

Name _____

Period _____

**Independent Study Unit
Reactions Assignment**

Write net ionic equations for the formation of the following complexes.

- 1) Solid silver chloride is added to a solution of concentrated hydrochloric acid.
- 2) Solid aluminum hydroxide is added to a concentrated solution of potassium hydroxide.
- 3) Excess concentrated hydrochloric acid is added to a 1.0 *M* solution of cobalt(II) chloride.
- 4) Excess concentrated ammonia solution is added to a solution of nickel(II) sulfate.
- 5) Excess hydrochloric acid is added to a solution of diamminesilver(I) nitrate.
- 6) An excess of nitric acid solution is added to a solution of tetraamminecopper(II) sulfate.
- 7) A concentrated solution of sodium cyanide is added to a solution of zinc iodide.
- 8) Excess aqueous sodium oxalate is added to an aqueous solution of iron (III) nitrate.
- 9) Excess concentrated ammonia is added to a solution of zinc(II) chloride.
- 10) Excess ethylenediammine is added to aqueous zinc (II) nitrate.

- 11) Excess concentrated sodium hydroxide is added to a solution of zinc nitrate.
- 12) A sodium thiosulfate solution is added to a suspension of silver chloride.
- 13) Concentrated ammonia solution is added in excess to a solution of copper(II) nitrate.
- 14) An excess of sodium hydroxide solution is added to a solution of aluminum chloride.
- 15) A suspension of copper(II) hydroxide is treated with an excess of ammonia water.
- 16) A solution of diamminesilver(I) chloride is treated with dilute nitric acid.
- 17) Excess concentrated sodium oxalate solution is added to copper(II) nitrate.
- 18) Excess dilute nitric acid is added containing the tetraamminecadmium(II) ion.
- 19) A suspension of zinc hydroxide is treated with concentrated sodium hydroxide.
- 20) A drop of potassium thiocyanate is added to a solution of iron(III) chloride.
- 21) Excess potassium thiocyanate is added to a solution of iron(III) chloride.
- 22) Aqueous sodium hydroxide is added to a saturated solution of aluminum hydroxide, forming a complex ion.