

3. Which solution will have a higher boiling point: A solution containing 105 g of sucrose ($C_{12}H_{22}O_{11}$) in 500. g of water, or a solution containing 35 g of NaCl in 500. g of water?

4. 0.546 g of a compound with a van't Hoff factor of 1 was dissolved in 15.0 g of benzene. The freezing point of the solution was found to be $0.240^{\circ}C$ lower than the freezing point of pure benzene. If K_f for benzene is $5.12^{\circ}C/molal$, what is the molar mass of the compound?