

Edexcel IGCSE Chemistry

Topic 4: Organic chemistry

Alkenes

Notes





4.23 know that alkenes contain the functional group $>C=C<$

- Functional group of alkenes is: $C=C$

4.24 know the general formula for alkenes

- C_nH_{2n} e.g. ethene is C_2H_4

4.25 explain why alkenes are classified as unsaturated hydrocarbons

- Contain one or more $C=C$ double bonds

4.26 understand how to draw the structural and displayed formulae for alkenes with up to four carbon atoms in the molecule, and name the unbranched-chain isomers; knowledge of cis/trans or E/Z notation is not required

- The first 2 alkenes are ethene and propene.
- Unsaturated carbons can be represented in the following forms:

alkene	structural formula	displayed formula
ethene	CH_2CH_2	
propene	CH_3CHCH_2	
butene	$CH_3CHCHCH_3$	



4.27 describe the reactions of alkenes with bromine to produce dibromoalkanes

- alkene + bromine → dibromoalkane
 - E.g. Ethene + bromine → 1,2-dibromoethane
- Addition reaction
- Involves the removal of C=C double bond
- remember bromine exists as Br₂

4.28 describe how bromine water can be used to distinguish between an alkane and an alkene

- alkenes react with bromine water, turning it from orange to colourless – alkanes DO NOT react with bromine water- it remains orange

