

Exercises (Mass Percent) from Chem Libre

1. 5.0 grams of sugar are dissolved in 150 g of water. What is the mass percent of sugar in the solution?
2. A 200-gram solution of alcohol contains 180 mL of water. What is the mass percent of alcohol? (Remember water's density.)
3. How many grams of NaBr are needed to make 50 g of a 5.0% solution?
4. How many grams of LiOH are needed to make 25 g of a 4.0 % solution?
5. What mass of NaF must be mixed with 25 mL of water to create a 3.5% by mass solution?
6. An 800 g solution of Kool-Aid contains 780 g of water. What is the mass percent of solute in this solution?
7. What is the mass percent of a solution created by adding 10 g of olive oil to 90 g of vegetable oil?
8. If a 4000g solution of salt water contains 40g of salt, what is its mass percent?

Exercises (Mass Percent)

1. 5.0 grams of sugar are dissolved in 150 g of water. What is the mass percent of sugar in the solution?

$$5/(5 + 150) * 100 \% = 3.2 \%$$

2. A 200-gram solution of alcohol contains 180 mL of water. What is the mass percent of alcohol? (Remember water's density.)

$$(200 - 180)/200 * 100 \% = 10.0\%$$

3. How many grams of NaBr are needed to make 50 g of a 5.0% solution?

$$0.05(50) = 2.5 \text{ g}$$

4. How many grams of LiOH are needed to make 25 g of a 4.0 % solution?

$$0.04(25) = 1.0 \text{ g}$$

5. What mass of NaF must be mixed with 25 mL of water to create a 3.5% by mass solution?

$$x/(x+25) = 0.035$$
$$x = 0.91 \text{ g}$$

6. An 800 g solution of Kool-Aid contains 780 g of water. What is the mass percent of solute in this solution?

$$(800 - 780)/800 * 100\% = 2.5\%$$

7. What is the mass percent of a solution created by adding 10 g of olive oil to 90 g of vegetable oil?

$$10/(10+90)* 100\% = 10\%$$

8. If a 4000g solution of salt water contains 40g of salt, what is its mass percent?

$$40/4000 * 100\% = 1.0\%$$