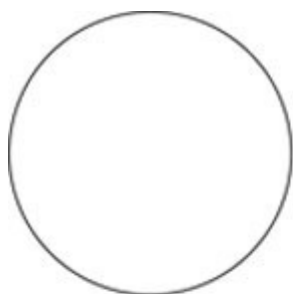


Using a microscale conductivity meter

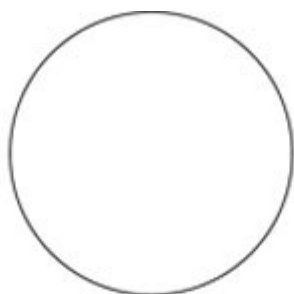
In this experiment you will be using a conductivity meter (see p. 12) to test which solids and solutions/liquids conduct electricity.

Instructions

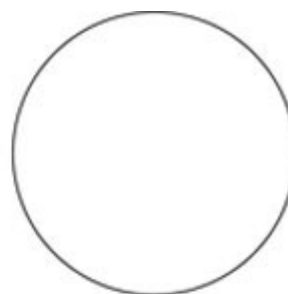
1. Cover the worksheet with a clear plastic sheet.
2. Add three drops of each of the solutions to the circles indicated below.
3. Place a small amount of each of the solids in the circle indicated below.
4. Test for conductivity by carefully placing just the tip of the electrodes in each of the substances in turn.
5. Make a table of your results.
6. Give explanations for your results trying to link the conductivity of a substance with its structure.



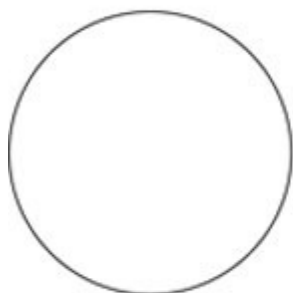
Copper sulphate
solution



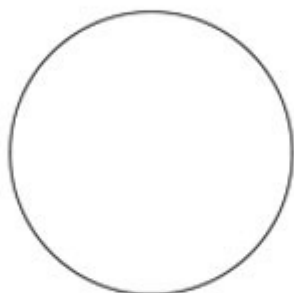
Sodium chloride
solution



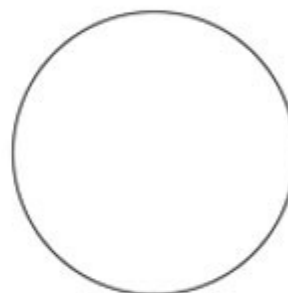
Sugar solution



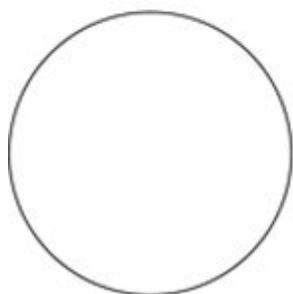
Tap water



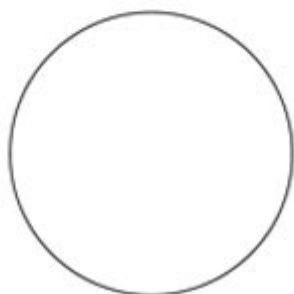
Deionised water



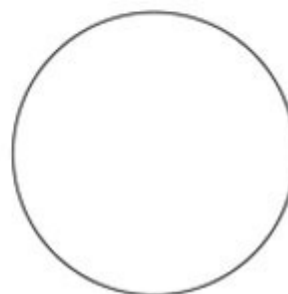
Copper foil



Iron nail



Aluminum foil



Pencil 'lead'

Health & Safety

Students must wear suitable eye protection (Splash resistant goggles to BS EN166 3).

Copper(II) sulphate solution, CuSO_4 (aq) causes eye damage (above 0.12 mol dm^{-3}), is harmful if swallowed and HAZARDOUS to the aquatic environment.

Credits

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Health & safety checked May 2018

Page last updated August 2018

