

Chemistry Demonstration

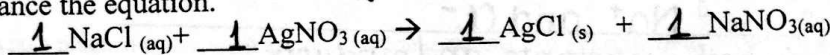
Name: KEY

Precipitation Reactions & Net Ionic Equations

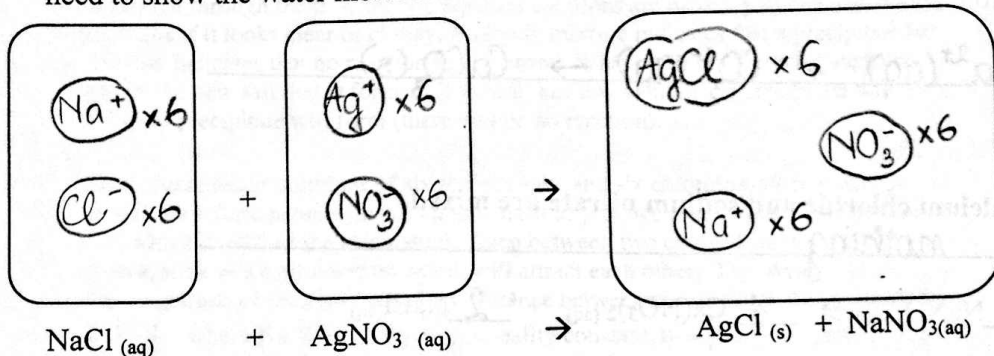
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1. Aqueous solutions of sodium chloride and silver nitrate are mixed.

- a. What do you observe? cloudy white solid formed
- b. Balance the equation.



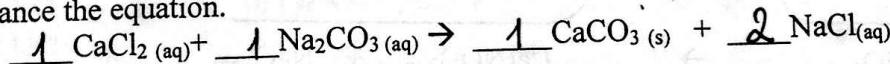
c. Show what ions are present. Remember that ionic compounds in the aqueous phase have the ions separated from each other. In the solid phase the ions form a crystal lattice. You do not need to show the water molecules. Draw 6 of each ion.



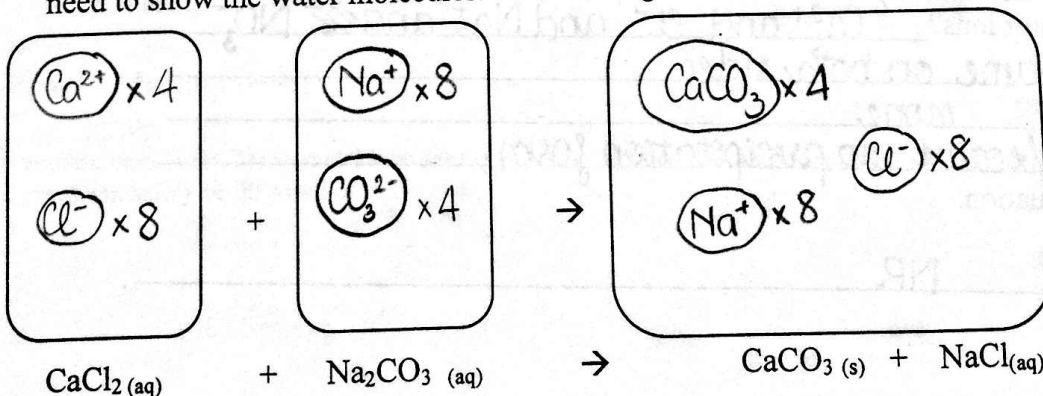
- d. Which ions are spectator ions? Na<sup>+</sup> and NO<sub>3</sub><sup>-</sup>  
 How can you tell? the ions are unchanged and present in the reactants & products
- e. Which ions reacted? Ag<sup>+</sup> and Cl<sup>-</sup>  
 How can you tell? because it forms a precipitate
- f. Write the net ionic equation. Ag<sup>+</sup>(aq) + Cl<sup>-</sup>(aq) → AgCl(s)

2. Aqueous solutions of calcium chloride and sodium carbonate mixed.

- a. What do you observe? white precipitation form
- b. Balance the equation.



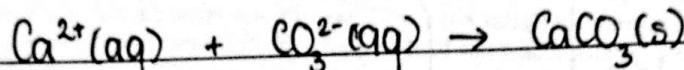
c. Show what ions are present. Remember that ionic compounds in the aqueous phase have the ions separated from each other. In the solid phase the ions form a crystal lattice. You do not need to show the water molecules. Draw enough ions to make 4 CaCO<sub>3</sub> formula units.



## Precipitation Reactions &amp; Net Ionic Equations

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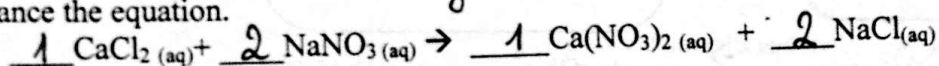
- d. Does your drawing show conservation of matter? yes  
 Explain. the number of ions is conserved (same in reactants and products)
- e. Which ions are spectator ions? Na<sup>+</sup> and Cl<sup>-</sup>  
 How can you tell? same in both reactants and products
- f. Which ions reacted? Ca<sup>2+</sup> and CO<sub>3</sub><sup>2-</sup>  
 How can you tell? because it forms precipitation CaCO<sub>3</sub>
- g. Write the net ionic equation.



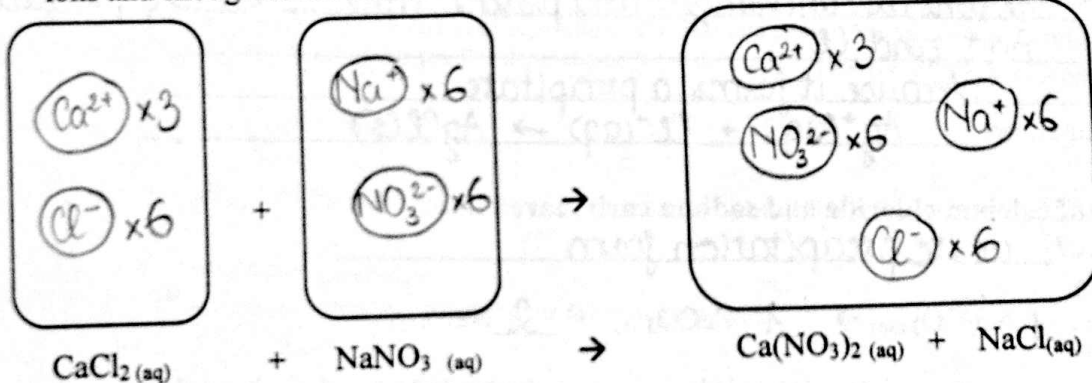
## 3. Aqueous solutions of calcium chloride and sodium nitrate are mixed.

- a. What do you observe? nothing

b. Balance the equation.



- c. Show what ions are present. Remember that ionic compounds in the aqueous phase have the ions separated from each other. You do not need to show the water molecules. Draw 6 chloride ions and enough of the other ions to show the correct ratios given in the balanced equation.



- d. Does your drawing show conservation of matter? yes  
 Explain. same #'s of ions on both sides
- e. Which ions are spectator ions? Ca<sup>2+</sup> and Cl<sup>-</sup> and Na<sup>+</sup> and ~~NO<sub>3</sub><sup>-</sup>~~  
 How can you tell? same on both sides
- f. Which ions reacted? none  
 How can you tell? because no precipitation form
- g. Write the net ionic equation.

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