

Chapter 16 Organic Analysis – GCSE Assumed Knowledge

Learning Objectives	Keypoints
Describe the advantages of using scientific instruments to analyse substances	Scientific instruments are sensitive (they can detect very small amounts) They are accurate (give a true result) They are fast and can run continuously
Interpret results from an instrumental analysis	Gas chromatography gives us a gas chromatogram. A gas chromatogram shows a different peak for each substance as each substance has a different retention time. The area under the different peaks shows the relative ratios of the different substances. Mass spectroscopy gives us a mass spectra. A mass spectra can tell us the mass of an atom or molecule. For an element: The mass spectra tells us the masses and relative amounts of each isotope. For a compound: The mass spectra tells us the mass of the molecule (the peak furthest to the right). It can also tell us the mass of different fragments of the molecule which can help identify the structure. Infra-red spectroscopy gives us an IR spectrum. The peaks in the spectrum tell us which functional groups are present in the molecule.