



## भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान पुणे

### INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH PUNE PREBID CLARIFICATION ON CPP TENDER NUMBER - IISER/PUR/0679/25

**आइटम विवरण- टाइम-ऑफ-फ्लाइट (QToF) या समतुल्य उच्च रिज़ॉल्यूशन LC-क्वाड्रुपोल (HRMS) सिस्टम के साथ LC-क्वाड्रुपोल की खरीद**

**Item Description- Procurement of LC-Quadrupole with Time-of-Flight (QToF) or Equivalent High Resolution LC-Quadrupole (HRMS) System**

टाइम-ऑफ-फ्लाइट (क्यूटीओएफ) या समतुल्य उच्च रिज़ॉल्यूशन एलसी-क्वाड्रुपोल (एचआरएमएस) सिस्टम के साथ एलसी-क्वाड्रुपोल की खरीद के लिए संस्थान की वेबसाइट [www.iiserpune.ac.in](http://www.iiserpune.ac.in) और सीपीपी पोर्टल पर 16/10/2025 को प्रकाशित खुली निविदा पृष्ठताछ का संदर्भ लें।

Refer to an open tender enquiry published on the Institute website [www.iiserpune.ac.in](http://www.iiserpune.ac.in) and on the CPP Portal on 16/10/2025 for procurement of LC-Quadrupole with Time-of-Flight (QToF) or Equivalent High Resolution LC-Quadrupole (HRMS) System.

प्री-बिड मीटिंग 30/10/2025 को शाम 3.00 बजे आयोजित की गई और बैठक का कार्यवृत्त निम्नानुसार है:

Pre-Bid meeting was held on 30/10/2025 at 3.00 PM and minutes of meeting is as under:

प्रारंभ में, समिति ने सभी सदस्यों और संभावित बोलीदाताओं के प्रतिनिधियों का स्वागत किया और सामान्य तौर पर निविदा के दायरे की जानकारी दी और उसके बाद सहायक कुलसचिव ( भंडार एवं क्रय) से बोली लगाने वालों को निविदा की मुख्य विशेषताओं के बारे में जानकारी देने का अनुरोध किया।

At the outset, the committee welcomed all the Members and the representative of the Prospective Bidders and briefed in general the scope of the tender and thereafter requested Assistant Registrar (S&P) to brief the bidders on the salient features of the tender.

उपस्थित प्रतिनिधि दिए गए उत्तरों से संतुष्ट थे और यह सूचित किया गया था कि प्रीबिड कॉन्फ्रेंस के दौरान की गई चर्चा के अनुसार दिए गए - सुधार / परिवर्धन / स्पष्टीकरण को IISER पुणे की वेबसाइट पर होस्ट किया जाएगा और सभी संभावित बोलीदाताओं को बोली दस्तावेजों में निर्धारित अनुसार अपनी बोली जमा करने से पहले प्री-बिड सम्मेलन की कार्यवाही का संज्ञान लेना आवश्यक है।

The representatives present were satisfied with the replies given and it was informed that the corrections / additions / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of IISER Pune and all the Prospective Bidders are required to take cognizance of the proceedings of the Pre-Bid Conference before submitting their bids as stipulated in the Bidding Documents.

हमारी आईआईएसईआर वेबसाइट [www.iiserpune.ac.in](http://www.iiserpune.ac.in) और CPP portal पर जारी नोटिस के अन्य नियम और शर्तें अपरिवर्तित रहेंगी। इस संबंध में और कोई पत्राचार नहीं किया जाएगा।

The other terms & conditions of the notice issued on our IISER website [www.iiserpune.ac.in](http://www.iiserpune.ac.in) and CPP portal will remain unchanged. No more correspondence in this regard will be entertained.

बैठक अध्यक्ष के धन्यवाद प्रस्ताव के साथ समाप्त हुई।

The meeting ended with vote of thanks to the Chair.

Sd/-

सहायक कुलसचिव (भंडारण एवं क्रय)  
Sr. Assistant Registrar (S&P)

11/11/2025

Open Tender Ref. No: IISER/PUR/0679/25

Date: 16/10/2025 LC-Quadrupole with Time-of-Flight (QToF) or Equivalent High-Resolution LC-Quadrupole (HRMS) System

| S. No                                      | Technical Description | Tender specification                                                                                                                                                                                                     | Requested amendment                                                                                         | Clarification/Amendment                                                                                                                                                                                                                      | Justification |
|--------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>Amendments Request from Vendor I :-</b> |                       |                                                                                                                                                                                                                          |                                                                                                             |                                                                                                                                                                                                                                              |               |
| 1                                          | Ionization Source     | A. The instrument must be equipped with combined/ Multi-Mode/dual electrospray ionization (ESI) and atmospheric pressure chemical ionization (APCI) as standard capable of handling flow rates up to 2 mL/min or higher. | Better to have dedicated ionization source. AJS (ESI) comes as default. APCI will be supplied additionally. | Amendment - The instrument must be equipped with dedicated/ combined/ Multi-Mode/dual electrospray ionization (ESI) and atmospheric pressure chemical ionization (APCI) as standard capable of handling flow rates up to 2 mL/min or higher. |               |
|                                            |                       | D. The vacuum system remains intact during the cleaning, source interchange or Servicing of the system with some isolation in the system.                                                                                | Source interchange is possible without breaking vacuum, complete maintenance needs vacuum shutdown          | Amendment - The vacuum system remains intact during source cleaning and source interchange. Servicing of the system needs vacuum shutdown                                                                                                    |               |
|                                            |                       | E. The system should have future upgradability to connect a nano-LC with nano-source.                                                                                                                                    | Nano source is available                                                                                    | Amendment - The system should have future upgradability to connect a nano-LC with nano-source or have nano-source available                                                                                                                  |               |

|   |                                      |                                                                                                                                                                                                                                   |                                                                   |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | <b>Desolvation Temperature</b>       | The upper limit of the desolvation temperature must be more than 600 oC, which should be programmable and can be used in all the different probe usages including combined / dual / ESI and APCI for every solvent and compounds. | 400 Deg. We have document proof to show more than 650 deg         | Clarification - Tender specification prevails   | Higher desolvation temperatures are required in case of analysis of polar compounds without derivatization, wherein higher aqueous mobile phase combination is required for efficient ionization                                                                                                                                                                                                                      |
| 4 | <b>Time of Flight (TOF)</b>          | The mass range of the Time of Flight (TOF) analyser must be at least =30 to =80,000 m/z.                                                                                                                                          | 30 to 10,000 m/z                                                  | Clarification - Tender specification prevails   | Intact proteins, protein complexes, nucleic acids, lipoproteins, nanoparticles, antibody-drug conjugates (ADCs), etc. can have m/z values well beyond 40,000 – especially if under native (non-denaturing) conditions, where charge states are low (z = 5-20). So even m/z 40,000 isn't enough to handle the upper range of native complexes or macromolecular assemblies that are common in modern chemical biology. |
| 6 | <b>Resolution</b>                    | The resolution of the TOF mass analyser must be 40,000 FWHM or higher at around m/z 1000 or Orbitrap with $\geq 2,00,000$ Resolving power @ 200 m/z (Proof of Statement must be provided)                                         | More than 45,000                                                  | Clarification - No change in this specification | Requested amendment of More than 45,000 already complies with tender specification of resolution of the TOF mass analyser must be 40,000 FWHM or higher at around m/z 1000                                                                                                                                                                                                                                            |
| 7 | <b>Mass Accuracy and Sensitivity</b> | A. The mass accuracy of the system should be a minimum of 1 ppm or better, with internal calibration standards for both MS C MS/MS modes on 10 consecutive repeat measurements on column analysis. (Proof of                      | 0.8 ppm for MS<br>2.0 ppm for MS/MS For 10 consecutive replicates | Clarification - No change in this specification | Requested amendment of 0.8 ppm for MS accuracy already complies with tender specification of MS accuracy of a minimum of 1 ppm or better.<br><br>2 ppm for MS/MS accuracy might not be                                                                                                                                                                                                                                |

|   |                                  |                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                        |
|---|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                  | statement must be provided for S/N ratio)<br>The instrument must be sensitive enough for detecting sub ppb/femtomole levels of compounds.                                                                                                                                                                                                                                                          |                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                     | sufficient for long chain polymers like peptides and oligos with similar elemental composition, or positional isomers.                                                                                                                                                                 |
|   |                                  | B. Sensitivity: MS and MS/MS mode $\leq 1$ picogram or better on column, at S/N ratio $\geq 3,500:1$ or better (Proof of statement must be provided for S/N ratio)                                                                                                                                                                                                                                 | >500:1 for MS<br>>1500:1 for MS/MS<br>For 10 replicates                                | Clarification - Tender specification prevails                                                                                                                                                                                                                                                                                                                                                                                       | In chemical biology (e.g., profiling enzyme substrates, small molecules, metabolites, or covalent modifiers), sample concentrations are often low and ion signals are weak.<br><br>Hence MS/MS mode sensitivity of >1500:1 and MS mode sensitivity of > 500:1 might not be sufficient. |
| 8 | <b>Scan modes and Capability</b> | A. The instrument must be able to operate in MS, MS/MS product ion scanning, simultaneous MS, and MS/MS scanning, UHPLC/Fast DDA Scan, TOF-MRM, 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. | TOF-MRM is vendor specific. Kindly amend it as TOF-MRM or equivalent acquisition mode. | Amendment- A. The instrument must be able to operate in MS, MS/MS product ion scanning, simultaneous MS, and MS/MS scanning, UHPLC/Fast DDA Scan, TOF-MRM or equivalent acquisition mode, 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 |                                                                                                                                                                                                                                                                                        |

|    |                            |                                                                                                                                   |                                                                                                                                              |                                                                                                  |  |
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|    |                            |                                                                                                                                   |                                                                                                                                              | TOF-MRM or equivalent acquisition mode.                                                          |  |
| 16 | <b>Flow Rate</b>           | The system must produce different gradient curves / profiles (> 10 different curves including linear, Step, Convex, Concave etc.) | Gradient curve is vendor specific. Challenges in method transfer to other instruments. Kindly remove Gradient curves and Convex and concave. | Amendment - The system must produce different gradient curves / profiles (> 10 different curves) |  |
| 18 | <b>System Dwell Volume</b> | Gradient Delay Volume of Less than 300 µL.                                                                                        | Less than 350 µL                                                                                                                             | Amendment - Gradient Delay Volume of Less than 350 µL.                                           |  |
|    | <b>Total Bandspread</b>    | The Total Bandspread should be less than 12 µL.                                                                                   | Vendor specific. Kindly make it generalized.                                                                                                 | Amendment - The Total Bandspread or dispersion volume should be less than 20 µL.                 |  |

| S. No                                          | Technical Description | Tender specification                                                                         | Requested amendment                                                                          | Clarification/ Amendment                      | Justification                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>II. Amendments Request from Vendor II :</b> |                       |                                                                                              |                                                                                              |                                               |                                                                                                                                                                                                                                                                                                                                                                                            |
| 1                                              | Mass Range            |                                                                                              |                                                                                              |                                               |                                                                                                                                                                                                                                                                                                                                                                                            |
| A                                              | Quadrupole            | mass range at least $\leq 30$ to $\geq 2250$ m/z or higher in resolving & non-resolving mode | mass range at least $\leq 30$ to $\geq 8000$ m/z or higher in resolving & non-resolving mode | Clarification - Tender specification prevails | Large synthetic or natural polymers or complexes (intact proteins, peptides, oligos, conjugates, nanoparticles etc.) can have m/z values > 3000-5000, especially if partially charged or singly charged species are formed (common in native MS or intact analyses). A QToF with a quadrupole limited to m/z 2250 cannot selectively isolate or transmit these high-mass ions efficiently. |

|   |                        |                                                                                                                      |                                                                                                             |                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---|------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B | TOF                    | at least $\leq 30$ to $\geq 40,000$ m/z                                                                              | at least $\leq 30$ to $\geq 80,000$ m/z.                                                                    | Clarification -<br>Tender specification prevails                                                                                    | Intact proteins, protein complexes, nucleic acids, lipoproteins, nanoparticles, antibody-drug conjugates (ADCs), etc. can have m/z values well beyond 40,000 – especially if under native (non-denaturing) conditions, where charge states are low ( $z = 5-20$ ).<br><b>So even m/z 40,000 isn't enough to handle the upper range of native complexes or macromolecular assemblies that are common in modern chemical biology.</b> |
| 2 | Linear Dynamic Range   | Minimum 4 orders or better                                                                                           | Minimum 5 orders or better                                                                                  | Amendment -<br>Minimum 4 orders or better                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3 | Sensitivity            | Sensitivity: MS/MS mode $\leq 1$ picogram or better on column, at S/N ratio $\geq 1750:1$ or better                  | Sensitivity: MS and MS/MS mode $\leq 1$ picogram or better on column, at S/N ratio $\geq 3,500:1$ or better | Clarification -<br>Tender specification prevails                                                                                    | In chemical biology (e.g., profiling enzyme substrates, small molecules, metabolites, or covalent modifiers), sample concentrations are often low and ion signals are weak.<br><br><b>Hence MS/MS mode sensitivity of <math>&gt;1750:1</math> and MS mode sensitivity of <math>&gt; 750:1</math> might not be sufficient.</b>                                                                                                       |
|   |                        | Sensitivity: MS mode $\leq 1$ picogram or better on column, at S/N ratio $\geq 750:1$ or better                      |                                                                                                             |                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4 | Data Acquisition Speed | Data acquisition rate for QTOF must be 25 Spectra per second or better in MS and 30 Spectra per second in MS/MS mode | Data acquisition rate for QTOF must be 30 Spectra per second or better in MS and MS/MS mode                 | Amendment -<br>Data acquisition rate for QTOF must be 25 Spectra per second or better in MS and 30 Spectra per second in MS/MS mode |                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| S. No                                            | Technical Description                                                                                        | Tender specification                                                                                         | Requested amendment | Clarification/ Amendment                        | Justification                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>III. Amendments Request from Vendor III :</b> |                                                                                                              |                                                                                                              |                     |                                                 |                                                                                                                                                                                                                                                                                                     |
| 1                                                | Desolvation Temperature - 600 or more                                                                        | Desolvation Temperature - 650 or more                                                                        |                     | Clarification - No change in this specification | Requested amendment of Desolvation Temperature - 650 or more, already complies with tender specification of Desolvation Temperature - 600 or more<br>The higher temperature is needed specific cases of cluster compounds.                                                                          |
| 2                                                | QToF mass range at least $\leq 30$ to $\geq 80,000$ m/z                                                      | QToF mass range at least $\leq 30$ to $\geq 100,000$ m/z                                                     |                     | Clarification - No change in this specification | Requested amendment of "QToF mass range at least $\leq 30$ to $\geq 100,000$ m/z", already complies with tender specification of "QToF mass range at least $\leq 30$ to $\geq 80,000$ m/z"                                                                                                          |
| 3                                                | Sensitivity - MS and MS/MS mode $\leq 1$ picogram or better on column, at S/N ratio $\geq 3,500:1$ or better | Sensitivity - MS and MS/MS mode $\leq 1$ picogram or better on column, at S/N ratio $\geq 3,700:1$ or better |                     | Clarification - No change in this specification | Requested amendment of "Sensitivity - MS and MS/MS mode $\leq 1$ picogram or better on column, at S/N ratio $\geq 3,700:1$ or better", already complies with tender specification of "Sensitivity - MS and MS/MS mode $\leq 1$ picogram or better on column, at S/N ratio $\geq 3,500:1$ or better" |

**Amendments from the Published Tender:**

**10. Warranty / Support:**

10.1. The items covered by the schedule of requirement shall carry minimum Three Years of Comprehensive Warranty from the date of acceptance of the equipment by IISER, PUNE. 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.

10.4. The 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 10-12 years from the date of supply of equipment on payment on approved price list basis.

**12. Annual Maintenance Contract/Comprehensive Maintenance Contract:**

12.1. The party must mention in the quotation, the rate/amount of annual maintenance and Comprehensive Maintenance Contract charges for the five years post warranty (after initial three years), if we opt for maintenance contract after expiry of the warranty period. This is mandatory to mention, wherever applicable.