Chemical gas laboratory tests essay sample

Part 1: Hydrogen and Manganese Dioxide

1. Inserted 4mL of hydrogen into a test tube

2. Scooped a little amount of manganese dioxide on the end of a wooden splint

3. Allowed the tip of the splint to flame using the Bunsen Burner

4. Allowed the reaction to proceed for a total of 15 seconds.

5. Placed the glowing splint into the test tube

6. Recorded the results

Part 2: Magnesium strip and Hydrochloric acid

1. Poured 3mL of hydrochloric acid into a test tube

2. Placed the magnesium strip into the hydrochloric acid into the tube and immediately covered the tube with a rubber stopper.

3. Allowed the magnesium strip to dissolve completely.

4. Carefully inserted a burning splint into the test tube.

5. Recorded the results.

Part 3: Vinegar and Sodium Bicarbonate (Baking Soda)

1. Poured 4mL of Vinegar into a test tube.

2. Lit the tip of a splint on fire using the Bunsen Burner.

3. Scooped a small amount of sodium bicarbonate.

4. Carefully added the sodium bicarbonate into the test tube.

5. Allowed the Vinegar and Baking Soda to react for 5 seconds.

6. Slightly tilted the test tube and inserted the burning splint halfway

through.

7. Recorded the results.

Materials Used

Part 1: Hydrogen & Manganese Dioxide.

1. One test tube.
2. Hydrogen
3. Manganese Dioxide
4. One wooden splint
5. Bunsen Burner
6. Flint and Steel

Part 2: Magnesium strip and Hydrochloric acid

1. One test tube
2. One Magnesium strip
3. Hydrochloric acid
4. Rubber Stopper
5. Wooden splint
6. Bunsen Burner
7. Flint and Steel

Part 3: Vinegar and Sodium Bicarbonate (Baking Soda)

1. One test tube
2. Vinegar
3. Two splints

4. Baking Soda

5. Bunsen Burner

6. Flint and Steel

Observations

Type of Experiment Type of Splint Splints Reaction to Chemicals

Hydrogen & Mangenese DioxideOxygen – glowing splint – the glowing splint combusted into flame again because of the amount of oxygen being produced by the two chemicals. Magnesium strip & Hydrochloric acidHydrogen – flaming splint – when the flaming splint was placed into the tube, it immediately burnt out because of the great amount of hydrogen being produced by the reaction, in other words, not enough oxygen to keep the flam alive.| Vinegar & Baking SodaCarbon Dioxide| – flaming splint| – as soon as the flaming splint was placed into the test tube, the overdose of Carbon Dioxide that the flame was receiving, caused the flame to create a “ popping” noise, and the flame went out.

Conclusion

The purpose of this lab experiment was to observe how a flame reacts to certain gases being produced and released into the air. This experiment clearly displays that certain gases such as Oxygen, when added to a flame, will become stronger, it also shows the reaction between a open flame coming into contact with hydrogen being produced into the air, can result into the flame burning out completely due to the lack of Oxygen. However, when Carbon Dioxide surrounds a flame, it makes a surprising reaction, as it

created a “ popping” noise, as well as a burnt out flame, the Carbon Dioxide replaces the oxygen in the air, causing the flame to burn out, and create such a noise.