

Neutralization Reactions

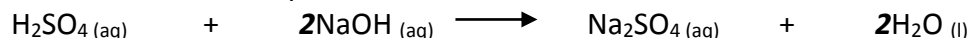
Example:

When dissolved sulfuric acid reacts with dissolved sodium hydroxide, the dissolved salt sodium sulfate and water are produced. Write the word equation and balanced chemical equation for the reaction.

a) Word Equation:

sulfuric acid + sodium hydroxide \longrightarrow sodium sulfate + water

b) Balanced Chemical Equation



Questions:

1. For each neutralization reaction below, identify the missing product or reactant.

a) Lithium hydroxide + hydrofluoric acid \longrightarrow lithium fluoride + _____

b) _____ + hydrochloric acid \longrightarrow potassium chloride + water

c) Lithium hydroxide + _____ \longrightarrow lithium nitrate + water

d) $\text{H}_3\text{PO}_4 (\text{aq}) + 3 \text{NaOH} (\text{aq}) \longrightarrow$ _____ + $3 \text{H}_2\text{O}$

e) $2 \text{NaOH} (\text{aq}) +$ _____ $\longrightarrow \text{Na}_2\text{SO}_4 (\text{aq}) + 2$ _____

2. When $\text{KOH} (\text{aq})$ reacts with $\text{HBr} (\text{aq})$, a neutralization reaction occurs. Write the word equation and balanced chemical equation.

3. Dissolved sulfuric acid (H_2SO_4) reacts with dissolved magnesium hydroxide ($\text{Mg}(\text{OH})_2$) to produce a salt and water. Write the word equation and balanced chemical equation.