



Systems

PHOENIX AIRWAVE

Equipment

Analytical Balance
Disposable Pipette
Tongs
Gloves
Desiccator
100 mL Porcelain Crucibles
H₂SO₄

Sample Preparation

None.

Procedure

1. Program Phoenix Airwave using parameters located in "Parameters" section and allow furnace to reach set temperature.
2. Weigh a crucible that has been preashed for a least 10 minutes at set temperature and record weight.
3. Weigh up to 50 grams of sample and record weight.
4. With the furnace temperature at 100°C or less, place crucible in furnace and ash until the hold phase at end of stage 2.
5. Remove sample, allow to cool sufficiently and wet sample with a small amount of H₂SO₄.
6. Place crucible back in furnace and ash for designated dwell time in stage 3.
7. Remove crucible, allow to cool in dessicator and reweigh recording weight.
8. Calculate percent ash:

$(\text{Weight of Ashed Sample With Crucible} - \text{Weight of Crucible}) / \text{Weight of Sample} \times 100$

Parameters

Stage	Dwell Time (minutes)	Temperature (°C)	Sample Size (g)
1	20 (20 min ramp)	250	50
2	30 (30 min ramp) then Hold	600	-
3	30	600	-

Notes

Note 1: Never place samples into the furnace chamber when the temperature is above 100°C or the ignition point of the product being ashed, whichever is the lowest.

*The above parameters are suggested starting points and may need to be modified to meet certain product specifications.