

Structural formula	Name	Notes
$ \begin{array}{ccccccc} & \text{H} & \text{H} & \text{H} & \text{H} & & \\ & & & & & & \\ \text{H} & -\text{C} & -\text{C} & -\text{C} & -\text{C} & -\text{C} & \\ & & & & & & \\ & \text{H} & \text{H} & \text{H} & \text{H} & & \\ & & & & & & \text{O} \\ & & & & & & // \\ & & & & & & \text{O} \\ & & & & & & \backslash \\ & & & & & & \text{H} \end{array} $	Pentanoic acid	<p>Longest C chain is 5 so "Pent"</p> <p>-COOH functional group so it's a carboxylic acid</p> <p>There is no need to number the -COOH functional group as it is automatically 1.</p>
$ \begin{array}{cccc} \text{CH} & \equiv & \text{C} & -\text{CH}-\text{CH}_3 \\ & & & \\ & & & \text{CH}_3 \end{array} $	3-methylbut-1-yne	<p>Longest C chain of 4 so "but"</p> <p>Triple bond so "yne", after C atom number 1 (so but-1-yne). Name position of C≡C before numbering any side chains.</p> <p>Methyl group is CH₃- group and is on C atom number 3</p>
$ \begin{array}{ccccccc} & & \text{Cl} & & & & \\ & & & & & & \\ \text{CH}_3 & -\text{C} & -\text{CH}_2 & -\text{CH}_3 \\ & & & \\ & \text{OH} & & \end{array} $	2-chlorobutan-2-ol	<p>Longest C chain of 4 so "but"</p> <p>-OH alcohol functional group so "ol", on carbon atom 2 (as -2-ol)</p> <p>Cl- group on carbon atom number 2</p> <p>Note: butan-2-ol not "but-2-ol"</p>
$ \begin{array}{ccccccc} & \text{H} & & \text{H} & & \text{H} & \\ & & & & & & \\ \text{H} & -\text{C} & = & \text{C} & - & \text{C} & -\text{H} \\ & & & & & & \\ & \text{H} & & \text{H} & & \text{H} & \end{array} $	But-1-ene	<p>Longest C chain of 4 so "but"</p> <p>Double bond so "ene", after C atom number 1</p>
$ \begin{array}{ccccccc} \text{CH}_3 & -\text{CH}_2 & -\text{CH} & -\text{CH}_2 \\ & & & \\ & & \text{Cl} & \text{Cl} \end{array} $	1,2-dichlorobutane	<p>Longest C chain of 4 so "but"</p> <p>"ane" since all C-C bonds are single</p> <p>"chloro" as -Cl, but "dichloro" since there are 2 x -Cl ; 1,2 as the -Cl are on carbon atoms numbers 1 and 2</p>
$ \text{CH}_3 - \text{CH}_2 - \text{C} \equiv \text{C} - \text{CH}_3 $	Pent-2-yne	<p>Longest C chain of 5, so "pent"</p> <p>Triple bond so "yne"</p> <p>Occurs after C atom number 2 (counting from the right end)</p>
$ \begin{array}{ccccccc} & \text{H} & \text{H} & \text{H} & \text{H} & & \\ & & & & & & \\ \text{H} & -\text{C} & -\text{C} & -\text{C} & -\text{C} & -\text{H} \\ & & & & & & \\ & \text{H} & & \text{H} & \text{H} & & \\ & & \text{N} & & & & \\ & & & & & & \\ & & \text{H} & & & & \end{array} $	2-aminobutane	<p>Longest C chain of 4, so "but"</p> <p>Based on butane so C-C single bonds</p> <p>Amino group -NH₂ on C atom 2</p>

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$\begin{array}{c} \text{CH}_3 - \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{OH} \\ \\ \text{Cl} \end{array}$	3-chlorobutan-1-ol	Longest C chain of 4 so "but" -OH alcohol functional group so "ol", on carbon atom 1 (as -1-ol) Cl- group on carbon atom number 3
$\begin{array}{cccc} \text{H} & \text{H} & \text{H} & \text{H} \\ & & & \\ \text{H} - \text{C} - & \text{C} - & \text{C} - & \text{N} - \text{H} \\ & & & \\ \text{H} & \text{H} & \text{H} & \end{array}$	1-aminopropane	Longest C chain of 3, so "prop" Based on propane so C-C single bonds Amino group -NH ₂ on C atom 1
$\begin{array}{cccc} & & & \text{O} \\ & & & // \\ \text{CH}_3 - \text{CH} - & \text{CH} - & \text{C} & \\ & & / \quad \backslash & \\ \text{CH}_3 & \text{Cl} & \text{OH} & \end{array}$	2-chloro-3-methylbutanoic acid	Longest C chain of 4 so "but" -COOH functional group so it's a carboxylic acid (it's always on the end so no need to number as "1" but it is C atoms number 1). Cl- group on carbon atom number 2, methyl group on 3.
$\begin{array}{c} \text{OH} \\ \\ \text{CH}_3 - \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{CH}_3 \end{array}$	Pentan-2-ol	Longest C chain of 5 so "pent" -OH alcohol functional group so "ol", on carbon atom 2 (as -2-ol) Note: pentan-2-ol not "pent-2-ol"
$\begin{array}{ccccccc} \text{CH}_3 - & \text{CH}_2 - & \text{CH} - & \text{CH}_2 - & \text{Cl} \\ & & \\ & & \text{Cl} \end{array}$	1,2-dichlorobutane	Longest C chain of 5 so "pent" "Chloro" since -Cl, "dichloro" since there are 2 x -Cl 1,2 as the -Cl are on carbon atoms numbers 1 and 2
$\begin{array}{cccc} \text{CH}_3 - & \text{C} \equiv \text{C} - & \text{CH} - & \text{CH}_3 \\ & & \\ & & \text{CH}_3 \end{array}$	4-methylpent-2-yne	Longest C chain of 5 so "pent" Triple bond so "yne" Occurs after C atom number 2 (counting from the left end) CH ₃ - methyl group on carbon atom number 4
$\begin{array}{cccc} & & \text{H} & \\ & & & \\ \text{H} & \text{H} & \text{H} - \text{C} - & \text{H} \\ & & & \\ \text{H} - \text{C} - & \text{C} - & \text{C} - & \text{C} - \text{H} \\ & & & \\ \text{H} & \text{H} - \text{N} & \text{H} & \text{H} \\ & & & \\ & \text{H} & & \end{array}$	2-amino-3-methylbutane	Longest C chain of 4, so "but" Based on butane so C-C single bonds Amino group -NH ₂ on C atom 2 Methyl group -CH ₃ on C atom 3 <i>a</i> before <i>m</i> so 2- <u>a</u> mino and 3- <u>m</u> ethyl