Effect of temperature on distribution coefficient for Zn^{2+}

Teacher and technician sheet

This practical applies the analysis of zinc using zincon (see *Zinc by zincon assay*).

Equipment and materials

Each student or pair of students will require:

- Soil (0.1 g)
- Electronic balance
- Boiling tube x 3
- 5 cm^3 pipette
- 1 cm^3 pipette
- Hot water baths x 3
- −10 – 110°C thermometer
- Filter funnel and filter paper
- Zinc sulfate solution containing 0.01 g dm^{-3} Zn^{2+} (10 ppm) (15 cm^3)
- Equipment and materials for zincon assay (see *Zinc by zincon assay*)

Make sure students wear eye protection. Zinc sulfate-7-water, $ZnSO_4.7H_2O$ is corrosive and harmful. Goggles are required for the preparation of the solution. Avoid inhalation of dust or spores from very dry soil/compost.

Solution preparation

- Zinc sulfate solution: Weigh out 0.0439 g zinc sulfate-7-water, $ZnSO_4.7H_2O$, dissolve in deionised water and make up to 1 dm^3.