

Lifting an egg by a thread

Cellulose fibres can be made by extrusion from a solution of dissolved cellulose.

Add about 10 g of copper carbonate to about 100 cm³ of 880 ammonia solution in a beaker, until no more dissolves. After a while decant off the blue solution. Then stir in gently between 1 and 1.5 g of finely shredded cellulose, taking care not to fold in air, until the blue solution has the consistency of a gel. Cellulose fibres are reformed by extruding the solution into 1 mol dm⁻³ sulphuric acid solution. The fibres must be washed with water after their colour has faded.

- Make some cellulose fibres that will lift an egg.

Health & Safety

In planning this activity, you should consider health and safety. Check your plans with your teacher before implementing them.

You must wear goggles during this practical and work in a well-ventilated laboratory or use a fume cupboard.

300 cm³ of 880 ammonia solution - This is concentrated ammonia. Corrosive to skin and eyes. Causes severe internal damage if swallowed. Gas pressure increases on hot days. Respiratory irritant.

30 g powdered copper carbonate - Harmful if swallowed, toxic to aquatic life.

1 mol dm⁻³ sulphuric acid - Skin/eye irritant

Credits

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Health & safety checked May 2018

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