NATIONAL CENTRE FOR EARTH SCIENCE STUDIES
P.B. No. 7250, MEDICAL COLLEGE P.O., AKKULAM, THIRUVANANTHAPURAM-695 011, INDIA
Tel: 91-471-2511531 *Fax: 91-471-2442280* e-mail: cesspurchase@gmail.com / purchase.ncess@nic.in

CORRIGENDUM No. 1

dt. 23/06/2026

Tender No. : PUR-PROC/191/2025-PUR-NCESS dt. 15-05-2026

Description of stores : **Laser Ablation Triple Quadrupole ICP-MS (LA-QQQ-ICPMS) - 1 No**

The following technical specifications are added to the tender as per the pre-bid meeting held on - 18-05-2026.

SL. No	Tender specifications		Modified specifications
1	Sample Introduction System	Peltier-cooled spray chamber (-10°C to +20°C) or suitable range to cover all applications and solvents.	Peltier-cooled spray chamber (-5°C to +20°C) or suitable range to cover all applications and solvents.
4	Plasma source	The ICP source should have an RF generator operating at a minimum frequency of 27 MHz and an output of 1.5 KW or more.	The ICP source should have an RF generator operating at a minimum frequency of 27 MHz or higher and an output of 1.5 KW or more.
5	ICP interface and extraction lenses	The ICP system must have a single/universal cone interface to achieve all instrument guaranteed performance specifications without any manual intervention or changeover The ICP interface must consist of standard sampler and skimmer cones. The cone should provide long-term stability and should be resistant to clogging. The interface must be water-cooled with high-efficiency ion extraction optics. High purity, high efficiency graphite/stainless steel extraction lenses should be provided for optimum beam conditioning, high ion transmission and low mass bias. Three sets of platinum and skimmer cones should be supplied. Four additional sets nickel sample	The ICP system must have a single/universal cone interface to achieve all instrument guaranteed performance specifications without any manual intervention or changeover The ICP interface must consist of standard sampler and skimmer cones. The cone should provide long-term stability and should be resistant to clogging. The interface must be water-cooled with high-efficiency ion extraction optics. High purity, high efficiency graphite/stainless steel extraction lenses should be provided for optimum beam conditioning, high ion transmission and low mass bias. Suitably designed ion lens to provide high ion transmission and low backgrounds.

		and skimmer cones should be supplied. Suitably designed ion lens to provide high ion transmission and low backgrounds.	
6	Collision/Reaction Cell	Minimum Three separate reaction gas channels for suitable reaction gas/gases (oxygen, ammonia, helium, hydrogen, methane)in pure or premix form should be offered for contamination free ultra-trace analysis.	Minimum three separate reaction gas channels for suitable reaction gas/gases (Oxygen, Ammonia, Helium, Hydrogen, Methane) in pure or premix form should be offered for contamination free ultra trace analysis. The Cell should be corrosion resistant.
7	Mass analyzer system	Quadrupole-based, RF 2.5 MHz or higher. Mass scan speed (Q1 & Q3): 5000 amu/s or better for ^{7}Li to ^{238}U along with 40 intervening masses.	Quadrupole-based, RF 2.0 MHz or higher. Mass scan speed (Ql & Q3): 3700 amu/s or better for ^{7}Li to ^{238}U along with 40 intervening masses.
8	Detection system	Mass range: 5-260 amu Detection Limits (ppt): Low mass: ≤0.2 or better; Mid mass: ≤0.05 or better; High Mass: ≤0.05 or better Sensitivity (Mcps/ppm): Low mass: ≥190; Mid Mass: ≥650; High Mass: ≥390. Background (no gas mode): ≤0.5 cps or better in no gas mode Oxide ratio (CeO^{+}/Ce^{+}): ≤3% or better	Mass Range: 5-260 amu or better for both Q1 & Q3 Detection limits (ppt): Low mass: ≤0.5 or better Mid mass: ≤0.1 or better High mass: ≤0.1 or better Sensitivity (Mcps/ppm): Low mass ≥ 65 Mid Mass: ≥ 400 High Mass: ≥ 300 Background (No gas mode): ≤5.0 cps or better in no gas mode Oxide ratio (CeO^{+}/Ce^{+}): ≤2% or better
OTHER			
23	Training	Advanced hands-on Factory training (5 working days) for laboratory personnel for the QQQ-ICPMS and 193 nm Laser after installation must be provided.	Advanced hands-on Factory training for 5 working days (complete expense towards Travel, stay and training cost should be borne by the vendor) for laboratory personnel (for two person) for the QQQ-ICPMS after installation. Training must be provided at Vendor's Instrument manufacturing facility.
24	Manuals	A complete set of operation and maintenance modules and circuit diagrams, covering instrument and software operation, instrument maintenance and fault diagnostics should be provided in hard copy as well as in CD along with the QQQ-ICPMS and LA system.	A complete set of operation and maintenance modules covering instrument and software operation, instrument maintenance and fault diagnostics should be provided in hard copy as well as in CD along with the QQQ-ICPMS and LA system.

25	Installation, warranty and maintenance	Additional quote for comprehensive on-site maintenance for the QQQ-ICPMS and LA system and their sub systems, including spares and consumables after the warranty period should be provided for three years.	Additional quote for comprehensive on-site maintenance for the QQQ-ICPMS and LA system and their subsystems including spares and consumables after the warranty period should be provided for three years (Minimum one preventive maintenance visit per year).
26	Supply of standards/ reference materials/ tool kits	A full kit that includes all the necessary tools for the installation and maintenance of the QQQ-ICPMS & LA system should be provided. In addition to the standards/reference materials necessary for installation and testing, the following standards should be provided. 91500 and Plesovice Zircon standards SRM NIST 610, 612, 614, 616 glass reference materials USGS BIR-1g, BCR-2g, BHVO-2g, GSC-2g, GSD-2g and GSE-2g glass reference materials Tuning and optimization solutions Certified multi-element solutions	A full kit that includes all the necessary tools for the installation and maintenance of the QQQ-ICPMS & LA system should be provided. In addition to the standards/reference materials necessary for installation and testing, the following standards should be provided. 91500 and Plesovice Zircon standards SRM NIST 610, 612, 614, 616 glass reference materials Additional consumables to be supplied, Ni sampler, skimmer and hyper skimmers cone (04 sets) Pt sampler, skimmer and hyper skimmers cone (03 sets) Standard torch – 03 Set Skimmer base for Pt cone – 02 Set Each Bonnet – 2 Routine LA consumables for 2 years of operation. Tuning and optimization solutions Certified multi-element solutions
27	Other items	UPS: 60 KVA three-phase UPS, from reliable and reputed bands/manufacturers with automatic correction for phase reversal should be quoted. Two years warranty for UPS should be provided.	UPS: 60 KVA three-phase (minimum 1 hour back-up) UPS from reliable and reputed brands/ Manufacturers with automatic correction for phase reversal should be quoted. Two years warranty for UPS should be provided. Additional three-year CMC should be also included.

28	Other Conditions	List of earth science laboratories in India and/or abroad must be provided with contact details of the person-in-charge, model, and date of installation of similar models.	A list of at least five reputed Earth Science laboratories in India and abroad (five each) currently utilizing the quoted model QQQ-ICPMS for isotope geochemistry and geochronology applications shall be provided. The list must include the laboratory name, contact details of the person-in-charge, instrument model, year of installation, and representative peer-reviewed publications demonstrating the instrument's successful application in isotope geochemistry and geochronology.

There is no change in other terms and conditions.

Yours sincerely,

Sd/-
Deputy Manager