

Making and Testing Oxygen

Name: _____ Form: _____

Aim: To produce oxygen gas in a chemical reaction and to then test its effect on a flame.

Equipment: 250mL conical flask; 50mL beaker; heat-proof mat; tongs; icy-pole stick; matches; spatula.

Chemicals: manganese dioxide powder (MnO_2), 6% hydrogen peroxide (H_2O_2)

Method:

Place a small spatula full of manganese dioxide powder (MnO_2) into the conical flask.

Set an icy-pole stick on fire. Let it burn a little.

Your partner can then pour about 10mL of hydrogen peroxide (H_2O_2) into the conical flask. You will see that a gas will be generated. This gas is oxygen gas. The chemical reaction does not last very long.

Blow the fire out and hold the glowing embers of the wood in the conical flask.

You can repeat the experiment by pouring in a little more hydrogen peroxide. (You don't need any more MnO_2 .)

Diagram



Observations: Describe the reaction and what happened when you placed the burning wood into the flask.

Describe the difference in flame colour when the wood is burning in the air and when it is burning inside the flask.

Questions:

1. Label the diagram above and draw in the two chemicals.
2. Write down the chemical equation for the reaction which produced the oxygen.

(word equation) _____

(symbol equation) _____

3. What was the role of the manganese dioxide powder?

4. Why do fire fighters hope for no wind?
