Soil/water 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
- 5 cm$^3$ pipette or burette
- −10 – 110°C thermometer
- Filter funnel and filter paper
- Narrow range pH indicator paper
- Zinc sulfate solution containing 0.01 g dm$^{-3}$ Zn$^{2+}$ (10 ppm) (5 cm$^3$)
- Equipment and materials for zincon assay (see Zinc by zincon assay)

Make sure that students wear eye protection. Zinc sulfate-7-water, ZnSO$_4$.7H$_2$O 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$_2$O, dissolve in deionised water and make up to 1 dm$^3$. 