

CHAPTER 7	Writing Net Ionic Equations	BLM 7.1.2
ASSESSMENT		

In writing net ionic equations from double and single replacement reactions, it is necessary to know what “comes apart,” and what doesn’t. The rules are simple. Ionic substances which are soluble according to the solubility table will dissociate when exposed to water, and are written in ionic form. The resultant ions are in (aq) state. Molecules are never “taken apart” into ions, as they are not made up of ions. Acids are all soluble, but only the acids classified as “strong” actually ionize 100%. The other acids do not, and therefore are left in molecular form, or “together.”

Write net ionic equations for the following reactions:

1. Solutions of sodium sulfide and iron(II) sulfate are mixed.
2. A solution of silver nitrate is poured onto a piece of copper.
3. A solution of nitric acid has solid insoluble magnesium oxide added to it.
4. Solutions of hydrocyanic acid and sodium hydroxide are mixed.
5. Carbon dioxide gas is bubbled into lithium hydroxide solution to form water and lithium carbonate.
6. Solutions of sodium carbonate and hydrochloric acid are mixed.
7. Solutions of ammonium phosphate and zinc sulfate mix.
8. Cadmium metal is added to a solution of cobalt(III) nitrate.
9. Ethanoic acid mixes with barium hydroxide solution.
10. When potassium sulfide solution mixes with hydrochloric acid solution, two products form. One of them is $\text{H}_2\text{S}(\text{g})$.