

Carbonyl bond  
Electron repulsion  
15/02/2019  
Chem 012

(1) Alcohols are organic compounds with functional group  $-OH$  they are often represented as  $R-OH$  where  $R$  is an alkyl group.  
They are classified into:-  
Primary alcohol - This is when the  $-OH$  group is bonded to the hydroxyl group and it is attached primary.  
Secondary alcohol - This is when the hydroxyl group is attached to a secondary carbon atom.  
Tertiary alcohol - This is when the hydroxyl group is attached to a tertiary carbon atom, which is bonded to three other carbons.  
Examples of the classification of alcohols:-  
Primary alcohols: ethanol, propan-1-ol.  
Secondary alcohols: butan-2-ol, propan-2-ol.  
Tertiary alcohols: 2-methylpropan-2-ol.

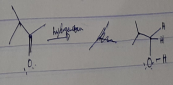
(2) Solubility  
Alcohols can react to form hydrogen bonds with water molecules. They are polar.  
Alcohols are not soluble in alkanes, alkenes and they are slightly soluble in halogenoalkanes and amines.  
Extraction: On a sugar-based starting fluid like kerosene, it is being added to remove from impurities. Then it is passed to a condenser, to release moisture. The methyl process extracts the fuel. The steam is then condensed.

carbons become energy is released or extracted energy.

Sugar production: After extraction the juice is stored. Several clarifications, uses sulphite and long filtered by heat and distilling. The juice is heated to 185°C to lower molecular contaminants and to facilitate the coagulation of colour and insoluble matter of green and white. Molasses are mixed with sugar cane juice to produce ethanol ready for yeast fermentation.

Fermentation process: This process starts by using sugarcane juice or molasses (molasses and sugarcane juice) then the different types are of fermentation can be used such as Batch process, The fed-batch process is commonly used in 70% - 75% operational distillers, the fermentation is handled at 6-16 hours.

(16) Molecular reaction of 2-methylpropan-2-ol  
Upon hydrogenation, it is supposed to reduce the compound by adding 2 hydrogen molecules. The  $C=O$  bond has the most electron density the oxygen has electronegativity, because the bond to be partially charged more the carbon.



(8) Propan-1-ol to Propan-2-ol  
Propan-1-ol + concentrated  $H_2SO_4 \rightarrow$  propan + heat  
Propan + heat  $\rightarrow$  Propan-2-ol.  
When propan-1-ol is treated with concentrated sulphuric acid the phenomenon called dehydration occurs due to the removal of a water molecule from propan-1-ol gets dehydrated. Propan-1-ol gets converted to propene.  
 $CH_3CH_2CH_2OH \xrightarrow{Conc. H_2SO_4} CH_3CH=CH_2$   
Propene can be hydrolyzed in markownikoff's addition to propan-2-ol. Due to the hydrolysis of water, the negative part attaches itself to the propene and thus convert it as propan-2-ol.  
 $CH_3-CH=CH_2 \xrightarrow{H_2O} CH_3-CH_2-CH_2-OH$