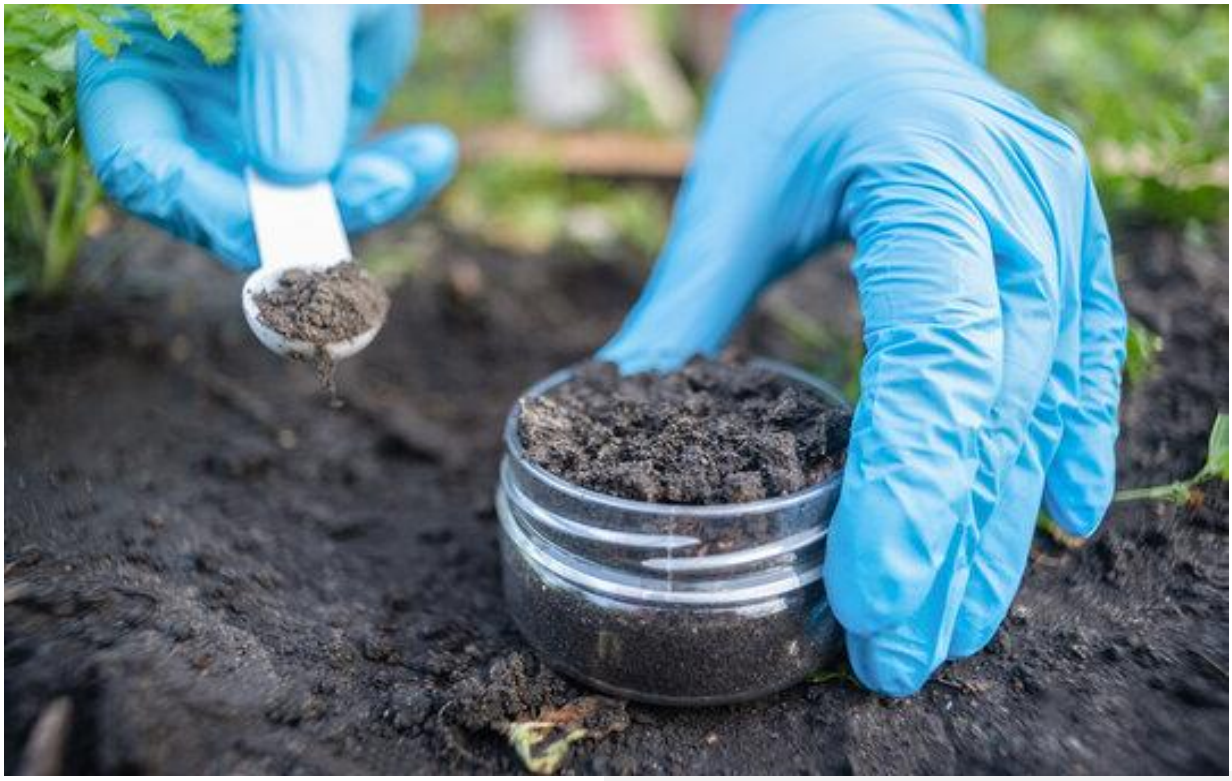
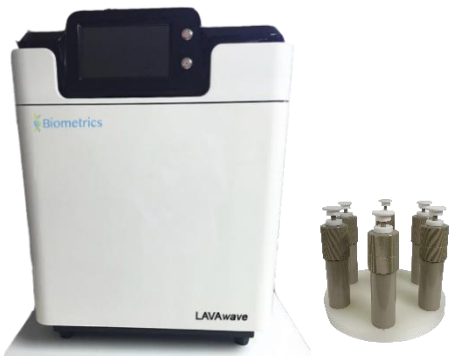
LAVA*wave* Application Note



Digestion of soil Sample

- Instrument

The measurement is performed using the LAVA*wave* LV-12



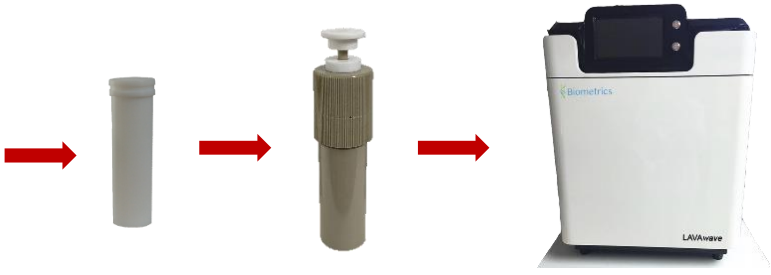
- Samples and reagents

Soil Sample: 0.2 g
Reagent : Conc. HNO_3 6.0 mL
Conc. HCL 2.0 mL
Conc. HF 2.0 mL

- Method Procedure

Weigh 0.2 g of the samples into the inner vessels added 6.0 mL(HNO_3) 2.0 mL (HCL) and 2.0 mL (HF) and then swirl the mixture and placed in a fume hood until vapor from reaction disappears. The inner vessels were closed and put into the outer vessels and sealed. After that placed the vessels into the microwave equipment and set the temperature and pressure program as below:

- Soil sample 0.2 g
- HNO_3 6.0 mL
- HCL 2.0 mL
- HF 2.0 mL

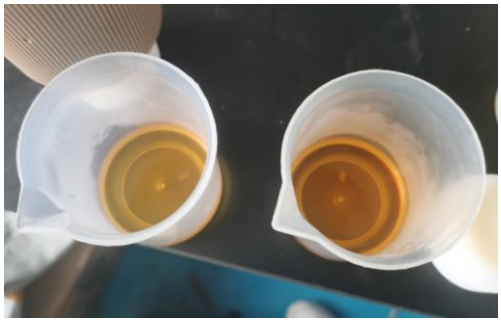


- Program setting

Step	Pressure (Bar)	Temperature (°C)	Power (W)	Heat Time (s)	Hold Time (s)
1	15	100	1000	300	60
2	25	140	1000	240	60
3	30	170	1000	180	120
4	40	195	1000	180	1200

- Result

The digestion solution transformed into a light-yellow transparent solution after digestion.



After digestion

The LAVAwave is a good choice for environmental sample digestion because it provides complete digestion, low reagent consumption, and fast operation. Furthermore, it can be used with a wide range of environmental samples, including sludges, sewage, clay, sediment, and so on.

"Safety is a part science"

Lab operator must wear safety goggles, face mask, gloves and body protection at all times.