

# COMMON FUNCTIONAL GROUPS

Type of compound	General structure	Example	Functional group	Type of compound	General structure	Example	Functional group
Acid chloride			-COCl	Aromatic compound			phenyl group
Alcohol	$R-\ddot{O}H$	$CH_3-\ddot{O}H$	-OH hydroxy group	Carboxylic acid			-COOH carboxy group
Aldehyde			C=O carbonyl group	Ester			-COOR
Alkane	R-H	CH <sub>3</sub> CH <sub>3</sub>	--	Ether	$R-\ddot{O}-R$	$CH_3-\ddot{O}-CH_3$	-OR alkoxy group
Alkene			double bond	Ketone			C=O carbonyl group
Alkyl halide	$R-\ddot{X}$ (X=F, Cl, Br, I)	$CH_3-\ddot{Br}$	-X halo group	Nitrile	$R-C\equiv N:$	$CH_3-C\equiv N:$	-C≡N cyano group
Alkyne	$-C\equiv C-$	$H-C\equiv C-H$	triple bond	Sulfide	$R-\ddot{S}-R$	$CH_3-\ddot{S}-CH_3$	-SR alkylthio group
Amide			-CONH <sub>2</sub> , -CONHR, -CONR <sub>2</sub>	Thiol	$R-\ddot{S}H$	$CH_3-\ddot{S}H$	-SH mercapto group
Amine	$R-\ddot{N}H_2$ or $R_2\ddot{N}H$ or $R_3\ddot{N}$	$CH_3-\ddot{N}H_2$	-NH <sub>2</sub> amino group	Thioester			-COSR
Anhydride							