



GuideMyGrades

YOUR GOALS. OUR EXPERTISE.

iGCSE & GCSE Chemistry

Examiners' Edition

Securing Grade 9s

FREE SAMPLE

Pearson Edexcel 4CH1, 1CH0, 1SC0

4 topic booklets, one for every topic

The marks students lose year after year, and how to stop losing them.
Every booklet comes with exam-style practice questions and full mark schemes.

This sample shows a few pages from one of the topics.



GuideMyGrades

— YOUR GOALS. OUR EXPERTISE. —

International GCSE & GCSE Chemistry • Topic 1

Principles of Chemistry

Examiners' Edition: Securing Grade 9s

21 common mistakes • 42 practice questions • full mark schemes

Written for Pearson Edexcel International GCSE Chemistry (4CH1) and Edexcel GCSE Chemistry / Combined Science (1CH0, 1SC0).

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All questions are original: none are taken or adapted from a real past paper.

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1.5 Electrolysis

MEMORISE THIS

cathode (-): positive ions gain electrons	reduction
anode (+): negative ions lose electrons	oxidation
halogens and oxygen are diatomic	Cl₂, Br₂, O₂

20 Half-equations at the electrodes

iGCSE	Triple only
GCSE	Higher tier only

✗ Common mistake

Writing Cl instead of Cl₂, putting electrons on the wrong side, or saying the metal (not the metal ion) gains electrons.

✓ Do this instead

- Cathode (negative electrode): positive ions **GAIN** electrons (reduction), e.g. $\text{Pb}^{2+} + 2\text{e}^- \rightarrow \text{Pb}$.
- Anode (positive electrode): negative ions **LOSE** electrons (oxidation), e.g. $2\text{Br}^- \rightarrow \text{Br}_2 + 2\text{e}^-$.
- Halogens and oxygen are diatomic: Cl₂, Br₂, O₂.
- Name the right species: "lead **IONS** gain electrons", not "lead gains electrons"; "bromide ions lose electrons", not "bromine".
- Check both atoms and charges balance.

IN THE EXAM

Only about one-third of students could write the half-equation for chloride ions forming chlorine. (Jan 2023, 2C)

Many students lost the mark by stating that chlorine loses electrons, rather than chloride ions. (Nov 2023, 2C)

Examiners flagged this in: Jan 2020 2C Q3, Jan 2020 2CR Q4, Jan 2022 2C Q6, Jan 2022 2CR Q6, Jun 2019 2CR Q4, Jun 2022 2C Q4, Jun 2023 2C Q5, Jun 2024 2C Q6, Jun 2024 2CR Q6, Nov 2023 2C Q7

Question 20.1 Check it

[Mark scheme ›](#)

Molten lead(II) bromide, PbBr₂, is electrolysed using inert electrodes.

Write the half-equations for the reactions at the negative electrode and at the positive electrode.

(4)

Question 20.2 Apply it

[Mark scheme ›](#)

Explain, in terms of electrons, why lead forms at the negative electrode.

(2)

Mark schemes

1 Melting points and purity

Question 1.1 Check it

[Back to question](#)

Part	Answer	Marks
	the sample is not pure (it is impure)	1
	it melts over a range of temperatures, below 135 °C (not at a fixed temperature)	1
Total		2

Question 1.2 Apply it

[Back to question](#)

Part	Answer	Marks
	sea water boils at a higher temperature than 100 °C	1
	and over a range of temperatures (pure water boils at exactly 100 °C)	1
Total		2

Common wrong answers: "The melting point is different" or "the melting point is lower" scores only half: the key idea is a range, not one fixed value.

2 Elements, compounds and mixtures

Question 2.1 Check it

[Back to question](#)

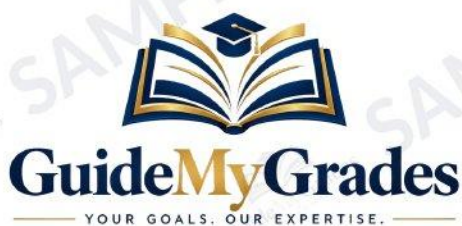
Part	Answer	Marks
	oxygen: element	1
	carbon dioxide: compound	1
	air: mixture	1
Total		3

Question 2.2 Apply it

[Back to question](#)

Part	Answer	Marks
	the copper and zinc are not chemically combined (no chemical bonds formed between them)	1
	the proportions can vary / the metals keep their own properties	1
Total		2

Common wrong answers: "The elements are combined together" describes a compound and loses the mark for brass.



Get the full booklets

Every topic. Every common mistake. Every mark scheme.

iGCSE & GCSE Chemistry: Securing Grade 9s

- Topic 1** Principles of Chemistry
- Topic 2** Inorganic Chemistry
- Topic 3** Physical Chemistry
- Topic 4** Organic Chemistry

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