



NATIONAL CENTRE FOR EARTH SCIENCE STUDIES

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CORRIGENDUM No.1

dt 15/04/2024

Tender No. : PUR-PROC/101a/2022-PUR-NCESS dt 26.03.2024

Description of stores : **Microwave Digestion System with accessories - 1 No**

The following changes are made in the technical specifications in the tender.

	FOR	READ
A	General Specification:	General Specification:
	Microwave Accelerated Reaction System for digesting samples including rock, sediment, soil, and weathered material using high concentration acids including the HF.	Microwave Accelerated Reaction System for digesting samples including rock, sediment, soil, and weathered material using high concentration acids including the HF.
	Microwave accelerated reaction system with magnetrons technology for general chemical laboratory sample preparation procedures. It shall consist of LCD display touch screen having corrosion resistant exhaust system, solid steel door with safety latch, high temperature resisted fluoropolymer coated cavity, compatible with USB and Ethernet connections, sufficient micro-SD RAM for storing the methods and results. The item also should have default pre-programmed one touch methods with controllable options and should be supplied with all the necessary accessories including power cord, wires, Porcelain-fused-to-metal (PFM) vessels, etc. The equipment shall be installed at specified site at NCESS, and necessary training for routine operation and maintenance shall be provided.	Microwave accelerated reaction system with magnetrons technology for general chemical laboratory sample preparation procedures. It shall consist of LCD display touch screen having corrosion resistant exhaust system, solid steel door with safety latch, high temperature resisted fluoropolymer coated cavity, compatible with USB and Ethernet connections, sufficient micro-SD RAM for storing the methods and results. The item also should have default pre-programmed one touch methods with controllable options and should be supplied with all the necessary accessories including power cord, wires, Porcelain-fused-to- metal (PFM) or TFM vessels, etc. The equipment shall be installed at specified site at NCESS, and necessary training for routine operation and maintenance shall be provided.
B	Detailed Specification of Microwave Digestion System with Accessories:	Detailed Specification of Microwave Digestion System with Accessories:
1	Magnetron Power: Microwave heating system must have a measured delivered output power of 1800 wattswith dual magnetron system.	Magnetron Power: Microwave heating system must have a measured delivered output power of 1800 watts with dual magnetron system.
2	Control: System must have a built-in operating system with touch screen controller and facility for connecting external mouse and external alphanumeric keypad for entry of operating parameters and sample identification. System must operate stand alone and must not require the use of any external computer for operation. System software must automatically adjust the power delivery based upon number of vessels, type of vessels and type of samples in a single touch operation.	Control: System must have a built-in operating system with touch screencontroller and facility for connecting external mouse and external alphanumeric keypad for entry of operating parameters and sample identification. System must operate stand alone and must not require the use of any external computer for operation. System software must automatically adjust the power delivery based upon number of vessels, type of vessels and type of samples in a single touch operation.

3	System must be capable of processing up to 16 high pressure (800 psig) vessels simultaneously. Vessels must be able to be individually loaded and removed from the microwave for ease of handling and without requirement to remove the whole turntable. Microwave digestion vessels must be vent-able	System must be capable of processing up to 15 high pressure (800 psig) or more vessels simultaneously. Vessels must be able to be individually loaded and removed from the microwave for ease of handling and without requirement to remove the whole turntable. Microwave digestion vessels must be vent-able
	No of vessels: - 16 Nos of Porcelain-fused-to-metal (PFM) type	No of vessels: - 15 Nos or more of Porcelain-fused-to-metal (PFM) or TFM type
	Temp that vessel should withstand: 260 Deg C or more	Temp that vessel should withstand: 260 Deg C or more
	Pressure capacity: 800 PSI or more	Pressure capacity: 800 PSI or more
	MOC: TFM	MOC: TFM
	Volume: 110 ml or more	
4	System must be equipped with a non-metallic temperature control device that will accurately measure and control the temperature inside the control vessel. Temperature control system must have floor mounted contact less (Non-IR) in-situ temperature sensor with LET Technology. The temperature control option must provide direct internal temperature control of applications and includes all on-board instrument electronics allowing full monitoring of vessels up to 260 deg C or more.	System must be equipped with a non-metallic temperature control device that will accurately measure and control the temperature inside the control vessel. Temperature control system must have floor mounted contact less in-situ temperature sensor with LET or IR Technology. The temperature control option must provide direct internal temperature control of applications and includes all on-board instrument electronics allowing full monitoring of vessels up to 260 deg C or more.
5	The system must be equipped with an easily detachable and re-attachable solvent Detection system for extraction.	The system must be equipped with an easily detachable and re- attachable solvent Detection system for extraction.
6	System must have a device to protect the magnetron from back-reflected energy. To ensure even heating it must be located external to the cavity. For Microwave Absorbing only Isolator should be provided and no other devices in the cavity are acceptable.	System must have a device to protect the magnetron from back-reflected energy. To ensure even heating it must be located external to the cavity. Microwave Absorbing media , or Isolator should be provided and no other devices in the cavity are acceptable.
7	System should have either camera or glass window to see through inside cavity while digestion run is ongoing	System should have either camera or glass window to see through inside cavity while digestion run is ongoing

There is no change in other terms and conditions.

Yours sincerely,

Sd/-

Deputy Manager