

Distinguish, differentiate, compare and explain what is the Difference between Alcohol and Phenol. Comparison and Differences.

## Difference between Alcohol and Phenol

S.No.	Alcohol	Phenol
1	Alcohol is an organic compound whose molecule contains one or more hydroxyl group attached to a carbon atom.	Phenol is a compound consisting of a hydroxyl group bonded directly to an aromatic hydrocarbon group.
2	Alcohols are neutral and don't have any effect on litmus paper.	Phenols are acidic and changes blue litmus paper to red.
3	Alcohols are basically a group of compounds.	Phenol is basically a specific compound.
4	Alcohol Formula $\hat{R} OH$	Phenol Formula $\hat{C}_6 H_5 OH$
5	Alcohol does not give any precipitation with bromine water.	Phenol gives white precipitate with bromine water.
6	Aliphatic compound	Aromatic compound
7	Alcohols are the derivatives of Alkane.	Phenols are the derivatives of Benzene.
8	Alcohols do not react with NaOH.	Phenol react with NaOH to form phenoxides.
9	Used in alcoholic beverages, pharmaceuticals, ink etc.	Mainly used as antiseptic agents.
10	Density of alcohol is $789 \text{ kg / m}^3$ .	Density of phenol is $1.07 \text{ g / cm}^3$ .
11	Lower alcohols are colorless liquids. <sup>3</sup>	Colorless crystalline deliquescent solids with melting point up to $41^\circ\text{C}$ .
12	They have characteristics of sweet smell and burning taste.	They have characteristics of phenolic order.