

Functional Groups Quiz PDF

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What are the characteristics of a sulfhydryl group?

- Contains sulfur
- Forms disulfide bonds
- Found in alcohols
- Involved in protein structure

Which functional group is typically found in amino acids?

- Phosphate
- Ether
- Amino
- Ester

What is the primary characteristic of a carbonyl group?

- Presence of a sulfur atom
- A double bond between carbon and oxygen
- A single bond between carbon and nitrogen
- A triple bond between carbon and hydrogen

Which functional groups can participate in hydrogen bonding?

- Amino
- Carboxyl
- Phosphate
- Ether

Discuss the importance of functional groups in the structure and function of DNA.

Which functional group is responsible for the acidic properties of vinegar?

- Hydroxyl
- Carbonyl
- Carboxyl
- Amino

What type of reaction involves the addition of a functional group to a molecule?

- Substitution
- Addition
- Elimination
- Combustion

Which functional group is characterized by the presence of an -OH group?

- Carbonyl
- Hydroxyl
- Amino
- Carboxyl

What is the general formula for a carboxyl group?

- NH₂
- COOH
- SH
- PO₄

Explain how the presence of a carboxyl group affects the acidity of a compound.

Compare and contrast the properties and reactions of hydroxyl and carbonyl groups.

What is the significance of the amino group in biological molecules such as proteins?

How do functional groups influence the chemical reactivity of organic molecules? Provide examples.

Which functional groups are commonly found in lipids?

Ester

- Phosphate
- Amino
- Carbonyl

Which functional groups are present in nucleic acids?

- Phosphate
- Amino
- Carbonyl
- Hydroxyl

Which functional group is present in ATP and involved in energy transfer?

- Sulfhydryl
- Phosphate
- Ether
- Ester

Which of the following is NOT a property of the hydroxyl group?

- Polar nature
- Ability to form hydrogen bonds
- Non-polar nature
- Presence in alcohols

Which functional groups are typically involved in oxidation-reduction reactions?

- Hydroxyl
- Carbonyl
- Amino
- Carboxyl

Which of the following functional groups are polar?

- Hydroxyl
- Carbonyl
- Ether
- Sulfhydryl

Describe the role of functional groups in determining the solubility of organic compounds.

