



Commentary

Opinion of the Scientific Committee on Consumer Safety (SCCS) – Revision of the opinion on the safety of aluminium in cosmetic products

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DG Health and Consumers, unit B2 Health Technology and Cosmetics, received in September 2011 a report submitted by the 'Agence française de sécurité sanitaire des produits de santé (AFSSAPS)' which raises concern on the use of aluminium in antiperspirants and deodorants. Other Member States asked to pay attention to aluminium present in other cosmetic products, such as lipsticks and toothpastes.

In October 2012, the Commission received a 'Scientific discussion paper on systemic exposure to Aluminium from dermal exposure to soluble salts' by Cosmetics Europe, in which they provide information on the wide variety of cosmetic ingredients containing Aluminium, which perform several different functions in several product types. In particular, the contribution from Cosmetics Europe focuses on the following:

Water-soluble aluminium containing ingredients that include: Simple Inorganic salts; Simple Organic Salts; Aluminium Benzoate, Chlorohydrates. These ingredients can be used in skin care products. Functions reported in Cosing are astringent, buffering agent, deodorant, antiperspirant.

Water-insoluble aluminium containing ingredients that include: Minerals, Glasses and Clays; Aluminium Lakes; Carbohydrates; Fatty acids salts.

The Insoluble Minerals, Glasses and Clays are typically added to cosmetic products as bulking agents, coloured pigments, and sometimes as mild abrasives. Aluminium colloidal colorants 'lakes' are mainly used in lipsticks.

According to Cosmetics Europe, the several physico-chemical properties of aluminium in the different chemical compounds seem to make it difficult to determine dermal and oral bioavailability, leading to uncertainty in the exposure assessment.

In June 2013, the Commission received a dossier on "the risk assessment of Aluminium exposure through food and the use of cosmetic products in the Norwegian population" by the Norwegian Scientific Committee for Food Safety. Shortly summarized, the exposure to aluminium through food and the use of cosmetic products in the Norwegian population was calculated and compared to two toxicological reference values: the tolerable weekly intake (TWI) of 1 mg Al/kg bw/week established by EFSA (2008), and the provisional tolerable weekly intake (PTWI) of 2 mg Al/kg bw/week established by JECFA (2011). The TWI/PTWI values are based on studies of developmental neurotoxicity in laboratory animals. In cosmetics, lipstick/lip gloss, antiperspirants and a few brands of whitening toothpaste were considered the relevant sources of exposure to aluminium. The Norwegian risk assessment aims at showing that cosmetic products, and in particular antiperspirants, contribute considerably more than diet to the total systemic exposure to aluminium in persons using such products.

Aluminium is a known systemic toxicant at high doses.

The SCCS is of the opinion that due to the lack of adequate data on dermal penetration to estimate the internal dose of aluminium following cosmetic uses, risk assessment cannot be performed.

Therefore internal exposure to aluminium after skin application should be determined using a human exposure study under use conditions.

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Confusion exists with respect to the correct terminology for underarm deodorants that are actually present on the market since they often contain both, typical deodorant as well as typical anti-perspirant ingredients.

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Transparency document

Transparency document related to this article can be found online at <http://dx.doi.org/10.1016/j.yrtph.2015.09.006>.

Reference

http://ec.europa.eu/health/scientific_committees/consumer_safety/docs/sccs_o_153.pdf.