

Flame reaction

Level Elementary

Concept

Some metals such as alkali metals and alkaline-earth metals show peculiar color flame when each metals are heated in the gas burner. This flame reaction is shown greatly and plainly.

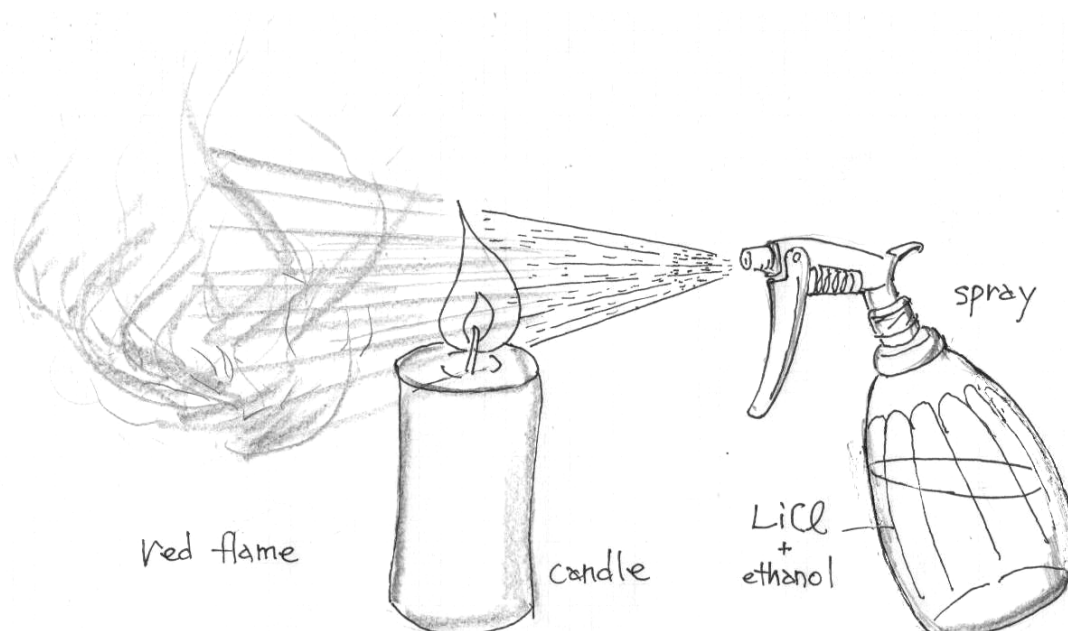
Materials

spray (3), alcohol, lithium chloride, copper(II)chloride potassium chloride, gas burner or candle.

Procedure

- (1)Alcohol is put in the spray and the lithium chloride is dissolved in it.
- (2)The gas burner is ignited.
- (3)The flame shows red when the solution is sprayed toward the flame of the burner.
- (4)In the case of copper(II)chloride, it becomes green and the potassium chloride, it becomes pink color.

The combustion temperature of the gas burner is high. The reaction can be seen even the water solution of the metal oxide and metal chloride. However, if you use the candle, the flame temperature is low and you should select the alcoholic solvent,. In that case, it is limited to the lithium chloride, the copper chloride, and the potassium chloride that dissolve to an alcoholic solvent.





LiCl



CuCl₂



KCl