

# Introduction to organic chemistry Cheat Sheet by Fahrinur via cheatography.com/160968/cs/33841/

#### Formulae of functional groups

The **general** formula is a formula that represents a homologous series of compounds using letters and numbers. A **homologous series** is a group of organic

A **homologous series** is a group of organic compounds that have the same functional group, the same general formula, and the same chemical properties.

The **structural formula** is a formula that shows how the atoms are bonded to each carbon atom in a molecule.

The **displayed formula** is a 2D representation of an organic molecule showing all its atoms (by their symbols) and their bonds (by single, double, or triple bonds).

The **skeletal formula** is a simplified displayed formula with all the carbon and hydrogen (C-H) bonds removed.

### Molecular & Empirical Formulae

The molecular formula shows the number and type of each atom in a molecule Eg. the molecular formula of ethanoic acid is

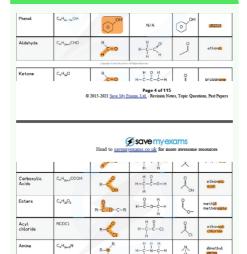
C2H4O2

The empirical formula shows the simplest whole number ratio of the elements present in one molecule of the compound Eg. the empirical formula of ethanol is CH2O

#### Formulae of functional groups

Functional Group	General Formula	Structural Formula	Displayed Formula	Skeletal Formula	
Alkane	C <sub>n</sub> H <sub>2n+2</sub>	R R R R	H-C-C-H	/	ethane
Alkene	C <sub>n</sub> H <sub>2n</sub>	R C=C R	HC-CH	/	ethene
Arene	number number of C of atoms rings	0	N/A	0	(benzene)
Halogenoalkane	C <sub>n</sub> H <sub>2n+1</sub> X halogen	R- <mark>⊗</mark>	H-C-C-X	_x-cı	chloroethane
Halogenoarene	C <sub>n</sub> H <sub>2n-7m</sub> X	<b>⊗</b> *	N/A	o x x − Ct	chtorobenzene
Alcohol	C <sub>a</sub> H <sub>2n+1</sub> OH	R-CH <sub>2</sub> -OH primary	н-С-С-О-Н Н Н	<b>/</b> ОН	ethan <mark>ol</mark>
		Copyright # Serr My Exems.	All Rights Reserved		
		R R-CH-OH secondary	H-C-H H-C-C-O-H	<u></u> _он	propan-2 <mark>-ol</mark>
		R   R   R   R   R   R   R   R   R   R	H-C-H H-C-C-O-H	> он	2-methylpropan

# Formulae of functional groups



## **Nomenclature of Aliphatic Compounds**

Number of Union Complaints table Number of Complaints of

# Functional groups & their nomenclature table

Functional Group			Name
Alkenes	ese	H C = C H	Ethese
Halogensalkane	chloro- fiuoro- iodo- bromo-	H - C - C - C L	Chloroethase
Alcohol	-el	H - C - C - OH	Ethanol
Aldehyde	- ol	H-C-C	Ethaval
Ketone	-one	CH3 C=0	Proposone
Carboxylic Acid	-oic acid	H-C-C-OH	Ethanoic acid
Ester	alkyl -cate	H H H Q H	Propyl Ethanoate
Amine	alkyl -amine	H-C-C-NH,	Ethylanine
Nitrile	-nitrile	H-C-C=N	Ethane nitrile

By Fahrinur cheatography.com/fahrinur/

Not published yet.

Last updated 26th August, 2022.

Page 1 of 1.

Sponsored by Readable.com Measure your website readability! https://readable.com