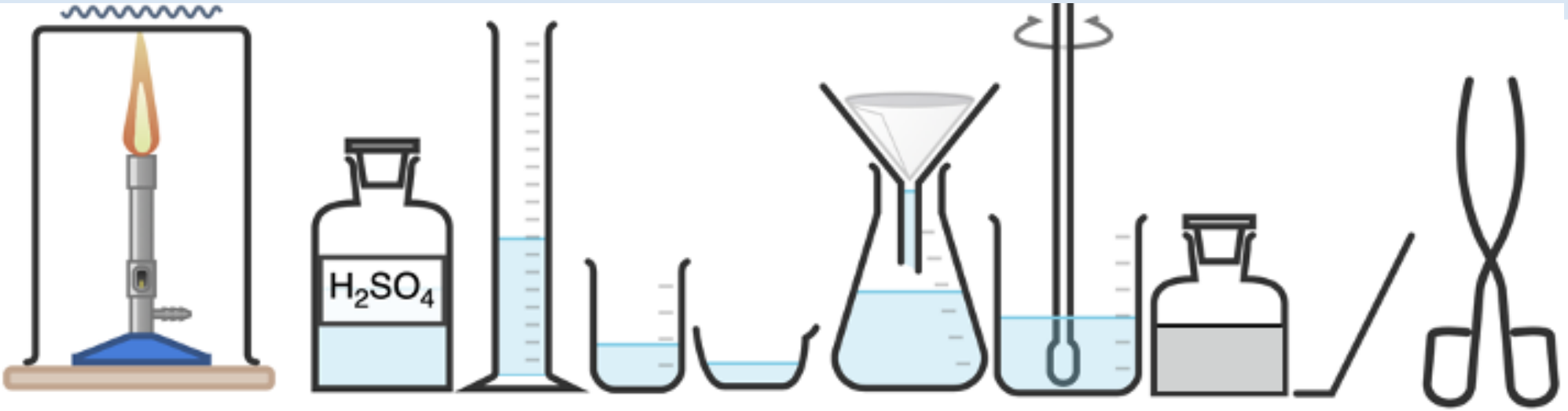
Year 8 Chemistry
Making Salts Practical

Science Mastery

Aim: To prepare a sample of a soluble salt.

Equipment Per Group	Method	Notes and guidance
1M sulfuric acid 50ml Measuring cylinder Magnesium oxide powder Spatula Glass rod 100ml beaker 250ml beaker Bunsen burner Tripod Gauze Heatproof mat Filter funnel and paper 100ml conical flask Tongs Evaporating basin Crystallising dish	1. Add 40ml sulfuric acid to the 100ml beaker. 2. Use the balance to measure 1g of magnesium oxide powder. 3. Use the spatula to add a small amount of the magnesium oxide then stir for 30 seconds. 4. Repeat this until all of the magnesium oxide has been added. 5. Gently heat the beaker on the Bunsen burner. Turn off the Bunsen burner after a minute. 6. Allow the apparatus to cool. 7. Filter the contents of the 100ml beaker with the filter paper and funnel into the conical flask. 8. Transfer the filtrate to the evaporating basin. 9. Add 100ml of water to the 250ml beaker and place this on the tripod. 10. Place the evaporating basin on top of the beaker and heat. 11. When crystals begin to form, switch the Bunsen burner off. 12. Use the tongs to pour the remaining solution into the crystallising dish and leave these in a cool spot for a couple of days.	Ensure you plan the follow-up lesson to be at least two days after the experiment. Discuss this with your technician in advance so they know how long to keep the crystals for.

Set Up:



General Teacher Notes

A risk assessment must be completed for this practical. The risk assessment should be specific to the class involved and written only by the teaching member of staff. For more guidance refer to CLEAPSS.
It is good practice for students to wear safety spectacles during all class practicals and demos.

1 M sulfuric acid is currently classed as a corrosive and irritant hazard. Ensure eye protection is worn at all times. For waste disposal, dilute to 0.1 M or weaker or neutralise with 1 M sodium carbonate solution and pour down foul-water drain. Refer to CLEAPSS Hazcard 98A.

Copper (II) oxide is currently classed as harmful if swallowed or inhaled and a cause of skin and eye irritation. It is toxic to aquatic life. Take extreme care while handling it and wear eye protection. For waste disposal, react a maximum of 24 g in 1 l of warm 1 M ethanoic acid before pouring down a foul-water drain. Refer to CLEAPSS Hazcard 26.

Copper sulfate solution is currently classed as corrosive and irritant hazard. Ensure eye protection is worn at all times. Copper sulfate solution must be left in a secure location to crystallise. If you believe there is a risk of the evaporating dishes being disturbed in your lab, ask your technician colleagues to store them in a prep room. For waste disposal, dilute to below 0.2 M and pour down a foul-water drain or your technician colleagues can use crystals for future practicals. Never allow students to take crystals home with them. Refer to CLEAPSS Hazcard 27C.

Clearing up

It is important that equipment is returned to the prep room in good order. If safe to do so, rinse used equipment and put it in the used equipment tray. If the trays arrived on a trolley, students must return all trays and equipment to that trolley. Anything dirty needs to be placed into a separate container for washing up. Never put dirty equipment back into a tray with clean equipment.

The equipment will likely be very hot after heating. If it is too hot to clear away safely by the end of the lesson, alert the technician.

Ensure the technician knows to not clear away the crystallising dishes until after the class has seen their results.