

(13.629) 32.5g $C_3H_8O_3$, 125g H_2O , 343K.
 0.353 mole, 6.94 mole

$VP_{soln} = X_{solvent} P^{\circ}$

$VP_{soln} = 0.95 (233.7 \text{ torr})$

222.38 torr

$X_{H_2O} = \frac{\text{Mole } H_2O}{\text{Mole } C_3H_8O_3 + \text{Mole } H_2O} = \frac{6.94}{0.353 + 6.94} = 0.95$

233.7 torr
 VP pure H_2O

Jan 4-8:13 AM

(13.73) 44.2mg $C_8H_9O_4$ (ASA), 0.358L H_2O , 25°C

$f_{m,d} \pi$

$PV = nRT$
 $PV = \frac{g}{MW} RT$

$P = \frac{\frac{g}{MW} RT}{V}$

$P = \frac{0.0442 / (180) (0.08206) 298}{0.358} = 0.0168 \text{ atm}$

Jan 4-8:19 AM

① BP ↑ } $\Delta T = (K \times m) \cdot i$ ← # of ions present in soln.
 ② FP ↓ } \swarrow Van't Hoff factor
 ③ VP ↓ $VP = X_{\text{solvent}} P^{\circ}_{\text{pure solvent}}$
 ④ $\Pi \uparrow$ $PU = nRT$, $P = \frac{n}{V}RT$, $\Pi = MRT$

Jan 4-8:22 AM

$\Delta T = (K \times m) \cdot i$ ← # ions present. If covalent then $i=1$
 Change in Temp. \swarrow
 Normal BP + ΔT \swarrow K_b
 Normal FP - ΔT \swarrow K_f
 Molality = $\frac{\text{Moles solute}}{\text{Kg solvent}}$

Jan 4-8:28 AM

Add 5g NaCl to 100g H₂O. New BP=?

$K_b = 0.52 \text{ m/}^\circ\text{C}$

$$\Delta T = (K_b \times m) i$$

$$= \left(0.52 \times \frac{5}{58} \right) \times 2 = 0.9$$

\swarrow molar = $\frac{g}{MW}$
 \searrow p

100 + 0.9
100.9

Jan 4-8:31 AM

<u>Solution</u>	<u>Suspension</u>	<u>colloid</u>
<ul style="list-style-type: none"> - homogeneous mixture - Never settles out. <p>really really really very very very small particles stay suspended.</p>	<p>Shake up + snow globe.</p> <ul style="list-style-type: none"> - Settles quickly <p>Large particles.</p>	<p>Dust in the wind "KANSAS"</p> <p>Small but will settle out.</p>

Jan 4-8:38 AM

PS13

skip 9, 11

Jan 4-8:47 AM