Analytical techniques

A-Level Chemistry · Vocabulary in context

Word	Example
infrared spectroscopy /ˌɪnfrəˈred spekˈtrɒskəpi/	**Infrared spectroscopy** shows which bonds are in a molecule.
functional group /ˈfʌŋkʃənl gruːp/	The –OH **functional group** makes a compound an alcohol. –OH
absorption /əbˈsɔːpʃn/	A coloured solution shows strong **absorption** of some colours of light.
wavenumber /ˈweɪvnʌmbə/	The O–H peak is at a **wavenumber** of about 3300 cm^{-1}. O–H 3300 cm^{-1}
fingerprint region	Every molecule has its own pattern in the **fingerprint region**.
mass spectrometry /mæs spekˈtrɒmətri/	**Mass spectrometry** measures the mass of molecules.
mass-to-charge ratio /mæs tə tʃɑːdʒ ˈreɪʃɪəʊ/	The peak at a **mass-to-charge ratio** of 46 is ethanol. 46
isotope /ˈaɪsətəʊp/	Carbon-14 is an **isotope** of carbon. Carbon-14
isotopic abundance /ˌaɪsəˈtɒpɪk əˈbʌndəns/	Chlorine-35 has an **isotopic abundance** of 75%. -35 75%
relative atomic mass /ˈrelətɪv əˈtɒmɪk mæs/	Chlorine has a **relative atomic mass** of 35.5. 35.5
molecular ion /məˈlekjʊlə ˈaɪɒn/	The **molecular ion** is the whole molecule with one electron removed.

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molecular ion peak /məˈlekjʊlə ˈaɪɒn piːk/	The **molecular ion peak** gives the relative molecular mass.
fragmentation /ˌfrægmənˈteɪʃn/	**Fragmentation** breaks the molecular ion into smaller pieces.
fragment /ˈfrægmənt/	A peak at 15 is the CH3+ **fragment**. 15 CH3+
radical /ˈrædɪkl/	The lost piece is a neutral **radical**, so it gives no peak.
base peak	The tallest peak is the **base peak**.

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