

Chemistry Assignment

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MBBS

19/MHS01/172

(1) Alcohols are very important organic compounds. Discuss briefly their classification and give one example each.

- Based on the number of hydrogen atoms attached to the carbon atom bearing the hydroxyl group.

Divided into primary, secondary and tertiary alcohols.

ex. Methanol - CH_3OH

- Based on the number of hydroxyl groups Alcohols possess.

Divided into monohydric, dihydric & polyhydric

ex. $\text{OHCH}_2\text{CH}_2\text{CH}_2\text{OH}$ - Propan-1,3,-diol

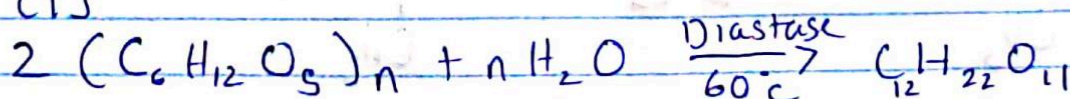
(2) Discuss the solubility of alcohols in water, organic solvent.

- lower alcohols are soluble in water and as the number of carbon atoms increase, solubility decreases

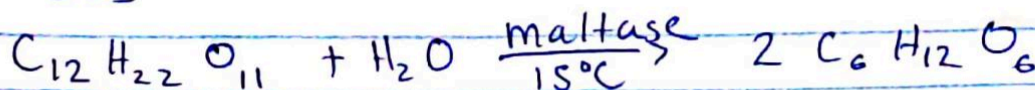
- Alcohols are always soluble in organic compounds because they're both organic.

(3) Show the three steps in the industrial manufacture of ethanol. Equations of reaction are mandatory.

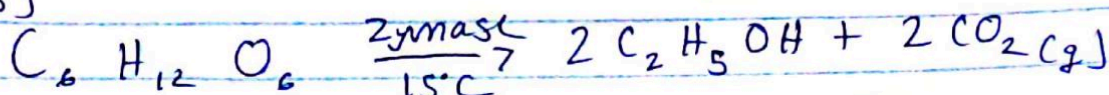
Step (1)



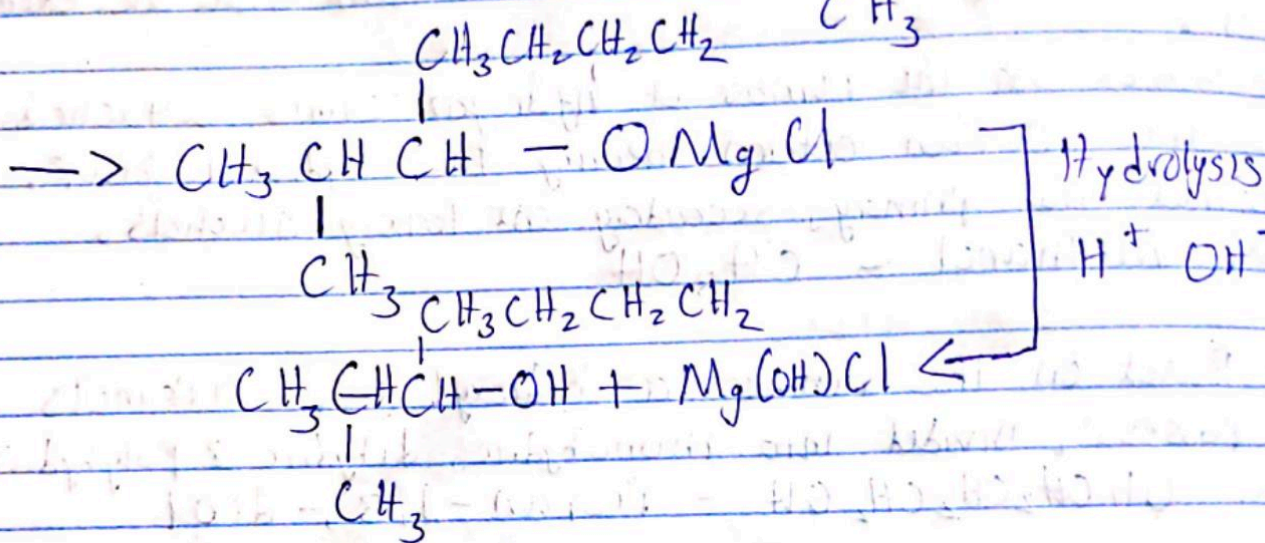
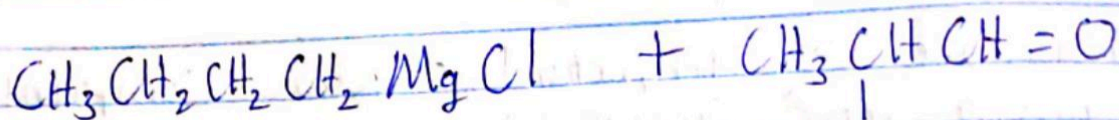
Step (2)



Step (3)



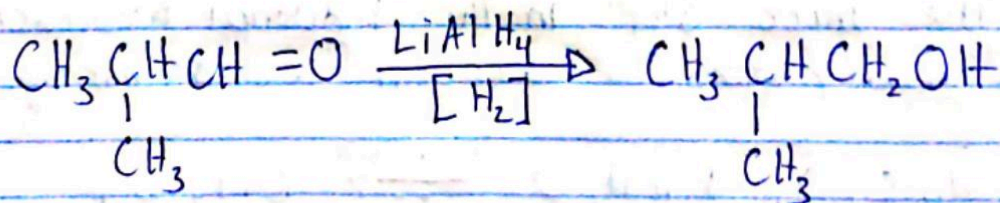
(4) Show the reaction between 2-Methylpropanal and butylmagnesium chloride that is Grignard Synthesis.



(5) we were told to skip

(6) Show the reduction reaction of 2-Methylpropanal
2-methylpropanone is not a thing so it's skipped.

(7) Show the reduction reaction of 2-Methylpropanal



(8) Propose a scheme for the conversion of propan-1-ol to propan-2-ol.

