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COURSE CODE: CHM 102

MATRIC NUMBER: 19/MHS02/070

1] The classifications are;

A. CLASSIFICATION BASED ON THE NUMBER OF HYDROGEN ATOMS:

This is based on the number of hydrogen atoms attached to the carbon atom containing the hydroxyl group. This is made up of the primary alkanol, secondary alkanol and tertiary alkanol. The primary alkanol which is made up of two or three carbon atoms attached to the hydrogen atom. The secondary alkanol which is made up of one carbon atom attached to the hydrogen atom. The tertiary alkanol which is made up of no carbon atom attached to the hydrogen atom.

Examples;

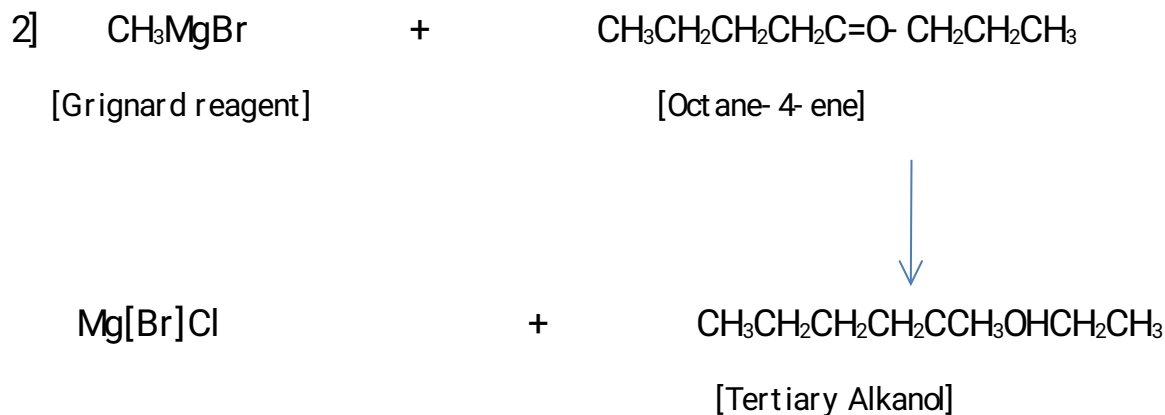


B. CLASSIFICATION BASED ON THE NUMBER OF HYDROXYL GROUP THEY

POSSESS: This is made up of monohydric alcohol that is made up of one hydroxyl group present in the alcoholic structure, the dihydric alcohol [Glycols] that is made up of two hydroxyl groups in their alcoholic structures. The trihydric alcohol [Triols] that is made up of three hydroxyl groups present in their alcoholic structures.

Examples;

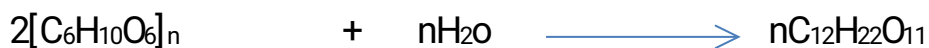




3] The biological catalysts [Enzymes] found in yeast break down the carbohydrate molecules in ethanol.

The industrial manufacture shows the following processes;

A. The starch containing the materials is warmed with malt to 60°C for a specific period of time and is converted into maltose by diastase [an enzyme] in the malt.



B. The maltose is broken down into glucose on addition of yeast which contains the enzyme maltase and at a temperature of 15°C

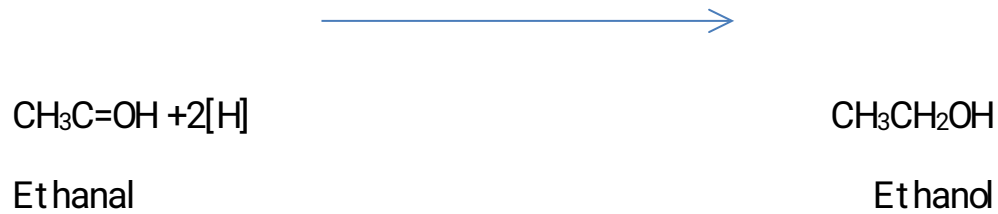


C. Glucose at a constant temp of 15°C is then converted into alcohol by the enzyme zymase also contained in the yeast



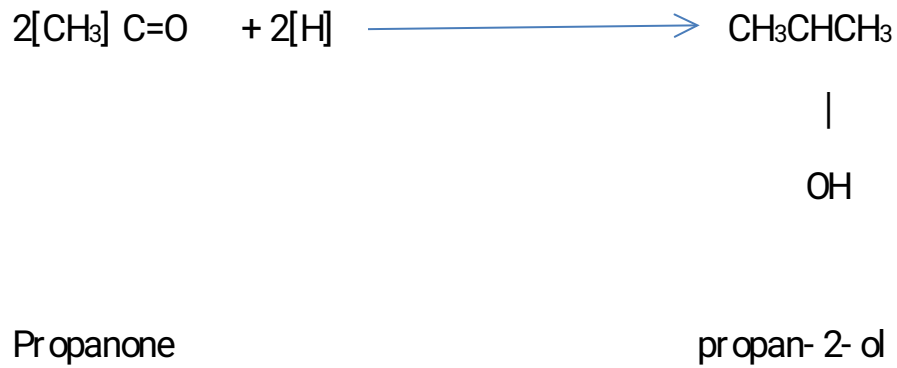
4] The product obtained from the reduction of Alkanone and Alkanals is alcohol

EQUATION [ALKANALS];



[Reduction of Ethanal to form Ethanol]

EQUATION [ALKANONE];



[Reduction of propanone to form propan-2-ol]