

Most lost marks here come from vague wording and from observations that were not recorded. Everything below is from Cambridge's own examiner reports. 失分多因表述含糊, 或实验现象没记录。× 是常见写法, ✓ 是能得分的写法。

Across every paper

- ✗ Writing a formula you are unsure of instead of the chemical's name.
 - ✓ **If you are not sure, write the NAME. A correct formula is always accepted; a wrong one is not.**
The most repeated message in these reports, across ten sessions. The name is the safer answer whenever the formula is uncertain.
不确定就写名称 ER 10 sessions P4
- ✗ Using 'it' and 'they' in an answer that mentions two substances.
 - ✓ **Name the substance every time: 'the zinc dissolves', not 'it dissolves'.**
Examiners raise the vague 'it' and 'they' directly – an ambiguous answer cannot be credited.
不要用 “ 它 ”, 写出物质名 ER 3 sessions P4
- ✗ Giving two answers where one was asked for, in case one is right.
 - ✓ **Commit to one.**
Examiners state that an incorrect statement may contradict a correct one, and record many such incidences.
只写一个答案 ER 3 sessions P4
- ✗ Leaving a question blank because the answer goes on the diagram and there is no dotted line.
 - ✓ **Write on the diagram. An answer space is wherever the question puts it.**
Examiners note these errors of omission repeatedly, and that they would not otherwise have happened.
图上也要作答 ER 3 sessions P4
- ✗ Saying 'the reaction is fast'.
 - ✓ **Make it comparative: 'faster than the reaction at 20 °C'.**
Named as the most common error in two separate rate questions – a comparison was required and only a description was given.
要写比较, 不是描述 ER 2 sessions P4
- Match your answer to the marks. Examiners note that a three-mark question needs three separate points and that omitting detail is a common reason for losing credit.
几分就写几点 ER 2 sessions P4

2 · Atoms, elements and compounds 原子、元素与化合物

- ✗ Writing 2H for two hydrogen atoms bonded together.
 - ✓ **H₂ – the subscript means bonded, the coefficient means separate.**
Recorded as the most common incorrect answer in three sessions of the same question.
H₂ 不是 2H ER 3 sessions P2
- ✗ Answering 'how many outer electrons' with the number of shells, or vice versa.
 - ✓ **Read which the question wants, then count on the diagram.**
Examiners record 'one' as the most common incorrect answer to a straightforward electron question.
看清问的是电子数还是层数 ER 2 sessions P2

1 · States of matter 物质的状态

- ✗ Explaining diffusion by saying the acid 'spreads out' or 'moves along the tube'.
 - ✓ **Say what moves: the PARTICLES move randomly and spread from a high to a low concentration.**
Examiners record that only a minority gained full credit, and that the missing word was 'particles'.
扩散要提到 “ 粒子 ” ER 2 sessions P2
- ✗ Confusing the bonds inside a molecule with the forces between molecules.
 - ✓ **Covalent bonds hold the atoms together; weaker intermolecular forces hold the molecules near each other.**
Examiners name this confusion directly in a question that was not well answered.
分子内是共价键, 分子间是作用力 ER 2 sessions P4

2 · Atoms, elements and compounds 原子、元素与化合物

- ✗ Drawing a dot-and-cross diagram of water with three lone pairs on the oxygen, or lone pairs on the hydrogens.
 - ✓ **Oxygen keeps TWO non-bonding pairs; hydrogen has none.**
Examiners list all three faults together – omitted, too many, and put on the wrong atom.
氧上两对孤对电子 ER 2 sessions P4
- ✗ Reading the proton number as the number of neutrons.
 - ✓ **Electrons equal protons in an atom; neutrons are mass number minus proton number.**
Examiners list 54, 24 and 18 as wrong neutron counts in one question – each a different arithmetic slip.
中子数 = 质量数 – 质子数 ER 2 sessions P2

3 · Stoichiometry 化学计量

✗ Calculating relative formula mass without using the numbers of atoms in the formula.

✓ **Multiply each relative atomic mass by its subscript, then add.**

Examiners record many incorrect answers arising from ignoring the subscripts.

要乘以下标个数

ER 2 sessions P2

✗ Balancing $\text{Fe} + \text{O}_2$ with 2Fe and 3O_2 .

✓ **Balance the atoms one element at a time and recount: $3\text{Fe} + 2\text{O}_2$.**

Examiners name 2Fe with 3O_2 , and 2Fe with 2O_2 , as the two common errors in the same equation.

配平后要重新数一遍

ER 2 sessions P2

✗ Answering a WORD equation with symbols, or writing ‘potassium bromine’.

✓ **Word equation means words, and the names must be right: potassium bromIDE.**

Examiners state that when a word equation is asked for, no other form is accepted.

文字方程只能写名称

ER 2 sessions P2

✗ Calculating a bond-energy answer and giving it the wrong sign.

✓ **Bonds broken minus bonds formed. A negative value means exothermic.**

Examiners note candidates confidently reaching 1425 kJ and 1800 kJ and then a significant number going wrong at the final step.

断键减成键, 负值放热

ER 2 sessions P4

4 · Electrochemistry 电化学

✗ Writing the cathode half-equation as $2\text{H}^+ + 2\text{e}^- \rightarrow \text{H}_2$ when the question wants the reduction of one species.

✓ **Check what is actually discharged at that electrode, and balance charge as well as atoms.**

Examiners note that a mathematically equivalent equation is not necessarily the one the question asks for.

看清电极上放电的是什麼

ER 2 sessions P4

6 · Chemical reactions 化学反应

✗ Defining equilibrium as ‘a reversible reaction’ or ‘a balance’.

✓ **The forward and backward reactions occur at the SAME RATE, so the concentrations stay constant.**

Examiners found this question demanding, with many candidates offering only reversibility or a vague idea of balance.

正逆反应速率相等

ER 2 sessions P4

✗ Answering a Le Chatelier question by talking about the reaction rather than the position of equilibrium.

✓ **Say which way the position shifts, and why.**

Examiners state candidates must be taught that it is the equilibrium the question is about.

要说平衡移动的方向

ER 2 sessions P4

5 · Chemical energetics 化学能量学

✗ Saying a reaction is exothermic because the temperature fell.

✓ **Falling temperature means the reaction took energy IN: it is endothermic.**

Examiners record a significant proportion giving exothermic, and confusion expressed in terms of heat energy rather than the direction of transfer.

温度下降是吸热

ER 2 sessions P4

✗ Comparing fuels by their temperature rise alone.

✓ **Divide the temperature rise by the MASS of fuel burned.**

Examiners name the fuel with the highest rise as the most common wrong answer, because the mass was never divided out.

要除以燃料质量

ER 2 sessions P5

11 · Organic chemistry 有机化学

✗ Spelling an ester ‘propanote’ or ‘propenoate’.

✓ **Methyl propanoate – check the stem, the ‘-an-’ and the ‘-oate’ separately.**

Examiners name the misspelling as the most common error in a question most candidates otherwise knew.

有机名称拼写要准

ER 2 sessions P4

✗ Drawing a nine-carbon chain for a polymer repeat unit, with or without continuation bonds.

✓ **Draw ONE repeat unit, with a continuation bond at each end.**

Named as the most common incorrect response – the structure was drawn but not as a repeat unit.

重复单元只画一个

ER 2 sessions P4

12 · Experimental techniques and chemical analysis 实验技术与化学分析

✗ Recording 25.0, 25.15 and 25.2 in the same burette table.

✓ **Every reading from one instrument goes to the same number of decimal places.**

Raised in nine separate reports. The resolution is a property of the apparatus, not of the reading.

同一仪器读数位数一致

ER 9 sessions P5

✗ Leaving a test blank because nothing happened.

✓ **Record ‘no change’ or ‘no visible reaction’. A negative result is a result.**

Examiners state in eight reports that a negative test is useful because it rules an ion out.

无现象也要记录

ER 8 sessions P5

✗ Writing ‘white precipitate’ for a sulfate test on a solution containing no sulfate.

✓ **Report what you actually saw: no change.**

Examiners record the expected observation being written instead of the observed one – the commonest way to lose a qualitative-analysis mark.

记录实际观察到的现象

ER 2 sessions P5

✗ Skipping the gas test when the question says ‘test any gas produced’.

✓ **Do the test and record both the test and the result.**

Raised in eight reports: where the instruction appears, the test and its result are both expected.

有气体就要检验并记录

ER 8 sessions P5

✗ Giving one observation where ammonia was added dropwise AND then in excess.

✓ **Give an observation for each step.**

Examiners state this explicitly – two additions means two observations.

每一步都要写现象

ER 2 sessions P5

✗ Reporting a white precipitate where the silver halide is cream or yellow.

✓ **Learn the three: chloride white, bromide cream, iodide yellow.**

Examiners note it was not uncommon for the cream precipitate to be reported as white.

卤化银: 白、乳白、黄

ER 2 sessions P5

✗ Describing a colour change in the wrong direction – colourless to orange instead of orange to colourless.

✓ **State the starting colour first, then the final one.**

Examiners record candidates confusing the direction of the change, which reverses the chemistry.

颜色变化要写清方向

ER 2 sessions P5

✗ Writing ‘the solvent dissolves in the solute’.

✓ **The SOLUTE dissolves in the SOLVENT to make a solution.**

Examiners record candidates attempting the right terminology and reversing it.

溶质溶于溶剂

ER 2 sessions P5

✗ Choosing a graph scale that puts all five points in one corner.

✓ **Choose a scale that spreads the points across most of the grid, and use easy divisions.**

Examiners note some candidates selected a scale that made accurate plotting difficult.

刻度要让点分布开

ER 2 sessions P5

✗ Naming a chemical test wrongly, or describing a physical observation instead of a test.

✓ **Give the reagent AND the positive result: limewater turns milky.**

Examiners describe one such question as very poorly answered, with candidates mixing tests up or giving no chemical test at all.

试剂和现象都要写

ER 3 sessions P5

■ Analyse the stem before writing. Examiners state in five reports that many candidates need more practice at this.

先分析题干

ER 5 sessions P4