



AQA GCSE Chemistry Foundation Tier 8462

<https://filestore.aqa.org.uk/content/summer-2022/AQA-8462-AI-22.PDF>

Unlike some other subjects, chemistry has many links between topics, so very little content has changed.

Top tips from AQA:

- The format/structure of the papers remains unchanged.
- Each paper may cover some, or all, of the content in the listed topic.
- Assessment of practical skills, maths skills, and Working Scientifically skills will occur throughout all the papers.
- Topics not explicitly given in any list may appear in low tariff (low scoring) questions or via 'linked' questions. Linked questions are those that bring together knowledge, skills and understanding from across the specification.
- Students will still be expected to apply their knowledge to unfamiliar contexts.

Paper 1 Chemistry Foundation 8462/1F 27.05.22 am

For this paper, the following list shows the major focus of the content of the exam:

- 4.1.1 A simple model of the atom, symbols, relative atomic mass, electronic charge and isotopes
- 4.1.2 The periodic table
- 4.2.1 Chemical bonds, ionic, covalent and metallic
- 4.2.2 How bonding and structure are related to the properties of substances
- 4.2.4 Bulk and surface properties of matter including nanoparticles
- 4.4.2 Reactions of acids
- 4.5.1 Exothermic and endothermic reactions Required practical activities that will be assessed:

Paper 2 Chemistry Foundation 8462/2F 20.06.22 am

For this paper, the following list shows the major focus of the content of the exam:

- 4.6.1 Rate of reaction
- 4.6.2 Reversible reactions and dynamic equilibrium
- 4.7.1 Carbon compounds as fuels and feedstock
- 4.8.3 Identification of ions by chemical and spectroscopic means
- 4.9.1 The composition and evolution of the Earth's atmosphere
- 4.10.1 Using the Earth's resources and obtaining potable water
- 4.10.2 Life cycle assessment and recycling
- 4.10.4 The Haber process and the use of NPK fertilisers

Required practical activities that will be assessed:

- 1: **preparation of a pure, dry sample of a soluble salt** from an insoluble oxide or carbonate, using a Bunsen burner to heat dilute acid and a water bath or electric heater to evaporate the solution.
- 2: determination of the reacting volumes of solutions of a strong acid and a strong alkali by **titration**.
- 4: **investigate the variables that affect temperature changes in reacting solutions** such as, e.g., acid plus metals, acid plus carbonates, neutralisations, displacement of metals.

Required practical activities that will be assessed:

- 5: **investigate how changes in concentration affect the rates of reactions** by a method involving measuring the volume of a gas produced and a method involving a change in colour or turbidity. This should be an investigation developing a hypothesis.
- 6: **investigate how paper chromatography can be used** to separate and tell the difference between coloured substances. Students should calculate R_f values.
- 7: **use of chemical tests to identify the ions** in unknown single ionic compounds covering the ions from sections Flame tests through to Sulfates.
- 8: analysis and purification of water samples from different sources, including pH, dissolved solids and distillation

Topic not assessed in this paper:

- 4.5.2 Chemical cells and fuel cells

Topic not assessed in this paper:

- 4.8.2 Identification of common gases