



**National Qualifications 2012  
Internal Assessment Report**

**Chemistry**

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

# National Qualifications (NQ) Awards

Titles/levels of NQ Awards verified:

Organic Chemistry AH DO74/13  
Energy Matters H DO69/12  
The World of Carbon H DO70/12  
Chemical Reactions H DO71/12  
Building Blocks Int2 DO66/11  
Chemistry in Action Acc3 DO63/09

## General comments

The central verification team felt the centres verified showed a higher standard of assessment and a higher standard of candidate evidence than has been seen in previous years. Eighty seven per cent of centres provided the correct Outcome 1, 2 and 3 evidence, most of which was accurately assessed, while 40 per cent showed evidence of best practice of internal verification and 80 per cent provided copies of the instruments of assessment and mark schemes as requested by SQA. Calculations were well laid out and used the correct units, while the quality of graphs was very good with clear labels, units, accurate plotting and good attempts at lines of best fit. Careful and accurate assessment had picked up errors and there was evidence of best practice of redrafting O3 reports.

## Course Arrangements, Unit specifications, instruments of assessment and exemplification materials

Assessors are all familiar with the Course Arrangements, the Unit Specifications and the instruments of assessment, which are all provided by SQA. Two centres appeared not to be following the General Marking Guidelines found in Unit 1, NAB001 at each level. These guidelines are also used by markers in the course exams so they can be used as a teaching tool when assessing Units.

## Evidence Requirements

There is a clear understanding of the Evidence Requirements for each of the Units verified.

## Administration of assessments

All of the centres verified used assessment instruments and marking instructions provided by SQA.

Forty per cent of centres verified showed evidence of best practice of internal verification. In a small, single-teacher department it is not always possible to internally verify (cross mark) candidate evidence so some small centres combine with other science departments in the same centre or with other chemistry departments in nearby centres to internally verify candidate evidence.

## Areas of good practice

In the majority of centres, assessment of both O1 and 2, and O3 evidence was careful, accurate and in line with National Standards. For O3, centres encouraged candidates to redraft the report to ensure that:

- ◆ all graphs used lines of best fit
- ◆ calculated rates of reaction used sufficient significant figures to give the correct level of accuracy
- ◆ scales used on graphs were correct and points were plotted accurately

## Specific areas for improvement

- ◆ an incorrect structure followed by a correct name is classed as a cancelling error and would not be awarded marks in the external examination.
- ◆ three centres awarded marks for incorrect structures, eg O-H-C- was accepted as a correct answer although it would not be accepted in the course exam.
- ◆ although most assessment was accurate, some centres showed a tendency to be lenient and, on two occasions, whole questions assessing O1 and 2 had not been marked.
- ◆ where centres have amended NAB marking instructions, these should be submitted along with the candidate evidence. Annotations to marking instructions should follow the general marking principles used in the national examination. For example, if a question is worth 1 or 0, the marks should not be altered to allow the award of a  $\frac{1}{2}$  mark. If a centre wants to substantially alter the NAB or NAB marking instructions, the proposed alterations should first be submitted to SQA for prior verification.
- ◆ it is good practice for teachers to sign and date all candidate evidence.
- ◆ Higher, Unit 1, PPA 2: several centres accepted the unlikely temperatures of 30, 40, 50 and 60°C instead of encouraging candidates to measure the actual temperature of the reaction mixture.