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 CHM 102 Assignment

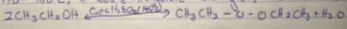
- 1)  $\text{CH}_3\text{OCH}_3$  - Methoxymethane  
 $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$  - Ethoxyethane  
 $(\text{C}_6\text{H}_5\text{CH}_2\text{O})_2$  - Dibenzyl ether  
 $\text{CH}_3\text{CH}_2\text{OCH}_3$  - Methoxyethane  
 $\text{CH}_3\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_3$  - Ethoxypropane

2) At room temperature, ethers are colourless, neutral liquids with pleasant odours. The lower aliphatic ethers are highly flammable gases or volatile liquids.

- i) Ethers are inert at moderate temperature. Their inertness at moderate temperature leads to their wide use as reaction media.  
 ii) Ethers are less soluble in water than are the corresponding alcohols.  
 iii) Most of the simple ethers are less dense than water, although the density increases with increasing relative molecular mass and some of the aromatic ethers are in fact denser than water.

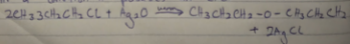
3) Partial Dehydration of alcohols:-

Simple ethers are manufactured from alcohols by catalytic dehydration. The alcohol in excess and concentrated tetraoxosulphate (VI) acid is heated at a carefully maintained temperature of  $140^\circ\text{C}$ . If excess alcohol is not used, the temperature is high as  $170-180^\circ\text{C}$ , it would dehydrate and yield an alkene.



1) From haloalkanes and dry silver(I) oxide

When haloalkanes and dry silver (I) oxide are reacted in a condition it produces an ether



- 4) It is used in the preparation of plastic and several synthetic
- 10) It is used as a gaseous sterilizing agent
- 11) It is used as an intermediate in the hydrolytic manufacture of ethylene glycol