



# NQ Verification 2021–22 Round 1

## Qualification Verification Summary Report

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### Section 1: Verification group information

Verification group name: **Chemistry**  
Verification event/visiting information: **Event**  
Date published: **June 2022**

#### National Courses/Units verified:

H21G 73	National 3	Chemical Changes and Structure
H21J 73	National 3	Nature's Chemistry
H21L 73	National 3	Chemistry in Society
H21G 74	National 4	Chemical Changes and Structure
H21J 74	National 4	Nature's Chemistry

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### Section 2: Comments on assessment

#### Assessment approaches

The requirement to complete outcome 1 for the unit assessment at National 3 and National 4 is removed for session 2021–22. The added value unit (AVU) at National 4 is suspended for session 2021–22.

Centres can refer to the [National Course modification summary: Chemistry](#) for further information.

Centres selected for National 3 and National 4 Chemistry units submitted evidence for outcome 2 only.

#### National 3 units

All centres that were verified had used the published unit assessment support packs (UASPs), which meant that there were no issues with the approach to assessment. All centres that were verified were using a test with a 50% cut-off score to assess outcome 2.

## **National 4 units**

Almost all centres that were verified had used the published unit assessment support packs (UASPs), which meant that there were generally few issues concerning the approach to assessment.

However, a small number of centres used older versions of the UASPs. Centres are reminded to use the most up-to-date versions and corresponding marking guidance.

A number of centres had chosen to make modifications to published UASPs. This is acceptable; however, care must be taken to ensure that the level of demand remains the same. This relates both to the difficulty of the questions and to the number of opportunities provided for each key area. The suggested numbers of opportunities for each key area can be found in Package 3 — Portfolio Approach, located on the SQA Secure website. A small number of centres were significantly modifying assessments by including too many or too few opportunities for some key areas. It is recommended that if centres make significant changes to published materials, they consider using the prior verification service, to ensure that proposed assessments are valid.

When a centre accepts responses other than those in the marking guidance, there should be annotations to the marking guidance to reflect the additional correct responses. Some centres made annotations to the marking guidance, which was helpful during verification. However, in a few cases the additional responses recorded on the marking guidance were incorrect. Centres should therefore ensure that any additional responses added to the marking guidance are appropriate.

Most centres were using the unit-by-unit approach to assess candidates. Almost all centres that were verified were using a test with a 50% cut-off score to assess outcome 2.

A small number of centres had chosen to use the portfolio approach. Centres are advised that in order to pass outcome 2 for a unit, candidates must be given the opportunity to make accurate statements for each key area, as part of assessment standard 2.1. A unit pass cannot be achieved unless questions covering assessment standard 2.1 for all key areas are included in the instrument of assessment. There must also be at least one opportunity to demonstrate each of the problem-solving skills for assessment standard 2.2 (making generalisations/predictions, selecting information and processing information).

## **Assessment judgements**

### **National 3 units**

Almost all centres that were verified were found to have made reliable assessment judgements and applied the marking guidance consistently throughout.

Some candidates were awarded marks for responses including incorrect chemical symbols. Where a chemical symbol is stated, it must be in the correct format, for example Br, not BR for bromine.

### **National 4 units**

Most centres that were verified were found to have made reliable assessment judgements and applied the marking guidance consistently throughout.

Some candidates were awarded marks for responses including incorrect units, chemical symbols and specific chemical terms. If a response does not require a unit, but an incorrect one is stated, this should not be awarded a mark. Where a chemical symbol is stated, it must be in the correct format, for example Li, not LI for lithium. Chemical terms must be correctly stated. When writing chemical formulae, the use of subscript numbers is required when appropriate in order for an answer to be chemically correct.

For responses requiring a change in pH to be described, centres should ensure that candidates include sufficient detail. This may include directionality of pH change, ie it increases/moves up towards neutral, rather than just stating that it changes, or becomes neutral.

For questions requiring candidates to describe a trend, a number of candidates made reference to specific numerical values in their responses, rather than describing an overall pattern. This frequently led to responses being incorrect, or containing cancelling errors. Candidates should be encouraged to focus on overall patterns when describing trends.

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## **Section 3: General comments**

Most centres that were verified this session have a good understanding of the national standard. Almost all centres provided candidate evidence that was internally verified by cross-marking.

It was observed that centres will often show clearly which judgements are made by an assessor and which are made by the internal verifier since different coloured pens were used. Undertaking internal verification activity in this way aids the process of external verification. Many centres also included comments and notes on professional dialogue between assessors and internal verifiers and this was very helpful.

In some centres, the process of internal verification was not entirely effective. In some cases, both the original assessor and internal verifier awarded marks incorrectly to candidates. This was particularly true for candidate responses requiring use of a correct unit or chemical formula. On a few occasions, there was discrepancy between the internal verifier and assessor, and it was not clear what the final assessment judgement was. If there is a discrepancy between the assessor and the internal verifier the final decision reached should be clearly recorded on the candidate's script.

In addition, internal verification records from a small number of centres indicated that the assessor and internal verifier had agreed to accept invalid answers, following discussion. This is not acceptable.

Although the marking guidance provided in the UASPs is not intended to be exhaustive and can be modified, centres must ensure that any modifications are of an equivalent standard to the existing guidance. If valid modifications are made, they must be applied consistently to all candidates within the cohort. If a correct answer is followed by a wrong answer, then this should be treated as a cancelling error and no marks should be awarded.

If candidates choose to word-process their evidence, this is acceptable. However, they are still required to provide chemically correct responses, with the use of subscripts and superscripts as appropriate for formulae.