INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH

PUNE

CLARIFICATION ON TENDER NUMBER - IISER-PUR-0387-15

ITEM DESCRIPTION- PROCUREMENT OF QUADRUPOLE INDUCTIVELY COUPLED PLASMA MASS SPECTROMETER

Refer our Press Tender Notice No.IISER/S&P/05/15 dated 25.8.2015 for procurement of Quadrupole Inductively Coupled Plasma Mass Spectrometer . Tender Reference Number – IISER-PUR-0387-15.

Pre-Bid meeting was held on September 03rd , 2015 at 4.00 PM and minutes of meeting is as under.

At the outset, the Chairman welcomed all the Members and the representative of the Prospective Bidders and briefed in general the scope of the Project and thereafter requested Assistant Registrar (S&P) to brief the vendors on the salient features of the commercial terms and the indenting Officer to read out the clarification sought by the Prospective Bidders and replied thereto as detailed in Annexure -II

The representatives present were satisfied with the replies given and it was informed that the corrections / additons / 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.

The other terms & conditions of the notice issued on our IISER website www.iiserpune.ac .in will remain unchanged. No more correspondence in this regard will be entertained

The meeting ended with vote of thanks to the Chair

Sd/-

3.9.2015 Assistant Registrar (S&P)

ANNEXURE -II

IISER PUNE

PRE-BID CONFERENCE FOR PROCUREMENT OF QUADRUPOLE INDUCTIVELY COUPLED PLASMA MASS SPECTROMETER.

TECHNICAL QUERIES AND CLARIFICATION

TENDER NUMBER - IISER-PUR-0387-15 DATE : 3.9.15

S.No	Query/Clarification Sought	Clarification / Amendment
1	Sample introduction system (serial no 1) - sample introduction kit including spray chamber peltier cooled and PFA nebulizer : we request you to change it to glass/PFA nebulizer	Selected analytical approaches require introduction of HF-dissolved samples to the plasma. Glass nebulizer will not be suitable for these solutions in HF-medium.
2	Ion Focusing system (serial no 4) - Mass cut off facility should be there to remove unwanted polyatomic interferences formed due to free atoms : We request you to change it to system should be capable to remove all polyatomic interferences	Mass cut off facility helps in removing defined masses and hence, minimizes reaction of these masses to form unwanted species. No change is made in this aspect in the specification.
3	Quadrupole assembly (Serial no 5) - Quadrupole mass filter shall preferably of material with excellent coefficient of thermal expansion properties : Please remove this line as different vendor have their own quadrupole MOC as per	Although different vendors use different materials, we prefer these materials, irrespective of its type, to have excellent thermal properties.

	their system design & requirement	
4	Performance specification (Serial no 8) - Oxide ratio (%) CeO/Ce<3% : Please reduce it to 1.5% as with current oxide ratio, sensitivity counts will be misleading Short Term (20 minutes) Stability <2% RSD or better : Please remove the timing as different vendor have different timing to show stability parameter Long Term (2-3 hours) Stability<3% RSD or better: Please remove the timing as different vendor have different timing to show stability parameter	Higher oxide ratios may influence both signal and noise counts. However, to avoid any such misleading count information, the specification defines both sensitivity and background counts for Q-ICPMS. Short and long term stabilities are relative terms and require mentioning precise time to make these terms meaningful. Demonstrating the short-term and long-term stability for the defined time should be a straight-forward exercise for vendors.
5	System controller & operating system (Serial no 9) - Software should be upgradable to advance version at no cost : Kindly change it to "Software quoted should be licensed, full-fledged software will all the advanced features	To appropriately incorporate the suggestion, the relevant text of the specification is now changed to "Software quoted should be licensed, and with all advanced features. The software should also be upgradable to advanced version at no cost"
6	Computer configuration (Serial no 11) - 1TB HDD, Latest Processor, 4 GBRAM, TFT-LED21"Monitor, DVD writer, Optical Mouse, 10 USB port, Keyboard, Serial Port-2, Suitable Licensed Windows 7O/S loaded LaserJet duplex color printer : Please change it to suitable PC and Printer. As the configuration mentioned may vary for different vendors	We understand that different vendors will have different computer configuration; the computer configuration mentioned in the specification represents only the minimum configuration we require for the system.
7	Accessories (Serial no 12) - Gas cylinder for Reaction cell gases -Oxygen, Hydrogen & Ammonia (1 Each), H2/He, He/Ammonia with mixer plumbing : Please change it to Gas cylinders to be provided for the gases required to remove the polyatomic interferences Gas purification panel for Argon, Oxygen , Helium & Hydrogen with appropriate plumbing : Please change it to Gas purification panel for the required gases are to be provided	As per the request, the relevant text has now been appropriately changed to "Gas cylinders to be provided for reaction cell gases required to remove the polyatomic interferences." We require both gas purification panel and appropriate plumbing for these gas supplies.
8	Ion source and RF should be 27 MHz ideal	ICPMS with both 27 MHZ and 40 MHZ RF generators have been successful in measuring isotopes of various elements; hence, no change in this aspect has been made in the specification.

8	Quadrupole Assembly: No stable isotope beyond 254 amu uranium oxide should change to 256 amu	The suggestion is not clear as presented. Assuming that the vendor request for change in mass range, the mass range has now been changed to 5-256 amu.
9	Ion Detector: Today with new technology we have all Digital Detector with 10 order of linear range advantage: - No cross correlation between analogue and digital reversal.	The current specification recognizes the availability of detectors with 10 order magnitude of dynamic range and hence, the required ion detector configuration is a detector assembly with a minimum of 9 order of dynamic range.
10	Accessories: Collision gases He and H are enough for removal of interferences Argon based as well as matrix based Methane and Amonia through relative results in many bi-products H and He have no or very less bi products	The suggestion is not clear as presented. The specification now mentions to provide the required collision and reaction gases for the system.
11	Revised Specification are appended below	

CHAPTER 4

SCHEDULE OF REQUIREMENTS, SPECIFICATIONS & ALLIED TECHNICAL DETAILS

Specifications of Quadrupole Inductively coupled plasma Mass Spectrometer (Q ICP-MS)
Computer Controlled bench top Q-ICPMS for the chemical analyses of geological samples:

1. Sample Introduction system	• Sample introduction kit including spray chamber peltier cooled and PFA Nebulizer • Suitable standard chiller • Appropriate uptake rate to reduce the waste generation
2. Ion Source and RF plasma:	• Minimum 27 MHz computer controlled RF generator operating from 500 to 1600 watts for automatic control of torch ignition, shutdown, and system warm up. • Provision for software controlled alignment of the ICP torch in X, Y & Z directions. System with fully automated features with direct control from software with no mechanical changeover required (e.g. change from normal plasma to cool plasma, auto alignment set up should be required only when changing any sample introduction

	assembly or torch components).
3. Ion Extraction Interface:	• Standard Nickle (Ni) and Platinum (Pt) sample and skimmer cones with suitable orifice diameters to suit all application and to prevent clogging and minimize signal drift.
4. Ion Focusing System:	• Ion focusing system should have efficient mechanism for removing all neutrals and photons from the Ion path. • Cell offering three modes of operation: Standard Mode, Collision Cell Mode with Kinetic Energy Discrimination (KED) and Reaction Cell • Switching of reaction and collision gases will be through software and automated. Unit will have the flexibility of applying both (collision, and reaction) gases using single method for removal of interferences. Mass Cut off facility should be there to remove unwanted polyatomic interferences formed due to free atoms
5.Quadrupole Assembly	• Quadrupole mass filter shall preferably of material with excellent thermal properties • The Mass range should be from 5-256 amu • Minimum scan speed of 3000 amu/s • Mass resolution: 0.3 to 1.0 amu
6.Ion Detector Assembly:	• Simultaneous dual-stage discrete dynode electron multiplier, which allows element concentration calibration over a minimum of 9 order magnitude of dynamic range in a single scan using both analog and pulse ion counting mode, and is protected against overload in both pulse counting and analog counting mode. • Dual-stage detector assembly should come as a standard with the system.
7.Vacuum System:	• Vacuum systems to maintain required pressure levels between the source and analyzer. • In the event of vacuum failure, the entire vacuum system is to be automatically back-filled by inert gas to preserve the cleanliness of the system. • Vacuum: minimum 10^{-5} mbar
8.Performance Specifications	Guaranteed sensitivity specifications will be considered (To be demonstrated during Demo): Typical sensitivity values will not be considered • Sensitivity(MCPS (Million counts per second)/PPM): Minimum 50 MCPS/PPM in all the mass range (Li/Be-In/Y-U/Th/Tl) • Oxide ratio (%) CeO/Ce< 3 % • Background on-mass (cps) No gas <1 cps

	• Short Term (30 minutes) Stability <2% RSD or better • Long Term (2 hours) Stability<3% RSD or better
9.System Controller and Operating System:	• Suitable Data Station with all Software operational controls. • Software should provide comprehensive functionality, simplified auto-tuning, and pre-set of Methods. • Windows-based software with real time monitoring system, routine maintenance alerts, QC checks, scheduler and customizable reporting etc. • Software quoted should be licensed, and with all advanced features. The software should also be upgradable to advanced version at no cost.
10. Upgradeability	System should be future upgradable to LC, GC, IC & LA.
11.ComputerConfiguration:	Branded state of the art desktop Personal Computer having minimum configuration: • 1TB HDD, Latest Processor, 4 GBRAM, TFT-LED21"Monitor, DVD writer, Optical Mouse, 10 USB port, Keyboard, Serial Port-2, Suitable Licensed Windows 7O/S loaded • LaserJet duplex color printer
12.Accessories:	• Spare PFA nebulizer • Auto-sampler of more than 300 samples capacity • Fume hood for ICPMS with appropriate plumbing • Argon Gas Cyllinders-8 • Gas cylinder to be provided for collision and reaction cell gases required to remove the polyatomic interferences • 2 stage Gas pressure regulators for each cylinder • Gas purification panel for all gases with appropriate plumbing • Sample introduction kit for direct injection of HF solutions
13. Warranty	3 Years comprehensive warranty to be offered as standard and should be included in the main configuration.
14. Training	Vendors to provide 3-day application training at our site.
15. References	Should furnish user's list for last 3 years with contact details.

ANNEXURE -III

IISER PUNE

PRE-BID CONFERENCE FOR PROCUREMENT OF QUADRUPOLE INDUCTIVELY COUPLED PLASMA MASS SPECTROMETER.

COMMERCIAL QUERIES AND CLARIFICATION

TENDER NUMBER - IISER-PUR-0387-15 DATE : 3.9.15

S.No	Query/Clarification Sought	Clarification / Amendment
	----------NIL----------	----------NIL----------