



**National Qualifications 2015
Internal Assessment Report
Chemistry: Revised (AH)**

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:

Chemistry: Revised (Advanced Higher)

FE4J 13 Researching Chemistry (visiting verification)

All verification of this Unit took place between February and March 2015.

There is one NAB for this Unit: NAB 001.

General comments

Verification involved centres that were offering the Revised Advanced Higher Course which requires candidates to develop specific skills and techniques in order to overtake the Outcomes and Performance Criteria of the Researching Chemistry Unit. It was obvious, in all centres, that some time and effort had been spent to ensure that the centre and the candidates were well prepared for this internally assessed Unit.

Candidates in all centres had been issued with the latest available AH guidance document and all had a record of the two Outcomes and four Performance Criteria attached to their daybook so that they could monitor their own progress. The majority of centres showed clear evidence of best practice of internal verification and some had adapted the Record of Attainment from page 15 of the NAB document to record the initials of the internal verifier and the date of the internal verification procedure. Assessors in more than half of the centres had clearly marked the day books, as befits a NAB.

Unit specifications, instruments of assessment and exemplification materials

The Unit specification is found on pages 73 to 88 of the National Course specification, Chemistry (Revised) Advanced Higher: course code C273/13 issued in March 2012 (which exemplifies the skills and techniques needed for the Researching Chemistry Unit). The instrument of assessment, consisting of two Outcomes and four Performance Criteria, is exemplified in the SQA document Advanced Higher Chemistry: Chemistry Investigation NAB/FE4J 13/001 issued in January 2013.

One centre adapted parts of the RSC online resource *Practical Chemistry for Schools and Colleges* and used it to prepare candidates for the practical work needed for the Researching Chemistry Unit.

Evidence Requirements

There is a clear understanding of the requirements for the two Outcomes and four Performance Criteria.

Administration of assessments

The assessment instrument for this Unit, FE4J 13 NAB 001, is provided by SQA along with advice on how to administer it. All centres that were verified used their intelligence, initiative and professional judgement in interpreting this advice. 67% of centres showed clear evidence of effective internal verification and discussions were underway in the remaining 33% of centres to set up internal verification procedures by using a departmental meeting to cross-mark NABs and day books with colleagues in other science departments.

Areas of good practice

- ◆ In all centres verified there was extensive evidence of regular discussions between the candidates and the class teacher during the planning stage of each investigation and candidates from all centres had the two Outcomes and four PCs listed at the front of their day book.
- ◆ In all centres, candidates had numbered the pages of their day books. Where there was evidence that any PC had been overtaken, 67% of the centres that were verified noted the page number on the copy of the Outcomes in the front cover of the day books and this was dated and signed by the class teacher. Several in-house checklists of Outcomes and PCs were designed to give advice to candidates on overtaking the PCs, but all avoided being too prescriptive. In all cases extensive planning had taken place before practical work was started and there was a lot of evidence of good advice being given and taken.
- ◆ Each day book is a NAB and 67% of centres had marked the day books, clearly indicating where each PC was deemed to have been overtaken.

Specific areas for improvement

- ◆ 33% of centres had a check list which recorded that the Outcomes and PCs had been overtaken, but the class teachers had not indicated in the day books where they believed each PC had been overtaken. If a check list is used, best practice is for candidates to number the pages of the day book and include pages numbers in the check list so the centre's assessment can be easily verified.
- ◆ Risk assessments should be carried out before practical work begins.
- ◆ All raw data gathered during the experimental work must be recorded in the day book using the correct number of significant figures
- ◆ Tables must have correct units and clear headings.
- ◆ Aims should be clearly stated on a separate line. If the aim is changed during the planning or experimental stage it must be made clear that a new aim has been adopted; the previous aim should be scored through.
- ◆ Titres should be in double figures. If a titre is too small the associated error will be large so the procedure must be modified to quantitatively dilute one of the solutions and increase the volume of the titre.
- ◆ It is useful for candidates to have some form of timeline included in the day book so they know what is expected of them at each stage of the investigation.

- ◆ 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.