

CHE 102 – Review – E2 – Miscellaneous

1. Miscellaneous

Draw an example of Primary, Secondary and Tertiary Alcohols.	Why does it matter if an alcohol is 1°, 2°, or 3°?
What is a thiol? How do you name a thiol? Draw and name an example.	What is the difference between Intermolecular and Intramolecular Dehydration? Draw two reactions illustrating this.
Draw and label (a) hemiacetal, (b) hemiketal (c) acetal (d) ketal.	What are some common uses for Alcohols? Ethers? Aldehydes? Ketones?

2. Oxidation and Reduction

Define Oxidation and Reduction in terms of the Gain and Loss of (a) electrons (b) bonds to Oxygen (c) bonds to Hydrogen (d) energy transfer.	What reaction arrows are associated with oxidation/reduction reactions?
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3. IMF's

Intermolecular Force	Definition + Important Details	Example	Miscellaneous
London Dispersion Forces (LDF)			
Dipole-Dipole (DD)			
H-bonding (HB)			
Ion-Dipole (ID)			
Ionic (I)			

4. Effect of IMF's on Solubility and Boiling Points/Melting Points

Effect of Functional Groups on Solubility in Water (Alcohol, Ether, Aldehyde, Ketone)	Effect of Functional groups on Boiling Point/Melting Points. (Alcohol, Ether, Aldehyde, Ketone)
<p>Draw an example of the Hydrogen bonding between:</p> <p>(a) Water – Water</p> <p>(b) Water – Alcohol</p> <p>(c) Alcohol-Alcohol</p>	Draw an example of the functional group in Alcohols, Ethers, Aldehydes and Ketones and discuss the IMF each is capable of.
How does the size of the R group on a molecule effect: Boiling and Melting Points? Why?	How does the size of the R group on a molecule effect: Solubility? Why?