediate basis but in no case any defect should prolong for more than 24 hours. The comprehensive warranty includes onsite warranty with parts.
- *The defects, if any, during the guarantee/warranty period are to be rectified free of charge by arranging free replacement wherever necessary. This includes cost, insurance, freight, custom duty, GST, local taxes if any should be borne by the beneficiary or his agent. A clear confirmation should be given for this item.*
- The OEM/bidder shall assure the supply of spare parts after warranty is over for maintenance of the equipment supplied if and when required for a period of 7 years from the date of supply of equipment on payment on approved price list basis.
- The equipment must be supported by a Service Centre manned by the principal vendor's technical support engineers. The support through this Centre must be available 24 hours in a day, seven days a week and 365 days a year. Also it should be possible to contract the Principal's vendor support Centre on a toll free number/web/mail.
- The vendor will have to arrange for all the tools required for installation, testing & maintenance etc.

#### **18. Indemnity**

- The vendor shall indemnify, protect and save NISER against all claims, losses, costs, damages, expenses, action suits and other proceeding, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc. or such other statutory infringements in respect of all the equipment's supplied by him.
- The successful bidder will be fully responsible for payment of wages and other dues as prescribed and compliance of various Labour Laws.
- The successful tenderer should give an undertaking that the staff deployed at the centre in terms of this contract at all time will be employees of the agency exclusively and they shall not be entitled to any claim of employment or permanency of job with NISER.
- NISER reserves the right to forfeit whole or part of the security money towards any damage/lose caused due to the negligence on the part of the agency engaged.

#### **19. Insurance**

The equipment to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at NISER site or as per agreed terms, in case of Rupee/Foreign currency transaction.

## **20. Penalty for delayed Services / LD**

As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise the EMD/SD will be forfeited and also LD clause will be applicable /enforced.

If the supplier fails to Supply, Install and Commission the equipment as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of 1% of order value per every week of delay subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier.

NISER reserves the right to cancel the order in case the delay is more than 30 days Penalties, if any, will be deducted from the EMD.

## **21. Jurisdiction**

If a dispute arises out of or in connection with the contract, or in respect of any defined legal relationship associated therewith or derived there from, the parties agree to submit that dispute to arbitration under the ICADR Arbitration Rules, 1996.

The authority to appoint the arbitrator(S) shall be the International Centre for alternative dispute resolution.

The International Centre for Alternative Dispute Resolution will provide administrative services in accordance with the ICADR arbitration Rules, 1996.

**FIC (Stores & Purchase)  
NISER, Jatni**

## **DECLARATION BY THE VENDOR**

It is hereby declared that I/We the undersigned, have read and examined all the terms and conditions etc. of the tender document for which I/We have signed and submitted the tender under proper lawful Power of Attorney. It is also certified that all the terms and conditions of the tender document are fully acceptable to me/us and I/We will abide by the conditions from serial no. 1 to 21 and we have not given any printed conditions beyond the scope of this tender. This is also certified that I/We/Our principal manufacturing firm has no objection in signing the purchase contract if the opportunity for the supply of the items against this tender is given to me/us.

Date:

Signature:

Address:

Name:

Designation:

On behalf of:

(Company Seal)



**SUPPLY AND INSTALLATION  
OF  
ESI- MASS SPECTROMETER  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI  
Notice Inviting E-Tender No. NIT-46/2018-NC-001406-CHE-18-19**

**General Information –Self Attested**

[www.tendewizard.com/NISER](http://www.tendewizard.com/NISER)

<b>Vendor Name</b>			
<b>Sl. No.</b>	<b>Basic Information</b>	<b>Please fill details</b>	<b>Page No. with name of the documents attached in support of information required</b>
<b>1</b>	<b>Name of the Company</b>		
<b>2</b>	<b>Full address of company along with Telephone no. Fax no. E-mail address :</b>		
<b>3</b>	<b>Local address of company for communication, if any</b>		
<b>4</b>	<b>Are you a manufacturer or dealer/reseller</b>		
<b>5</b>	<b>If dealer please attach certificate from your principal company clearly showing validity of the certificate</b>		

6	<p>If foreign supplier : Please give details of your Indian authorised partner if any</p>		
7	<p>Annual turn over in last 3 financial years in Rs. Crores.  (i) Year 2015-2016  (ii) Year 2016-2017  (iii) Year 2017-2018  Please attach balance sheet</p>		
8	<p>Supply &amp; Installation of ESI- MASS SPECTROMETER to our tendered of last 3 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value)  (Please attach list of clients)  (i) Year 2015-2016  (ii) Year 2016-2017  (iii) Year 2017-2018  Please attach copy of Purchase Order/ Completion Certificate</p>		
9	<p>GST Registration no. with Place</p>		
10	<p>Income Tax Registration no. with place</p>		
11	<p>Photocopy of EMD (If Applicable)</p>		
12	<p>Name and address on whom purchase order will be placed</p>		

13	<b>Bank details of the supplier on which order will be placed</b>		
14	<b>If you are claiming exemption certificate under SSI/DGS&amp;D/DAE, Please attach self attested copy of certificate which should be valid during the tender process</b>		
15	<b>Service centre details &amp; principal vendor support centre</b>		
16	<b>Delivery period :Please mention time of delivery &amp; Installation</b>		
17	<b>Declaration to be submitted by Vendor</b>		
18	<b>Warranty :- 05 year</b>		

**TECHNICAL BID  
SUPPLY AND INSTALLATION  
OF  
ESI- MASS SPECTROMETER  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI  
Notice Inviting E-Tender No. NIT-46/2018-NC-001406-CHE-18-19**

[www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER)

Vendor Name		-	
SL. No	Item Specification	Accepted/Not Accepted/Deviation if any. Please specify your specification if deviation is there	Page No. of your specifications/Brochure/ Deviation, etc attached in support of your specification/deviation
1	Technical Specification for ESI-HRMS Mass Spectrometer system		



**A. Ionization Source :**

- The instrument must be equipped with combined/dual electrospray ionization (ESI) and atmospheric pressure chemical ionization (APCI) as standard. In case Vendors not having Combined / dual sources can also offer dedicated ionization source. Solid Probe Ionization source also must be included as an additional source. Sample introduction must be done either direct infusion with system fluidics or through LC. The Sample Introduction Technology must be associated with automated system parameter checking along with alerts generation. It must provide calibrant delivery system with programmable divert valve & Automated Mass Calibration.

- The combined/dual ionization or dedicated (ESI& APCI) source must operate along with reference spray to facilitate automated accurate mass measurements within single LCMS experiment. The instrument should be capable of reference mass correction for MS and MS/MS operation without losing sensitivity. To facilitate automated accurate mass measurements within single LCMS experiment, the ionization source must incorporate a probe to introduce a reference mass and allow indexed sampling of the two sprayers to avoid interference between analyte and reference spectra. The ionization must be done both in a positive & negative modes. In case of Alternative HRMS Technology such as Orbitrap internal calibration must be done with suitable calibrants.

- The ion source must be of Orthogonal design. The cleaning of the source should be done without venting the system and facility to Vacuum Interlock should be provided. The Vacuum must remain intact during the cleaning, Source interchange or Servicing of the system. Vendors must assure the same in writing.

	<p><b>B. Ion Optics :</b></p> <ul style="list-style-type: none"> <li>• The Ion optics in the system should maximise sensitivity while maintaining system robustness. Neutral molecules and gas load must be actively exhausted for higher sensitivity of the system.</li> </ul>		
	<p><b>C. Desolvation Temperature :</b></p> <ul style="list-style-type: none"> <li>• The upper limit of the desolvation temperature must be more than 500 degree C, which should be programmable and used in all the different probe usages including combined / dual / dedicated ESI&amp;APCI or solid probe for every Solvents &amp; Compounds.</li> </ul>		
	<p><b>D. Quadrupole: (For Both QTOF &amp; Equivalent Technology / Orbitrap)</b></p> <ul style="list-style-type: none"> <li>• Instrument should have Quadrupole for isolation followed by collision cell and appropriate assembly required for high resolution mass data. A suitable technology or device must be available to allow the source elements to be removed and cleaned without breaking instrument vacuum, maximizing instrument uptime. Precursor ion selection should be done using Quadrupole.</li> <li>• Mass Range: The instrument must have a high mass filter (quadrupole) for efficient transmission of ions having mass range at least <math>\leq 30</math> to <math>\geq 30,000</math> m/z or higher in resolving &amp; non-resolving mode or better for QTOF Technology. For Equivalent system like Orbitrap technology, Quadrupole must be associated &amp; mass range must be higher having high mass filters.</li> </ul>		
	<p><b>E. . Time of Flight (TOF) or Equivalent Orbitrap :</b></p> <ul style="list-style-type: none"> <li>• Analyzer: Geometry with quadrupole as Q1 followed by TOF with a collision cell in between should be present in case of QToF.</li> <li>• The mass range of the Time of Flight (TOF) analyzer must be at least <math>\leq 30</math> to <math>\geq 40,000</math> m/z. For Equivalent High Resolution Analyzer other than TOF, the mass range must be <math>\geq 6000</math> m/z.</li> <li>• The TOF mass analyzer / equivalent must have linearity of response of minimum 4 orders or better of magnitude</li> </ul>		

<p>whilst maintaining specified resolution for quantitation purposes.</p>		
<p><b>F. Resolution :</b></p> <ul style="list-style-type: none"> <li>• The resolution of the TOFmass analyzer must be more than 40,000 FWHM or better around m/z 1000 and more than 35,000 FWHM or better of around 200 m/z. (Proof of Statement must be provided)</li> </ul> <p>For Equivalent HRMS Mass Analyzer / Orbitrap the resolution must be more than 1,20,000 at around 200 m/z.</p> <ul style="list-style-type: none"> <li>• Data acquisition rate for QTOF must be 30 Spectra per second or better in MS and MS/MS mode independent of any conditions.(Proof of Statement must be provided)</li> </ul> <p>For Equivalent HRMS / Orbitrap the scan rate should be equal to or more than 12 Hz.</p>		
<p><b>G. Mass Accuracy &amp; Sensitivity :</b></p> <ul style="list-style-type: none"> <li>• The mass accuracy of the system should be a minimum of less than 1 ppm, with both internal &amp; external calibration standards for both MS &amp; MS/MS modes on 10 consecutive repeat measurements on column analysis. (Proof of statement must be provided for S/N ratio)The instrument must be sensitive enough for detecting sub ppb/femtomole levels of compounds.</li> <li>• Sensitivity: Full MS/MS mode <math>\leq</math> 100 femtogram or better on column, at S/N ratio <math>\geq</math> 400:1 or better (Proof of statement must be provided for S/N ratio)</li> </ul> <p>For other equivalent technology like Orbitrap, the Sensitivity Data must be</p>		

	<p>mentioned in details &amp; must be high enough.</p>		
	<p><b>H. Scan modes &amp; Capability :</b></p> <ul style="list-style-type: none"> <li>• The instrument must be able to operate in MS, MS/MS product ion scanning, Fast DDA Scan, Precursor Ion Scan, Neutral loss/gain scan. The software should be capable of data acquisitions whereby high and low collision energy data is acquired simultaneously to provide fragmentation data for all detectable molecular ions and TOF-MRM.</li> </ul> <p>For Equivalent HRMS / Orbitrap technology, scan modes or capabilities must be explained &amp; stated in details.</p>		
	<p><b>I. Vacuum System:</b></p> <ul style="list-style-type: none"> <li>• A high efficiency vacuum system with turbo pumps with rotary pumps or equivalent must be provided for making the instrument sensitive enough.</li> </ul>		

<p><b>J. Softwares :</b></p> <ul style="list-style-type: none"> <li>• The software should have capabilities to perform the following functions: Automated mass calibration, resolution, sensitivity check should be performed by software. Software tools for addressing Screening, Component Identification &amp; Structural Elucidation workflows. The data processing software must incorporate an elemental composition calculator as standard. Included into the calculator must be algorithms for isotope pattern modeling that allow data interpretation of actual isotope patterns. A goodness of fit from actual to theoretical isotopes must be included. The ability to filter out incorrect elemental composition calculations through the use of intelligent spectral interpretation algorithms must be incorporated. Software should give elemental formula with mass accuracy or ppm error and isotopic fit value.</li> <li>• The model offered by the vendor should have capability to demonstrate the above mention parameter like fast LC, high resolution, high mass accuracy in one single run.</li> </ul>		
<p><b>K. Instrument &amp; Software Qualification Service &amp; Certification:</b></p> <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./Cas No/Product ID etc.</p>		

2	<p><b>Computer &amp; Workstation :</b></p> <p>A Workstation should be provided for controlling the mass spectrometer, the LC and the auto-sampler with data acquisition &amp; for data processing and analysis with following specification:</p> <ul style="list-style-type: none"> <li>• Memory / RAM: 30 GB or higher, Hard disk: 10 TB or higher</li> <li>• CPU: Dual-Processor; Operating system: Windows 7/10 64 - bit or better.</li> <li>• 21 inch LCD monitor.</li> <li>• 1 Laser jet printer.</li> <li>• All hardware and software including drivers, monitor, device interfaces cards/network must be preinstalled and preconfigured on the computer provided.</li> </ul>		
3	<p><b>Nitrogen Generator:</b></p> <p>A noise free Nitrogen Gas Generator with in-built compressor along with other Gas cylinder should be provided to operate the system.</p> <p>The Maximum gas output pressure must be 100 psi or equivalent.</p> <p>The Maximum outlet Flow Rate must be 32 L/min or equivalent.</p>		
4	<p><b>10 KVA UPS:</b></p> <p>The vendor must provide 10 KVA UPS with a minimum 60 mins / 1 hr backup with the system.</p>		
5	<p><b>FAST UHPLC SYSTEM: A liquid chromatography system as an inlet to the Mass Spectrometer with following specifications:</b></p> <p>The chromatography system should be capable of being operated both as a HPLC &amp; Fast UHPLC by interchanging the column chemistries.</p>		
	<p><b>A. Pump :</b></p> <ul style="list-style-type: none"> <li>• Quaternary / Binary operating pump(s) with an operating pressure of minimum 15000 psi or better.</li> </ul>		
	<p><b>B. Flow Rate :</b></p> <ul style="list-style-type: none"> <li>• The flow rate range should be 0.010 to 2.000 mL/min, in 0.001 mL increments.</li> </ul>		

	<p><b>C. Degasser :</b></p> <ul style="list-style-type: none"> <li>• The instrument should have in-built Vacuum degasser facility with minimum four lines and should be efficient to remove dissolved air online.</li> </ul>		
	<p><b>D. System Delay Volume :</b> System Delay Volume should be less than &lt; 400ul, independent of system backpressure &amp; with standard mixer for higher sensitivity.</p>		
	<p><b>E. Autosampler :</b></p> <ul style="list-style-type: none"> <li>• Autosampler should be available with a capacity of approx. 80 vials or more of 1.5 ml or better capacity &amp; sufficient no. of spare sample vials must be provided. The autosampler should have cooling facility upto 4 degrees or better and heating upto 40 degrees or better.</li> <li>• Programmable injection volume from 0.5 ul to 20 ul or better must be available.</li> <li>• The carryover of the autosampler must be less than 0.002% or better.</li> <li>• Compressibility Compensation should be Automatic &amp; Continuous.</li> </ul>		
	<p><b>F. Column Oven :</b> Column Temperature Control should be from 20 deg. C to 90 deg. C or better.</p>		
	<p><b>G. Columns :</b></p> <ul style="list-style-type: none"> <li>• Sub 2 microns (1.7um / 1.6um) C18 UHPLC/UPLC Columns for the analysis should be Quoted with Smaller Dimensions with a pH level of 2 – 12.</li> <li>• Column usage history tracking technology must be associated with the column so that all the information related to number of injections, solvent consumption, Temperature, Pressure etc. should be available electronically &amp; archives all of them so that the data can be acquired as when required &amp; must help to create a paperless laboratory.</li> </ul>		
6	<p><b>Warranty :</b> Warranty of the Entire instrument must be 5 years comprehensive except consumables of Computer and Printer, Gases etc. The Vendor must point out the consumable items where the warranty is not covering.</p>		

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**Others :**• The system must be attended within 48 - 72 hrs of reporting.

- The other gases along with regulators should also be supplied along with the system.

- Training and Installation: Installation must be done at user's site with no extra costs involved. A one week (at least) general entry-level training-cum-workshop and advanced-level training-cum-workshop must be arranged at the user's site by the vendor on experimental and data analysis part, with no extra cost involved.

- Proof of Performance documents must be provided with the Compliance sheet. The vendors must submit/upload all the Technical Data Sheets as per their claim in original & authenticated.

- Standards/reagents & MS Grade Solvents required for successful installation must be supplied.

- The Vendor must submit at least 10 or more customer details / PO copies / references of the same model Quoted in India.



**FINANCIAL BID  
SUPPLY AND INSTALLATION  
OF  
ESI- MASS SPECTROMETER  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI  
Notice Inviting E-Tender No. NIT-46/2018-NC-001406-CHE-18-19**

[www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER)

Vendor Name							
SL. No.	Item Specification	Qty	Type of Currency	Unit Price in Foreign currency as per terms & condition no.15(d) of Tender document	Total Price in Foreign Currency as per terms & condition no.15(d) of Tender document	Unit Price in INR as per terms & condition no.15(b) of Tender document	Total Price in INR as per terms & condition no.15(b) of Tender document
1	<b>ESI-HRMS Mass Spectrometer system</b> (Specification as per technical Bid)	1					
2	<b>Computer &amp; Workstation</b> (Specification as per technical Bid)	1					
3	<b>Nitrogen Generator</b> (Specification as per technical Bid)	1					
4	<b>10 KVA UPS</b> (Specification as per technical Bid)	1					

5	<b>A liquid chromatography system</b> (Specification as per technical Bid)	1					
	<b>Other Charges If Any</b>						
	<b>Agency Commission</b>						
	<b>GST Charge If Any</b>						
	<b>Grand Total</b>				<b>0.00</b>		<b>0.00</b>
6	<b>Comprehensive AMC charges after expiry of Warranty period in % of basic price only.</b>						