



NATRUE Organization - Statement

Endocrine Disrupting Chemicals in Natural and Organic Cosmetics?

Endocrine disrupting chemicals (EDCs) are rapidly gaining media attention and more and more EU member states are taking action against them in consumer products. Recently, an environmental NGO, ChemSec launched a new version of their SIN (substitute it now!) list containing 22 EDCs of primary importance. Many of these substances on the list are either used in cosmetics and many other consumer products we use on daily basis. But what are EDCs and should you be worried about them? If so, are there safer alternatives?

1. What are endocrine disrupting chemicals (EDCs)?

EDCs generally refer to synthetic substances that have hormonal activities and therefore might interfere with either the production or the activity of hormones within the endocrine system, leading to adverse effects. Among the substances suspected to be EDCs are bisphenol A, phthalates, parabens, several synthetic UV-filters, and pesticides. Many of these chemicals have been linked to developmental, reproductive, neural, immune, and other aberrations in wildlife and laboratory animals.

As many other EDCs are also known to exert toxicity at low doses and may pose a threat to future generations, many scientists, NGOs and consumer organisations urge industries and regulatory bodies to adopt the precautionary principle and replace EDCs entirely wherever possible. However, due to lack of an agreed and harmonised definition of EDCs, and their huge economical relevance, many such chemicals are fiercely defended by some industries. Furthermore, as it is difficult to prove the link between EDC occurrence and negative health impacts, regulatory bodies have been facing a real challenge to set a framework to limit their use. A well-known example is Diethylstilbestrol (DES) which was prescribed to millions of pregnant women in America between 1938 and 1971. DES came to public attention long after its use because their daughters showed increased rates of a rare cervical cancer called clear-cell adenocarcinoma (CCA). While scientists continue to work towards a more complete and accurate risk assessment of EDCs, reducing their exposure from daily products is the easiest thing you can do to reduce health risks.

2. What about plant derived ingredients with hormonal activity?

Some natural substances show an influence on endocrine activity, as for example, plant estrogens (e.g. isoflavones) found in soy, beans, seeds and nuts. The role of phytoestrogens in human health is still somewhat controversial and the potential therapeutic benefits of phytoestrogens are not clear due to conflicting results. Some studies show beneficial effects (e.g. lowering cancer risks and as postmenopausal treatment), while others show the opposite effects. Though it may not be advisable to consume excessive amount of phytoestrogens, especially for vulnerable population groups, it is unlikely that phytoestrogens are responsible for increased incidents of EDC related diseases which have been observed in the last decades. These natural substances have existed long before synthetic EDCs, and the human body developed ways to eliminate them efficiently. For example, most common plant estrogens in soy have a half-life of 6-8 hours in our body compared to



NATRUE Organization - Statement

10-12 years for EDC pesticide, DDT's. Furthermore, it is shown that a topical application of isoflavone glycosides, which are the most commonly used form in cosmetic applications, cannot penetrate the skin and therefore will not exert significant systemic effects.

3. Political activities around EDCs in cosmetics

Considering the risks which have been pointed out by scientists, the regulatory development to restrict use of EDCs in consumer products has been rather slow. The first alarm was back in 1996 when the book "Our Stolen Future" was published. But still today e.g. millions of tons of bisphenol A are produced globally, used in plastic materials and eventually released into the environment.

However, things are about to change now. Some EU member states are introducing measures to limit the exposure to EDCs, especially to vulnerable population groups. For example, Denmark banned the use of two parabens in personal care products intended for children under the age of three. Furthermore, shortly after the launch of new SIN list, French MPs voted to ban three groups of EDCs; phthalates, parabens and alkylphenols and proposed to ban bisphenol A in all food contact materials. More recently, the French Agency for the Safety of health Products (AFSSAPS) decided to ban an UV-Filter, 3-benzylidene-camphor as this substance is suspected to cause endocrine disruption and affect fertility. Slowly but surely we see the restriction of EDCs at European level: The EU Commission is now considering the substances on the SIN list to be included as substances of very high concerns (SVHCs) under REACH.

4. NATRUE label as an assurance

The NATRUE label helps you to make a conscious choice of your personal care products. In fact, NATRUE does not allow any synthetic chemicals that can exhibit EDC activity: no preservatives like parabens, no synthetic UV-filters and no phthalates in fragrances. Preservatives are only allowed if they are nature identical. Instead of using chemical UV-filters, NATRUE certified products contain mineral UV-filters which do not penetrate into the skin. The pleasant natural scent comes from plant-derived essential oils. So, with NATRUE certified products, you can be completely confident that they do not contain substances on the SIN-list.

5. NATRUE members' commitment

[NATRUE members](#) go even further with the authenticity of natural cosmetics containing pure natural ingredients. They believe in cosmetics based on high quality natural ingredients. Wherever possible, our member companies promote the use of organically grown natural ingredients which are produced without synthetic pesticides. With NATRUE certified products, you can enjoy all the benefits of state-of-the-art cosmetics while feeling good about yourself knowing that your purchase will also support the protection of natural resources, biodiversity, animal welfare and rural development. You can be truly confident about your conscious choice!

Conclusion

NATRUE certified cosmetics are free of synthetic chemicals claimed to be EDCs. Unlike other industry sectors which may be facing difficulty to substitute the



NATRUE Organization - Statement

substances on the SIN list, we are pleased to offer the consumers real alternatives of personal care products which do not contain these substances. Vigilant consumers can rely on the NATRUE label when choosing personal care products.

References

- The European Commission Staff Working document on the implementation of the “Community Strategy for Endocrine Disrupters”-a range of substances suspected of interfering with the hormone systems of humans and wildlife, SEC (2007) 1635. Available from DG Environment’s website at http://ec.europa.eu/environment/endocrine/documents/sec_2007_1635_en.pdf
- Statement from 12 NGOs available at: http://www.env-health.org/IMG/pdf/NGOs_requirements_EDCs_May_2011_FINAL_with_BEUC.pdf
- Daniel Schmid, Fred Züllli, Hans-Peter Nissen and Hanpeter Prieur (2003) Penetration and metabolism of Isoflavones in Human Skin. *Cosmetics & Toiletries magazine*, Vol. 118, No.9, p.71-74.
- Theo Colborn; Dianne Dumanoski; and John Peter Meyers, 1996. “Our Stolen Future: Are we threatening our fertility, intelligence, and survival?-A Scientific Detective Story”, ISBN 0-525-93982-2.
- In addition to SIN list, more extensive list of EDC candidate is available from TEDX website at <http://www.endocrinedisruption.com/interactive-tools/tedx-list-of-potential-endocrine-disruptors/search-the-tedx-list>

About NATRUE:

NATRUE is an international non-profit organisation located in Brussels. It has promoted and protected authentic natural and organic cosmetics since 2007. The NATRUE Label sets a high standard which guarantees quality and integrity so consumers worldwide may identify and enjoy natural and organic cosmetics truly worthy of that name. Currently over 6,200 products and more than 270 raw materials are NATRUE certified. Products are listed on the publicly accessible database in our website (www.natrue.org).