

*V-1 ____ C ____ NC
**V-2 ____ C ____ NC

Chemistry 151
Worksheet 13

Name: _____

*A. (2.0 pts.) Determine the molal concentration of a solution prepared by dissolving 30.0g of KOH in 0.300kg of water. (At. Wt. K=39.1, H=1.0, O=16.0amu)

**B. (2.0 pts.) 150mL of 4.00M H₂SO₄ is diluted with water to a volume of 600mL. Find the molar concentration of H₂SO₄ in the diluted solution.

C. (3.0 pts.) A 22.0% by mass solution of LiCl in water has a density of 1.127g/mL. (At. Wt. Li=6.94, H=1.0, O=16.0, Cl=35.5amu)

1. Determine the molar concentration of LiCl.

2. Determine the molal concentration of LiCl.

3. Determine the mole fraction of LiCl in this solution.

D. (2.0 pts.) Determine the percent by mass CaCl₂ in a 6.25 molal CaCl₂ solution. (At. Wt. Ca=40.1, Cl=35.5amu)

E. (1.0 pts.) A certain reaction requires 12.5g of Mg(OH)₂. Determine the volume of a 2.50M solution of Mg(OH)₂ that would provide this needed mass of Mg(OH)₂. (At. Wt. Mg=24.3, O=16.0, H=1.0amu)