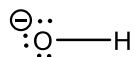


### What is a hydroxyl group?

A hydroxyl group is a chemical group that consists of a single oxygen atom bonded to a hydrogen atom (-OH). Hydroxyl groups are polar and are often found in a variety of compounds, including alcohols, sugars, and organic acids.



Hydroxyl groups are important in organic chemistry because they can participate in a variety of chemical reactions. For example, hydroxyl groups can undergo nucleophilic substitution reactions, electrophilic substitution reactions, and elimination reactions. They can also react with other hydroxyl groups to form ethers or with carboxyl groups to form esters.

Hydroxyl groups are also biologically active and are found in a variety of natural products and drugs. They can interact with proteins, enzymes, and other biomolecules and can play important roles in the activity and pharmacology of these compounds.

Overall, hydroxyl groups are versatile and important functional groups that are widely used in organic chemistry and biology.