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INSTRUMENT STANDARD OPERATING PROCEDURE MANUAL

College of Medicine



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Document History

Document Section	Details of Amendments	Date	Modified by (Initials)
SOP	First Draft on SOP for the operation of microwave systems Digestion CEM mars6		

1. OBJECTIVE

The document describes the operation of microwave systems Digestion

2. SCOPE

Acid digestion is vital for the preparation of samples for elemental analysis by ICP, ICP-MS or AA spectroscopy. Traditional acid digestion techniques using a hot plate are time consuming and often provide incomplete digestion. In addition, due to the acid fumes released from open vessels, this technique causes unnecessary corrosion and hazardous working environments.

3. RESPONSIBILITIES

- ☐ It is the responsibility of designated personnel in the lab to train staff and students on this procedure and to ensure adherence to this procedure under supervision.
- ☐ It is the responsibility of designated personnel (staff or Student) to follow the instructions of this procedure under supervision.

4. REFERENCES

- ☐ <https://cem.com/mars-6/>

5. DEFINITIONS

- ☐ CEM MARS6

6. SAFETY PRECAUTIONS

- ☐ By careful handling use concentrated acid.
- ☐ High pressure
- ☐ Used in Fume hood

7. PROCEDURE FOR OPERATING microwave systems Digestion CEM mars6

7.1. Turning on the instrument:

- ☐ Insert plug in electric
- ☐ On fume hood (vacuum air)
- ☐ Bring acid (nitric acid 70%)

7.2. Software Operation.

One touch Mars6

7.3. Steps of the Procedure

- ☐ Weigh sample then transfer to Teflon vial
- ☐ Add acid
- ☐ Close vial
- ☐ Put rack in microwave
- ☐ Select method OR new method
- ☐ Then touch run icon
- ☐ Wait finish then cooled

7.4. Turning off the Instrument

- ☐ Remove rack
- ☐ Turn off
- ☐ Off fume hood

7.5. Warning

Concentrated acid under high pressure.

