

Naming of Polyfunctional Organic Compounds

1. **Suffix**- the part that identifies the principal functional-group class to which the molecules belongs.
2. **Parent**- the part that identifies the size of the main chain or ring.
3. **Substituent prefixes**- parts that identify what substituents are located on the main chain or ring.
4. **Locants**- numbers that tell where substituents are located on the main chain.

Classification of Functional Groups for Purpose of Nomenclature.

<u>Functional Groups</u>	<u>Name as suffix</u>	<u>Name as prefix</u>
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Principal groups

1. Carboxylic acids	-oic acid -carboxylic acid	carboxy
2. Acid anhydrids	-oic anhydride -carboxylic anhydride	
3. Esters	-oate -carboxylate	alkoxycarbonyl
4. Acid halides	-oyl halides -carbonyl halide	halocarbonyl
5. Amides	-amide -carboxamide	amido
6. Nitriles	-nitrile -carbonitrile	cyano
7. Aldehydes	-al -carbaldehyde	oxo
8. ketones	-one	oxo
9. Alcohols	-ol	hydroxy
10. Phenols	-ol	hydroxy

11. Thiols	-thiol	mercapto
12. Amines	-amine	amino
13. Imines	-imine	imino
14. Alkenes	-ene	alkenyl
15. Alkynes	-yne	alkynyl
16. Alkanes	-ane	alkyl

Subordinate groups

17. Ethers		alkoxy
18. Sulfides		alkylthio
19. Halides		halo
20. Nitro		nitro
21. Azides		azido
22. Diazo		diazo

1. Parent- selecting the main chain or ring.

a. If the group of highest priority is part of an open chain, select the longest chain that contains the largest number of principal functional groups.