

Name: Khalea Obayem Bichards

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Department: MBBS

Course: Chem 102

Assignment

1) A) Based on the number of hydrogen attached to the carbon carrying the functional group.

a) Primary alcohols: If the number of hydrogen attached to the carbon carrying the -OH is 2 or 3 e.g. $\text{C}_2\text{H}_5\text{OH}$ - Ethanol

b) Secondary alcohols: If the no of hydrogen attached to the carbon carrying the -OH is just 1. E.g. $\text{C}_3\text{H}_7\text{OH}$ - Propan-2-ol

c) Tertiary alcohols: If there is no hydrogen atom attached to the carbon carrying the hydroxyl group. E.g. $(\text{C}_2\text{H}_5)_2\text{CH}$ - 2-methyl-propan-2-ol

B) Based on the no of hydroxyl groups present in the compound.

a) Monohydric alcohols: They are alcohols with just one hydroxyl group e.g. $\text{C}_3\text{H}_7\text{OH}$ - propanol

b) Dihydric alcohols: They have 2 hydroxyl groups e.g. $\text{C}_2\text{H}_4(\text{OH})_2$ - Ethan-1,2-diol.

c) Trihydric alcohols: They have 3 hydroxyl groups. e.g. Propan-1,2,3-triol - $(\text{C}_3\text{H}_5(\text{OH})_3)$

2) Alcohols especially those with 3 and less no of carbon atoms in ~~their~~ their molecules are soluble in water because they can form hydrogen with water molecules. Also, all monohydric alcohols are soluble in organic solvents.

3) Industrial preparation of Ethanol



