

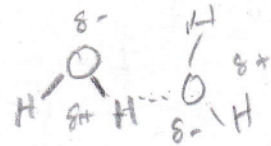
Day 31

Good Morning!

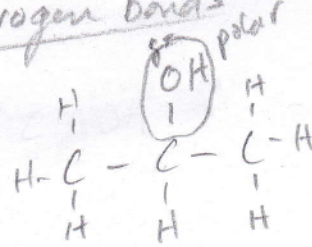
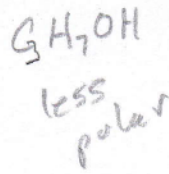
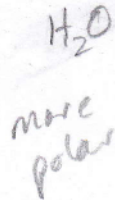
Intermolecular forces

Review nonpolar/polar evaporation/boiling

very strong intermolecular forces are formed when hydrogen is bonded to F, O, or N. These are called hydrogen bonds



evaporation of water vs alcohol



two factors

1. polarity
2. mass

more polar \Rightarrow harder to evap.
 more mass \Rightarrow harder to evap.

$H_2O \Rightarrow$

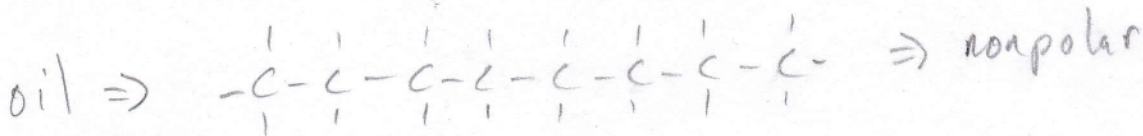
$$\begin{array}{r} 2 \times 1 = 2 \\ 1 \times 16 = 16 \\ \hline 18 \end{array}$$

C_3H_7OH

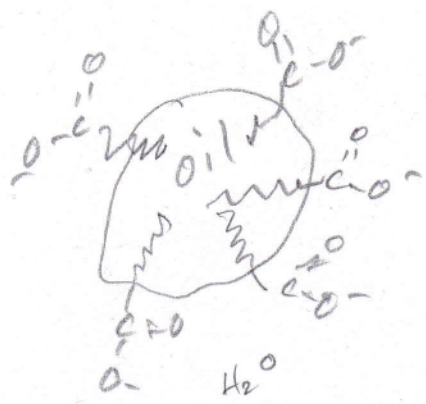
$$\begin{array}{r} 3 \times 12 = 36 \\ 8 \times 1 = 8 \\ 1 \times 16 = 16 \\ \hline 60 \end{array}$$

A + B

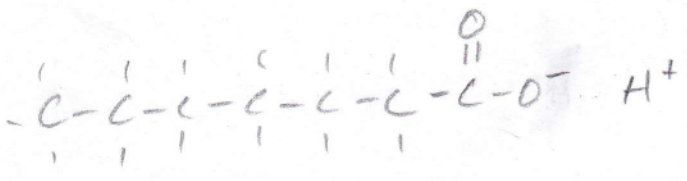
more mass	more polar	mass predict	polarity predict	evap. faster
A	A	B	B	B
A	B	B	A	? (not conclude)
B	A	A	B	? "
B	B	A	A	A



polar dissolves in polar
 nonpolar " " nonpolar
 polar and nonpolar don't mix



detergent



⇒ inter. forces between H_2O + glass
 must be stronger than H_2O to H_2O



⇒ water-water + side-side
 are equal



⇒ lig-lig. stronger than lig-side

water "beads-up" on wax
 water-water ⇒ stronger
 water-car