

Name: _____ Per: _____ Group #: _____ Date: _____

Leader _____ Mediator _____

Materials Manager _____ Reader _____

Flame Test of metallic compounds

Objective: 1) observe characteristic colors produced as metallic compounds are heated.
2) Use flame test data to identify unknown metallic compounds.

Materials and Equipment:

- Gas burner or
- Wire wands
- 8 solutions of metallic compounds
- goggles

Procedures:

1. Wear goggles at all times!
2. Dip the tip of the loop of wire at the end of the wand in the metallic solution.
3. Place the tip in the flame and record the color of the flame on your data table.
4. Return the wires and solutions to the materials tray.
5. When your teacher instructs you, pass the tray to the next group, and repeat the procedure for all 8 solutions

Observations:

Compound	Flame Color (Hypothesis)	Flame Color (Actual)
CuCl		
NaCl		
LiCl		
SrCl ₂		
BaCl ₂		
KCl		
Unknown A		
Unknown B		

Analysis:

1. In what **three** ways are all of the above compounds alike (except the unknowns)?

1. _____

2. _____

3. _____

2. Write out the name of each of the compounds:

CuCl= _____ SrCl₂= _____
NaCl= _____ BaCl₂= _____
LiCl= _____ KCl = _____

Conclusion:

1. Explain what part of the compound you think is responsible for the flame color and WHY?

2. Explain how you determined the identities of Unknown A and Unknown B.

3. What do you think would happen to the flame if we dipped the loop into two compounds?