

Analytical Division

National Schools' Analyst Competition Regional Heat
Queen Mary University of London, Wednesday 1st April 2009

The Schools' Analyst Competition is a national competition run by the Royal Society of Chemistry's Analytical Division, for year 12 students studying AS level Chemistry or equivalent. The aim of the competition is to raise the profile of the Society and to promote an interest in the study of Chemistry, particularly Analytical Chemistry/Science, thereby encouraging the participants in the competition to consider Analytical Science as a career option.

Analytical measurements pervade through all areas of science and society ensuring for instance, safety in the food we eat, the water we drink and many of the consumable items that we use in everyday life. Analytical Science is in the forefront of technologies being used to combat terrorism and for detecting drug use in sport and other areas of society. Many of the measurements which are helping astronomers to understand the nature and history of the universe are obtained by using measurement techniques similar to those that can be found in all modern analytical laboratories. In the 21st century, analytical science is a combination of chemistry, physics, biology, mathematics and engineering and experiments undertaken in the competition, are chosen particularly to allow competitors an insight into the exciting technologies, now used routinely throughout analytical science. The Universities chosen to host both the heats and the national final have established interests in both teaching and research in Analytical Science.

The Final of the Competition sees up to 16 teams competing for a Challenge Shield. Teams are judged for their skill, understanding and accuracy, their ability to work as a team and for their safe working practices in the laboratory. First, second and third placed teams in the National Final receive prizes of £750, £500 and £250 respectively with the other finalists receiving £100 each. There are also prizes for the individual team members and all travelling expenses are reimbursed. The photograph below shows the team from a school in Scotland, who went on to win the 2005 competition.



The team is shown preparing samples of a vitamin supplement to be analysed spectrophotometrically for its iron content. Other exercises undertaken in the competition were the analysis of aspirin tablets by an acid/base titration and the analysis of a commercial mouthwash for its menthol content using the tandem technique of gas chromatography / mass spectrometry (gcms)

The Analytical Division is divided into eight Regions covering the whole of the United Kingdom and all of these Regions offer at least one heat, to select the teams that will compete in the 2009 national final to be held at the University of Plymouth on the 29/30 June. If you would like a team (or teams) from your school to compete in the **Regional Heat** then complete the attached reply slip and return it to the address provided by Wednesday 18th March. For queries, please contact Dr Tippu Sheriff at QMUL, whose contact details are given below or Brian Woodget [National Coordinator (bwoodget@aol.com)].

Teachers/helpers accompanying teams (each of **3 pupils**) are very welcome to stay and can participate in the activities that will be available for them, however pupils may be left unaccompanied at QMUL during the day if preferred. **Travelling expenses can be claimed** from the RSC's East Anglia Region Analytical Division (EARAD) using forms that will be provided; EARAD have also kindly agreed to **provide lunch expenses** for all competitors and teachers/helpers that stay for the day and Prizes for the top three teams in the competition.

Local organiser: Dr Tippu S Sheriff

E-mail: t.s.sheriff@qmul.ac.uk Tel: 020 7882 8466

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Reply Slip

Name and Address of School

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Name of Teacher who will accompany School Team

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Contact Details of Teacher who will accompany School Team

Work Number:.....**Mobile Number:**.....

Email Address:.....

Names of Pupils in Team (last minute changes to team are possible in case of illness *etc*)

1).....Year.....

2).....Year.....

3).....Year.....

State if any of the students have a disability or special needs (the lunch provided will cater for most dietary needs).

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I understand that pupils from my school must adhere to COSHH Regulations when working in the laboratory and to instructions provided by demonstrators and organisers on the day. We agree to abide by the Rules of the competition.

Signed (Head of Chemistry/Science or Headteacher).....Date:.....

Please return completed form to: Dr Tippu S Sheriff, School of Biological and Chemical Sciences, Queen Mary University of London, London E1 4NS