

The Flame Test Lab

Purpose: To excite electrons using heat, and to use their light emission to identify unknowns.

Materials: **GOGGLES**, filter paper, bunsen burner, tongs, solutions.

Procedure:

1. Thoroughly wet one end of a piece of filter paper with a solution.
2. Using tongs, hold the wet end of the filter paper in the edge of a bunsen burner flame.
3. Observe and record color.
4. Identify unknowns using the same technique.

Chemical Compound	Color of Flame	Ion Responsible for Color
LiCl	Red	
CaCl ₂	Red Orange	
KCl	Purple/pink	
CuCl ₂	Green/Blue	
NaCl	Bright yellow orange	
Unknown 1	Orange	
Unknown 2	Red	
Unknown 3	Blue and Green	
Unknown 4	Violet	
Unknown 5 (contained two of the knowns)	red and pink	

Conclusion:

1. Identify the unknowns.
2. On the back of the page, give an explanation of your understanding of what causes the light to be emitted.