

Unit 6 – Chapter 11: Solutions & IMFs

Name _____

Beer's Law Lab Conclusion Questions

Period _____

- 1) A solution is made by dissolving 25 g NaCl in enough water to make 1.0 liter of solution. Assume that the density of the solution is 1.0 g/cm^3 . Calculate the a) mass percent, b) molarity, c) molality, and d) mole fraction of NaCl.

- 2) A solution is prepared by dissolving 50.0 grams of cesium chloride (CsCl) in 50.0 grams of water. The density of the solution is 1.58 g/mL . Calculate the a) mass percent, b) molarity, c) molality, and d) mole fraction of the cesium chloride.

- 3) In a solution of acetone and ethanol, the mole fraction of the acetone is 0.40. What is the concentration of acetone as a mass percent?

- 4) A 1.37 M solution of citric acid ($\text{H}_3\text{C}_6\text{H}_5\text{O}_7$) in water has a density of 1.10 g/mL . Calculate the a) mass percent, b) molality, and c) mole fraction of the citric acid.

- 5) The most concentrated aqueous solution of NaOH that can be prepared is approximately 50% by mass. Calculate the a) mole fraction and b) molality of NaOH in this solution.