

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Chemistry** ~ Ms. Hart

**Class:** Anions or Cations



### 8.3 Classwork

- Which ion, when combined with chloride ions,  $\text{Cl}^-$ , forms an insoluble substance in water?
  - $\text{Fe}^{2+}$
  - $\text{Mg}^{2+}$
  - $\text{Pb}^{2+}$
  - $\text{Zn}^{2+}$
- According to Table F, which of these salts is *least* soluble in water?
  - $\text{LiCl}$
  - $\text{RbCl}$
  - $\text{FeCl}_2$
  - $\text{PbCl}_2$
- Which compound is insoluble in water?
  - $\text{BaSO}_4$
  - $\text{CaCrO}_4$
  - $\text{KClO}_3$
  - $\text{Na}_2\text{S}$
- According to Reference Table F, which of these compounds is the least soluble in water?
  - $\text{K}_2\text{CO}_3$
  - $\text{KC}_2\text{H}_3\text{O}_2$
  - $\text{Ca}_3(\text{PO}_4)_2$
  - $\text{Ca}(\text{NO}_3)_2$
- ~~At standard pressure, a certain compound has a low boiling point and is insoluble in water. At STP, this compound most likely exists as~~
  - ~~ionic crystals~~
  - ~~metallic crystals~~
  - ~~nonpolar molecules~~
  - ~~polar molecules~~
- Based on Reference Table F, which of these salts is the best electrolyte?
  - sodium nitrate
  - magnesium carbonate
  - silver chloride
  - barium sulfate

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7. Which barium salt is insoluble in water?

- (1)  $\text{BaCO}_3$
- (2)  $\text{BaCl}_2$
- (3)  $\text{Ba}(\text{ClO}_4)_2$
- (4)  $\text{Ba}(\text{NO}_3)_2$

8. Based on Reference Table F, which of these saturated solutions has the lowest concentration of dissolved ions?

- (1)  $\text{NaCl}(\text{aq})$
- (2)  $\text{MgCl}_2(\text{aq})$
- (3)  $\text{NiCl}_2(\text{aq})$
- (4)  $\text{AgCl}(\text{aq})$

9. At STP, which of these substances is most soluble in  $\text{H}_2\text{O}$ ?

- (1)  $\text{CCl}_4$
- (2)  $\text{CO}_2$
- (3)  $\text{HCl}$
- (4)  $\text{N}_2$

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10. Based on Reference Table F, describe the solubility of magnesium hydroxide in water.

11. Based on Reference Table F, describe the solubility of zinc sulfide in water.

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