



Chemical Reactions

Set 21

- $\text{CaCO}_3(\text{s}) + 2\text{H}^+(\text{aq}) \rightarrow \text{Ca}^{2+}(\text{aq}) + \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\ell)$
White solid dissolves; colourless, odourless gas evolved; colourless solution formed.
- $\text{Mg}(\text{s}) + 2\text{H}^+(\text{aq}) \rightarrow \text{Mg}^{2+}(\text{aq}) + \text{H}_2(\text{g})$
Silver solid dissolves; colourless, odourless gas evolved; colourless solution formed.
- $\text{NaHCO}_3(\text{s}) + \text{CH}_3\text{COOH}(\text{aq}) \rightarrow \text{Na}^+(\text{aq}) + \text{CH}_3\text{COO}^-(\text{aq}) + \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\ell)$
White solid dissolves; colourless, odourless gas evolved; colourless solution formed.
- $\text{H}^+(\text{aq}) + \text{OH}^-(\text{aq}) \rightarrow \text{H}_2\text{O}(\ell)$
No visible reaction; heat evolved.
- $\text{H}^+(\text{aq}) + \text{NaOH}(\text{s}) \rightarrow \text{Na}^+(\text{aq}) + \text{H}_2\text{O}(\ell)$
White solid dissolves; heat evolved.
- $\text{CoCO}_3(\text{s}) + 2\text{H}^+(\text{aq}) \rightarrow \text{Co}^{2+}(\text{aq}) + \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\ell)$
Pink solid dissolves; colourless, odourless gas evolved, pink solution formed.
- $\text{Ba}^{2+}(\text{aq}) + \text{SO}_4^{2-}(\text{aq}) \rightarrow \text{BaSO}_4(\text{s})$
White precipitate formed.
- $\text{Pb}^{2+}(\text{aq}) + 2\text{I}^-(\text{aq}) \rightarrow \text{PbI}_2(\text{s})$
Yellow precipitate formed.
- $2\text{Au}^{3+}(\text{aq}) + 3\text{Cu}(\text{s}) \rightarrow 2\text{Au}(\text{s}) + 3\text{Cu}^{2+}(\text{aq})$
Yellow/gold precipitate formed, yellow solution turns blue, brown solid dissolves.
- $2\text{Na}(\text{s}) + 2\text{H}_2\text{O}(\ell) \rightarrow 2\text{Na}^+(\text{aq}) + 2\text{OH}^-(\text{aq}) + \text{H}_2(\text{g})$
Silver solid reacts vigorously; colourless, odourless gas evolved, colourless solution formed.
- $\text{K}_2\text{CO}_3(\text{s}) + 2\text{H}^+(\text{aq}) \rightarrow 2\text{K}^+(\text{aq}) + \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\ell)$
White solid dissolves; colourless, odourless gas evolved; colourless solution formed.
- $\text{H}^+(\text{aq}) + \text{OH}^-(\text{aq}) \rightarrow \text{H}_2\text{O}(\ell)$
No visible reaction; heat evolved.
- $\text{Ag}^+(\text{aq}) + \text{Br}^-(\text{aq}) \rightarrow \text{AgBr}(\text{s})$
Cream coloured precipitate formed.
- $\text{Ni}(\text{s}) + \text{Cu}^{2+}(\text{aq}) \rightarrow \text{Ni}^{2+}(\text{aq}) + \text{Cu}(\text{s})$
Brown/black precipitate formed, silver solid dissolves; blue solution turns green.
- $\text{Fe}^{2+}(\text{aq}) + 2\text{OH}^-(\text{aq}) \rightarrow \text{Fe}(\text{OH})_2(\text{s})$
Pale green precipitate formed.