

19/MHS02/054

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Department: Nursing 100 level

Course: Chem 102

1. Discuss the two major classification of alkanols. Give three examples each for each class

Alkanols can be classified into two:

- (a) classification based on the number of alkyl group hydrogen alone.

Alkanol has the general molecular formula " $R-OH$ "

where " R " is the alkyl group e.g

Methyl - CH_3

Ethyl - CH_3CH_2

Propyl - $CH_3CH_2CH_2$ etc.

based on the classification, alkanols can be classified

as follows:

- (i) Primary alkanol: They have only one alkyl group or three or less hydrogen atom attached to the carbon atom that carries hydroxyl group.

e.g ethanol (1°) & Methanol (1°).

- (ii) Secondary alkanol: They have two alkyl groups or one hydrogen atom attached to the carbon that carries hydroxyl group.

e.g ethanol.

2. In the Grignard synthesis of Alkanols, react a methyl Grignard reagent with $CH_3CH_2CH_2CH_2C(=O)CH_2CH_2CH_3$. Show the reaction steps.

