

Chemguide – questions

ELECTROLYSING MOLTEN COMPOUNDS

1. What is meant by the following terms?
 - a) Electrolysis
 - b) Electrolyte
 - c) Anode
 - d) Cation

2. In the electrolysis of molten sodium iodide using carbon electrodes, nothing happens until the sodium iodide is molten, but then you see a purple gas being given off from one electrode and orange flashes at the other one, and a current flows around the external circuit.
 - a) What is the purple gas produced at one of the electrodes?
 - b) Which electrode is it produced at?
 - c) Write an equation for its formation.
 - d) Is this oxidation or reduction?
 - e) Explain the orange flashes at the other electrode.
 - f) Write the equation for the initial reaction happening at this electrode.
 - g) Why does no current flow while the sodium iodide is solid.
 - h) Explain why the discharge of ions allows current to flow around the external circuit.