

**Tender notification for High Resolution MS QTOF Ion Mobility with
Nano LC System (TIMS-TOF).**

Tender Number: (DBG/DKS/IISc/07/2025)

Global Tender

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Section 1: Bid Schedule

1	Tender Number	DBG/DKS/IISC/07/2025
2	Tender Date	30/07/2025
3	Item Description	High Resolution MS QTOF Ion Mobility with Nano LC System (TIMS-TOF)
4	Tender Type	Two bid system: (a) Technical Bid (Part A) (b) Commercial Bid (part B)
5	Place of tender submission	Kind attention: Prof. Deepak K Saini, Department of Developmental Biology & Genetics, Indian Institute of Science Bengaluru - 560012,
6	Last Date and Time for tender submission	22 nd August 2025
7	Primary Point of Contact	Prof. Deepak K Saini, Department of Developmental Biology & Genetics Indian Institute of Science Bengaluru -560012, India Email: deepaksaini@iisc.ac.in

The procurement of **High Resolution MS QTOF Ion Mobility with Nano LC System (TIMS-TOF)** at the Department of Developmental Biology & Genetics (DBG) in the Indian Institute of Science, Bangalore. All interested vendors shall submit a response demonstrating their capabilities to produce the requested equipment to the primary point of contact.

Section 2: Eligibility Criteria

Prequalification criteria:

1. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per -Annexure 4.
2. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.
3. System Catalogue should be produced with the Technical Bid. Original Invoice, Original Warranty Certificate, and Original Test Reports should be produced for all imported items from OEM (Original Equipment Manufacturer) at the time of supply of equipment.
4. Manufacturers should have ISO or equivalent international standard certificate. Please attach the required certificate with the bid.
5. The supplier will support the user with all the spares for a minimum period of 5 years.
6. Details of experienced service engineers including contact details should be provided in the tender document.

Section 3: Terms and conditions

(A) Submission of Tender

1. All documentation in the tender should be in English.
2. Vendors will be required to submit a technical proposal and a commercial proposal in **two separate sealed envelopes** (two bid systems). The technical bid should contain all commercial terms and conditions, except the price. **Only vendors who meet the technical requirement will be considered for the commercial discussion.**
3. **The technical bid** (Part A) must contain a point-by-point technical compliance document. The technical proposal should contain a compliance table with 5 columns.
 - a. The first column must list the technical requirements, in the order that they are given in the technical requirements below.
 - b. The second column must provide the specification of the instrument against the requirement (please provide quantitative responses wherever possible)
 - c. The third column should describe the compliance with a “YES” or “NO” only. Ensure that the entries in column 2 and column 3 are consistent.
 - d. The fourth column should clearly state the reasons/explanations/context for deviations if any.
 - e. The fifth column may contain additional remarks. It can be used to highlight the technical features, qualify the response of previous columns, or provide additional details.
4. **The commercial bid** (Part B) – Indicating item-wise price for the items mentioned in the technical bid, **as per the format of quotation provided in the tender**, and other commercial terms and conditions. The commercial bid should indicate the following separately: (a) equipment price (b) optional items (c) Shipping cost and (d) the Total cost.
5. The technical bid and price bid should each be placed in separate sealed covers, super scribing on both the envelopes a tender no. and the due date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No, Tender Description & Due Date.
6. The SEALED COVER super scribing tender number / due date & should reach Department of Developmental Biology & Genetics, Indian Institute of Science, Bangalore – 560012, India on or before the due date mentioned in the tender notice. In case the due date happens to be a holiday the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
7. All queries are to be addressed to the person identified in “Section 1: Bid Schedule” of the tender notice.

8. GST/other taxes, levies etc., are to be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document (Indian Bidders only).
9. In addition to that listed in the technical table that the vendor would like to bring to the attention of the committee, such as data sheets, technical plots etc. must be listed at the end of the compliance table. The committee will go through the data provided and those available in their website to evaluate the suitability.
10. The decision of the purchase committee will be final. The Institute reserves the right to accept or reject any bid or to annul the bidding process and reject all bids, at any time before the award of the contract without thereby incurring any liability of the affected bidder or bidders.
11. Only the Original Equipment Manufacturer or their authorized representatives across the globe shall participate in the bid.
12. The order will be placed only on the bidder who participated in the bid.

(B) Cancellation of Tender

Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

- a. To accept OR reject the lowest tender or any other tender or all the tenders.
- b. To accept any tender in full or in part.
- c. To reject the tender, offer not confirming to the tender terms.

(C) Validity of the Offer

The offer shall be valid for at least 90 Days from the date of opening of the commercial bid.

(D) Evaluation of the Offer

1. The technical bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
3. Pre-qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or commercial evaluation. The decision regarding acceptance and/or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and the decision in this regard shall be binding on the bidders.
4. The award of the contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
 - a. Non-submission of complete offers.
 - b. Receipt of bids after the due date and time and or by email/fax (unless specified otherwise).

c. Receipt of bids in open conditions.

6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall consider that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained.
7. No revision of the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
8. The lowest bid will be calculated based on the total price of all items tendered for Basic equipment along with accessories selected for installation, operation, preprocessing and post- processing, optional items, recommended spares, warranty, and annual maintenance contract.

(E) Pre-requisites:

The bidder will provide the prerequisite installation requirement of the equipment along with the technical bid.

(F) Warranty:

The complete system is to be under a warranty period of **a minimum of 3 year** from the date of delivery, including a free supply of spare parts and online assistance. If the instrument is found to be defective, it must be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc Bangalore. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

(G) Purchase Order:

1. The order will be placed on the bidder whose bid is accepted by IISc based on the terms & conditions mentioned in the tender document.
2. The quantity of the items in the tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.
3. If the quality of the product and service provided is not found satisfactory, IISc Bangalore reserves the right to cancel or amend the contract.

(H) Delivery and Installation

The bidder shall provide the lead time to delivery, installation and made functional at IISc Bangalore from the date of receipt of the purchase order. The system should be delivered, installed, and made functional **within 3 months** from the date of receipt of the purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. After successful installation and inspection, the date of taking over the entire

system by the IISc, Bangalore shall be taken as the start of the warranty period. No partial shipment is allowed. The technical installation personnel/engineer, who will perform the installation, must possess proof of a training certificate from the manufacturing company/factory/principal, which should be submitted along with the tender offer.

(I) Payment Terms:

100% payments (except AMC) will be released after completion of delivery and satisfactory installation subject to TDS as per rules. As per GFR, no advance payment can be made to the authorized Indian distributors unless an equal amount of bank guarantee is provided.

(J) Statutory Variation:

Any statutory increase in the taxes and duties after the bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed onto IISc, Bangalore.

(K) Disputes and Jurisdiction:

Any legal disputes arising out of any breach of contract about this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

(L) General:

1. All amendments, time extensions, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension in the bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.
2. The bidder may furnish any additional information, which is necessary to establish capabilities to complete the envisaged work. It is, however, advised not to furnish superfluous information.
3. The bidder may visit the installation site before submission of the tender, with prior intimation.

Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from tendering/taking up of work in IISc Bangalore.

Section 4: Technical Specifications

Technical Specification for High Resolution MS QTOF Ion Mobility with Nano LC System (TIMS-TOF)s

To supply, deliver, install, and commission UHPLC coupled with High Resolution QTOF with Ion Mobility Mass Spectrometry for Proteomics workflow.

A complete setup of high-resolution QTOF with Ion Mobility mass spectrometry separation adds as a great extension to HRMS that delivers the 4-dimensional information about ions (retention time, precursor mass, ion mobility of the precursor ion, fragment ion masses) and increases peak capacity and confidence in compound characterization. Furthermore, the system should have high scan speeds with high sensitivity & resolution and provide the necessary robustness and upgrade option for running bigger sample cohorts & high throughput workflows such as proteomics (clinical), PTMs identification and analysis, de novo sequencing, quantitative proteomics, top-down sequencing, label free quantitation etc. All the hardware and software required for Proteomics applications should be included in the quote.

The system shall comprise of the following components:

- **Proteomics workflows:** High throughput Nano LC for analysis of large sample cohorts- cell lysate, and body fluids including but not limited to plasma, serum and urine.
- High Resolution Quadrupole Time-of-Flight Ion Mobility Separation (Q-TOF IMS).

The LC-HRMS high-resolution mass spec system must be able to provide seamless integration between LC and MS so that all LC operating parameters are always available and data system communication faults between the LC and MS are minimized.

A. Specifications for High Resolution QTOF with Ion Mobility Mass Spectrometry Features: -.

- The high-resolution mass analyzer should have an ion mobility device/cell followed by quadrupole (Q1) followed by a collision cell & a TOF mass analyzer for MS and MS/MS analysis.
- The instrument can synchronize the quadrupole with the IMS elution time to allow for a high MS/MS acquisition speed, leading to an increased fragmentation depth and there must be algorithms for intelligent targeting of low-level precursors.
- The MS instrument must be capable of real-time data acquisition a data processing, enabling a high spectrum repetition rate of >300Hz in MS/MS mode (including Ion mobility separation and without sacrificing sensitivity) to obtain highest possible identification of both peptides and proteins, i.e. achieving high sequence coverage of the identified proteins.
- Quadrupole Mass Range: 20 to 20,000 m/z or better resolving mode.

- Quadrupole Mass Range for MS/MS Studies: 3000 m/z or better.
- Acquisition Rate: 50 Spectra per second or better in MS & MS/MS mode.
- The high-resolution ion mobility device should achieve upto 100 Hz MS/MS scan speed without effecting resolution & sensitivity in DDA & DIA MS/MS mode.
- Resolution: The resolution of the instrument should be 60,000 (FWHM) at a scan speed of 50 spectra/sec in both MS and MS/MS Mode for a similar molecule at approximately 1000 m/z (Supporting documentary evidence need to be provided)
- Mass Accuracy: 1 ppm in both MS & MS/MS modes on 10 consecutive repeat measurements using suitable reference mass.
- Sensitivity: The sensitivity of 1 pg reserpine should give S/N > 100:1 in resolution mode and S/N > 100:1 in sensitivity mode (Support document proof to be provided)
- The analyser / detections system must have the capability of producing data with a dynamic range of up to 5 orders of magnitude.
- CCS and mass calibration are achieved with the same calibrant reagent and can be applied to all compounds regardless of chemical class.
- Vacuum System: Suitable Vacuum system to operate the instrument which must be an oil free vacuum backing pump. Vacuum read backs and system vent/pumps cycles should be digitally monitored to provide software control and ensure fail-safe operation in the event of power failure.

Ion Mobility features: -

- Ion Mobility: The system should have Ion Mobility capability to facilitate the separation of nominally isobaric species.
- The IMS (ion mobility separation) device should incorporate a cell which has the following functionality.
- Can separate mixtures of ions according to their ion mobility and with a high resolution of over 200 $\Omega/\Delta\Omega$ (cross-section/delta cross section).
- Reproducibility of Collisional Cross Section (CCS) value determination <0.5 % RSD and create CCS based libraries.
- The end user should be able to switch ON & OFF this mode through the software itself to switch between routine QTOF mode & IMS-QTOF mode.

Modes of operation: Following acquisition modes must be available:

- MS Scanning
- MS/MS product Ion Scanning
- Simultaneous MS & MS/MS scanning. 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.

- TOF- MRM/PRM mode for performing quantitation at sub ppb levels.
- DDA/IDA scanning. The acquisition of data should also be possible by setting thresholds for ion intensity for both MS & MSMS and by switching between the two modes.
- The acquisition software should allow for automated DDA MS/MS, DIA MS/MS, PRM MS/MS and other data directed acquisitions.
- The operation should have internal mass correction technique for better mass accuracy.
- The instrument should be capable of internal reference mass correction for MS and MS/MS operation without losing sensitivity.
- Direct Infusion: Syringe pump or equivalent for direct infusion of samples.
- The MS System(s) offered must all be capable of CID (collision induced dissociation) in order to perform structural elucidation and confirmation for multi omics studies.
- The quadrupole runs synchronously with Ion mobility spectrometry for stepped and sliding Isolation windows in DIA modes.

C. Data station with software:

The data system should be able to provide single platform of the software for controlling simultaneously UHPLC-IMS-QTOF as well as vacuum pump, gases, all modes. The software should have controlled auto tune to enable quick start up for quantitative analysis.

The system should have windows based, easy to use and versatile.

Latest computer with suitable keyboard & Mouse with following configuration should be included.

- Processor: Intel® Xeon® Processor (4.0 GHz 4c) or better;
- Operating system: Windows 10 or latest version, 64 bit or better
- Motherboard: TPM Enabled or better
- Hard Disk: 2TB or better
- RAM: 64GB or better
- 24-inch HD monitor display or better

Operating Software

- The software should be user friendly & have capabilities to perform the following functions.
- Integrated sample or calibrant delivery system with divert valve, Automated mass calibration
- Software tools for proteomics applications should be quoted. The software should also have capability for assigning structures by taking fragment ion spectra into account and automatically calculating fragments based on algorithms.
- The software should be able to define adducts present in the sample for automatic compound ion deconvolution.
- The system should have pre-defined methods for DDA, DIA, PRM delivered, where both m/z and ion mobility are used for selectivity (i.e. window selection in DIA and PRM, and possibility to integrate various LC vendors into the instrument control software and the data-file format must be open architecture to enable easy input for various bioinformatics approaches in-house.
- The mass spectrometer must be capable of operating in both DIA mode in combination with a scanning quadrupole mass filter and ultra-fast detection system and Ion mobility enabled DIA mode on the same platform.
- The system should ensure optimal run conditions for every sample through a QC check process.
- The system should be a GPU based platform for data processing of protein/peptide Identifications and real time database search results for bottom-up proteomics.

<ul style="list-style-type: none"> • The software must provide options to predict CCS values based on machine learning for common metabolites and enable to compare these predicted values to measured values. • Algorithms to perform relative quantitation of isotopically labelled samples. • The s/w should be able to perform data reduction processes w/o compromising quantitative accuracy and speeding up analysis 	
B. The separation system for high throughput analysis of large sample cohorts' studies MS-based proteomics cell lysate, and body fluids including but not limited to plasma, serum, and urine.	
High Throughput Nano LC specifications: The Nano LC system pumping should be split into high-speed, low-pressure gradient generation and high-pressure isocratic delivery section for high throughput studies.	
Pressure Range	High Pressure pump: 7500 psi Low Pressure pump: 3500 psi
Flow range	High pressure pump: 100 nl/min to 5000 nl/min. Low pressure pump: 100 nl/min to 80 ul/min.
Retention time reproducibility	STD less than 5 seconds
Carry over	0.05%, Total TIC, 1 ug HeLa digest
System dwell volume:	Should be less than 400µL for total system
Preventive maintenance interval	30,000 injection cycles
Sample tray format	6 x 96 sample vials plates.
Throughput	30 to 500 samples per day
C. Warranty & Pre-installation accessories.	
<ul style="list-style-type: none"> • A complete 3-year Warranty should be quoted for both the HRMS and Nano LC systems. The Nitrogen gas generator to be quoted with a highly durable, low noise, vibration-free drying system and an auto drain valve with an inbuilt compressor. It should be able to supply the gases (32 L/min) required for the LC-MS/MS instrument at the required purity, pressure, and flow rate. The following essential consumables are to be provided for the successful installation of the instruments: nano LC columns, calibration kit, sample preparation kits for proteomics samples, and other essential consumables for trouble-free operation. The extended warranty cost as well as the CMC/ AMC cost should be indicated. 	

Section 5- Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this section and submitted to

Attn. Prof. Deepak K Saini,
Department of Developmental Biology & Genetics
Indian Institute of Science
Bengaluru -560012, India
Email: deepaksaini@iisc.ac.in

Annexure-1:

Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Details of the Bidder

Sl. No Items Details

1. Name of the Bidder
2. Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)
3. Registration No/ Trade License, (attach attested copy)
4. Registered Office Address
5. Address for communication
6. Contact person- Name and Designation
7. Telephone No
8. Email ID
9. Website
10. PAN No. (attach copy)
11. GST No. (attach copy)

Signature of the Bidder

Name, Designation, Seal

Date:

Annexure-2:

Declaration regarding experience

To,
Prof. Deepak K Saini,
Department of Developmental Biology & Genetics
Indian Institute of Science
Bengaluru -560012, India
Email: deepaksaini@iisc.ac.in

Ref: Tender No: DBG/DKS/IISc/07/2025

Dated: 30/07/2025

Supply and installation of High Resolution MS QTOF Ion Mobility with Nano LC System (TIMS-TOF) at Department of Developmental Biology and Genetics, IISc Bangalore.

Sir/Ma'am,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has ---- years of experience in supplying and installing Super-resolution imaging microscopy system.

(Signature of the Bidder)

Name, Designation, Seal

Date

Annexure-3:

To,
Prof. Deepak K Saini,
Department of Developmental Biology & Genetics
Indian Institute of Science
Bengaluru -560012, India
Email: deepaksaini@iisc.ac.in

Declaration of the track record
Department of Developmental Biology & Genetics,
Indian Institute of Science, Bengaluru 560012, India

Ref: Tender No: DBG/DKS/IISc/07/2025

Dated: 30/07/2025

Supply and installation of High Resolution MS QTOF Ion Mobility with Nano LC System (TIMS-TOF) at Department of Developmental Biology and Genetics, IISc Bangalore.

Sir,
I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred /blacklisted by any Government / Semi Government organizations/institutions in India or abroad. I further certify that I'm competent officer in my company/firm to make this declaration.

Or

I declare the following,

Sl.No.	Country in which the company is Debarred/blacklisted	/case is Pending Blacklisted/debarred by Government/Semi Government/Organizations	/Institutions	Reasons	Since when and for how long
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(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding the period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully

(Signature of the Bidder)

Name Designation, Seal

Date

Annexure – 4:

Declaration for acceptance of terms and conditions

To,
Prof. Deepak K Saini,
Department of Developmental Biology & Genetics
Indian Institute of Science
Bengaluru -560012, India
Email: deepaksaini@iisc.ac.in

Ref: Tender No: DBG/DKS/IISc/07/2025

Dated: 30/07/2025

Subject- Supply and installation of High Resolution MS QTOF Ion Mobility with Nano LC System (TIMS-TOF) at Department of Developmental Biology and Genetics", IISc Bangalore.

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name, Designation, Seal

Date

Annexure – 5:

Details of items quoted:

- a. Company Name
- b. Product Name
- c. Part / Catalogue number
- d. Product description / main features
- e. Detailed technical specifications
- f. Remarks

Instructions to bidders:

- 1. Bidder should provide technical specifications of the quoted product/s in detail.
- 2. Bidder should attach product brochures along with technical bid.
- 3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.

Section 6 – Commercial Bid

The bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

Sl. No.	Description	Cat. Number	Quantity	Unit Price	Sub total
1.	Essential items noted in the technical specification				
1.a	... (details of essential items)				
1.b	...				
2.	Optional items noted in the technical specification				
2.a	... (details of optional items)				
2.b	...				
3.	Accessories for operation and installation				
4.	All Consumables, spares and software to be supplied locally				
5.	Warranty (1 year)				
6.	Cost of Insurance and Airfreight				

Any additional items

Sl. No	Description	Cat. Number	Quantity	Unit Price	Sub total

Addressed to

To,
Prof. Deepak K Saini,
Department of Developmental Biology & Genetics
Indian Institute of Science
Bengaluru -560012, India
Email: deepaksaini@iisc.ac.in

Section 7 – Checklist

(This should be enclosed with technical bid- Part A)

The following items must be checked before the Bid is submitted:

1. Sealed Envelope “A”: Technical Bid

1. Section 5- Technical Bid (each page signed by the authorized signatory and sealed) with the

below annexures:

- a. Annexure 1: Bidders details**
 - b. Annexure 2: Declaration regarding experience**
 - c. Annexure 3: Declaration regarding clean track record**
 - d. Annexure 4: Declaration for acceptance of terms and conditions**
 - e. Annexure 5: Details of items quoted.**
- 2. Copy of this tender document duly signed by the authorized signatory on every page and sealed.**

2. Sealed Envelope “B”: Commercial Bid Section

6: Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) super scribing on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description & Due Date.