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Block: G

Lab #6:

Flame Colours

Purpose:

- to use an experimental technique called a flame test to observe the different colours (and spectra) emitted by different elements when heated
- to attempt to identify an unknown element by its flame colour
- to demonstrate collaborative skills
- to demonstrate safe laboratory procedures

Materials:

- as outlined on page 224, text Probe 9

Procedure:

- as outlined on page 225, text Probe 9

Data/observations:

Solution Name Observations (anecdotal/sketches)

potassium	light orange-pink
copper	light neon green
strontium	darker orange-red
sodium	bright orange
barium	light, pale orange
calcium	darker orange
lithium	dark pink-red
unknown #1	darker orange red, probably sodium
unknown #2	darker orange red, probably strontium

Questions:

- 1) Although ~~all~~ the substances all had a unique colour. once put in the flame, some substances were quite similar to each other. For example, most of the salts in the video were different shades of orange and red.

Conclusion:

During this lab, I learnt how to identify different substances by the flame colour they produce. It was interesting to note that although all the salts had different flame colours, some salts were just different shades of the same colour. I also learnt that flame colours are like fingerprints. You can identify an unknown element by its flame colour. Some things that might have gone wrong or could have affected the outcome of the experiment are if you didn't hold the loop containing the substance to the hottest part of the flame, the temperature might affect the shade of the colour. Also, if you didn't sanitize the loop before dipping it into the solution, the substance may be contaminated.