OCR (B) Chemistry A-Level

CD6 - Modern Analytical Techniques

Flashcards

What is gas-liquid chromatography?

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A type of chromatography used to separate and analyse compounds that are in the liquid or gaseous phase.

What are some uses of gas chromatography?

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Uses include:

- Testing how pure a substance is.
- Separating all the different components in a mixture.

How is gas-liquid chromatography carried out?

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- The mixture is injected into the column (lined with a high boiling point liquid on a porous support) where it vaporises and is carried through the column by an inert carrier gas.
- Compounds move through the column at different rates due to solubility and volatility.
- Compounds pass through a detector at the end of the column. This produces a gas chromatogram.
- Each peak = different compound.

What is retention time?

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The time taken from the injection of the mixture to the detection of a compound.

What does the retention time of a compound allow you to do?

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Compare the time to known values to help identify the compound.

What technique is usually used for further analysis?

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- Mass spectrometry.
- This will allow you to calculate the molecular mass of the separated products.