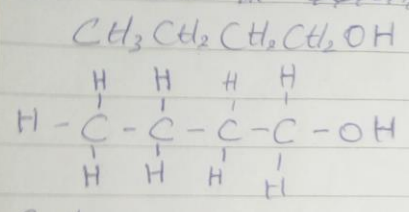


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Chemistry Assignment

① Classification of alcohol

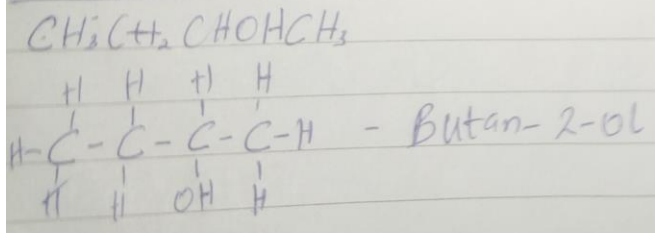
1) Primary alcohol: A primary alcohol has only one alkyl or aryl group attached to the carbon bearing the -OH. A secondary alcohol examples



Butan-1-ol

Secondary alcohol: A secondary alcohol has 2 alkyl or aryl groups attached to the carbon bearing the -OH.

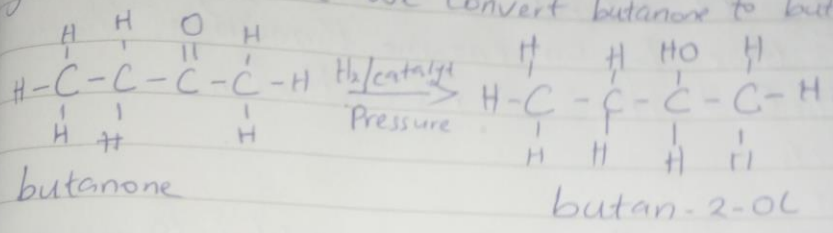
Examples



Reduction of alkanones and alkanal

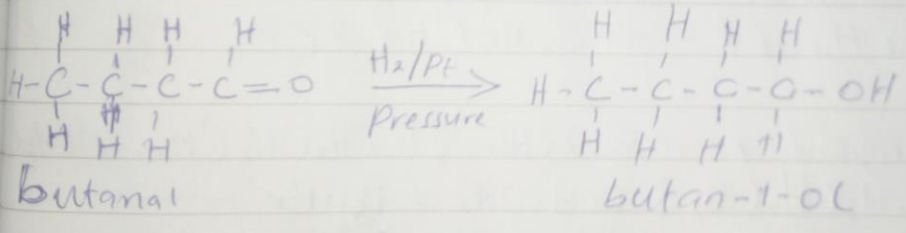
The reduction of alkanones produces a secondary alcohol

Example: Using a ~~Nickel~~ catalyst with hydrogen gas under pressure we convert butanone to butan-2-ol



The reduction of alkanal produces a ~~secondary~~ ^{Primary} alcohol

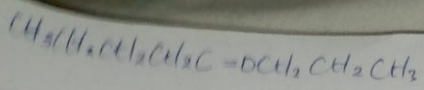
Example: Using a platinum catalyst with hydrogen gas under pressure we convert butanal to butan-1-ol



Industrial Preparation of Ethanol

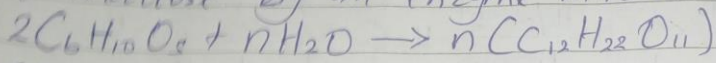
Preparation Steps

Extraction of Starch! Crushed potato is stirred at ~~100°C~~ ~~to 150°C~~ 140°C to 150°C under pressure to prepare starch solution known as



Mash Germination before hydrolysis, starch is first undergo germination at 10°C to 13°C for few days. This germinated starch is called MALT.

Hydrolysis of Starch: starch is hydrolysed to maltose by an enzyme known as diastase.

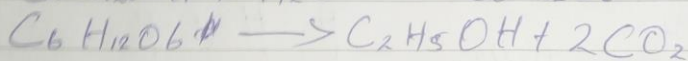
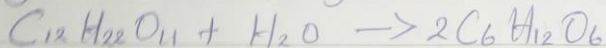


Starch
Maltose

Fermentation: finally yeast is added to maltose. Yeast secrete two enzymes.

1) Maltase: Converts maltose into glucose.

2) Zymase: Converts glucose into ethanol.



2) Original reaction with $CH_3CH_2CH_2CH_2COCH_2CH_2$

