

Lab: Flames Gone Wild!

Purpose: To perform flame tests and use emission spectra to identify unknown elements.

Safety: You will be using a burner, so make sure long or loose hair is tied back and that you have safety glasses on!



Procedure:

1. Observe teacher demonstration or video of flame tests. Record the flame color of each ion below:

Ion	Na ⁺	K ⁺	Li ⁺	Ca ⁺²	Sr ⁺²	Ba ⁺²	Cu ⁺²
Flame Color							

2. Carefully watch your teacher's demonstration of how to light a burner. Each person will practice lighting a burner. You may not continue to the next part of the lab until you have done this successfully and obtained your teacher's initials here:

3. Get ONE splint saturated with unknown chemical #1. Light your burner. Carefully put the end of the splint into the hottest part of the flame and observe the color produced.
4. Compare flame color to data table above, and determine which ion is present in your unknown sample. Record result in table below.
5. Repeat steps 2&3 with the six other unknown samples.

Unknown #	1	2	3	4	5	6	7
Flame color							
Ion Present							

6. WHY do you think these different substances produced different colors when put into a flame?
