

Synthesis of *cis*- and *trans*-copper(II) aminoethanoate

Teacher and technician sheet

Equipment and materials

Each student or pair of students will require:

- Hot water bath or electric heating mantle
- 25 cm³ measuring cylinder
- 2 x 100 cm³ conical flasks
- 2 x 250 cm³ conical flasks
- Waterbath
- -10 – 110 °C thermometer
- Filter funnel and fluted filter paper
- Watch glass (2)
- 50 cm³ round-bottom flask (Quickfit)
- Condenser (Quickfit) to fit the 50 cm³ round-bottom flask
- Bunsen Burner, tripod and gauze
- Sample tube (2)
- Ethanol
- Copper(II) ethanoate-1-water
- Glycine
- Ice

Make sure students wear eye protection. Copper(II) ethanoate-1-water is harmful and an irritant. Ethanol is flammable. Work away from naked flames. As industrial denatured alcohol or ethanol formulated with methanol (IDA/IMS – industrial methylated spirits) is being used, there may be toxicity issues from methanol (or other adulterants) so work in a well-ventilated lab.