

Practice Problems: Molecular, Complete Ionic & Net Ionic Equations

See the complete solutions to these problems at <https://youtu.be/uwpe4Z0yF6E>.

Predict the products, balance the molecular equation, then write the complete ionic and net ionic equations, including physical states.

1. barium chloride + sodium carbonate

2. ammonium sulfide + phosphoric acid

3. lithium carbonate + hydrochloric acid

Compounds containing the following ions are generally soluble in water (aq)	Exceptions that are insoluble (s)
NH_4^+ , Li^+ , Na^+ , K^+	None
NO_3^- , $\text{C}_2\text{H}_3\text{O}_2^-$	None
Cl^- , Br^- , I^-	Compounds of Ag^+ , Hg_2^{2+} , or Pb^{2+}
SO_4^{2-}	Compounds of Ca^{2+} , Sr^{2+} , Ba^{2+} , or Pb^{2+}
Compounds containing the following ions are generally insoluble in water (s)	Exceptions that are soluble (aq)
CO_3^{2-} , CrO_4^{2-} , PO_4^{3-}	Compounds of NH_4^+ , Li^+ , Na^+ , K^+
OH^- , S^{2-}	Compounds of NH_4^+ , Li^+ , Na^+ , K^+ , Ca^{2+} , Sr^{2+} , Ba^{2+}