



**National Qualifications 2013  
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

Advanced Higher Chemistry: D075/13 001 Chemical Investigations  
(Visiting verification)

## General comments

Ninety per cent of centres verified had issued the latest SQA document *Guidance for AH Candidates* to the AH students. These centres had rigorous procedures in place to ensure candidates were aware that the day book is a NAB and that assessment against the Outcomes and PCs of this NAB has to be successful in order to obtain an award at AH level. Timelines and feedback pro formas were widely 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; 57% of centres verified were also aware of the need to physically mark the day books. 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 day book constituted a NAB and had all been shown the list of PCs which had to be overtaken. Ninety per cent of centres were using the latest version of the Guidance document.

## Evidence Requirements

Forty-three per cent of centres verified still did not fully appreciate that, because the day book is a NAB, it must be physically assessed. Just as a NAB testing O1&2 (KU & PS) would be marked (assessed) the day book 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 for the half Unit D075/13.

All centres used a student checklist to show clearly when each PC was overtaken; these checklists were signed and generally dated so the day books 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 57% of centres verified were aware of the need to physically mark the day books.

External verification of the NQ half Unit D075/13 takes place prior to the completion date set by most centres. As such, external verification of this half Unit is, almost always, verification of incomplete evidence so visiting verifiers see partially assessed material. In all centres verified, the assessment decisions which had been made by teachers/lecturers were in line with national standards. Twenty-nine per cent of centres verified showed no evidence of internal verification. In each of these centres, constructive feedback was given by verifiers and a system was discussed for the regular inspection of day books, at given dates, with a view to carrying out regular internal verification and assessment of PCs as the investigations proceed. The idea of a departmental policy for day book assessment procedures was explored.

### **Areas of good practice**

Verifiers saw a distinct increase in the use of timelines, to keep students on track, and of printed pro formas to feedback relevant advice to candidates as they moved through the investigation. Two centres used ring binders containing a supply of these pro formas which could be completed then slotted in to the appropriate section. Several centres advised candidates to write on only one side of each page in the day book, leaving facing pages blank so there was space for the class teacher to offer advice.

Ten per cent of centres verified set up the day books so students had printed advice on tabulating raw data, using correct units, recording problems encountered, advice given and modifications undertaken as well as a note on what should be achieved in each practical session.

Ninety per cent of centres verified had attached a copy of the Record of Attainment from page 18 of *Chemistry Investigation D075 13/NAB001* (issued July 2002) to each candidate's day book. In these centres, candidates were encouraged to use the PCs to check their own progress and the record acted as a prompt/reminder for both staff and candidates to treat the day book as a NAB and remember the need to work towards achieving all six PCs.

Evidence from all centres showed an appreciation of risk and most day books contained formalised risk assessments.

### **Specific areas for improvement**

Advice given in the 2012 IAR is still pertinent.

Cross-marking of candidate evidence could be done during a departmental meeting so that all staff become familiar with the assessment requirements of each Course and standards are consistent across the department. In most centres where an internal verification policy is in place, 20% of the candidates are randomly selected for internal verification.

Candidates should be encouraged to ensure that results tables have headings and correct units. They should also consider the number of significant figures

used in calculations and the accuracy of their measurements. Solutions should be diluted where necessary in order to avoid small titres and increase accuracy.

Candidates should clearly state the overall aim at the start of the investigation as this avoids confusion and can greatly aid the final evaluation. Replicates are needed so advice should be given that it is better to analyse a small number of samples twice than it is to analyse a large number of samples once.