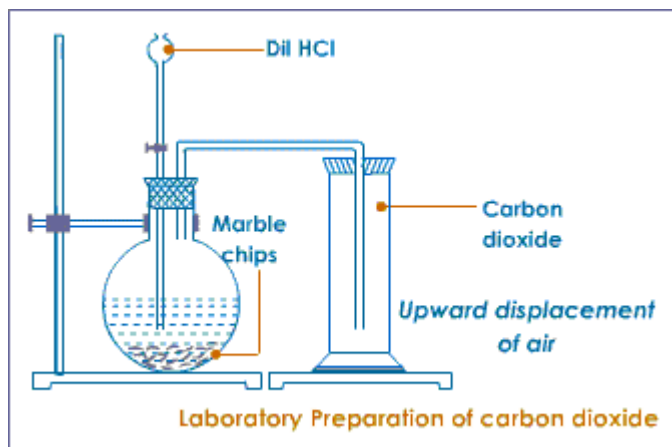


Preparation and Properties of Carbon Dioxide

Procedure: Record all data in your laboratory notebook. Always use distilled or deionized water.



Assemble the apparatus shown in this diagram. Grind the marble chips using a mortar and pestle prior to adding them. Slowly add dilute hydrochloric acid (6M) to the thistle funnel and allow time for the carbon dioxide to fill the receiving container.

Why does the carbon dioxide displace the air in the container?

Once you have collected a couple of bottles of carbon dioxide perform various tests described below.

Research the properties of carbon dioxide on the

Internet to help you explain the results of these tests.

How do we know we have synthesized carbon dioxide?

Describe the appearance of the marble chips before and after the addition of the hydrochloric acid.

Describe the appearance of carbon dioxide.

Wave your hand over the container of carbon dioxide. Do you detect an odor?

Obtain some blue litmus paper and place a few drops of water on it. Using tongs lower it into the container of carbon dioxide gas. You can also use the pH paper to test water that has been bubbled with carbon dioxide. What new compound have you made? What do you observe? Explain.

Use pH paper to test the lime water before and after bubbling carbon dioxide through it.

Light a splint on fire and lower it into the container of carbon dioxide. Explain your observations.

Light a candle. Pour carbon dioxide on the flame. Explain your observations.

Bubble carbon dioxide through about 10mL of clear lime water. Explain your observations.