

WS 18.3 Solutions

Name _____

1) You add 24.3 g of KI to 500. mL of pure water. The final volume comes out to be 505. mL.

Which substance is the solute? _____ The solvent? _____

a) What is the **total mass** of the solution?

b) What is the **mass percent of KI** in the solution?

d) What is the **mole fraction of KI** in the solution?

e) What is the **molarity** of the solution?

2) a) You mix together 100. grams of H₂O and 78.9 grams of ethanol CH₃CH₂OH (MM = 46.07 g/mol) . Find the **mole fraction of ethanol** in this solution.

b) If the final volume comes out to be 195. mL, find the **molarity** of the ethanol in this solution.

c) Find the **density** of the final solution.

d) Find the **MOLALITY** of the solution, assuming ethanol is the solute.

3) How is the unit MOLALITY different than MOLARITY?