

## MOGCK CHEMISTRY 20 Systemic Qualitative Analysis Lab

- Write the HIGHLIGHTED UNDERLINED SECTIONS on a separate piece of paper and attach to the back of this paper.

### Problem:

Is it possible to determine which ions are present in a container of unknown solutions using solubility?

### Hypothesis:

Before you lab, develop a flow chart of solubility in order to demonstrate the procedure you will be taking (on back of sheet!)

### Variables

Controlled Variable (3):

Manipulated Variable:

Responding Variable:

### Materials and Procedure:

- cup of solution possibly containing  $Zn(NO_3)_2$ ,  $Pb(NO_3)_2$  and  $Ba(NO_3)_2$
- KI solution
- NaOH solution
- $Na_2SO_4$  solution
- Filter paper (3)
- Funnel
- Ring stand

Using your developed procedure, test to see if your cup contains the given cations ( $Zn^{2+}$   $Pb^{2+}$  or  $Ba^{2+}$ )

Remember to filter off your precipitate and collect the remaining filtrate in order to test a second and third time

### Experimental Results:

Table 1:

Solution Added	Precipitate and Observations

### Analysis of Results:

Describe which cations were present in solution and explain how you know this to be true