3 · Quantitative chemistry

AQA · GCSE · Chemistry · Vocabulary in context

Word	Example
conservation of mass /ˌkɒnsəˈveɪʃn ɒv mæs/	A balanced equation follows **conservation of mass**.
balanced /ˈbælənst/	A **balanced** equation has the same atoms on both sides.
subscript /ˈsʌbskrɪpt/	In H_2O, the small 2 is a **subscript**. H_2O 2
relative formula mass /ˈrelətɪv ˈfɔːmjʊlə mæs/	The **relative formula mass** of water is 18. 18
relative atomic mass /ˈrelətɪv əˈtɒmɪk mæs/	Chlorine has a **relative atomic mass** of 35.5. 35.5
percentage by mass	Find the **percentage by mass** of oxygen in water.
oxidation /ˌɒksɪˈdeɪʃn/	**Oxidation** is the loss of electrons.
carbonate /ˈkɑːbəneɪt/	Calcium **carbonate** fizzes with acid.
thermal decomposition /ˈθɜːml ˌdiːkɒmpəˈzɪʃn/	**Thermal decomposition** of calcium carbonate gives calcium oxide and carbon dioxide.
uncertainty /ʌnˈsɜːtənti/	The length is 25.0 cm with an **uncertainty** of 0.1 cm. 25.0 cm 0.1 cm
mean /miːn/	Add the three readings and divide by three to find the **mean**.
range /reɪndʒ/	The **range** of the results is from 4.1 g to 4.5 g. 4.1 g 4.5 g
mole /məʊl/	One **mole** of carbon has a mass of 12 g. 12 g

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Avogadro constant /ˌævəˈgædrəʊ ˈkɒnstənt/	The **Avogadro constant** is 6.02×10^{23} per mole. 6.02×10^{23}
molar mass /ˈməʊlə mæs/	The **molar mass** of water is 18 g/mol. 18 g/mol
mole ratios	The equation gives the **mole ratios** of reactants and products.
limiting reactant /ˈlɪmɪtɪŋ rɪˈæktənt/	The **limiting reactant** runs out first.
excess /ekˈses/	Add the metal in **excess**, so all the acid reacts.
concentration /ˌkɒnsənˈtreɪʃn/	The **concentration** of the acid is 2 mol/dm^3. 2 mol/dm^3
solute /ˈsɒljuːt/	Salt is the **solute** in salt water.
theoretical mass	The **theoretical mass** is the most product you could make.
reversible /rɪˈvɜːsɪbl/	A **reversible** reaction can go both ways.
percentage yield /pəˈsentɪdʒ jiːld/	We made 8 g out of a possible 10 g: an 80% **percentage yield**. 10 g 8 g 80%
atom economy /ˈætəm ɪˈkɒnəmi/	High **atom economy** means little waste.
by-product /baɪ ˈprɒdʌkt/	Water is a **by-product** of this reaction.
molar concentration /ˈməʊlə ˌkɒnsənˈtreɪʃn/	**Molar concentration** is measured in mol/dm^3. mol/dm^3
mass concentration /mæs ˌkɒnsənˈtreɪʃn/	**Mass concentration** is measured in g/dm^3. g/dm^3

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titration /taɪˈtreɪʃn/	A **titration** finds the exact volume of acid needed.
room temperature and pressure /ruːm ˈtemprɪtʃə ænd ˈpreʃə/	At **room temperature and pressure**, one mole of gas fills 24 dm^3.

$$1 \qquad 24\ dm^3$$

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