

SBI 4U1
Organic Nomenclature and Functional Groups

1. Draw the structural formula.
2. Name the compound.
3. Write the molecular formula.

*Some have more than one possibility depending of what carbon atom the functional group is on

Family:	Hydrocarbons	Hydrocarbons	Hydrocarbons	Hydrocarbons	Hydrocarbons	Hydrocarbons
Group		*Alcohols	Aldehydes	*Ketones	Carboxylic Acids	*Amines
Functional Group		R-OH	R-C(=O)-H	R-C(=O)-R	R-C(=O)-OH	R-NH ₂
	<p style="text-align: center;">-C- METHANE</p>	<p style="text-align: center;">CH₃OH -C-OH METHANOL</p>	<p style="text-align: center;">H-C(=O)-H methanal</p>	/	<p style="text-align: center;">H-C(=O)-OH methanoic acid</p>	<p style="text-align: center;">-C-NH₂ methanamine</p>
	<p style="text-align: center;">-C-C- ETHANE</p>	<p style="text-align: center;">-C-C-OH ethanol</p>	<p style="text-align: center;">-C-C(=O)-H ethanal C₂H₄O</p>	/	<p style="text-align: center;">-C-C(=O)-OH ETHANOIC ACID</p>	<p style="text-align: center;">-C-NH₂ ethanamine</p>
	<p style="text-align: center;">-C-C-C- PROPANE</p>	<p style="text-align: center;">-C-C-C-OH propanol</p>	<p style="text-align: center;">-C-C-C(=O)-H PROPANAL</p>	<p style="text-align: center;">-C-C-C(=O)- propanone</p>	<p style="text-align: center;">-C-C-C(=O)-OH propanoic acid</p>	<p style="text-align: center;">-C-C-C-NH₂ ethan-2-amine</p>
	<p style="text-align: center;">-C-C-C-C- BUTANE</p>	<p style="text-align: center;">-C-C-C-C-OH butanol</p>	<p style="text-align: center;">-C-C-C-C(=O)-H butanal</p>	<p style="text-align: center;">-C-C-C-C(=O)- butanone</p>	<p style="text-align: center;">-C-C-C-C(=O)-OH butanoic acid</p>	<p style="text-align: center;">-C-C-C-C-NH₂ 1-BUTANAMINE</p>

	OH	R-C(=O)-H	R-C(=O)-R	R-C(=O)-OH	R-NH ₂
$\begin{array}{c} & & & \\ -C-C-C-C-C- \\ & & & \\ \text{PENTANE} \end{array}$	$\begin{array}{c} \text{OH} \\ \\ -C-C-C-C-C- \\ & & & \\ \text{pentan-2-ol} \end{array}$	$\begin{array}{c} \text{O} \\ \\ -C-C-C-C-C-H \\ & & & \\ \text{pentanal} \end{array}$	$\begin{array}{c} \text{C}_3\text{H}_7\text{O} \\ \\ -C-C-C-C-C- \\ & & & \\ \text{PENTANONE} \end{array}$	$\begin{array}{c} & & & & & \\ -C-C-C-C-C-C-OH \\ & & & & & \\ \text{pentanoic acid} \end{array}$	$\begin{array}{c} \text{NH}_2 \\ \\ -C-C-C-C-C-C- \\ & & & & & \\ \text{pentan-3-amine} \end{array}$
$\begin{array}{c} & & & & \\ -C-C-C-C-C-C- \\ & & & & \\ \text{HEXANE} \end{array}$	$\begin{array}{c} \text{OH} \\ \\ -C-C-C-C-C-C- \\ & & & & \\ \text{hexan-3-ol} \end{array}$	$\begin{array}{c} \text{O} \\ \\ -C-C-C-C-C-C-H \\ & & & & \\ \text{hexanal} \end{array}$	$\begin{array}{c} \text{O} \\ \\ -C-C-C-C-C-C- \\ & & & & \\ \text{hexan-2-one} \end{array}$	$\begin{array}{c} & & & & & \\ -C-C-C-C-C-C-OH \\ & & & & & \\ \text{hexanoic acid} \end{array}$	$\begin{array}{c} \text{NH}_2 \\ \\ -C-C-C-C-C-C- \\ & & & & & \\ \text{hexan-2-amine} \end{array}$

In the space below draw the following molecules.

- 2-methyl-3-ethyl pentane
 $\begin{array}{c} \text{CH}_3 \\ | \\ -C-C-C-C-C- \\ | & | & | & | & | \\ \text{ethyl} & & & & \end{array}$
- 2-hexanol
 $\begin{array}{c} \text{OH} \\ | \\ -C-C-C-C-C-C- \\ | & | & | & | & | & | \end{array}$
- 3-octanone
 $\begin{array}{c} \text{O} \\ || \\ -C-C-C-C-C-C-C- \\ | & | & | & | & | & | & | \end{array}$
- octanoic acid
 $\begin{array}{c} \text{O} \\ || \\ -C-C-C-C-C-C-C- \\ | & | & | & | & | & | & | \\ \text{OH} \end{array}$
- 2,4 heptanone
 $\begin{array}{c} \text{O} \\ || \\ -C-C-C-C-C-C-C- \\ | & | & | & | & | & | & | \\ \text{OH} & & & & & & \end{array}$
- 3,4 decanol
 $\begin{array}{c} \text{OH} \\ | \\ -C-C-C-C-C-C-C-C- \\ | & | & | & | & | & | & | & | \end{array}$
- 3-nona-amine
 $\begin{array}{c} \text{NH}_2 \\ | \\ -C-C-C-C-C-C-C-C-C- \\ | & | & | & | & | & | & | & | & | \end{array}$
- 2-pentanone
 $\begin{array}{c} \text{O} \\ || \\ -C-C-C-C-C- \\ | & | & | & | & | \end{array}$
- 2,3,4 octanol
 $\begin{array}{c} \text{OH} \\ | \\ -C-C-C-C-C-C-C- \\ | & | & | & | & | & | & | \end{array}$