

Review Writing Net Ionic Equations

For each of the following examples write the molecular, ionic and net ionic equation!



Phosphoric acid is added to aqueous potassium hydroxide...

$\text{H}_3\text{PO}_4(\text{aq}) + \text{KOH}(\text{aq}) \rightarrow$ predict products and check for precipitates

$\text{H}_3\text{PO}_4(\text{aq}) + 3 \text{KOH}(\text{aq}) \rightarrow \text{K}_3\text{PO}_4(\text{aq}) + 3 \text{H}_2\text{O}$
or

$\text{H}_3\text{PO}_4(\text{aq}) + \text{KOH}(\text{aq}) \rightarrow \text{KH}_2\text{PO}_4(\text{aq}) + \text{H}_2\text{O}$

Since $\text{H}_3\text{PO}_4(\text{aq})$ is a weak acid (stays together) and KOH is a strong base (breaks up)

Finishing

$\text{H}_3\text{PO}_4 + 3\text{K}^+ + 3\text{OH}^- \rightarrow 3\text{K}^+ + \text{PO}_4^{3-} + 3 \text{H}_2\text{O}$
OR

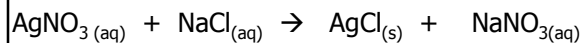
$\text{H}_3\text{PO}_4 + \text{K}^+ + \text{OH}^- \rightarrow \text{K}^+ + \text{H}_2\text{PO}_4^- + \text{H}_2\text{O}$
and finally for the net ionic equations...

$\text{H}_3\text{PO}_4 + 3 \text{OH}^- \rightarrow \text{PO}_4^{3-} + 3 \text{H}_2\text{O}$
OR

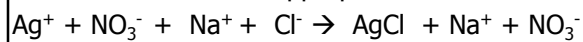
$\text{H}_3\text{PO}_4 + \text{OH}^- \rightarrow \text{H}_2\text{PO}_4^- + \text{H}_2\text{O}$

Aqueous silver nitrate is added to a sodium chloride (saline) solution...

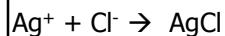
$\text{AgNO}_3(\text{aq}) + \text{NaCl}(\text{aq}) \rightarrow$ predict products and check for precipitates



Now write ions where appropriate...



And finally



YOU TRY THESE-write the net ionic equations

1. Solutions of zinc nitrate and potassium hydroxide are mixed...
2. Perchloric acid is titrated with sodium hydroxide...
3. Aqueous sodium carbonate is combined with cobalt (II) nitrate solution...

The Answers

