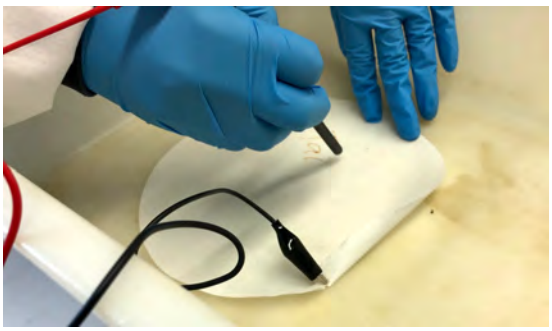
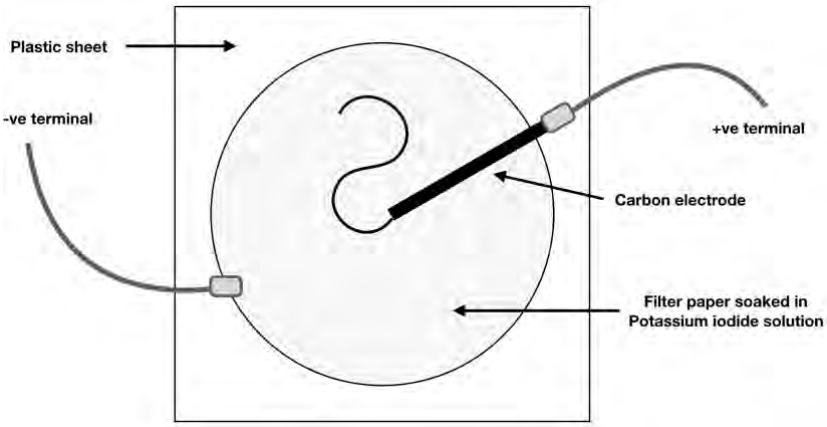
Carbon Rod Writing



What is happening?

The electricity oxidises the iodide ions (with a minus one charge), which are not coloured, to elemental iodine (neutral charge), which is brown.

Why did this happen?



This is an example of electrolysis of potassium iodide (KI) solution. The filter paper soaked in potassium iodide solution forms one electrode of an electric circuit (attached to negative terminal of power source). For the other electrode, a carbon rod (carbon is electrically conductive) is used as a 'pen nib' to 'write' on the filter paper. When this electrode is made positive, the writing (brown iodine) is visible. If you reverse the polarity, the writing disappears.

Did you know?

Iodine is toxic, but is also an essential element for life, as your body uses it in hormones to control growth and metabolism. You therefore require a *very* small amount (130-150 micrograms) in your daily diet. Iodine cannot be made in the body and must be eaten. Most table salt has iodine added to it. There is also iodine in fish and seaweed.