IITM

भारतीय उष्णदेशीय मौसम विज्ञान संस्थान
(पृथ्वी विज्ञान मंत्रालय, भारत सरकार का एक स्वायत्त संस्थान)
डॉ. होमी भाभा मार्ग पाषाण, पुणे– ४११ ००८

INDIAN INSTITUTE OF TROPICAL METEOROLOGY
(An Autonomous Institute of the Ministry of Earth Sciences, Govt. of India)
Dr. Homi Bhabha Road, Pashan, Pune - 411 008. India

सं. पीएस/125/33/2025 दिनांक – 22 दिसंबर2025

सेवा में / To,

विषय- "कार्बनिक और अकार्बनिक नमूनों के लिए चुंबकीय क्षेत्र आइसोटोप अनुपात विश्लेषण प्रणाली" की आपूर्ति, स्थापना और कमीशनिंग - मात्रा 1 सेट। के संदर्भ में।

Sub – Supply, Installation and Commissioning of Magnetic sector Isotope Ratio Mass Spectrometer (MS-IRMS) system for organic and inorganic samples and associated accessories, Qty - 1 Set.-

Ref – This Institute's Tender enquiry of even number dated PS/125/33/2025

प्रिय महोदय/ Dear Sirs,

यह संस्थान उपरोक्त विषयानुसार सामग्री की खरिद करना चाहता है। इसलिए इच्छुक बोलीदाताओं से अनुरोध है कि अपनी तकनिकी तथा कीमत बोली निम्नलिखित निर्देशानुसार प्रस्तुत करें।

This Institute wishes to procure goods as per subject cited above. Therefore, interested bidders are requested to submit their Technical and Price bids as per the instructions given below;

बोली प्रस्तुत करने की अंतिम तिथि बोली प्रस्तुत करने की अंतिम तिथि दि. 26 दिसंबर, 2025 से 10 जनवरी, 2026 को 1500 बजे तक बढाई जाती है।

The last date of submission of bids is extended from 26th December 2025 to 10th January 2026 upto 1500 hrs.

For Updated Techical Technical Specification please refer pre-bid minutes. All other terms and conditions will remain unchanged.

तकनीकी विशिष्टताओं की अद्यतन जानकारी के लिए कृपया प्री-विड मिनट्स देखें। अन्य सभी विनिमय एंव शर्ते अपरिवर्तित रहेंगी।

तकनिकी बोली उसी दिन 1530 बजे ऑनलाइन पद्धती व्दारा खोली जाएगी ।
Bids will be opened on the same day at 1530 hrs. through online mode only.

बोलीदाता जो उपर्युक्त निविदा में भाग लेना चाहते हैं, उन्हें वेब पोर्टल https://moes.euniwizarde.in पर उपलब्ध सूचना के अनुसार पंजीकृत करना होगा।

Bidders willing to participate for the above tender, has to get registered themselves on web portal https://moes.euniwizarde.in as per the instruction available at there.

धन्यवाद / Thanking you.

22/12/2025

(श्रीमति योगिता कड / Smt. Yogita Kad)
प्रशासनिक अधिकारी (पीएसयू) / Administrative Officer (PSU)
कृते निदेशक / for Director
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भारतीय उष्णदेशीय मौसम विज्ञान संस्थान, पुणे

INDIAN INSTITUTE OF TROPICAL METEOROLOGY, PUNE

Minutes of the pre-bid meeting held on 12 December 2025

At the commencement of the proceedings, the Indenting Officer extended a warm welcome to the Chairman and the Committee Members and informed them about the queries received from three prospective bidders during the pre-bid meeting held on 12 December 2025 at Sikka Hall, IITM. Subsequently, the Chairman invited the concerned Indenting Officer to present the queries raised by all prospective bidders regarding the tender terms and conditions and the technical specifications of the Magnetic Sector Isotope Ratio Mass Spectrometer (MC-IRMS), Quantity: 01.

The Committee deliberated on each query and recommended suitable amendments to the proposed specifications of the Magnetic Sector Isotope Ratio Mass Spectrometer (MC-IRMS) system to make the specifications generic. The Committee also received inputs from the Purchase Section concerning the responses to the non-technical queries raised by the prospective bidders.

Accordingly, the final revised tender document incorporates both technical and non-technical amendments. In view of these revisions, the Committee further recommended extending the bid submission deadline to **10 January 2026**.

Response to queries by Thermo Fisher India Ltd.

Sr. No.	Tender Specification	Amendment Required	Remarks	TEC response/recommendation
1.	Accelerating voltage ≥ 5,000 volts or above.	Accelerating voltage ≥ 3,000 volts or above.	Although Thermo Scientific Delta Q employs a nominal acceleration voltage of 3,000 V compared to 5,000 V for the Elementar 5000, the effective ion/particle energy and resulting analytical performance are determined by the *overall source and optics design*, not by acceleration voltage alone. In routine operation, we can achieve similar limits of detection, linearity, and reproducibility to those achieved on instruments running at 5,000 V, but with improved long-term stability and reduced maintenance	Not approved: A higher accelerating voltage is an important parameter for regulating ionization, ion separation, and detection, thereby improving the sensitivity and resolution of the instrument as well as the precision of measurements.

			requirements.	
2.	Mass Range: 1-96 AMU	Mass Range: 1-96 AMU at full acceleration voltage	Uniform acceleration across the full mass range ensures all ions enter the analyser with identical energy, preventing mass-dependent fractionation and maintaining precise, stable focusing	Approved
3	Dynamic range: 100 Volts or above	Dynamic range: 50 Volts or above		Approved
4	Isotope ratio linearity in continuous flow mode must have a linear response over the range from sub-10µg to more than 100 µg sample sizes: The slope for the various isotope values and sample amount should be: o δ13C (CO2): ≤ 0.02 ‰/µg or equivalent o δ18O (CO2): ≤ 0.04 ‰/µg or equivalent o δ15N (N2):	Isotope ratio linearity in continuous flow mode must have a linear response over the range from sub-10µg to more than 100 µg sample sizes or 10 pulses of reference gas at an amplitude of 5 nA (1.5 V, for H_2 5 V): The slope for the various isotope values and sample amount should be: o δ13C (CO2): ≤ 0.02 ‰/µg or ‰/nA o δ18O (CO2): ≤ 0.04 ‰/µg or ‰/nA o δ15N (N2): ≤ 0.02 ‰/µg or ‰/nA o δ34S (SO2): ≤ 0.04 ‰/µg or ‰/nA o δ18O (CO): ≤ 0.04 ‰/µg or ‰/nA	Thermofisher publishes continuous flow linearity in ‰/nA for 10 pulses of reference gas at an amplitude of 5 nA (1.5 V, for H_2 5 V). Hence request you to add the terminology of sample weight alternatively the current so that both vendors can participate.	Approved in addition to current specifications.

	≤ 0.02 ‰/µg or equivalent o δ34S (SO2): ≤ 0.04 ‰/µg or equivalent o δ18O (CO): ≤ 0.04 ‰/µg or equivalent			
5	The system should comply to below external precision 1σ (‰) for 10 continuous runs of water samples of 200ul: o δ18O (CO2): ≤ 0.05 ‰ o δD (H2): ≤ 1 ‰	The system should comply to below external precision 1σ (‰) for 5 or more continuous run of water samples of 200ul: o δ18O (CO2): ≤ 0.08 ‰ o δD (H2): ≤ 2 ‰	Thermofisher publishes data on 5 runs for 200 ul of water. Hence, we request you to amend the runs to 5 or more and amend the precision data so that we can participate in the tender.	Not Approved: The proposed instrument is required to generate high-quality data; therefore, the request for lower precision is not accepted.
6	The system should be capable of analysing carbonate samples ranging from 20 to 1000 µg (micro g).	The system should be capable of analysing carbonate samples ranging from 20 to 450 µg (micro g) or more.	High sample weight can be analysed with the help of auto dilution of the signal using continuous flow device and is counterproductive. Thermofisher Gas bench can handle upto 300 ug without auto dilution and above that the samples can be analysed using auto dilution capabilities.	Not Approved: The sample amount range is paramount, as a wide variety of samples will be analyzed on the proposed instrument.
7	The system should comply to below external precision 1σ (‰) for 10 continuous runs of 40-200µg carbonate: o δ13C	The system should comply to below external precision 1σ (‰) for 5 or more continuous runs of 100µg carbonate: o δ13C (CO2): ≤ 0.1 ‰ o δ18O (CO2): ≤ 0.1 ‰	Thermofisher publishes precision data at a fixed weight 100µg so that it is easy to demonstrate during installation. A range specifications adds ambiguity when confirming the specifications during installation.	The revised specification "the system should comply to below external precision 1σ (‰) for 10 continuous runs of 20-200µg carbonate: o δ13C (CO2): ≤ 0.04 ‰ o δ18O (CO2): ≤ 0.08 ‰.

	(CO2): ≤ 0.04 ‰ o δ18O (CO2): ≤ 0.08 ‰			The precision for the entire sample range (20-200µg carbonate) mentioned must be demonstrated at the time of installation at IITM." The revised range of 20–200 µg carbonate to keep the uniformity of the lower range of the sample requirement provided in the point the point # in the original tender specifications. As stated in Point No. 5, the proposed instrument is required to generate high-quality data; therefore, the request for lower precision is not accepted.
8	The autosampler should accommodate 60 or more positions, capable of holding 25 mm and 47 mm diameter glass fiber filters (GFF)	The autosampler should accommodate 60 or more positions, capable of holding 25 mm and 47 mm diameter glass fibre filters (GFF) as is or sub-sampled.	Thermofisher autosampler is designed to handle GFF in folded or subsampled format. Currently only one vendor can hold the GFF in as is format. Hence request you to allow sampling in different format so that we can also participate in the tender.	It revised to "the autosampler should accommodate 60 or more positions, capable of holding 25 mm and 47 mm diameter glass fiber filters (GFF) as is or sub-sampled."
9	It should allow easy switching between CNS mode and CN mode, and vice versa.	It should allow easy switching between CNS/OH mode and CN mode, and vice versa.	Tender asks for cups for hydrogen and mentions precision data for hydrogen and oxygen but the EA does not mention instrument parameters for oxygen and hydrogen. Hence request you to add the same.	It revised to "It should allow easy switching between CNS/OH mode and CN mode, and vice versa"

10	The instrument should include a dedicated, temperature-controlled column trap specifically for sulfur.	Please remove this.	Temperature controlled column trap for sulphur is a patented technology by one vendor. Hence request you to please remove this. Thermofisher uses packed GC column for separation	Approved
11	A physical key or switch must be provided to close the dedicated sulfur column channel, with control accessible via software.	Vendor specific parameter. Please remove	Vendor specific parameter. Please remove	The specification has been revised to "A physical key/switch or software controller must be provided to close the sulfur column channel".
12	Precision for CNS isotopic analysis should be guaranteed for all three isotopes in a single run. The external precision (1σ) for a sample size of 50 µg absolute content of C, N, and S should meet the following specifications:	Precision for CNS isotopic analysis should be guaranteed for all three isotopes in a single run. The external precision (1σ) for a sample size of 50 µg absolute content of C, N, and & 60 µg absolute content S should meet the following specifications:	Thermofisher has sulphur precision data published with Analysing 300 µg of Sulfanilamide (This equates to 125 µg C, 49 µg N and 60 µg S). Hence request you to please amend it so that we have the published literature to support the tender specifications.	Not Approved: The requirement has been included considering the possible sample types and their quantities. Increasing the minimum sample amount would limit the analytical capability to handle certain critical samples, which are generally available only in low quantities.

Response to queries by JCS Services India Ltd.

S.No	Technical specifications	Requested Change	Remarks	TEC recommendation
	MS-IRMS system			
1	Dynamic range: 100 Volts or above	NU "HORIZON" offers dynamic range of 50V with a resistor of 1011ohm. Kindly change the same to include this.	Dynamic range is very much dependant on the amplifier resistor used. The tender spec does not state which resistor is considered.	Approved
	Internal precision 1σ (‰) in continuous flow mode: δ13C (CO2): ≤ 0.06 δ18O (CO2): ≤ 0.06 δ15N (N2): ≤ 0.06 δ34S (SO2): ≤ 0.10 δ18O (CO): ≤ 0.10 δD (H2): ≤ 0.20	Nu offers δD (H2): ≤ 0.40.	Kindly change the same to include this.	Not Approved: The proposed instrument is required to generate high-quality data; therefore, the request for lower precision is not accepted.
	Internal precision 2σ (‰) in dual inlet mode: δ13C (CO2): ≤ 0.010 δ18O (CO2): ≤ 0.016 δD (H2): ≤ 0.10	Nu offers δD (H2): ≤ 0.15.	Kindly change the same to include this.	Not Approved: The proposed instrument is required to generate high-quality data; therefore, the request for lower precision is not accepted.

	Dual Inlet (DI) Interface The system should comply to below external precision 1σ (‰) for 10 continuous run of water samples of 200ul: δ18O (CO2): ≤ 0.05 ‰ δD (H2): ≤ 1 ‰	Nu offers δD (H2): ≤ 1.5‰.	Kindly change the same to include this.	Not Approved: The proposed instrument is required to generate high-quality data; therefore, the request for lower precision is not accepted.
	Interface For Carbonate Analysis The system should comply to below external precision 1sigma (‰) for 10 continuous runs of: 40 - 200µg carbonate: δ13C (CO2): ≤ 0.04‰ δ18O (CO2): ≤ 0.08‰	Nu specifies the sample weight range of: 80-200µg.	Kindly change the same to include this.	It has been revised to "the system should comply to below external precision 1σ (‰) for 10 continuous runs of 20-200µg carbonate: o δ13C (CO2): ≤ 0.04 ‰ o δ18O (CO2): ≤ 0.08 ‰. The precision for the entire sample range (20-200µg carbonate) mentioned must be demonstrated at the time of installation at IITM."
	Elemental Analyser (EA) The autosampler should accommodate 60 or more positions, capable of holding 25 mm and 47 mm diameter	Nu Instruments believes this GFF of 25mm and 47mm autosampler is proprietary to one supplier. Nu Instruments requests to delete this as no other manufacturer can supply this.	Kindly change the same to include this.	It revised to "the autosampler should accommodate 60 or more positions, capable of holding 25 mm and 47 mm diameter glass fiber filters (GFF) as is or sub-sampled."

	glass fibre filters (GFF).			
	It must be possible to analyze sulfur at a higher column temperature than carbon and nitrogen within the same run. Column temperatures should be monitored and logged by the software during sample analysis for diagnostic purposes.	Nu Instruments offers an alternative technology in which carbon, nitrogen and sulfur is analyzed in a single run using a short GC S column and NC column fitted in parallel in the GC oven along with a switching valve and a metering valve. This allows S to elute first giving a fast analysis time (<10 minutes) to measure S, N and C with a sharper S peak shape and therefore less sample is needed. Kindly delete the requirement to run at a higher column temperature.	PFA technical note detailing this feature. Kindly change the same to include this.	The specification has been revised to "It must be possible to analyze sulphur, carbon and nitrogen within the same run. Column temperatures should be monitored and logged by the software during sample analysis for diagnostic purposes".
	A physical key or switch must be provided to close the dedicated sulfur column channel, with control accessible via software.	The closing of the sulfur channel on the Nu Instruments EA is performed via the software and not a physical key. Kindly remove the requirement for physical key or switch to close the sulfur column channel.	Kindly change the same to include this.	The specification has been revised to "A physical key/switch or software controller must be provided to close the sulfur column channel.

	Specific requirement, if any On-site demonstration of technical specifications on the pre-existing MS-IRMS systems installed in India. This demonstration will be considered for the technical evaluation of the bid.	The NU Horizon with latest developments on NU Ember EA system is not yet installed in India. We request you to modify the same to allow online demonstration of the latest features accordingly.	Kindly change the same to include this.	The specification has been revised to "On-site demonstration of technical specifications on the pre-existing MS-IRMS systems installed in India. In the event that no MS-IRMS system is installed in India, the vendor is permitted to demonstrate the pre-existing quoted specifications using the same type of mass spectrometer system installed at a user abroad via online mode. This demonstration will be considered as part of the technical evaluation of the bid.
	Performance certificates from at least two users in India should be submitted.	NU Instruments only have one IRMS system in India. However, we can provide Global users list and relevant performance certificate for the same.	Kindly change the same to include this.	The specification has been revised to "Performance certificates from at least two users in India or abroad should be submitted."
	The vendor must have completed at least five MS-IRMS system installations in India within the last 10 years, with supporting documentation provided.	NU Instruments only have one IRMS system in India. However, we can provide Global users list and relevant performance certificate for the same. Nu request to kindly modify the same	Kindly change the same to include this.	The specification has been revised to "The vendor must have completed at least five MS-IRMS systems installations in India or abroad within the last 10 years, with supporting documentation needs to be provided.

	IITM reserves the right to conduct site visits for the demonstration of the quoted specifications on existing instruments installed in India at any time during the tender process or prior to the issuance of a purchase order.	Nu Instruments can provide this at the local installation at AMD. Alternately, Nu can provide this at a global user site with permission of the user. This can also be demonstrated online at the Nu factory in U	Kindly change the same to include this.	The specification has been revised to "IITM reserves the right to conduct site visits **or a consultation** for the demonstration of the quoted specifications on existing instruments installed in India **or abroad** at any time during the tender process or prior to the issuance of a purchase order.
	TECNO-COMMERCIAL CHANGES			
	EMD for the Bid Security	NU invites your attention to the holiday period in UK due to Christmas and New year vacations thereby delaying documentation and generation of requisite bid security. Nu requests you to allow three to four weeks duration from the date of issue of corrigendum post pre bid meeting.	Kindly change the same to include this.	It may kindly noted that bidder has to submit the EMD amount along with submission of Technical Bid. Original hard copy of EMD instrument to be submitted by the bidder within 5 days from the date of submission of final bid on e-procurement web portal of this Institute.
	Delivery of 16 weeks.	Nu Instruments requests a minimum of 24 weeks for delivery after receipt of LC.	Kindly change the same to include this.	Approved: Considering the request from the majority of the possible vendors, the delivery period has been revised to 24 weeks.

	During warranty – down-time call attendance to be within 24 hours.	Nu Instruments can provide online support within 24 hours of being notified and engineer's visit will be arranged within 72 hours, if required.	Kindly change the same to include this.	Approved: During warranty – downtime Online support within 24 Hours. Technician/Engineer visit- within 72 hours.
	Qualification Criteria - Supply of similar equipment.	NU Instruments only have one IRMS system in India. However, we can provide Global users list and relevant performance certificate for the same.	Kindly change the same to include this.	It has been revised to "A complete list of users in India or abroad who operate similar instruments, along with their contact details (including email addresses), must be provided."
	Qualification Criteria	Nu Instruments will be quoting for the complete imported IRMS system from UK, while JCS-Hyderabad will quote for Local supplies such as gas cylinders, laminar flow, oven, alarms, tables, LN2 dewar, etc from India. Kindly allow quoting in multi-currency for this reason. As such two purchase orders will need to be placed.	Kindly change the same to include this.	The bidder may submit a bid in multiple currencies. IITM will issue the POs to the successful bidder through the appropriate mode as per the procedure.

Response to queries by Elementar India Ltd.

Sr. No.	Tender Specification	Amendment Required	Remarks	TEC recommendation
1.	**Availability of Multi-Currency Quotation Option on Portal** It has been noted that the portal (https://moes.euniwizarde.in) currently reflects the "Multi-Currency Tender" option as "**No".**	As IRMS is a high value instrument, we would like to offer this in foreign currency (Euro) and other indigenous items in Indian Rupee. Therefore, we kindly request you to enable vendors to offer in multicurrency. The price portal should reflect these provisions.		The bidder may submit a bid in multiple currencies. IITM will issue the POs to the successful bidder through the appropriate mode as per the procedure.
2.	**Provision for Quoting Prices for Main Instrument, Indigenous Items, and 5-Year CAMC.**	Since we are still seeking clarifications on tender (through this letter), We have not yet initiated EMD process, which restricts our access to the price-submission section of the portal. We are therefore unable to verify whether separate fields exist for quoting the main instrument, indigenous items, and the 5-year CAMC. We kindly request verification and, if required, the incorporation of appropriate fields on the portal to separately quote these components.		Approved: Since the bidder has not submitted the EMD amount, the required system fields will be available to them once the EMD option is fulfilled.

3	The tender specifies a delivery period of **16 weeks** after receipt of order/establishment of LC and installation within **4 weeks** thereafter.	Considering the complexity of IRMS it goes through rigorous processes during production, testing and calibration. Keeping in view the configuration desired by IITM which required extremely good precisions for carbonates, the testing time further increases to optimize the instrument. Citing this, we kindly request you to amend the delivery period as **"6 months after Receipt of Order/ Establishment of LC and Installation within 4 weeks."**		Approved: Considering the request from majority of the possible vendors, the delivery period revised to 24 weeks.
	Physical Submission of Technical Bid Documents During the pre-bid meeting, the committee clarified that only the EMD (in case of Bank Guarantee) requires physical submission, whereas technical and price bid documents should be submitted online.	We request formal confirmation that no physical copies of the technical or price bids are required apart from the EMD (BG), if applicable.		Since bids are invited through e-procurement portal, no need to submission of physical copy of bid. However, bidder is required to submit physical original copy of EMD instrument, if it is submitted through DD/Banker's cheque/Bank Guarantee/Insurance Bond etc.

	Warranty Requirements for Third-Party Items The tender includes several third-party items such as fume hoods, laboratory ovens, UPS systems, leak detectors, and batteries etc. These items are procured from their respective OEMs and are not manufactured by us.	We request acceptance of these items with their **standard one-year OEM warranty**, and that they be **excluded from CAMC obligations**, as extended warranty or CAMC cannot be provided for such bought-out components.		Fume hoods, laboratory ovens, UPS systems, leak detectors, and batteries may be excluded from the CAMC.
	Precision Specifications for Carbonate Interface Sample Weight: The tender document lists the required sample weight for carbonate analysis as **40–200 µg**, while another section mentions a lower limit of **20 µg**.	It appears there is a typographic mistake. Since this parameter critically affects performance especially for small carbonate samples such as single foraminifera, we request correction of the specification to: **"20–200µg"**, which aligns with industry standards and is supported by multiple vendors.		The revised specification "the system should comply to below external precision 1σ (‰) for 10 continuous runs of 20-200µg carbonate: o δ13C (CO2): ≤ 0.04 ‰ o δ18O (CO2): ≤ 0.08 ‰. The precision for the entire sample range (20-200µg carbonate) mentioned must be demonstrated at the time of installation at IITM."