

SOLUTIONS

CLASSIC

Percentage Concentrations

Date:

1. What is the percentage concentration of solution by mass that is obtained by mixing 40 g sugar and 160 g water?(20%)
2. What is the percentage concentration of solution by mass that is obtained by mixing 20-g alcohol and 180 g water? (10%)
3. 30 g NaCl is dissolved in 270 g water. What is the percentage concentration of solution by mass?(10%)
4. 50 g KOH is dissolved in 200 g water. What is the percentage concentration of solution by mass?(20%)
5. What is the mass of solute that is in 200 g of 25% $\text{Ca}(\text{OH})_2$ solution by mass?(50 g)
6. What is the mass of solute that is in 400 g of 15% $\text{Ba}(\text{OH})_2$ solution by mass?(60 g)
7. What is the mass of solvent that is in 250 g of 20% KOH solution by mass?(200 g)
8. What is the mass of solvent that is in 500 g of 10% $\text{Mg}(\text{OH})_2$ solution by mass?(450 g)
9. What is the percentage concentration of the solution obtained by mixing 200 g of 20% NaCl, 100 g of NaCl and 200 g water? (28%)
10. 50 g salt is added into 200 g of 25% salt solution. What is the percentage concentration of the new solution? (40%)
11. 10 g sugar is added into 40 g of 20% sugar solution by mass. What is the percentage concentration of the new solution? (36%)
12. What is the percentage concentration of the solution that is obtained by mixing 60 g of 40% sugar solution, 60 g of 20% sugar solution and 60 g water? (17 %)
13. 20% salt solution contains 20 g water. What is the mass of salt? (5 g)
14. What is the mass of water that is in 30% salt solution containing 60 g salt? (200 g)
15. What is the mass of KOH that is in a 100 g, 30% alcohol solution?
16. Suppose that we have 200 g of solution. If it is 25% water solution of alcohol by mass what are the mass of solvent and solute?
17. Suppose that we have 500 g of solution. What are the mass of solute and solvent if it contains 40% salt in water solution?
18. Calculate the new concentration of 200 g aqueous solution that contains 60% sugar after following process.
 - a) It is mixed with 100 g water.
 - b) It is mixed with 20 g sugar
 - c) It is mixed with 100 g aqueous solution that contains 40% sugar by mass.
 - d) 40 g of water is evaporated from it.
 - e) It is mixed 50 g sugar and 50 g water.
19. Calculate the percentage by mass of solute in each of the following process.
 - a) 25 g sugar in 75 g water.
 - b) 20 g salt in 140 g water.
 - c) 40 g KOH in 120 g alcohol.
 - d) 10.8 g sugar in 10.2 g water.