**Predicting Precipitates WS (answers on back)**

1. **For solutions of nickel(II) acetate & sodium phosphate**
   1. Write the balanced dissociation reaction that occurred previously to the 1st compound
   2. Write the balanced dissociation reaction that occurred previously to the 2nd compound
   3. Write the balanced molecular equation for the reaction that occurs when they are mixed
   4. Write the balanced full ionic equation for the reaction that occurs when they are mixed
   5. Write the balanced net ionic equation for the reaction that occurs when they are mixed
   6. List the spectators
   7. Draw a particulate diagram to represent this precipitation reaction

For the reactions below that occur when the given solutions are mixed,

1. write the balanced net ionic equation
2. List the spectators
3. Barium chloride & iron(II) sulfate
4. Sodium hydroxide & magnesium nitrate
5. Silver nitrate & cobalt(III) bromide

**ANSWERS**

Ni(C2H3O2)2 (s) 🡪 Ni2+ (aq) + 2 C2H3O2- (aq)

Na3PO4 (s) 🡪 3 Na+ (aq) + PO43- (aq)

3 Ni(C2H3O2)2 (aq) + 2 Na3PO4 (aq) 🡪 6 NaC2H3O2 (aq) + Ni3(PO4)2 (s)

3 Ni2+ (aq) + C2H3O2- (aq) + Na+ (aq) + 2 PO43- (aq) 🡪 Ni3(PO4)2 (s) + Na+ (aq) + C2H3O2- (aq)

3 Ni2+ (aq) + 2 PO43- (aq) 🡪 Ni3(PO4)2 (s)

Spectators = Na+ (aq) and C2H3O2- (aq)

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2) 🡪 BaSO4 (s)

3) 🡪 Mg(OH)2 (s)

4) 🡪 AgBr (s)