

Functional Groups

Functional Group	Formula	Class of Compound	Naming	Example	Solubility
Hydroxyl	$\text{R}-\text{O}-\text{H}$	Alcohols	-ol	Propanol Ethanol Butanol	Short – Yes Long – No
Ether	$\text{R}-\text{O}-\text{R}'$	Alkoxy's	Replacing -yl with -oxy on shortest alkyl Using name of parent alkane of longest alkyl	Methoxymethane Butoxybutane Ethoxyethane	Short – Yes Long – No
Carbonyl	$\text{R}-\text{C}(=\text{O})-\text{R}'$	Ketones	-one	Butanone Propanone Methanone	Short – Yes Long – No
Formyl	$\text{R}-\text{C}(=\text{O})-\text{H}$	Aldehydes	-al	Methanal Butanal Propanal Formaldehyde	Short – Yes Long – No
Carboxyl	$\text{R}-\text{C}(=\text{O})-\text{OH}$	Carboxylic Acids	-oic acid	Ethanoic acid Butanoic acid Hexanoic acid	Short – Yes Long – No
Ester	$\text{R}-\text{C}(=\text{O})-\text{OR}'$	Esters	-yl -oate	Ethyl acetate Methyl acetate	Short – Yes Long – No
Amino	$\text{R}-\text{N}(\text{H})_2$	Primary amine (HIGH BP)	-amine	Propanamine Methanamine 1-Methylpropanamine	Short – Yes Long – No
	$\text{R}-\text{N}(\text{H})-\text{R}'$	Secondary amine (MOD BP)			
	$\text{R}-\text{N}(\text{R}')_2$	Tertiary amine (LOW BP)			