

Mars 6TM Method Note

Microwave Digestion of US EPA 3051 (Solid Sample)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture before closing the vessel.

Notes

Recommended Equipment	Recommended Vessels	Reagents	Reagents	
MARS 6 MARS 6 iWave	EasyPrep Plus MARSXpress	HNO₃ HCl (Optional)		
	MARSXpress Plus			

Max Sample WeightSample TypeControl TypeMethod Type0.5 gSolidStandard ControlOne Touch

Heating Progra	am					
Stage	Temp (°C)	*Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	175	5:30	4:30	800	900-1050	Off

^{*} Ramp times and power may vary depending on the type and number of vessels.

Results

This method is intended to be an acid leach, not a total digest. Hydrofluoric acid will be required to provide complete digestion of the sample matrix. (See method 3052 for total digestion).

General Precaution

- a) This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- b) If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- c) The control / reference vessel must contain the largest and most reactive sample.
- d) Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- e) If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.