

Preparation of copper(II) citrate

Teacher and technician sheet

Making copper(II) citrate from copper(II) sulfate

Equipment and materials

Each student or pair of students will require:

- Weighing bottle (or small beaker)
- 100 cm³ conical flask (2)
- Suction filtration apparatus and filter paper
- Sample bottle
- Trisodium citrate-2-water
- Copper(II) sulfate-5-water

Make sure students wear eye protection. Copper(II) sulfate is harmful if swallowed, is irritating to the eyes and skin and is very toxic to aquatic organisms.

Making copper(II) citrate from copper(II) ethanoate

Equipment and materials

Each student or pair of students will require:

- Weighing bottle (or small beaker) (2)
- 100 cm³ conical flask (2)
- Suction filtration apparatus and filter paper
- Sample bottle
- Citric acid monohydrate
- Copper(II) ethanoate-1-water

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

Further suggestions

Student could

- find out about the structure and properties of copper(II) citrate-5-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) citrate-5-water.