IUPAC Division of Chemistry and the Environment (DCE) Minutes of Division Committee Meeting 13 and 14 August 2005, Beijing, PRC

Start time: 09:00 a.m. Saturday 13 August

Location: Beijing International Conference Center, Beijing, China

Present: Ken Racke (President), Patrick Holland (Secretary), Werner Klein (Past-President), Elke Anklam (TM), Patrick Dysseler (TM), Leo Klasinc (TM), Laura McConnell (TM), Willie Peijnenburg (TM), Nicola Senesi (TM), Don Wauchope (TM), Ole Hertel (AM), Pan-Ming Huang (AM), Werner Kördel (AM), Yehuda Shevah (AM), Keiji Tanaka (AM), Petr Fedotov (NR, Russia), Hemda Garelick (TM), Melissa Fitzgerald (NR, Australia), Edgard Resto (NR, Puerto Rico).

Also contributing: IUPAC Young Observers Andrea Jackson (University of Leeds, UK) and Yi Lu (University of Illinois, Urbana IL); IUPAC Observer Ewa Cukrowska (University of Witwatersrand, South Africa); IUPAC Vice-President Bryan Henry; CCE Chair Peter Atkins.

Apologies: Walter Benson (AM; IOCD), Richard Cantrill (AM), Yong-Hwa Kim (NR, Korea).

0. Executive Summary

A total of 18 Division Committee members and 3 visiting contributors participated in the 2005 meeting held at Beijing International Conference Center, China. The results of the 2005 election of Titular Members by email ballot were confirmed and 7 Associate Members and 10 National Representative positions were agreed. Ken Racke is continuing Division President (to 2007) and Willie Peijnenburg is the new Division Secretary after Patrick Holland who stands down after 20 years of meritorious service to IUPAC. The progress and completion of existing projects was reviewed. Since the beginning of the existing biennium (January 2004), 8 projects have been completed, 1 project was abandoned, and 7 new projects have been initiated. Most active projects appear to be making solid progress versus milestones, but 1 project lacking such progress was agreed for termination. This leaves the Division with 21 active projects, several of which have interdivisional cooperation. Several new areas of project activities were discussed, including an ambitious new book series on biophysico-chemical processes in environmental systems. Two specific project proposals are currently under review, and a call for new project proposals in priority areas of interest will be made in the near future, with funding expected to arise from the 2006-2007 biennium budget. Major conferences related to crop protection chemistry and food chemistry are planned for 2006 and 2007, respectively. Each of the 4 sub-committees (SC) supporting the Divisional program held planning meetings in Beijing. Of particular note was the workshop on "Future IUPAC Directions in Food Chemistry" which reviewed emerging issues, identified areas of opportunity for IUPAC, and developed an action plan related to prioritization of future project activities and SC membership. The next face-to-face meeting of the Divisional Committee was agreed for Bilthoven, Netherlands during July 2006, with at least one phone conference to be held in advance of this session.

1. Introduction and Review of DCE Activities

The President welcomed attendees including IUPAC Young Observers Andrea Jackson and Yi Lu. He confirmed the meeting agenda and emphasized three primary expected results for the meeting:

- 1. Confirm the membership of the Division Committee (DC) for 2006-2007.
- 2. Evaluate progress of active projects, sub-committee activities, and develop guidance as needed. The meeting was reminded of the reorganization of IUPAC's work and budget to a project-oriented system and that this area was thus of utmost importance for DCE and the vitality of the Union.
- 3. Continue the process of developing a long-term strategy for the Division and the activities of the sub-committees, including setting future directions for priority areas of new project development, looking ahead to future conference development, and revitalization of food chemistry activities.

Terms of Reference - Through its internationally recognized membership and project teams, the Division of Chemistry and the Environment (DCE) will provide unbiased and timely authoritative reviews on the behavior of chemical compounds in food and the environment. The DCE will undertake both fundamental and applied evaluations that contribute to solving environmental problems and enhancing the quality of food on a global scale. (May 2004 revision)

2. Minutes and Action Items from Previous Meetings

Minutes confirmed for the DCE meeting at Maryland, May 2004 and for phone conference of December 2004. Most action items have been addressed, but the following require further action:

- IUPAC website membership lists to be augmented by expertise and areas of interest. DS to follow-up with IUPAC Secretariat.
- AOAC International DCE to publish article in their magazine Laboratory Management. DS to follow-up with Al Pohland and Elke Anklam.
- An update from the Food Chemistry SC is required on the action plan agreed at the 2004 meeting regarding the IUPAC oils and fats standardized methods (i. The AOCS cover page/heading for published methods will be modified to reflect the IUPAC origin for methods harmonized/originating with IUPAC, ii) A summary should be published of historic activities, to include a table listing the harmonized methods and giving original PAC references and IUPAC methods published.) DS to follow-up with Richard Cantrill.

3. Divisional Membership

Appendix I provides the full list of DCE membership for 2006-2007 agreed by the meeting and as supplied to the Bureau for confirmation. Operation of the division does not emphasize the differences between the various membership categories. Funding support to meetings is provided where needed as much as possible and also may come from relevant project budgets. The following are issues arising.

• Titular Members (TM – 10 positions). Werner Klein summarized the procedure of the Nominating Committee and the outcome of the confidential e-mail ballot for the 7 vacancies. Development of the ballot was greatly assisted by the 16 nominations received from NAOs. Out of the DCE electorate, comprising current TMs, AMs, NRs, SC members, and Task Group Leaders, ca 50% cast their vote. Ken Racke is continuing Division

President (to 2007) and Willie Peijnenburg is the new Division Secretary after Patrick Holland who will stand down after 20 years of service to IUPAC. Some newly elected members will be new to the IUPAC system, and it will be important to fully incorporate them into the work of the Division, particularly regarding the new directions being charted for food chemistry activities. In this regard, the DS agreed to brief new TM Melton thoroughly on the discussions and outcomes of the meeting and the DCE initiatives in food chemistry. The meeting decided not to assign the Vice-President position at this time but candidate(s) will be decided at the 2006 DC meeting to be put on the official ballot for the 2007 election of DCE TMs.

- Associate Members (AM 7 positions). The meeting selected the AMs mainly from the unsuccessful candidates for TM, current active NRs and those key persons having to stand down after 4 years as TM. A four-year term limit also applies to AMs.
- National Representatives (NR). The meeting noted with approval the increased allocation to 10 positions. The selection was made on the basis of nominations from NAOs and some strategic selections based on experience. In some cases formal nominations will need to be solicited from the NAO and/or dispensation sought from Bureau where the country is already represented on DC at the AM or TM level. DP to liaise with NAOs to ensure the appropriate NR nominations are received by the IUPAC Secretariat.
- Sub-committees (no limit). The existing subcommittees and Chairs are listed below:
 Biophysico-Chemical Processes in Environmental Systems Nicola Senesi
 Chemistry of Environmental Compartments (air, water, soil) Yehuda Shevah
 Crop Protection Chemistry Ken Racke
 Food Chemistry Patrick Dysseler/Elke Anklam

SC Chairmen to forward recommendations, with full contact details and expertise/area of interest, to DP and DS by 10 September. This will support a notification to the IUPAC Secretariat due by 15 September. It was noted that, although there is no limit on the number of SC members, it is essential that SC members are active in the field and willing to serve. SC members should be, or intend to be, active on project task forces.

• DCE representatives to other IUPAC bodies (confirmed by meeting).

Bureau – DP Ken Racke

Committee on Chemical Industry (COCI) – Keiji Tanaka

IUPAC Commission for Chemical Education (CCE) – Nicola Senesi (Don Wauchope potential replacement)

Interdivisional Committee on Terminology, Nomenclature and Symbols (ICTNS)

- Yehuda Shevah

Pure & Applied Chemistry editorial advisory board – Ole Hertel Interdivisional Subcommittee on Green Chemistry - Nicola Senesi CHEMRAWN – DP to investigate how DCE can become involved.

4. Review of Project Activities

The Division has 22 active projects, several of which have interdivisional cooperation. Since the beginning of the existing biennium (January 2004), 8 projects have been completed, 1 project was abandoned, and 7 new projects have been initiated. An overview of these project activities may be found in the DP report to Council (June 2005) which was previously circulated.

The meeting reviewed progress of the current active projects, including budget status to June 2005. Most projects appear to be moving forward to completion, albeit at a slower rate than estimated in the original proposals, and within budget. Project status reports had been received from most project leaders. A summary of the status of active projects may be found in the table in the appendix.

The Committee agreed to discontinue project 1999-014-2-600 (Dekker) due to lack of progress. The budget for this project was spent, but no reports received following several requests to the Project Leader. DS to query whether IUPAC received acknowledgement in a major report prepared covering research carried out on the topic of remote sensing by the task group leader.

Two project proposals reviewed by the Committee during the 2004 meeting and phone conference had been placed on hold pending further developments (e.g., revised proposals), and it was agreed to delete these from the system (DS to notify the IUPAC Secretariat):

- 2003-016-1 (Herrchen) 'on-hold'; pending EU regulatory developments.
- 2004-001-1 (Slanina) 'on hold'; no progress with revising proposal.

5. Budget

Total Division budget for 2004-2005 biennium was \$68,000 with 25% allotted for administrative expenses, mainly for travel to 2004 Maryland meeting (TMs and AMs) and 2005 GA (AMs) and 75% for new project activities (\$51,000). All funding has been allocated, but it is likely that the Project Committee or Divisional Reserve Fund still has money available for outstanding proposals in high priority areas, especially those with an interdivisional flavor.

Beginning January 2006, the new biennial budget of \$68,000 will be available to the Division.

The Division also manages book royalty funds from past projects, mainly the Wiley book series on Analytical and Physical Chemistry in Environmental Systems. Nicola Senesi to review the current contracts and request detailed sales information on the books already published in the series. It was agreed that new contracts would assign all editor and chapter author royalties to IUPAC (typically 12% of wholesale value) because IUPAC policy is for project activities to be on a voluntary basis except for the travel/subsistence grants.

6. Review of Sub-committee Activities

The functions for the DC and SCs within DCE were articulated during the Brisbane 2001 meeting and are repeated here for reference.

The roles and functions of the DCE Division Committee are:

- 1. Long-term strategic planning for the Division.
- 2. Facilitating development of new projects, including: formal review; progress through the approval system; funding / budgets; selection and approval of project teams.
- 3. Review of the DCE project portfolio, including: progress with current projects and budget spending; critical weaknesses in coverage; important new areas.
- 4. Developing and managing interdivisional projects and higher level external links (SCOPE, COCI, OECD etc).
- 5. Liaison with Bureau.
- 6. Governance of sub-committees through key joint members.

The roles and functions of sub-committees are:

- 1. Evaluating the suite of current projects in the topic area with an emphasis on facilitating rapid progress and ensuring that the final recommendations are sound.
- 2. Developing new projects through soliciting and prioritising ideas for topics, preparing formal proposals and nominating task groups.
- 3. Running working meetings to advance groups of projects with the advantages of:
 - motivation and cross-fertilisation of ideas through face-face contacts;
 - economies of time and budget commitments;
 - inclusion of extension activities (workshops, symposia, congresses);
- 4. Providing visibility and status to participants in projects.
- 5. Communicating within the topic areas, including with scientists internationally with interests in the area.
- 6. Liaison with the DCE Committee. Each SC will include at least 3 members from the Divisional committee who will be active in project work to ensure a strong, project oriented focus for DCE and the SC.

DP and DS to develop a draft revised document describing DC and SC roles and functions for review and comment by DC members. A final document will be made available for future reference (e.g., via the Divisional web site).

• Subcommittee Reports

Biophysico-Chemical Processes in Environmental Systems

Nicola Senesi and Ming Huang gave verbal reports on the SC activities. Projects have exclusively involved production of books containing authoritative chapter reviews by invited experts. Volume 9 of the Wiley series on *Analytical and Physical Chemistry in Environmental Systems* was published during 2004. Volumes 10 and 11 are current projects close to completion. A further book project was approved in 2004 on metals and metalloids (Leader and editor-in-chief Antonio Violante).

An ambitious proposal was presented for a new books series *Biophysico-Chemical Processes in Environmental Systems*, of which the Violante book would be the first volume of eleven. Some new procedures would be implemented including sponsorships of associated workshops on book topics, inclusion of task group members from the SC on Chemistry of Environmental Compartments, and more interdivisional focus.

Ming Huang presented reports on coordination with ISSS and on the 4th International Symposium on Interactions of Soil Minerals with Organic Components and Microorganisms (ISMOM) held in Wuhan, China, September 2004. Nicola Senesi was the official IUPAC representative and invited lecturer to the later meeting. A book is to be published by Springer containing the invited papers and a special issue of a journal will contain contributed papers. DP will check with the Publications SC re possible IUPAC sponsorship (logo etc) for the book.

The SC met following the DC meeting.

Chemistry of Environmental Compartments

Yehuda Shevah provided an informal report mainly summarizing the status of current projects. As well as a number of projects nearing completion with formal reports, the ongoing arsenic remediation project is meeting with a lot of interest. Some frustration was expressed regarding communications with task group leaders and DP/DS in regard to managing project progress and budgets.

The SC met following the DC meeting to review progress on existing projects and recommend future areas of project activity (see appended report). Ongoing activity includes efforts related to degradation, bio-availability and accumulation of chemicals, airborne and remote

monitoring of water quality, solute movement in soils, and code of practice in reporting analytical data. The work plan includes 5 projects, one of which will be suspended due to lack of progress. Members of the SC also contribute to three other sub-divisional projects. Two specific new project topics were discussed in detail, including "In-situ treatment of polluted soil and water with emphasis on the use of genetically engineered microorganisms" and "airborne and remote monitoring of the environment". Several additional areas of potential project activity are listed below, and members and supporters of the SC will be invited to participate in development of these and other new ideas into future IUPAC project proposals:

- Waste incineration versus land and water disposal
- Tropical forest and animal emissions
- Antibiotics discharge in water, soil and air
- Atmospheric Ammonium Nitrogen
- Environmental consequences of stabilized waste residues for fertilizer

Crop Protection Chemistry

Ken Racke tabled a report (appended) on activities including terms of reference, progress on nine active projects and extension activities. The SC of 22 members last met during February 2005 following the successful *IUPAC-CICA-MAG International Workshop on Crop Protection Chemistry* held in Costa Rica. A report of the workshop is being published in the September/October issue of *Chemistry International*.

DCE and the SC are sponsoring the 11th IUPAC International Congress of Pesticide Chemistry in Kobe, Japan, August 2006 and a meeting was held at the GA with interested parties, including Professor Ohkawa, chairman of the organizing committee, to review the detailed plans. The 3rd Circular is in draft form and will be released soon. The SC plans to meet immediately prior to the 2006 Congress. Two bids are being prepared for the 12th Congress to be held for 2010, and a decision on location is anticipated by the end of 2005.

Food Chemistry

Elke Anklam provided an informal report. One new project is underway (Fitzgerald 2004-022-1) and another proposal has just been submitted. The 2nd IUPAC Conference on Trace Elements in Food was held in Poland during 2004 with over 150 registrants. Funding was largely from the EC.

The *International Workshop on Fats, Oils and Oilseeds Analysis and Production* held in Tunisia during December 2004 was successful, with strong inputs from Patrick Dysseler and Richard Cantrill on the organising committee. More than 100 participated, many from Tunisia and surrounding North African countries. DP succeeded in convincing the IUPAC Treasurer to transfer the budget surplus from the Brazil 2001 workshop to this meeting.

The 1st circular has been released for the XIIth IUPAC International Symposium on Mycotoxins and Phycotoxins planned for Istanbul, Turkey in May 2007.

Revitalization of project activities continues to prove difficult and a number of members of the current SC are inactive in regard to IUPAC. A proposal to create a new division of food chemistry was regarded as impractical at this time but consideration would be given to forming an inter-divisional committee once a critical number of food-related projects were underway. A half-day workshop was held at the GA to consider the future for food chemistry activities within IUPAC. See appendix for notes.

7. Future Directions and Project Priorities

• Improvements in Division Operations and Activities

The meeting discussed a number of ideas related to improvement of the Division, and these are briefly summarized below:

- Need to establish better communications within the DC concerning evaluation of project proposals.
- The annual DC meeting would benefit from setting aside at least a half-day breakout session during which SCs could meet.
- Will be important to continue to increase involvement in promotion of the work of the Division at IUPAC-sponsored conferences and project-related workshops.
- The work of the Division with respect to project activities would benefit from development of a more active call for project proposals in high-priority project areas.
- The system of 6-monthly progress reports will be retained with DS circulating a concatenated document containing all reports received (as at this GA). Task group leaders should ensure each reports is concise (1 page) but contains all key information to evaluate progress. DS to investigate the possibility for placing the reports on the IUPAC website with hot-links from/to project pages. The DC agreed that projects would be suspended where two successive progress reports had not been received.
- In reviewing interdivisional projects, the difficulties of communication and establishing responsibilities in preparing, approving and managing such projects was noted. DP to raise the issue at the Bureau and Division President's meetings at this GA.
- The DC reasserted its responsibility to give final approval for recommendations to be published as a part of formal reports from DCE projects. While the SCs will generally assist in drafting and reviewing such reports, it is important that any recommendations receive wider scrutiny before publication under the IUPAC name. Recent draft reports from the Crop Protection SC will be circulated to the full DC for comment.

• New Project Ideas

A new proposal has been submitted by Elke Anklam on harmonised guidelines for validation of screening methods of analysis. This will be circulated by Fabienne Myers to DCE, ACD (Div. V) and Health (Div. VII).

Ming Huang outlined proposals and procedures for a new Wiley book series (11 volumes). DC agreed there should be a proposal for each volume which would be evaluated for its merits. One of the books in the existing Wiley series is being considered for reprinting in soft-cover as a student text.

Proposal 2005-019-1, on guidelines for proficiency testing where only a limited number for labs are available, will be circulated to DC for comment.

Laura McConnell is preparing a proposal on predicting VOC emissions from non-fumigant pesticide formulations. This will be circulated when a full draft is received.

Leo Klasinc is considering a project on atmospheric ozone effects on human health. This is a hot topic with a *Science* paper in-press. Andrea Jackson (Young Observer) also expressed interest in this topic.

Werner Koerdel is developing a proposal centered on issues relating to sustainable uses of animal wastes.

DP reported interest from Khalida Al-Dalama (Kuwait) in a project to study fate and remediation of hydrocarbon pollution from crude petroleum in soil and water. DP to obtain additional details regarding the isssues of greatest concern and Yehuda Shevah to check his SC for interest and expertise.

• Call for Project Proposals

A potential threat to the Division is that future priorities are driven by randomly submitted project proposals. In light of the Division's desire to provide more strategic direction, the Committee agreed to issue a call for new proposals in designated priority areas of interest. To this end, the following action plan was agreed:

- Each SC to develop a list of proposed top priority areas of interest and forward to the DS by 15 October 2005.
- DP and DS to coordinate a call for proposals with desired receipt by 1 April 2006.

The goal will be to have a group of project proposals and associated external peer review comments available to support review and funding decisions by the next DC meeting in July 2006.

8. External Collaboration

- Several existing on-going international symposia, conferences and workshops have been mentioned above. These form an important part of DCE outreach activities. Further opportunities exist with American Cereal Chemists annual meeting, ACS Agrochemical Division meeting and AOAC annual meeting.
- Werner Klein presented a summary of SCOPE and ICSU as collaborative funding agencies. His commentary on current processes is appended to these minutes.

9. Future Division Meetings

- 2006 DC meeting early July, RIVM, Bilthoven, The Netherlands (host Willie Peijnenburg)
- 2006/2006 Phone Conference(s) to be organized by DP and DS for late 2005 and/or during the first half of 2006
- 2007 General Assembly 4-12 August 2007, Torino, Italy

10. Other Business

Ole Hertel is Division representative to the new PAC editorial advisory board. It was noted that *Pure & Applied Chemistry* is now sending all manuscripts for external review in a move to align PAC with other quality scientific publishing. The citation frequency of PAC had increased during the past several years and is comparable to other middle-of-the-road chemistry journals. PAC has also made considerable efforts to improve the times to publication, including the implementation of an on-line manuscript submission/external review

system. Times to publication of 6-9 months are now being achieved for symposium proceedings. These features make PAC an attractive proposition for conference organizers/editors compared with publication of a special edition book.

Appendix I

Division of Chemistry and the Environment (VI) Proposed Division Committee Members, Term, NAO To be approved by the IUPAC Council

Titular Members (10)

Dr. Hemda Garelick	2006-2009	UK
Dr. Ole Hertel	2006-2009	Denmark
Prof. Pan Ming Huang	2006-2009	Canada
Prof. Yong-Hwa Kim	2006-2009	Korea
Dr. Laura McConnell	2004-2007	USA
Prof. Laurence D. Melton	2006-2009	New Zealand
Dr. Willie J.G.M. Peijnenberg (DS)	2006-2009	Netherlands
Dr. Kenneth D. Racke (DP)	2004-2007	USA
Dr. R. Donald Wauchope	2004-2007	USA
Prof. Kevin J. Wilkinson	2006-2009	Switzerland

Associate Members (7)

Dr. Elke Anklam	2006-2007	Belgium
Dr. Reto Battaglia	2006-2007	Switzerland
Dr. Walter R. Benson	2006-2007	USA
Dr. Petr S. Fedotov	2006-2007	Russia
Dr. Werner Kördel	2006-2007	Germany
Prof. Nicola Senesi	2006-2007	Italy
Dr. Yehuda Shevah	2006-2007	Israel

National Representatives (10)

Prof. Muhammad Iqbal Bhanger	2006-2007	Pakistan
Prof. Ewa Cukrowska*	2006-2007	South Africa
Prof. Manos Dassenakis	2006-2007	Greece
Dr. Patrick Dysseler*	2006-2007	Belgium
Prof. Jörg Feldmann	2006-2007	UK
Dr. Melissa Fitzgerald*	2006-2007	Australia
Prof. Leo Klasinc*	2006-2007	Croatia
Dr. Keiji Tanaka*	2006-2007	Japan
Prof. Konstantin Terytze	2006-2007	Germany
Prof. Yuanhang Zhang*	2006-2007	China

^{*}DCE DP/DS will be requesting official NAO nomination

Appendix II

Workshop on "Future IUPAC Directions in Food Chemistry" InterDivisional Meeting Beijing, China Monday 15 August 2005 14:00-17:30

1. Introduction and Objectives – Ken Racke, President DCE

Key questions of interest include:

- Which issues related to food chemistry require the most urgent attention at the international level?
- Where can IUPAC best make a contribution while avoiding duplication of effort?
- How can we best utilize our food chemistry-related conferences?
- Which individuals and structure will best support IUPAC's future efforts in food chemistry?

2. Issues in Food Chemistry – Elke Anklam (TM, EC)

Overview presentation: Challenges for Food Safety & Quality Control.

- Food Chemistry (understanding of composition, mechanisms, interactions)
- Food Analysis (measurements for food safety and quality including authenticity)
- Method validation (guidelines)
- Definitions (e.g. what is water, starch, dietary fibers)
- Nutritional aspects

3. Other View points and Examples of Potential Project Areas

Reto Battaglia (SQTS, Switzerland) Melissa Fitzgerald (IRRI, Philippines) Mark Buecking (Fraunhoffer Inst, Germany) Elke Anklam (EC, Brussels)

4. Open discussion, including contributions from other divisions

5. Priority Areas for Role of IUPAC in Food Chemistry

Internationally harmonised guidelines and recommendations

1. Method related aspects

Preparation of test portions

Method validation including advice for establishment of method performance characteristics

Definition and establishment of LOD and LOQ

Method uncertainty – harmonise various models

Calibration and traceability

Reporting of analytical results - definitions of units

Recommendation of methods

Applicability of existing methods,

Need for development –must be fit-for-purpose)

2. Definitions

Defining of analytes, with respect to analytical technique used

e.g dietary fibre, carbohydrates, fat, proteins, water in food

cf. clinical chemistry

Requirements for databases for authenticity and risk assessment

e.g. for food composition tables, genotyping

Risk assessment methodologies in food toxicology and food regulation

3. Knowledge transfer in collaboration with local and regional institutions CHEMRWN, IUPAC-CCE, IOCD, AOAC

Dissemination of knowledge on analytical methods (fit-for-purpose!) via:

Workshops

Training sessions

4. Proposed membership for new DCE SC on Food Chemistry

- L. Melton (New Zealand) Titular Member
- R. Battaglia (Switzerland) Associate Member
- E. Anklam ("Belgium"; EC) Associate Member
- M. Fitzgerald (Australia) National Representative
- P. Dysseler (Belgium) National Representative
- P. Holland (NZ) TM/DS to Dec.2005
- R. Abrigolos (Philippines)
- M. Bhanger (Pakistan)
- M. Buecking (Germany)
- R. Cantrill (USA)
- T. Eklund (Norway)
- R. Fenwick (UK)
- J. Gilbert (UK)
- T. Gude (Switzerland)
- J. Hungerford (USA)
- J. Lawrence (Canada)
- R. Lagos (Brazil)
- R. Marchelli (Italy)
- R. Stadler (Switzerland)
- A. Fajgelj (link with Division V)
- J. Duffus (link with Division VII)

6. Action Plan and Future Needs

- A finalized listing of SC members needs to be developed by 10 September 2005, including nomination of a future SC Chair to lead efforts beginning in 2006.
- Based on the preliminary ideas generated during the workshop, a proposal needs to be
 developed from among the SC members which outlines future food chemistry activities
 and priority project areas. Target should be to have this available by early 2006.