



# Star Composition: Flame Test Lab



## Procedure:

1. Use paper clip to make a looped end wire.
2. Dip loop in chemical and hold in flame.
3. Write down the color of the flame.
4. Repeat while looking through a diffraction grating spectrometer.
5. Record the areas where you see a dark band or bands of color.
6. Dip loop in water and wipe clean.
7. Repeat the steps for all the chemicals.
8. Clean up and return all materials and equipment to proper place.

## Data:

Substance (chemical formula)	Observations of Chemical	Color of Flame
Calcium Chloride (CaCl)		
Lithium Chloride (LiCl)		
Strontium Chloride (SrCl)		
Potassium Chloride (KCl)		
Sodium Chloride (NaCl)		
Cupric Chloride (CuCl <sub>2</sub> )		
Unknown # 1		

Colors using the Spectroscope						
Source	Red	Orange	Yellow	Green	Blue	Violet
Calcium Chloride (CaCl)						
Lithium Chloride (LiCl)						
Strontium Chloride (SrCl)						
Potassium Chloride (KCl)						
Sodium Chloride (NaCl)						
Cupric Chloride (CuCl <sub>2</sub> )						

1) How do scientists know what different stars are composed of without visiting them?