

Cambridge IGCSE Chemistry

Topic 14: Organic chemistry

Homologous series

Notes





Describe the concept of homologous series as...

- A 'family' of similar compounds with similar chemical properties due to the presence of the same functional group

(Extended only) Describe the general characteristics of a homologous series

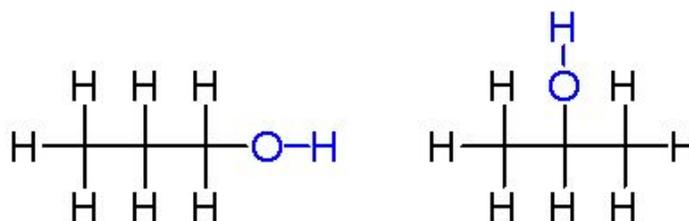
- Similar chemical properties – undergo the same chemical reactions
 - E.g. alkenes decolourise bromine water (orange to colourless) due to the C=C, whereas alkanes do not due to the lack of C=C

(Extended only) Recall that the compounds in a homologous series have...

- The same general formula
 - General formulae = a type of empirical formula that represents the composition of any member of an entire class of compounds (e.g. for ethene = C_nH_{2n})

(Extended only) Describe and identify structural isomerism

- Structural isomerism = compounds with the same molecular formula exist in different forms due to different arrangements of atoms
- Can be structural isomers due to different placement of functional groups:



- Can be structural isomers due to different functional groups but with the exact same group of atoms:





- Can be structural isomers due to branched or unbranched chains

