

SCHOOLS' ANALYST COMPETITION  
RSCAD SCOTTISH REGION  
8 MARCH 2010  
REPORT

The 21<sup>st</sup> annual Scottish Region Heat of the Royal Society of Chemistry Analytical Division Schools' Analyst Competition was held at the Heriot Watt University, Edinburgh on Monday 8 March 2010.

17 teams from all over Scotland took part. Each team consisted of 3 students.

The teams carried out 3 experiments devised by Duncan Fortune. These were:

1. The determination of acetylsalicylic acid in aspirin tablets by pH titration,
2. The determination of ascorbic acid in vitamin C tablets by back titration .
3. The determination of orthophosphate in a sample of field run-off by formation of a coloured complex and comparison of the absorbance with that of a series of standards.

Each school was supplied with the experimental details in advance to allow the teams to familiarise themselves with the techniques and plan their strategy on the day.

Experiments 1 and 3 were performed fairly well by most of the teams, Experiment 2 was the one which presented the teams with most difficulty. Not that the experiment was intrinsically more difficult than the others but in order to complete it in the time allotted( 75 minutes) required a high degree of organisation. Some teams coped with this better than others and this in the end was the deciding factor.

Each experiment was marked out of 50 with marks being awarded for calculations, construction of graphs and calibration curves, where appropriate, calculations, accuracy of results and answers to comprehension questions.

The winners were Glenalmond College, with Boclair Academy in second place and Fettes College in third place. Each member of the winning team received a book token to the value of £30, the second team each received £20 book tokens and the third £10.

The winning team also receive a cup donated in 1990 by MacFarlan Smith in 1990. Their names are engraved on the base. Sadly there is only space for one more year on the base. The committee feel that the cup should be retained in view of its history. They would like to purchase a second base which would cost around £200 and any donations towards this would be gratefully received.

The winning team go on to take part in the National Finals which are to be held in Huddersfield on 21/22 June 2010.

The committee would like to thank Prof Martin McCoustra for allowing the use of the laboratory at Heriot Watt University and donating the chemicals and also Christina Graham of Heriot Watt University for trying out the experiments, preparing solutions, laying out the laboratory "stations" at which the teams work and for ensuring the smooth running of the competition on the day. The marking was done by Duncan Fortune and Dilys Jeffrey-Smith who also did the de-briefing. The prizes were presented by Duncan Fortune.

The committee would also like to thank Johnson Matthey (MacFarlan Smith), Syngenta, Ciba and Roemex for their generous sponsorship. The Schools' Analyst Competition is very much enjoyed by the participants and is extremely worthwhile but due to the widespread nature of the region it is very expensive to run. The sponsorship enables the event to continue to be held.

Dilys Jeffrey-Smith  
25 March 2010