

## Preparation of magnesium sulfate

### Teacher and technician sheet

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#### Equipment and materials

Each student or pair of students will require:

- Weighing bottle (or small beaker)
- Balance
- Evaporating basin
- 250 cm<sup>3</sup> beaker
- Bunsen burner, tripod and gauze
- 25 cm<sup>3</sup> measuring cylinder
- Filter funnel and filter paper
- Hot water bath
- Watch glass
- Thermometer (10 – 110 °C)
- Stirring rod
- 250 cm<sup>3</sup> beaker to act as a water bath
- Sample bottle
- Spatula
- 1 mol dm<sup>-3</sup> sulfuric acid, 25 cm<sup>3</sup>
- magnesium oxide, 1.5 g

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 that students wear eye protection. 1 mol dm<sup>-3</sup> sulfuric acid is an irritant.

#### Further suggestions

Students could

- test the effectiveness of their product as a fertiliser
- outline an experiment to obtain magnesium sulfate-7-water crystals directly from magnesite
- find out about other uses of magnesium sulfate.