

Preparation of copper(II) ethanoate

Teacher and technician sheet

Equipment and materials

Each student or pair of students will require:

- Weighing bottle (or small beaker)
- 100 cm³ beaker
- Bunsen burner, tripod and gauze
- 25 cm³ measuring cylinder
- Hot water bath
- Filter funnel and filter paper
- Thermometer (0 – 110 °C)
- Evaporating basin
- Spatula
- Sample bottle
- 1 mol dm⁻³ ethanoic acid
- Basic copper(II) carbonate

The hot water can be simply a beaker of water kept at about 60 °C. The evaporating basin needs to be large enough to sit comfortably on the top of the beaker.

Make sure students wear eye protection. Basic copper(II) carbonate is harmful if swallowed. Copper(II) ethanoate is harmful if swallowed, may cause serious damage to eyes and is very toxic to aquatic organisms.

Further suggestions

Students could

- find out about the structure and properties of copper(II) ethanoate-1-water;
- contrast the two preparative methods and suggest which is better;
- test the effectiveness of their product as a fertiliser;
- find out about other uses of copper(II) ethanoate-1-water.