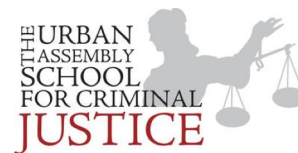


Name: _____ Date: _____

Chemistry ~ Ms. Hart

Class:

Anions or Cations



8.3 Homework Sheet

1. Determine if the following compounds are soluble or insoluble in water using Table F.
 - a. Sodium sulfate, Na_2SO_4
 - b. Lithium acetate, $\text{LiC}_2\text{H}_3\text{O}_2$
 - c. Magnesium chlorate, $\text{Mg}(\text{ClO}_3)_2$
 - d. Hydrobromic acid, HBr
 - e. Calcium carbonate, CaCO_3
 - f. Barium phosphate, $\text{Ba}_3(\text{PO}_4)_2$
 - g. Zinc hydroxide, $\text{Zn}(\text{OH})_2$
 - h. Sodium carbonate, Na_2CO_3
 - i. Ammonium sulfide, $(\text{NH}_4)_2\text{S}$
 - j. Barium sulfate, BaSO_4
2. Describe the solubility of lead iodide, PbI_2 , in water.
3. Describe the solubility of aluminum nitrate, $\text{Al}(\text{NO}_3)_3$, in water.
4. Lithium hydroxide, LiOH , is soluble in water, but beryllium hydroxide, $\text{Be}(\text{OH})_2$, is not. Which exception explains this difference?
5. NaCl is soluble in water. Identify another compound containing the chloride ion that is soluble in water.

6. NaCl is soluble in water. Identify another compound containing the chloride ion that is insoluble in water.
7. SrSO_4 is insoluble in water. Identify a compound containing the sulfate ion (SO_4^{2-}) that is soluble in water.

ONE MORE TIME – push through - “There may be a solution...” (Solubility Rules)

Directions: Use the solubility rules in *Table F* of your reference packet to answer the following questions.

1. Determine if the following compounds are *soluble* or *insoluble* in water.
 - a. Sodium chlorate, NaClO_3 . Example: All Group 1 ions (like Na^+) are soluble so sodium chlorate is soluble
 - b. Magnesium chromate, MgCrO_4
 - c. Aluminum acetate, $\text{Al}(\text{C}_2\text{H}_3\text{O}_2)_3$
 - d. Strontium hydroxide, $\text{Sr}(\text{OH})_2$
 - e. Cesium carbonate, Cs_2CO_3
 - f. Ammonium nitrate, NH_4NO_3
 - g. Barium hydroxide, $\text{Ba}(\text{OH})_2$
 - h. Zinc phosphate, $\text{Zn}_3(\text{PO}_4)_2$
 - i. Calcium sulfide, CaS
 - j. Silver sulfate, Ag_2SO_4