

Hydrogen ~ Colourless gas

~ Collect the gas in a test tube and hold a **lighted splint** in it, the gas burns with squeaky 'pop' sound

Chlorine ~ Green poisonous gas which has bleaching property

~ Hold damp blue litmus paper in the gas (in fume cupboard), the litmus paper turns white

Carbon Dioxide ~ Colourless with weakly acidic gas

~ Deliver the gas into limewater, limewater turns cloudy or milky

Ammonia ~ Colourless alkaline gas

~ Hold damp red litmus paper in it, red litmus paper turns blue

Electroplating

Process used to coat metal object with another metal to **prevent corrosion** and make it **look more attractive**

EXAMPLE: Food can (steel) coated with tin

Steel taps or car bumpers coated with chromium to make it look shiny and stylish

To electroplate an object with metal X:

➤ **Cathode:** The object to be plated

➤ **Anode:** Metal X

➤ **Electrolyte:** An aqueous solution contains ions of plating metal [Metal X]

Purifying

EXAMPLE: Electrolysis is used to purify impure Metal X.

➤ **Anode:** Impure Metal X

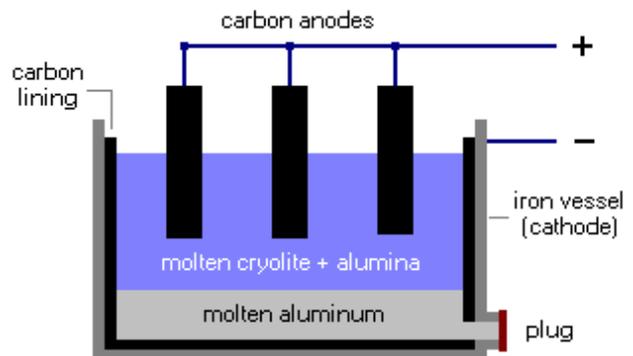
➤ **Cathode:** Pure Metal X

➤ **Electrolyte:** An aqueous solution contains ions of purifying metal [Metal X]

Aluminium Extraction

Bauxite → Aluminium oxide → Cryolite

950°C → Molten Aluminium oxide



Electrolysis	Different	Voltaic Cell
Same type of electrode (mostly)	Type of Electrode	Must be different type of metals
Positive to Negative	Energy Change	Negative to Positive
Required	Power Supply	Do not required
Positive	Anode	Negative