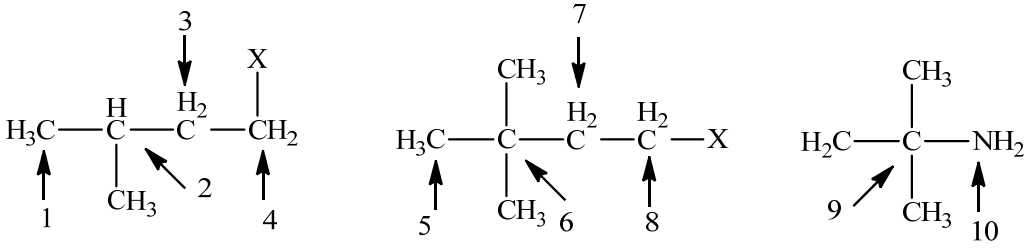
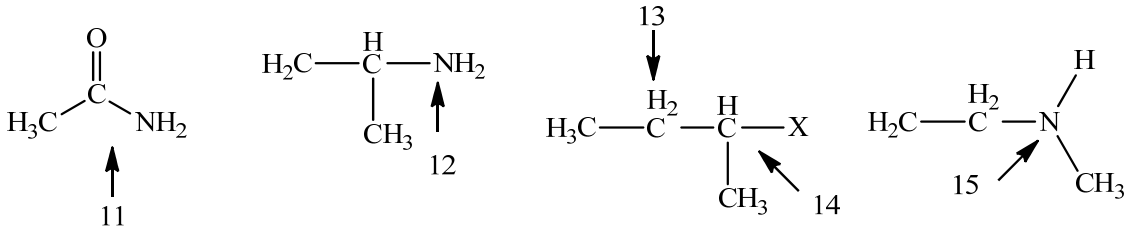
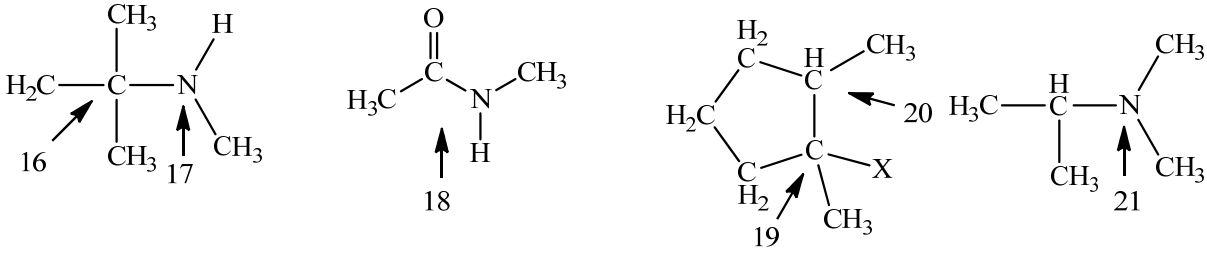
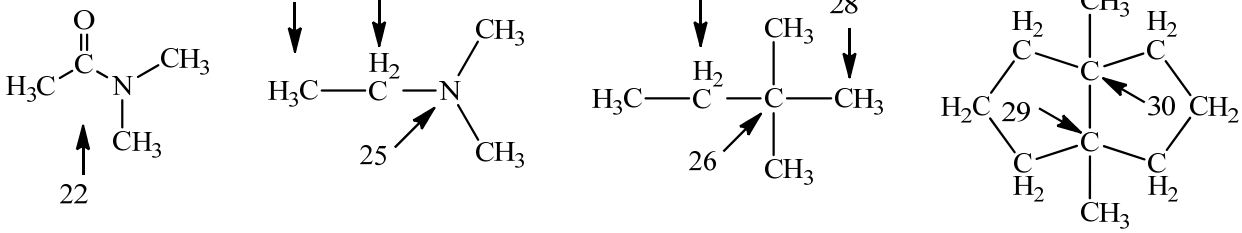
Chem 201 Nomenclature Set Beauchamp Name _____

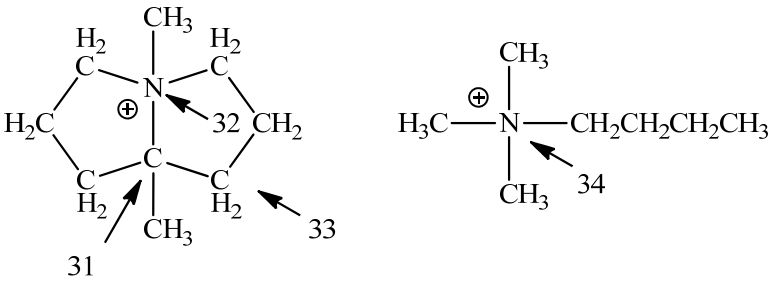
Special terms to identify "parts" of organic structues.









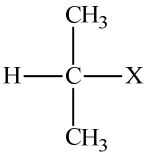


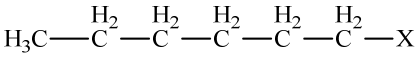
Possible answers.

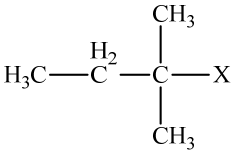
1. primary carbon = 1,4,5,8,23,28
2. secondary carbon = 3,7,13,14,24,26,33
3. tertiary carbon = 2,9,16,20,19
4. quaternary carbon = 6,26,29,30
5. primary amine = 10,12
6. secondary amine = 15,17
7. tertiary amine = 21,25
8. quaternary ammonium ion = 32,34
8. primary amide = 11
9. secondary amide = 18
10. tertiary amide = 22
11. methyl carbon = 1,5,28
12. methylene carbon = 3,7,13,24,26,33
13. methine carbon = 2.14.20

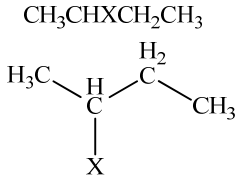
Chem 201 Nomenclature Set Beauchamp Name _____

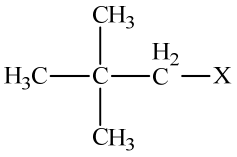
Possible answers are written in lower right corner.

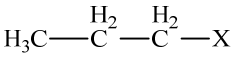


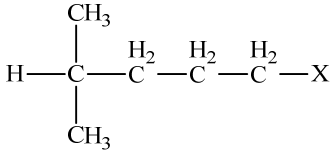


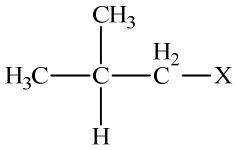


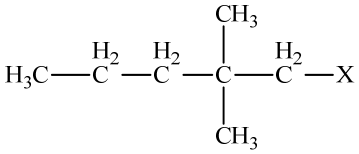


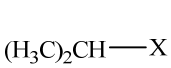


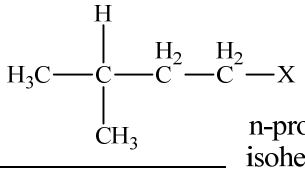


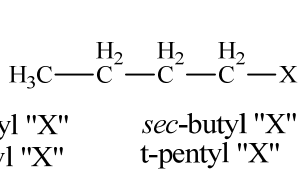






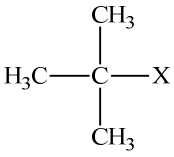


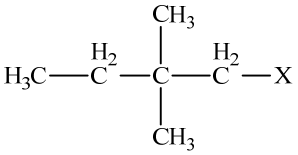


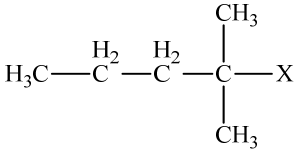


n-propyl "X"
isohexyl "X"
isopropyl "X"
neopentyl "X"
t-hexyl "X"
heptyl "X"
isopentyl "X"
hexyl "X"

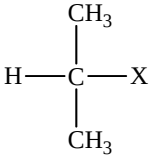
sec-butyl "X"
t-pentyl "X"
n-hexyl "X"
t-butyl "X"
isobutyl "X"
isopropyl "X"
n-butyl "X"



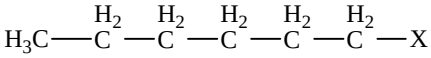




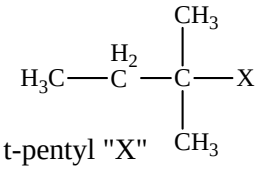
Answers.



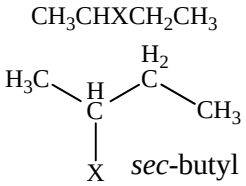
isopropyl "X"



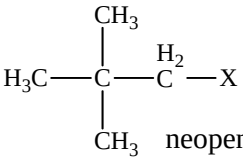
n-hexyl "X"



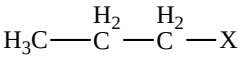
t-pentyl "X"



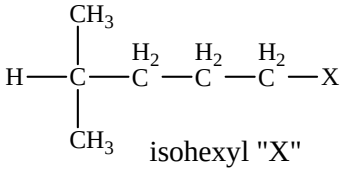
sec-butyl "X"



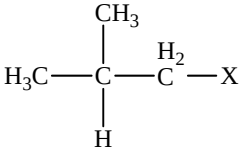
neopentyl "X"



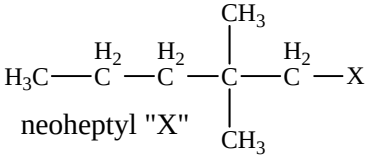
n-propyl "X"



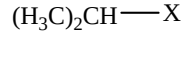
isohexyl "X"



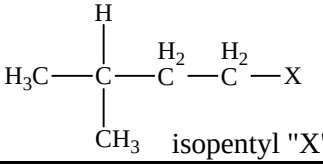
isobutyl "X"



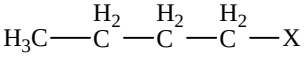
neoheptyl "X"



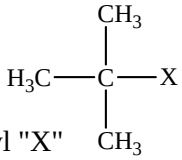
isopropyl "X"



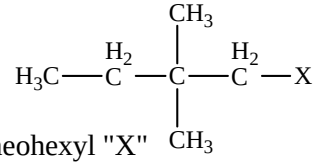
isopentyl "X"



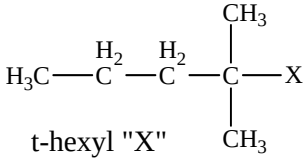
n-butyl "X"



t-butyl "X"

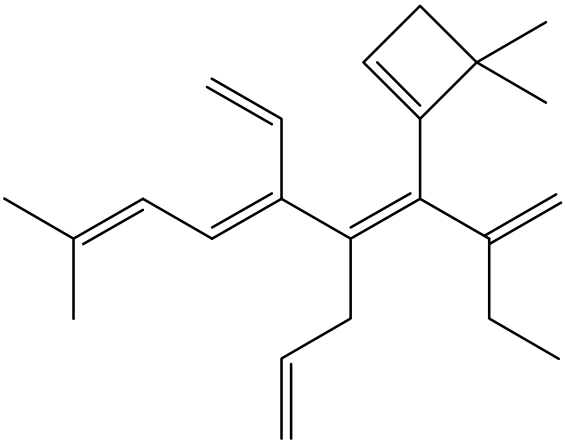


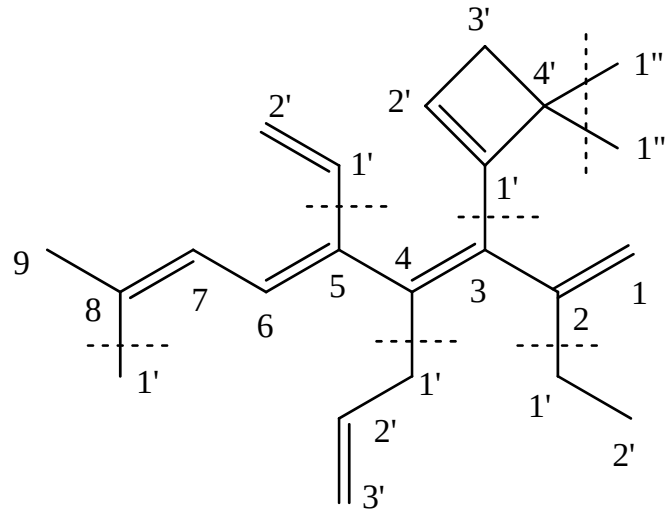
neohexyl "X"



t-hexyl "X"

Provide an acceptable name for the following structure.





2-ethyl-3-(4,4-dimethylcyclobut-1-enyl)-4-(prop-2-enyl)-5-ethenyl-8-methylnona-1,3Z,5E,7-tetraene

-4-allyl -5-vinyl

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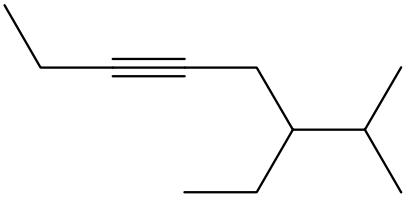
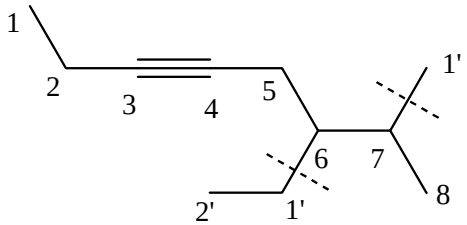
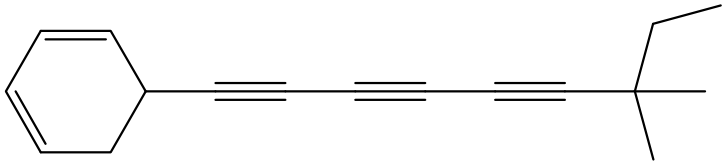
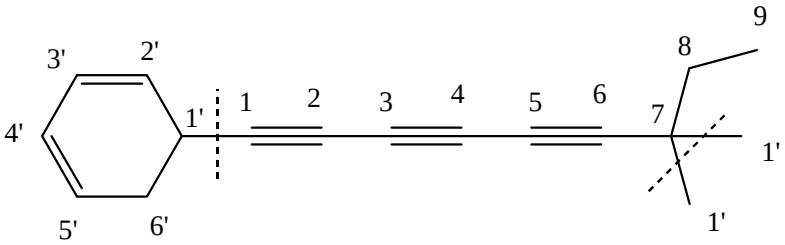
3. Indicate any substituent groups by the number of the carbon atom in the longest chain to which they are attached.



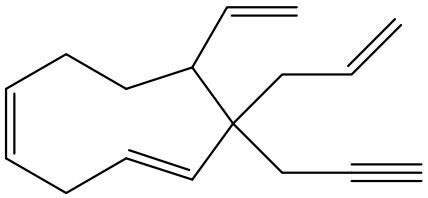


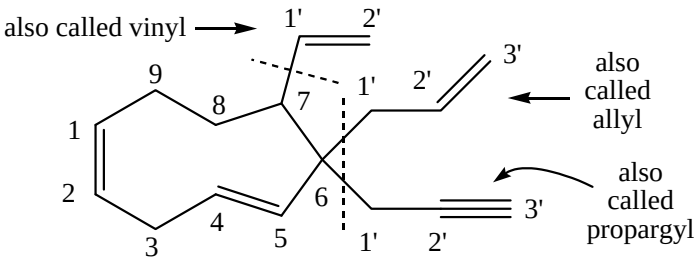
6-ethyl-7-methyloct-3-yne





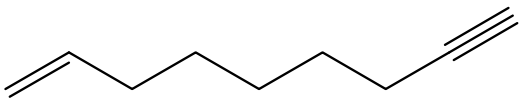
1-(cyclohexa-2,4-dienyl)-7,7-dimethylnona-1,3,5-triyne

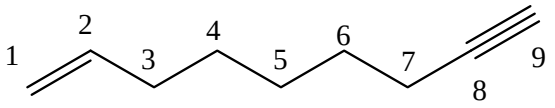




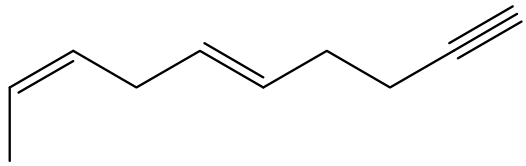
7-ethenyl-6-(prop-2-enyl)-6-(prop-2-ynyl)cyclonona-1Z,4E-diene

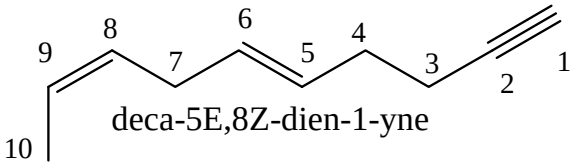
6-allyl-6-propargyl-7-vinylcyclonona-1Z,4E-diene



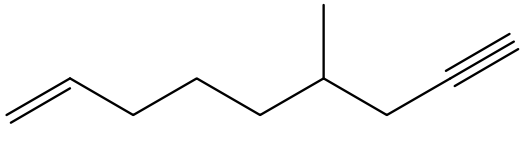


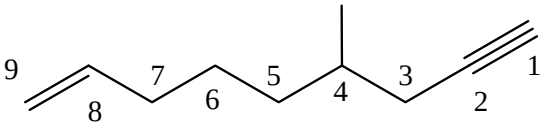
non-1-en-8-yne



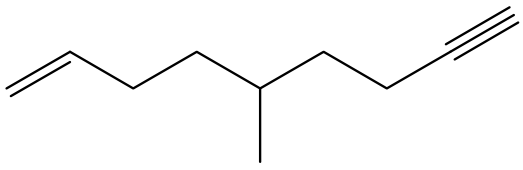


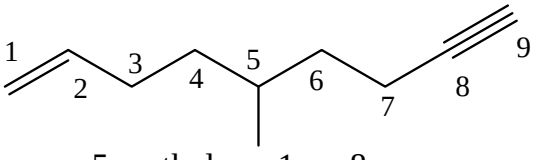
deca-5E,8Z-dien-1-yne





4-methylnon-8-en-1-yne





5-methylnon-1-en-8-yne

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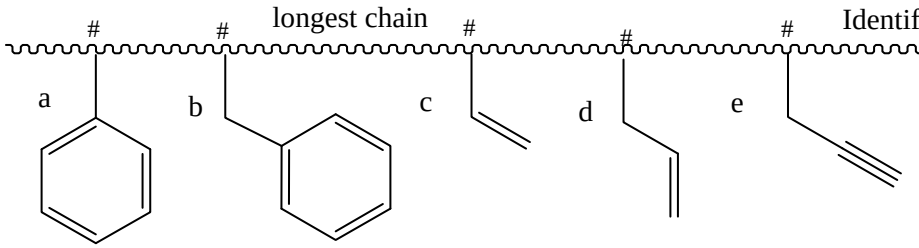
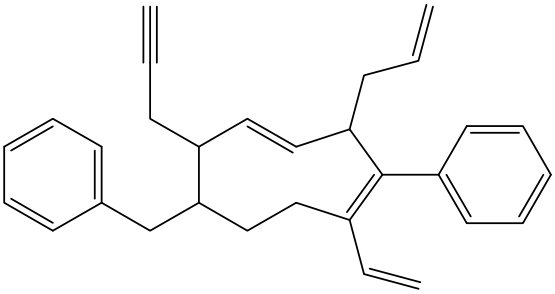
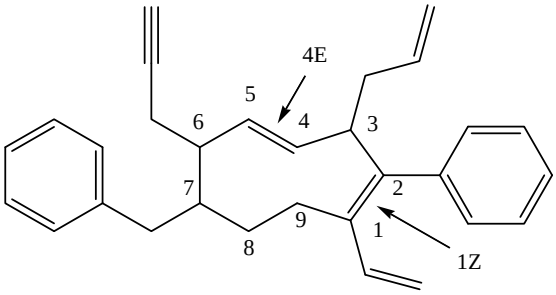


Identify common name of each substituent.

#-allyl
#-vinyl
#-benzyl
#-propargyl
#-phenyl



Provide an acceptable name for the above structure.



1-vinyl-2-phenyl-3-allyl-6-propargyl-7-benzylcyclonona-1Z,4E-diene

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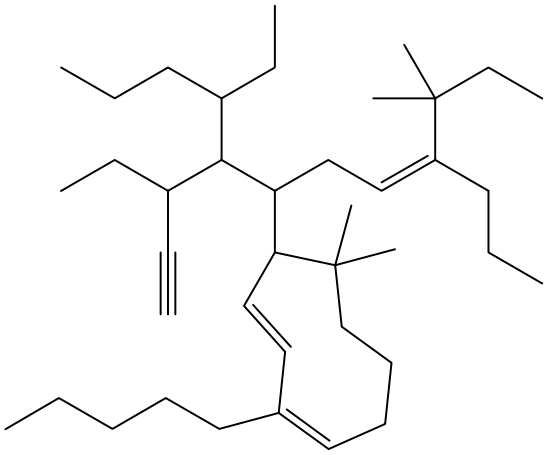

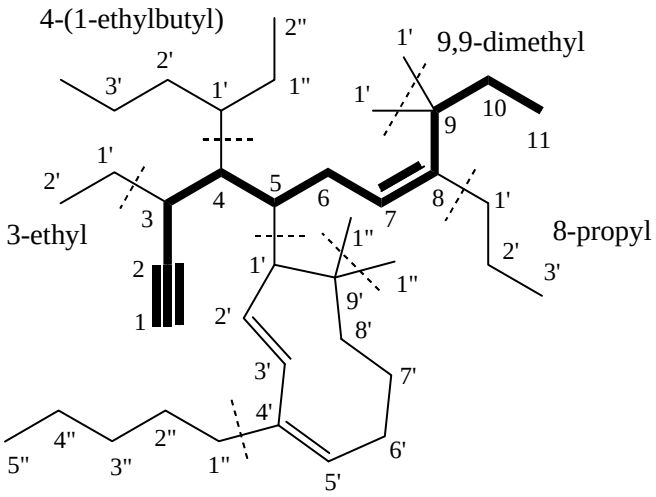

5-(4-pentyl-9,9-dimethylcyclonona-2E,4Z-dienyl)

3-ethyl-4-(1-ethylbutyl)-5-(4-pentyl-9,9-dimethylcyclonona-2E,4Z-dienyl)-8-propyl-9,9-dimethylundec-7Z-en-1-yne

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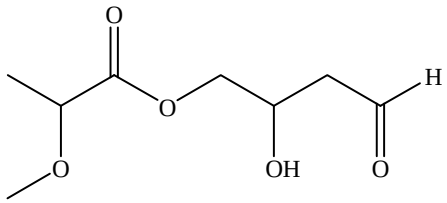

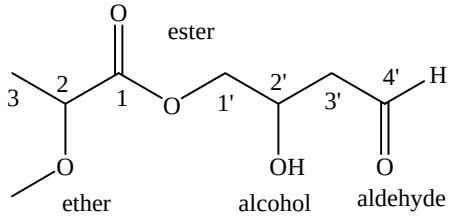

2-hydroxy-4-oxobutyl 2-methoxypropanoate

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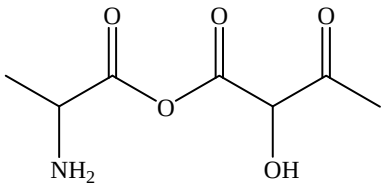
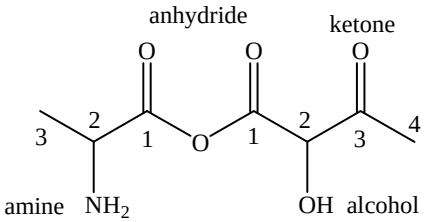
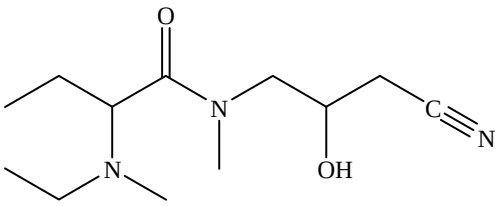
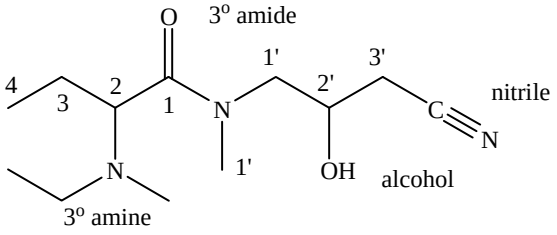




2-hydroxy-3-oxobutanoic 2-aminopropanoic anhydride





N-(2-hydroxy-3-cyanopropyl)-N-methyl-2-(N-ethyl-N-methylamino)butanamide

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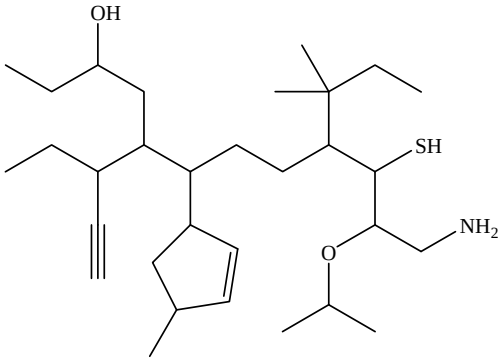

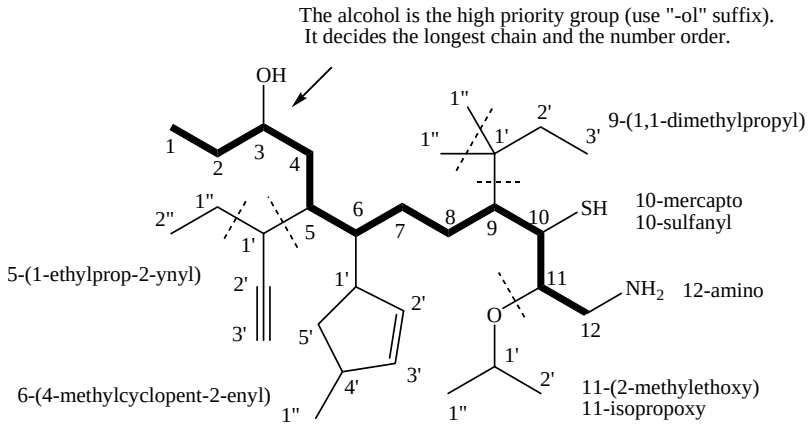

5-(1-ethylprop-2-ynyl)-6-(4-methylcyclopent-2-enyl)-9-(1,1-dimethylpropyl)-10-mercapto-11-(2-methylethoxy)-12-aminododecan-3-ol

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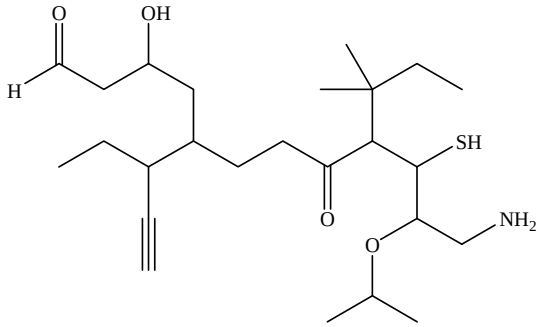
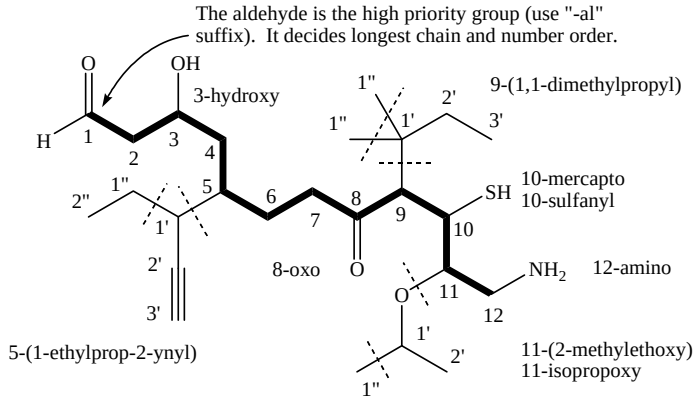
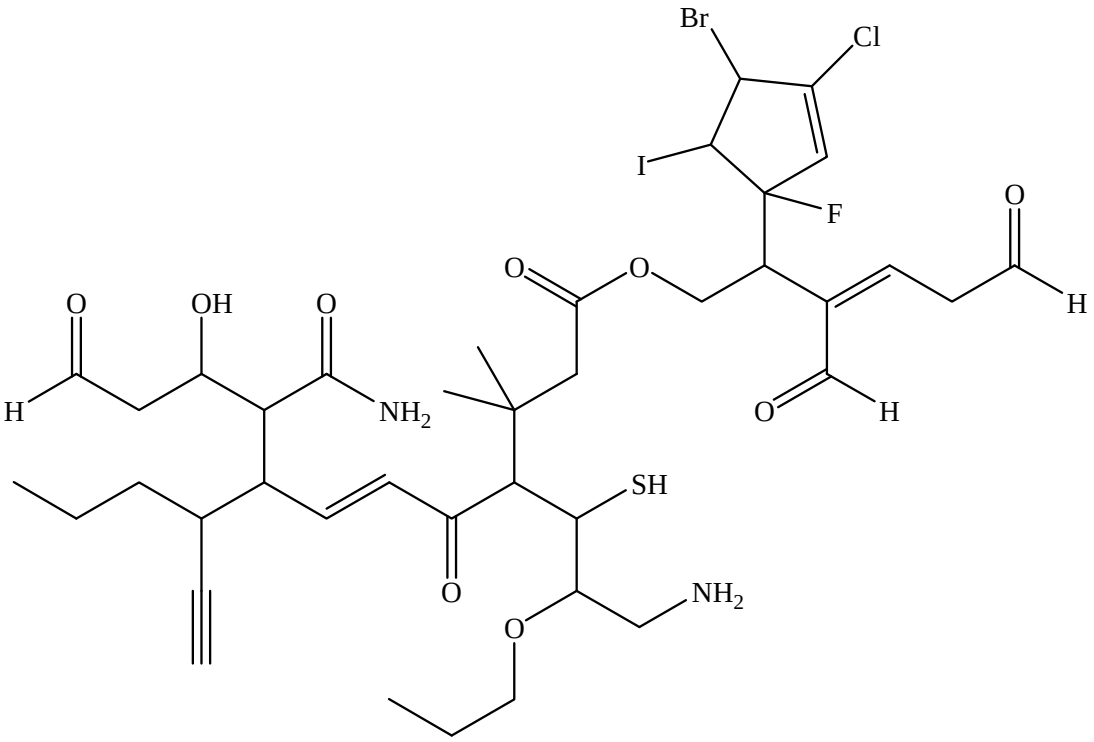
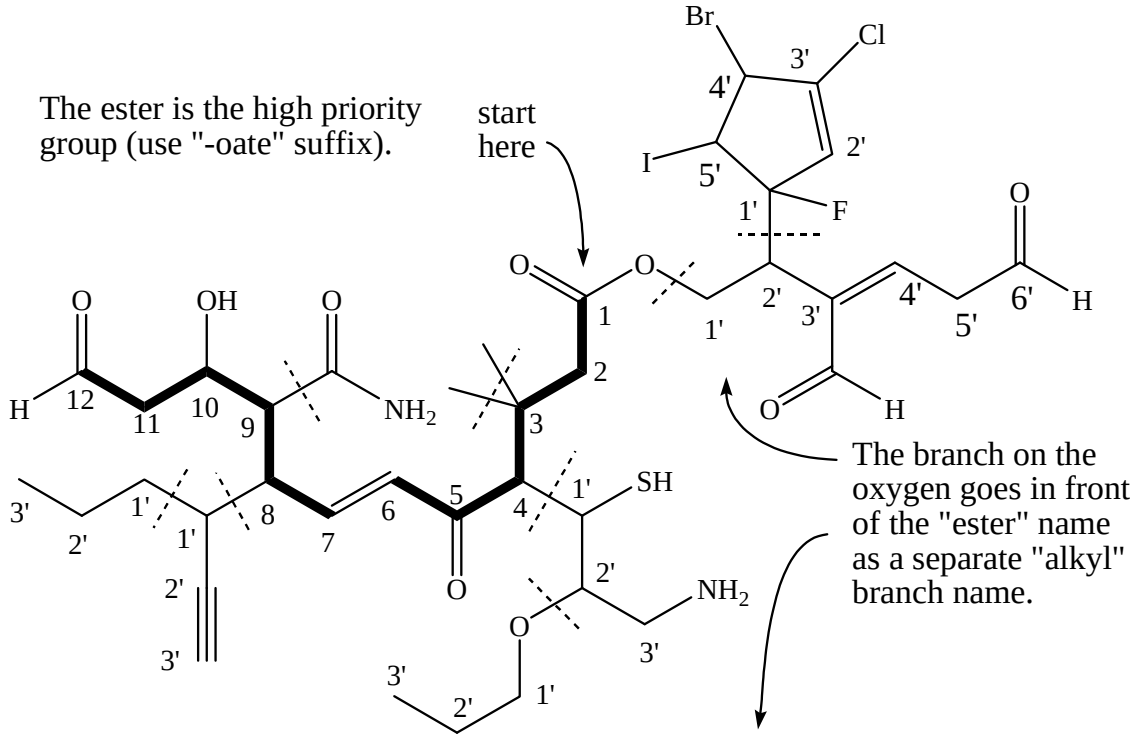




3-hydroxy-5-(1-ethylprop-2-ynyl)-8-oxo-9-(1,1-dimethylpropyl)-

10-mercapto-11-(2-methylethoxy)-12-aminododecanal

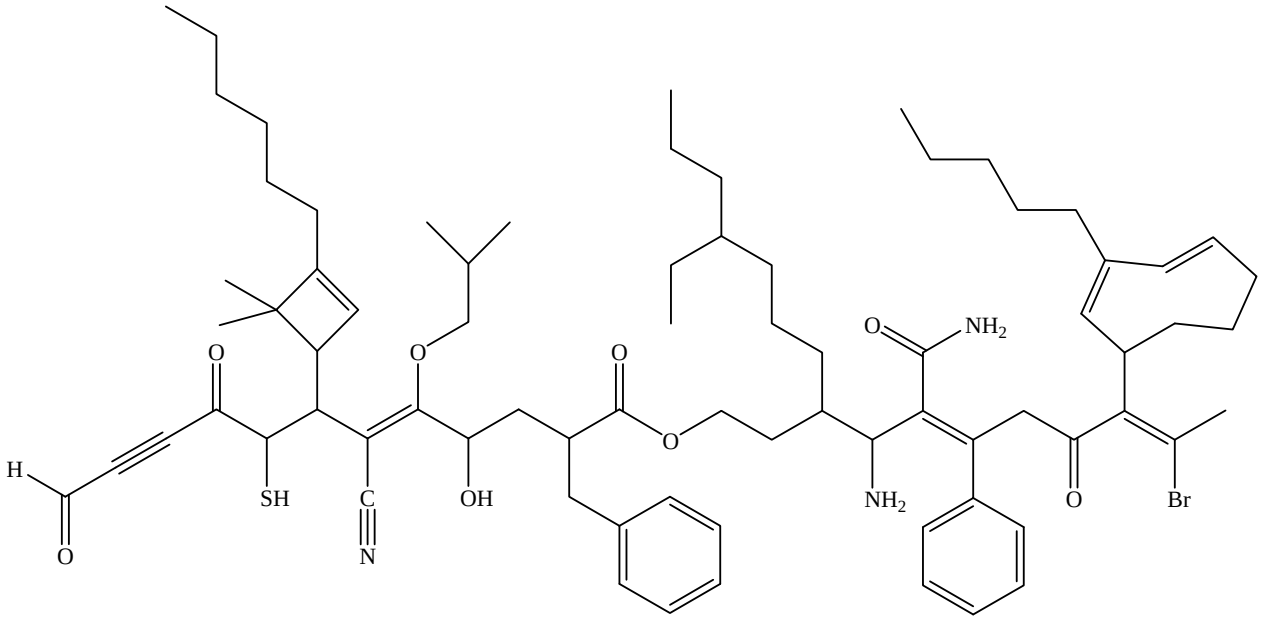




2-(1-fluoro-3-chloro-4-bromo-5-iodocyclopent-2-enyl)-3-formyl-6-oxohex-3Z-enyl

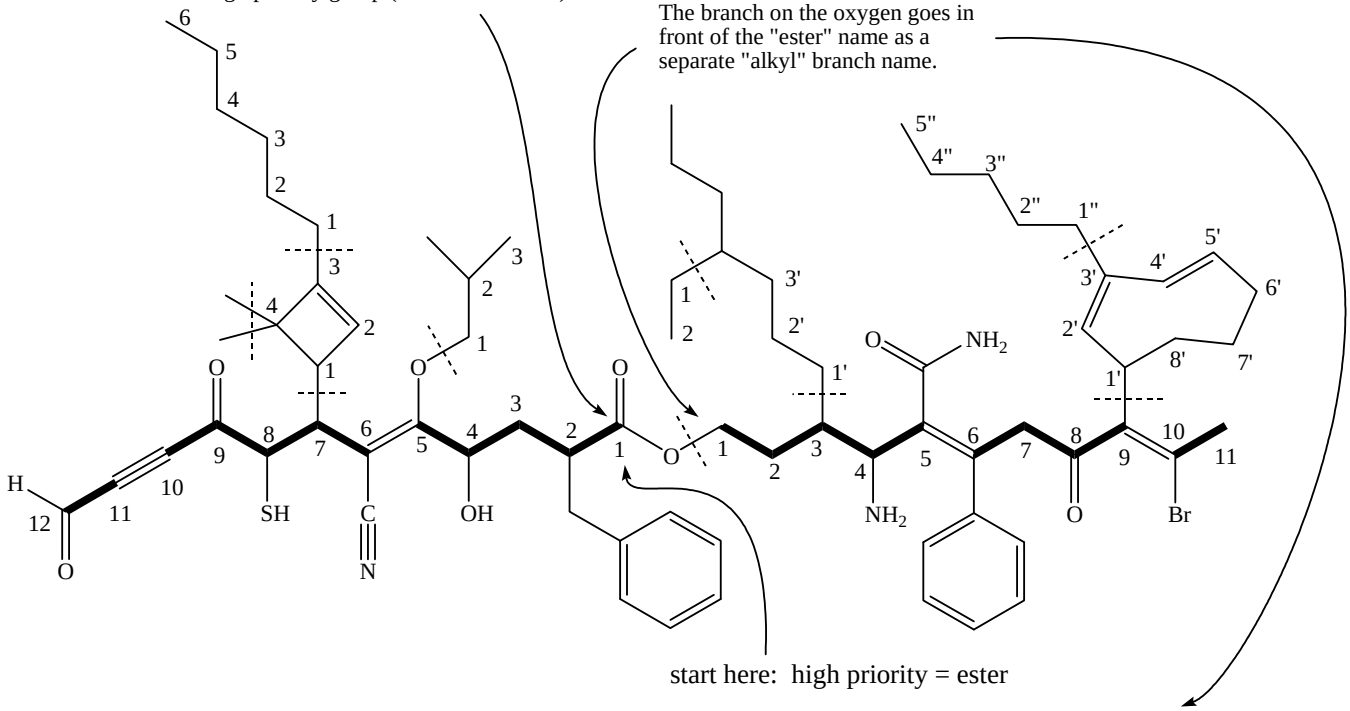
3,3-dimethyl-4-(1-mercapto-2-propoxy-3-aminopropyl)-5,12-dioxo-

8-(1-propylprop-2-ynyl)-9-amido-10-hydroxydodec-6E-enoate



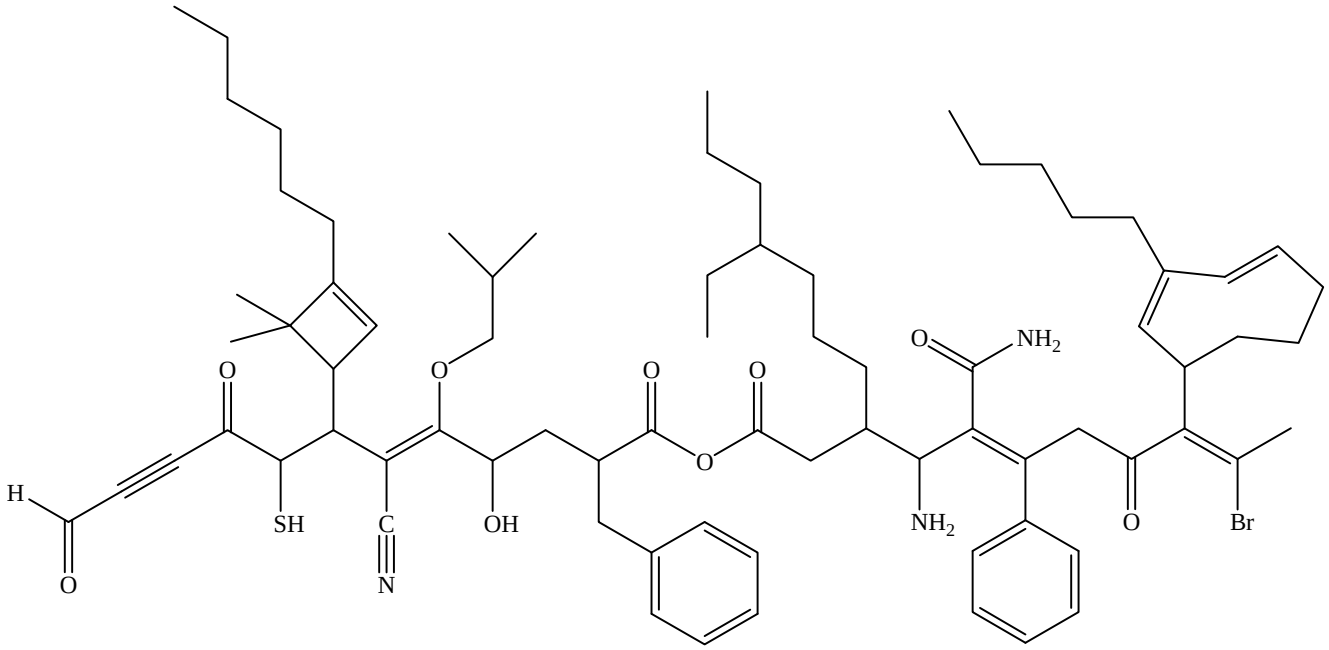
The ester is the high priority group (use "-oate" suffix).

The branch on the oxygen goes in front of the "ester" name as a separate "alkyl" branch name.

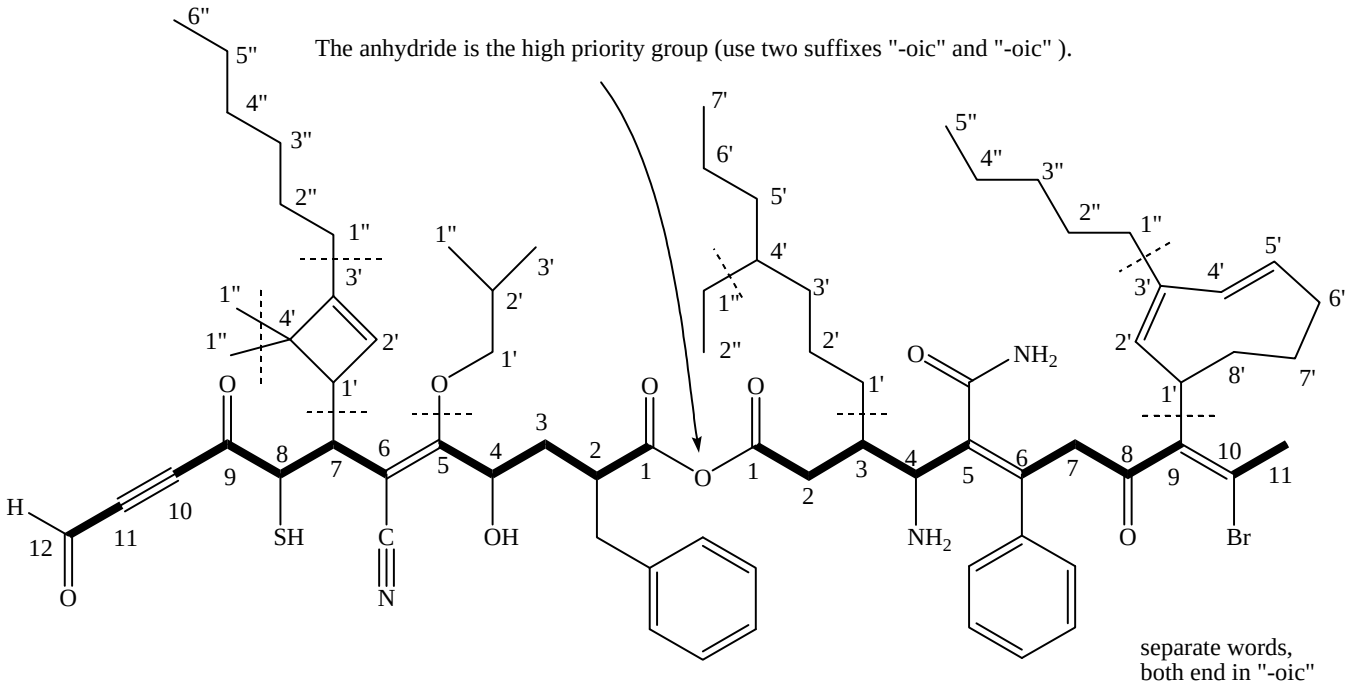


start here: high priority = ester

3-(4-ethylheptyl)-4-amino-5-amido-6-phenyl-8-oxo-9-(3-pentylcycloocta-2Z,4E-dienyl)-10-bromoundeca-5E,9Z-dienyl 2-benzyl-4-hydroxy-5-(2-methylpropoxy)-6-cyano-7-(3-hexyl-4,4-dimethylcyclobut-2-enyl)-8-mercapto-9,12-dioxododec-5E-en-10-ynoate



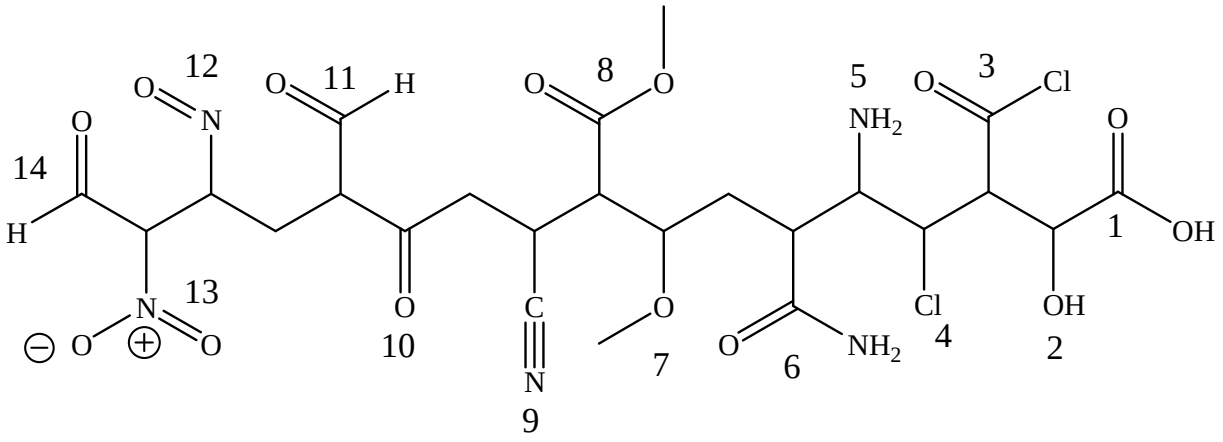
The anhydride is the high priority group (use two suffixes "-oic" and "-oic").

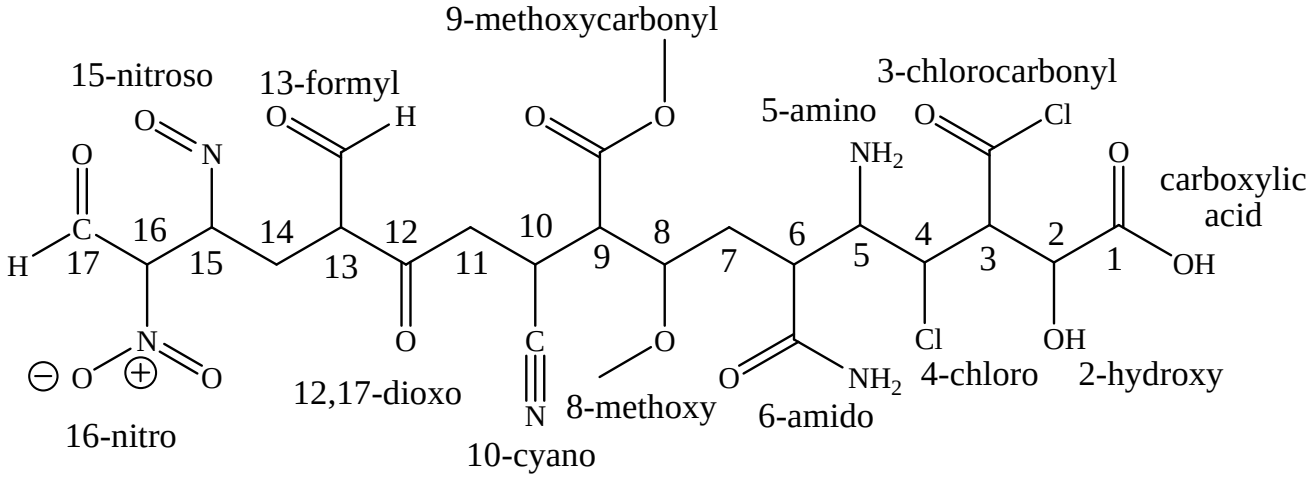


3-(4-ethylheptyl)-2-amino-5-amido-6-phenyl-8-oxo-9-(3-pentylcycloocta-2Z,4E-dienyl)-10-bromoundeca-5E,9Z-dienoic

2-benzyl-4-hydroxy-5-(2-methylpropoxy)-6-cyano-7-(3-hexyl-4,4-dimethylcyclobut-2-enyl)-8-mercapto-

9,12-dioxododec-5E-en-10-ynoic anhydride



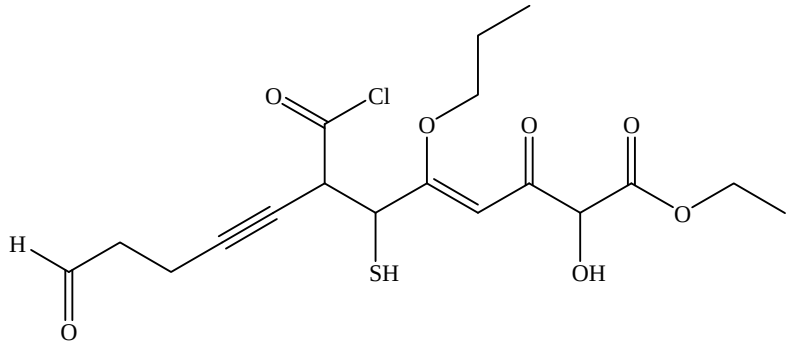


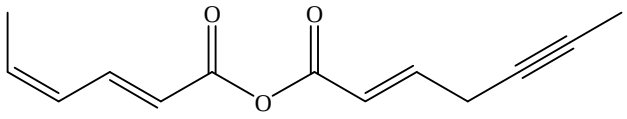
2-hydroxy-3-chlorocarbonyl-4-chloro-5-amino-6-amido-8-methoxy-9-methoxycarbonyl-

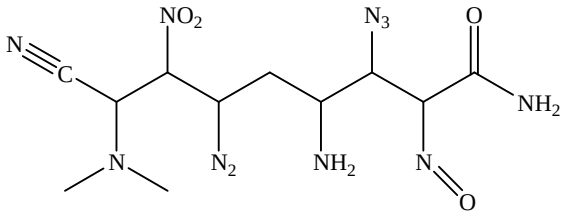
10-cyano-12,17-dioxo-13-formyl-15-nitroso-16-nitroheptadecadecanoic acid

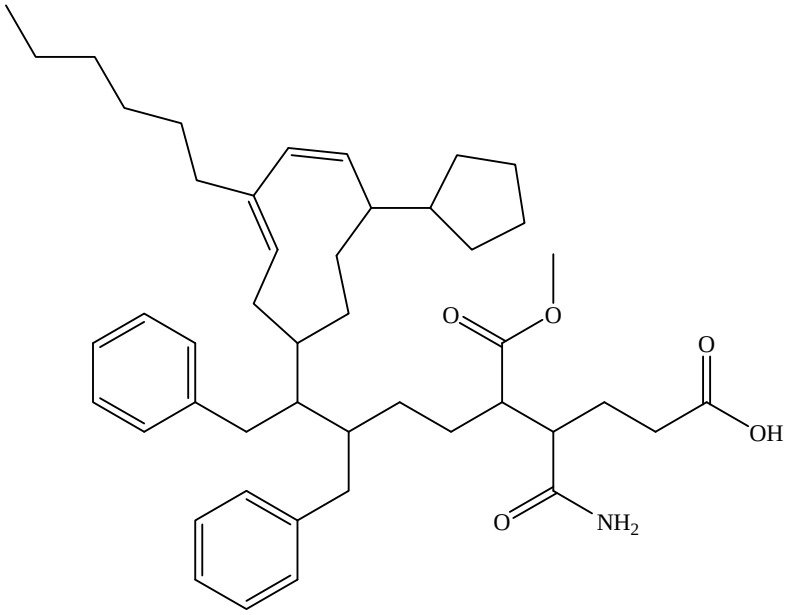
Chem 201 Nomenclature Set Beauchamp Name _____

Nomenclature Homework/Quiz



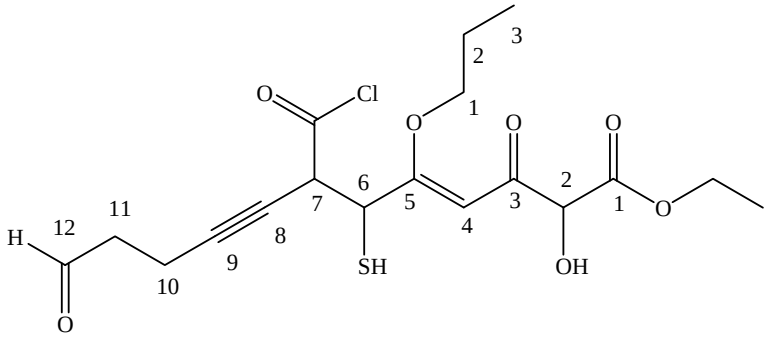






Chem 201 Nomenclature Set Beauchamp Name _____

Nomenclature Homework/Quiz Possible KEY



ethyl 2-hydroxy-3,12-dioxo-5-propoxy-6-mercapto-7-chlorocarbonyldodec-4Z-en-8-ynoate

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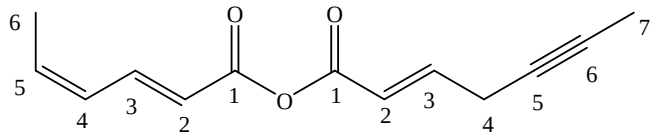
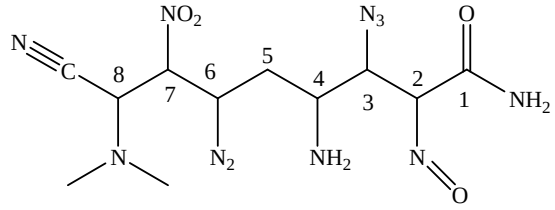


hept-2E-en-5-ynoic hexa-2E,4Z-dienoic anhydride



2-nitroso-3-azido-4-amino-6-diazo-7-nitro-8-(N,N-dimethylamino)-8-cyanooctanamide

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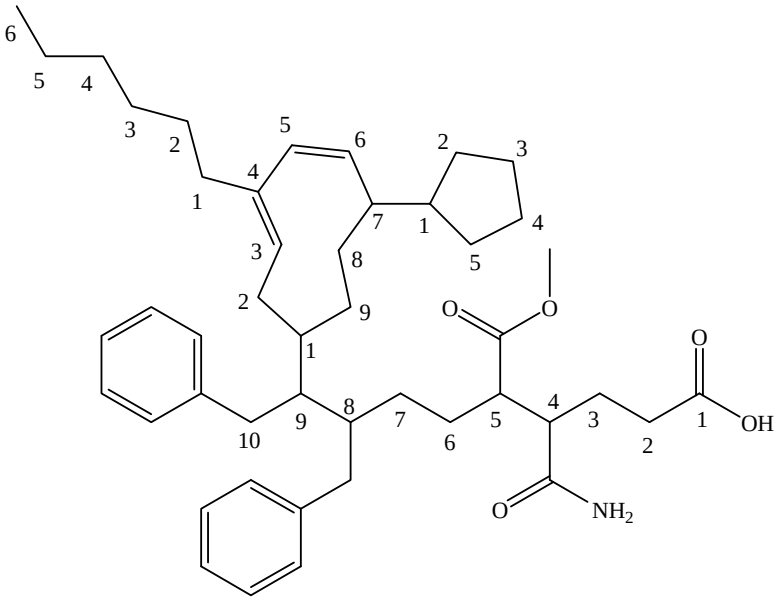

4-amido-5-methoxycarbonyl-8-benzyl-9-(4-hexyl-7-cyclopentylcyclonona-3E,5Z-dienyl)-10-phenyldecanoic acid