



**National Qualifications 2014  
Internal Assessment Report  
Chemistry (Advanced Higher)**

The purpose of this report is to provide feedback to centres on verification in National Qualifications in this subject.

# National Qualifications (NQ) Units

Titles/levels of NQ Units verified:

Advanced Higher Chemistry: D075/13 001 Chemical Investigations

## General comments

100% of the centres that were verified had issued the most up-to-date SQA document 'Guidance for AH Candidates' to the AH students. The majority of centres had rigorous procedures in place to ensure candidates were aware that the daybook is a NAB, and that assessment against the Outcomes and PCs of this NAB has to be successful for them to obtain an award at AH level. All centres verified had ensured that each candidate had a list of Outcomes and PCs written in or attached to their daybook.

There was extensive evidence of feedback from class teachers being used to give clear advice during the planning and experimental stages, and all centres verified were familiar with the appropriate documentation issued by SQA.

## Unit specifications, instruments of assessment and exemplification materials

The Unit specifications and instruments of assessment have been unchanged since 2000, and verification shows that all centres are aware of the two Outcomes and six PCs used to assess this half Unit. 72% of centres verified were also aware of the need to physically mark the daybooks.

All centres had prepared their candidates before they started experimental work; candidates had all been issued with the SQA document *Guidance for AH Candidates*, they all knew that their daybook constituted a NAB, and had all been shown the list of PCs which had to be overtaken.

## Evidence requirements

Only 28% of the centres that were verified did not fully appreciate that, because the daybook is a NAB, it must be physically assessed. Just as a NAB testing Outcomes 1 and 2 (KU & PS) would be marked (assessed), the daybook must also be marked and the point at which each PC has been overtaken must be indicated. If there is no indication of where the centre feels a PC has been overtaken, it is not possible to know whether the assessor has a clear understanding of the Evidence Requirements.

All centres used a student checklist to show clearly when each PC was overtaken. These checklists were signed and generally dated, so the daybooks should also be signed and dated at the point where that PC was deemed to be overtaken.

## **Administration of assessments**

All centres verified were aware of the two Outcomes and six PCs used to assess this half Unit, and 72% of the centres were aware of the need to physically mark the daybooks.

External verification of the half Unit D075/13 takes place before the completion date set by most centres. As such, external verification is, almost always, verification of incomplete evidence so visiting verifiers see partially-assessed material. In all centres verified, the vast majority of assessment decisions made by teachers/lecturers were in line with national standards.

14% of centres verified showed no evidence of internal verification (IV). In centres where there is a single chemistry teacher, internal verification is often seen as problematic. In these centres, constructive feedback was given by verifiers and a system was discussed for the regular inspection of daybooks by other members of the science faculty or by colleagues from neighbouring schools with a view to carrying out regular internal verification as the Investigations proceed. The idea of a departmental policy for daybook assessment procedures was explored.

In 14% of centres there was very little evidence that the policy put in place for internal verification had actually been implemented.

## **Areas of good practice**

100% of centres verified had attached a copy (often customised) of the Record of Attainment from page 18 of Chemistry Investigation D075 13/NAB001 (issued July 2002) to each candidate's daybook. Centres encouraged candidates to use the PCs to check their own progress, and the Record acted as a prompt/reminder for staff and candidates to treat the daybook as a NAB and remember the need to work towards achieving all six PCs.

Evidence from almost all centres showed an appreciation of risk, and most daybooks contained formalised risk assessments.

In all centres verified, class teachers had added helpful comments to the daybooks. These comments were generally followed by a noticeable improvement in the standard of recorded results.

In several centres the candidates had written extensively about the theory associated with their chosen topic before they started the practical work. This advantaged the candidates because the appropriate balanced equations were available for them to run quick checks on raw data, making sure that the investigation was proceeding as planned. In most of these centres candidates were also encouraged to enter references throughout the daybooks as they were consulted — a practice that helps speed up the writing of the final report.

### **Specific areas for improvement**

In 28% of centres verified some of the recording of experimental results was not up to an acceptable standard.

Raw data must be recorded in tables with correct units and clear headings. Outcome 2, PC(b) requires results and observations to be tabulated in the daybook. Doing so will mean the information is transferred to the investigation report in a format that will gain marks. For accuracy, titres should have a value greater than  $10 \text{ cm}^3$ . Where this is not the case, the appropriate solution should be diluted to increase the titre volume. Titration results must have an initial and final volume, and the (concordant) titres used to calculate the average must be shown. The importance of presenting raw data and processed data clearly in tabular and/or graphical format should be emphasised to candidates.