Parabens

Parabens are extensively used in personal care products and cosmetics. The last decade has provided increasing scientific evidence of their endocrine disrupting properties and increased consumer demand for paraben-free products. Denmark recently became the first country to ban parabens in products for children.

PARABENS ARE COMMON COSMETIC PRESERVATIVES

Parabens are a group of molecules used as preservatives because of their antimicrobial properties. Parabens have been extensively used in personal care products and cosmetics for a long time and are frequently found in human and environmental samples. One of the most commonly used parabens, propylparaben, has in several studies been detected in more than 90% of human urine samples.. The four most commonly-used parabens are methyl- and ethylparaben ("short-chained") and propyl- and butylparaben ("long-chained").

PARABENS POSSESS ENDOCRINE DISRUPTING PROPERTIES

Parabens interfere with our endocrine system. They are oestrogenic, meaning that they mimic the effects of natural oestrogen in the body. Propyl- and butylparaben are more oestrogenic than methyl-and ethylparaben. Parabens are also anti-androgenic, decreasing sperm function and altering levels of metabolic hormones. Rats exposed to parabens during pregnancy give birth to fewer pups, with both male and female pups showing malformed reproductive organs.

FROM CONTROVERSY TO DANISH BAN

A study published in 2004 found parabens to be present in breast cancer tissues, suggesting a connection between parabens in deodorants and breast cancer. The debate following this publication put parabens in focus for consumers and regulatory authorities, initiating further research on parabens.

In 2009 the Danish National Food Institute published a risk assessment for parabens, including more recent studies showing endocrine disrupting properties of parabens in animals, and also studies on uptake and metabolism of parabens in humans. This risk assessment concluded that the oestrogenic burden from paraben exposure may exceed the amount of natural

oestrogen in children, and that for propylparaben the safety margin between possible levels in humans and effect concentrations in young animals is very small.

In December 2010 the Scientific Committee on Consumer Products (SCCP) of the European Union published an updated opinion on parabens. They concluded that there is not enough data to perform risk assessments for propylparaben and butylparaben in humans, and meanwhile the maximum concentration of these parabens in consumer products should be lowered from 0.8% to 0.19%.

In March 2011 Denmark prohibited propylparaben and butylparaben in products for use by children younger than three years of age.

PARABENS ON THE SIN LIST

Propylparaben and butylparaben are included on the SIN 2.0 list due to their endocrine disrupting properties. These are the most urgent parabens to phase out. However, the other parabens have also shown endocrine disrupting properties, and cannot be regarded as safe substitutes for the parabens on the SIN List.

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ChemSec, Box 7005, SE-402 31 Göteborg, Sweden
Tel: +46(0)31-711 04 95
E-mail: info@chemsec.org
www.chemsec.org

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