

Study: Half of US cosmetics contain toxic chemicals

June 15 2021, by Matthew Daly



Rep. Debbie Dingell, D-Mich., pauses for reporters after a meeting of the House Democratic Caucus, Tuesday, June 15, 2021, at the Capitol in Washington. Dingell, who has sponsored several PFAS-related bills in the House, said she has looked for PFAS in her own makeup and lipstick, but could not see if they were present because the products were not properly labeled. Credit: AP Photo/J. Scott Applewhite

More than half the cosmetics sold in the United States and Canada likely contain high levels of a toxic industrial compound linked to serious health conditions, including cancer and reduced birth weight, according to a new study.

Researchers at the University of Notre Dame tested more than 230 commonly used cosmetics and found that 56% of foundations and eye products, 48% of lip products and 47% of mascaras contained high levels of fluorine—an indicator of PFAS, so-called "forever chemicals" that are used in nonstick frying pans, rugs and countless other [consumer products](#).

Some of the highest PFAS levels were found in waterproof mascara (82%) and long-lasting lipstick (62%), according to the study published Tuesday in the journal *Environmental Science & Technology Letters*. Twenty-nine products with high fluorine concentrations were tested further and found to contain between four and 13 specific PFAS chemicals, the study found. Only one item listed PFAS as an ingredient on the label.

The study results were announced as a bipartisan group of senators introduced a bill to ban the use of PFAS, or perfluoroalkyl and polyfluoroalkyl substances, in cosmetics and other beauty products. The move to ban PFAS comes as Congress considers wide-ranging legislation to set a national drinking water standard for certain PFAS chemicals and clean up contaminated sites across the country, including military bases where high rates of PFAS have been discovered.

The Environmental Protection Agency also is moving to collect industry data on PFAS chemical uses and [health risks](#) as it considers regulations to reduce potential risks caused by the chemicals.

"There is nothing safe and nothing good about PFAS," said Sen. Richard

Blumenthal, D-Conn., who introduced the cosmetics bill with Sen. Susan Collins, R-Maine. "These chemicals are a menace hidden in plain sight that people literally display on their faces every day."

Rep. Debbie Dingell, D-Mich., who has sponsored several PFAS-related bills in the House, said she has looked for PFAS in her own makeup and lipstick, but could not see if they were present because the products were not properly labeled.

"How do I know it doesn't have PFAS?" she asked at a news conference Tuesday, referring to the eye makeup, foundation and lipstick she was wearing. "People are being poisoned every day."

Graham Peaslee, a physics professor at Notre Dame and the principal investigator of the study, called the results shocking. Not only do the cosmetics pose an immediate risk to users, but they also create a long-term risk, he said. "PFAS is a persistent [chemical](#). When it gets into the bloodstream, it stays there and accumulates," Peaslee said.

The chemicals also pose the risk of environmental contamination associated with manufacturing and disposal, he said.



A worker, at left, tends to a customer at a cosmetics shop amid the COVID-19 pandemic Thursday, May 20, 2021, in Los Angeles. Credit: AP Photo/Marcio Jose Sanchez

"This should be a wake-up call for the cosmetics industry," said David Andrews, a senior scientist at the Environmental Working Group, a Washington-based nonprofit that has worked to restrict PFAS.

The products tested in the study "are applied each and every day by millions of Americans. It is critical that we end all non-essential uses of PFAS," Andrews said.

The man-made compounds are used in countless products, including nonstick cookware, water-repellent sports gear, cosmetics and grease-

resistant food packaging, along with firefighting foams.

Public health studies on exposed populations have associated the chemicals with an array of health problems, including some cancers, weakened immunity and low birth weight. Widespread testing in recent years has found high levels of PFAS in many public water systems and [military bases](#).

"PFAS chemicals are not necessary for makeup. Given their large potential for harm, I believe they should not be used in any personal care products," said Arlene Blum, a co-author of the study and executive director of the Green Science Policy Institute, an advocacy group in Berkeley, Calif.

A spokeswoman for the U.S. Food and Drug Administration, which regulates cosmetics, had no immediate comment.

The Personal Care Products Council, a trade association representing the cosmetics industry, said in a statement that a small number of PFAS chemicals may be found as ingredients or at trace levels in products such as lotion, nail polish, eye makeup and foundation. The chemicals are used for product consistency and texture and are subject to safety requirements by the FDA, said Alexandra Kowcz, the council's chief scientist.

"Our member companies take their responsibility for product safety and the trust families put in those products very seriously," she said, adding that the group supports prohibition of certain PFAS from use in cosmetics. "Science and safety are the foundation for everything we do."

Blumenthal, a former state attorney general and self-described "crusader" on behalf of consumers, said he does not use cosmetics. But speaking on behalf of millions of cosmetics users, he said they have a

message for the industry: "We've trusted you and you betrayed us."

Brands that want to avoid likely government regulation should voluntarily go PFAS-free, Blumenthal said. "Aware and angry consumers are the most effective advocate" for change."

More information: Heather D. Whitehead et al, Fluorinated Compounds in North American Cosmetics, *Environmental Science & Technology Letters* (2021). [DOI: 10.1021/acs.estlett.1c00240](https://doi.org/10.1021/acs.estlett.1c00240)

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Citation: Study: Half of US cosmetics contain toxic chemicals (2021, June 15) retrieved 23 April 2024 from <https://phys.org/news/2021-06-cosmetics-toxic-chemicals.html>

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