

# • TYPES OF ORGANIC FORMULAE •

A GUIDE TO THE DIFFERENT WAYS ORGANIC COMPOUNDS CAN BE REPRESENTED IN CHEMISTRY

## MOLECULAR FORMULA

The molecular formula of an organic compound simply shows the number of each type of atom present. It tells you nothing about the bonding within the compound.



## EMPIRICAL FORMULA

The empirical formula of an organic compound gives the simplest possible whole number ratio of the different types of atom within the compound.



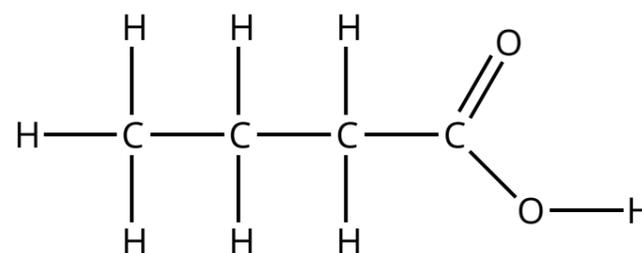
## CONDENSED FORMULA

The condensed formula is also text-based; here, each carbon atom is listed separately, with atoms attached to it following. An exception is cyclic parts of molecules, e.g. benzene, where the carbons are grouped.



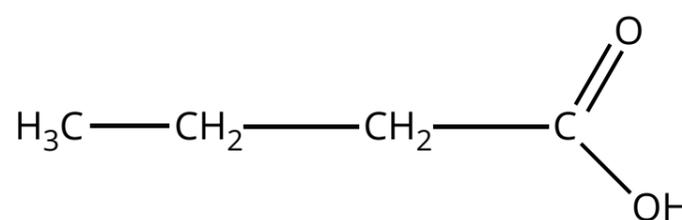
## DISPLAYED FORMULA

A displayed formula shows all of the atoms and all of the bonds present in an organic compound. The bonds are represented as lines.



## STRUCTURAL FORMULA

Similar to displayed formula - not all bonds are shown, although all atoms are still indicated using subscript numbers. Carbon hydrogen bonds are often simplified.



## SKELETAL FORMULA

In a skeletal formula, most hydrogen atoms are omitted, and line ends or vertices represent carbons. Functional groups and atoms other than carbon or hydrogen are still shown. Easiest to draw & commonly used.

