

Personal Care Products

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Reason for Standard

There are approximately 12,000 chemicals available for use in personal care products today, few of which have been thoroughly tested for their impacts on human health.ⁱ While the Food and Drug Administration (FDA) has overseen cosmetics and personal care products since the 1930s, their ability to actually regulate the ingredients is severely limited.ⁱⁱ

Consumer products made from synthetic petroleum-derived chemicals rose sharply following WWII, which found their way into new cosmetic and personal care products.ⁱⁱⁱ Decades later, formulations have changed little and most products available today contain dozens of toxic chemicals that can have short or long-term health consequences, along with negative ecological impacts.^{iv}

The toxic chemicals found in personal care products have been linked to a myriad of health concerns, including cancer, developmental disorders, birth defects, obesity, skin problems, and allergies.^{v,vi,vii} Attributing direct causation of disease and illness to toxic chemical exposure has been extremely difficult, but growing scientific evidence showing correlation between increased rates of cancer, reproductive difficulties, allergies, skin conditions, and developmental impairment in humans and wildlife as toxic chemical exposure has increased is extremely strong.^{viii} Real-world evidence has also demonstrated that long-term exposure to chemicals is having significant health consequences on humans and wildlife, yet, the two government agencies responsible for chemical management and oversight, the Environmental Protection Agency (EPA) and the FDA, have been either reluctant or unable to set strong regulations and restrictions around their use.^{ix,x} New legislation at the state and federal level to protect consumers has been gaining traction since the early 2000's, but adoption has been slow, and passage of such laws has been met with staunch industry opposition.^{xi}

Over the past few decades, the industry and consumer demand for less toxic personal care products has grown significantly, due to the efforts of environmentalists, consumer activists, and toxicologists bringing to light the health and ecological implications of toxic chemicals. This growth is beneficial, as more options for safer products are available, however, one consequence that must be mitigated is an increased risk of greenwashing.

PCC sets high standards with clear requirements for the ingredients and products we sell in our health and body care department to try to fill some of the gaps in the industry regulations that fail to safeguard human and ecological health. To ensure PCC is selling safe products, we abide by the precautionary principle and prohibit ingredients that are known or suspected to be toxic to humans and/or the environment.

Scope

This standard applies to cosmetics, personal care products, and essential oils sold in the Health and Body Care Department (HBC). For a detailed list of all product types within the scope of this standard, see [Appendix-Section A](#).

Standard

1. Products and General Criteria

- 1.1. Products must not contain any substances on the [list of Unacceptable Ingredients](#) for the Health and Body Care Department unless the product qualifies as an exception for the ingredient.

- 1.2. Vendors must abide by [PCC's Packaging Standard](#) and are encouraged to minimize packaging and use materials that are compostable, made from recycled content, reusable and/or easily recycled by the consumer after use when possible.
- 1.3. Vendors must abide by [PCC's Fair Labor Standard](#); PCC will not sell products from vendors with a documented history of human rights abuses in their supply chain.
- 1.4. PCC gives priority to products using ingredients that are certified USDA organic, Non-GMO Project Verified, or contain other third-party certifications verifying sustainability.
- 1.5. PCC gives preference to locally produced products and locally sourced ingredients.

2. Labeling and Formulary Changes

- 2.1. Vendors must inform PCC, in writing, of any formulary changes, such as adding or replacing ingredients, at least 30 days prior to the shipment of the altered product.
- 2.2. Vendors must adhere to the following naming and labeling conventions to be considered for sale at PCC:
 - 2.2.1. All ingredient names must comply with the most recent edition of the International Cosmetics Ingredient Dictionary and Handbook and must be listed using the International Nomenclature for Cosmetic Ingredients (INCI) naming system. Addition of common name or other ingredient information is acceptable and encouraged if it provides greater transparency on sourcing and materials for consumers.
 - 2.2.2. Mixtures must have their components disclosed and listed using their INCI names; addition of common name or other ingredient information is acceptable and encouraged if it provides greater transparency on sourcing and materials for consumers.
 - 2.2.3. All botanicals must be listed as their scientific name followed by the chemical modification (e.g., essential oil). Vendors may use the common name if they so choose.

3. Ingredient Requirements

- 3.1. PCC does not accept products with ingredients made from petrochemicals, except in box hair dye.
- 3.2. PCC discourages the use of synthetic ingredients and encourages vendors to use non-synthetic ingredients whenever possible.
- 3.3. PCC does not accept products with ingredients that have well-documented connections with impacts on human health (e.g., endocrine disruption), or the environment.
 - 3.3.1. Substances classified as known or probable human carcinogens according to the U.S. Food and Drug Administration (FDA), Environmental Protection Agency (EPA), International Agency for Research on Cancer (IARC), National Toxicology Program (NTP), or a similar agency are prohibited.
 - 3.3.2. PCC does not accept products containing synthetic ingredients that are known or probable allergen inducers and skin sensitizing agents, such as methylisothiazolinone.
- 3.4. PCC does not accept products with ingredients produced through potentially harmful chemical processing methods, including ethoxylation and hexane extraction.
- 3.5. PCC does not accept any products using pressurized aerosol sprays and gas propellants (e.g., propane or isobutane).
- 3.6. PCC does not accept products with engineered nanoparticles.
- 3.7. PCC does not accept products that contain microbeads.
- 3.8. PCC encourages vendors to minimize the use of synthetic preservatives and does not permit products with any parabens, formaldehyde releasers, or isothiazolinones. Certain synthetic preservatives are permitted with use restrictions that are outlined under the [list of Unacceptable Ingredients](#) for Health and Body Care.
- 3.9. PCC does not accept products with synthetic or artificial fragrances and flavors.

3.9.1. Scents and flavors must be derived from natural sources, such as essential oils, fractions of essential oils, botanicals, or flavorings acceptable in USDA Organic products.

3.10. PCC does not accept products that contain fluorinated compounds, or PFAS.

3.11. PCC does not accept products with ingredients that may be contaminated with 1,4-dioxane, ethylene oxide, or other harmful byproducts.

3.12. Pigments and ingredients containing heavy metals, including lead, mercury, and chromium are prohibited.

4. Animal Testing and Animal-Derived Ingredients

4.1. PCC does not accept any products that have been tested on animals.

4.2. Animal-derived ingredients of endangered or threatened species are not accepted.

5. Sunscreens

5.1. PCC does not accept sunscreen products that contain any UV filtering chemicals, such as oxybenzone and avobenzone.

5.2. PCC does not accept sunscreens or skin products marketed for sun protection that contain retinol or Vitamin A.

5.3. PCC does not accept aerosol or spray sunscreens.

Standard-Specific Glossary

Carcinogens are substances capable of causing cancer, either through tumor formation, genetic mutation, or disruption of cellular processes. While some substances, like radiation exposure, are clear and undeniable causes of cancer, other substances are suspected as being carcinogenic based on limited human data, animal studies, and research indicating similarities to other known carcinogens. Exposure to such substances, such as parabens, may not lead to cancer for decades or be the sole contributor to the development of a cancer, making it difficult to establish proof for many toxic chemicals that are most likely contributing to rising cancer rates due to chronic and low-level exposure.

Essential oils are concentrated oils produced from plants and botanicals, which contain the active components of the source material, the most prominent one being scent. These volatile oils are extremely potent; none should be ingested and only a select few have been deemed safe to use without dilution. Most essential oils should be used at concentrations of 2-5% depending upon the product and its intended use.

Endocrine Disrupting Chemicals (EDCs) are substances that interfere with the body's endocrine system, either by mimicking or blocking hormones, or by interrupting biological processes involving hormones. The endocrine system is an information-signaling group of glands throughout the body that secretes hormones to regulate growth, reproductive function, sexual development, mood, metabolism, and sleep. It's comprised of the thyroid, parathyroid, adrenal, and pituitary glands, as well as the pancreas, ovaries, and testicles. The endocrine system controls a huge range of biological functions and is imperative to normal development. EDCs, which are usually human-made chemicals like pesticides, are associated with a plethora of health risks including cancer, birth defects, obesity, diabetes, early puberty, neurological development delays, and immune system problems. Examples of EDCs include pesticides (DDT and atrazine), PCBs, BPA, phthalates, and triclosan.

Heavy metals are naturally occurring elements found in the earth's crust and are characterized chemically by a high atomic weight and a density at least five times greater than that of water. Heavy metals are widely used in various industrial, agricultural, and domestic applications. They are used in the production of clothing dyes, pesticides, electronics, batteries, and more. The extraction, processing, use, and disposal of heavy metals releases them into the environment where they are persistent and can contaminate food, water, air, and dust. Arsenic, lead, chromium, cadmium, and mercury are of particular concern because they are the most highly toxic to humans.

The [International Agency for Research on Cancer \(IARC\)](#) is the World Health Organization's (WHO) agency that promotes and coordinates international efforts in researching the causes of cancer. Their primary efforts involve

organizing research across different countries to clarify environmental and lifestyle risks, particularly in moderate-income level countries. Additionally, the IARC educates cancer researchers and shapes global cancer policies in collaboration with the WHO.

International Cosmetics Ingredient Dictionary and Handbook provides a comprehensive listing of ingredients used in cosmetic and personal care products for the benefit of consumers, the FDA, and manufacturers. It is authored by the Personal Care Products Council (PCPC), the trade association for the cosmetic and personal care industry. The combined dictionary/handbook contains more than 13,000 International Nomenclature Cosmetic Ingredient (INCI) labeling names for the United States, the European Union, and other countries. These are cross-referenced to nearly 60,000 trade and technical names and 3,000 suppliers from 91 countries. The first version was released in 1973 and it can now be accessed online through the [Personal Care Products Council](#).

International Nomenclature for Cosmetic Ingredients (INCI) is the naming system established by the Personal Care Product Council, which creates unique identifiers for all the ingredients used in personal care products. For example, the INCI name for Vitamin E is tocopherol.

Microbeads are extremely small pieces of plastic added to personal care products, most commonly in toothpastes or as exfoliants in body scrubs or washes. They are a massive source of plastic pollution and can wash down the drain and enter our waterways. The [Microbead-Free Waters Act of 2015](#) banned microbeads from wash-off personal care products in 2018. While this was a significant step, the focus on wash-off products left a [loophole for microbeads](#) to continue being allowed in other products, like detergents and leave-on cosmetics.

Nanoparticles are, in the most basic sense, incredibly small particles of a material. Nanoscale particles are not just small, they exhibit very different properties than their macroscale counterparts because at such a small size, they obey the laws of [quantum mechanics](#) instead of Newtonian physics (the normal rules of physics, named after Isaac Newton). The [European Commission](#) defines nanomaterial dimensions as ranging between 1 and 100 nanometers. The [FDA](#) does not have a legal definition for nanotechnology. However, they also recognize nanomaterials/nanoparticles as generally between 1 and 100 nanometers in size. For reference, a human hair is about 80,000 nanometers wide. Nanotechnology has a wide range of applications, some of which could be controlled and beneficial. In personal care products, finely ground titanium dioxide or silicone dioxide can be present freely and there is concern over the potential health impacts these substances have because they are small enough to enter the bloodstream or be absorbed in the intestines (if used in food).

The [National Toxicology Program](#) (NTP), housed under the United States' National Institutes of Health (NIH), is an inter-agency program founded in 1987 that monitors and evaluates the public health and environmental risks of toxic chemicals. The goal of NTP is to coordinate testing efforts across departments in the government and to develop and continually improve toxicology science and testing methods. Read more on the [NTP's website](#).

Nonsynthetic (or natural) ingredients, as defined under the USDA National Organic Program, are "substance[s] that [are] derived from mineral, plant, or animal matter and does not undergo a synthetic process."^{xii} Additionally, substances that are extracted or created through naturally occurring biological processes are considered nonsynthetic. For example, lactic acid would be considered nonsynthetic if created through lactose (milk sugar) being fermented by the bacterium *Lactobacillus*.

Petrochemicals are substances derived from petroleum, natural gas, or coal. The chemicals, classified as hydrocarbons, are commonly used in personal care products to serve diverse functions. Many surfactant, detergent, and emollient chemicals are petrochemicals. Propylene glycol, parabens, mineral oil, and petrolatum are all examples of petrochemicals you may find on the ingredient panels of common name-brand products. Many of these chemicals can also be synthesized from renewable resources, like coconut or palm oil. There is significant debate as to whether those substances, made from more "natural" sources carry the same health risks, or whether the primary source of risk lies in the source material itself.

PFAS, or per and poly-fluoroalkyl substances, are chemicals used for their water and oil repellency; they are persistent in the environment and do not breakdown into benign substances over time. There are thousands of substances within the PFAS family, the most well-known one goes under the brand name of Teflon, used to coat non-stick cookware. PFAS can be found in food packaging, cookware, textiles and clothing, cosmetics, camping gear, and more. There is strong evidence that exposure to PFAS reduces immune system function, causes birth defects, damages internal organs, and increases the risk of certain cancers, such as prostate and bladder cancer.

The Precautionary Principle is a theory, framework, and approach to handling new situations and innovations through a lens of precaution for health and safety. Under the precautionary principle, the burden of proof for potential harm to human health or ecosystems rests on the proponents of what is being introduced, created, or proposed for implementation. In the case of toxics or ingredients, it shifts the burden of proof that a substance is safe on those who claim it is safe, rather than requiring proof of its harm. In the United States, the regulatory approach to personal care products has not employed the precautionary principle. The precautionary principle can be applied to almost any field of study or industry and is an evolving epistemology.

Retinol, or Vitamin A, is an antioxidant added to many personal care products because it reduces fine lines and slows skin aging. However, studies have found that forms of Vitamin A, in the presence of sunlight, can accelerate cancerous lesions and tumors. This was not discovered until after retinol or other forms of Vitamin A became a common additive in sunscreens, under the assumption that Vitamin A would help protect the skin from sun damage. It can still be found in some products available for purchase. To learn more, see the [EWG's Sunscreen Guide](#).

Synthetic ingredients, as defined under the USDA National Organic Program, are “substance[s] that [are] formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from a naturally occurring plant, animal or mineral sources, except that such term shall not apply to substances created by naturally occurring biological processes.”^{xiii}

Synthetic fragrances are human-created chemical mixtures that are usually made from petroleum or natural gas byproducts. Most fragrances in products are blends of chemicals considered trade secrets, so while it is only one ingredient, it could be comprised of hundreds of chemicals. There are approximately 3,000 different chemicals used in proprietary fragrances, many of which are linked to various health concerns including cancer, allergies, neurotoxicity, and reproductive and developmental toxicity.

Appendix

Section A: Products within the Scope of the HBC, Personal Care Products Standard

- Soap: liquid, bar, or other form
- Body lotions, creams, and oils
- Essential oils
- Facial products: washes, creams, serums, masks, towelettes
- Hair products
 - Soap/shampoo
 - Hair conditioner
 - Styling products
- Cosmetics: foundation, BB/CC cream, concealer, primer, eye liner and shadow, mascara, lipsticks and balms, nail polish
- Sunscreen
- Bath products
 - Bubble baths
 - Body scrubs
 - Bath bombs

- Body wash
- Oral care products
 - Toothpaste and powder
 - Mouth wash
 - Dental floss and toothbrushes
- Deodorant and body sprays
- Personal care
 - Lubricants
 - Shaving creams

ⁱ Lauren Zanolli, “Pretty Hurts: Are Chemicals in Beauty Products Making Us Ill?,” *The Guardian*, May 23, 2019, sec. US news, <http://www.theguardian.com/us-news/2019/may/23/are-chemicals-in-beauty-products-making-us-ill>.

ⁱⁱ Center for Food Safety and Applied Nutrition, “FDA Authority Over Cosmetics: How Cosmetics Are Not FDA-Approved, but Are FDA-Regulated,” FDA (FDA, March 8, 2021), <https://www.fda.gov/cosmetics/cosmetics-laws-regulations/fda-authority-over-cosmetics-how-cosmetics-are-not-fda-approved-are-fda-regulated>.

ⁱⁱⁱ Maryam Khezzadeh, “Toxic Beauty — a Data Story,” Medium, April 17, 2017, <https://medium.com/think-dirty/toxic-beauty-a-data-story-283270f111cf>.

^{iv} Theo Colborn, Dianne Dumanoski, and John Peterson Myers, *Our Stolen Future: Are We Threatening Our Fertility, Intelligence, and Survival? A Scientific Detective Story* (New York: The Penguin Group, 1997).

^v Stacy Malkan, *Not Just a Pretty Face: The Ugly Side of the Beauty Industry* (Canada: New Society Publishers, 2007).

^{vi} Ami R. Zota and Bhavna Shamasunder, “The Environmental Injustice of Beauty: Framing Chemical Exposures from Beauty Products as a Health Disparities Concern,” *American Journal of Obstetrics and Gynecology* 217, no. 4 (October 2017): 418.e1-418.e6, <https://doi.org/10.1016/j.ajog.2017.07.020>.

^{vii} Muhammad Bilal, Shahid Mehmood, and Hafiz M. N. Iqbal, “The Beast of Beauty: Environmental and Health Concerns of Toxic Components in Cosmetics,” *Cosmetics* 7, no. 1 (March 2020): 13, <https://doi.org/10.3390/cosmetics7010013>.

^{viii} Lauren Zanolli, “Pretty Hurts: Are Chemicals in Beauty Products Making Us Ill?,” *The Guardian*, May 23, 2019, sec. US news, <http://www.theguardian.com/us-news/2019/may/23/are-chemicals-in-beauty-products-making-us-ill>.

^{ix} Melissa Lee Phillips, “Obstructing Authority: Does the EPA Have the Power to Ensure Commercial Chemicals Are Safe?,” *Environmental Health Perspectives* 114, no. 12 (December 2006), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1764141/>.

^x Editor, “The FDA Needs More Power to Regulate Toxic Chemicals in Cosmetics,” *Scientific American*, November 1, 2017, <https://doi.org/10.1038/scientificamerican1117-10>.

^{xi} Eric Lipton and Rachel Abrams, “Cosmetics Industry in Lather over Legislation Aimed at Keeping Products Safe,” *The Seattle Times*, August 15, 2016, sec. Nation, <https://www.seattletimes.com/nation-world/nation/cosmetics-industry-in-lather-over-legislation-aimed-at-keeping-products-safe/>.

^{xii} National Organic Standards Board, “NOSB Guidance for the Review of Synthetic and Non-Synthetic Substances,” August 17, 2005, <https://www.ams.usda.gov/sites/default/files/media/NOP%20Rec%20Guidance%20Review%20of%20Synthetic%20and%20Nonsynthetic%20substances.pdf>.

^{xiii} Ibid.