

Second Edition

A LIFETIME OF ANALYSIS



**A Brief History of the
North West Region of the Analytical Division of
the Royal Society of Chemistry
in Celebration of its 75th Anniversary**

1924 - 1999

Preface

“All the world’s a stage, and all the men and the women merely players: they have their exits and their entrances; and one man in his time plays many parts, his acts being seven ages...” (The Seven Ages of Man from “As you Like It”)

William Shakespeare wrote these words at the turn of the century some four hundred years ago and they seem very appropriate to introduce this brief history of the N. W. Region of the Analytical Division of the Royal Society of Chemistry. This year, 1999, our Region celebrates its 75th birthday and, although recent statistics show we are now living longer than ever before, it is fair to say that this milestone on our history truly represents “A Lifetime of Analysis”.

Shakespeare’s lines are also apt because the N.W. Region is actively involved in promoting analytical chemistry at all ages from 7 to 70+. Together with local schools we organise fun events for primary school children and more serious activities, such as the Schools Analyst Competition, for senior students. We have developed the Analytical Science Network for those starting their careers in analysis, and organise a programme of scientific meetings covering a wide range of specialist subjects for practising analysts. Our special way of keeping in touch with our retired members is through our Long Service Members Lunches, and we never forget that “all work and no play makes Jack a dull boy” so we organise a variety of social events for all ages.

As in all other aspects of life, the first 75 years of the N.W. Region have witnessed dramatic changes in the way analytical chemistry is practised. We have seen a transition from measurements based largely on chemical reactions and the human sensory system to measurements performed using a wide range of instrumental techniques. These events have required a concomitant change in the skills required by the analyst and it is not surprising therefore that our Region has adapted well and is a healthy, vibrant organisation as we celebrate our 75th birthday and enter a new millennium.

From the enthusiasm demonstrated by the youngsters who are involved in many of our analytical activities I am sure that we need have no worry about the viability of the next 75 years of our Region. And although unlikely to attract such wide acclaim as Shakespeare’s plays, I hope that histories of the N.W Region will continue to appear for a long time into the future.

I would like to acknowledge the contributions of both former and current committee members of the N.W. Region in the preparation of this document. Special thanks are due to G.G. Longman⁽¹⁾, G.B. Crump⁽²⁾ and J.W. Ogleby⁽³⁾ who all produced previous histories of the Region and which have been valuable sources of information. I am also indebted to L.S. Bark, D.S. Corrigan, J.D.R. Thomas, A.C. Bushnell, P. Morries and G. Davison for their helpful feedback on my first draft.

The N.W. Region is also most grateful to the following local companies who have provided financial assistance to help cover the production and distribution costs of this document:

- Bristol - Myers Squibb (Moreton)
- Avecia (Blackley)
- Hypersil (Runcorn)
- Shell Global Solutions (Thornton)

I hope you find this account of our Region both informative and enjoyable. Clearly it is a brief history and therefore not a comprehensive description of the first 75 years of the N.W. Region, but any comments from readers highlighting inaccuracies or providing further information about our Region will be gratefully received and suitably archived for inclusion in a future compilation.

Stuart Forbes

(Vice-Chairman, N.W. Region - Analytical Division)

December, 1999

Preface to the Second Edition

This second edition of “A lifetime of Analysis” has been produced because all copies of the original document have been distributed amongst a variety of recipients including N.W. Region and other RSC Members, libraries and museums. In producing the second edition I have taken the opportunity to update the tables at the back of this account and to correct an error in the first edition, namely the identity of the gentleman in the photograph inside the Chairman’s Badge of Office (page 25) who is Arthur Hill Hassall and not S. E. Melling as originally stated. However, I have not changed the main body of text which appears as originally produced.

I would like to take the opportunity to acknowledge the helpful feedback I have received following the distribution of the first edition and to mention that in the near future the whole document will be available on our N. W. Region Web Site at:

www.rsc.org/lap/rsccom/dab/adnwregion.htm.

Stuart Forbes

(Chairman, N.W. Region – Analytical Division)

February, 2002

Contents

Introduction	5
Background to the N.W. Region	6
The Early Years	7
The Transition	8
Schools Analyst Competition	10
Analytical Science Network	13
Scientific Meetings	15
Social Meetings	19
Long Service Members Lunches	21
Finances	22
Future	22
References	24
The Badge of Office of the Chairman of the N.W. Region - Analytical Division	25
Appendix 1 Chairmen and Honorary Secretaries of the N.W. Region	26
Appendix 2 Officers of the N.W. Region who have become Analytical Division Officers or received Analytical Division Awards	27
Appendix 3a Record of Schools in the Liverpool Section of the Schools Analyst Competition	28
Appendix 3b Record of Schools in the Lancaster Section of the Schools Analyst Competition	29
Appendix 3c Record of Schools in the Manchester Section of the Schools Analyst Competition	30

Introduction

Analytical chemistry is a truly pervasive science underpinning the chemical and pharmaceutical industries, public health, control of the environment and engineering. The analytical sector in the UK is currently estimated to have a £7 billion annual turnover and employs about 200,000 people.

This year, 1999, the North West Region of the Analytical Division of the Royal Society of Chemistry (RSC) celebrates its 75th anniversary. Our parent organisation, the RSC, is the scientific and professional body representing chemists in the UK and has approximately 47,000 members, over 8,000 of whom are members of the Analytical Division which is currently sub-divided into nine regions.

The N.W. Region was a founder member of what has become the Analytical Division and, with some 1,100 members spread throughout the Region from Carlisle to Mid-Wales, has one of the largest memberships of the Division. Our main remit is to promote analytical science in the Region which is achieved through a variety of activities involving school children; students in higher education; practising chemists in industry, academia, government and independent laboratories; and retired chemists.



The Committee of the N.W. Region (1999)

standing (from left): Damien Arrigan, Paul Thomas, Alexis Holden, Mark Tombs, Sharon Stephen (Chairman), Alan Handley, Rob Edwards, Ted Adlard, Peter Myers.

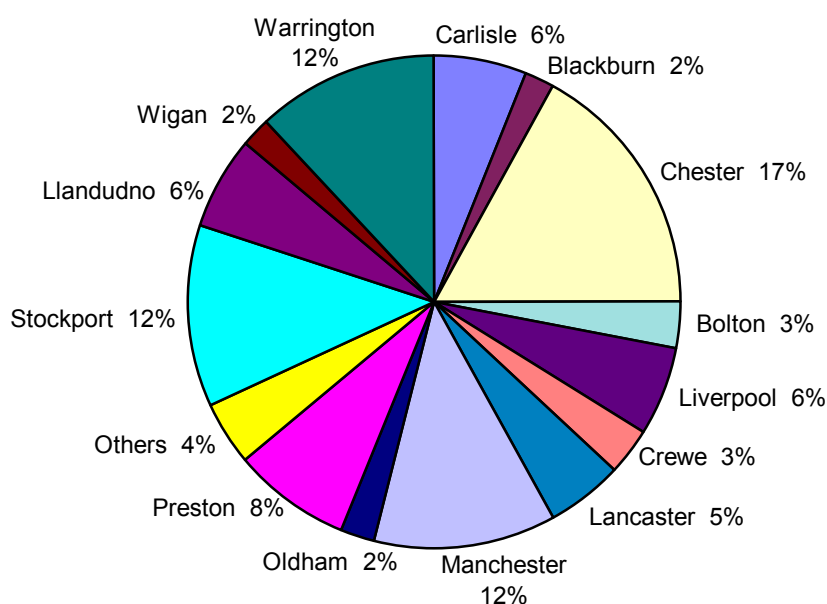
seated (from left): John Ogleby (Assistant Secretary), Stuart Forbes (Vice-Chairman), Gerry Davison (Secretary) Brian Taylor (Treasurer).

Background to the N.W. Region

Although this year we celebrate the 75th Anniversary of the N.W. Region, the Region and its associated parent bodies, the Analytical Division and the Royal Society of Chemistry, have undergone many changes of name since their creation.

As recounted by J.D.R. (Ron) Thomas⁽³⁾ the Analytical Division has developed from the Society of Public Analysts which was formed in 1874 and subsequently became the Society of Public Analysts and Other Analytical Chemists in 1907, and the Society for Analytical Chemistry (SAC) in 1954. In the following two decades there was a move to a much closer association between the various societies covering different aspects of chemistry and this led to the incorporation of SAC as the Analytical Division of the Chemical Society in 1972. Some eight years later the Chemical Society and the Royal Institute of Chemistry unified to form our present parent organisation, the Royal Society of Chemistry.

The North of England Section of the Society of Public Analysts and Other Analytical Chemists was inaugurated in 1924 and covered the area from a line drawn horizontally through Birmingham to the Scottish Border. The Section was the first region of the Society to be formed but it also hosted a meeting in Harrogate in 1934 which led to the formation the following year of the Scottish Section, the second region of the Society. The North of England Section was divided into two in 1966 and the resulting N.W. Region covered, as it does currently, Cumbria, Lancashire, Cheshire, Merseyside, Greater Manchester, Mid and North Wales and the Isle of Man, with the N.E. Region covering the area to the east of the Pennines.



Distribution of N.W. Region Members in 1999 (by post code)

The Early Years

Our early records indicate that two former chairmen, G.D. Elsdon and S.E. Melling, were instrumental in the formation of the North of England Section of the Society of Public Analysts and Other Analytical Chemists. The Section was formed at an extraordinary general meeting of the Society held at the Literary and Philosophic Society, 36 George Street, Manchester on 7 November, 1924.

As recorded⁽⁴⁾ in his annual address to the Society in 1925, G. Rudd Thompson, the Retiring President stated:

“It has also fallen to my lot to preside at an Extraordinary General Meeting of our Society which was held in Manchester, when I was honoured by the support of many of our officers and members who specially travelled north for the purpose.

Here the proposal that a Northern Section of our Society be formed was formally discussed and decided upon, and I look forward with pleasurable anticipation to the beneficial results from the formation of other provincial sections.

It is always a matter of inconvenience and expense for country members to take part in our meetings and deliberations in London, and a good case has been made out for the formation of “feeders”, when we shall have the benefit of increased membership, and I feel sure a greater number of papers will be forthcoming for The Analyst, thereby increasing our sphere of action and usefulness, to say nothing of bringing chemists in all branches of work into closer contact with one another.

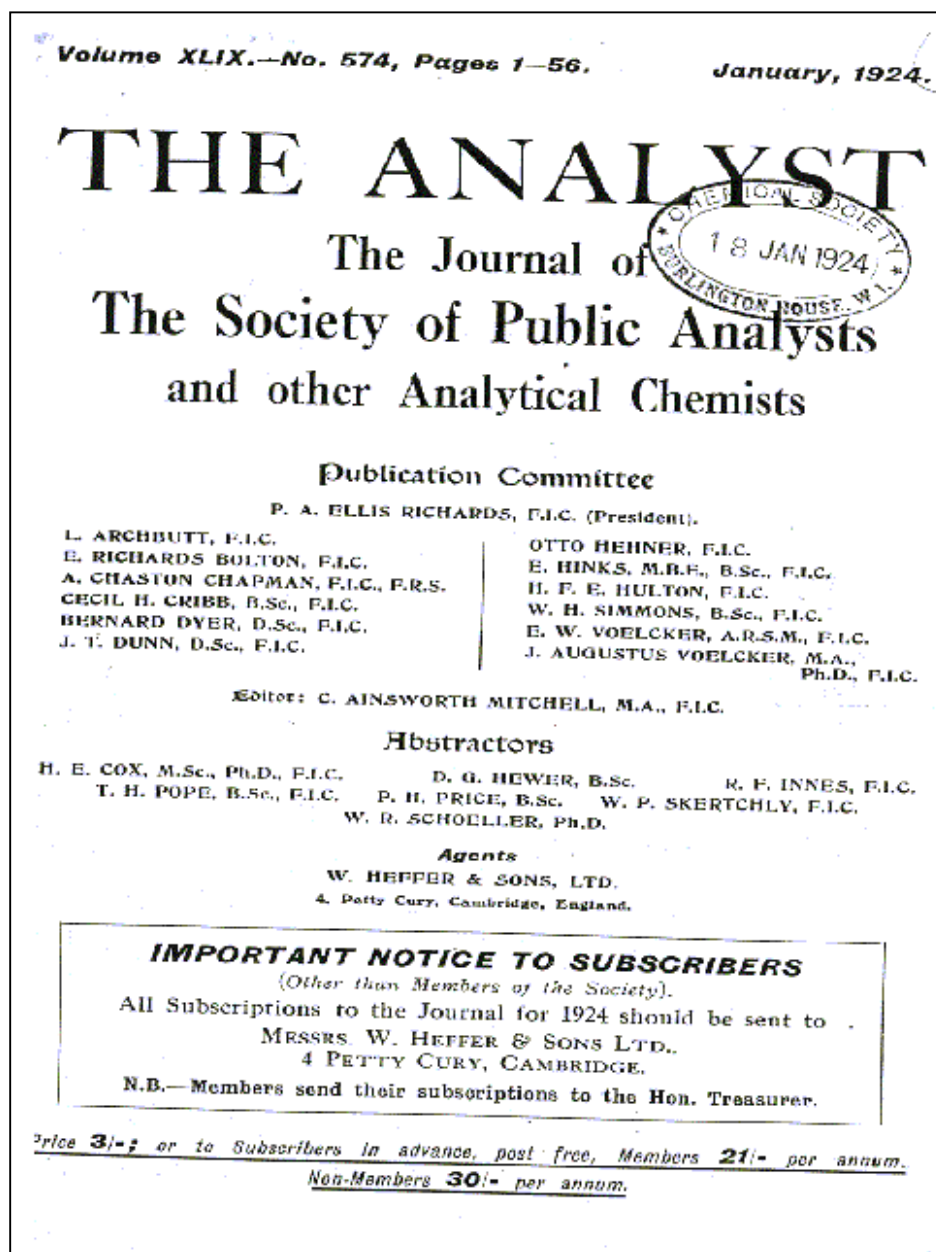
This Northern Section is the first off-shoot from the parent body, and a further one is under consideration, but the details of formation etc., of this have been somewhat delayed owing to the distance from London and the difficulty experienced by those interested in meeting to discuss the matter.”

A full committee of the North of England Section was elected at the first general meeting held in February 1925 and the original objective was recorded as:

“To raise the status and increase the influence of the Society of Public Analysts and Other Analytical Chemists, to afford opportunities for members to meet together for the reading of papers on analytical chemistry and to discuss subjects of scientific and professional interest”.

It was agreed by the Council of the Society that members of the North of England Section should pay an annual subscription of 2s. 6d (equivalent to 12.5p for our younger readers) but should be relieved of the entrance fee of £1. This may appear a small sum in comparison with our current RSC subscriptions although, as illustrated below, the annual price to members of *The Analyst* at that time was £1. 1s. 0d compared with the current annual members rate of £113 so the subscription was probably equivalent to some £12 - £15 nowadays. Salaries have also increased considerably since the formation of the Section when a professionally qualified analytical chemist might expect to receive £200 - £300 per annum. Clearly the first

treasurers of the Section maintained a good control of expenditure because the annual subscription of 2s. 6d remained unchanged until 1945.



Cover page of "The Analyst" from 1924

(the year of formation of the North of England Section of the Society of Public Analysts and Other Analytical Chemists)

The Transition

As indicated in previous sections of this account, for the first 25-30 years virtually all of the Region's activities were dominated by public analysts and, in line with the original objective, regular meetings of members were held to

discuss the analysis of foods, milk, fat, water, feeding stuffs and drugs (described later in the section on scientific meetings). During the 1940s and early 1950s the number of industrial analysts in the Society of Public Analysts and Other Analytical Chemists grew and it became increasingly obvious that the needs of public analysts were usually very different from those of “other analysts”. With an increasing number of analytical instruments entering the laboratory the industrial analyst became more specialised, while the public analyst continued to handle a wide range of diverse samples and was often called on to provide evidence in court. In 1953 the Society’s “other analytical chemists” outnumbered the public analysts in the organisation and it was decided that the interests of both groups would be best served by separate bodies. Consequently the Association of Public Analysts was formed to deal with their special interests, and in 1954 the Society was renamed to the Society for Analytical Chemistry (SAC).

Although the public analysts had their own association they remained highly influential in the SAC long after 1954 and, with the exception of T.P. Hilditch (1938-39) and J.R. Edisbury (1959-60), every chairman of the Region up to 1966 was a public analyst. However, with the formation of the Association of Public Analysts and increased local activity in both academic and industrial spheres, the balance of membership and scientific interests slowly changed. Consequently since the early 1970s the Region has seen a much wider membership base and organised a wide range of activities to promote analytical science throughout N.W. England, Mid and North Wales.

The foundations of the N.W. Region and the transition in membership base were marked at a meeting held on 8 November 1974 to celebrate both the 50th Anniversary of the founding of the North of England Section of the Society of Public Analysts and Other Analytical Chemists and the 21st Anniversary of the founding of the Association of Public Analysts. This meeting catered for all tastes with visits to the N.W. Forensic Science Laboratories, Blackpool Catering College and the Lion Brewery; a lecture programme ranging from “The Science of Shakespeare” to “Chemical Aspects of the Drugs Scene”; and a showing of films made of North of England Section Summer Meetings some years earlier. In the evening Lancashire County Council hosted a dinner for the delegates who all received a copy of a booklet⁽¹⁾ giving a history of the North of England Section which had been compiled by G.G. (George) Longman, a past Honorary Secretary and Chairman.

In addition to the transition from a membership consisting almost exclusively of public analysts to one involving a wider range of professional interests, there has also been a transition in the activities of the Region. For many years the activities concentrated primarily on the professional interests of the members and most of the funds were spent on scientific meetings for members. However the success of the Region’s scientific meetings led to a steady build up of a financial surplus and this enabled the Region to open its activities beyond those catering only for members in active employment. Consequently we now organise events to stimulate school children at one end of the age scale and to keep in touch with retired members at the other end.

Schools Analyst Competition

A major role of the N.W. Region has been to stimulate interest in analytical chemistry in youngsters and consequently we attach great importance to supporting the very successful Schools Analyst Competition which is held annually and involves schools spread throughout the UK.

This competition was invented at the then North London Polytechnic in the early 1980s and our Region first became involved in 1987 at the initiative of L. (Larry) Gifford, a former N.W. Region Committee member, when we sponsored a competition at Manchester University. From this beginning interest in the event throughout the N.W. Region increased dramatically with a second competition being launched at Liverpool University in 1988 and a third at Lancaster University added in 1990.

The competitions have grown in strength to a point where both the Manchester (now held at the Metropolitan University) and Liverpool (now involving John Moores University) events typically attract 25 to 35 teams and the Lancaster competition has attracted up to 43 teams. The competition continues to flourish in the N.W. Region and we are now looking to establish a fourth centre at Bangor University to bring in schools from Mid and North Wales.



A-Level Students participating in a recent Schools Analyst Competition

This event involves teams of three first year GCE A-level students who undertake a series of practical exercises over a period of 4-5 hours. These exercises often introduce the students to instrumental techniques such as gas chromatography and atomic absorption spectrometry, which they don't normally encounter in their

secondary education, and their application to the analysis of a variety of samples including wine, plastics, pharmaceuticals, oils and fats . A light-hearted lecture or laboratory tour is usually held after the formal competition which gives the students an opportunity to relax and the organisers a chance to collate the results of the competition.

In addition to all the help we receive from local staff in organising these competitions we are also indebted to more than 20 local companies and the Analytical Division who help to sponsor these events providing materials, trophies, prize money and refreshments for the competitors.

The winners from the regional competitions held in Manchester, Liverpool and Lancaster progress to a national final, sponsored by the Analytical Division Education and Training Committee, in which schools throughout the UK participate. As shown below, schools from the N.W. Region have a particularly good record in these national finals, which started in 1990, winning places on several occasions and, in two of the finals, taking the first, second and third places.

<u>Record of Schools from N.W. Region in the National Finals of the Schools Analyst Competition</u>		
YEAR	VENUE	SCHOOL (position)
1991	University of North London	Austin Friars School, Carlisle (2) Merchant Taylors Boys School, Crosby (3)
1994	Lancaster University	Lancaster Royal Grammar School (3)
1995	University of Hertfordshire at Hatfield	Our Lady's Chetwynde School, Barrow-in-Furness (3)
1997	University of Birmingham	Merchant Taylors Boys School, Crosby (1) Blackpool Sixth Form College (2) Manchester Grammar School (3)
1998	University of Sunderland	Nelson and Colne College, Nelson (1) Our Lady's Chetwynde School, Barrow-in-Furness (2) Manchester High School for Girls (3)
1999	University of Kent at Canterbury	Nelson and Colne College, Nelson (1)
2000	Heriot-Watt University	Westholme School, Blackburn (3)

(regional results of the Schools Analyst Competition are shown in Appendix 3)

In writing about the Schools Analyst Competition in the N.W. Region special mention must be made of C.J. (Colin) Peacock, a former chairman, who has made a major contribution to the success of this venture in our area. Like many others Colin has given large amounts of time voluntarily to drive this event and organise the regional finals held at Lancaster University. Owing to the rural nature of the northern sector of our Region, which contrasts dramatically with areas such as Merseyside and Greater Manchester, Colin organises an in-school postal round with one team from each of the top ten schools attending the regional final at Lancaster. This initiative has resulted in up to 83 teams competing in this event from that sector alone. Moreover, this concept has been extended across the UK with Lancaster now hosting a national postal competition for schools in areas where there are no local events.

In addition to these competitions we help to arrange schools lectures throughout the Region and our committee members also visit schools to promote chemistry and offer careers advice. Recently we have formed an education sub-committee which interacts with teachers in the Region to help organise schools events. One such event was Streamwatch UK, an environmental project which encourages observation of local rivers by the use of analytical test kits to produce good data on water quality which is subsequently fed into a central database. The N.W. Region has purchased several test kits and, working together with North West Water, the Manchester Section of the RSC, local teachers and Streamwatch UK, is now promoting this initiative throughout our Region.

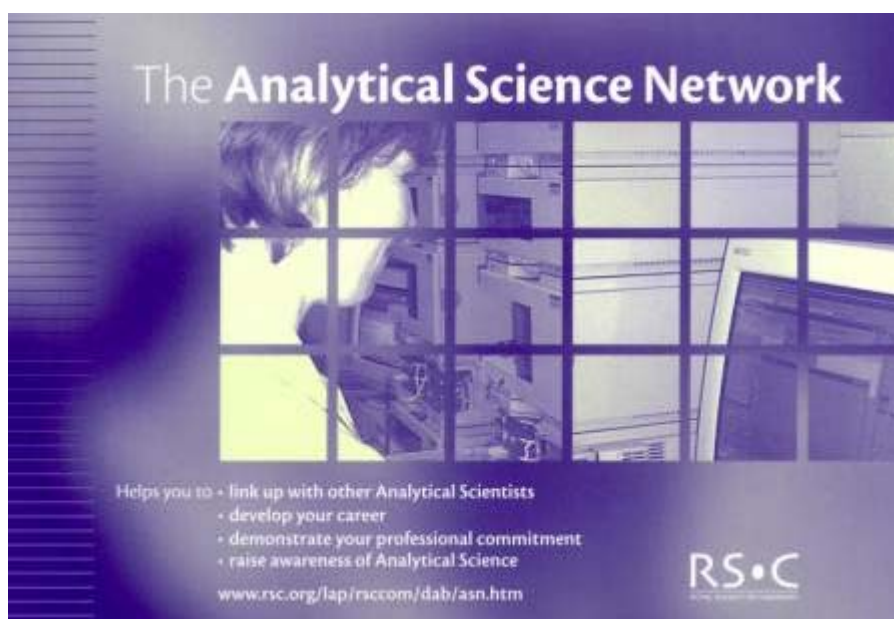


Youngsters from schools in the N.W. Region enjoying a recent Streamwatch event

Analytical Science Network

A major initiative of the N.W. Region is the Analytical Science Network (ASN) which was established to foster the careers of present and prospective analytical scientists and to promote analytical science in general. The Network, which started some three years ago, encourages contact between young analytical scientists (<35 years of age) from both industry and academia by organising a variety of meetings, conferences, competitions and newsletters.

Due to its success in the N.W. Region, the ASN has recently been extended to form a national network for young scientists throughout the UK. Nine ASN regions have been formed to help support the needs of members and other interested younger analytical scientists at a more local level and each region has one or more active regional representatives. Our Region is justifiably proud of the inspiration, energy and enthusiasm shown by three members of the present committee, C.L.P. (Paul) Thomas, A.J. (Alexis) Holden and D. (Damien) Arrigan, in establishing and developing the ASN into a thriving organisation. This is particularly satisfying because we all realise the importance to our future prosperity of maintaining the supply of highly motivated, good quality analytical scientists into the next millennium.



At present the ASN has four initiative groups which are (i) ASN Development, (ii) Continuing Professional Development (CPD), (iii) Awareness of Analytical Science and (iv) Emerging Young Professionals (EYP). The first group, ASN development, has responsibility for forging the ASN into the future by identifying new areas of interest and growth. It is a vehicle by which younger scientists are encouraged to sit on committees and influence the development of their subject and profession. The CPD Group is involved in identifying good CPD activities and also in providing informal CPD meetings within each region. The Awareness Group is currently involved in

developing a generic information and lecture pack for school children which emphasises the impact of science and good analytical science on a thriving society. Finally the EYP Group is responsible for organising an annual meeting where the past, present and future activities of the ASN are reviewed and new members are invited to join in the development and growth of the Network.

In May 1999 the ASN held its fourth annual EYP Meeting following successful earlier meetings at Buxton (1996), Evesham (1997) and Harrogate (1998). This event, which was held in York, started on a Friday evening and continued until Sunday afternoon, and demonstrated the interest and enthusiasm in analytical science shown by many of our younger colleagues. Some 55 delegates (two thirds from industry) participated and the Analytical Division President, Prof. J.N. Miller, was also present for some of the meeting. In addition to presentations by the young analysts and invited speakers, several discussion groups tackled subjects such as the role of uncertainty in analysis, raising the awareness of analytical science, analytical science education and the future of the ASN. Just like their older counterparts, ASN members also like to let their hair down and the meeting also included a quiz, a ceilidh and plenty of opportunities for bar-room discussions.

A recent innovation of the ASN is the Analytical Grand Prix which is a competition open to all scientists under 35 years of age whose work involves chemical analysis. The winner of this competition will have generated original ideas about how chemical analysis can be advanced and clearly demonstrated a significant contribution they have made to the subject. Prizes will be awarded by the Analytical Division at the RSC Annual Conference which is being held at Manchester in April 2000. The first prize of £43,500 will enable the winner to fund innovative research in their chosen field and travel grants will be awarded as runners-up prizes.



In addition to the Analytical Science Network, the N.W. Region has run annual young analytical scientists competitions for several years. The winners of these competitions have often used their prize money to attend international conferences and present and discuss their work with fellow scientists from other countries.

Scientific Meetings

Without doubt the main activity of the N.W. Region is organising scientific meetings on all aspects of analytical chemistry although the topics chosen clearly reflect the interests of local industry and academia. Typically we organise around four meetings each year, some of which are held together with other groups of the Analytical Division or with bodies such as the Water Chemistry Forum, the Institute of Petroleum or the Chromatographic Society. We pride ourselves on the success of these meetings, which usually attract some 70-100 participants from both the UK and overseas, and generate a small cash surplus for investment in other activities such as the Schools Analyst Competitions and the Analytical Science Network. Most meetings now occupy a full day although sometimes the programme extends over two days.

Naturally the topics covered at scientific meetings of the N.W. Region have altered dramatically over the years and, as previously indicated, up to the early 1970s most scientific meetings reflected the interests of public analysts. It should be remembered that the original remit of public analysts was the protection of health through good nutrition and effective medicine when many men had been found unfit for conscripted military service at the times of the Boer and First World Wars. It is not therefore surprising that many of the earlier scientific meetings, which attracted a high percentage of members, focused on the analysis of foodstuffs. G.D. Elsdon, one of our founder members and the Borough Analyst of Salford, showed the value of freezing point measurements to distinguish naturally poor milk from watered milks, worked on the determination of butter in margarine, and drew up sugar analysis tables.

These meetings often led to the North of England Section submitting resolutions to the Council of the Society of Public Analysts and Other Analytical Chemists who could then advise the appropriate ministry with regard to legislation concerning the nation's foodstuffs. A few of the resolutions submitted are quoted below:

10th October, 1929 - *“That Council be asked to consider the question of a specified procedure for analysis of jams including details of manipulation and incorporating the necessary portions of Macara’s paper”*.

30th November, 1929 - *“In the opinion of members the question of standards for potted meats calls for consideration by Council in association with the Food Manufacturers Association”*.

8th April, 1933 - *“The Meeting is of the opinion that the freezing point test is of great value for detection and determination of added water in milk and requests Council to approve the freezing point determination of added water in milk and to publish an agreed procedure”*.

It is somewhat ironical that at the end of the 20th Century the quality of foodstuffs continues to receive a great deal of attention from analysts who are frequently called on to determine the presence of toxic chemicals such as benzene or dioxins, organisms

such as the bovine spongiform encephalopathy agent or genetically modified raw products in a variety of food products.

During the Second World War some members of the N.W. Region were automatically classified as being in reserved occupations and were therefore able to continue their corporate activities during this period. Again public analysts played a major role in the maintenance of adequate nutritional standards when, during times of food rationing, deception was not uncommon and worthless food substitutes, such as coloured baking powder masquerading as dried eggs, were exposed. Scientific meetings continued to be held during the war years, usually on a similar theme to those mentioned above although meetings covering the techniques of polarography, column chromatography and mass spectrometry were also held.

With the decreasing influence of public analysts, scientific meetings concentrated more on topics of interest to local industries, where the analysts were also becoming more specialised in their activities. This resulted in meetings attracting a lower percentage of N.W. Region members, who only participated in meetings in their own field, but an increasing number of non-members and delegates from outside the Region. At the same time an increasing number of joint meetings involving ourselves and other organisations were held and this has developed to the stage where most of our current scientific meetings now involve other bodies as shown in the table of recent meetings.



Delegates in discussion with exhibitors during a N.W. Region Scientific Meeting

Recent N.W. Region Scientific Meetings

<u>Date</u>	<u>Topic</u>	<u>Venue</u>	<u>Organisers</u>
<u>1998</u>			
25 th March	Petroanalysis 98 : Fuels 2000 and Beyond - The Analytical Challenge	Shell, Thornton	N.W. Region and the Institute of Petroleum
8/10 th July	Ion-Ex 98	Wrexham	N.W. Region and NEWRI
15 th September	Sampling for Occupational Hygiene Monitoring	UMIST, Manchester	N.W. Region and the British Occupational Hygiene Society
14 th October	Separation Science in Process and Plant Control	ICI, Runcorn	N.W. Region and the Chromatographic Society
<u>1999</u>			
10 th March	Industrial Aspects of Electroanalysis (Chemical Sensors in Waste & Water Control)	N.W. Water, Warrington	N.W. Region and the Electroanalytical Group
23 rd June	Young Analytical Scientists	John Moores University, Liverpool	N.W. Region
11/12 th October	Endocrine Disruptors in the Environment: The Analytical Challenge	N.W. Water, Warrington	N.W. Region, the Water Chemists Forum, N.E. Region and the Environment Group
3 rd November	Computers in Analytical Chemistry	ICI, Runcorn	N.W. Region and the Chromatographic Society
1 st December	75 th Anniversary Scientific Meeting	UMIST, Manchester	N.W. Region

Over the last 25 years there has been a deliberate policy to hold meetings throughout the Region and outside the main industrial axis of Manchester/Merseyside. This was best exemplified in 1980 which saw the zenith meeting of the Region when we hosted the Analytical Division's SAC International Conference (SAC '80) at Lancaster University. With much help from local staff the meeting proved a great success and attracted 425 delegates who enjoyed both the scientific sessions and the social excursions around the Lake District.

The financial side of our scientific meetings has also changed considerably with the passage of time. When most of the affairs of the Region involved public analysts the majority of meetings were held in the evening and no registration fees were levied. Speakers' expenses were generally low and paid with the help of an annual grant from the Analytical Division, the N.W. Region typically maintaining a relatively small balance of £50 - 100. However, in 1975 two speakers submitted expenses that dramatically reduced the Region's balance and the committee therefore decided to take the following actions:

- to inform speakers beforehand what expenses we would meet.
- to use local speakers as much as possible.
- to generate sufficient reserves to allow us to bring eminent speakers into the Region.
- to hold one-day and half-day meetings for which registration fees would be charged.

These policy changes coincided with the decreasing influence of public analysts in N.W. Region affairs and the rapid development of new analytical techniques and instrumentation for which attractive mini-symposia could be held. Many of our scientific meetings consequently started to make a modest surplus which improved the Region's financial balance and enabled us to invest in more ambitious scientific meetings and other activities to attract youngsters into our profession.

With the increasing involvement of industrial and academic analysts in N.W. Region affairs we have benefited considerably from the support of local industries and universities who have provided facilities for major meetings together with some secretarial and reprographic assistance. All good things come to an end however and it is a sign of the times as we celebrate our 75th birthday that these facilities are now only available to us at commercial rates. The drive to reduce costs across industry and academia also has a direct impact on our scientific meetings with employers now more reluctant to release staff from their immediate duties in order to attend meetings.

To celebrate our 75th Anniversary a special scientific meeting was held in December 1999 which included presentations on the development of several key analytical techniques (chromatography, atomic spectroscopy, mass spectrometry and nuclear magnetic resonance spectroscopy) by leading authorities in these fields.

Scientific meetings will undoubtedly continue to be the most important activity for employed members in the Region although the format of these meetings might well change in the future. With the major steps forward in communications technology a considerable number of conferences are nowadays conducted using electronic mail.

Although such conferences facilitate the involvement of a wide range of delegates at relatively low cost, the valuable element of social interaction is lost so it is to be hoped that such events will not totally replace the more traditional meetings.

Social Meetings

In addition to the scientific programme the Region organises a number of social meetings for members, their families and guests. Our aim is to have a general get-together and, in the case of family events, encourage any interest our children may have in chemistry.

Social meetings are in no way a new activity for the N.W. Region as our records⁽²⁾ show them extending back to 1930 when a party of 28 members and their guests held a summer visit to Scarborough. Several week-end “Summer Meetings” were organised with visits to other holiday resorts including Llandudno, Harrogate, Blackpool and Windermere and these events usually attracted some 55-60 members. The meetings, which were suspended during the war but resumed again in the late 1940s, not only provided the opportunity to look around the resorts themselves but also included a semi-scientific lecture of general interest, a theatre trip and a coach tour.



Members and Guests at a Summer Meeting held in Harrogate in June 1935

The famous N.W. Region Summer Meetings reached their peak during the 1970s and 1980s when, as shown in the table, visits were made to a variety of locations on the mainland and to one overseas destination!

Venues of N.W. Region Summer Meetings during the 1973-1989 period

1973	Heskin, Lancashire	1982	Keswick, Lake District
1974	Hawkshead, Lake District	1983	Burton Manor, Wirral
1975	Lancaster	1984	Ironbridge, Telford
1976	Bangor	1985	York
1977	Burton Manor, Wirral	1986	Portmeirion
1978	Ambleside, Lake District	1987	Losehill Hall, Hope, Derbyshire
1979	Buxton	1988	Warwick
1980	Aberystwyth	1989	Alston Hall, Preston
1981	Douglas, Isle of Man		

The success of these meetings was largely due to the hard work and dedication of the Region's honorary secretaries who took on the lion's share of the organisation. Our current Honorary Secretary, G. (Gerry) Davison, was the major organiser of these events from 1977 onwards and the Region owes Gerry a tremendous debt of gratitude for the success of these events in recent years. A brief summary⁽⁵⁾ of the Aberystwyth Meeting held in June 1980 illustrates the vast amount of organisation required which not only involved arranging transport, accommodation and meals for 35 adults and a few children but also included an extensive programme of events for the participants:

On the Saturday morning a visit was made to the Welsh Plant Breeding Station where new strains of plants were being developed and this was followed in the afternoon with three talks: "The Work of the Plant Breeding Station", "Silver and Lead Mining in Mid-Wales" and "Welsh-built Sailing Ships". During the evening a banquet was held, followed by entertainment from a male choir. The following day started with a conducted tour of the Rheidol Hydroelectric Power Station followed by a visit to the Llywernog Silver-Lead Mine. During the return journey on Sunday afternoon a visit was made to the Centre for Alternative Technology at Machynlleth.

In more recent times our social meetings have been less elaborate (and less expensive) affairs. They are typically half-day events which involve a visit to a location of interest and/or a general interest talk from a guest speaker but, most importantly, also offer an opportunity for members and their guest to meet and have a chat.

Earlier this year the N.W. Region celebrated its 75th Anniversary with a Burns Supper and Ceilidh held at Zeneca Specialties, Blackley. Great fun was had by all who attended with a superb meal, Scottish country dancing to a live band, an interesting talk on the science of scotch whisky and a whisky tasting competition. We were honoured by the company of the current RSC and Analytical Division Presidents, Prof. Anthony Ledwith and Prof. James Miller. Not surprisingly with a room full of alcoholic analysts, the whisky tasting competition resulted in a large number of correct entries, so the winner was eventually selected by lottery.

Long Service Members Lunches

In order to maintain contact between retired members, several of whom served on the N.W. Region Committee many years ago, we hold lunches each year for our long serving members (>70 years of age), of whom we have around 80 in the Region. These meetings, which have been running for twelve years and are usually held in early summer, provide a relaxed and informal atmosphere in which retired members and their guests can meet friends and catch up on all the news in the Region. The lunches are normally followed by a lecture or a visit to a nearby place of interest and generally attract some 30-40 participants.

E.R. (Ted) Adlard, a former N.W. Region Chairman, is the main organiser of these events and his efforts are often rewarded with letters of appreciation from those attending which clearly demonstrates how much the occasion is valued by our long serving members.



Long Service Members and Guests at a N.W. Region Lunch

In addition to the lunches we also send Christmas cards to each of our long serving members which is a small gesture but shows our eagerness to maintain contact with all members, many of whom have made valuable contributions to the success of the N.W. Region in years gone by.

Finances

The N.W. Region currently enjoys a good financial status which results mainly from organising a series of well balanced meetings which attract a large number of delegates and usually produce a modest surplus.

In the early years the Region's total subscription income of £5 - 10 was supplemented by a grant from the parent Society of Public Analysts and Other Analytical Chemists and produced typical end of year balances of around £10. During the 1940s these balances steadily increased and in 1945 a balance of £70 was recorded by the treasurer.

As mentioned earlier the balances remained fairly modest until the late 1970s when, following the introduction of registration fees for delegates attending the Region's meetings, we started to receive another income stream. This resulted in our balances reaching four figures by the early 1980s and an end of year balance of over five thousand pounds was recorded in 1984.

The N.W. Region has continued to generate revenue from its own scientific meetings and in the early 1990s via the Manchester Liaison Committee, a group formed by various chemical bodies in the area which organised a number of very successful meetings. We have also sought funds from various other sources such as the RSC Analytical Chemistry Trust Fund, industrial sponsorships and bequests. This income has provided the means for us to undertake new initiatives aimed at promoting analytical science throughout the Region.

Future

As we reflect on the past 75 years of the N.W. Region it is interesting to consider our future as we enter a new millennium. The science of analytical chemistry and the technology employed continues to change rapidly and it is a tribute to analysts throughout the past century that we have responded well to the challenges posed by the society in which we operate.

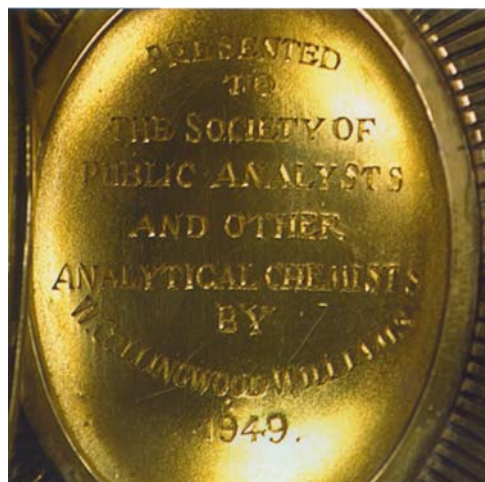
It now seems relatively straightforward to send a mass spectrometer to another planetary body in order to examine its basic composition. Or to characterise minute quantities of DNA and provide scientific evidence for a criminal or historical investigation. Or to carry out complex biochemical analyses, such as pregnancy testing, in our own homes, and breath analysis for alcohol and drugs at the roadside.

So with these capabilities where will we be when the N.W. Region celebrates its centenary in 2024? Could it be that we will all be “analysts” with the ability to characterise very complex samples using kits purchased from the supermarket shelves? Or will we have miniaturised analytical devices implanted in our bodies to warn us of impending illnesses or to tell us objectively that we’ve drunk too much alcohol or ingested too much cholesterol?

Clearly none of us know the answers to these questions but we can have no doubts that analytical science will continue to play a major role in underpinning our developing society throughout the world. Future developments in analytical science will most probably require the expertise of multidisciplinary teams involving chemists, physicists, engineers, biochemists, statisticians and computer scientists to name a few. It is therefore essential that the N.W. Region plays its part in ensuring a continued supply of high quality scientists capable of innovating and implementing measurement systems to meet the needs of the 21st Century. In response to this requirement our Region will be placing even greater emphasis in the coming years on attracting school children into our profession, and will continue to facilitate the good liaison between analytical scientists in the academic, public and industrial sectors which has sustained the success of the N.W. Region since 1924.

References

1. *“A History of the North West Region of the Analytical Division of the Royal Society of Chemistry (1924-1974)”*
G.G. Longman
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3. *“History of the North West Region of the Analytical Division of the Royal Society of Chemistry”*
J.W. Ogleby
published in *“A History of the Analytical Division of the Royal Society of Chemistry (1972-1999)”* by J.D.R. Thomas
(Royal Society of Chemistry, 1999)
4. *“Annual address of the Retiring President”*
presented at the Annual General Meeting of the Society of Public Analysts and Other Analytical Chemists held in Burlington House on 4 February, 1925
G. Rudd Thompson
(Analyst, 1925)
5. *“Report of North West Region Summer Meeting, Aberystwyth, June 27-29, 1980”*
G.B. Crump
(Analytical Proceedings, November 1980)



***The Badge of Office of the Chairman of the
North West Region - Analytical Division***

Presented to the Society of Public Analysts and Other Analytical Chemists (S.P.A & O.A.C) - North of England Section in 1949 by W. Collingwood Williams, a founder member of the North of England Section and a former Lancashire Public Analyst. The photograph inside the badge is of Arthur Hill Hassall, the first man to investigate the adulteration of food in a scientific way (*circ.* 1850).

In 1975, to mark the 50th Anniversary of the N.W. Region, A.C. Bushnell, who was also the Lancashire County Public Analyst at the time, presented the Region with a gold bar to the badge which is engraved "Renamed 1953 S.A.C (Society for Analytical Chemistry). Renamed 1975 Analytical Division Chemical Society".

(*note:* the dates on the gold bar correspond to the time when the decision was made to change from S.P.A & O.A.C to S.A.C rather than the official date (1954), and to the end of the interim period (1975) during which S.A.C was incorporated into the Chemical Society three years earlier).

Chairmen of the N.W. Region - Analytical Division

1925	W.H. Roberts	1963	C.J. House
1927	J.T. Dunn	1965	J.F. Clark
1929	S.E. Melling	1967	W. Cule Davies
1930	G.D. Elsdon	1969	R. Sinar
1931	C.J.H. Stock	1971	G.G. Longman
1932	J. Evans	1973	A.C. Bushnell
1934	W.H. Roberts	1975	L.S. Bark
1936	A.R. Tankard	1977	J.W. Ogleby
1938	T.P. Hilditch	1979	G.B. Crump
1940	J.R. Stubbs	1981	A. Dyer
1943	W.G. Carey	1983	A. Mathias
1945	H.W. Mason	1985	P. Morries
1947	C.H. Manley	1987	E.R. Adlard
1949	J.G. Sherratt	1989	C.J. Peacock
1951	A.A.D. Comrie	1991	E.R. Adlard
1953	T.W. Lovatt	1992	I.D. Wilson
1955	J.R. Warmsley	1994	D. Griffin
1957	A.N. Leather	1996	A.J. Handley
1959	J.R. Edisbury	1998	S.C. Stephen
1961	J. Markland	2000	S. Forbes

(The Chairman usually has a two year term of office)

Honorary Secretaries of the N.W. Region - Analytical Division

1924	G.D. Elsdon	1971-72	C.A. MacDonald
1925-28	H.J. Lea	1973-74	J. Cottam
1929-39	J.R. Stubbs	1975-76	G.B. Crump
1940-54	A. Lees	1977-	G. Davison
1955	A. Alcock		
1956	A.C. Wiggins		
1958-62	B. Hulme		
1962	G.G. Longman		
1968-70	J.B. Aldred		

(As described in earlier sections of this account, the present N.W. Region was formally constituted in 1966)

Officers of N.W. Region who have become Analytical Division Officers
or received Analytical Division Awards

Presidents of the Society of Public Analysts
and Other Analytical Chemists

J.T. Dunn (1930)
J. Evans (1934)
W.H. Roberts (1938)
S.E. Melling (1944)

Presidents of the Society of Analytical Chemistry

C. Whalley (1971)

Presidents of the Analytical Division

C. Whalley (1972)
L.S. Bark (1980)

SAC Gold Medal

G.F. Kirkbright (1984)

SAC Silver Medal

J.F. Alder (1985)
R.D. Snook (1989)
I.D. Wilson (1990)
R.M. Miller (1991)
P.R. Fielden (1994)

Analytical Division Distinguished
Service Award

G. Davison (1997)
E.R. Adlard (1999)
J. W. Ogleby (2001)

(As described in earlier sections of this account, the present N.W. Region was formally constituted in 1966)

Record of Schools in the Liverpool Section of the Schools Analyst Competition

YEAR	SCHOOL (position)
1989	St. Edwards College (1) Queens School (2) Merchant Taylors Girls School (3)
1990	Neston County High School (1) Blue Coat School (2) St. Edwards College (3)
1991	Merchant Taylors School (1) Neston County High School (2) Widnes Sixth Form College (3=) Wirral Grammar School for Boys (3=)
1992	Blue Coat School (1) Sir John Deanes College (2) Birkenhead High School (3)
1993	Brookvale Comprehensive School (1) Merchant Taylors School (2) Rainford High School (3)
1994	Birkenhead School (1) Neston County High School (2) Queens School (3)
1995	Birkenhead School (1) Ormskirk High School (2) Widnes Sixth Form College (3)
1996	Birkenhead High School (1) Birkenhead School (2) Rainford High School (3)
1997	Helsby High School (1) Merchant Taylors School (2) Wirral Grammar School for Girls (3)
1998	Blue Coat School (1) Merchant Taylors Girls School (2) Wirral Grammar School for Girls (3)
1999	St. Anselms College (1) Sutton Community High School (2) Birkenhead School (3)
2000	Queens School, Chester (1) Neston High School (2) Holy Family Catholic High School, Liverpool (3)
2001	Widness Sixth form College (1) Birkenhead High School (2) Merchant Taylors Girls School (3)

Record of Schools in the Lancaster Section of the Schools Analyst Competition

YEAR	SCHOOL (position)
1991	Austin Friars School, Carlisle (1) Lancaster Royal Grammar School (2=) The Lakes School, Windermere (2=)
1992	Ermysteds Grammar School, Skipton (1) Queen Elizabeth School, Kirkby Lonsdale (2) Lancaster Royal Grammar School (3) Morecambe High School (4)
1993	Baines School, Poulton-le-Fylde (1) St. Benedicts R.C. High School, Whitehaven (2) Ripley St. Thomas High School, Lancaster (3) Our Lady's R.C. High School, Lancaster (4)
1994	Lancaster Royal Grammar School (1) The Lakes School, Troutbeck Bridge (2) St. Wilfrids C.E. High School, Blackburn (3) Westholme School, Blackburn (4)
1995	Our Lady's Chetwynde School, Barrow-in-Furness (1) Kirkbie Kendal School (2) St. Wilfrids C.E. High School, Blackburn (3) Keswick School (4)
1996	Keswick School (1) Blackpool Sixth Form College (2) Nelson and Colne College, Nelson (3) Baines School, Poulton-le-Fylde (4)
1997	Queen Mary School, Lytham (1) Blackpool Sixth Form College (2) Morecambe High School (3) Our Lady's R.C. High School, Lancaster (4)
1998	Our Lady's Chetwynde School, Barrow-in-Furness (1) Nelson and Colne College, Nelson (2) St. Wilfrids C.E. High School, Blackburn (3) Cardinal Newman College, Preston (4)
1999	Nelson and Colne College, Nelson (1) Queen Elizabeth School, Kirkby Lonsdale (2) Barrow Sixth Form College (3) Ermysteds Grammar School, Skipton (4)
2000	Westholme School, Blackburn (1) Burnley Habergham High School (2) Our Lady's Chetwynde School, Barrow (3) Blackpool Sixth form College (4)
2001	Blackpool Sixth Form College (1) Lancaster Royal Grammar School (2) Ermysted's School, Skipton (3) Keswick School (4)

Record of Schools in the Manchester Section of the Schools Analyst Competition

YEAR	SCHOOL (position)
1989	Cheadle Hulme School (1) Bolton School (2) Lymm School (3)
1990	Manchester Grammar School (1)
1991	Withington Girls School (1)
1992	Cheadle Hulme School (1=) Hulme Grammar School for Girls (1=) Sir John Deanes College, Northwich (3)
1993	Holmes Chapel Comprehensive School (1) Bury College (2) Lymm High School (3)
1994	Altrincham Girls School (1)
1995	Bolton South Sixth Form College (1=) Sir John Deanes College, Northwich (1=) Wigan Community School and Sixth Form College (3)
1996	Bolton Girls School (1) Kings School, Macclesfield (2) Burnley Habergham High School (3)
1997	Burnley Habergham High School (1) Manchester Grammar School (2) Withington High School for Girls (3)
1998	Withington Girls School (1)
1999	Sir John Deanes College, Northwich (1) Helsby High School (2) Grange School (3)
2000	Stockport Grammar School (1) Ridge Danyers College, Marple (2) Deanery High School (3) Withington Girls School (4)
2001	Withington Girls School (1) Eccles College (2) Manchester High School for Girls (3) Deanery High School, Wigan (4)

Record of Schools in the Bangor Section of the Schools Analyst Competition

YEAR	SCHOOL (position)
2001	Ysgol David Hughes, Ynys Mon Alun School, Mold Yale College, Wrexham