

IUPAC (International Union of Pure and Applied Chemistry)

Sr No.	Functional	Prefix	Suffix
1	-COOH (Carboxylic acid)	Carboxy	oic acid
2	-SO ₃ H (Sulphonic acid)	Sulpho	sulphonic acid
3	-CO-O-CO- (Anhydride)	-----	oic anhydride
4	-COOR (Ester)	Carbalkoxy/alkoxy carbonyl	oate
5	-COX (Acid halide)	Haloformyl	oyl halide
6	-CONH ₂ (Amide)	Carbamoyl	amide
7	-CN (Cyano)	Cyano	nitrile
8	-NC (Isocyano)	Isocyano	isonitrile
9	-CHO (Aldehyde)	formyl/ oxo	-al
10	-CO- (Ketone)	Oxo	one
11	-OH (Alcohol)	Hydroxy	ol
12	-OH (Phenol)	Hydroxy	phenol
13	-SH (Thiol)	Thio/ mercaptol	thiol
14	-NH ₂ (Amine)	Amino	amine
15	-OR (Ether)	Alkoxy	alkoxy alkane
16	>C=C< (Alkene)	-----	ene
17	-C≡C- (Alkyne)	-----	yne
18	-X (Halide)	Halo	-----
19	-NO ₂ (Nitro)	Nitro	-----

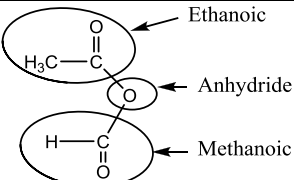
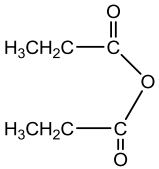
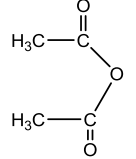
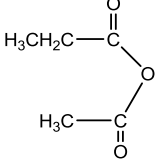
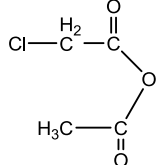
(1) IUPAC nomenclature of CARBOXYLIC ACIDS (-COOH)

Sr NO.	Structure	IUPAC Name
1	$\text{H}_3\text{C}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{COOH}$	
2	$\text{HOOC}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{COOH}$	
3	$\begin{array}{c} \text{HOOC}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}}{\text{C}}-\text{COOH} \\ \\ \text{CHO} \end{array}$	
4	$\begin{array}{c} \text{HOOC}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{COOH} \\ \\ \text{COOH} \end{array}$	
5	$\begin{array}{c} \text{HOOC}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{H}}{\text{C}}-\text{COOH} \\ \quad \quad \\ \text{CHO} \quad \text{CH}_3 \quad \text{CN} \end{array}$	
6	$\begin{array}{c} \text{H}_3\text{C}-\overset{\text{H}}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{H}}{\text{C}}-\text{COOH} \\ \quad \quad \\ \text{CHO} \quad \text{CH}_3 \quad \text{CH}_2\text{CH}_3 \end{array}$	
7	$\begin{array}{c} \text{HOOC}-\overset{\text{H}}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{CN}}{\text{C}}-\text{COOH} \\ \quad \quad \quad \\ \text{CN} \quad \text{OCH}_3 \quad \text{OCH}_2\text{CH}_3 \quad \text{H} \end{array}$	
9	$\begin{array}{c} \text{H}_3\text{C}-\overset{\text{H}}{\text{C}}-\overset{\text{O}}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{COOH} \\ \quad \\ \text{COOH} \quad \text{O} \end{array}$	
10	$\text{HOOC}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{CONH}_2$	
11	$\text{HOOC}-\overset{\text{H}_2}{\text{C}}-\text{COBr}$	
12	$\text{HOOC}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{COOH} \\ \\ \text{COOH}$	
13	$\begin{array}{c} \text{COOH} \\ \\ \text{COOH} \end{array}$	
14	$\begin{array}{c} \text{COOH} \\ \\ \text{CHO} \end{array}$	
15	$\begin{array}{c} \text{H}_3\text{C}-\text{C}-\text{COOH} \\ \\ \text{O} \end{array}$	

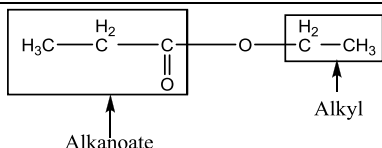
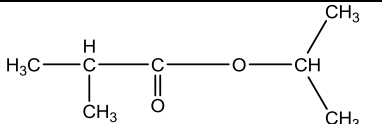
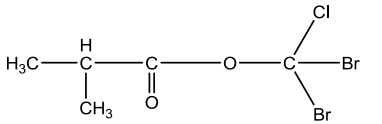
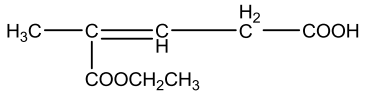
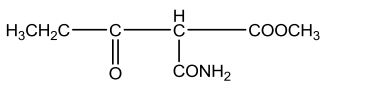
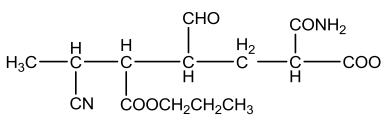
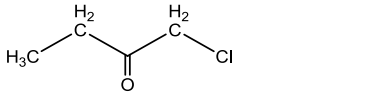
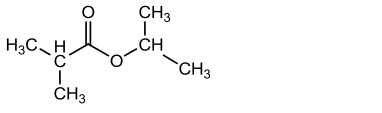
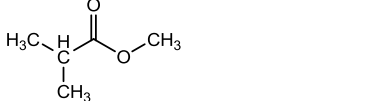
(2) IUPAC nomenclature of ALKANE SULPHONIC ACIDS (-SO₃H)

Sr No.	Structure	IUPAC Name
1	$\text{H}_3\text{C}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{SO}_3\text{H}$	
2	$\begin{array}{c} \text{H}_3\text{C}-\overset{\text{H}}{\text{C}}-\text{CH}_3 \\ \\ \text{SO}_3\text{H} \end{array}$	
3	$\begin{array}{c} \text{H}_3\text{C}-\overset{\text{H}}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{SO}_3\text{H} \\ \quad \\ \text{SO}_3\text{H} \quad \text{SO}_3\text{H} \end{array}$	
4	$\begin{array}{c} \text{HOOC}-\overset{\text{H}}{\text{C}}-\text{CH}_3 \\ \\ \text{SO}_3\text{H} \end{array}$	
5	$\begin{array}{c} \text{HO}_3\text{S}-\overset{\text{H}}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{SO}_3\text{H} \\ \\ \text{CHO} \end{array}$	
6	$\begin{array}{c} \text{H}_3\text{C}-\overset{\text{H}}{\text{C}}-\overset{\text{H}}{\text{C}}-\overset{\text{H}_2}{\text{C}}-\text{SO}_3\text{H} \\ \quad \\ \text{CH}_3 \quad \text{SO}_3\text{H} \end{array}$	

(3) IUPAC nomenclature of ACID ANHYDRIDES

Sr No.	Structure	IUPAC Name	Sr No.	Structure	IUPAC Name
1			4		
2			5		
3					

(4) IUPAC nomenclature of ESTERS (ALKYL ALKANOATE-COOR)

Sr No.	Structure	IUPAC Name
1		
2		
3		
4		
5		
6		
7		
8		
9		

(5) IUPAC nomenclature of HALOFORMYL (ALKANOYL HALIDE-COX)

Sr No.	Structure	IUPAC Name
1		
2		
3		
4		
5		

(6) IUPAC nomenclature of ALKANAMIDES (-CONH₂)

Sr No.	Structure	IUPAC Name
1		
2		
3		

(7) IUPAC nomenclature of ALKANE NITRILES AND ALKANE ISONITRILES (R-CN & R-NC)

Sr No.	Structure	IUPAC Name
1	CH ₃ -CN	
2	CH ₃ -NC	
3	CN-CH ₂ -CH ₂ -NC	
4		
5		

(8) IUPAC nomenclature of ALDEHYDES (ALKANAL-CHO)

Sr No.	Structure	IUPAC Name	Sr No.	Structure	IUPAC Name
1	OHC—CHO		4	$\begin{array}{c} \text{H}_3\text{C}-\text{C}-\text{C}-\text{COOH} \\ \parallel \quad \parallel \\ \text{O} \quad \text{O} \end{array}$	
2	$\begin{array}{c} \text{H}_3\text{C}-\text{C}-\text{C}-\text{CH}_3 \\ \parallel \quad \parallel \\ \text{O} \quad \text{O} \end{array}$		5	$\begin{array}{c} \text{H}_3\text{C}-\text{C}-\text{C}-\text{C}-\text{CHO} \\ \parallel \quad \quad \parallel \\ \text{O} \quad \text{COOH} \quad \text{O} \\ \quad \quad 1 \quad 2 \quad 3 \quad 4 \end{array}$	
3	$\begin{array}{c} \text{H}_3\text{C}-\text{C}-\text{C}-\text{CHO} \\ \parallel \quad \parallel \\ \text{O} \quad \text{O} \end{array}$				

(9) IUPAC nomenclature of ALCOHOLS (ALKANOL R-OH), PHENOLS (Ar-OH), THIOLS (R-SH), AMINES (ALKANAMINE R-NH₂) AND ETHERS (ALKOXY ALKANE R-O-R)

Sr No.	Structure	IUPAC Name
1	HO-CH ₂ -CH ₂ -OH	
2	$\begin{array}{c} \text{H}_2\text{C}-\text{C}-\text{C}-\text{CH}_2\text{OH} \\ \quad \quad \\ \text{CH}_2\text{OH} \quad \text{CH}_2\text{OH} \quad \text{CH}_2\text{OH} \end{array}$	
3	$\begin{array}{c} \text{Et} \quad \text{Et} \\ \diagdown \quad / \\ \text{N} \\ / \\ \text{Et} \end{array}$	
4	$\begin{array}{c} \text{H}_3\text{C}-\text{C}-\text{C}-\text{N} \\ \quad \quad / \quad \backslash \\ \text{H}_2 \quad \text{H}_2 \quad \quad \quad \text{CH}_2\text{CH}_3 \end{array}$	
5	CH ₃ -CH ₂ -CH ₂ -O-CH ₃	
6	CH ₃ -CH ₂ -CH ₂ -SH	
7	CH ₃ O-CH ₂ -Et	
8	CH ₃ -S-CH ₂ -CH ₃	
9	MeO-CH ₂ -CH ₂ -CH ₃	
10	$\begin{array}{c} \text{H}_2\text{N}-\text{C}-\text{C}-\text{NH}_2 \\ \parallel \quad \parallel \\ \text{O} \quad \text{O} \end{array}$	
11	$\begin{array}{c} \text{H}_2\text{N}-\text{C}-\text{NH}_2 \\ \parallel \\ \text{O} \end{array}$	
12	$\begin{array}{c} \text{OHC}-\text{C}-\text{C}-\text{CHO} \\ \quad \\ \text{H}_2 \quad \text{H} \\ \quad \quad \text{CHO} \end{array}$	