



Procedure

Allow vessel to cool. To the TFM liner that contains the sample and acid, add H_3BO_3 [Solid (s) or 4% (w/v)] as recommended by the chemistry guidelines below. Ensure the max vessel volume of 30 mL is not exceeded. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel with a new cap.

To determine the amount of H_3BO_3 (s or 4% w/v) needed, refer to our chemistry guidelines:

- If using 4% w/v H_3BO_3 , add up to 10 mL for every 1 mL of HF used
- If using Solid H_3BO_3 , add up to 0.5 g for every 1 mL of HF used. Additionally, add at least 4 mL of DI H_2O for each 0.5 g of H_3BO_3 (s) used.

Notes

This procedure can be used if it is necessary to complex the residual Hydrofluoric Acid (HF) or re-dissolve insoluble fluorides formed by reaction of certain analytes with hydrofluoric acid.

The total volume of the vessel including the boric acid solution should not exceed 30 mL.

If an application-specific neutralization method is needed, please contact CEM.

Recommended Equipment

BLADE

Recommended Vessels

QVL

Vent Profile

Inorganic (QVL)

Max Sample Weight

Varies

Reagents

H_3BO_3 (4%)

Heating Program

Stage	Temp (°C)	Pressure (psi)	Stirring	Ramp (mm:ss)	Hold (mm:ss)
1	160	400	Medium	4:00	2:00

Results

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

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 for your sample. Refer to the BLADE Manual for how to perform a digestion.
- Hydrochloric Acid (HCl) is appropriate for the stabilization of some elements in solution.
- If using Hydrofluoric Acid (HF), please refer to the HF Addendum in the BLADE Manual.
- If using a Quartz Vessel Liner (QVL), please refer to the BLADE Manual for operation.
- Manual venting of CEM vessels should be performed when wearing appropriate PPE and when the vessel contents are at or below room temperature to avoid for potential of chemical burns.
- Always uncap vessels while vessel opening is pointed away from the operator.