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Department: Nursing
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Course code: Chem 102
Assignment: General Chemistry

1) a) They are classified based on the number of hydrogen atoms attached to the carbon atom containing the hydroxyl group.

- If it is more than two hydrogen atoms $\rightarrow 1^\circ$ (primary alcohol).
- If it is just one hydrogen atom $\Rightarrow 2^\circ$ (secondary alcohol).
- If it is none $\Rightarrow 3^\circ$ (tertiary alcohol).

b) They are also classified based on the number of hydroxyl group they possess

- Monohydric alcohol \Rightarrow If there is only one hydroxyl group.
- Dihydric alcohol \Rightarrow If there are two hydroxyl groups.
- Trihydric alcohol \Rightarrow If there are three hydroxyl groups.
- Polyhydric alcohol \Rightarrow If there are more than three hydroxyl groups.

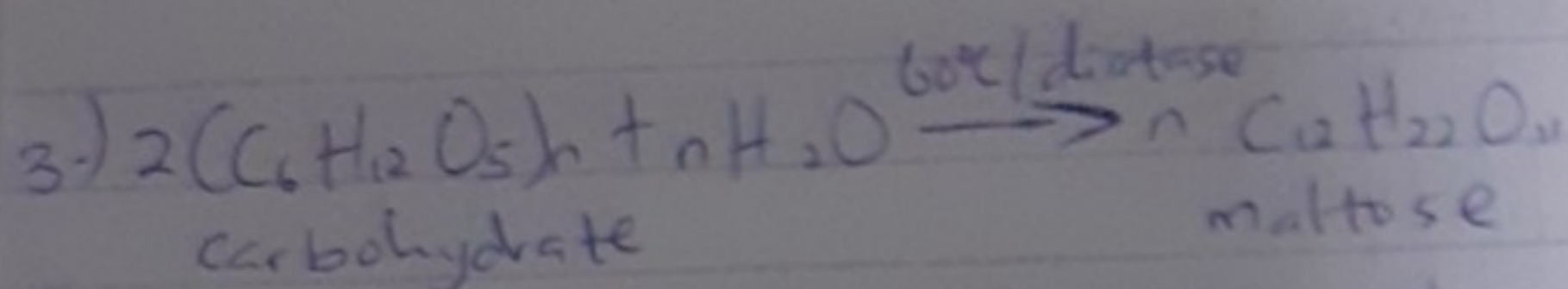
Example: $\text{HOCH}_2\text{CH}_2\text{OH}$ (Ethane-1,2-diol) dihydric alcohol

2) For water:

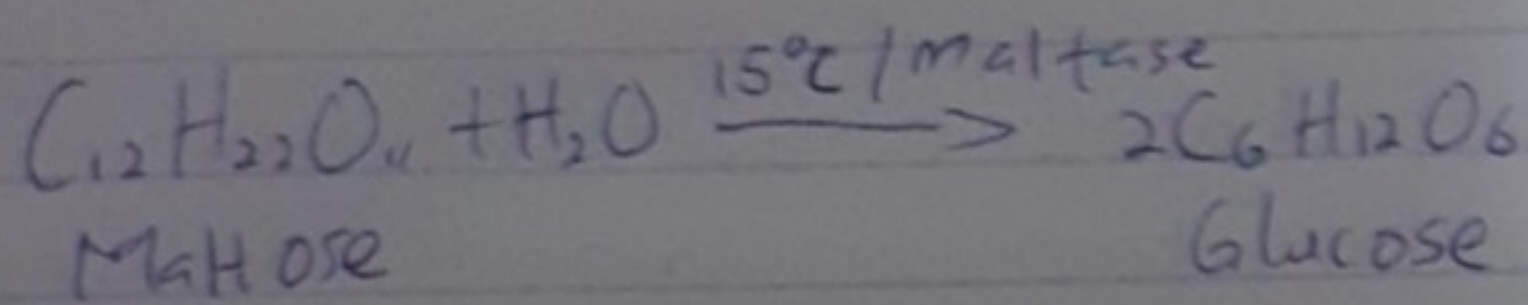
All lower alcohols with up to three carbon atoms in their molecules are soluble because they can form hydrogen bonds with water molecules.

For organic solvents:

All monohydric alcohols are soluble in organic solvents.



The maltose is broken down into glucose on addition of yeast which contains the enzyme maltase and at a temperature of $15^\circ C$



The glucose at constant temperature of $15^\circ C$ is then converted into alcohol by the enzyme zymase contained also in yeast.

