

The Bunsen Burner

Sketch a Bunsen burner, on the right, and label on it the following features of the Bunsen burner:

1. Base
2. Burner tube
3. Adjustable air inlet valve
4. Gas inlet tubing

The _____ mixes with the _____ and is ignited, at the _____ of the Bunsen burner.

To light the Bunsen burner

1. When lighting a Bunsen burner, make sure the _____ is _____.
2. Hold a _____ match, so that the bottom of the _____ is below the top of the _____ Bunsen tube.
3. Then _____ the gas tap.

(If the lighted match is placed directly over the Bunsen burner tube with the _____, the rush of air may extinguish the match.)

4. After the Bunsen burner is lighted, _____ the air inlet valve by rotating so that there is an inner _____ cone in the flame with an outer almost _____ cone.

The _____ of the inner _____ cone is the hottest part of the Bunsen burner flame.

Summary: How to light a Bunsen burner:

1. Air hole closed
2. Light a match.
3. Turn the gas tap on slowly and hold the match at the top of the Bunsen burner tube.

Properties of the Luminous Flame

This flame is obtained when the air hole is _____, the gas is undergoing incomplete combustion, so that the flame is sometimes called a _____ or a sooty flame, it is not used for _____ purposes, it is a quiet flame.

The colour of the flame is _____ and is a flickering flame.

This flame is used when the Bunsen burner is not in _____.

Properties of the Non-Luminous Flame

This flame is obtained when the air hole is _____, the gas is undergoing _____ combustion, such that the flame is sometimes called a _____ or a heating flame, this flame is used for heating purposes.

This flame consists of an _____ blue, _____ cone consisting of unburned gases, and an almost invisible _____ flame; the _____ is the hottest part of the flame.

This is a _____ or a roaring flame.

Questions

1. What is the purpose of mixing the air with the gas when using a Bunsen burner?
2. Why should the air hole be closed when lighting the Bunsen burner?
3. Describe the properties of the Bunsen burner flame with the air hole open and air hole closed.