

Perception

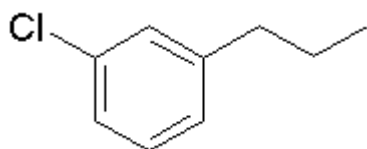
Although every effort has been made to ensure the accuracy of the grading, the quality of the explanations, and the grammatical correctness of the content, mistakes occasionally slip through. In our goal to achieve a perfect database of questions, answers, and explanations, we would appreciate your help by reporting to us mistakes that you see. [Click on the link here](#) and be sure to give us an explanation of what you think is wrong. You may copy and paste the text and any structures directly into this form. Be sure to include your name and email address and we will get back to you about the correctness of your suggestion. Thanks in advance for helping us to maintain this system as the world's leading system to help in the teaching of organic chemistry.

Sm2-03-01 Functional Groups completed

Total score: 0 out of 10, 0%

1 of 10

Identify the functional group(s) that appear in the molecule below.

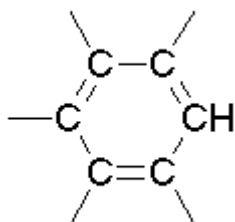


- ☐ Ester
- ☐ Amine
- ☐ Thiol
- ☐ Amide
- ☐ Ether
- ☐ Halide
- ☐ Epoxide
- ☐ Alcohol
- ☐ Carboxylic Acid
- ☐ Ketone
- ☐ Nitrile
- ☐ Arene
- ☐ Alkene

- ☐ Sulfonic Acid
- ☐ Sulfide
- ☐ Acid Anhydride
- ☐ Alkyne
- ☐ Aldehyde

Question not answered

Arenes are identified by the following functional group:



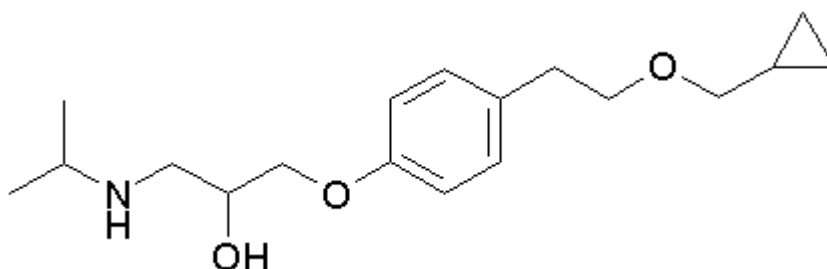
The general formula for an arene is ArH . Sometimes one or more of the carbon atoms within the 6-membered arene ring can be substituted by a heteroatom such as O or N. The important issue is having a 6-membered ring with 3 alternating double bonds.

This molecule also contains a halide.

The correct answers are halide and arene functional groups.

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Identify the functional group(s) that appear in **betaxolol**. This compound is in a class of drugs called beta-blockers, which are used to lower blood pressure, lower heart rate, reduce angina (chest pain), and reduce the risk of recurrent heart attacks.



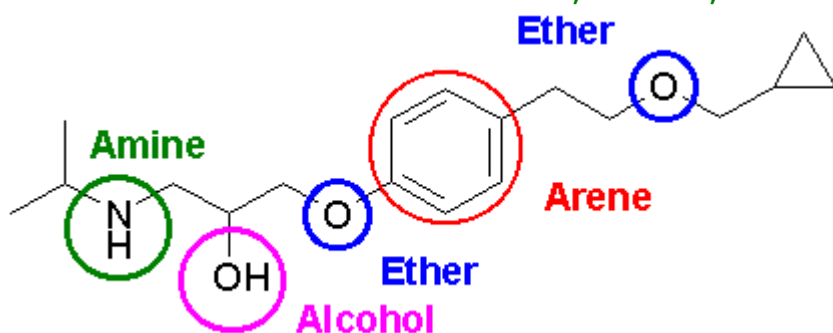
Betaxolol

- ☐ Alkene

- ☐ Carboxylic Acid
- ☐ Ketone
- ☐ Ester
- ☐ Arene
- ☐ Amine
- ☐ Alcohol
- ☐ Ether
- ☐ Amide
- ☐ Aldehyde

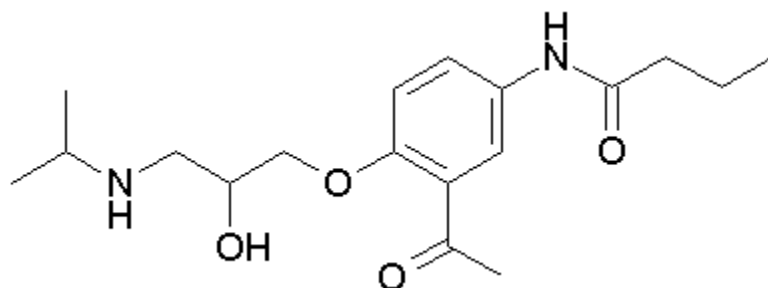
Question not answered

The correct answers are alcohol, amine, arene, and ether.



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Identify the functional group(s) that appear in **acebutolol**. This compound is in a class of drugs called beta-blockers, which are used to lower blood pressure, lower heart rate, reduce angina (chest pain), and reduce the risk of recurrent heart attacks.



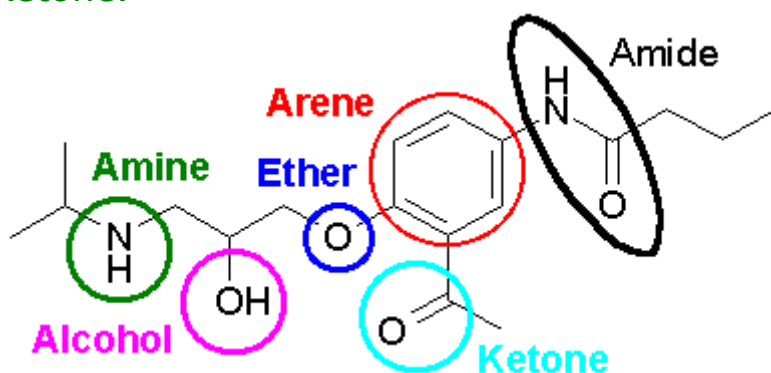
Acebutolol

- ☐ Arene
- ☐ Ketone
- ☐ Carboxylic Acid
- ☐ Aldehyde

- ☐ Ester
- ☐ Amine
- ☐ Alcohol
- ☐ Ether
- ☐ Alkene
- ☐ Amide

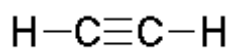
Question not answered

The correct answers are alcohol, amide, amine, arene, ether, and ketone.



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Identify the functional group(s) that appear in the molecule below.

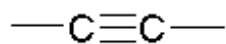


- ☐ Amine
- ☐ Alkyl Halide
- ☐ Aldehyde
- ☐ Amide
- ☐ Epoxide
- ☐ Ketone
- ☐ Acyl Halide
- ☐ Alcohol
- ☐ Sulfonic Acid
- ☐ Sulfide
- ☐ Thiol
- ☐ Ether
- ☐ Arene
- ☐ Carboxylic Acid
- ☐ Ester

- ☐ Nitrile
- ☐ Alkene
- ☐ Alkyne
- ☐ Acid Anhydride

Question not answered

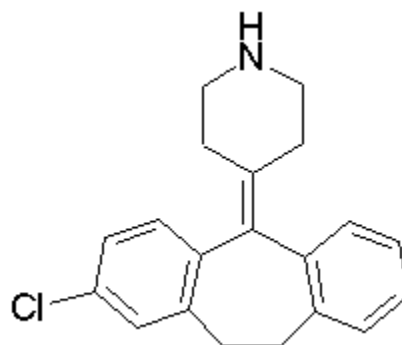
Alkynes are identified by the following functional group:



The general formula for an alkyne is $\text{RC}\equiv\text{CR}$.

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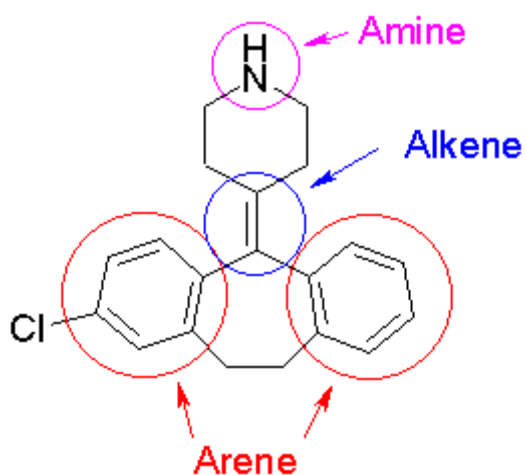
Identify the functional group(s) that appear in desloratadine. Desloratadine is a histamine H_1 -receptor antagonist that the FDA has approved as a treatment for the relief of seasonal allergic rhinitis in patients 12 years or older.



Desloratadine

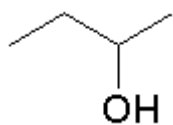
- ☐ Ether
- ☐ Halide
- ☐ Arene
- ☐ Nitrile
- ☐ Amine
- ☐ Thiol
- ☐ Alkene
- ☐ Aldehyde
- ☐ Alkyne
- ☐ Ketone
- ☐ Amide
- ☐ Alcohol

Question not answered



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Identify the functional group(s) that appear in the molecule below.



- ☐ Carboxylic Acid
- ☐ Thiol
- ☐ Alkyne
- ☐ Alkene
- ☐ Ketone
- ☐ Alkyl Halide
- ☐ Nitrile
- ☐ Arene
- ☐ Acid Anhydride
- ☐ Aldehyde
- ☐ Acyl Halide
- ☐ Sulfide
- ☐ Amide
- ☐ Epoxide
- ☐ Alcohol
- ☐ Sulfonic Acid
- ☐ Ester
- ☐ Ether
- ☐ Amine

Question not answered

Alcohols are identified by the following functional group:

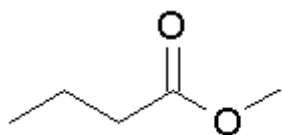
-OH

The general formula for an alcohol is ROH.

The correct answer is that this molecule contains an alcohol functional group.

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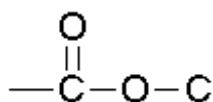
Identify the functional group(s) that appear in the molecule below, which is responsible for the scent of apple.



- ☐ Sulfide
- ☐ Nitrile
- ☐ Alkene
- ☐ Aldehyde
- ☐ Amine
- ☐ Arene
- ☐ Thiol
- ☐ Ketone
- ☐ Carboxylic Acid
- ☐ Alcohol
- ☐ Epoxide
- ☐ Acid Anhydride
- ☐ Alkyne
- ☐ Amide
- ☐ Acyl Halide
- ☐ Alkyl Halide
- ☐ Sulfonic Acid
- ☐ Ether
- ☐ Ester

Question not answered

Esters are identified by the following functional group:

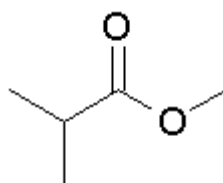


The general formula for an ester is RCO_2R .

The correct answer is that this molecule is from the ester functional group.

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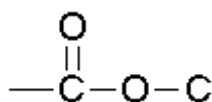
Identify the functional group(s) that appear in the molecule below.



- ☐ Alcohol
- ☐ Amine
- ☐ Arene
- ☐ Ether
- ☐ Amide
- ☐ Ester
- ☐ Acid Anhydride
- ☐ Alkyl Halide
- ☐ Aldehyde
- ☐ Alkene
- ☐ Epoxide
- ☐ Thiol
- ☐ Alkyne
- ☐ Sulfide
- ☐ Acyl Halide
- ☐ Sulfonic Acid
- ☐ Ketone
- ☐ Nitrile
- ☐ Carboxylic Acid

Question not answered

Esters are identified by the following functional group:

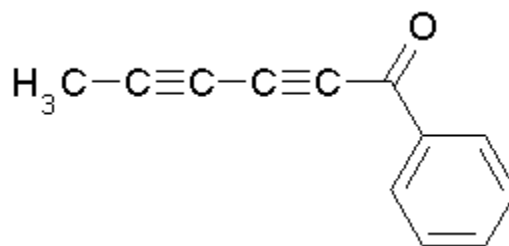


The general formula for an ester is RCO_2R .

The correct answer is that this molecule contains an ester functional group.

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Identify the functional group(s) that appear in capillin. Capillin is isolated as an oil from chrsanthemums and has been found to have fungicidal activity.

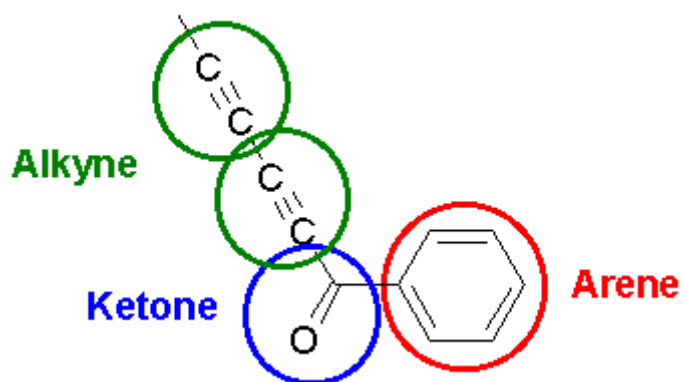


Capillin

- ☐ Ketone
- ☐ Acyl Halide
- ☐ Amide
- ☐ Carboxylic Acid
- ☐ Alkyl Halide
- ☐ Ester
- ☐ Alcohol
- ☐ Alkene
- ☐ Arene
- ☐ Aldehyde
- ☐ Alkyne
- ☐ Ether

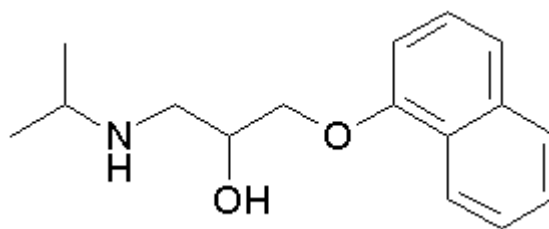
Question not answered

The correct answer is that this molecule contains alkyne, ketone, and arene functional groups as identified in the following picture.



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Identify the functional group(s) that appear in **propranolol**. This compound is in a class of drugs called beta-blockers, which are used to lower blood pressure, lower heart rate, reduce angina (chest pain), and reduce the risk of recurrent heart attacks.

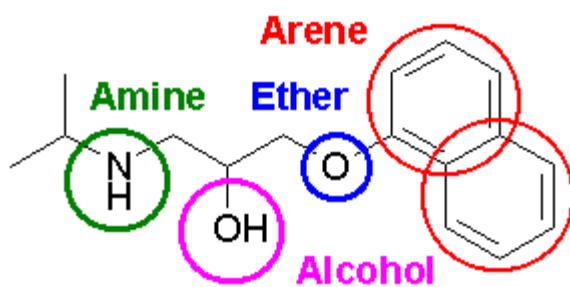


Propranolol

- ☐ Alcohol
- ☐ Amide
- ☐ Aldehyde
- ☐ Carboxylic Acid
- ☐ Ester
- ☐ Alkene
- ☐ Amine
- ☐ Ketone
- ☐ Arene
- ☐ Ether

Question not answered

The correct answers are alcohol, amine, arene, and ether.



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