



MARS 6™

Method Note

Microwave Digestion of Sn - Ag Solder

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Slowly add dropwise 10 mL of 1:1:1 H₂O:HNO₃:HF (premixed) to the sample. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

Caution must be taken when adding the acid solution to the sample as the reaction is very vigorous and exothermic.

Allow any initial reaction to subside before sealing the vessel.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
MARSXpress
MARSXpress Plus

Reagents

H₂O
HNO₃
HF

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	*Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	180	15:00	10:00	800	900-1050	Off

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

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precaution

- 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.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- 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.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.