

Definitions and Concepts for Edexcel Chemistry A-level

Topic 7: Modern Analytical Techniques 1

This chapter is focused on problem solving. Make sure you know how to analyse and interpret the MS and IR spectra.

Molecular ion peak: The peak with the highest m/z value. This is the molecular mass of the molecule being tested in the mass spectrometer.

[M+1] peak: The peak which occurs due to the isotope ^{13}C .

Fragmentation: When molecular ion is fragmented to smaller molecules/ions.

Infrared radiation (IR): Has frequencies below that of red light.

Stretching: When a bond absorbs infrared radiation and therefore changes its length

Transmittance: A value in the IR spectrum that shows the amount of radiation absorbed at a particular frequency (the *wavenumber*).

IR spectroscopy: A technique used to determine the presence of certain functional groups within the molecule, such as $-\text{OH}$, $\text{C}=\text{O}$, $-\text{NH}_2$.

Mass spectrometry: A technique that gives you information about the mass of a molecule and its fragments.

