

Some sample colligative properties and concentration problems ...

(1) What is the freezing point of a 41% solution of urea in water?



(2) 0.2436 g of an unknown substance is dissolved in 20.0 mL of cyclohexane, C_6H_{12} . If the freezing point depression of this solution is 2.5 C, what is the molecular weight of the unknown? The density of cyclohexane at the temperature the cyclohexane volume was measured is 0.779 g/mL.

(3) Commercial sulfuric acid is 18.0 M. If the density of the acid is 1.802 g/mL, what is the molality?

