

Name: _____ Period: _____ Date: _____

Ion Flame Test Demo

I. Before the demonstration:

A. The situation - There are several types of ionic compounds. Each one will be dissolved in a small amount of methanol. The solution will be burned and we will make observations about the color of the flame.

B. Determining the Independent and Dependent variables:

1. The independent variable in this experiment is:

_____.

2. The dependent variable in this experiment is:

_____.

C. Write a problem statement:

1. How will the _____ (I.V.)

effect the _____ (D.V.)?

D. Create a hypothesis using the If/then format:

_____.

E. What is the control group used in this demonstration?

_____.

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II. During the demonstration: Data and Observations

Compound Name	Compound Formula	Positive Ion	Negative Ion	Flame test color
Methanol	CH ₃ OH	none	none	
Barium chloride	BaCl ₂	Ca ²⁺	Cl ⁻¹	
Calcium chloride	CaCl ₂	Ca ²⁺	Cl ⁻¹	
Copper chloride	CuCl ₂	Cu ²⁺	Cl ⁻¹	
Potassium chloride	KCl	K ¹⁺	Cl ⁻¹	
Lithium chloride	LiCl ₂	Li ¹⁺	Cl ⁻¹	
Sodium chloride	NaCl	Na ¹⁺	Cl ⁻¹	
Strontium chloride	SrCl ₂	Sr ²⁺	Cl ⁻¹	
Unknowns:	Record the flame color and determine what salt is in the balloon based on the data above.			
	Compound formula			Flame color
Control	none	none	none	
Unknown #1				
Unknown #2				
Unknown #3				