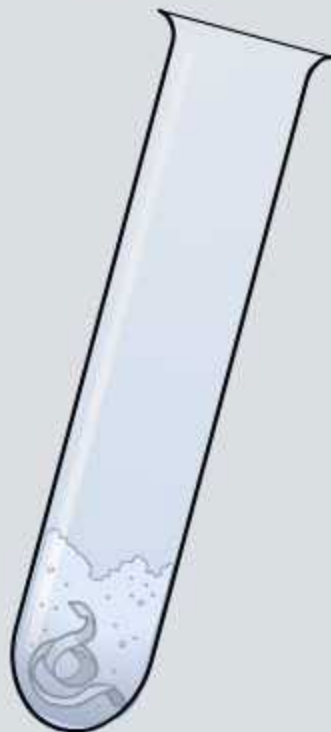


## Making Gases



# Making useful gases

Hydrogen, oxygen and carbon dioxide are very useful gases.

- Hydrogen is used to make margarine, and as a rocket fuel.
- Oxygen is used to help things burn at a high temperature, like welding torches.
- Carbon dioxide is used in fire extinguishers.



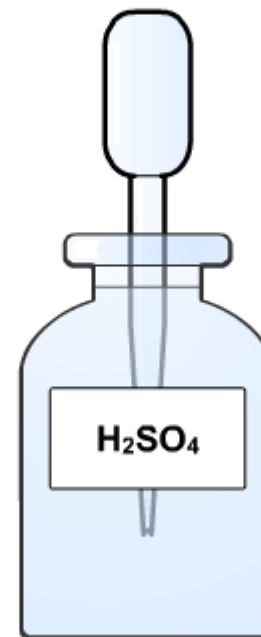
These gases are made in factories using chemical reactions.



## How will magnesium react with sulfuric acid?

Many metals react with acids. For example, magnesium reacts with sulfuric acid ( $\text{H}_2\text{SO}_4$ ).

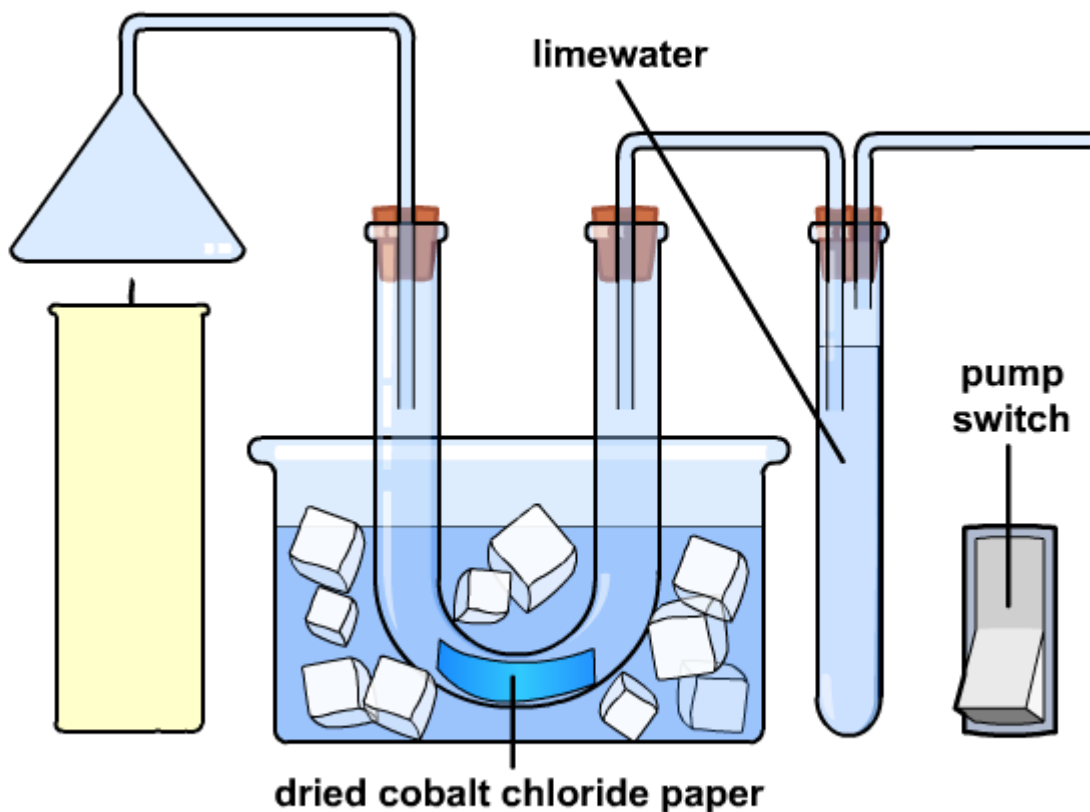
Click "**play**" to find out which gas is produced during this reaction.



## What are the tests for the products of combustion?

What products are produced when the candle wax burns?

Click "play" to find out.



## How do you produce and test for oxygen?

Hydrogen peroxide decomposes into water and oxygen very slowly at room temperature.

Click "**play**" to find out how to quickly produce and test for oxygen.



## What is the test for carbon dioxide?

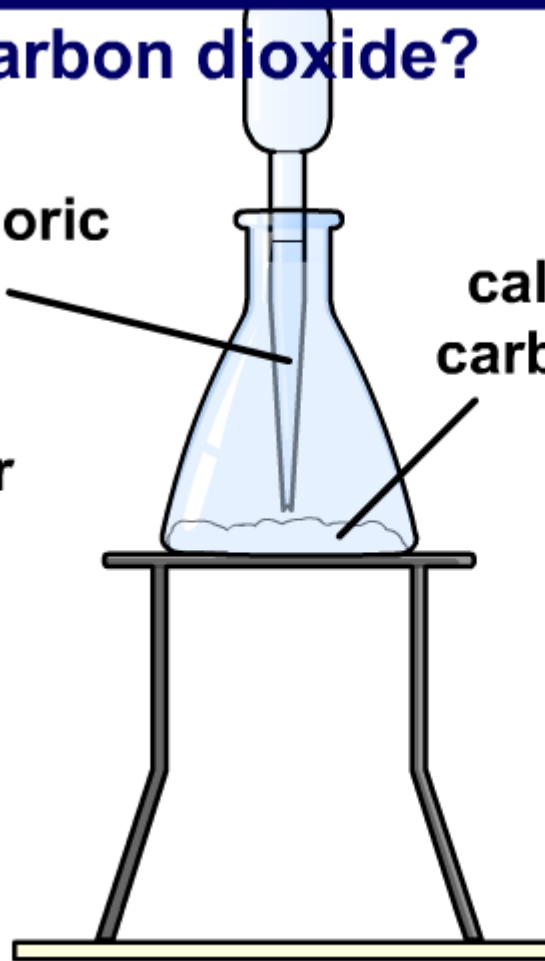
When carbonates react with acids, carbon dioxide is produced. What is the test for carbon dioxide?

Click "**play**" to find out.

hydrochloric  
acid

calcium  
carbonate

limewater



# Word equations for making gases

Complete the word equations to show the formation of gases

hydrochloric acid

+

magnesium

→

1

sulfuric acid

+

zinc

→

2

hydrogen peroxide

+

manganese dioxide

→

3

hydrochloric acid

+

calcium carbonate

→

4

sulfuric acid

+

calcium carbonate

→

5

?

zinc sulfate + hydrogen

C

solve

↶

# Which gas?



Which gas is produced by each set of reactants?

1 sulfuric acid and magnesium

 ▼

2 hydrogen peroxide and manganese dioxide

 ▼

3 nitric acid and zinc

 ▼

4 copper carbonate and sulfuric acid

 ▼

5 iron carbonate and nitric acid

 ▲

solve





# Which test?

Which test is used to detect each gas?

gas	test	positive result
carbon dioxide	<input type="text" value="?"/>	<input type="text" value="?"/>
hydrogen	<input type="text" value="?"/>	<input type="text" value="?"/>
oxygen	<input type="text" value="?"/>	<input type="text" value="?"/>



solve

