

Assignment Answers

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There are two classification of d. One is based on the number of hydrogen atom attached to the carbon atom containing the hydroxyl group. When two or three hydrogens are attached to the one containing the hydroxyl group it is called primary alcohol. When one hydrogen is attached to the one containing hydroxyl group it is called secondary alcohol. And if no hydrogen is attached to the one carrier of hydroxyl group it is called tertiary alcohol. e.g. C_2H_5OH

The second one is based on the number of hydroxyl group present. When one hydroxyl group is present it is called monohydric, when two hydroxyl groups is present it is called dihydric (glycol), and when three hydroxyl groups are present it is called triols. Polyhydric has more than three.

2nd classification example

- ① Methanol - (1°)
- ② Ethanol - (2°)
- ③ Methylpropan-2-ol - (3°)

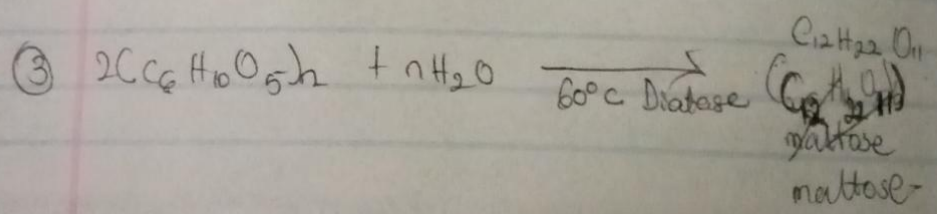
2nd classification example

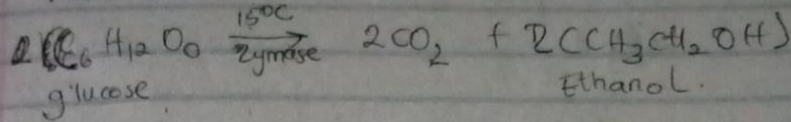
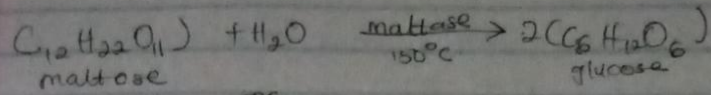
- Propanol (1°)
- Ethane 1,2-diol (2°)
- Propan 1,2,3-triol (3°)

2 In water. The lower alcohols are soluble because they can form hydrogen bond with water. The water solubility decreases with increasing relative molecular mass.

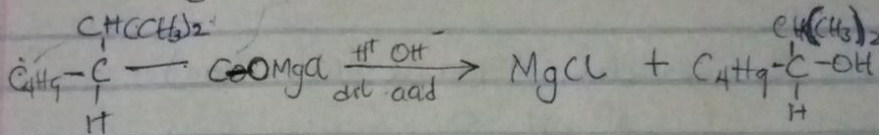
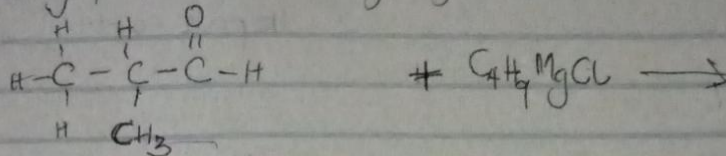
In Organic solvent.

All monohydric alcohol are soluble in organic solvent. The solubility of simple alcohols and polyhydric is due to the ability to form hydrogen bond with water molecules.



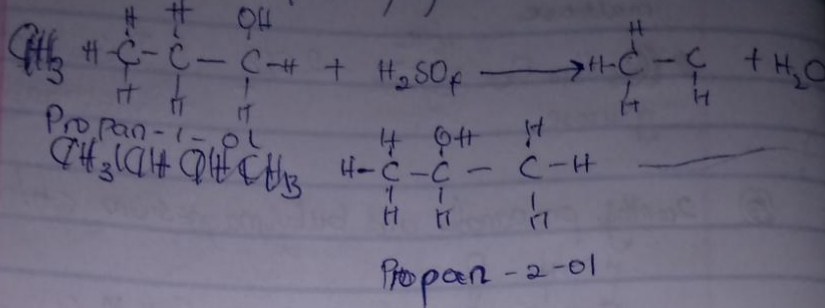


④ 2-methyl propanal and butylmagnesium chloride.



$\chi=0$

8 Convert ~~from~~ from propan-1-ol to propan-2-ol



9 2-methyl-propanal (reduction)

