Collection of Gas over Water

Purpose

To qualitatively observe the formation of $O_{2\,(g)}$ product from a classic chemical reaction

Materials

Pan and gas hose apparatus	Stopper
Jar (500 mL)	Side arm flask (500 mL)
Wooden splint	Water
Matches	Potassium Iodide (Saturated 20 mL)
Glass square	Hydrogen Peroxide (3% store-bought solution 30 mL

Preparation

1. Fill the assembled pan and hose apparatus with water until the water level is ~1 cm above the glass tube in the middle of the apparatus.
2. Completely fill the 500 mL jar with water, and using the glass square, invert the jar into the pan full of water. Carefully move the jar under the water and place the jar over the glass tube in the middle without releasing any water from the jar.
3. Attach the gas hose to the side arm flask.

Procedure

1. Pour 20 mL of KI into the side arm flask.
2. Pour 30 mL of H_2O_2 into the side arm flask and immediately stopper the flask.
3. Allow the reaction to completely react. The jar will be filling with oxygen gas.
4. Light the end of the wooden splint on fire.
5. When the reaction is complete, remove the jar from the water (spilling out any excess water. Blow the wooden splint out and immediately insert it into the jar to detect the presence of oxygen. The splint should reignite in the presence of oxygen.

Disposal

All contents of the experiment can be disposed of down the drain with plenty of water.