ADEFEMI OMOSALEWA OPEYEMI
19/MHS01/024
MBBS CHM 102

1a CH_3OCH_3 → Methoxymethane
b $CH_3CH_2OCH_2CH_3$ → Ethoxyethane
c $[CH_3CH_2CH_2CH_2]_2O$ → Butoxymethane
d $CH_3CH_2OCH_3$ → Methoxy ethane
e $CH_3CH_2OCH_2CH_3$ → Ethoxypropane.

2a 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 the corresponding alcohols. Lower molecular weight ethers such as methoxymethane and metoxyethane 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 increase, there is a rapid decrease in solubility. They are miscible with most organic solvent.

3 Controlled catalysts hydration of Olefins

$2CH_3CH=CH_2 + H_2O \longrightarrow (CH_3)_2CH-O-CH(CH_3)_2$

2-Isopropoxy propane

II from Haloalkanes and dry silver [I] oxide

$2RX + Ag_2O \xrightarrow{warm} R-O-R + 2AgX$

$2CH_3CH_2CH_2Cl + Ag_2O \xrightarrow{warm} CH_3CH_2CH_2OCH_2CH_2CH_3 + 2AgCl$

Propoxypropane.

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

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

III Ethylene oxide is used as a gaseous sterilizing agent.