

S4 Chemistry Quiz
Reaction of Alkali 1

Complete the following chemical equation:

1. $\text{CO}_2(\text{g}) + \text{KOH}(\text{aq}) \longrightarrow$
2. $\text{SO}_2(\text{g}) + \text{Ca}(\text{OH})_2(\text{aq}) \longrightarrow$
3. $\text{NH}_4\text{Cl}(\text{aq}) + \text{KOH}(\text{aq}) \xrightarrow{\Delta}$
4. $\text{NH}_3(\text{aq}) + \text{H}_2\text{SO}_4(\text{aq}) \longrightarrow$
5. $\text{CO}(\text{g}) + \text{NaOH}(\text{aq}) \longrightarrow$
6. $(\text{NH}_4)_3\text{PO}_4(\text{aq}) + \text{KOH}(\text{aq}) \xrightarrow{\Delta}$
7. $\text{Ca}(\text{OH})_2(\text{aq}) + \text{H}_2\text{SO}_4(\text{aq}) \longrightarrow$
8. $\text{NaNO}_3(\text{aq}) + \text{SO}_3(\text{aq}) \longrightarrow$

Suggested Answer

1. $\text{CO}_2(\text{g}) + 2\text{KOH}(\text{aq}) \longrightarrow \text{K}_2\text{CO}_3(\text{aq}) + \text{H}_2\text{O}(\text{l})$
2. $\text{SO}_2(\text{g}) + \text{Ca}(\text{OH})_2(\text{aq}) \longrightarrow \text{CaSO}_3(\text{s}) + \text{H}_2\text{O}(\text{l})$
3. $\text{NH}_4\text{Cl}(\text{aq}) + \text{KOH}(\text{aq}) \xrightarrow{\Delta} \text{KCl}(\text{aq}) + \text{NH}_3(\text{g}) + \text{H}_2\text{O}(\text{l})$
4. $2\text{NH}_3(\text{aq}) + \text{H}_2\text{SO}_4(\text{aq}) \longrightarrow (\text{NH}_4)_2\text{SO}_4(\text{aq})$
5. $\text{CO}(\text{g}) + \text{NaOH}(\text{aq}) \longrightarrow \text{No reaction}$
6. $(\text{NH}_4)_3\text{PO}_4(\text{aq}) + 3\text{KOH}(\text{aq}) \xrightarrow{\Delta} \text{K}_3\text{PO}_4(\text{aq}) + 3\text{NH}_3(\text{g}) + 3\text{H}_2\text{O}(\text{l})$
7. $\text{Ca}(\text{OH})_2(\text{aq}) + \text{H}_2\text{SO}_4(\text{aq}) \longrightarrow \text{CaSO}_4(\text{s}) + 2\text{H}_2\text{O}(\text{l})$
8. $\text{NaNO}_3(\text{aq}) + \text{SO}_3(\text{aq}) \longrightarrow \text{No reaction}$
(Salt)