Chemistry 2201 Lab: RAOULT

Determining if a binary mixture is behaving ideally and obeys RAOULT's Law.

$$P_{total} = P°_A \cdot X_A + P°_B \cdot X_B$$

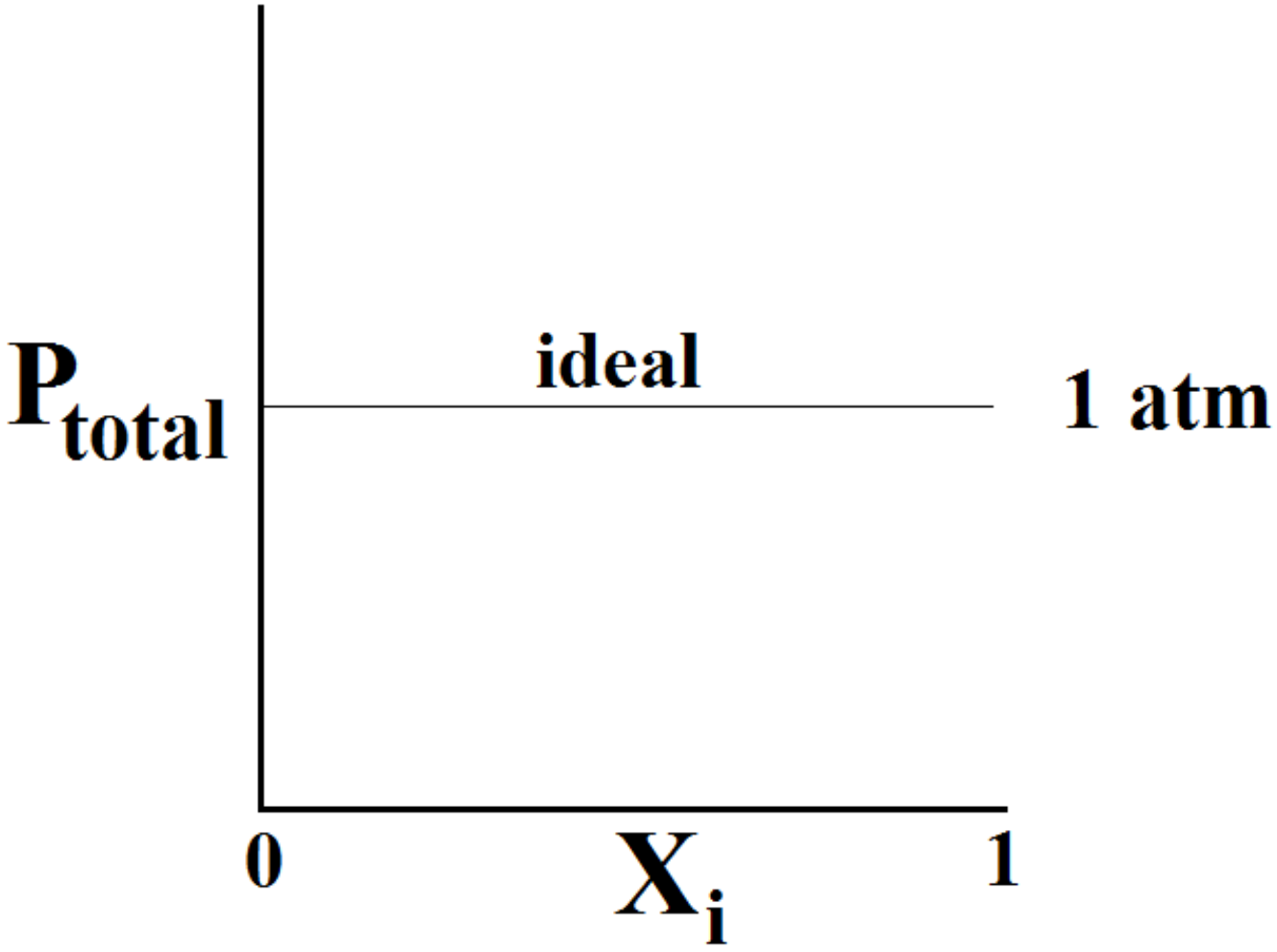
Measure Boiling-Point(BP) of a binary mixture as a function of composition(X_i).

From BP determine P° of each component A and B($P°_A$ and $P°_B$).

Calculate P_{total}.

$$P_{total} = P°_A \cdot X_A + P°_B \cdot X_B$$

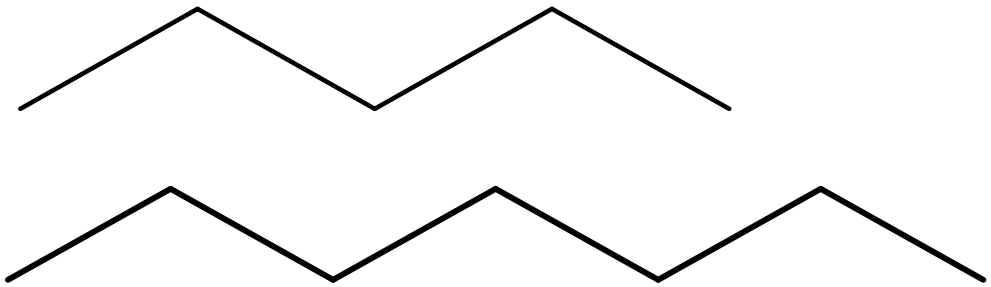
Plot of P_{total} vs. X.



Mixture behaving ideally if interaction between pure components same as components of mixture.

Mixture1

n-pentane/n-heptane **“Ideal”**



Mixture2

n-pentane/2-propanol **“Non-ideal”**