

ODELEYE HANNATH ADEWUNMI
19/MHSU/1095 PHARMACY CHM 102

- a) CH_3OCH_3 - Methoxymethane
- b) $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ - Ethoxyethane
- c) $\text{CH}_3(\text{CH}_2\text{CH}_2\text{CH}_2)_2\text{O}$ - Butoxymethane
- d) $\text{CH}_3\text{CH}_2\text{OCH}_3$ - Methoxyethane
- e) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_3$ - Ethoxypropane

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

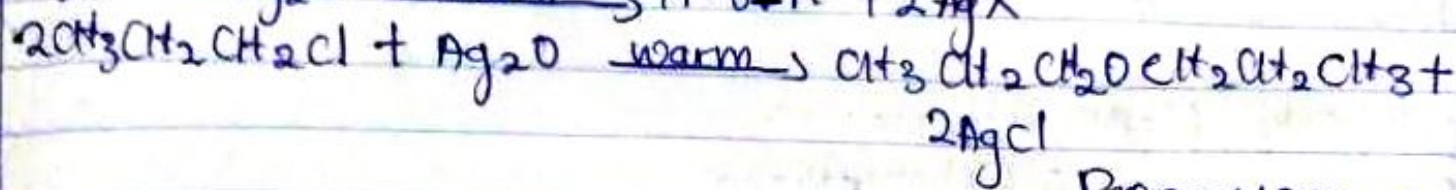
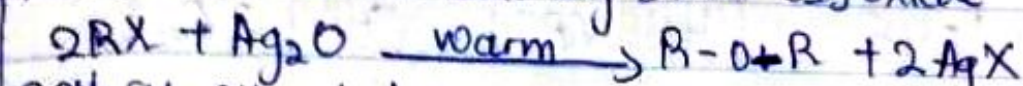
b) Reactivity: Ethers are inert at moderate temperature. Their inertness at moderate temperatures leads to their wide use as reaction media. Simple ethers are not found commonly in nature but the ether linkage is present in such natural products as sugars, starches and cellulose.

c) Density: 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.

d) Solubility: Ethers are less soluble in water than are the corresponding alcohols. Lower molecular weight ethers such as methoxymethane and methoxyethane are fairly soluble in water since the molecules are able to form hydrogen bonds with the water molecules but as the hydrocarbon content of the molecules increases, there is a rapid decline in solubility. They are miscible with most organic solvents.

3) Partial Controlled catalytic hydration of olefins
 $2\text{CH}_3\text{CH}=\text{CH}_2 + \text{H}_2\text{O} \rightarrow (\text{CH}_3)_2\text{CH}-\text{O}-\text{CH}(\text{CH}_3)_2$
2-Isopropoxypropane.

n) From haloalkanes and dry silver (I) oxide



Propoxypropane

4) Ethylene oxide is used as an intermediate in the hydrolytic manufacture of ethylene glycol

5) Ethylene oxide is used in the preparation of nonionic emulsifying agents, plastics, plasticizers and several synthetic textiles.

11) Ethylene oxide is used as a gaseous sterilizing agent.