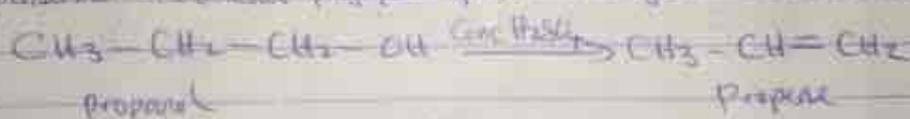


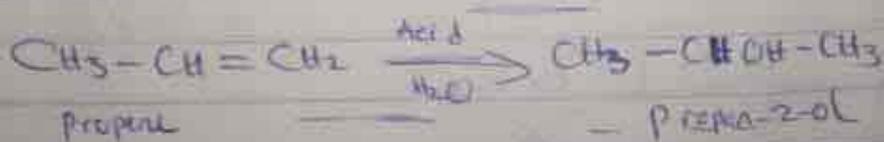
Q. Ans: To convert propan-1-ol to propan-2-ol
Materials: Concentrated Sulphuric acid with

Process: Dehydration of Propanol, Hydration of propene to propan-2-ol
When propan-1-ol is treated with Conc H_2SO_4 the phenomenon called
is dehydration occurs - due to which water molecule from propan-1-ol gets
eliminated. As a result propan-1-ol gets converted to propene



Hydr. Hydration of Propene (react)

Propene obtained above is treated with H_2O which gets added to propene
in presence of acid (catalyst). This addition takes place according to
Markovnikov's rule



① Alcohols are classified based on the number of hydrogen atoms attached to the carbon atom containing the hydroxyl group. If the number of hydrogen atoms attached to the carbon atom bearing the hydroxyl group are 2 or 3 it is called a PRIMARY ALCOHOL (1°). If it is one it is called a SECONDARY ALCOHOL (2°) and if no hydrogen atom is attached to the carbon atom bearing the hydroxyl group it is called a tertiary alcohol (3°)

Examples of primary alcohol - C_2H_5OH methanol, C_3H_7OH ethanol

" " secondary alcohol - $C_2H_5CH(OH)C_2H_5$ Propan-2-ol

" " tertiary alcohol - $(C_2H_5)_3C-OH$ - 2 methylpropan-2-ol

Alcohols can also be classified according to the number of hydroxyl groups they possess. Monohydric Alcohols possess one hydroxyl group in its structure. Dihydric Alcohols also called Glycols possess two hydroxyl groups in its structure while Trihydric Alcohols possess 3 hydroxyl groups present in its structure. Polyhydric alcohols possess more than three hydroxyl groups

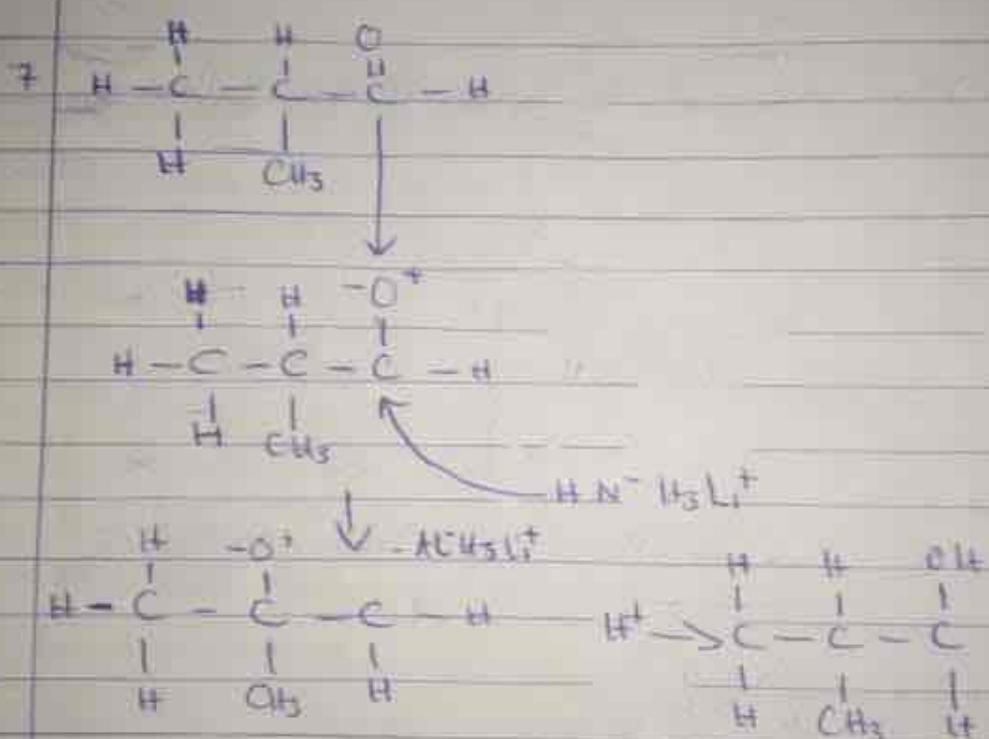
Examples

$CH_3CH_2CH_2OH$ - Propanol (Monohydric Alcohols)

$HOCH_2CH_2OH$ - Ethane-1,2-diol (Dihydric Alcohols)

$OHCH_2CH(OH)CH_2OH$ Propane-1,2,3-triol (Trihydric alcohol)

$CH_2OH(CH_2OH)_3CH_2OH$ - Heptane-2,3,4,5,6-pentanol (Polyhydric or Polyhydric alcohol)



Aim: 2, methyl propanol

8 To convert propan-1-ol to propan-2-ol

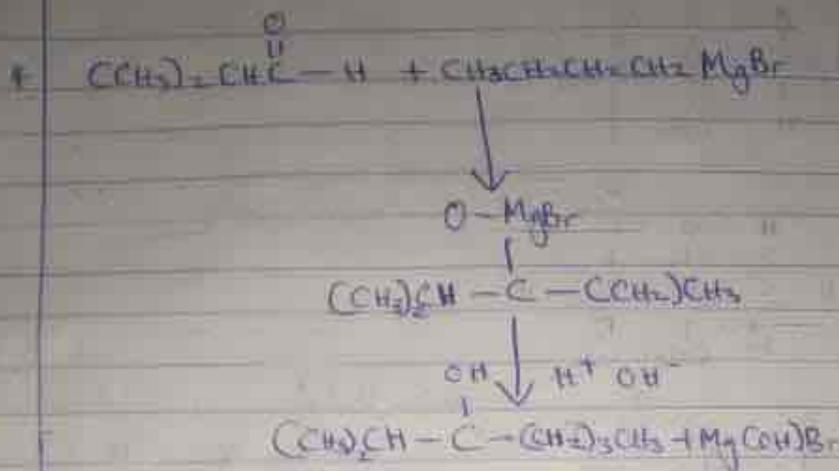
reagents: Concentrated sulphuric acid, water

Process: Dehydration of propan-1-ol to propene, Hydrolysis of propene to propan-2-ol

Steps

Dehydration of propan-1-ol

When propan-1-ol is treated with concentrated sulphuric acid, a phenomenon called dehydration occurs due to the loss of water molecule from



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