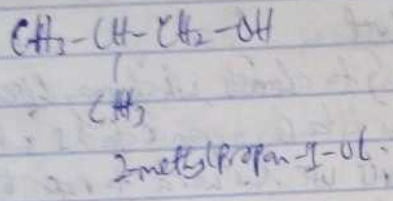
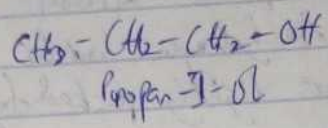
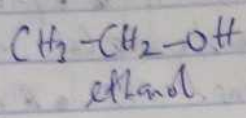


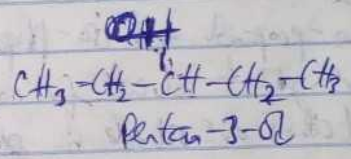
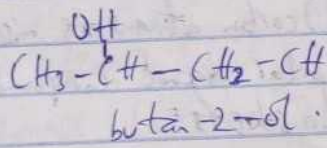
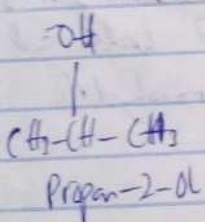
NAME: ONYENKHA KEACE (OENMI)
 DEPARTMENT: GEOLOGY
 MATRIC NO: 19/SCI 14/021
 COURSE: CHM102 Assignment Answers

(1) The classification of Alcohols and examples -

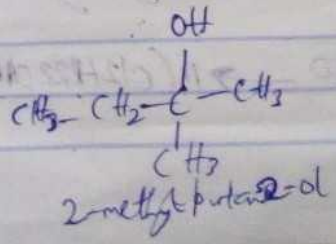
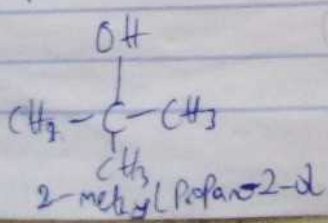
(a) Primary alcohols -> Are those alcohols where the carbon atom of the hydroxyl group (OH) is attached to only one single alkyl group. Some of the examples of these primary alcohols include methanol, propanol, ethanol etc. The complexity of alkyl chain is unrelated to the classification of any alcohol considered as primary. The existence of only one linkage among -OH group.



(b) Secondary alcohols -> Are those where the carbon atom of the hydroxyl group is attached to two alkyl groups on either side. The two alkyl groups present may be either structurally identical or even different. Examples are -



(c) Tertiary alcohols -> Are those which feature hydroxyl group attached to the carbon atom which is connected to 3-alkyl groups. The physical properties of these alcohols mainly depend on their structure. The presence of this -OH group allows the alcohols in the formation of hydrogen bonds. formed are weak and this bond makes the boiling points of alcohols higher than its alkanes. Examples are -

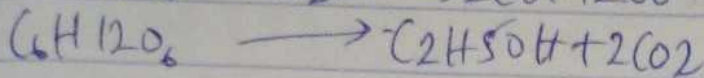
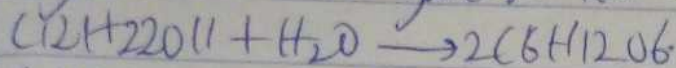


2. Fermentation of which yeast is added to maltose.

3. Yeast secretes two enzymes:

(a) Maltase: Converts maltose into glucose.

(b) Zymase: Converts glucose into ethanol.



Method 2: By the fermentation of molasses -

On industrial scale, ethanol can be prepared by the fermentation of molasses. Molasses is the mother liquor left after the crystallization of sugar cane juice. It is a dark colored viscous liquid. Molasses contains about 60% fermentable sugar.

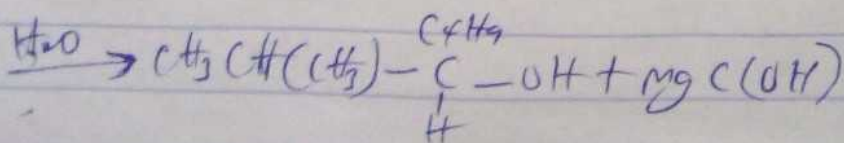
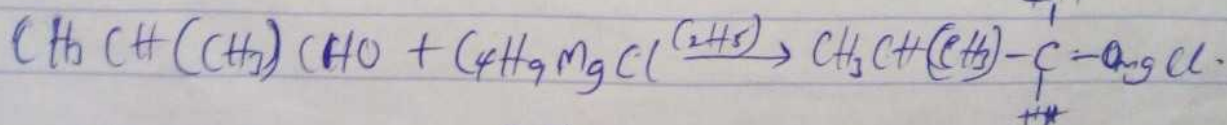
Method of Preparation:

(a) Dilution of molasses - Molasses is first diluted with water in 1:5 ratio by volume.

(b) Addition of ammonium sulphate: If nitrogen content of molasses is small, it is now fortified with ammonium sulphate to provide adequate supply of nitrogen to yeast.

(c) Fermentation: The resulting solution is received in a large tank and yeast is added to it at $30^\circ C$ and kept for 2 to 3 days. During this period, enzymes sucrase and zymase which are present in yeast, convert sugar into ethyl alcohol.

(4) The reaction between 2-methylpropanone and butylmagnesium chloride.



(5) The Reaction between 2-methyl propanone and Butylmagnesium chloride.

(6) The reduction reaction of 2-methyl propanal.

