**Colligative Properties Practice Problems**

1. What will the boiling point of a 4.5 m sucrose solution be? (Kb = 0.512o C/m)
2. If I make a solution by adding 30.0 grams of glucose (C6H12O6) to 2.0 kg of water, what will the melting point of this solution be? (Kf = 1.86o C/m)
3. Which will have a lower boiling point, a 0.05 m solution of sucrose or a solution of l-alanine (C3H7­NO2) made by placing 0.40 grams of l-alanine in 230 mL of water?
4. Acetic acid (C2H4O2) has a melting point of 16.6o C. If I were to try and decrease the melting point by 5.0 degrees, how concentrated a solution would I need to make? (Kf of acetic acid is 3.9o C/m)
5. If I dissolve ethanol in water (boiling point = 78o C), the boiling point of the resulting solution decreases rather than increasing as we’ve seen. Why do you believe this is?