Working together to replace animal testing

COLIPA
The European Cosmetics Association







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A long-term and continuous commitment to replace animal testing

The European cosmetics industry, represented by Colipa, is committed to the replacement of animal testing for all its ingredients as soon as possible. We, the industry, are equally committed to quality and safety, as consumers must have absolute confidence in our ingredients and products. This is why, over the last 20 years, we have assigned significant funding as well as our best scientists and laboratories to researching alternative methods.

"We are proud of the important role our industry has played in developing alternative approaches to animal testing"

We are proud of the important role our industry has played in the development of alternative approaches to animal testing in Europe and internationally. We phased out animal testing on finished products more than 10 years ahead of the legal deadline (in place since 2004) and have led or contributed significantly to all the replacement methods that are available to date.

We believe that replacing animal testing is in the interest of all concerned. Therefore we have a long-standing and ongoing commitment to replacing animal testing.
We are playing a leading role in the development and promotion of alternative testing methods and new approaches to ensuring the safety of our products and ingredients.

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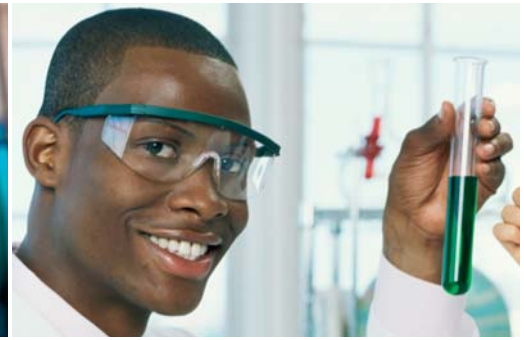
Safety

Consumer safety is fundamental to our activities and we therefore support the European Union (EU) legislation that is in place and gives consumers confidence in the safety of cosmetic products.

Each ingredient in every cosmetic product on the market today will have been tested at some point to make sure that it does not cause harm to consumers and workers. Many of the ingredients that have long been in use in our industry will have originally been proved to be safe through testing on animals, using historically accepted methods. For the majority of ingredients used in cosmetics we have succeeded in replacing these tests by non-animal tests such as *in vitro* methods. However, there are still gaps in scientific knowledge that need to be filled in order to replace animal testing completely, while continuing to guarantee the safety of our products.







"We are working harder than ever to find alternative methods to animal testing that continue to guarantee the safety of our products"

The European regulatory perspective

The EU Cosmetics Directive (76/768/EEC) requires that every new cosmetic product launched on the European market be assessed for safety to human health using methods acknowledged for their science and accepted by regulators.

The 7th Amendment to the Cosmetics Directive (2003/15/EC) introduces a progressive ban on animal testing and a marketing ban on cosmetic products and their ingredients that are tested on animals, as follows:

- Immediate ban on any test for which a validated alternative is accepted.
- Ban on testing of finished products – September 2004.
- Ban on testing of ingredients – March 2009 (after this date no animal testing on ingredients for the purpose of the Cosmetics Directive will be allowed in the EU).
- Marketing ban on products containing ingredients requiring certain complex toxicity tests (repeat dose application) – progressive introduction (March 2009 allows exemption for testing with repeated application; after March 2013 no cosmetic product containing ingredients tested on animals for the purpose of the Directive will be allowed for sale in the EU).

We are working harder than ever to find alternative methods to animal testing that continue to guarantee the safety of our products.







What is an alternative method?

Alternative methods are defined by the “Three Rs”:

- Replacement of an animal test by a non-animal test;
- Refinement of an animal test to reduce or eliminate stress or suffering; or
- Reduction in the number of animals needed in a test.

Colipa’s current research efforts are focused on the development of replacement methods.

“Our current research efforts are focused on the development of replacement methods”

In Europe, alternative testing methods are scientifically validated by the European Centre for the Validation of Alternative Methods (ECVAM), an official body appointed for this purpose by the European Union. Validation by ECVAM means that these methods can be used across the different industries that test chemicals for safety purposes (chemicals, food, pharmaceuticals, etc).

Validation is the process by which scientists and regulators establish whether a method is reliable and relevant for a specific purpose.

From idea to validated and globally accepted method

To work out how to mimic a complex biological response outside a living organism is a tremendous scientific challenge, but validating an alternative method and proving it is safe also takes time. The cosmetics industry works with ECVAM to make the process as efficient as possible.

Once validated by ECVAM, an alternative method needs to be accepted and adopted by EU regulators, as per the Council Regulation on test methods of 30 May 2008, and applied across all industries that test chemicals for safety purposes.

Working together to promote alternative approaches

Globally, the cosmetics industry is the pioneer in research into developing alternative methods to animal testing. Our industry has been looking for alternatives since the early 1980 s.

In 1992 Colipa created the Steering Committee on Alternatives to Animal Testing (SCAAT) to co-ordinate the efforts of the cosmetics industry in the development, validation and acceptance of alternatives to animal testing for evaluating the safety of products and ingredients. The work of SCAAT has always been based on collaboration – not only between member companies but also with other groups who have an interest in the outcome of the research, such as academia.

In November 2005, led by the European Commission, the cosmetics industry joined forces with many individual companies and associations from several diverse industry sectors to create the European Partnership for Alternative Approaches to Animal Testing (EPAA). This unique partnership pools knowledge and resources to develop new alternative approaches and works together to speed up the acceptance of such methods and to exchange best practice between industries. As well as replacement methods, the EPAA advocates many refinement and reduction alternative methods.

Reaching beyond cosmetics

A complete replacement of animal testing will only be possible through collective action by all relevant stakeholders on a global scale. Indeed, many of the advances in alternative approaches used by the cosmetics industry have been successful due to cooperation with academia and other industries. Such approaches are now also used by sectors such as the pharmaceutical and chemical industries.

"A complete replacement of animal testing will only be possible through collective action"

In order to achieve our aim, we collaborate closely with the industry's regulators. These are the European Commission's Scientific Committee on Consumer Safety (SCCS), ECVAM (The European Centre for the Validation of Alternative Methods) and the European Commission. We work with the European Commission through the Directorate Generals for Enterprise, Research and Health and Consumers.

On an international level, Colipa works with the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM) in the United States, as well as with partners from Canada and Japan, and the OECD (Organisation for Economic Co-operation and Development). We also promote alternative approaches internationally, for example within the International Cooperation on Cosmetic Regulation (ICCR) and through our contributions to the World Congress on Alternatives.

Example of development and validation of a skin irritation alternative method*

1980 s Invention of the basic idea to reconstruct skin layers *in vitro*

Mid 1990 s Idea to use reconstructed cell layers to mimic irritation effects consolidated

1999-2001 Pre-validation studies

2002 Optimisation studies

2003-2005 Main validation study

2006-2007 Data review and evaluation

2007 Validated and accepted by ECVAM

Regulatory Acceptance (on-going)

* Episkin ™



Our results have already made a difference

Colipa's member companies have spent years gathering experience in their particular product areas and developing alternative testing methods. As early as the 1980 s, we succeeded in phasing out all animal testing for finished products by pooling our resources. We have used state-of-the-art science, advanced approaches to risk assessment and extensive existing research results.

Progress towards replacing animal testing

We have also contributed significantly to the development of replacement methods for testing ingredients in four particular areas: skin corrosion, phototoxicity, percutaneous absorption and skin irritation. To date, four methods have been validated by ECVAM, with a fifth, an *in vitro* method for dermal absorption/ percutaneous penetration, having been globally accepted by the OECD.

Topic	Explanation		Replacement
Skin corrosion	Irreversible destruction of skin by a chemical	1	**Transcutaneous Electrical Resistance Assay
		2	Human skin models **Episkin™, **EpiDerm™, SkinEthic™
Phototoxicity	Irritation that only occurs when a substance is exposed to ultraviolet (UV) light	3	**3T3 Neutral Red Uptake Phototoxicity Test
Percutaneous absorption	Absorption of a substance through the skin	4	***In vitro* method
Skin irritation	Local skin effects e.g. redness, burning or stinging	5	Human Skin models EpiSkin™, EpiDerm™, SkinEthic™

** OECD Guidelines

"We have succeeded in phasing out all animal testing of finished products, and contributed significantly to the development of replacement methods for testing ingredients"

We are proud of the success in achieving these replacement methods, thereby contributing to a reduction in the number of animal tests carried out. The industry as a whole is continuing to work towards the goal of replacing animal testing entirely.

Today, animal testing on ingredients is the very last resort. It is only used in cases where legislation requires it and where there is no other means of ensuring consumer safety. Testing is subject to the most stringent conditions and ethical policies.

Where next for alternative methods?

Individual members of Colipa commit substantial investment to research into alternative testing methods and are working collectively through the organisation to make progress as fast as possible. Building on a joint effort, Colipa is currently carrying out optimisation and research work in the following four priority areas:

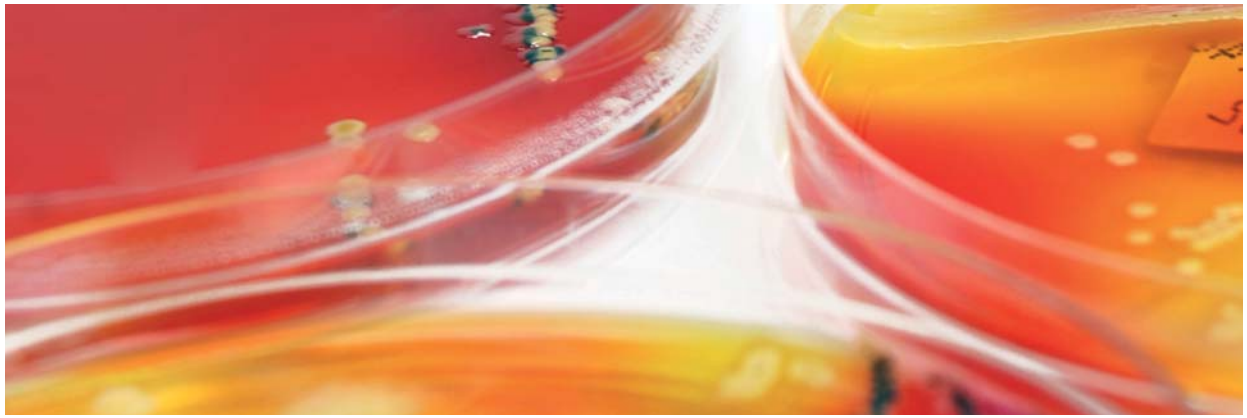
- Eye irritation
- Genotoxicity/mutagenicity
- Skin sensitisation
- Systemic toxicity (including repeat dose toxicity)

Our aim is to develop validated and legally acceptable alternative approaches with a view to replacing animal testing.

Each research area is guided by a special Colipa task force, whose objective is to achieve validation and acceptance of alternative methods of testing. We also established a safety assessment project team that looks at alternative approaches to animal testing from a safety standpoint, co-ordinating the research efforts of the topic-specific teams.

We, the European cosmetics industry, are committed to continuing significant research into alternative methods. We are making every effort to ensure the safety of our products without using animals.

Through Colipa, the European Cosmetics Association, we are committed to promoting alternative approaches to animal testing and acting as a driving force and an ambassador in this field globally.



Working strategically through Colipa to find alternative methods

Colipa's members from the European cosmetics industry are working hard to find alternative methods. We are working on integrated testing and approaches for use in safety assessment, taking into account the 2009 and 2013 deadlines of the 7th Amendment to the EU Cosmetics Directive.

In 2007 and 2008, we organised a series of workshops to evaluate how safety assessment for toxicological endpoints covered by the 2009 deadline (acute toxicity, skin and eye irritation and genetic toxicity) could be addressed by alternative approaches to animal testing. We considered *in vitro* and *in silico* methods and testing strategies developed by Colipa teams, or with our partners such as ECVAM and the EPAA, as well as by others outside Colipa. We identified gaps in existing methods for each endpoint to provide guidance to the alternative testing programmes led or co-led by our organisation. We designed tiered approaches to the use of alternative methods to ensure the continuous safety of cosmetic ingredients and products. Future activities for the team will involve additional toxicological endpoints covered by the 2013 deadline. This work will be available to the whole scientific community through peer-reviewed scientific publications.

Eye Irritation

Activities in this area are directed towards the short and medium term with a view to meeting the regulatory and industry needs using alternative methods.

The first goal consists of Validation Oriented Activities. In collaboration with ECVAM, we are currently entering a formal validation study for eye irritation with the Human Reconstructed Tissue (HRT) models MatTek EpiOcular™ and SkinEthic™ HCE. The development and optimisation of existing models is a complementary approach.



The second goal consists of the use of integrated analysis for combinations of these *in vitro* assays.

Future research is focused on identification of new *in vitro* endpoints more predictive of the *in vivo* human response to chemical injury through understanding mechanisms of eye injury/recovery. This would result in new or improved *in vitro* methods that would proceed to formal validation.

To achieve this we have a programme that incorporates three core activities: 1) method development/optimisation of existing models to validation; 2) research projects that are conducted in collaboration with academia and 3) collaborative activities with external partners.

The goal of our research programme is to have available models that address depth of injury and recovery as a mechanistic basis for eye irritation. As such, our ongoing work is focused on continued development of multilayer corneal models such as isolated eyes, isolated corneas and 3-D bioengineered corneal constructs and incorporation of evaluation parameters that measure depth of injury as this relates to extent of recovery.

Equally important to achieve validated *in vitro* methods is collaboration between industry, academia, external scientific organisations and regulators. We are working with ECVAM by active mutual participation in both COLIPA and ECVAM Eye Irritation Task Forces and providing ECVAM with support for retrospective statistical analysis of current *in vitro* methods.





The knowledge gained from all of these activities will be used to define combinations of *in vitro* assays that could evaluate eye irritation across the range of irritancy for different chemical classes.

Genotoxicity

We are working with external partners, including academics and ECVAM, to increase the specificity of current standard *in vitro* genetic toxicology models, and to develop new *in vitro* assays with higher relevance to human exposure.

At present, there are *in vitro* tests which can detect possible carcinogens, however, these tests are overly sensitive and can lead to classifying safe substances as hazardous.
We have been identifying key causes for the differences observed and are funding a research programme to address these.

The most relevant route of exposure of cosmetics is via the skin. Therefore, one focus of our work is to develop genotoxicity assays based on 3D human skin models.
The knowledge generated by this programme will be used to support the use of *in vitro* assays as replacements for animal experiments and, at the same time, generate test data with higher significance for dermal exposure.

Skin Tolerance

There is a joint effort to increase our understanding of how chemicals affect the skin causing allergic reactions. The goal is to develop *in vitro* assays that are capable of measuring the different biological parameters that allergens are believed to alter *in vivo*. Their ultimate aim is to integrate the data from these different assays to understand the potential risk to human health.

Two of the parameters believed to be critical for chemical-induced skin allergy are the ability of an allergen to bind to skin protein and its ability to activate dendritic cells. Dendritic cells are the key cells responsible for presenting an allergen to the immune system – the event that causes an allergic reaction. Consequently, both protein binding and dendritic cell-based assay protocols are currently being evaluated in collaboration with ECVAM.

We are also funding a wider programme of research to develop our understanding of skin allergy. These projects investigate amongst others how chemicals penetrate and permeate the skin using a computer-based modelling approach. The results of this research will be used to refine existing or develop new *in vitro* assay systems.

Systemic Toxicity

Non-animal systemic toxicity safety assessment represents an enormous scientific challenge. The progress in life sciences and genomics in recent years brought optimism among many scientists in academia, industry and legislators for securing alternative approaches that might eliminate the need for animal testing totally. In fact, some adverse conditions are now well understood at a molecular level, but a huge scientific leap in understanding is still required about how these individual mechanisms work together to trigger an overall reaction of an organism - or no reaction at all.

To further facilitate this huge scientific task Colipa has now created a research partnership with the European Commission, with a budget of EUR 50 Million for 5 years, to fund large-scale basic research projects to help further the science that will ultimately make non-animal safety assessments for systemic effects a reality. The research agenda for this joint project is being set by internationally-renowned scientists independent of the cosmetics industry. Proposals will be invited for research that meets this agenda, and Colipa will be involved throughout the process to ensure that the research funded is relevant to the safety assessment of cosmetic ingredients. The call for proposals is expected to be published by June 2009 so that research can begin early in 2010.



COLIPA – The European Cosmetics Association

Our vision

The cosmetics, perfumery and personal care industry and its products contribute significantly to individual and social well-being in everyday life.

Our mission

Colipa's mission is to help maintain and develop a sustainable, competitive and respected industry in Europe by:

- Demonstrating the inherent value of the cosmetics industry (as stated in our vision).
- Striving to create the most favourable economic and regulatory environment in which to operate.
- Advocating best practices.

Our goals

As the single recognised voice of European cosmetics, perfumery and personal care Colipa must:

- Earn public trust by fostering transparent and reliable relationships with public authorities and stakeholders. This enables Colipa to communicate most effectively the social and economic relevance of the cosmetics industry in terms of satisfying consumer needs.

- Achieve effective public policy by actively shaping workable and fair policy frameworks regulating the industry. To this end, proactive and effective networking and communication are of the essence. Opportunities for achieving alignment on an international scale should be created and optimised.

- Enhance member value by addressing their needs in an efficient and transparent way, through timely information and decision making processes. Focus on the issues and activities important to members. Make 'best use of members' expertise and dedication to optimise both efficiency and one-voice positions.

Active Corporate Members

Beiersdorf • Chanel SAS • Parfums Christian Dior • Colgate Palmolive • Coty • Elizabeth Arden • Estée Lauder Companies • GlaxoSmithKline • Henkel • Johnson & Johnson • Kanebo Cosmetics • Kao Corporation • L'Oréal • Mary Kay • Pierre Fabre Dermo-Cosmétique • Procter & Gamble • Shiseido • Unilever

Supporting Corporate Member

Avon

Active Association Members

AUSTRIA F.C.I.O. - Fachverband der Chemischen Industrie Österreichs

BELGIUM & LUXEMBOURG DETIC – Association Belgo-Luxembourgeoise des producteurs et des distributeurs de savons, cosmétiques, produits d'entretien, d'hygiène et de toilette, colles et produits connexes

BULGARIA B.N.A.E.O.P.C.- Bulgarian National Association Essential Oils, Perfumery and Cosmetics

CZECH REPUBLIC CSZV - Czech Association for Branded Products

DENMARK S.P.T. – Brancheforeningen for Sæbe, Parfume og Teknisk/Kemiske artikler

ESTONIA E.K.T.L. – Eesti Keemiatööstuse Liit

FINLAND T.Y. - Teknokemian Yhdistys Teknokemiska Föreningen

FRANCE FEBEA. - Fédération des Entreprises de la Beauté

GERMANY I.K.W. - Industrieverband Körperpflege- und Waschmittel

GREECE P.S.V.A.K. - The Hellenic Cosmetic, Toiletry and Perfumery Association

HUNGARY KOZMOS – Association of Hungarian Cosmetics, Detergents and Cleanser Industries

IRELAND I.C.D.A. - Irish Cosmetic, Detergents & Allied Products Association

ITALY UNIPRO – Associazione Italiana delle imprese Cosmetiche

LATVIA LAKIFA - Association of Latvian Chemical and Pharmaceutical Industry

LITHUANIA LIKOCHEMA - Lithuanian Cosmetics and Household Chemicals Producers Association

LUXEMBOURG & BELGIUM DETIC

THE NETHERLANDS N.C.V. - Nederlandse Cosmetica Vereniging

NORWAY K.L.F. - Kosmetikkleverandorenes Forening

PORTUGAL A.I.C. - Associaçao dos Industriais de Cosmética, Perfumaria e Higiene Corporal

ROMANIA RUCODEM- Romanian Union of Cosmetics & Detergent Manufacturers

SLOVAKIA SZZV- Slovak Association for Branded Products

SLOVENIA KPC - Association of Cosmetics and Detergents Producers of Slovenia (part of the Association of Chemical Industries)

SPAIN STANPA - Asociación Nacional de Perfumeria y Cosmética

SWEDEN K.T.F. - Kemisk-Tekniska Leverantörförbundet

SWITZERLAND SKW. - Schweizerischer Kosmetik-und Waschmittelverband

UNITED KINGDOM C.T.P.A.- Cosmetic, Toiletry & Perfumery Association

Supporting Association Members

AUSTRALIA ACCORD Australasia - Advocate for the Consumer, Cosmetic, Hygiene and Speciality Products Industry

BRAZIL ABIHPEC (sipatesp) – Associaçao Brasileira da Industria de Higiene Pessoal, Perfumariae Cosméticos

RUSSIA PCAR - Perfumery and Cosmetics Association of Russia

APCoHM - Association of Perfumery, Cosmetics and Household chemistry Manufacturers

TURKEY C.T.I.A. - Cosmetics and Toiletries Industry Association

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