

Ionic Compounds Review Extra Practice

Compounds w/Polyatomic Ions

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**Answers are on Page 3!

Examples of Ionic Compounds with Polyatomic Ions:

1. $\text{Na}_2\text{SO}_4 \rightarrow$
2. $\text{KNO}_3 \rightarrow$
3. $\text{Ca}(\text{OH})_2 \rightarrow$
4. $\text{NH}_4\text{Cl} \rightarrow$
5. $\text{Mg}(\text{C}_2\text{H}_3\text{O}_2)_2 \rightarrow$
6. $\text{Ba}(\text{NO}_3)_2 \rightarrow$
7. $\text{Al}_2(\text{SO}_4)_3 \rightarrow$

Pro Tip for Naming:

- Name the **cation (metal or ammonium)** first.
- Name the **polyatomic ion** as-is.
- Watch out for parentheses when more than one polyatomic ion is needed to balance the charges

Part 2: Write the Formula for the Given Ionic Compound with Polyatomic Ions

1. Lithium phosphate $\rightarrow$ _____
2. Ammonium sulfate $\rightarrow$ _____
3. Calcium carbonate $\rightarrow$ _____
4. Potassium chlorate $\rightarrow$ _____

5. **Magnesium nitrate** → _____

6. **Sodium bicarbonate** → _____

7. **Iron (III) hydroxide** → _____

Pro Tip for Students:

- Remember to balance the charges to ensure the compound is neutral.
- Use parentheses for polyatomic ions when more than one is required.

Answer Key Part 1:

1. **Sodium sulfate** $\rightarrow \text{Na}_2\text{SO}_4$
2. **Potassium nitrate** $\rightarrow \text{KNO}_3$
3. **Calcium hydroxide** $\rightarrow \text{Ca}(\text{OH})_2$
4. **Ammonium chloride** $\rightarrow \text{NH}_4\text{Cl}$
5. **Magnesium acetate** $\rightarrow \text{Mg}(\text{C}_2\text{H}_3\text{O}_2)_2$
6. **Barium nitrate** $\rightarrow \text{Ba}(\text{NO}_3)_2$
7. **Aluminum sulfate** $\rightarrow \text{Al}_2(\text{SO}_4)_3$

Answer Key Part 2:

1. **Lithium phosphate** $\rightarrow \text{Li}_3\text{PO}_4$
2. **Ammonium sulfate** $\rightarrow (\text{NH}_4)_2\text{SO}_4$
3. **Calcium carbonate** $\rightarrow \text{CaCO}_3$
4. **Potassium chlorate** $\rightarrow \text{KClO}_3$
5. **Magnesium nitrate** $\rightarrow \text{Mg}(\text{NO}_3)_2$
6. **Sodium bicarbonate** $\rightarrow \text{NaHCO}_3$
7. **Iron (III) hydroxide** $\rightarrow \text{Fe}(\text{OH})_3$