Generic Organic Synthesis process	Specific type process	Generic Organic Synthesis process	Specific type process
Acetylation	Acetylchloride, acetic anhydride.	**Formylation**	Phosphorous Oxychloride.
Acylation	O-Acylation, N-Acylation, Sulfonylation, Friedel-Crafts Acylation.	**Halogenation**	Aromatic and Aliphatic Bromination and Chlorinations Acyl Halide formations.
Acid Chloride Handling	Acetyl Chloride.	**Heterocyclic Ring Closure**	Hantsch 1,4 Dihydropyridines Synthesis, Fischer Indole synthesis.
Aldo Condensation	Benzaldehyde.	**Hydrogenation**	Hydrogen, Catalyst, Rreductive Amination. Ethylamine.
Alkylation	N-Alkylation, O-Alkylation, S-Alkylation, Eschweilwer-Clarke react.	**Hydrolysis**	Ester hydrolisis, Amide hydrolisis.
Amination	Delépine reaction, Reductive Amination.	**Iodination**	Iodine, Sodium Iodine.
Aromatic Substitution	Aromatic halogenation.	**Leuckart reaction**	Ammonium formate.
Bromination	Bromine.	**Mannich Reaction**	Paraformaldehyde.
Carbamoylation	Amines and Carbamoyl Chloride Derivatives.	**Metal Hydride Reductions**	Sodium Aluminium Hydride, Sodium Borohydride.
Carboxylation	Carbon dioxide.	**Nitration**	Nitric Acid and Sulphuric Acid Mixture.
Chloromethylation	Forladehyde and Hydrogen chloride.	**Nitrogen Heterocyclics**	Indoles, Pyridines, 1,4-Dihydropyridines.
Chlorosulfonation	Chlorosulfonic acid.	**Oxidation**	Aromatization, Dehydrogenation.
Chlorination	Chlorine gas, Phosphorous Oxychloride etc.	**Phase Transfer Catalysis**	Benzyl Triethylammonium chloride.
Cyclization	Hantsch 1,4 Dihydropyridines Synthesis, Fischer indole synthesis.	**Pirrole Chemistry**	Heterocyclic Substitution.
Decarboxylation	Sulfuric Acid.	**Rearrangement**	Baker-Ventakaraman rearrangement, Fries rearrangement Schleyer adamantization.
Dehydration	Sulfuric Acid, Double-bond formation.	**Reduction**	Low pressure Hydrogenations.
Delepine Reaction	Hexamethylene tetramine.	**Reductive amination**	Ketones and Aldehydes.
Diels-Alder reaction	Maleic anhydre.	**Transesterification**	Methyl Esters and Higher Alcohols.
Elimination	Dehydration, Aromatization.	**Saponification**	Sodium Hydroxide.
Esterification	Alcohol and Carboxylic Acid.	**Sulfur Chemistry**	Thiol formation. Sulfoxide Formation.
Etherification	Alkoxide or Aroxide and Alkyl Halide.	**Vilsmeier-Haack Acylation**	Phosphorous oxychloride.
Freidel Crafts reactions	Aluminium Trichloride.	**Wittig Reaction**	Triphenylphosphine.