



Personal Care Products Council
Committed to Safety,
Quality & Innovation

September 16, 2016

Via Electronic Mail

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HWTR Program
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Re: Comments on Children's Safe Products Act Rule Update

Dear Ms. Steward:

The Personal Care Products Council (Council)¹ is pleased to submit the following comments in response to the Washington Department of Ecology's (DOE) proposal to update the Reporting List of Chemicals of High Concern to Children (CHCC) contained in the Children's Safe Products Act² (CSPA). Our member companies are involved in the manufacture and distribution of over-the-counter (OTC) drug products, cosmetics, toiletries, fragrances, and ingredients in Washington and throughout the United States, and therefore have a strong interest in this process.

As part of the proposed CHCC update, DOE and the Washington Department of Health will review recent science and data to determine if any chemicals should be added to or deleted from the CHCC list. To that end, the Council respectfully submits the following information in support of removing parabens

¹Based in Washington, DC, the Personal Care Products Council is the leading national trade association representing the global cosmetic and personal care products industry. Founded in 1894, the Council's 600 member companies manufacture, distribute, and supply the vast majority of finished personal care products marketed in the U.S. As the makers of a diverse range of products millions of consumers rely on every day, from sunscreens, toothpaste and shampoo to moisturizer, lipstick and fragrance, personal care products companies are global leaders committed to product safety, quality and innovation.

² Chapter 173-334 WAC Children's Safe Products – Reporting Rule.

(methylparaben, ethylparaben, propylparaben, butylparaben)³; their common metabolite para-hydroxybenzoic acid; and 2-ethylhexyl-4-methoxycinnamate⁴ as CHCC.

PARABENS

Listing Criteria

Parabens were originally added to the CHCC largely because of their designation as Category 1 Endocrine Disruptors by the European Union.⁵ It is important to stress that designation as a Category 1 substance in that context does not necessarily mean that there is final proof that the substances is an endocrine disruptor; rather, the designation merely indicates that there is at least one study of a living organism which has documented some measure of endocrine activity. Further, continued reliance on the EU designation does not reflect the ongoing debate about the proper definition of “endocrine disruptor.” Currently, the European Commission is in the process of refining the definition of “endocrine disruptor,” and the method utilized in designating a substance as an endocrine disruptor.⁶ Moreover, the European Commission recently updated its list of priority chemicals to include 66 chemicals, none of which were parabens or para-hydroxybenzoic acid.⁷

³ Propyl paraben (CAS 94-13-3) Butyl paraben (CAS 94-26-8) Methyl paraben (CAS 99-76-3) Ethyl paraben (CAS 120-47-8) para-Hydroxybenzoic acid (CAS 99-96-7).

⁴ CAS 5466-77-3.

⁵ “The EU List of Potential Endocrine Disruptors”, at <http://eng.mst.dk/topics/chemicals/endocrine-disruptors/the-eu-list-of-potential-endocrine-disruptors/> (Accessed Sept. 14, 2016).

⁶ See “Minutes: Ad-Hoc Working Group meeting of the Advisory Group on the Food Chain, Animal, and Plant Health Criteria used to Identify Endocrine Disruptors,” European Commission (July 18, 2016) available at http://ec.europa.eu/dqs/health_food-safety/dqs_consultations/docs/dqs_consultations_working-groups_20160630_sum.pdf (Accessed Sept. 15, 2016) (“The Chair stressed he valued very much the contributions provided by interested parties. He hoped that the process would result in practical ED criteria that will help to protect the health of people and the environment.”)

⁷ Annex 15, “List of 66 substances with classification high, medium, or low exposure concern,” available at http://ec.europa.eu/environment/archives/docum/pdf/bkh_annex_15.pdf (Accessed Sept. 14, 2016).

Finally, if part of the calculus in listing a substance as a CHCC is the relative degree of exposure, parabens have decreasing levels of reported uses based on manufacturer surveys collected by the Washington DOE. For example, with a reporting date range between 9/10/2012 and 9/14/2016 the substance phenol was reported 264 times compared to 234 reported uses of propyl paraben during the same reporting range. Critically, however, with a more current and restrictive date range of 9/10/2014-9/14/2016 the reported uses are 181 phenol and 97 for propyl paraben.⁸

Safety

Parabens have been reviewed by international authoritative bodies and found to be safe for use in cosmetics, food and medical products. These comments will briefly summarize reviews and address the main safety issues that have been raised regarding the parabens.

The Cosmetic Ingredient Review⁹ (CIR) has reviewed the safety of parabens, including methyl-, ethyl-, propyl- and butylparaben, and concluded they were safe for use in cosmetic products (CIR, 1984)¹⁰. In 2006, CIR re-opened the safety assessment for parabens to examine more recent data and exposure estimates for cosmetic uses. After considering, in particular, the potential exposure to sensitive subpopulations (i.e., women and infants), CIR once again determined that there was no need to change its original conclusion that parabens are safe as used in cosmetics (CIR, 2008)¹¹.

⁸ "Children's Safe Reporting Act Reported Data," at <https://fortress.wa.gov/ecy/cspareporting/Reports/ReportViewer.aspx?ReportName=ChemicalReportByName> (Accessed Sept.14, 2016).

⁹ The Cosmetic Ingredient Review (CIR) Expert Panel is an independent, non-profit panel of scientific experts – with U.S. Food and Drug Administration officials and a representative of the Consumer Federation of America participating as liaison members – that regularly assesses the safety of numerous cosmetic ingredients and publishes its findings in open, peer-reviewed literature. More information is available at www.cir-safety.org

¹⁰ Cosmetic Ingredient Review. *J. Amer. Coll. Toxicol. Final Report on the Safety Assessment of Methylparaben, Ethylparaben, Propylparaben, and Butylparaben*, 147-209, Vol. 3(5) (1984).

¹¹ Cosmetic Ingredient Review. *Int'l. J. Toxicol. Final Amended Report on the Safety Assessment of Methylparaben, Ethylparaben, Propylparaben, Isopropylparaben, Butylparaben, Isobutylparaben, and Benzylparaben as used in Cosmetic Products*, 1-82, Vol. 27(suppl 4) (2008).

The Scientific Committee on Consumer Products in the European Union (SCCP, now SCCS) affirmed the safety of methylparaben and ethylparaben in 2005, concluding that the two parabens could be safely used at levels up to 0.4% (SCCP, 2005)¹². However, the same opinion concluded that more data was needed to evaluate propylparaben and butylparaben. Additional data was submitted, and in 2010, the SCCS concluded the sum of the individual concentrations of propyl- and butylparaben should not exceed 0.19%, based on a “conservative choice for the calculation of the Margin-of-Safety (MoS) of Butyl- and Propylparaben” (emphasis in original)¹³. The issue of concern related to reports of toxicity in juvenile male rats (decreased sperm counts and decreased testosterone levels).^{14 15 16} However, these results were not replicated in larger studies conducted under Good Laboratory Practice (GLP) conditions and evaluating the same endpoints.^{17 18} Regarding one of these studies (Gazin et al., 2013), the SCCS concluded that “[t]he GLP study on reproductive toxicity has been well conducted and is considered

¹² Scientific Committee on Consumer Products, *Scientific Committee on Consumer Products Extended Opinion on the Safety Evaluation of Parabens. SCCP/0873/05*, available at http://ec.europa.eu/health/archive/ph_risk/committees/04_sccp/docs/sccp_o_019.pdf (2005)

¹³ Scientific Committee on Consumer Products, *Scientific Committee on Consumer Safety Opinion on Parabens. SCCS/1348/10 Revision 22 March 2011*, available at http://ec.europa.eu/health/scientific_committees/consumer_safety/docs/sccs_o_041.pdf (2010).

¹⁴ Oishi S., *Effects of butylparaben on the male reproductive system in rats*, *Toxicology and Industrial Health*, 31-39, Vol. 17 (2001).

¹⁵ Oishi S., *Effects of butyl paraben on the male reproductive system in mice*, *Arch Toxicol* 423-29. Vol. 76 (2002), p. 423 - 429.

¹⁶ Oishi S., *Effects of propyl paraben on the male reproductive system*, *Food Chem Toxicol.*, 1807-13, Vol. 40– (2002).

¹⁷ Hoberman, A.M., Schreur, D.K., Leazer, T., Daston, G.P., Carthew, P., Re, T., Loretz, L., and Mann, P. (2008) *Lack of effect of butylparaben and methylparaben on the reproductive system in male rats*. *Birth Defects Res. B Dev. Reprod. Toxicol.*,j Vol. 83, 123-33 (2008).

¹⁸ Gazin, V., Marsden, E., and Marguerite, F. *Oral Propylparaben Administration to Juvenile Male Wistar Rats Did Not Induce Toxicity in Reproductive Organs*, *Toxicol. Sci.* 136 (2), 392-401 (2013).

appropriate to refute the study of Oishi (2002) which reported reproductive toxicity in juvenile male rats.”¹⁹

Methyl- and propylparaben were both reviewed in 2015 by the Committee for Medicinal Products for Human Use (CMPH) of the European Medicines Agency, and both were found safe for use in oral pharmaceutical formulations.²⁰ Similar to the SCCS, CMPH recognized the Gazin et al. study as a well conducted study refuting the earlier reports of effects on sperm counts described in studies by Oishi. The review concluded that ‘a conservative NOEL of 100 mg/kg/day has been determined for propylparaben’ based on effects on the female reproductive system (*the endpoint of estrogenicity is discussed below*). In the case of methylparaben, the review concluded that it ‘has not been associated with adverse effects on the male and female reproductive organs in juvenile rats or in embryo-foetal development studies.’

The allegation that parabens are potential “environmental estrogens” deserves additional mention. This concern originated from studies that suggested parabens exhibit very weak estrogenic activity in experimental models. It is instructive to cite U.S. FDA’s public statement regarding paraben safety in cosmetic products²¹ :

“FDA is aware that estrogenic activity in the body is associated with certain forms of breast cancer. Although parabens can act similarly to estrogen, they have been shown to have much less estrogenic activity than the body’s naturally occurring estrogen. For example, a 1998 study (Routledge et al., in Toxicology and Applied Pharmacology) found that the most potent paraben tested in the study, butylparaben, showed from 10,000- to 100,000-fold less activity than

¹⁹ Scientific Committee on Consumer Safety, *Scientific Committee on Consumer Safety Opinion on Parabens. Updated request for a scientific opinion on propyl- and butylparaben*. SCCS/1514/13, available at http://ec.europa.eu/health/scientific_committees/consumer_safety/docs/sccs_o_132.pdf (2013).

²⁰ European Medicines Agency, Committee for Medicinal Products for Human Use. 2015. Reflection paper on the use of methyl- and propylparaben as excipients in human medicinal products for oral use. http://www.ema.europa.eu/docs/en_GB/document_library/Scientific_guideline/2015/11/WC500196733.pdf

²¹ U.S. Food and Drug Administration, *Parabens* (Mar. 24, 2006), available at <http://www.fda.gov/Cosmetics/ProductsIngredients/Ingredients/ucm128042.htm> (last modified Oct.31, 2007).

naturally occurring estradiol (a form of estrogen). Further, parabens are used at very low levels in cosmetics. In a review of the estrogenic activity of parabens, (Golden et al., in *Critical Reviews in Toxicology*, 2005) the author concluded that based on maximum daily exposure estimates, it was implausible that parabens could increase the risk associated with exposure to estrogenic chemicals. FDA believes that at the present time there is no reason for consumers to be concerned about the use of cosmetics containing parabens.”

Recent publications also provide comprehensive reviews of the estrogenic potential of the parabens, as well as reviews of male reproductive toxicity.^{22 23 24}

It should be further noted that Parabens are approved by FDA as food preservatives, and methyl- and propylparaben – both of which are listed by DOE as a CHCC – are on the FDA’s “Generally Recognized As Safe” (GRAS) list as Category 1 substances, which according to FDA means:

“There is no evidence in the available information on [the substance] that demonstrates, or suggests reasonable grounds to suspect, a hazard to the public when they are used at levels that are now current or might reasonably be expected in the future.”²⁵

Methyl-, ethyl-, propyl- and butyl paraben, as well as their common metabolite p-hydroxybenzoic acid, are currently listed by DOE as CHCCs. The Council believes these listings are not warranted based on the available scientific data, and recommends that they be removed from the CHCC list.

²² Golden, R., Gandy, J., and Vollmer, G., *A Review of the Endocrine Activity of Parabens and Implications for Potential Risks to Human Health.*, *Critical Rev Toxicol.* Vol. 35, p. 435-458 (2005).

²³ Boberg, J., Taxvig, C., Christiansen, S., and Hass, U., *Possible endocrine disrupting effects of parabens and their metabolites.*, *Repro. Toxicol.*, Vol. 30, p. 301-312 (2010).

²⁴ Witorsch, R.J. and Thomas, J.A. (2010) Personal care products and endocrine disruption: A critical review of the literature. Vol. 40(S3), p. 1–30.

²⁵ “Select Committee on GRAS Substances (SCGOS) Opinion: Methyl Paraben, Propyl Paraben (1972), available at <http://www.fda.gov/Food/IngredientsPackagingLabeling/GRAS/SCOGS/ucm260472.htm> (Accessed Sept. 15, 2016).

2-ETHYL-HEXYL-4-METHOXYCINNAMATE

DOE also lists 2-ethyl-hexyl-4-methoxycinnamate (also known as octinoxate when used as an active drug ingredient) on its list of CHCC. Ethylhexyl Methoxycinnamate is an ester of 2-ethylhexyl alcohol and methoxycinnamic acid. Ethylhexyl Methoxycinnamate may be used as an active ingredient in OTC drug products, including use as an active drug ingredient in many sunscreen formulations up to a concentration of 7.5 percent.²⁶ Furthermore, FDA has recognized and approved of the combination of various active drug ingredients, including octinoxate, in sunscreen formulations provided that the applicable concentrations and required SPF levels are met.²⁷

Ethylhexyl Methoxycinnamate was originally listed as a CHCC because of possible estrogenic properties, and its designation as a Category 1 Endocrine Disruptor by the European Union in a 2002 Report (“2002 EU Report”). At the time of the 2002 EU Report, designation as a Category 1 Endocrine Disruptor only required “at least one study providing evidence of endocrine disruption in an intact organism.”²⁸ At the same time, a 2002 EU Report also acknowledged that such an approach was “not a formal weight of evidence approach” (emphasis added).²⁹ Moreover, Ethylhexyl Methoxycinnamate is not on the 2016 updated EU list of priority chemicals.³⁰

²⁶ TITLE 21--FOOD AND DRUGS, Sec. 352.50 Principal display panel of all sunscreen drug products (April 1, 2015, available at <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm?fr=352.50>

²⁷ *Id.*

²⁸ European Commission DG Environment, *Endocrine disruptors: study on gathering information on 435 substances with insufficient data. Final report B4-3040/2001/325850/MAR/C2*, page ix, available at http://ec.europa.eu/environment/chemicals/endocrine/pdf/bkh_report.pdf (2002).

²⁹ European Commission DG Environment, *Endocrine disruptors: study on gathering information on 435 substances with insufficient data. Final report B4-3040/2001/325850/MAR/C2*, page ix, available at http://ec.europa.eu/environment/chemicals/endocrine/pdf/bkh_report.pdf (2002).

³⁰ Annex 15, “List of 66 substances with classification high, medium, or low exposure concern,” available at http://ec.europa.eu/environment/archives/docum/pdf/bkh_annex_15.pdf (Accessed Sept. 14, 2016).

In studies completed in 2011-2012 and sponsored by the U.S. National Institutes of Environmental Health,³¹ it was concluded that oral administration of oxybenzone, octylsalate, octylmethoxycinnamate or octocrylene, up to the limit dose level of 1000 mg/kg did not demonstrate androgen antagonist activity.

Ethylhexyl Methoxycinnamate is approved as a UV filter in the European Union as well as in the U.S. The evaluation of its safety by the Scientific Committee on Cosmetic and Non-food Products (SCCNFP) included specific consideration of endocrine disruption.³² The review reports the results of a uterotrophic assay, noting that 2-ethyl-hexyl-4-methoxycinnamate “did not induce a uterotrophic effect and no histopathologic changes could be shown in the uteri concerned.” The review concluded that 2-ethyl-hexyl-4-methoxycinnamate had an acceptable margin of safety for all endpoints, including estrogenicity.

Conclusion

As stated previously, the aim and focus of the program should be on maintaining a list of CHCCs that is based upon sound scientific data and principles. This type of approach would address both the public safety and health concern, while also providing assurance to industry that the regulations are not implemented on an ad hoc basis. When there is a consistent absence of *scientifically valid* data about a chemical’s potential for harm, despite years of inclusion as a CHHC, continuing to list such a substance frustrates the aim of the CSPA, diverts public funding and research from consideration of new priority chemicals, and creates an unnecessary burden upon manufacturers and distributors.

The Council would like to thank DOE for the opportunity to provide comments, and welcomes the opportunity to work with DOE on this and future rulemakings. Our industry recognizes the critical need

³¹ Referenced at <http://ntp.niehs.nih.gov/testing/status/agents/ts-m20239.html>. The full report and its data can be requested through the relevant and applicable public disclosure statutes.

³² *Opinion on the Evaluation of Potentially Estrogenic Effects of UV-Filters*, adopted June 12, 2001, available at: http://ec.europa.eu/health/scientific_committees/consumer_safety/opinions/sccnfp_opinions_97_04/sccp_out145_en.htm

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to update a chemical management program in order to improve public health and the environment in the State of Washington.

Very truly yours,

A handwritten signature in black ink, appearing to read "Thomas F. Myers". The signature is fluid and cursive, with a long horizontal stroke at the end.

Thomas F. Myers
EVP – Legal & General Counsel