



## Soil

---

Microwave Sample Preparation Note: XprEN-8  
Category: Environmental

---

Rev. Date: 6/04

**Sample Type:** Soil  
**Application Type:** Acid Digestion  
**Vessel Type:** 55 mL  
**Number of Vessels:** 40  
**Reagents:** Aqua Regia (3:1 Hydrochloric Acid:Nitric Acid)  
**Method Sample Type:** Organic  
**Sample Weight:** 2 grams

### Step 1:

<u>Acid Type</u>	<u>Volume</u>
Aqua Regia	12 mL

### Heating Program: Ramp to Temperature Control

Stage	Max. Power	% Power	Ramp (min.)	Pressure (psi)	Temperature (°C)	Hold (min.)
(1)	1200 W	100	10:00	-	160	15:00

**NOTE A:** This procedure is a reference point for sample digestion using the CEM Microwave Sample Preparation System and may need to be modified or changed to obtain the required results on your sample.

**NOTE B:** Manual venting of CEM closed vessels should only be performed when wearing hand, eye and body protection and only 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 and toward the back of a fume hood.

**NOTE C:** Power should be adjusted up or down with respect to the number of vessels. General guidelines are as follows: 8-12 vessels (50% power), 13-20 vessels (75% power), >20 vessels (100% power).

**NOTE D:** "Organic Method Sample Type" should be used for most sample types. Choose "Inorganic" for samples with more than 1 gram of solid material remaining at the bottom of the vessel at the end of the digest (ex. leach methods). Choose "Water" for samples that are largely aqueous prior to digestion.