

Electrolysis using a microscale Hoffman apparatus

In this experiment you will be investigating the electrolysis of sodium sulphate solution using a microscale Hoffman apparatus.

Instructions

1. Set up the Hoffman apparatus in a clamp (see 'Apparatus and techniques for microscale chemistry' handout).
2. Pour *ca* 40 cm³ of the sodium sulphate solution into a beaker and add a few drops of bromothymol blue indicator. Note the colour of the solution.
3. Using a pipette carefully fill the electrolysis apparatus with the sodium sulphate solution.
4. Plug the tops of each stem with a small piece of Blu-Tack®.
5. Carefully attach the crocodile clips to the electrodes and record all your observations over the next 15 min.
6. Disconnect the leads and try to give explanations for your observations.

Question

1. Can you think of a way of testing for either of the gases that you have collected?

Health & Safety

Sodium sulphate, 0.5 mol dm⁻³ Na₂SO₃ (aq) and bromothymol blue solutions are of low hazard.

Credits

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Health & safety checked May 2018

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