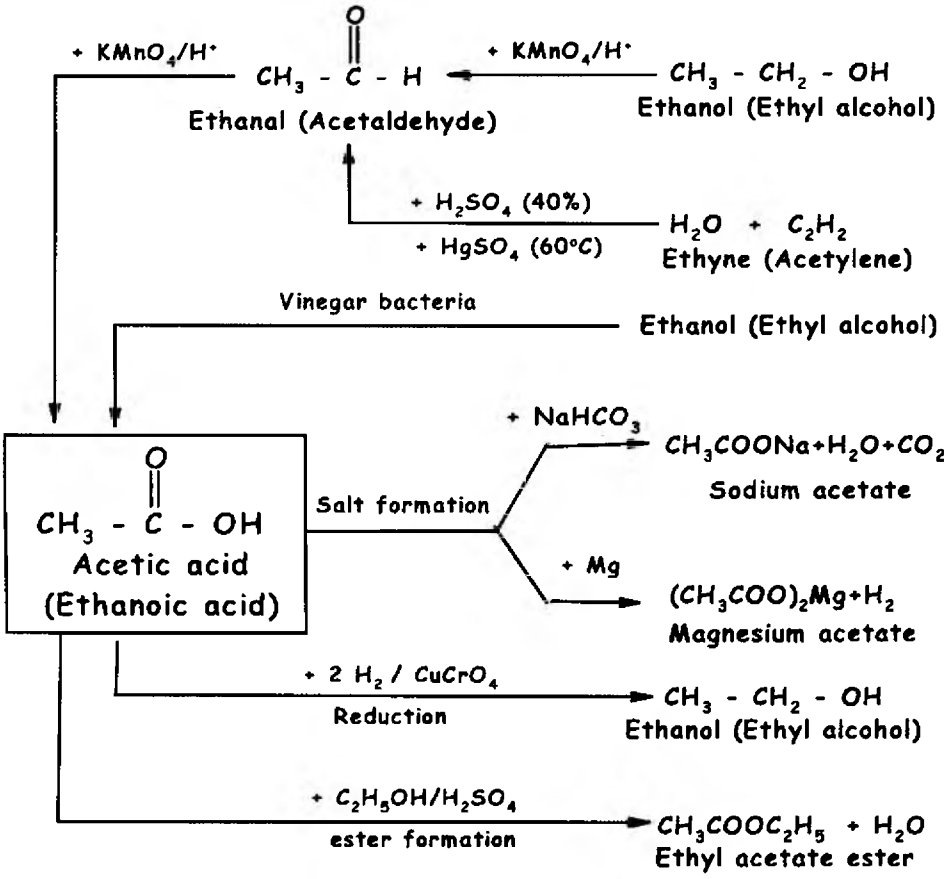
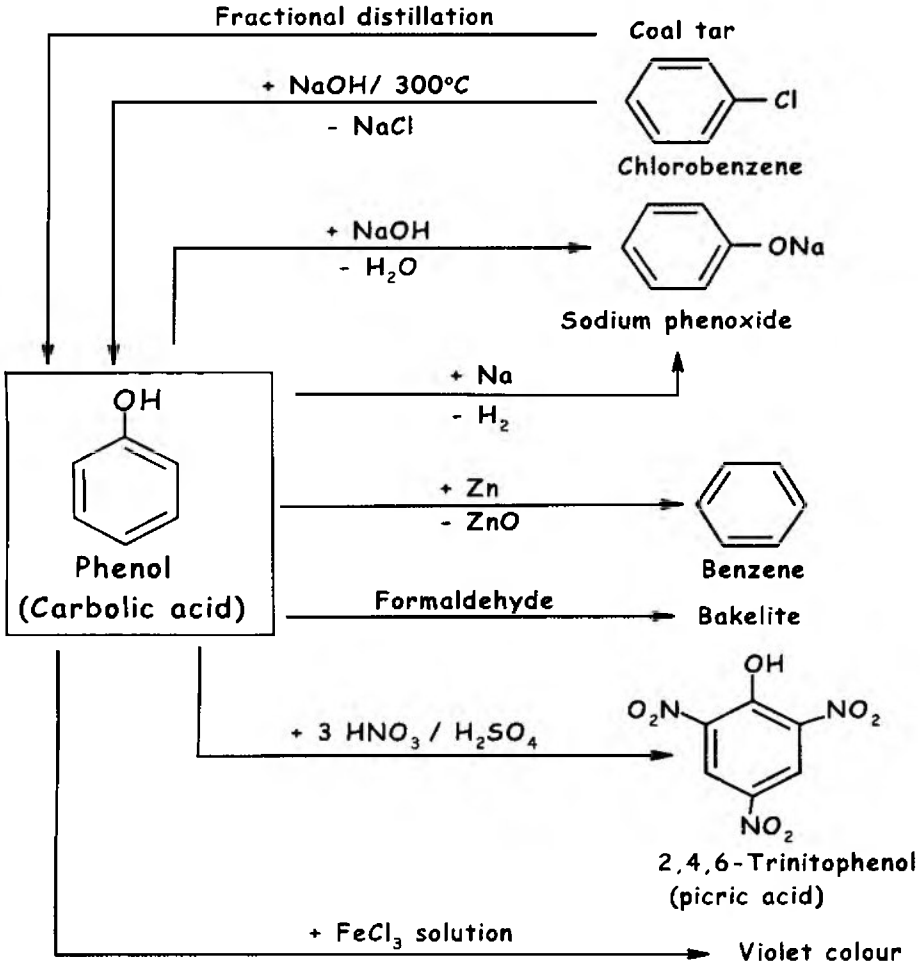
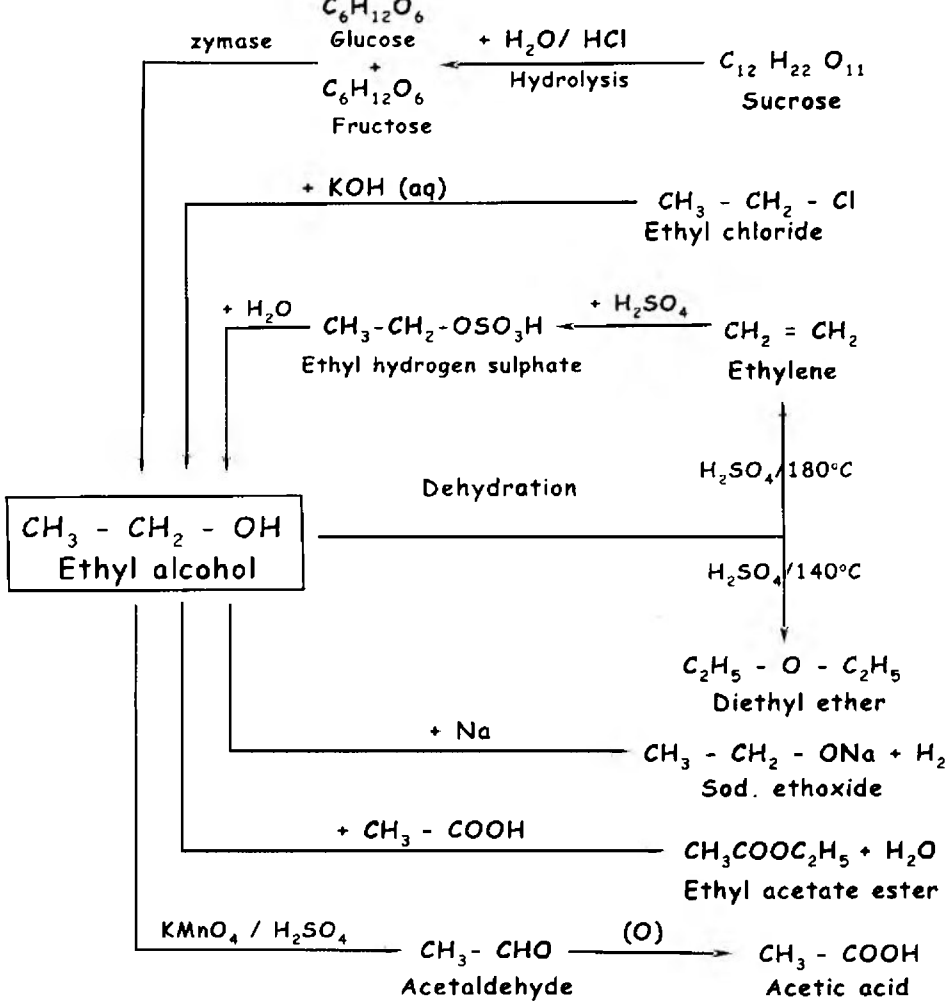
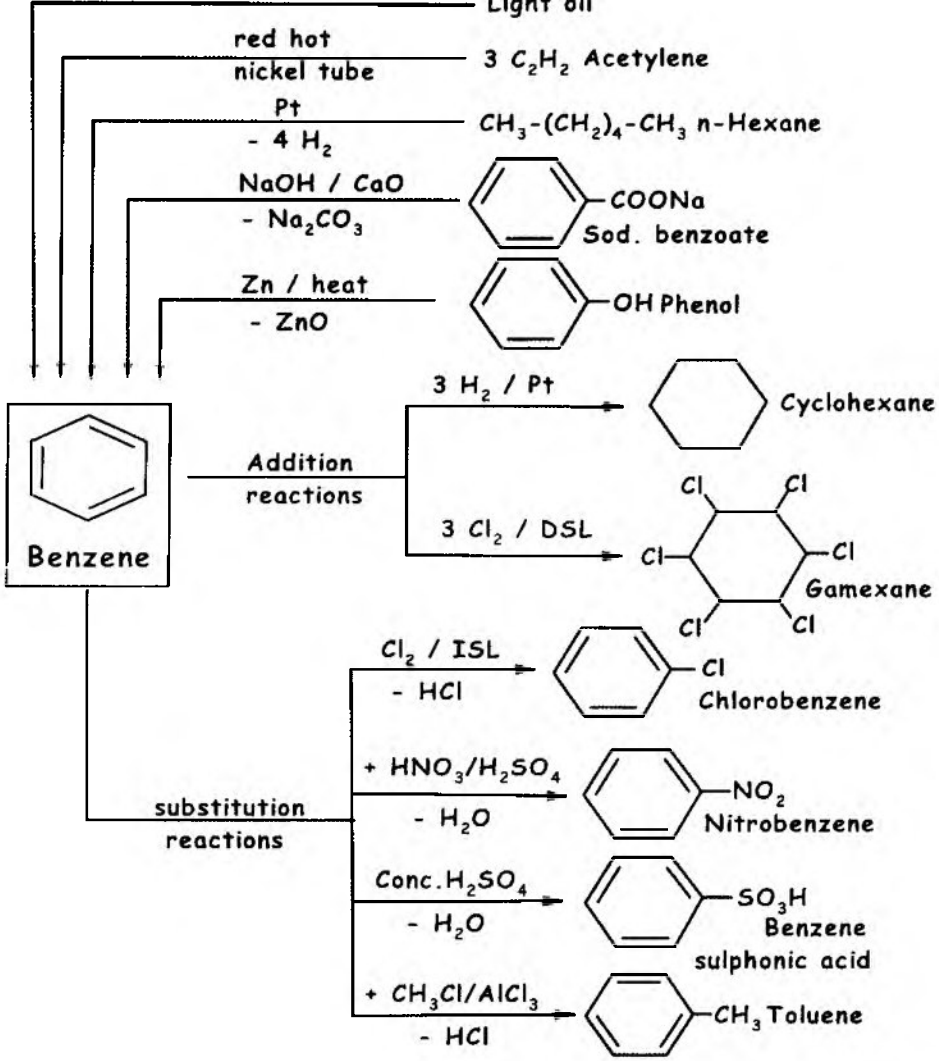

+ KMnO4/H+
CH3 - C - H
O
+ KMnO4/H+
CH3 - CH2 - OH
Ethanal (Acetaldehyde)
Ethanol (Ethyl alcohol)
+ H2SO4 (40%)
+ HgSO4 (60°C)
H2O + C2H2
Ethyne (Acetylene)
Vinegar bacteria
Ethanol (Ethyl alcohol)
+ NaHCO3
CH3COONa+H2O+CO2
Sodium acetate
CH3 - C - OH
O
Acetic acid
(Ethanoic acid)
Salt formation
+ Mg
(CH3COO)2Mg+H2
Magnesium acetate
+ 2 H2 / CuCrO4
Reduction
CH3 - CH2 - OH
Ethanol (Ethyl alcohol)
+ C2H5OH/H2SO4
ester formation
CH3COOC2H5 + H2O
Ethyl acetate ester



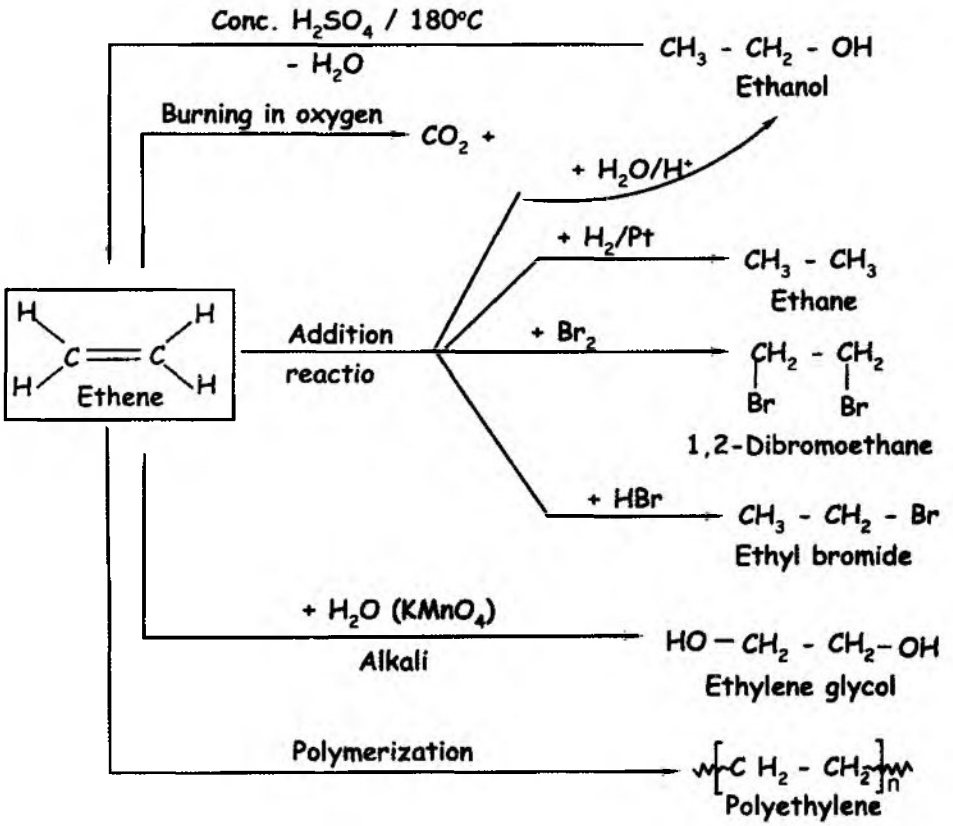
1. From chlorobenzene show how to prepare picric acid.
2. From carbolic acid show how to get benzene.
3. From chlorobenzene show how to get sodium phenoxide.
4. From coal tar show how to get 2,4,6-trinitrophenol.
5. From phenol show how to get chlorobenzene.
6. From benzene show how to get backelite.
7. From benzene show how to get picric acid.
8. From carbolic acid show how to get cyclohexane.



1. From ethylene show how to prepare sodium ethoxide.
2. From ethyl chloride show how to get ethanol.
3. From ethene show how to get ethanoic acid.
4. From ethanol show how to get ethyl acetate ester.
5. From sodium ethoxide show how to get diethyl ether.
6. From ethylene show how to get diethyl ether.
7. From ethylene get ethyl acetate ester.
8. From ethyl chloride get sodium ethoxide.
9. From an alkyl halide show how to get ethanoic acid.



1. From sodium benzoate show how to get gamexane.
2. From phenol show how to get nitrobenzene.
3. From acetylene show how to get toluene.
4. From phenol show how to get chlorobenzene.
5. From sodium benzoate how to get a cyclic aliphatic compound.
6. From phenol show how to get toluene.
7. From an aromatic compound get a cyclic aliphatic compound.

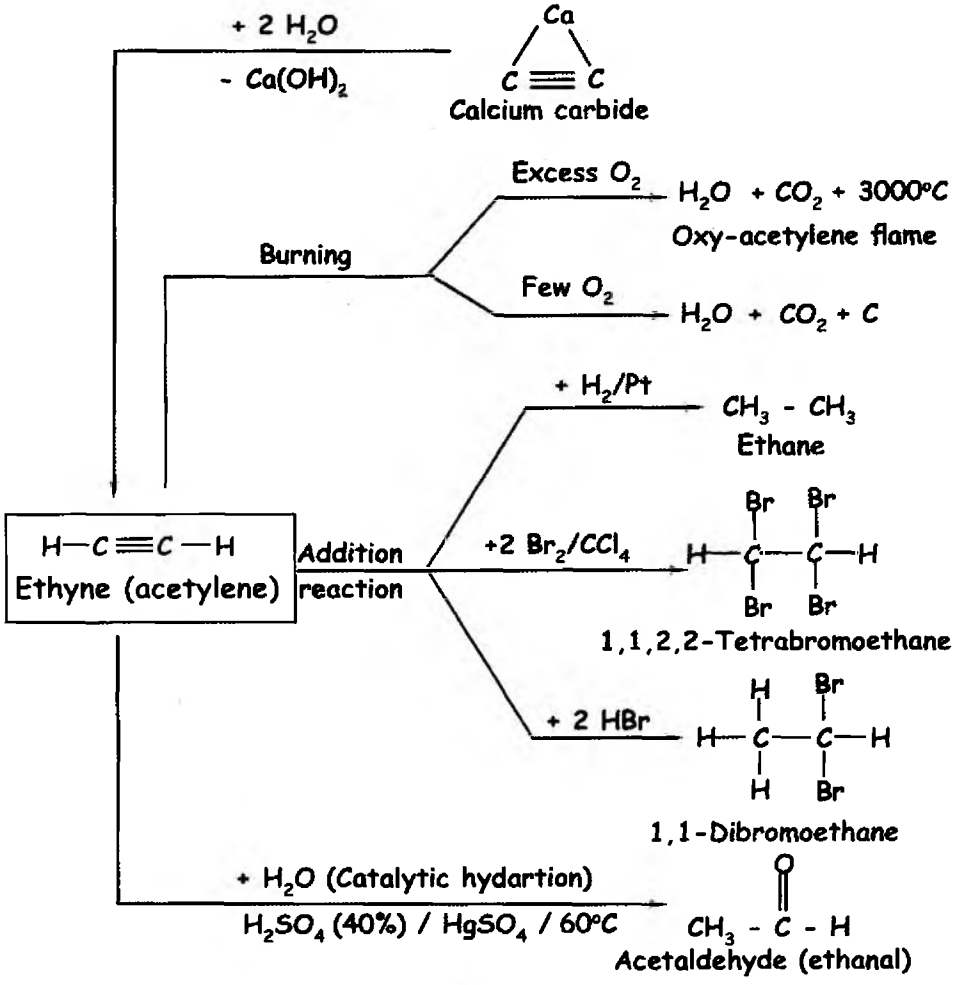


1. From ethanol show how to get polyethylene.
2. From ethanol show how to get a dihydric alcohol.
3. From ethanol show how to get bromoethane (ethyl bromide).
4. From ethylene show how to get a saturated hydrocarbon.
5. From ethanol show how to get 1,2-dibromoethane.
6. From ethyl alcohol show how to get unsaturated hydrocarbon.
7. From ethylene show how to get a dihydric alcohol.
8. From ethanol show how to get an alkyl halide.

XI. Study the following chart and show by equations only:

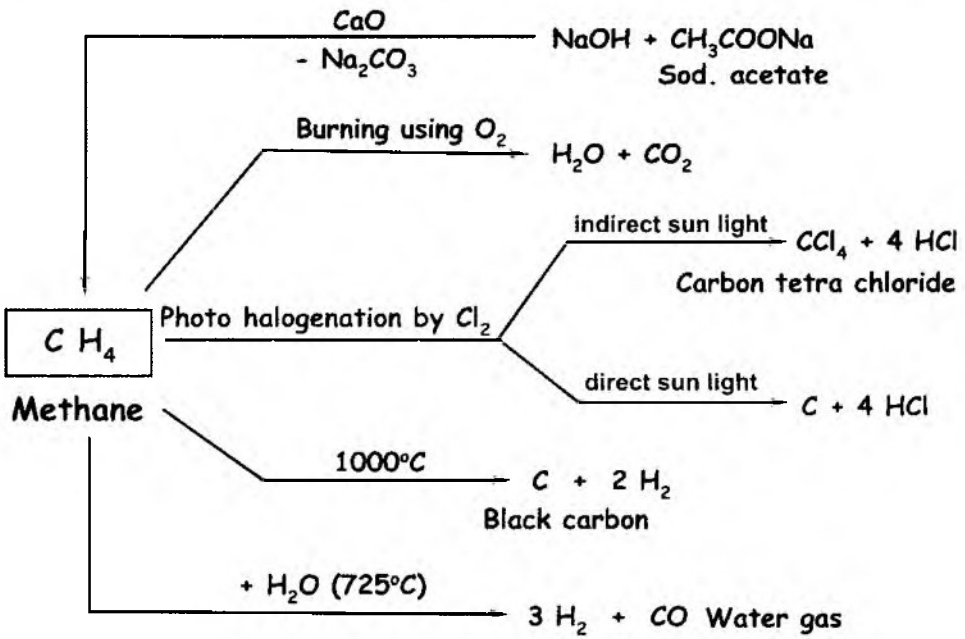
1. From calcium carbide show how to get ethane.
2. From calcium carbide show how to get acetaldehyde.
3. From calcium carbide show how to get 1,1-dibromoethane.
4. From calcium carbide show how to get get 1,1,2,2-tetrabromoethane.

5. From calcium carbide show how to get a saturated hydrocarbon.
6. From ethyne show how to get ethanal.
7. From acetylene show how to get 1,1-dichloroethane.



4. $CH_3 - CH(I) - (CH_2)_5 - CH(Cl) - C(Cl)_3$.
5. $CH_3 - CH_2 - CH(CH_3) - CH_2 - CH_2 - CH(Br) - CH_2 - CH_3$.
6. $CH_3 - CH_2 - CH(C_2H_5) - CH_2 - CH_2 - CH(OH) - CH_2 - CH_3$.
7. 1- Bromo -1- fluoro -2,4-dimethyl-3-ethyloctane.

VII. Study the following chart and answer by equations only:



1. From sodium acetate get carbon tetrachloride.
2. From sodium acetate get a substance used in car tiers and printing ink.
3. From sodium acetate get water gas.
4. What is the action of water on natural gas?
5. From methane get a mixture of carbon dioxide and water vapour.
6. How to prepare sodium acetate from acetic acid by neutralization?
7. From sodium acetate get a mixture of carbon and hydrogen chloride.
8. From sodium acetate get a mixture of carbon dioxide and water vapour.
9. From a mixture of carbon dioxide and water get water gas.
10. From sodium acetate get black carbon.
11. How to prepare an organic gas and another inorganic gas?
12. From the chart mention one carboxylic acid salt.
13. Write the reaction which indicates a dry distillation reaction.