

# Cracking

Chemistry - Key Stage 4

Organic Chemistry

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# Recap

1. What is the name of the process we use to separate out the different hydrocarbons from a crude oil mixture?
2. What piece of equipment/machinery is needed for the above process?
3. Describe the temperature gradient within the above piece of equipment/machinery.  
***At the bottom of the f\_\_\_\_\_ c\_\_\_\_\_, there is a very \_\_\_\_\_ temperature. As you move up the column, the temperature gets \_\_\_\_\_. The temperature at the bottom is approximately \_\_\_\_\_°C whilst the temperature at the top is around \_\_\_\_\_°C.***
4. Identify 5 of the fractions from the process and what they can be used for.  
***P\_\_\_\_\_ →***  
***N\_\_\_\_\_ →***  
***K\_\_\_\_\_ →***  
***D\_\_\_\_\_ →***  
***B\_\_\_\_\_ →***



# Knowledge check

In a fractionating column, short-chain hydrocarbons collect near the \_\_\_\_ because...

Long-chain hydrocarbons collect near the \_\_\_\_\_ because...

There is a higher demand for short-chain hydrocarbons because...

There is a lower demand for long-chain hydrocarbons because...



# Copy and complete

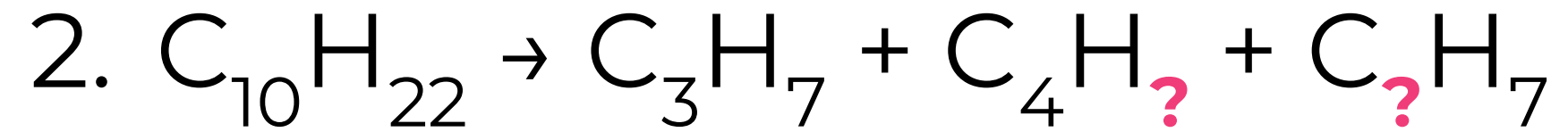
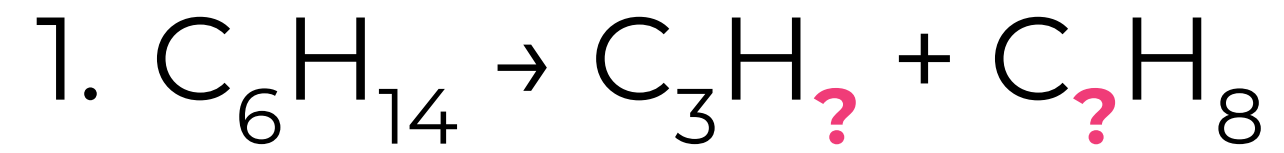
Cracking involves taking l\_\_\_\_\_c\_\_\_\_\_ h\_\_\_\_\_ and 'cracking' them into s\_\_\_\_\_, more u\_\_\_\_\_ molecules.

A long-chain a\_\_\_\_\_ is broken down into a shorter-chain a\_\_\_\_\_ and a\_\_\_\_\_.

Alkenes can contain d\_\_\_\_\_ b\_\_\_\_\_ and can be described as being u\_\_\_\_\_. They can be used in the manufacture of p\_\_\_\_\_.



# Examples



# Types of cracking

The two types of cracking are...

In t\_\_\_\_\_ cracking, the alkanes are subject to...

In c\_\_\_\_\_ cracking, the alkanes are subject to...



- 1. Describe what would happen to bromine water if propane was added to it and explain the reasons for this.**
- 2. Describe what would happen to bromine water if butene was added to it and explain the reasons for this.**

