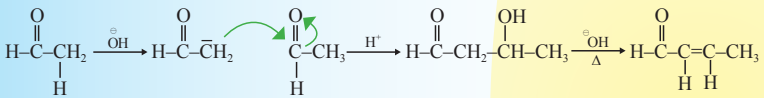
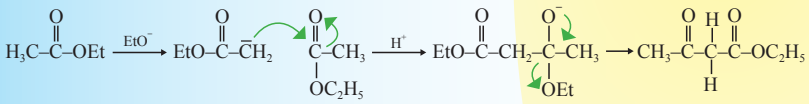
CHAPTER 24

Organic Name Reactions

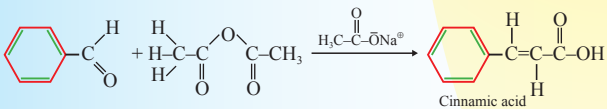
Aldol Condensation



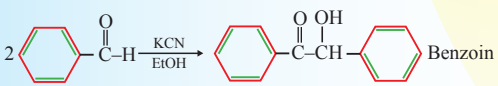
Claisen Condensation



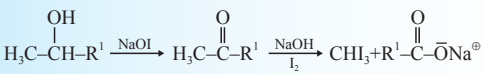
Perkin Condensation



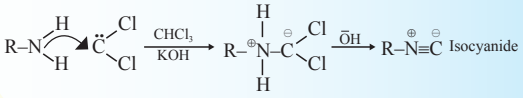
Benzoin Condensation



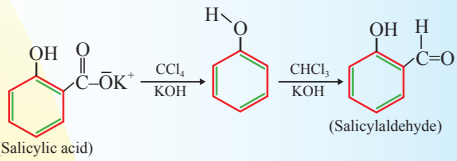
Haloform Reaction



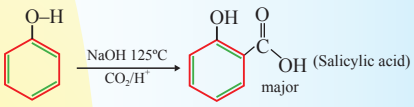
Carbylamine Test



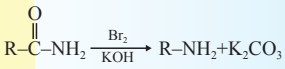
Reimer Tiemman Reaction



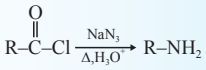
Kolbe's Schimdt Reaction



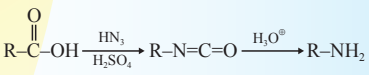
Hoffmann Bromamide Degradation



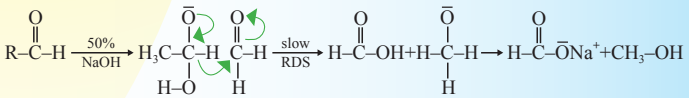
Curtius Reaction



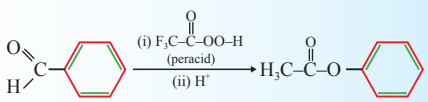
Schimdt Reaction



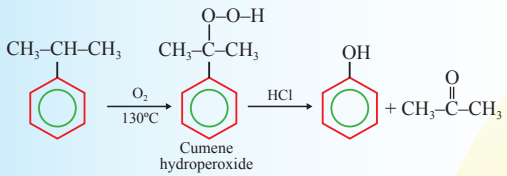
Cannizzaro Reaction



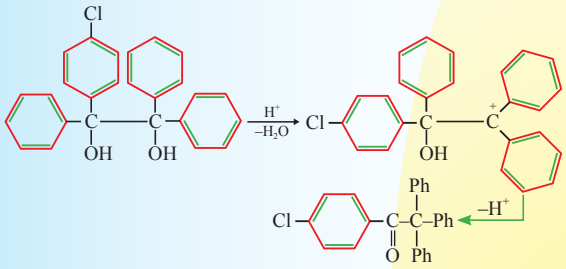
Bayer villiger oxidation



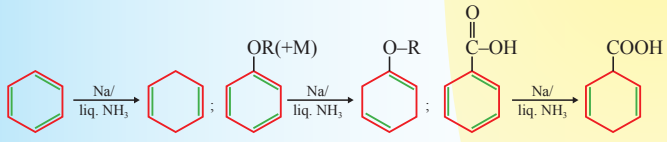
Cumene

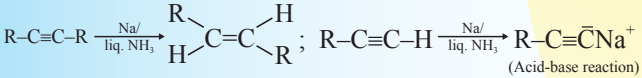


Pinacol-Pincolone rearrangement

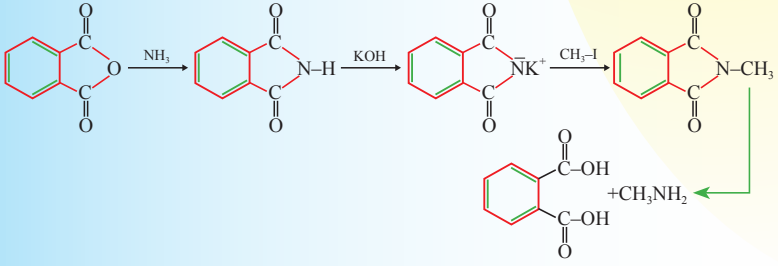


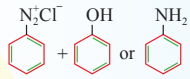
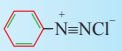
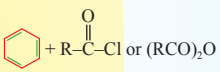
Birch Reduction

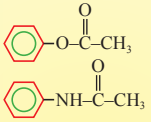




Gabriel Synthesis



Name	Reactant	Reagent	Product
Clemmensen Reduction	Aldehyde & Ketone	Zn-Hg/conc. HCl	Alkane
Coupling Reaction		NaOH (phenol) HCl (Aniline)	Azo Dye (Detectionof OH or NH_2 gr)
Diazotization		$NaNO_2$ + HCl (0° – 5°C)	
Etard reaction		CrO_2Cl_2/CS_2	 (Benzalde hyde)
Fitting Reaction	Halo benzene	Na/Dry ether	Diphenyl
Friedel Craft alkylation		Anhydrous $AlCl_3$	Alkyl Benzene
Friedel Craft acylation		Anhydrous $AlCl_3$	Acyl Benzene
Gattermann aldehyde synthesis	C_6H_6	HCN+HCl/$ZnCl_2$/ H_3O^+	Benzaldehyde
Gattermann-Koch reaction	C_6H_6 (CO + HCl)	anhy $AlCl_3$	Benzaldehyde
Hell-Volhard-Zelinsky reaction	carboxylic acid having α-hydrogen atom	Br_2/red P	α-halogenated carboxylic acid
Hoffmann mustard oil reaction	primary aliphatic amine + CS_2	$HgCl_2/\Delta$	CH_3CH_2–N=C=S+HgS (black)
Hunsdiecker reaction	Ag salt of carboxylic acid	Br_2/CCl_4,80°C	alkyl or aryl bromide
Kolbe electrolytic reaction	alkali metal salt of carboxylic acid	electrolysis	alkane, alkene and alkyne
Mendius reaction	alkyl or aryl cyanide	Na/C_2H_5OH	primary amine

Name	Reactant	Reagent	Product
Rosenmund reduction	acid chloride	H_2,Pd/$BaSO_4$ boiling xylene	aldehyde
Sabatier-Senderens reaction	Unsaturated hydrocarbon	Ranye Ni/H_2, 200–300°C	Alkane
Sandmeyer reaction	$C_6H_5\overset{+}{N}_2Cl^-$	CuCl/HCl or CuBr/ HBr or CuCN/KCN, heat	Halo or cyanobenzene
Gattermann Reaction	$C_6H_5N_2^+Cl^-$	Cu/HX(HBr/HCl)	Halobenzene
Schotten-Baumann reaction	(phenol or aniline or alcohol)	NaOH + C_6H_5COCl	benzolytated product 
Stephen reaction	alkyl cyanide	(i) $SnCl_2$/HCl (ii) H_2O	Aldehyde
Williamson synthesis	alkyl halide	sodium alkoxide or sodium phenoxide	Ether
Wurtz-Fitting reaction	alkyl halide + aryl halide	Na/dry ether	alkyl benzene