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Course: Chem 102

- 1) CH_3OCH_3 : Methoxymethane
- 2) $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$: Ethoxyethane
- 3) $\text{C}_2\text{H}_5\text{OCH}_2\text{CH}_2\text{CH}_3$: Ethoxypropane
- 4) $\text{CH}_3(\text{CH}_2)_2\text{OCH}_2\text{CH}_2\text{CH}_3$: Propoxymethane
- 5) $\text{C}_6\text{H}_5(\text{CH}_2)_2\text{O}$: Butoxybenzene

2) Properties of ethers

a) Physical states: Ethers are colorless, neutral liquid with pleasant odors at room temperature. Lower aliphatic ethers are highly flammable, gas or volatile liquid.

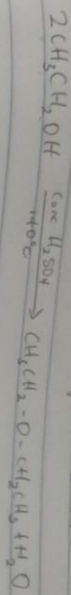
b) Solubility: Ethers are less soluble in water than corresponding alcohols. Lower molecular weight ethers are fairly soluble in water.

Boiling point: Lower molecular mass ethers have lower boiling point than corresponding alcohols while ethers containing ethyl radicals longer than four carbon chains have a higher boiling point.

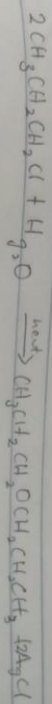
Density: Ethers are in or at moderate temperature and as such have a lower wide uses reaction media.

Density: Increases with increasing relative molecular mass. Simple ethers are less than water.

3) Two methods of preparing ethene and their reaction of reactive
Partial dehydrogenation of alcohol: Simple ethene are prepared by catalytic
dehydration of unsaturated alcohol by a process called esterification in
excess alcohol or high temperature or high as $\text{C}_{100-150}^{\circ}\text{C}$



b) From haloalkanes and dry silver oxide: Ethene can be prepared by heating
haloalkanes with dry silver oxide



4) Uses of ethylene Oxide

- 1) As a gaseous sterilizing agent
- 2) As an intermediate in the hydrolytic manufacturing ethylene glycol
- 3) Used in the manufacture of products like polyethylene glycol