

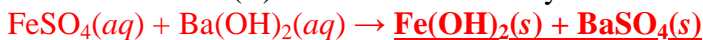
Chem 1020

Precipitation reactions worksheet

For each of the following combinations of reactants, do the following:

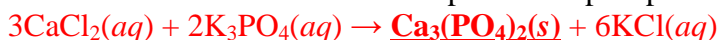
- Predict possible products with phase labels
- Write the balanced chemical equation. If no visible reaction occurs, write NR. If a precipitate forms, give the formula and name of the precipitate.

1. Solutions of iron (II) sulfate and barium hydroxide are mixed.



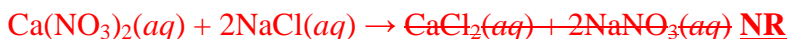
Iron (II) hydroxide and barium sulfate are the precipitates (there's two!)

2. Solutions of calcium chloride and potassium phosphate are mixed.

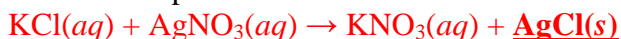


Calcium phosphate is the precipitate.

3. Solutions of calcium nitrate and sodium chloride are mixed.



4. Solutions of potassium chloride and silver nitrate are mixed.



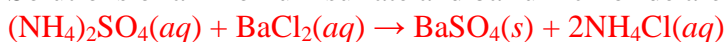
Silver chloride is the precipitate.

5. Solutions of sodium sulfide and nickel (II) sulfate are mixed.



Nickel (II) sulfide is the precipitate.

6. Solutions of ammonium sulfate and barium chloride are mixed.



Barium sulfate is the precipitate.

7.  $\text{Na}_2\text{S}(aq) + \text{ZnSO}_4(aq) \rightarrow \text{Na}_2\text{SO}_4(aq) + \text{ZnS}(s)$

Zinc (II) sulfide is the precipitate.

8.  $\text{Al}(\text{NO}_3)_3(aq) + \text{Na}_3\text{PO}_4(aq) \rightarrow \text{AlPO}_4(s) + 3\text{NaNO}_3(aq)$

Aluminum phosphate is the precipitate.

9.  $(\text{NH}_4)_2\text{CO}_3(aq) + \text{MgSO}_4(aq) \rightarrow \text{MgCO}_3(s) + (\text{NH}_4)_2\text{SO}_4(aq)$

Magnesium carbonate is the precipitate.

10.  $\text{Na}_2\text{SO}_4(aq) + \text{K}_2\text{S}(aq) \rightarrow \text{Na}_2\text{S}(aq) + \text{K}_2\text{SO}_4(aq) \text{ NR}$

11.  $\text{Ca}(\text{OH})_2(aq) + \text{Na}_2\text{SO}_4(aq) \rightarrow \text{CaSO}_4(s) + 2\text{NaOH}(aq)$

Calcium sulfate is the precipitate.

12.  $\text{Pb}(\text{NO}_3)_2(aq) + 2\text{LiI}(aq) \rightarrow \text{PbI}_2(s) + 2\text{LiNO}_3(aq)$

Lead (II) iodide is the precipitate.