Alternative Certification Model 2020–21: National QA Exercise Key Messages

Subject	**Chemistry**
Level	**National 5**

This report provides information on themes emerging from the national quality assurance exercise, which is part of the Alternative Certification Model for National 5, Higher and Advanced Higher courses.

A sample of candidates' assessed work from selected centres was reviewed to determine whether assessment was in line with the national standard. The evidence submitted may have been partial or incomplete and is unlikely to have represented all of the evidence that will be gathered to allow the centre to determine a provisional result.

The centres selected for review in this subject and at this level have been provided with specific feedback on the evidence that they submitted. The comments below highlight key points about the assessment approaches and instruments used and the sampled centres' assessment judgements, for all centres delivering the subject at this level to reflect upon and make any appropriate adjustments.

Section 1: Comments on approach to assessment

Most centres submitted partial evidence. Centre-devised assessment instruments were the most common form of evidence submitted. These ranged from short end-of-topic tests to full course coverage question papers. In some cases, National Qualifications unit assessment support packs were submitted as supplementary evidence. A few centres submitted the 2021 SQA secure question paper. All centres were able to submit evidence for five candidates.

Almost all of those centres with partial evidence are intending to use the 2021 SQA secure question paper at a later date. Some centres intend to modify the paper by either changing the questions or splitting the paper so it can be taken in more than one sitting. In some cases, there was no information on how the SQA secure question paper would be delivered.

Most of the centre-devised assessment instruments were shorter than the two-and-a-half hour, 100-mark, full SQA question paper, and were commonly split into two separate papers. In most cases, these assessment instruments did not adequately sample from the entire course.

- The balance of knowledge and understanding, and skills questions was rarely appropriate, with too few skills-based questions. Some skills were omitted entirely. Skills-based questions should account for approximately 35% of the total marks.
- In many cases, there was over-sampling of key area knowledge and understanding.
- Almost all centre-devised question papers had too few grade A marks, which should account for approximately 30% of the total marks.

Guidance on the allocation of marks to skills, knowledge and understanding, and the proportion of grade A marks can be found in the RNQ National 5 Chemistry question paper brief, in *Guidance on assessments and gathering evidence* on the Understanding Standards website.

This partially explains why many centre-devised assessment instruments were low in demand.

Centres should take care to make sure that candidates are given the appropriate time allocation based on the number of marks in the assessment. Centre-devised assessment instruments were commonly constructed from a range of past paper questions, some of these being from retired qualifications. Without modification, the questioning style may be inappropriate as command words were not used as they are now. On some occasions, the selected questions covered content no longer in the N5 Chemistry specification.

It is current practice to start each question with a command word. A list of these command words, and how to use them, can be found in the General Marking Principles at the beginning of any set of SQA marking instructions. Updating the style of the questions helps familiarise candidates with the format and command words before sitting an SQA exam. The RNQ specimen question paper, the 2018 and 2019 question papers, and the 2021 SQA secure resource exemplify the current standards for style of questions.

Section 2: Comments on assessment judgements

Most of the marking judgements evidenced were in line with national standards.

Frequently, marking instructions for assessment instruments from retired qualifications were not updated to be consistent with current marking practice, for example when drawing graphs. A number of common errors were observed in the centre evidence:

- Four marks cannot be allocated to graph drawing when the format has already been provided in the question.
- Marks should not be awarded for 'accuracy of plotting / line of best fit' when plots have been joined dot-to-dot with a ruler rather than a line of best fit, as stated in the marking instructions.
- There is no longer allowance of one plotting error: all plots must be within a half box tolerance.

Open-ended questions were often closed in nature. Some centres also used prescriptive measures to allocate marks to open-ended questions. These questions are designed to give candidates an opportunity to demonstrate their knowledge of chemistry from across the scope of the National 5 course. Limiting the marking instruction to specific points that candidates should make meant that marks for relevant chemistry were not always awarded. There were often inconsistencies within centres when awarding marks to open questions.

Questions that have the unit included in the stem of the question do not require the candidate to write the unit, but if they do write the unit, it must be correct. This marking instruction must only be applied a maximum of once per paper. See General Marking Principle (i).

A National 5 Chemistry question paper would typically have one question that requires a unit to be written in the answer, and therefore the unit is not included in the question. This mark would be independent and separate to General Marking Principle (i).

When considering amendments to the notional grade boundaries, the centre should only take into account the demand of the assessment, in terms of the balance of grade A and grade C questions and the conditions of assessment, for example, a single paper or a split paper. This balance can also be affected by the centre's interpretation of the marking instructions and any modifications made. Grade boundaries should not be amended based on the circumstances of the candidates. In all cases, national standards should be met. The grade A boundary and grade C boundary should be set independently. The grade B boundary is exactly halfway between A and C. The grade D boundary is set at 10% below the grade C boundary. The boundary between upper and lower bands is at the halfway point of each grade. It is worth noting that grade boundaries vary from year to year, though usually by only a few marks.

A great deal of good practice was evident from the evidence submitted. There was clear evidence of moderation internally, externally or both in almost all submissions. Most centres clearly annotated changes to marks awarded, and sometimes the justifications for changes were also given. However, it was also evident that in many centre-devised assessments, only the marks awarded had been checked. The assessments themselves had not been checked against the current National 5 Chemistry question paper brief.