**DATA ANALYSIS CONTINUED:**

What overall changes in mass or volume could cause density to increase when salt is added to water?

 ↑D

 ↑D

Mass

Volume

Mass

Volume

 ↓D

 OR

Complete the table below for changes of mass in the solution.

|  |  |
| --- | --- |
| **Could the volume decrease in the solution?** | **Possible? Yes or No. Explain why.** |
| **1. Volume being removed?** **What would cause volume  to be removed?** |  |
| **Could the mass increase in the solution?** |  |
| **2. Mass added?** **What would cause mass  to be added?** |  |

DATA ANALYSIS: (Continued)

**PROBLEM: Why does density change when salt is added to water?**

Measure the exact changes in mass and volume while creating a 4% solution.

4% Salt Solution

**1) Measure exactly 96 ml of fresh water.**

Why is 96 g = 96 mL of water?

**2) Add 4.0 g of salt to the 96 g of water.**

**3) Stir until dissolved. (Use pipette)**

**4) Measure new volume. \_\_\_\_\_\_ ml**

**5) Calculate density = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Solve below)**

 M 96.0 g water + 4.0 g **salt** 100.0 g

 V New volume:\_\_\_\_\_\_\_\_\_\_\_ ml \_\_\_\_\_\_\_ml \_\_\_\_\_\_mL

**How did mass and/or volume change in order to cause the density of the water to increase?**

DATA ANALYSIS: (Continued)

**PROBLEM: Why does density change when salt is added to water?**

Measure the exact changes in mass and volume while creating a 4% solution.

4% Salt Solution

**1) Measure exactly 96 ml of fresh water.**

**Why is 96 g = 96 mL of water?**

**2) Add 4.0 g of salt to the 96 g of water.**

**3) Stir until dissolved. (Use pipette)**

**4) Measure new volume. \_\_\_\_\_\_ ml**

**5) Calculate density = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Solve below)**

 M 96.0 g water + 4.0 g **salt** 100.0 g

 V New volume:\_\_\_\_\_\_\_\_\_\_\_ ml \_\_\_\_\_\_\_ml \_\_\_\_\_\_mL

**How did mass and/or volume change in order to cause the density of the water to increase?**