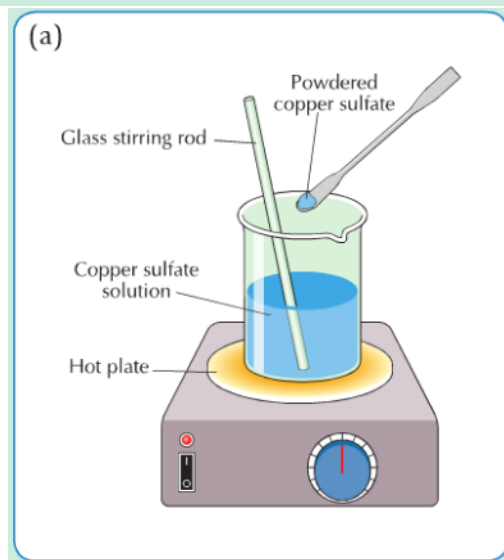


To Grow Crystals of Copper Sulfate

Safety: Goggles and Hair

Apparatus required: pestle and mortar; stirring rod; beaker; Bunsen burner (or hotplate); tripod; wire gauze; evaporating basin; thermometer

Chemicals required: alum or copper sulfate; water



Method

1. Grind up a sample of alum or copper sulfate using a pestle and mortar. This will help it to dissolve more quickly.
2. Gradually add the powdered substance to 100 cm³ of water in a beaker, Fig. 22.7(a). Use a stirring rod to help the powder to dissolve. Continue adding until the solute no longer dissolves but settles at the bottom of the beaker. Using a thermometer, note the temperature of the water.
3. Heat the water to about 60 °C and note what happens to the undissolved copper sulfate. What does this show? Add in more copper sulfate and heat until no more will dissolve.
4. Pour about half of the solution into a warm evaporating basin and put it aside to cool slowly, Fig. 22.7(b). Cool the other half quickly by holding the beaker under running water from the tap. Note what you observe.

Attachments

sugar-and-salt-solutions_en.jar

soluble-salts_en.jar