



सी एस आई आर -राष्ट्रीय पर्यावरण अभियांत्रिकी अनुसंधान संस्थान

CSIR- National Environmental Engineering Research Institute

नेहरु मार्ग, नागपुर ४४००२०, भारत

Nehru Marg, Nagpur – 440 020 (M.S.), India

टेलीफोन Telephone 0712-2249992,2249746,2226705

ईमेल Email:- spo@neeri.res.in, st_pur@neeri.res.in

वैबसाइट Website: www.neeri.res.in



CORRIGENDUM

PUR-85/EP/seaf/2022-23

Date: 03.10.2022

After the Pre-Bid meeting held on 30.09.2022, Technical specifications of **Microwave Digestion System** is amended and revised specification is as per Annexure-A.

Qualification criteria, Terms & Conditions, Bid submission end date and Bid opening date will remain same.

भंडार एवं क्रय अधिकारी
Stores & Purchase Officer

Revised Technical Specification for Microwave Digestion System.**Subject: Revised Technical Specification for the Purchase of Microwave Digestion System**

Supply, installation, demonstration and testing of Front loaded table top Microwave Digestion System with all required accessories and operating software

- 1. MICROWAVE DIGESTION SYSTEM (FRONT LOADED FOR SAFETY ISSUES with SS solid door)** with 24 Nos. vessel rotors for quick dissolution of various environmental samples without loss of heavy metals from sample solution. Rotor should be upgradable.

The system should allow pressurized reaction with user selection of continuous or pulsed microwave reaction.

The system should have metal body and should have solid steel door for safety.

- 2. MAGNETRON:**

The microwave system should have dual Magnetron system with good diffuser for homogenous microwave power distribution in the cavity. Microwave frequency should be 2455 MHz and installed power should be minimum 1800 W (two magnetrons minimum 900W each). The delivered / output power should be controllable via microprocessor +/- 1W increments. There should be provision for protection from reflected microwave energy. The microwave delivery should be selective pulsed or unpulsed depending upon the user.

- 3. CAVITY:**

The cavity should be made of stainless-steel housing with PTFE plasma coating for corrosion resistance. Also, all hardware should have protective coating for the resistance from acid. The microwave cavity should be designed for volume of around 50 litre or more. There should be provision of door lock so that it cannot be opened automatically if the temperature inside the vessel is not safe.

- 4. SAFETY:**

Interlocks: The system should have good interlocking system for safety and cavity door should have 3 or more safety interlocks.

The system door should have interlock so that unless inside vessel temperature is below 50 °C door should not open automatically.

Vessels: Vessels offered should have venting technology in case of excess pressure development.

Safety Certification: The system should be certified by necessary safety authority for safe operations by any international agencies.

5. EXHAUST:

The system should have inbuilt exhaust system to cool the vessels and to drive away if any fumes in the cavity and it should cover under three year warranty.

6. VESSELS:

The system should be high throughput which can hold at least 24 Nos. The material of construction should be high purity TFM fluoropolymer. Vessel volume should be about 80 ml or more and it should be designed for maximum temperature capacity upto 250°C and maximum pressure 80 to 100 Bar.

7. SENSORS:

The system should have IR temp sensor for each vessel temp. controlling and monitoring and contactless pressure sensor or accurate pressure controlling mechanism for all vessels should be offered with the system.

8. CONTROLLER:

System should be controlled by touchscreen display.

9. POWER:

Power requirement: 230V, 50 Hz

10. WARRANTY:

One Year Standard Warranty + 2 years additional warranty