

Division of Analytical Chemistry

European Association for Chemical and Molecular Sciences



2007 Annual Meeting

38th Meeting of DAC-EuCheMS

Sunday, 09 September 2007, from 09:00 to 13:00

Aula Rector Dhanis, Kleine Kauwenberg 14, Antwerp, Belgium

MINUTES

Participants

Austria	Prof. W. Buchberger*	Gesellschaft Österreichischer Chemiker
	Prof. W. Lindner*	Austrian Society of Analytical Chemistr
Belgium	Prof. A. Adriaens*	Koninklijke Vlaamse Chemische Vereniging
	Dr. A. Verbueken	- " -
	Dr. E. Jooken	- " -
	Prof. K. Janssens	EUROANALYSIS XIV - " -
Brazil	Prof. S. Cadore	Brazilian Chemical Society
Europ. Comm.	Prof. H. Emons	JRC, IRMM
	Prof. M. Grasserbauer	JRC, IES
Chile	Prof. H. Pinochet	Chilean Chemical Society
Cyprus	Prof. C. Kapnissi-Christodoulou*	Pancyprian Union of Chemists
Czech Rep.	Prof. J. Barek*	Czech Chemical Society
Denmark	Dr. J. Andersen*	Danish Chemical Society
Finland	Prof.. L. Niinistö*	Association of Finnish Chemical Societies
Germany	Prof. R. Salzer*	Gesellschaft Deutscher Chemiker
	Dr. E.H. Korte*	Deutsche Bunsen-Gesellschaft für Phys. Chem.
Hungary	Prof. G. Horvai*	Hungarian Chemical Society
Italy	Prof. L. Sabbatini	Società Chimica Italiana
Netherlands	Prof. L. Buydens*	Koninklijke Nederlandse Chemische Vereniging
Norway	Prof. W. Lund*	Norwegian Chemical Society
Poland	Prof. S. Głąb*	Polish Chemical Society & Committee on Analytical Chemistry of PAS
Portugal	Prof. M.F. Camões*	Portuguese Chemical Society
Romania	Prof. G.E. Baiulescu*	Romanian Society of Analytical Chemistry
Russia	Prof. S.N. Shtykov*	Mendeleev Russian Chemical Society
	Prof. B.Ya. Spivakov*	Scientific Council on Analytical Chem. of RAS
Serbia	Prof. S. Ražić*	Serbian Chemical Society
Slovakia	Prof. J. Labuda*	Slovak Chemical Society
Spain	Prof. M. Valcárcel*	Societat Espanola de Quimica Analítica (SEQA) & Spanish Royal Society of Chemistry
Sweden	Prof. B. Karlberg*	Swedish Chemical Society
UK	Prof P. Worsfold*	The Royal Society of Chemistry
	Prof. D.T. Burns	- " -
Ukraine	Prof. V. Zaitsev*	Ukrainian Chemical Society

thus: 25 EuCheMS Member Societies (21 countries) represented

(24 votes (*), both Spanish societies mandated the same person who can hold one vote only)

Apologies:

Urban Frey, Swiss Chem. Soc.

Jeremy Glennon, Institute of Chem. of Ireland

Adam Hulanicki, Polish Chem. Soc.[#]

Milt Karayannis, Assoc. of Greek Chemists

Takehiko Kitamori, Japan Soc. Anal. Chem.

Daniel Mandler, The Israel Chem. Soc;

José Pingarron, SEQA Spain[#]

Gemma Rauret, Spanish Royal Soc. Chem.[#]

Güler Somer, Turkish Chem. Soc.

Koos van Staden, South African Chem. Soc.

Wolfhard Wegscheider, ASAC Austria[#]

P.G. Zambonin, Soc. Chim. Italiana[#]

([#] mandate transferred)

1. Opening

The Chairman, Bo Karlberg, opened the Annual Meeting, welcomed the participants and thanked the Euroanalysis Organizers for providing the meeting room. The participants introduced themselves.

Before starting on the Agenda, the Chairman asked Prof. Horvai to give a short account of Prof. **Ernö Pungor** who passed away on 13 June 2007 in his 84th year. The participants honoured the memory of the former DAC Chairman with a moment of silence.

Armand Verbueken welcomed the participants in his capacity as Chairman of the host, the Analytical Division of the Koninklijke Vlaamse Chemische Vereniging (KVCV), and expressed his pleasure to meet them in Antwerp at the occasion of Euroanalysis XIV. In a concise overview he introduced the structure and the projects of the KVCV.

The **invitation** for the Annual Meeting with the proposed Agenda had been sent out in due time. The **Agenda** was accepted as drafted. **Apologies** and the mandates transferred were noted.

The **Minutes** of the 37th DAC Meeting held in Moscow, Russia, on 25 June 2006, were accepted as mailed with the Letter of Information dated 03 July 2006.

2. Report of the Chairman

Bo Karlberg summarized the activities since the Annual Meeting last year.

Four **Letters of Information** with several attachments have been circulated since the previous Annual Meeting (dated 03 July and 02 December 2006; 03 April and 10 July 2007). The 35th issue of the **European Analytical Column** has been produced; it appeared in international journals and newsletters as usual and is available from the DAC website.

The **DAC Steering Committee** met twice, namely on 10 February 2007 in Warsaw, Poland, and on 08 September 2007 in Antwerp, Belgium, in order to promote all current DAC business and to discuss future plans.

The Chairman has attended the **EuCheMS General Assembly** (11-13 October 2006 in Moscow, Russia) and represented the Division at the **Executive Committee** meeting (17 April 2007 in Brussels, Belgium).

The *Ethical Guidelines for Publications in Journals and Reviews* are now available on the EuCheMS homepage. Further to publication in *Analyt. Bioanalyt. Chem.* other journals (e.g. *Accred. Qual. Assur.*) published commenting articles.

3. Election and Appointments

3.1 Election of the DAC Chairman for the period 2008-2010

A candidature had to be announced three months before the Annual Meeting. The Secretary received none but the nomination of the present Chairman for another term of office, what is in agreement with the DAC Statutes. Therefore, Bo Karlberg was the only candidate.

Miguel Valcárcel as the immediate past Chairman took over the chair of the Annual Meeting for the election by secret ballots. 24 ballots were handed out to the Delegates with voting rights, 24 were returned, without exception in favor of Bo Karlberg's chairmanship. Bo Karlberg accepted the mandate and resumed the Meeting chair.

3.2 Appointment of the DAC Secretary for the period 2008-2010

The re-elected Chairman, Bo Karlberg, proposes Jens Andersen as Secretary for the years 2008-2010. He explains that the Danish Chemical Society is prepared to give the moral and financial support necessary for the appointment. The Annual Meeting approved the proposal unanimously.

Bo Karlberg thanked the retiring Secretary, Heiner Korte, for serving DAC in this function for nine years. In turn, Heiner Korte thanked the Delegates and Observers for the cooperation 'among friends' and reminded them that there is enough work for everybody e.g. in order to broaden the basis of DAC by intensified interfacing with the home societies and all relevant bodies, to enhance the visibility of DAC in the scientific community and to strengthen its impact within EuCheMS itself.

3.3 Steering Committee membership

On proposal of the Chairman the Annual Meeting appoints Wolfgang Buchberger, George Horvai and Paul Worsfold as members of the Steering Committee, which is complemented ex-officio by the Secretary and is chaired by the DAC Chairman.

3.4 Clusters of DAC experts: fields and membership

On the basis of the keywords characterizing their research interests which were provided individually by the Delegates, nine sub-disciplines have been tentatively been identified covering both, methods and application fields. A matrix attributing the interests of the Delegates and Observers to the different topics was proposed and distributed with the Letter of Information. The Secretary received requests for modifications in a few cases. After the corrections of these, the matrix will become available at the DAC website with its next update.

4. EUROANALYSIS Conferences

4.1 EUROANALYSIS XIV (EuCheMS Event No. 311); Chair: Prof. K. Janssens Antwerp, Belgium, 9-14 Sep 2007

Before opening the conference, 650 participants were registered who submitted more than 800 abstracts, so that four parallel streams of oral sessions were scheduled and all reserve space has been occupied by poster presentations. The focus on environmental issues seemed to attract participants. These are coming from some 50 countries, with the largest delegations from Belgium and Spain. With some financial support from the 2004 EUROANALYSIS in Salamanca, around 90 bursaries could be given. The new and attractive conference venue in the centre of the historic town contributed greatly to the flavour of the event.

4.2 Thanks to the members of the Jury of the Robert Kellner Lecture 2007 and the nominators; outlook on procedure for 2009

On behalf of the DAC, the Chairman extended cordial thanks to the chairman, Miguel Valcárcel, and the members of the jury for the 2007 Robert Kellner Lecture as well as to the nominators of

eight outstanding candidates. The participants can expect an exciting lecture by the awardee Alfredo Sanz-Medel of Oviedo University (Spain).

The 2008 Annual Meeting will have to endorse the members of the 2009 jury. As prescribed by the statutes, nominations will be called for publicly. Details will be communicated in the Letters of Information.

Wolfgang Lindner reminded the Annual Meeting that the present Statutes do not define the qualification profile according which an awardee shall be elected. It is agreed that with the help of the present jury members, the Steering Committee shall develop a guideline.

4.3 EUROANALYSIS XV, Co-Chairs: Profs. W. Buchberger and W. Lindner, Innsbruck, Austria, 6-10 Sep 2009

The flyers are included in the conference material. The conference homepage is accessible and will continuously be updated. The motto of Euroanalysis XV is "The Impact of Analytical Chemistry on Quality of Life". It will be held in the reasonably priced convention centre, which offers the important benefit of professional organization and support. The chairs expect the visit of the EUROANALYSIS Presidium in spring 2008 to discuss the entire layout including plans for topics and boards. It should be noted that the conference will not have an excursion on Wednesday afternoon, but will end on Thursday, so that Friday may be used for sightseeing.

4.4 Venue of EUROANALYSIS 2011: Prof. Slavica Ražić, Serbian Chemical Society

The DAC received the invitation to hold Euroanalysis 2011 in Belgrade, Serbia. The detailed bid-book requested by the DAC Statutes was circulated in due time, all Delegates should have received a copy per e-mail.

On behalf of the inviting society, Prof. Ražić presented an attractive summary of proposals, plans and organizing capacities. She stressed the intended cooperation of the host with DAC and the Presidium and responds to all questions as far as it is possible at such an early stage. The Delegates appreciated the chance to hold EUROANALYSIS in a region where it has not been held before, all the more since this is a particular request of the Statutes. Based on earlier experiences one may assume that societies of neighbour countries will value this opportunity for cooperation. The Delegates accept unanimously the invitation by the Serbian Chemical Society.

5. Reports and Information

5.1 News from EuCheMS

The release of a new issue of the EuCheMS News has been announced. The Chairman asked all Delegates to check that they receive the News via their society. DAC intends to be mentioned in each issue, as this reaches out to about 150 000 chemists in Europe. Notes for the next issue due in October, are under preparation.

5.2 DAC engagement for the 2nd EuCheMS Chemistry Congress Torino, Italy, 16-20 September 2008

The Chairman has accepted the responsibility to organize one of the Symposia within the Congress. The topic is "Chemical Measurement Quality: Societal Impact". So far the keynote lecturer and four invited speakers have confirmed to give their lectures.

In the following discussion, Reiner Salzer, who organized a symposium of the first Congress in Budapest, points out, that on the whole analytical chemistry was and will be again underrepresented, being restricted almost exclusively to this one session. He warns that this situation over a sequence of events would convey the impression that analytical chemistry is the bottom of the league. Manfred Grasserbauer recommends interlinking with other chemical disciplines and problem solving aspects.

5.3 Study Group 'Education in Analytical Chemistry'; Head: Prof. R. Salzer

The Study Group organized the Session Education during Euroanalysis XIV. The session is intended to provide an overview about current curricular developments and their consequences for Analytical Chemistry. Speakers shall report on national efforts to strengthen Analytical Chemistry on Bachelor as well as on Master level. A second topic of the session concerns the progress in the development of case studies.

Aim of the Session Education is the exchange of information about current developments and to provide help for representatives of individual universities. A very encouraging outcome of our sessions on education is the decision of the organizers of Pittcon to establish a similar session there. It will run for the first time during Pittcon 2008. Reiner Salzer is invited as lecturer.

Ties between the European Chemistry Thematic Network ECTN and DAC continue to be strong. Reiner Salzer is working as elected member of the Label Committee for the Chemistry Eurobachelor and the Chemistry Euromaster. The new possibility of developing Master curricula for Analytical Chemistry by national or international consortia constitutes an important possibility for smaller groups to form attractive and powerful networks and to attract additional Master students to Analytical Chemistry. This issue will be discussed during the educational session of Euroanalysis XIV.

Another important development within ECTN is the EChemTest project (www.echemtest.net). Analytical Chemistry maintains its strong position within EChemTest thanks to the activities of the Study Group member Milt Karayannis (Greece).

The close relations between DAC/SG Education and DivCEd could be maintained. Reiner Salzer attended the last meeting of the DivCEd Board as observer and participated in the Annual Meeting of DivCEd. He also lectured during the DivCEd Conference "Eurovariety in Chemistry Education". The information exchange between DAC and DivCEd proceeds on its high level.

The development of a collection of case studies is the current core activity of the Study Group Education. Only few proposals were submitted by DAC members. For this reason, new contacts were developed to groups with similar activities. Two of these contacts seem to be very promising.

Reiner Salzer

5.4 Study Group 'Quality Assurance & Accreditation', Head: Prof. W. Wegscheider

After previous discussions in the 2006 Annual Meeting and in the Steering Committee and after the resignation of its Head, Wolfhard Wegscheider, the Study Group is resolved.

However, since the Quality Assurance plays an important role in Chemistry, a new Study Group 'Quality Assurance' is established under guidance of Jens Andersen, who will also maintain close links to Eurachem.

A report on CITAC activities authored by Wolfhard Wegscheider and Jens Andersen is attached to these Minutes.

5.5 Study Group 'History'; Head: Prof. D.T. Burns

The listing of "Contributions to the History of Analytical Chemistry in Europe made via DAC-EuCheMS", available on the DAC web-site, has been up dated. Work continues on the series "People and Places Important in the History of Specific Countries, Hosts of Euroanalysis Conferences".

(a) The account for Italy is now completed (pp. 31, ill. 16) and is on-line on the Microchimica Acta web-site [Burns, Piccardi and Sabbatini].

(b) Prof. J. M. Cano Pavon, University of Málaga, agreed in Feb. 2006 to produce an account for Spain but so far no draft has been seen.

(c) The account for Belgium is complete [Burns and Deelstra] and will be presented in History Lecture at Euroanalysis XIV by Prof. Deelstra.

(d) Authors are being sought, with the assistance of Prof. R. Salzer, to produce the account for Germany. Due to the prior work of E. Homberg, "The Rise of Analytical Chemistry and its Consequences for the Development of the German Chemical Profession (1780-1860)", *Ambix*, **46**, 1-32, (1999), only the pre 1780 and the post 1860 period's accounts have to be written. Due to the amount of material, numbers of personalities and journal space restrictions, it is likely that only "Some/Selected Highlights of the People and Places....Germany" can be included.

Active collaboration has continued with the EuCheMS-Working Party on the History of Chemistry to good effect. The account for Belgium is co-authored by their past Chairman and the current Chairman also made an input. Since the last Annual Meeting of DAC, contributions were made to the most successful "6th. International Conference on the History of Chemistry", Louvain, 29 Sept. -1 Oct. 2007. The Proceedings of the satellite conference to the first EuCheMS European Conference, "History of the Food Chain", 31 August to 3 September, Gödöllő, Hungary, have been published, edited by E. Vámos (for copies contact vamos.eva@chello.hu); it contains mostly material of analytical chemical interest. The 7th. ICHC will be held 24-27 September 2009 in Sopron, Hungary. Assistance was given to the editors of the post 5th. ICHC publication "Creating Networks in Chemistry", A. K. Nielsen and S. Štrbáňová (eds.), RSC, autumn 2007, this is an account of the founding and early history of the Chemical Societies in Europe,

D. Thorburn Burns

(please note: The article on 'Analytical Chemistry in Belgium: An Historical Overview' by H. Deelstra and D.T. Burns has been completed prior to Euroanalysis XIV and is in press in Microchim. Acta)

5.6 Task Force 'Bioanalytics', Head: Prof. G. Horvai

Ian Labuda, as a titular member of AC Division Committee of IUPAC has to transfer information on activities on bioanalytical chemistry between ACD and DAC.

At IUPAC, till now he was included in the task group of the project "Chemistry for Biology" by Professor T. Norin, Stockholm. This project is prolonged for one year now. Then, his two-year project "Electrochemical DNA-based biosensors: terms and methodology" by J. Labuda, A.M.O. Brett, G. Evtugyn, M. Fojta, M. Mascini, M. Ozsozs, E. Palecek, J. Wang has started as a continuation of previous IUPAC projects on biosensors omitting DNA. Similarly, ACD President Professor R. Lobinski's project on speciation has started on the topic of bioanalytical chemistry.

In his laboratory of biosensors at the Slovak University of technology they have recently published/submitted several original papers and book/textbook chapters on biosensors. Biosensor research continues also at Chemistry Institute of the Slovak Academy of Sciences and it is directed to their biotechnology application.

Bioanalysis in **Slovakia** (and probably also elsewhere) is mostly done in medical/clinical labs, people are covered by biochemistry societies and mostly do not want/need another bioanalytical section under Slovak Chemical Society.

Hendrik Emons' group at IRMM has advanced significantly their bioanalytical activities (and several finalized deliverables are listed in the annual report of IRMM), and the international networking - also at European level - is progressing as well. He can give some information about that at the Annual Meeting in Antwerp.

The bioanalytical section of the **Hungarian** Chemical Society (HChS) Analytical Division has been officially established. At the 100 year anniversary of HChS one of the three plenary lectures was given (at G. Horvai's request) on biosensors.

At the 1st European Chemistry Congress in Budapest George Horvai approached the president of the biomedical division in EuChEMS, professor Bertini, for collaboration. He seemed to be too busy with other things to be interested in this.

George Horvai made up plans to start a series of short contributions from bioanalytical chemists within his lecture course on instrumental analysis. (Some bioanalytical techniques like immunoassays and biochips have been already subject of the standard course.

George Horvai

5.7 Task Force 'European AC on the web', Head: Prof. B. Karlberg

An oral report was given to the Annual Meeting by Bo Karlberg: The website is located at a server at the University of Stockholm, and it is maintained by Bo Karlberg and coworkers. More contributions are called for, aiming at providing a full overview of European Analytical groups within a couple of years. A Finnish website was promoted as one of the most attractive websites that may serve as a frame of reference to future contributors.

Because of the particular and long lasting importance of the matter The Annual Meeting decided to convert the Task Force to a Study Group.

Task Force 'Opportunities', Head: Prof. V. Zaitsev

and

5.8 Cooperation with EuCheMS Divisions and Working Parties, IUPAC et al.

The reports were skipped in order to finish the Annual Meeting before the lunch break.

5.9 Events 'organized in cooperation with DAC-EuCheMS'

(some reports are available from the DAC website)

- 18th Analysdagarna, Analytical Days; 12-15 June 2006, Gothenburg, Sweden: oral report by Bo Karlberg
- ICAS-2006 International Congress on Analytical Sciences, 25-30 June 2006, Moscow, Russia; oral report by Boris Spivakov
- First European Chemistry Congress (EuCheMS Event 300); 27-31 August 2006, Budapest, Hungary: oral summary by George Horvai
- History of the Food Chain, 31 August - 3 September, Gödöllő, Hungary: oral report by Duncan T. Burns (see StG History)
- 13th International Conference on Near Infrared Spectroscopy, 17-21 June 2007, Umeå, Sweden, and Vasa, Finland: oral report by Bo Karlberg
- 5th Symposium In Vino Analytica Scientia, 22-25 July 2007, Melbourne, Australia: oral report by Wolfgang Buchberger

6. Any other business

Another 20 copies of the book "25 years of the FECS Working Party Analytical Chemistry" (D.T. Burns, A. Gogala, H. Malissa and L. Niinistö) have been made available by the Slovenian Chem. Soc. which had published the book in 1999. The gift is gratefully acknowledged, all the more since the interest of the Delegates turned out to be considerable.

It is proposed to hold the **2008 DAC Annual Meeting** on Tuesday, 16 September 2008 in conjunction with the EuCheMS Chemistry Congress in Torino. Italy.

The Chairman closes the Annual Meeting with thanks to the EUROANALYSIS XIV organizers and KVCV for hosting the meeting, and to all participants for their attendance and cooperation.

DAC Structure (2008)

Chair: Bo Karlberg

Secretary: Jens Andersen

Steering Committee: Bo Karlberg (chair), Jens Andersen, Wolfgang Buchberger, George Horvai, Paul Worsfold

Study Group 'Education': Reiner Salzer (head),
J. Andersen, A. Hulanicki, M. Karayannis, S. Ražić

Study Group 'History': Duncan T. Burns (head)
Filomena Camões, Luigia Sabbatini, (ex officio: Jens Andersen);
further members according tasks

Study Group 'Quality Assurance': Jens Andersen (head)

Study Group 'Bioanalytics': George Horvai (head)
Hendrik Emons, Jan Labuda, José Pingarrón (ex officio: Jens Andersen)

Study Group 'European Analytical Chemistry on the Web': Bo Karlberg (head),
George Horvai, Gemma Rauret (ex officio: Jens Andersen)

Task Force 'Opportunities for Analytical Chemistry': Vladimir Zaitsev (head),
Wolfgang Buchberger (ex officio Jens Andersen)

Liaison Persons to EuCheMS Divisions and Working Parties as well as to other organisations

Education Reiner Salzer

History Duncan Burns

Life Sciences George Horvai

Food Bo Karlberg

Environment Gemma Rauret

Electrochemistry Luigia Sabbatini, José Pingarrón

Computational Filomena Camões, Bo Karlberg

Microsystems Jeremy Glennon

IUPAC Jan Labuda, Walter Lund

EURACHEM Jens Andersen

kt/2007-10-27

ATTACHMENT

Report to EuCheMS Division of Analytical Chemistry on CITAC activity

Study Group Quality Assurance and Accreditation
Wolfhard Wegscheider and Jens E.T. Andersen

Organisation

The Members list comprises currently 36 members of many nationalities. The CITAC board is presented as follows:

Mrs. Vera Poncano, Brazil (Chair)

Dr. Ilya Kuselmann, Israel (Vice-chair)

Dr. Laurie Besley, Australia (Secretary)

Prof. Dr. Wolfhard Wegscheider, Austria (Treasurer)

Vision and aims

Although the CITAC organisation [1] was founded on traceability, it embraces a variety of concepts allocated specifically to quality assurance. Collaboration with other organisations that promote practices and procedures of quality assurance is essential, and appointed liaison persons are encouraged to support this effort. In continuation of this aim a close contact to EuCheMS is desired together with contacts to IUPAC, ISO/REMCO, BIPM/CCQM, ILAC, EA, APLAC, EUROMET, SIM, APMP, AOACI, IAEA, IFCC and SADC MET.

The overarching perspective is to improve traceability and to maintain reliability of chemical analysis. Traceability is promoted by the development of tools and procedures that supports the operator at laboratories. Quality control and environmental monitoring are concepts of high importance, as also endorsed by the European Community.

Analytical chemistry and quality assurance is viewed broadly and the CITAC effort addresses fundamentals (e.g. determination of the value of fundamental constants), education and industrial applications. Challenging problems, such as the determination of the value of Avogadro's number and a possible re-definition of the kilogram, are followed closely. However, the main effort is focused on the dissemination of the methods that are important to proficiency testing and reliability, as well as interlaboratory comparison. European initiatives on proficiency testing include two databases EPTIS and COEPT that are still growing in number of queries. A tentative correspondence is envisaged between the CITAC effort and the 6th European Environmental Action Programme [2].

Publications and communications

The CITAC/Eurachem guides [1, 3] are celebrated and excellent tool of analytical chemistry.

In order to enjoy the full benefit of the guide, some degree of mathematical foundation is needed. It constitutes a comprehensible approach to the construction of uncertainty budgets, and it is well suited for purposes of teaching at the master level.

At the CITAC homepage newsletters, links and publications are available. A link is given to the homepage of Eurachem wherefrom the guides may also be downloaded. The latest issue of the newsletter was published in February 2007.

A national representative is encouraged by CITAC and a stronger collaboration with the EuCheMS/DAC is much desired. Most favourably, the contact is established by appointment of a liaison officer of DAC who participates in relevant meetings and gives a report to the annual meeting. The liaison officer is yet to be found.

Teaching and academia

The syllabus of analytical chemistry of the Eurobachelor recommends a little more than 10% of the time allocated to statistics chemometrics and quality assurance [4]. In addition, the basic modules supply statistics in the mathematical syllabus, which then supports the student's level of knowledge that allows an understanding of the concepts of QA.

The CITAC organisation plays a bridging role between universities, industry and governing bodies and provides guidance to the analytical community [5]. The Institute of Reference Materials and Methods (IRMM) provides pertinent documents that are available to the implementation of metrology in education and science.

The main task of the DAC is to reinforce the willingness to implement schemes of good laboratory practice at the bachelor level and good scientific practice at the master level of educations. The overall aim is to prepare the students for their future professional employment, where such competencies are much in demand.

A number of universities are resilient in their effort to promote good scientific practice and validation of science, and they have to a large extent accepted the terms and conditions of metrology and quality assurance. Scientific results must be unambiguous and represent fully investigated data that cannot be questioned. In order to ensure that a proper treatment of instruments, data and interpretations is performed at all levels, a limited number of straightforward procedures and practices of quality assurance should be recommended.

Since the validation of methods of measurements is accepted in a wide community of scientists, the DAC must support the growth of well established practices at all levels. Therefore, it is proposed that the task force of quality assurance should be continued and utilized as a basis for the monitoring of the development and progress of good scientific practice at universities. The DAC might consider renaming the study group quality assurance and admit the denotation as, e.g. 'Good practice of science'?

Meetings and Congresses

The members meet annually and the past meeting was held in Moscow in parallel to the first European Congress in Chemistry, Budapest, Hungary, August 27-31, 2006. The next meeting is held in conjunction with the IV's International Congress on Clinical Measurement, Traceability and Quality Assurance in July 2007 in Brazil.

References

- [1] <http://www.citac.cc/>
- [2] <http://ec.europa.eu/environment/newprg/index.htm>
- [3] <http://www.eurachem.org>
- [4] R. Salzer, Eurocurriculum II for Analytical Chemistry Approved by the Division of Analytical Chemistry of FECS, Anal. Bioanal. Chem. 378 (2004) p. 28.
- [5] I. Kuselman, CITAC Mission, Objectives and Strategies, Accred. Qual. Assur. 9 (2004) p. 172.