

Grade 12 Chemistry



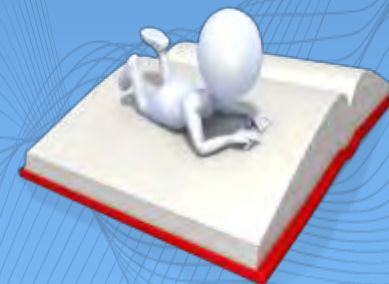
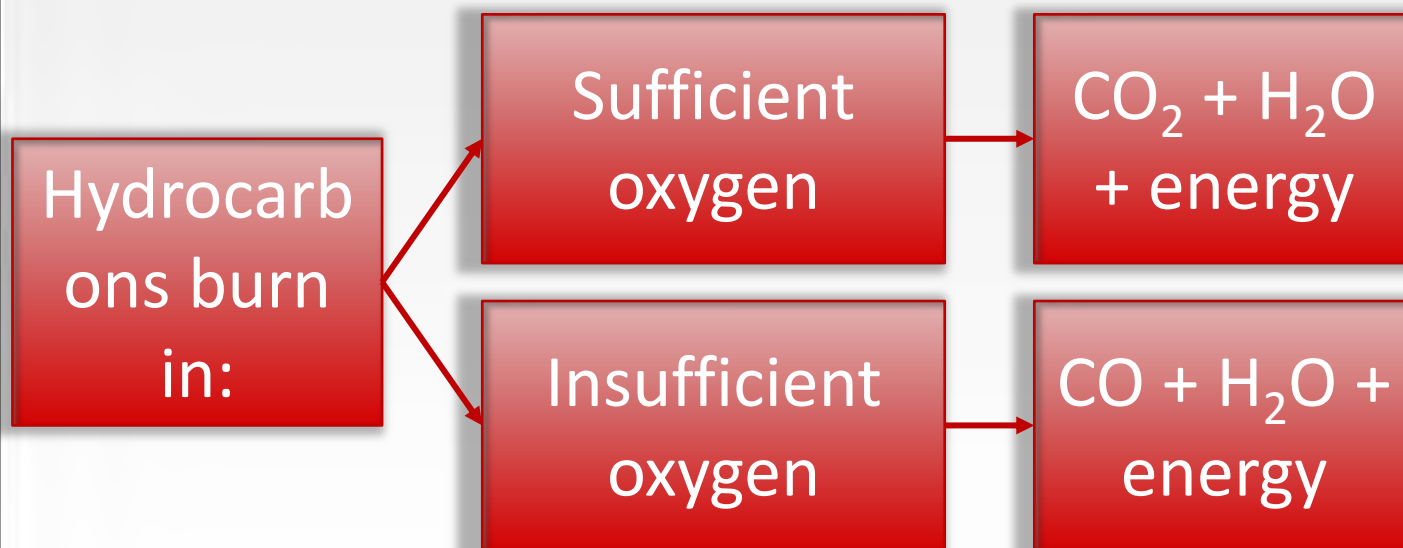
Knowledge area:
Matter and
material

Organic molecules

1.6 Application of organic chemistry

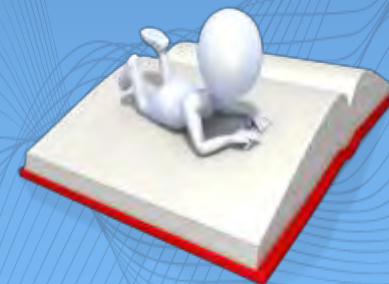
1.6.1 Combustion

Combustion in oxygen (air):



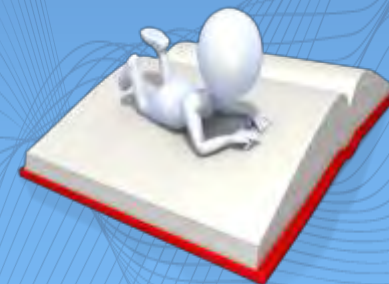
Examples

1. Octane complete
2. Octane incomplete
3. Ethyne complete
4. Ethanol incomplete



Examples

Hexane burns in sufficient oxygen:



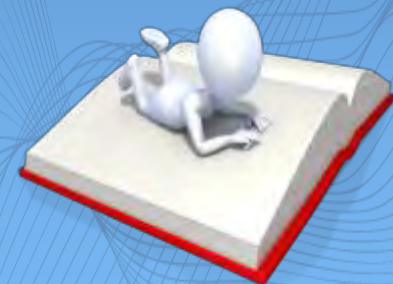
1.6.2 Preparation of esters

An ester is the product of an acidic catalysed condensation reaction. This means that:

- acid is required to accelerate the reaction.
- water is one of the products that form.

The process of an ester being prepared, is called esterification.

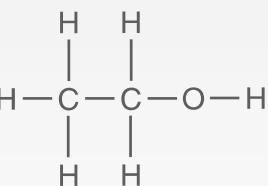
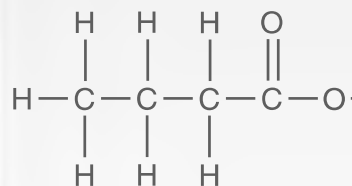
Preparation: reaction between carboxylic acid and alcohol



Organic molecules

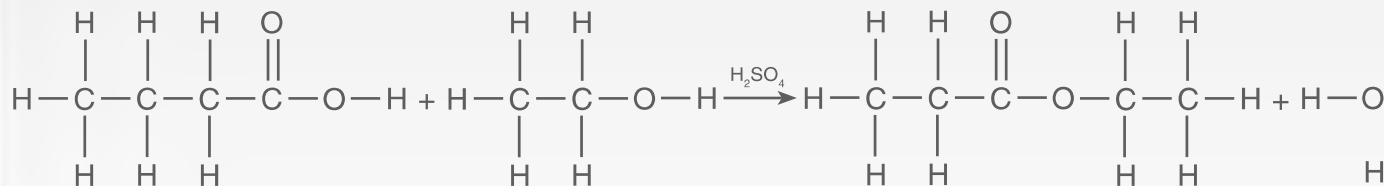
Conditions: catalyst and dehydrating agent:
 $\text{H}_2\text{SO}_4(\text{c})$
Heat added.

propanoic acid



ethanol

ethyl propanoate



water

