

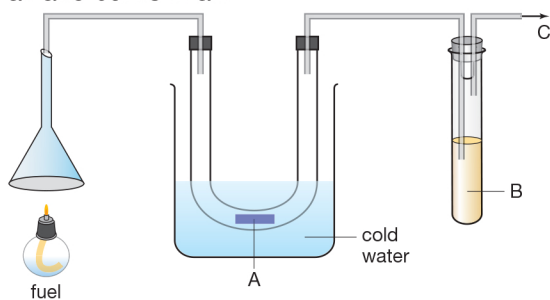


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# Organic chemistry

## REVIEW IT!

- 1 a** State the physical property which allows us to separate crude oil into its fractions using fractional distillation.
- b** As we go up the fractionating tower what happens to the following properties:
- viscosity
  - boiling point
  - ease of lighting?
- c** Explain the trend in boiling point as you go up the tower.
- 2** Alkanes are the main components of crude oil.
- a** What is the general formula of the alkanes?
- b** Complete and balance the following equations for the complete combustion of the two hydrocarbons methane and ethane:
- $\text{CH}_4(\text{g}) + \text{O}_2(\text{g}) \rightarrow$
  - $\text{C}_2\text{H}_6(\text{l}) + \text{O}_2(\text{g}) \rightarrow$
- c** The diagram below shows the apparatus used to investigate what is formed when an alkane burns in air.



- i** Give the correct labels for A, B and C.

- Describe what happens to A. What does the change show?
  - Describe what happens to the liquid in B. What does the change show?
- 3 a** Why is it necessary to carry out cracking on alkanes which have large molecules?
- b** Complete the following equations:
- $\text{C}_{10}\text{H}_{22} \rightarrow \text{C}_4\text{H}_8 +$
  - $\rightarrow \text{C}_3\text{H}_6 + \text{C}_6\text{H}_{14}$