**Products of Electrolysis**

Molten compounds

* the metal will form at the cathode
* the non-metal ion will form at the anode.

Aqueous solutions

* Cathode:
  + the metal will form if it is less reactive than hydrogen on the reactivity series;
  + if the metal is more reactive than hydrogen on the reactivity series, hydrogen will form
* Anode
  + oxygen will form at the anode
  + unless there is a high concentration of a halide, in which case the halogen forms

Work out the products of the electrolysis of the following compounds

|  |  |  |  |
| --- | --- | --- | --- |
|  | At the anode | At the cathode | Ions left in solution |
| Conc Copper bromide (aq) |  |  |  |
| Copper bromide (l) |  |  |  |
| Water |  |  |  |
| Sodium chloride (l) |  |  |  |
| Conc Sodium chloride (aq) |  |  |  |
| Lead bromide (l) |  |  |  |
| Dilute Copper sulphate (aq) |  |  |  |
| Dilute magnesium chloride (aq) |  |  |  |
| Conc Copper chloride (aq) |  |  |  |
| Dilute Copper chloride (aq) |  |  |  |
| Conc Hydrochloric acid (HCl) |  |  |  |
| Sulphuric acid |  |  |  |