

Microwave Digestion of Carbonyl Iron

Procedure

Weigh 0.2 g of the sample into the digestion vessel. Add 6 mL HNO₃, 2 mL HCl, and 1 mL HBF₄ slowly. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

This application can only be run in the iPrep vessel.

The addition of Conc. HCl (0-4 mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes.

Recommended Equipment	Recommended Vessels	Reagents
MARS 6 iWave	iPrep	HNO ₃ HCI HBF ₄

Max Sample Weight	Sample Type	Control Type	Method Type
0.2 g	Organic	Ramp to Temperature	One Touch

Heating Program							
Stage	Temp (°C)	*Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring	
1	210	30:00	20:00	N/A	700-1800	Off	

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

Results

Sample was clear, yellow in color with no visible particles upon dilution to 50 mL.

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) 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.
- d) If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.