

Review C2.3 Quantitative chemistry and analysis

<i>Can you...?</i>	😊	😐	😞
Recall the masses and charges of protons, neutrons and electrons			
Remember that protons + neutrons = mass number			
Define the word isotope.			
Recall that the relative atomic mass of an element (A_r) compares the mass of atoms of the element with the ^{12}C isotope. It is an average value for the isotopes of the element.			
The relative formula mass (M_r) of a compound is the sum of the relative atomic masses of the atoms in the numbers shown in the formula.			
State that the relative formula mass of a substance, in grams, is known as one mole of that substance			
Describe the benefits of using instrumental methods to detect and ID elements and compounds			
Describe how chemical analysis like paper chromatography allows us to ID additives in food – like artificial colours.			
Describe how gas chromatography linked to mass spectroscopy (GC-MS) works and how it IDs the M_r of substances			
Calculate the percentage of an element within a compound			
Calculate the empirical formula of a compound from its mass or percentages.			
Calculate the masses of reactants or products from balanced symbol equations			
Understand the idea of, and calculate the percentage yield from a chemical reaction			
Represent a reversible reaction using a word equation			
Evaluate sustainable development issues relating the starting materials of an industrial process to the product yield and the energy requirements of the reactions involved			