Chemistry

Organic Chemistry 1 - Hydrocarbons

Contains carbon + hydrogen atoms only \triangleright

Homologous Series

- Group of molecules with the same general formula
- Similar chemical properties gradually changing physical properties

Alkanes (CnH2n+2)

Saturated – single bond only

No.1 of carbon	Name	Molecular formula	Structure Formula
1	Methane	CH4	
2	Ethane	C2H6	
3	Propane	C3H8	
4	Butane	C4H10	

- Low Mp and Bp weak intermolecular forces between molecules need breaking, little energy is required
- > As molecules get bigger, the forces get stronger as there are more electrons so MP Complete combustion of Alkanes & Alkenes – excess O2
 Hydrocarbon + oxygen —> Carbon dioxide + water
 Incomplete combustion – limited supply of O2 esale
 Soot and CO are produced
 2CH4+3O2 = 200 = 1115

> 2CH4+3O2 -> 2Co+ 4H2 Alkenes (CnH2n)

- > CinsaPara ed arbon double bonds - contains 😁 n
- P molecules react to form 1
- > Test for alkenes \rightarrow Bromine water turns orange to colourless alkanes stay the same
- Isomers have the same molecular formula but a different arrangement of atoms
- More than one option a number is added to tell us where the double bond starts from on carbon
 - \triangleright **Reaction with Bromine**
 - Reaction with Water



of A

No.1 of carbon	Name	Molecular formula	Structure Formula
2	Ethene	C2H4	
3	Propene	C3H6	
4	But-1-ene	C4H8	
	But-2-ene		