

**Functional Group: hydrocarbon**

1. Structure
2. Polar/Nonpolar
3. Hydrophobic/Hydrophilic
4. Chemical Bond
5. Charge

**Functional Group: Alcohol, Hydroxyl**

1. Structure
2. Polar/Nonpolar
3. Hydrophobic/Hydrophilic
4. Chemical Bond
5. Charge

**Functional Group: Amine, Amino**

1. Structure
2. Polar/Nonpolar
3. Hydrophobic/Hydrophilic
4. Chemical Bond
5. Charge

**Functional Group: Sulfhydryl**

1. Structure
2. Polar/Nonpolar
3. Hydrophobic/Hydrophilic
4. Chemical Bond
5. Charge

**Functional Group: Carboxylic Acid**

1. Structure
2. Polar/Nonpolar
3. Hydrophobic/Hydrophilic
4. Chemical Bond
5. Charge

**Functional Group: Aldehyde**

1. Structure
2. Polar/Nonpolar
3. Hydrophobic/Hydrophilic
4. Chemical Bond
5. Charge

**Functional Group: Ketone**

1. Structure
2. Polar/Nonpolar
3. Hydrophobic/Hydrophilic
4. Chemical Bond
5. Charge

**Functional Group: Phosphate**

1. Structure
2. Polar/Nonpolar
3. Hydrophobic/Hydrophilic
4. Chemical Bond
5. Charge

<p style="text-align: center;">-C-OH</p> <ol style="list-style-type: none"> <li>oxygen and hydrogen</li> <li>Polar</li> <li>Hydrophilic</li> <li>H-bond</li> <li>No charge</li> </ol>	<p style="text-align: center;">CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-</p> <ol style="list-style-type: none"> <li>carbon and hydrogen</li> <li><b>Nonpolar</b></li> <li>Hydrophobic</li> <li>Hydrophobic bond</li> <li>No charge</li> </ol>
<p style="text-align: center;">-C-SH</p> <ol style="list-style-type: none"> <li>sulfur and hydrogen</li> <li>Polar</li> <li>Hydrophilic</li> <li>H-bond / Covalent disulfide</li> <li>No charge</li> </ol>	<p style="text-align: center;">-C-NH<sub>2</sub></p> <ol style="list-style-type: none"> <li>nitrogen and hydrogen</li> <li>Polar</li> <li>Hydrophilic</li> <li>H-bond / Ionic</li> <li><b>Can form plus</b></li> </ol>
<p style="text-align: center;"> <math display="block">\begin{array}{c} \text{O} \\    \\ \text{-C-H} \end{array}</math> </p> <ol style="list-style-type: none"> <li>carbon, oxygen, hydrog</li> <li>Polar</li> <li>Hydrophilic</li> <li>H-bond</li> <li>No charge</li> </ol>	<p style="text-align: center;"> <math display="block">\begin{array}{c} \text{O} \\    \\ \text{-C-OH} \end{array}</math> </p> <ol style="list-style-type: none"> <li>carbon, oxygen, hydrog</li> <li>Polar</li> <li>Hydrophilic</li> <li>H-bond / Ionic</li> <li><b>Can form minus</b></li> </ol>
<p style="text-align: center;"> <math display="block">\begin{array}{c} \text{O} \\    \\ \text{O} = \text{P} - \text{O} - \text{H} \\   \\ \text{O} - \text{H} \end{array}</math> </p> <p>phosphorus, oxygen and hydrogen</p> <ol style="list-style-type: none"> <li></li> <li>Polar</li> <li>Hydrophilic</li> <li>Ionic bond / H-bond</li> <li><b>Minus</b></li> </ol>	<p style="text-align: center;"> <math display="block">\begin{array}{c} \text{O} \\    \\ \text{C-C-C-} \end{array}</math> </p> <ol style="list-style-type: none"> <li>carbon, oxygen</li> <li>Polar</li> <li>Hydrophilic</li> <li>H-bond</li> <li>No charge</li> </ol>