



Scientific Committee on Consumer Safety

SCCS

## **Memorandum on Endocrine Disruptors**

The SCCS adopted this memorandum at its 8th Plenary meeting

on 16 December 2014

### About the Scientific Committees

Three independent non-food Scientific Committees provide the Commission with the scientific advice it needs when preparing policy and proposals relating to consumer safety, public health and the environment. The Committees also draw the Commission's attention to the new or emerging problems which may pose an actual or potential threat. They are: the Scientific Committee on Consumer Safety (SCCS), the Scientific Committee on Health and Environmental Risks (SCHER) and the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR) and are made up of external experts.

In addition, the Commission relies upon the work of the European Food Safety Authority (EFSA), the European Medicines Agency (EMA), the European Centre for Disease prevention and Control (ECDC) and the European Chemicals Agency (ECHA).

### SCCS

The Committee shall provide opinions on questions concerning all types of health and safety risks (notably chemical, biological, mechanical and other physical risks) of non-food consumer products (for example: cosmetic products and their ingredients, toys, textiles, clothing, personal care and household products such as detergents, etc.) and services (for example: tattooing, artificial sun tanning, etc.).

### Scientific Committee members

Ulrike Bernauer, Qasim Chaudhry, Pieter-Jan Coenraads, Gisela Degen, Maria Dusinska, Werner Lilienblum, Andreas Luch, Elsa Nielsen, Thomas Platzek, Suresh Chandra Rastogi, Christophe Rousselle, Jan van Benthem.

### Contact

European Commission

Health & Consumers

Directorate C: Public Health

Unit C2 – Health Information/ Secretariat of the Scientific Committee

Office: HTC 03/073 L-2920 Luxembourg

[SANCO-C2-SCCS@ec.europa.eu](mailto:SANCO-C2-SCCS@ec.europa.eu)

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### Rapporteurs

Prof. T. Platzek  
Prof. G. Degen  
Dr. W. Lilienblum  
Dr. Ch. Rousselle

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## MEMORANDUM

REGULATION (EC) No 1223/2009 on cosmetic products states in Article 15 No. 4. "When Community or internationally agreed criteria for identifying substances with endocrine-disrupting properties are available, or at the latest on 11 January 2015, the Commission shall review this Regulation with regard to substances with endocrine-disrupting properties."

The European Commission established two expert groups with orientation on various scientific and policy aspects related to this topic. The "Ad hoc group of Commission Services, EU Agencies and Member States" focused on policy issues. The "Endocrine Disruptors Expert Advisory Group" reflected on scientific issues relevant to endocrine disruptors, not specific to any regulatory framework, including advice/orientation on scientific criteria for the identification of endocrine disrupting chemicals. In both groups, industry associations, non-governmental organisations, European Commission staff, EU Agencies and Member States were represented. The outcome of "the Endocrine Disruptors Expert Advisory Group" meetings is summarised in two reports [JRC 2013a, b].

For preparing the definition of the criteria in the EU, the Commission asked the European Food Safety Authority (EFSA) to deliver a Scientific Opinion on the hazard assessment of endocrine disruptors (EDs) which was published in 2013 [EFSA 2013].

Endocrine disruptors may be identified on a case-by-case basis as substances of very high concern (SVHCs) under Article 57(f) of REACH Regulation, where there is scientific evidence of probable serious effects to human health or to the environment, which give rise to an equivalent level of concern as for CMR or PBT/vPvB substances. ECHA has set up a working group of experts on ED to deal with this issue under REACH regulation.

In June 2014, the EU Commission initiated a roadmap defining criteria for identifying endocrine disruptors mainly in the context of the implementation of the Plant Protection Product Regulation and Biocidal Products Regulation as well as for other sectorial legislations. The various approaches foreseen for the regulation of EDs in different pieces of legislation were compiled in the roadmap including the cosmetics sector. In the context of the implementation of the plant protection product regulation and the biocidal products regulation, a public consultation has been started (period of consultation from 26.09.2014 to 16.01.2015). This Memorandum is also meant as the SCCS's contribution to that public consultation.

By Commission Decision of 5 August 2008, an advisory structure of Scientific Committees and experts in the field of consumer safety, public health and the environment was set up (2008/721/EC) and three Scientific Committees were established. The Scientific Committee on Consumer Safety (SCCS) shall provide opinions on questions concerning all types of health and safety risks of non-food consumer products (for example: cosmetic products and their ingredients, etc.) and services.

The "Notes of Guidance for Testing of Cosmetic Ingredients and Their Safety Evaluation by the SCCS" are compiled by the members of the SCCS. The document is designed to provide guidance to public authorities and to the cosmetic industry in order to improve harmonised compliance with the actual cosmetic EU legislation. It contains relevant information on the different aspects of testing and safety evaluation of cosmetic substances in Europe. The "Notes of Guidance" are regularly revised and updated in order to incorporate the progress of scientific knowledge [SCCS/1501/12].

The SCCS, in accordance with EFSA and JRC, endorses the WHO/IPCS definitions:  
"A **potential endocrine disruptor** is an exogenous substance or mixture that

*possesses properties that might lead to endocrine disruption in an intact organism or its progeny, or (sub)populations."*

and

*"An **endocrine disruptor** is an exogenous substance or mixture that alters function(s) of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or (sub) populations"*.

It is emphasised that an endocrine disruptor (ED) is defined by a set of three criteria: the presence of *i*) an adverse effect in an intact organism or a (sub)population; *ii*) an endocrine activity; and *iii*) a plausible causal relationship between the two. Moreover, the SCCS supports the conclusions of EFSA that: *"Critical effect, severity, (ir)reversibility and potency aspects are part of the hazard characterisation of EDs. To inform on risk and level of concern for the purpose of risk management decisions, risk assessment (taking into account hazard and exposure data/predictions) makes best use of available information. EDs can therefore be treated like most other substances of concern for human health and the environment, i.e. be subject to risk assessment and not only to hazard assessment."* [EFSA 2013].

This position is in agreement with past and present practices of the SCCS with regard to a safety assessment for substances with potential endocrine disrupting properties. Examples of cosmetic ingredients evaluated by the SCCS and its predecessors (SCCP and SCCNFP) are several parabens [SCCP/1017/06, SCCP/1183/08, SCCS/1348/10, SCCS/1446/11, SCCS/1514/13], triclosan [SCCP/1192/08, SCCS/1414/11], homosalate [SCCP/1086/07], benzophenones, 4-methylbenzylidene camphor and 3-benzylidene camphor [SCCNFP/0483/01, SCCP/1183/08, SCCS/1513/13], melatonin [SCCS/1315/10], and cyclomethicone [SCCS/1241/10], *i.e.* substances used as preservatives, UV filters and for other functions. Data from *in vitro* studies suitable to detect different hormonal activities were reviewed together with data from *in vivo* studies relevant for detection of related developmental and reproductive toxicity as well as information on human exposure resulting from the use of these substances in cosmetic products. Thereby, conclusions are made whether endocrine/hormonal activities are the critical endpoint for assessing the safety of these substances for consumers, including vulnerable groups such as children when applicable.

Due to the ban on animal testing for cosmetic ingredients effective since 2013, it will be extremely difficult in the future to differentiate between a **potential ED** and an **ED**, if the substance is registered *solely* for use in cosmetic products [Factsheet ECHA-14-FS-04-EN, [http://echa.europa.eu/documents/10162/13628/reach\\_cosmetics\\_factsheet\\_en.pdf](http://echa.europa.eu/documents/10162/13628/reach_cosmetics_factsheet_en.pdf)]. Yet, for substances registered under REACH and also for other (mixed) uses, crucial information from animal tests is necessary for the time being.

The replacement of animal test methods by alternative methods in relation to complex toxicological endpoints remains scientifically difficult, despite the additional efforts launched at various levels [SCCS/1294/10, Adler et al. 2011, JRC 2014]. With regard to substances with endocrine activity (potential endocrine disruptors), the assessment of their impact to human health without animal data remains a challenge.

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