List of methods of preparation of phenol

- Diazonium salts
- Alkali fusion of sulphonates
- Haloaerenes
- · Decarboxylation of sodium salicylate
- Chlrobenzene
- Cumene

Expression for reaction of preparation of phenol from diazonium salts

$$\begin{array}{c|c} NX\ominus\\ & \\ N\\ & \\ N\\ & \\ OH\\ & \\ + N_2 + HCl \end{array}$$

Reactants in reaction of preparation of phenol from diazonium salts

- Benzene diazonium salt
- Water

Products in reaction of preparation of phenol from diazonium salts

- Phenol
- · Nitrogen gas
- · Hydrochloric acid

Condition for reaction of preparation of phenol from diazonium salts

- Heat
- · Acidic medium

Expression for reaction of preparation of phenol from fusion of sulphonates

.
$$SO_3 \ominus Na \oplus \qquad O \ominus Na \oplus \qquad + Na_2 SO_3 + H_2 O$$
 .
$$O \ominus Na \oplus \qquad + NaCl$$

Reactants in reaction of preparation of phenol from fusion of sulphonates

- Sodium benzene sulphonate
- Sodium hydroxide

Intermediate product in reaction of preparation of phenol from fusion of sulphonates

- Sodium phenoxide
- Sodium sulphonate
- Water

Reagent for reaction of intermediate product in reaction of fusion of sulphonates

Hydro chloric acid

Products in reaction of preparation of phenol from fusion of sulphonates on reaction of intermediate product

- Phenol
- · Sodium chloride

Range of temperature for reaction of preparation of phenol from fusion of sulphonates

570K - 623 K

Expression for reaction of preparation of phenol from haloaerene

$$\begin{array}{c} \text{Cl} & \text{ONa} \\ \\ + \text{NaOH} \longrightarrow & \\ \end{array} \\ \begin{array}{c} \text{HCl} \\ \end{array} \\ + \text{NaCl} \end{array}$$

Reactants in reaction of preparation of phenol from haloaerene

- · Halo benzene
- · Sodium hydroxide

Intermediate product in reaction of preparation of phenol from halo arene

Sodium phenoxide

Reagent for reacting intermediate product in preparation of phenol from halo arene

Hydro chloric acid

Products in reaction of preparation of phenol from haloaerene

- Phenol
- Sodium chloride
- Hydrochloric acid

Range of temperature for reaction of preparation of phenol from haloaerene

573 - 623 K

Pressure for reaction of preparation of phenol from halo arene

300 atm

Expression for reaction of preparation of phenol from decarboxylation of sodium salicylate

COONa OH
$$+ \text{NaOH} \xrightarrow{\text{NaOH(CaO)}} +$$

Reactants in reaction of preparation of phenol from decarboxylation of sodium salicylate

+ NaCl

+ HCl

- Sodium salicylate
- Sodium hydroxide

Intermediate product in reaction of preparation of phenol from decarboxylation of sodium salicylate

Sodium phenoxide

Reagent for reacting with intermediate product in reaction of preparation of phenol from decarboxylation of sodium salicylate

Hydrochloric acid

Products in reaction of preparation of phenol from decarboxylation of sodium salicylate

Phenol

Condition for reaction of preparation of phenol from decarboxylation of sodium salicylate

Sodalime

Molecular formula of sodalime

NaOH(CaO)

Expression for reaction of preparation of phenol from chlorobenzene

$$+ \text{NaOH} \xrightarrow[\text{catalyst}]{\text{ONa}} \xrightarrow[\text{OH}]{\text{OH}}$$

Reactants in reaction of preparation of phenol from chlorobenzene

- Chlorobenzene
- · Sodium hydroxide

Products in reaction of preparation of phenol from chlorobenzene

- Phenol
- Sodium chloride

Condition of temperature in reaction of preparation of phenol from chlorobenzene

350 C

Condition of	pressure in reaction	n of preparation	on of phenol fo	rm chlorobenzene
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200 atm