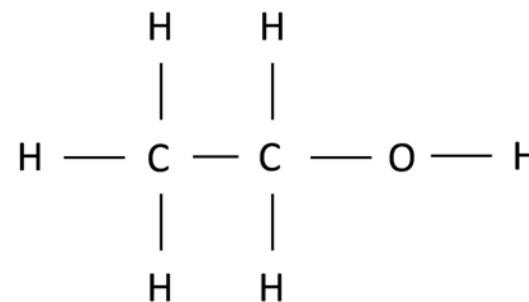


AQA GCSE
ORGANIC CHEMISTRY
THINK IT!



ALKANE

ALKENE



Crude oil, hydrocarbons and alkanes:

- Describe how crude oil was formed
- Crude oil is a mixture explain the similarities and differences between the chemicals in this mixture.
- Crude oil is a finite resource wind power is a renewable resource, explain how crude oil is different to wind power?
- Name and draw the first four members of the alkanes.

Structure, formulae and reactions of alkenes (Chemistry only):

- Explain how alkanes and alkenes differ.
- Describe, using structural formula, how bromine water can be used to test for an alkene. Give the colour change you would expect to see in the reaction.
- Name and draw the structural formula of the alkene with five carbon atoms.
- This alkene can have different structural formula explain why.

Carboxylic acids (Chemistry only):

- Draw the structural formula for ethanoic acid and explain what happens when it is added to sodium carbonate.
- (HT only) Explain why ethanoic acid is described as a weak acid.
- Describe the differences between propanol and propanoic acid
- Name the chemical formed if propanol is reacted with propanoic acid?.

Fractional distillation, properties of hydrocarbons and petrochemicals:

- Explain why crude oil separates into fractions during fractional distillation in terms of evaporation and condensation?
- Crude oil can be used to make fuels or petrochemicals evaluate the use of crude oil for each of these.
- Explain how and why boiling point, viscosity and flammability change with changing hydrocarbon size.

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Addition polymerisation (Chemistry only):

- Describe what happens during the polymerisation of ethene.
- In this polymer, ethene is described as the repeating unit. Explain using a diagram what this means.
- No atoms are lost from the monomers in addition polymerisation. Explain why this is the case.
- Draw diagrams to show how the monomer chloroethene polymerises

Cracking and alkenes:

- Why is cracking useful?
- Explain why alkenes are more reactive than alkanes.
- Describe the uses of alkenes and explain why they can be used in this way
- Modern life would be very different if we did not use hydrocarbons. Use examples to explain this statement.
- How are catalytic cracking and steam cracking different?

Alcohols (Chemistry only):

- Give the general formula of an alcohol?
- Describe, using balanced symbol equations the difference between the reactions of ethanol and water with sodium.
- Describe and explain the conditions required to convert glucose to ethanol by fermentation.
- What are the uses of the first four alcohols?

Condensation polymerisation and amino acids (Chemistry only and HT):

- Glycerine $\text{H}_2\text{NCH}_2\text{COOH}$ polymerises by condensation polymerisation to form a polypeptide. Using the formula above, explain why this is an example of condensation polymerisation to make a polypeptide.
- Explain how addition and condensation polymerisation differ?