ECETO C (European Centre for Ecotoxicology and Toxicology of Chemicals) was established in 1978 as a scientific, non-commercial association; it is financed by over fifty companies with interests in the manufacture and use of chemicals.

The main objective of our activities is to identify, evaluate and minimise any potentially adverse effects on health and the environment which might arise from the manufacture and use of chemicals.

To meet this objective, we facilitate the networking of suitably-qualified scientists from our member companies. The output of our activities includes Technical Reports and Monographs reflecting the current state of the science for the issue under review.

An internal peer-review process has ensured that we have earned recognition and respect by external bodies for scientific integrity. We have become a valued partner with many other organisations and regulatory bodies, such as the World Health Organization (WHO) notably the International Programme on Chemical Safety (IPCS) and the European Commission (EC), in establishing a scientific foundation for the development of legislation on chemicals.
Achievements

As the 20th century draws to a close, we can reflect with some considerable pride on the achievements of ECETOC. Whilst serving the needs of its industrial members for some 22 years, the Association has earned and maintained a strong and widespread reputation for scientific integrity. This in turn has led to its recognition as a partner by organisations such as WHO and the EC in developing, promoting, and dispensing a better understanding of the impact of chemicals on health and the environment.

Over the years, ever-growing demands for assistance, coupled with a steadily diminishing pool of specialist expertise both inside and outside the industry, have prompted ECETOC to adapt its work programme and the way it operates. This versatility has ensured that a productive programme of work has been maintained in the more traditional areas whilst accommodating the needs of major new ventures such as the Long-range Research Initiative (LRI).

Thus, during 1999, a fruitful ECETOC programme delivered an extensive and wide range of outputs including scientific papers and reports, the resourcing of external partnerships, organisation and sponsorship of symposia as well as scientific support to the European Chemical Industry Council (CEFIC) LRI so that its programme of funded research could be compiled and launched.

A new strategic plan was formulated to enable ECETOC to continue to identify and address the needs and demands voiced by our member companies and by external partners. Designed to maximise the scarce specialist resources available and channel effort to tackle issues of highest priority, the plan’s implementation was initiated in July.

Addressing the need for ECETOC to improve its level and range of communications both across its membership and with the outside world, a Website was developed and launched at the end of 1999. Early indications of the popularity and utility of this new medium of ECETOC activity are most encouraging and development of further features is planned.

New Demands in Europe

In the spring of 1999, the EC announced its intention to undertake a major review towards updating the Technical Guidance Document (TGD) for the risk assessment of existing substances (Council Regulation EEC, 793/93).

The TGD was first published in 1996 following a period of development in which ECETOC scientists played a leading role on behalf of the whole industry.

Once again ECETOC is taking the initiative on behalf of the wider interests of the industry, putting in place and resourcing around 14 groups to provide input, in partnership with experts from European Union Member States, to the EC working groups. Effective networking across the industry will be established towards ensuring a consistent and common input which is, above all, scientifically robust. These extensive new demands will present a major challenge for ECETOC throughout, and probably beyond the year 2000.
In June 1999, the EU Council of Environmental Ministers issued a resolution calling for the EC to present a proposal for a new strategy on the chemicals policy by the end of 2000. The strategy is to be based on "the precautionary principle, the goal of sustainable development, environmental safety and the ability of the common market to function".

This new strategy will have major implications for the manner in which chemicals are evaluated for their health and environmental effects and consequently regulated within the EU. The role of industry will be to shoulder more responsibility for generating data and, inevitably, for their evaluation.

**The Challenge**

The demands for sound-science to develop effective tools to evaluate the hazards and risks of chemicals to humans and to the environment have escalated. There are strong indications that this trend will continue.

The industry has continued to merge and restructure and in this consolidation process it is becoming clear that the pool of specialist expertise is not only diminishing, but also becoming more diffusely located.

It is crucial that ECETO C finds ways in which to meet the demands of its members, and of other stakeholders, without compromising the scientific integrity for which the Association is renowned. This strikes at the very core of the modus operandi of our Task Forces and the Scientific Committee and for this reason the Board has commissioned an urgent review of these procedures for introduction in 2000.

**Acknowledgements**

The main achievements of ECETO C during 1999 are described in the following pages of this report. We are indebted to the scientists from our member companies, as well as those from other organisations, who contributed to the successful outcome of our work programme.

In particular, I wish to acknowledge the great contribution made by Dr. Wim Tordoir (Shell International) who retired in November after over seventeen years active membership of the Scientific Committee, nine of these as Chairman. His steady influence and commitment to the highest scientific ideals will be greatly missed.

Finally, thanks are also expressed to the Secretariat, whose support facilitated the teamwork that generated ECETO C’s successful 1999.

J.J. Van de Berg
Chairman
ECETO C Board of Directors
Mr. A. Perroy (Rhône-Poulenc) resigned his seat on the Board with effect from 1 May 1999.

Mr. J-F. Berthiaux (Exxon Chemicals) was elected to the Board at the Annual General Meeting on 19 May 1999.

In addition, Mr. J.J. Van de Berg (Solvay), Ir. C. Bronke (DSM) and Dr. J. Rudolph (Hüls) were re-elected following expiry of their mandates.

The Board composition following the 1999 Annual General Meeting was:

**CHAIRMAN**

Mr. J.J. Van de Berg  
Solvay

**VICE-CHAIRMAN AND TREASURER**

Dr. C. Mancel  
Procter & Gamble

**BOARD MEMBERS**

- Mr. J-F. Berthiaux  
Exxon Chemicals
- Ir. C. Bronke  
DSM
- Dr. K. Eigenmann  
Novartis
- Mr. D. Hyde  
AstraZeneca
- Mr. H. Langballe  
Norsk Hydro
- Dr. J. Rudolph  
Hüls
- Dr. H. Schiff  
Novo Nordisk
Dr. W. Tordoir (Shell International) resigned from his position as Chairman of the Scientific Committee following retirement from his company in November 1999. Dr. O. Bøckman (Norsk Hydro) resigned from the Scientific Committee in December 1999.

Dr. L. Smith (AstraZeneca) was appointed to the Scientific Committee in February 1999.

The Scientific Committee held six meetings during the year.

The composition of the Scientific Committee in 1999 was:

**CHAIRMAN**

Dr. W. Tordoir  Shell International

**Vice-Chairman**

Dr. G. Randall  AstraZeneca

**Members**

Dr. O. Bøckman  Norsk Hydro  
Dr. C. Braun  Akzo Nobel  
Dr. N. Carmichael  Rhône-Poulenc  
Dr. C. d’Hondt  Novartis  
Dr. T. Feijtel  Procter & Gamble  
Dr. B. Hildebrand  BASF  
Dr. J. Jackson  Monsanto  
Prof. E. Löser  Bayer  
Dr. R. Millischer  Elf Atochem  
Dr. A. Sarrif  DuPont de Nemours  
Dr. L. Smith  AstraZeneca  
Dr. J. Solbé  Unilever  
Dr. H.-J. Wiegand  Hüls
Dr. Wim Tordoir was first appointed to the ECETOC Scientific Committee early in 1983 marking the beginning of an impressive seventeen year record, serving first as a member until mid 1990 and then as Chairman until his retirement from Shell International at the end of November 1999.

Dr. Tordoir participated in the peer review of more than 150 of the major ECETOC reports (23 Monographs, 75 Technical Reports, 38 Joint Assessment of Commodity Chemicals (JACC) Reports and 16 Special Reports) as well as more than 20 Documents, position papers and many external publications. More than half of this total he has overseen as Chairman of the Scientific Committee, a position to which he was appointed on 1 July 1990.

By the time of his retirement, Dr. Tordoir had chaired more than 50 meetings of the Scientific Committee. In addition, he had chaired or co-chaired, many of the ECETOC technical meetings, symposia and workshops – some jointly with other organisations – addressing many major emerging issues such as endocrine disruption and sensitive sub-populations.

In addition to these new challenges for the industry, several important milestones were attained by ECETOC during Dr. Tordoir’s Chairmanship of the Scientific Committee. These included the establishment of a recognised partnership with such external organisations as the International Agency for Research on Cancer (IARC), the EC and the WHO.

Within industry, ECETOC’s relationship with CEFIC and other such associations has grown much stronger over recent years, culminating in the alliances formed under LRI. Dr. Tordoir played an important part in these achievements, demonstrating his ability to adapt ECETOC responses to meet these new demands. This required flexibility allied with a firm commitment to keeping faith with the science.

Dr. Tordoir has been a constant and dependable support behind the scenes for the Secretariat and indeed for virtually all ECETOC’s scientific activities. He has, furthermore, acted as a strong and able envoy for the Association through his own personal contacts and in representing ECETOC formally in the meetings of other organisations.

ECETOC, its Committees and Task Forces and member companies, and the many individual scientists with whom Wim Tordoir has interacted, are united in expressing appreciation for his outstanding contribution and in extending their good wishes for his retirement.

Mrs M. Tordoir (left) and Dr W. Tordoir (right) receiving presentations from Dr G. Randall at the Scientific Committee farewell dinner.
MAJOR INITIATIVES

Long-range Research Initiative (LRI)

ECETOC has played a significant role since 1997 in the development of CEFIC/Chemical Manufacturers Association (CMA)/Japanese Chemical Industry Association (JCIA) funded strategic research programme on health and environmental research.

The ECETOC groups responsible for the preparation of the State of the Science White Papers developed more-specific Requests for Proposals (RfPs) covering 25 research projects in the fields of;

- Environmental fate modelling;
- Persistence, bioaccumulation and ecotoxicity;
- Human health effects;
- Human health exposure;
- Release and uncertainty.

These RfPs were advertised on the CEFIC Website in April of 1999 with a deadline for responses of 31 July. This resulted in 85 research proposals being received.

Selection teams (consisting of ECETOC member company scientists and external scientists) were commissioned with the goal of reviewing and ranking the bids received. The results of this exercise were communicated to CEFIC in the form of recommendations for funding, further elaborated with suggestions for improvements of the bids where appropriate. Not all the RfPs were successful and some were redrafted and re-advertised in November.

By the end of 1999 16 projects, which will form the basis of the first 3 years’ research, had been agreed. The ECETOC Stewards Team and newly established Monitoring Teams will carry out the scientific management of the LRI programme on behalf of CEFIC. The Monitoring Teams will have the prime responsibility for overseeing and maintaining contact with the individual research projects. In addition the Monitoring Teams are charged with maintaining close contact with the complementary LRI activities underway in the USA (CMA) and Japan (JCIA), ensuring opportunities for joint efforts and new research opportunities and needs are identified and communicated to the CEFIC Planning Group. Involvement in formal revision or addition to the State of the Science White Papers will also be included in the Monitoring Teams’ terms of reference.

Revision of Technical Guidance Document (TGD) for Risk Assessment

This year the focus of work has shifted in response to the European Chemicals Bureau’s (ECB) announced intention in April 1999 to revise the TGD for risk assessment (Technical Guidance Document in Support of Commission Directive 93/67/EEC on Risk Assessment for New Notified Substances and Commission Regulation (EC) No 1488/94 on Risk Assessment for Existing Substances). The announcement included the proposal to extend the guidance to cover biocides as well as new and existing substances.
ECB made it clear from the beginning that ECETOC would be a valued partner in progressing this initiative. Moreover it was expected that steps would be taken to ensure that the input from the whole industry should be channelled through ECETOC as single point of contact, not an easy task to accomplish with the range of industry sectors to which the risk assessment regulation applies. These include industrial chemicals, metals, dyes, detergents, oil and consumer products, each with their own particular concerns; in addition biocides needed to be integrated. In spite of this broad range of interests, only one or two experts were to be invited from industry to join each of the ECB topic groups.

Meetings with other relevant associations, particularly CEFIC, Eurometaux, Association Internationale de la Savonnerie, de la Détergence et des Produits d’Entretien (AISE), CONCAWE and with representatives from the biocides sector resulted in a strategy for formulating the necessary input to the revision process. Acknowledging the successful leadership role played by ECETOC in the development of the TGD in 1996, agreement was reached that ECETOC would act as focal point for industry.

The bulk of this activity is planned for 2000. Efforts during the latter half of 1999 have been directed towards constructing the framework to support the revision process and in ensuring that the interests of all our member companies and of the other industry associations would be taken into account whilst formulating the scientific input.

Some of the topic areas for revision were initiated by ECB in 1999. These included marine risk assessment and the risk assessment of non-threshold carcinogens. It is expected that there will be considerable pressure next year to progress matters to meet the announced intention to achieve a first draft of a revised TGD by the end of year 2000.

ECETOC representation at the ECB meetings during 1999, included the following:

- ECB Secretariat (M. Butler and M. Holt) participated in the sessions on the proposed revision of the TGD at the 20th and 21st Technical Meetings on Existing Chemicals following Council Regulation (EEC, 793/93) held in Arona, in May/June and September respectively.
- Dr. A. Mallett (Shell) and Mr. M. Penman (Exxon) represented ECETOC at sub-group meetings on the quantitative risk assessment of non-threshold carcinogens, held in Arona, on 22 September, and 9 December respectively.
- Also relevant to the TGD revision process, in April 1999 a workshop on interpretation of margins of safety (MOS) in human health risk assessment was convened by ECB in conjunction with the Dutch authorities (Rijksinstituut voor Volksgezondheid en Milieuhygiëne (RIVM)) and TNO. ECETOC was invited to participate in the organising committee and was represented thereon by Dr. C. Lally (Procter & Gamble and Chair of the ECETOC Task Force on Risk Assessment Factors). Representation at the workshop from industry was limited to four and ECETOC, in consultation with other organisations, acted as focal point, fielding experts covering interspecies extrapolation, intraspecies extrapolation, route-to-route extrapolation and duration of exposure.
- In addition to Dr. Lally, the following experts represented ECETOC and industry at the workshop: Drs. S. Jacobi (Degussa), W. ten Berge (DSM), W. Aulmann (Henkel) and Mr. M. Penman (Exxon).
In formulating ECETOC’s strategic plan, an urgent need was identified for improving the visibility of the organisation to the outside world and enhancing the communications with its membership.

The creation of an ECETOC Website with associated intranets, underpinned by an effective contacts database, was considered key to realising this goal. To initiate and maintain these resources the Secretariat was reinforced with a communications specialist.

External contractors were commissioned to design the Website and its associated elements. Review of the project during its development was effected through consultation with specialists and users representing member companies and external groups.

The Website, www.ecetoc.org was officially launched in December. It comprises public and members-only sections, to promote an improved level of communication about our activities, publications, workshops and other developments.

Further expansion of this service, inter alia to provide discussion fora for specialist networks is planned for 2000.

**ECETO C Website**

**ECETO C TASK FORCES**

**New Task Forces**

During 1999 new Task Forces were established in relation to the following issues:

**Cyanides**

At the request of interested member companies, the Scientific Committee agreed to appoint a Task Force to prepare a JACC on cyanides. Many cyanide-containing chemicals are HPV (high production volume) chemicals with widespread use in industry. Several compounds (sodium and potassium cyanide, hydrogen cyanide and acetone cyanohydrin) are included in the Organisation for Economic Co-operation and Development (OECD)/EC Risk Assessment programme and although not prioritised to date are likely to undergo assessment in the next few years. A comprehensive review of the available physico-chemical, toxicological, environmental, ecotoxicological and human data will strengthen the rationale for extrapolation of data between these chemicals and help identify potential data gaps in advance of regulatory programmes.

**Fluoroalkanes**

The Scientific Committee agreed to establish a Task Force to prepare a series of JACC reports on fluoroalkanes. Fluoroalkanes are used as refrigerants, blowing agents and propellants. There is a need for a comprehensive, critical review to include the most recent studies. A supplementary report is planned to address the potential health impact of the impurities, by-products or decomposition products that occur in fluoroalkanes.
Symposium on Genetic Susceptibility to Environmental Toxicants

This Task Force was commissioned to organise jointly with the European EnvironmentalMutagens Society (EEMS) a symposium on Genetic Susceptibility to Environmental Toxicants. Thereafter the Task Force would edit the proceedings and recommendations in a form suitable for publication. The symposium is to be held on 24 August 2000 in Budapest.

Use of Observational Data in the Risk Assessment of Existing Chemicals

This Task Force was commissioned to develop criteria on which to judge the adequacy of epidemiology/observational/workplace exposure data. This guidance will justify where appropriate the use of human data in place of those from controlled experiments in animals. In particular, the outcome of this work will be relevant to providing input to the EC’s proposed revision of the TGD for the risk assessment of existing chemicals.

Ongoing Task Forces

In addition to the activity in the new Task Forces, work was progressed by the following on-going Task Forces:

Risk Assessment

In 1998 a review of the progress made in the risk assessments being conducted under the EC Council Regulation 793/93 revealed severe delays. A number of areas were highlighted where additional scientific guidance could help accelerate the progress of the risk assessments and improve the quality of the outcome. The Scientific Committee commissioned the following Task Forces to develop the necessary guidance:

- Adverse versus Non-adverse Effects
- Marine Risk Assessment
- Risk Assessment Factors
- Terrestrial Risk Assessment
- Toxicological Mechanisms
- Health Effects

The following Task Forces have been commissioned to address generic issues concerning the evaluation of health effects of chemical substances. The outcome from these groups will be in the form of guidance on interpretation and application of data, e.g. in the context of hazard classification:

- Genetic Polymorphism
- Human Data for Classification Purposes
- Reproductive Toxicity
- Skin Sensitisation Testing
- Toxic Effects of Dusts

Environment

The following Task Forces were appointed to address specific issues related to the environmental fate and/or effects of chemicals:
This part of the ECETOC programme is devoted to preparation of comprehensive critical reviews of toxicological and ecotoxicological data on specific substances, predominantly those having widespread and multiple uses. The outcome of these initiatives is published in the JACC series of reports. In some cases, these hazard assessments are further extended to enable their application in risk assessment scenarios, e.g. under the Existing Substances Regulation 793/93. The Task Forces engaged in preparing these reports are:

- Butanols
- MethylTert-Butyl Ether (MTBE) Risk Assessment
- Monochloroacetic Acid and its Sodium Salt
- Peracetic Acid
- Synthetic Amorphous Silica
- Tetrafluoroethylene and Hexafluoropropylene

**RELATIONSHIPS WITH OTHER ORGANISATIONS**

**European Commission – Joint Research Centre (JRC)/European Chemicals Bureau (ECB)**


In addition, Mr R. Murray-Smith (AstraZeneca) represented ECETOC on the ECB EUSES working group.

**European Commission – ECVAM**

ECVAM was established in 1992 in response to Article 23 of Directive 86/609/EEC, with the goal of promoting the scientific methods which were of importance to the biosciences and which reduced, refined or replaced the use of laboratory animals. The aims of ECVAM are wide-ranging and not solely related to toxicity testing, although to date activity has focused on that area.

During 1999, ECETOC continued to be represented by Dr. P. Botham (AstraZeneca) on the Scientific Advisory Committee (ESAC).

**European Commission – Research**

**European Dermal Exposure Network**

This thematic network, set up in 1996 for a 3-year period, was supported by the EC under the SMT
4th Action Programme. A major role was the facilitation of interchange between experts in the fields of "skin and surface contamination", "biological monitoring" and "risk assessment". The network concluded its work in October 1999, by which time the technology transfer programme had been completed, the challenge now being to find people from the recipient countries to attend the proposed course in workplace risk assessment. Proposals for collaborative research under the 5th Action Programme had generated interest in relation to such topics as dermal penetration and biological monitoring.

A small ad hoc group of representatives of ECETOC member companies participated in each workgroup and a member of the Scientific Committee additionally participated in the Network Steering Committee.

Dr. M. Comber (AstraZeneca) represented ECETOC in the EU project FAME which is aimed at the development and validation of QSARs to be used primarily in connection with priority setting. Dr. Comber was supported in this activity by the ECETOC QSARs Task Force.

Organisation for Economic Co-operation and Development (OEC D)

ECETOC continued to maintain close co-operation with OECD and its on-going programme of activities relating to test-method development (toxicology and ecotoxicology) and risk assessment. Input from ECETOC is made through the consultation process established by OECD in respect of the Test Guidelines Programme, both in terms of submission of written comment and in the nomination of suitably-qualified experts to serve on the working groups.

During 1999 ECETOC member companies were invited to comment on a wide range of topics and proposed Test Guidelines, including the following:

Guideline (proposed): In Vitro Percutaneous Absorption Method

Guideline 202 (update): Daphnia sp. Acute Immobilisation Test

Guidelines 420 and 423 (updates): Acute Oral Toxicity Testing

Guideline (proposed): Leaching in Soil Columns

Guidance Notes: Analysis and Evaluation of Chronic Toxicity Studies

Guidance: Neurotoxicity Testing

In addition:
Dr. J. Gerlache (Solvay) participated as a member of the organising committee for a meeting on Acute Exposure Guideline Levels (AEGLs), held in Paris, 7-8 June 1999, at which he represented ECETOC.


Dr. M. Comber (AstraZeneca) and Dr. P-G. Pontal (Rhône-Poulenc) represented ECETOC for environmental and health issues respectively on
the ongoing Network of Experts on Risk Assessment.

Mr R. Murray-Smith (AstraZeneca) represented ECETOC on the OECD Task Force on Environmental Exposure Assessment.

Dr. A. Sarrif (DuPont) and Dr. D. Basketter (Unilever) represented ECETOC on the ongoing Business and Industry Advisory Committee (BIAC) Special Task Force on OECD Harmonisation of Classification and Labelling.

**United Nations Environment Programme (UNEP)**

UNEP Criteria Expert Group (CEG) meeting, Vienna, June 1999

Dr. J-M. Libre (Elf Atochem) Chairman of the ECETOC Persistent Organic Pollutants (POPs) Task Force tabled recommendations for the scientific criteria for nominating POPs.

**World Health Organization (WHO)**

ECETOC was admitted into official relations with the WHO in 1996 as a Non-Governmental Organisation (NGO). This public acknowledgement of the fact that both organisations share the goal of protecting health and the environment from the adverse effects of chemicals was earned as a result of many years of close collaboration between ECETOC and various WHO bodies, notably IPCS. This co-operation has continued throughout 1999.

**International Programme on Chemical Safety (IPCS)**

ECETOC continues to work closely with the IPCS in its various programme areas. As with all ECETOC representation in external meetings, selection of suitably qualified and experienced scientists is through a procedure which involves the Scientific Committee. Where possible such representation is undertaken by the Chairman or member of an ECETOC Task Force that has been dealing with the topic in question. In all cases the importance of maintaining scientific integrity through such participation is emphasised in briefings before the event.

**UNEP Criteria Expert Group (CEG) meeting, Athens, 5-6 September, 1999**

Dr. V. Vandepitte (Procter & Gamble) represented ECETOC.

**4th Steering Committee meeting on harmonisation of approaches to the assessment of risk from exposure to chemicals, Montreux, 30 September-1 October 1999.**

Dr. V. Scaliteur (Procter & Gamble) represented ECETOC.

**IPCS Environmental Health Criteria Document (EHC) Programme**

ECETOC provides comments and data in the consultation phase of the development of IPCS EHC documents. During 1999, ECETOC members were invited to comment on the following draft documents:
Relevance and Validation of Biomarkers in Risk Assessment

Palladium

Arsenic and Arsenic Compounds

Following the consultation phase ECETO C is invited to provide a specialist representative to participate as an observer in the IPCSTask Group meeting to finalise the EHC.

IPCS Concise International Chemical Assessment Documents (CICADs) Programme

IPCS launched this series of chemical assessments in 1996. The purpose of the documents is to accelerate the progress of the review of chemicals within the IPCS programme through a process designed to minimise the effort required compared with the EHC programme. A format has been designed to achieve this, in which the review is more focused on the defined lead effects of the chemicals.

The utilisation of existing reviews from reliable sources, such as those produced by regulatory authorities, results in a further saving of resources.

ECETO C is involved in the initial consultation and review of draft CICADs and, with experts from academia and national authorities, participates in the Final Review Board and Steering Group meetings.

During 1999, ECETO C participation in the CICADs programme included:

5th Final Review Board meeting for CICADs, Sweden, May 1999.
Dr. N. Drouot (Elf Atochem) represented ECETO C.

International Agency for Research on Cancer (IARC)

ECETO C has a well-established relationship with IARC, receiving an invitation to nominate observers at ad hoc meetings of experts convened to evaluate specific chemicals in respect of their carcinogenicity to man. During 1999, no such meetings were held. However, IARC announced its intention to convene a Working Group of experts to meet in February 2000 to evaluate the "publicly available evidence" that some (17) industrial chemicals could pose a risk of developing cancer.

Dr. G. Gans (BASF) was appointed as the ECETO C observer to the IARC Working Group meeting on Some Industrial Chemicals, Volume 77, to be held at Lyon on 15-22 February 2000.

The European Cosmetic Toiletry and Perfumery Association (COLIPA)

Dr. R. Lewis (AstraZeneca) represented ECETO C on the COLIPA committee set up to oversee a COLIPA initiative to explore research into alternative non-animal tests to replace the Draize eye test.

Dr. I. Kimber (AstraZeneca) represented ECETO C on the COLIPA "Skin Tolerance" Task Force towards ensuring effective communication between the COLIPA activities and those of the current ECETO C Task Force on Skin Sensitisation Testing, and to identify any opportunities for joint projects with other organisations.
**International Life Sciences Institute (ILSI)**

The Secretary General participated in an ILSI workshop on Threshold of Toxicological Concern for Chemical Substances Present in the Diet, Paris, 5-6 October 1999.

ECETOC also continues its active membership of the Environmental and Health Task Force.

**European Chemical Industry Council (CEFIC)**

See “Long-range Research Initiative” under Major Initiatives on page 9.

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**Presentations**

**Sound Science for Responsible Management of Chemical Safety, VCI Technik und Umwelt Committee, 19 February 1999**

The Board Chairman, Mr. J.J. Van de Berg (Solvay) and the Secretary General delivered a presentation on ECETOC and its activities to the VCI Technik und Umwelt Committee on 19 February. They described how the association operated, how it compared with other organisations, its achievements to date both in terms of issues and partnerships, and the challenges for the future. There was considerable discussion of the issue of diminishing specialist resources in the chemical industry.

**European Toxicology Forum, Brussels, 6 May 1999**

The Secretary General gave a presentation at the European Toxicology Forum, describing the role of ECETOC in support of the CEFIC Long-range Research Initiative.

**GREAT-ER Workshop, Arona, Italy 15 March 1999**

Dr. T. Feijtel (Procter & Gamble) chaired the workshop presenting the results of the 3 year programme to develop the GREAT-ER model to an audience of 75 participants from academia, the regulatory authorities and industry.
A series of platforms and poster presentations describing the development and use of the GREAT-ER (Geography-referenced Exposure Assessment Tool for European Rivers) model were featured.

Dr. T. Feijtel (Procter & Gamble) described the Pan-European Development of GREAT-ER. Dr. G. Boeije (Procter & Gamble) presented on spatially aggregated Predicted Environmental Concentrations (PECs), Dr. K. Fox (Unilever) focused on the removals of linear alkylbenzene sulphonate from four rivers in the UK, Mr. F. Koorman (University of Osnabrück) outlined the use of GREAT-ER as a tool for data quality checking and monitoring design and the spatial aspects of exposure assessment for down-the-drain chemicals were discussed by Mr. J.-O. Wagner (University of Osnabrück).

A number of other presentations on the development within the GREAT-ER project and its use as a first level modelling tool to meet the requirements of the proposed EC Water Framework Directive were given by Dr. K. Fox (Unilever) at the following conferences and workshops:

International Conference on Water and Textiles, Huddersfield, May 1999

Waste and Water Conference, Copenhagen, June 1999

Water Symposium Workshop, Stockholm, August 1999

Dr. H. Müllerschön (Rohm & Haas) presented an update on the current status of work achieved by the ECETOC Task Force that also collected data as an OECD Clearing House.

Dr. F.M. Carpanini
Secretary General
ECETOC
## Publications

The following ECETOC reports were published in 1999

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<td>Monochloroacetic Acid (CAS No. 79-11-8) and its Sodium Salt (CAS No. 3926-62-3)</td>
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<td>Tetrachloroethylene (CAS No. 127-18-4)</td>
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<td>GREAT-ER User Manual</td>
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### External Publications


ECETO C O R G A N I S A T I O N

Organisation and Membership

Member Companies

General Assembly

Board of Directors

Secretary General

Scientific Committee

TF₁   TF₂   TF₃   TF₄   TF₅

Secretariat
ECETO C Modus Operandi

**Board**

ECETO C operates under the general direction of a Board comprised of up to twelve senior executives from member companies. The Board is responsible for the overall policy and finance of the association.

**Scientific Committee**

Crucial to the success of ECETO C in establishing and maintaining its authority and reputation as a source of sound scientific information and judgement, is its Scientific Committee. Composed of up to fifteen top industry scientists (mainly toxicologists, ecotoxicologists and physicians) the Committee is appointed by the ECETO C Board. Members are selected on the basis of their proven scientific expertise, thereby underpinning their role of assuring sound scientific standards and quality.

The Scientific Committee is responsible for the definition, management and peer review of the ECETO C work programme. A major part of this work programme is the production of ECETO C publications by Task Forces appointed by the Scientific Committee.

**Task Forces**

ECETO C publications are produced by Task Forces composed of appropriate experts drawn from member companies and other organisations as required. Although all member companies have the opportunity to nominate members to the Task Forces, their final composition is subject to endorsement by the Scientific Committee, taking into account the range of skills required to address the selected topic. The work of the Task Force follows the Terms of Reference established by the Scientific Committee and is directed by a Chairman who is appointed to the task by the Scientific Committee. Most but not all Task Force activities result in one or more ECETO C publications. The specific objectives of the other projects undertaken by Task Forces vary, and frequently involve activities with other organisations.

**Secretariat**

The Board, Scientific Committee and Task Forces are supported and assisted in their activities by a small team of scientists with administrative support, led by the Secretary General. Further details of ECETO C staff members are given on page 23.

**Programme Selection**

A topic for consideration by ECETO C may be proposed by any member company or any other organisation whether trade association, academia or regulatory authority. For the proposal to be progressed it must be supported by at least two member companies; in addition it must be judged to meet the scientific standards required by the Scientific Committee. Provided these criteria are met, specific Terms of Reference are drawn up and endorsed by the Scientific Committee prior to selection of Task Force members.

**Publications**

The main output of ECETO C’s Task Force activities is the publication of a range of reports varying in scope from the ‘JACC’ reports on specific chemicals to ‘Monographs’, dealing with the fundamental principles underlying the various branches of science in toxicology and...
ecotoxicology. All reports are published following peer review by the Scientific Committee and copies are sent to all member companies and to other interested parties, such as the various regulatory authorities, international organisations and academic groups, for use as required.

**Website**

The ECETO C Website communicates the goals, objectives, output and activities of the Association to the outside world, provides an additional information source and point of contact to our members and supports the Committees and Task Forces in developing their outputs.

**Representation**

ECETO C regularly receives invitations to send representatives and observers to a variety of fora, such as the IPCS, OECD, IARC and the EC groups, where the health and environmental effects of chemicals are discussed and evaluated.

**Workshops and Seminars**

Workshops and seminars are convened, often in partnership with other interested parties and groups, in order to develop and communicate understanding and counsel on the key issues affecting the responsible environmental management of chemicals.
ECETO C SECRETARIAT

At 31 December 1999 staff employed were:

- Dr. F. Carpanini  Secretary General
- Ms. M. Butler  Health Sciences
- Mr. M. Holt  Environmental Sciences
- Ir. H. Vrijhof  Chemicals Programme
- Ms. S. Henssler  Communications
- Ms. G. Gérits  Office Manager
- Ms. A. Vandeneycken  Secretary
- Ms. A. Ngoy  Secretary

Mrs. Michèle De Mesmaeker retired from her position as Office Manager in July 1999. Michèle had served ECETO C for many years having joined the Association in its early days in Avenue Louise. We extend good wishes to her for a long and happy retirement. In her place we welcome Ms. Geneviève Gérits.

We also welcome Ms. Sabine Henssler who joined the ECETO C team as Communications Officer in July 1999.
ECETO C MEMBERSHIP

3M
Akzo Nobel
Albright & Wilson
AstraZeneca
Ausimont
BASF
Bayer
Benckiser
Boehringer Ingelheim
Borax
Borealis
BP Amoco Chemicals
Ciba Specialty Chemicals
Coca-Cola
Colgate-Palmolive
Degussa*
Dow Corning
Dow Chemical
DSM
DuPont de Nemours
Elf Atochem
Enichem
Exxon Chemical
F. Hoffmann-La Roche
FMC
Fortum

Henkel
Hüls*
ICI
Janssen Pharmaceutica
L’Oreal
Lyondell Chemical
Merck
Monsanto
Norsk Hydro
Novartis
Novo Nordisk
Perstorp Regeno
Petresa
Procter & Gamble
Repsol Quimica
Rhône-Poulenc†
Rohm & Haas
Shell Chemicals
Solvay
Statoil
Th. Goldschmidt
TotalFina
Unilever
Union Carbide
Wacker Chemie

* Merged to Degussa-Hüls during 1999
† Now Rhodia
## Finance

### Income

<table>
<thead>
<tr>
<th>Subscriptions</th>
<th>ACTUAL 1999</th>
<th>Euro</th>
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<tbody>
<tr>
<td>Full Members</td>
<td>1,428,000</td>
<td></td>
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<tr>
<td>New Members</td>
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<tr>
<td><strong>Total Subscriptions</strong></td>
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<td>Project-related</td>
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<td><strong>GRAND TOTAL</strong></td>
<td><strong>1,574,582</strong></td>
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</tbody>
</table>

### Expenditure

| Salaries (and related expenses) | 880,404 | Euro |
| Office and running expenses     | 246,809 |      |
| Travel expenses on mission      | 28,554  |      |
| Meetings and consultants        | 78,883  |      |
| Professional services           | 9,428   |      |
| Bank charges                    | 5,838   |      |
| Capital expenditure             | 13,565  |      |
| Publications                    | 41,124  |      |
| Miscellaneous                   | 18,823  |      |
| Website development             | 37,184  |      |
| **TOTAL**                       | **1,360,612** |      |

### Balance Sheet

<table>
<thead>
<tr>
<th>Balance sheet</th>
<th>ACTUAL 1999</th>
<th>Euro</th>
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<tbody>
<tr>
<td>Income</td>
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<tr>
<td>Expenditure</td>
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<td>Estimated Reserve required</td>
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ECETO C Publications

MONOGRAPHS

No. 1 Good Laboratory Practice
No. 2 A Contribution to Strategy for Identification and Control of Occupational Carcinogens
No. 3 Risk Assessment of Occupational Chemical Carcinogens
No. 4 Hepatocarcinogenesis in Laboratory Rodents: Relevance for Man
No. 5 Identification and Assessment of the Effects of Chemicals on Reproduction and Developments (Reproductive Toxicology)
No. 6 Acute Toxicity Tests, LD50 (LC50) Determinations and Alternatives
No. 7 Recommendations for the Harmonisation of International Guidelines for Toxicity Studies
No. 8 Structure-Activity Relationships in Toxicology and Ecotoxicology: An Assessment (Summary)
No. 9 Assessment of Mutagenicity of Industrial and Plant Protection Chemicals
No. 10 Identification of Immunotoxic Effects of Chemicals and Assessment of their Relevance to Man
No. 11 Eye Irritation Testing
No. 12 Alternative Approaches for the Assessment of Reproductive Toxicity (with emphasis on embryotoxicity/teratogenicity)
No. 13 DNA and Protein Adducts: Evaluation of their Use in Exposure Monitoring and Risk Assessment
No. 14 Skin Sensitisation Testing
No. 15 Skin Irritation
No. 16 Early Indicators of Non-Genotoxic Carcinogenesis
No. 17 Hepatic Peroxisome Proliferation
No. 18 Evaluation of the Neurotoxic Potential of Chemicals
No. 19 Respiratory Allergy
No. 20 Percutaneous Absorption
No. 21 Immunotoxicity: Hazard Identification and Risk Characterisation
No. 22 Evaluation of Chemicals for Oculotoxicity
No. 23 Receptor Mediated Mechanisms in Chemical Carcinogenesis
No. 24 Risk Assessment for Carcinogens
No. 25 Practical Concepts for Dose Selection in Chronic Toxicity and Carcinogenicity Studies in Rodents
No. 26 Aquatic Toxicity Testing of Sparingly Soluble Volatile and Unstable Substances
No. 27 Aneuploidy
No. 28 Threshold - Mediated Mutagens - Publication in Mutation Research, Special Issue
TECHNICAL REPORTS

No. 1 Assessment of Data on the Effects of Formaldehyde on Humans
No. 2 The Mutagenic and Carcinogenic Potential of Formaldehyde
No. 3 Assessment of Test Methods for Photodegradation of Chemicals in the Environment
No. 4 The Toxicology of Ethylene Glycol Monoalkyl Ethers and its Relevance to Man
No. 5 Toxicity of Ethylene Oxide and its Relevance to Man
No. 6 Formaldehyde Toxicology: an Up-Dating of ECETOC Technical Reports 1 and 2
No. 7 Experimental Assessment of the Phototransformation of Chemicals in the Atmosphere
No. 8 Biodegradation Testing: An Assessment of the Present Status
No. 9 Assessment of Reverse-Phase Chromatographic Methods for Determining Partition Coefficients
No. 10 Considerations Regarding the Extrapolation of Biological Data in Deriving Occupational Exposure Limits
No. 11 Ethylene Oxide Toxicology and its Relevance to Man: An Up-Dating of ECETOC Technical Report 5
No. 12 The Phototransformation of Chemicals in Water: Results of a Ring-Test
No. 15 The Use of Physical-Chemical Properties in the 6th Amendment and their Required Precision, Accuracy and Limiting Values
No. 16 A Review of Recent Literature on the Toxicology of Benzene
No. 17 The Toxicology of Glycol Ethers and its Relevance to Man: An Up-Dating of ECETOC Technical Report 4
No. 18 Harmonisation of Ready Biodegradability Tests
No. 19 An Assessment of Occurrence and Effects of Dialkyl-o-Phthalates in the Environment
No. 20 Biodegradation Tests for Poorly-Soluble Compounds
No. 21 Guide to the Classification of Carcinogens, Mutagens, and Teratogens under the 6th Amendment
No. 22 Classification of Dangerous Substances and Pesticides in the EEC Directives. A Proposed Revision of Criteria for Inhalational Toxicity
No. 23 Evaluation of the Toxicity of Substances to be Assessed for Biodegradability
No. 24 The EEC 6th Amendment: Prolonged Fish Toxicity Tests
No. 25 Evaluation of Fish Tainting
No. 26 The Assessment of Carcinogenic Hazard for Human Beings exposed to Methylene Chloride
No. 27 Nitrate and Drinking Water
No. 28 Evaluation of Anaerobic Biodegradation
No. 29 Concentrations of Industrial Organic Chemicals Measured in the Environment: The Influence of Physico-Chemical Properties, Tonnage and Use Patterns
No. 30  Existing Chemicals: Literature Reviews Technical and Evaluations (Fifth Edition) (No longer available)
No. 31  The Mutagenicity and Carcinogenicity of Vinyl Chloride: A Historical Review and Assessment
No. 32  Methylene Chloride (Dichloromethane): Human Risk Assessment Using Experimental Animal Data
No. 33  Nickel and Nickel Compounds: Review of Toxicology and Epidemiology with Special References to Carcinogenesis
No. 34  Methylene Chloride (Dichloromethane): An Overview of Experiment Work Investigating Species, Differences in Carcinogenicity and their Relevance to Man
No. 35  Fate, Behaviour and Toxicity of Organic Chemicals Associated with Sediments
No. 36  Biomonitoring of Industrial Effects
No. 37  Tetrachlorethylene: Assessment of Human Carcinogenic Hazard
No. 38  A Guide to the Classification of Preparations Containing Carcinogens, Mutagens and Teratogens
No. 39  Hazard Assessment of Floating Chemicals After an Accidental Spill at Sea
No. 40  Hazard Assessment of Chemical Contaminents in Soil
No. 41  Human Exposure to N-Nitrosamines, their Effects and Risk Assessment for N-Nitrosodiethanolamine in Personal Care Products
No. 42  Critical Evaluation of Methods for the Determination of N-Nitrosamines in Personal Care and Household Products
No. 43  Emergency Exposure Indices for Industrial Chemicals
No. 44  Biodegradation Kinetics
No. 45  Nickel, Cobalt and Chromium in Consumer Products: Allergic Contact Dermatitis
No. 46  EC 7th Amendment: Role of Mammalian Toxicokinetic and Metabolic Studies in the Toxicological Assessment of Industrial Chemicals
No. 47  EC 7th Amendment "Toxic to Reproduction": Guidance on Classification
No. 48  Eye Irritation: Reference Chemicals Data Bank (Second Edition)
No. 49  Exposure of Man to Dioxins: A Perspective on Industrial Waste Incineration
No. 50  Estimating Environmental Concentrations of Chemicals using Fate and Exposure Models
No. 51  Environmental Hazard Assessment of Substances
No. 52  Styrene Toxicology Investigations on the Potential for Carcinogenicity
No. 53  DHTDMAC: Aquatic and Terrestrial Hazard Assessment (CAS No. 61789-80-8)
No. 54  Assessment of the Biodegradation of Chemicals in the Marine Environment
No. 55  Pulmonary Toxicity of Polyalkylene Glycols
No. 56  Aquatic Toxicity Data Evolution: The Database (ISSN -0773-8072-56)
No. 57  Polypropylene Production and Colorectal Cancer
No. 58  Assessment of Non-Occupational Exposure to Chemicals
No. 59  Testing for Worker Protection
No. 60  Trichloroethylene: Assessment of Human Carcinogenic Hazard
No. 61  Environmental Exposure Assessment
No. 62 Ammonia Emissions to Air in Western Europe
No. 63 Reproductive and General Toxicology of some Inorganic Borates and Risks Assessment for Human Beings
No. 64 The Toxicology of Glycol Ethers and its Relevance to Man
No. 65 Formaldehyde and Human Cancer Risks
No. 66 Skin Irritation and Corrosion: Reference Chemicals Data Bank
No. 67 The Role of Bioaccumulation in Environmental Risk Assessment: The Aquatic Environment and Related Food Webs
No. 68 Assessment Factors in Human Health Risk Assessment
No. 69 Toxicology of Man-Made Organic Fibres
No. 70 Chronic Neurotoxicity of Solvents
No. 71 Inventory of Critical Reviews on Chemicals (Only available to ECETOC members)
No. 72 Methyl tert-Butyl Ether (MTBE) Health Risk Characterisation
No. 73 The Value of Aquatic Model Ecosystem Studies in Ecotoxicology
No. 74 QSARs in the Assessment of the Environmental Fate and Effects of Chemicals
No. 75 Organophosphorus Pesticides and Long-term Effects on the Nervous System
No. 76 Monitoring and Modelling of Industrial Organic Chemicals, with Particular Reference to Aquatic Risk Assessment
No. 77 Skin and Respiratory Sensitisers: Reference Chemicals Data Bank
No. 78 Skin Sensitisation Testing: Methodological Considerations

JACC

No. 1 Joint Assessment of Commodity Chemicals, Melamine
No. 2 Joint Assessment of Commodity Chemicals, 1,4-Dioxane
No. 3 Joint Assessment of Commodity Chemicals, Methyl Ethyl Ketone
No. 4 Joint Assessment of Commodity Chemicals, Methylene Chloride
No. 5 Joint Assessment of Commodity Chemicals, Vinylidene Chloride
No. 6 Joint Assessment of Commodity Chemicals, Xylenes
No. 7 Joint Assessment of Commodity Chemicals, Ethylbenzene
No. 8 Joint Assessment of Commodity Chemicals, Methyl Isobutyl Ketone
No. 9 Joint Assessment of Commodity Chemicals, Chlorodifluoromethane
No. 10 Joint Assessment of Commodity Chemicals, Isophorone
No. 11 Joint Assessment of Commodity Chemicals, (HFA-132b) 1,2-Dichloro-1,1-Difluoroethane
No. 12 Joint Assessment of Commodity Chemicals, (HFA-124) 1-Chloro-1,2,2,2-Tetrafluoroethane
No. 13 Joint Assessment of Commodity Chemicals, (HFA-123) 1,1-Dichloro-2,2,2-Trifluoroethane
No. 14 Joint Assessment of Commodity Chemicals, (HFA-133a) 1-Chloro-2,2,2-Trifluoromethane
No. 15 Joint Assessment of Commodity Chemicals, (HFA-141B) 1-Fluoro 1,1-Dichloroethane
No. 16 Joint Assessment of Commodity Chemicals, (HCFC-21) Dichlorofluoromethane
No. 17 Joint Assessment of Commodity Chemicals, (HFA-142b) 1-Chloro-1,1-Difluoroethane
No. 18 Joint Assessment of Commodity Chemicals, Vinyl Acetate
No. 19 Joint Assessment of Commodity Chemicals, Dicyclopentadiene (CAS:77-73-6)
No. 20 Joint Assessment of Commodity Chemicals, Tris-/Bis-/Mono-(2 ethylhexyl) Phosphate
No. 21 Joint Assessment of Commodity Chemicals, Tris-(2-Butoxyethyl)-Phosphate (CAS:78-51-3)
No. 22 Joint Assessment of Commodity Chemicals, Hydrogen Peroxide (CAS:7722-84-1)
No. 23 Joint Assessment of Commodity Chemicals, (ISSN-0773-6339-23) Polycarboxylate Polymers as Used in Detergents
No. 24 Joint Assessment of Commodity Chemicals, Pentfluoroethane (HFC-125) (CAS:354-33-6)
No. 25 Joint Assessment of Commodity Chemicals, 1-Chloro-1,2,2,2-tetrafluoroethane (HCFC 124) (CAS No. 2837-89-0)
No. 26 Joint Assessment of Commodity Chemicals, Linear Polymethylsiloxanes (CAS N.o.63148-62-9)
No. 27 Joint Assessment of Commodity Chemicals, n-Butyl Acrylate (CAS N.o.141-32-2)
No. 28 Joint Assessment of Commodity Chemicals, Ethyl Acrylate (CAS N.o.140-88-5)
No. 29 Joint Assessment of Commodity Chemicals, (HCFC-141b) 1,1-Dichloro-1-Fluoroethane (CAS N.o.1717-00-6)
No. 30 Joint Assessment of Commodity Chemicals, Methyl Methacrylate (CAS N.o.80-62-6)
No. 31 Joint Assessment of Commodity Chemicals, (HFC-134a) 1,1,1,2-Tetrafluoroethane (CAS N.o.811-97-2)
No. 32 Joint Assessment of Commodity Chemicals, (HFC-32) Difluoromethane (CAS N.o.75-10-5)
No. 33 Joint Assessment of Commodity Chemicals, (HCFC-123) 1,1-Dichloro-2,2,2-Trifluoroethane (CAS N.o.306-83-2)
No. 34 Joint Assessment of Commodity Chemicals, Acrylic Acid (CAS N.o.79-10-7)
No. 35 Joint Assessment of Commodity Chemicals, Methacrylic Acid (CAS N.o.79-41-4)
No. 36 Joint Assessment of Commodity Chemicals, n-Butyl Methacrylate; Isobutyl Methacrylate (CAS N.o.97-88-1) (CAS N.o.97-86-9)
No. 37 Joint Assessment of Commodity Chemicals, Methyl Acrylate (CAS N.o.96-33-3)
No. 38 Joint Assessment of Commodity Chemicals, Monochloroacetic Acid (CAS N.o.79-11-8) and its Sodium Salt (CAS N.o.3926-62-3)
No. 39 Joint Assessment of Commodity Chemicals, Tetrachloroethylene (CAS N.o.127-18-4)

**SPECIAL REPORT**

No. 8 HAZCHEM; A Mathematical Model for Use in Risk Assessment of Substances
No. 9 Styrene Criteria Document
No. 10 Hydrogen Peroxide OEL Criteria Document (CAS N.o. 7722-84-1)
No. 11 Ecotoxicology of some Inorganic Borates
No. 12 1,3-Butadiene OEL Criteria Document (Second Edition) (CAS N.o. 106-99-0)
No. 13 Occupational Exposure Limits for Hydrocarbon Solvents
No. 14 n-Butyl Methacrylate Isobutyl Methacrylate OEL Criteria Document
No. 15 Examination of a Proposed Skin Notation Strategy
No. 16 GREAT-ER User Manual

DOCUMENT

No. 32 Environmental Oestrogens: Male Reproduction and Reproduction Development
No. 33 Environmental Oestrogens: A Compendium of Test Methods
No. 34 The Challenge Posed by Endocrine-disrupting Chemicals
No. 35 Exposure Assessment in the Context of the EC Technical Guidance Documents on Risk Assessment of Substances
No. 37 EC Classification of Eye Irritancy
No. 38 Wildlife and Endocrine Disrupters: Requirements for Hazard Identification
No. 39 Screening and Testing Methods for Ecotoxicological Effects of Potential Endocrine Disrupters: Response to the EDSTAC Recommendations and a Proposed Alternative Approach
No. 40 Comments on Recommendation from Scientific Committee on Occupational Exposure Limits for 1,3-Butadiene
No. 41 Persistent Organic Pollutants (POPs) Response to UNEP/INC/CEG-I Annex 1