

Ashing samples

Soil and plant samples are dried, ground and sieved prior to analysis.

- Soil samples are dried at 70°C in the oven. The dried soil is ground in a mechanical mortar and pestle and passed through a 2 mm screen.
- Plant samples are dried at 70 °C and ground to pass through a 1 mm screen.

The following method covers the determination of ash from soil, plant and waste samples.

1. Tare a porcelain crucible on the analytical balance.
2. Add approximately 0.25 g soil, plant or tissue material to the crucible. Record the exact weight of the plant tissue.
3. Transfer the crucible(s) to the muffle furnace.
4. Heat at 450 C for at least two hours.
5. Turn of the muffle furnace and allow the furnace to cool to room temperature
6. Add 2 mL of 2.5 M HCl to the ash in the crucibles.
7. Heat the crucibles + acid on the hot plate until they start to steam. Then remove them and allow them to cool.
8. Quantitatively transfer the contents of each crucible into a 25 mL volumetric fask; i.e., use several rinses with deionized water to flush the contents of the crucible into a volumetric flask. Bring each flask to volume with deionized water. Cover the mouth of the flask with parafilm and mix the contents by invertiing the flask 3 times.
9. Use small funnels and folded filter paper to filter the contents of each 25-mL volumetric flask into large test tubes. Put the solution in refrigerator.