

Black-colored plastic used for kitchen utensils and toys linked to banned toxic flame retardants

By Sandee LaMotte, CNN

🕒 6 minute read · Updated 8:34 AM EDT, Tue October 1, 2024

💬 121 comments



Black-colored plastics used in electronics are leaching flame retardants into kitchen utensils, toys and food containers, a new study found. Grace Cary/Moment RF/Getty Images/File

(CNN) — Black-colored plastic used in children’s toys, takeout containers, kitchen utensils and grocery meat and produce trays may contain alarming levels of toxic flame retardants that may be leaching from electronic products during recycling, a new study found.

“A product with one of the highest levels of flame retardants were black plastic pirate coin beads that kids wear — they resemble Mardi Gras beads but more for costume wear,” said lead study author Megan Liu, science and policy manager for Toxic-Free Future, an environmental advocacy group.

“That particular product had up to 22,800 parts per million of total flame retardants — that’s almost 3% by weight,” Liu said. “Kids will often play with toys multiple days in a row until they tire of them.”

enclosures on televisions and other electronics, Liu said.

“It appears the plastics used to make the consumer products were contaminated with flame retardants due to mistakes in the recycling of electronic waste,” she said.

One consumer product, a black plastic sushi tray, contained 11,900 parts per million of the flame retardant decabromodiphenyl ether, or decaBDE for short. That chemical is a member of the polybrominated diphenyl ethers, or PBDE, class of flame retardants.

People with the highest blood levels of PBDEs were approximately 300% more likely to die from cancer as people with the lowest levels, according to an April 2024 study.



RELATED ARTICLE

Tiny shards of plastic are increasingly infiltrating our brains, study says



Sign up for the Results Are In newsletter

Get the latest expert advice to live a healthier and happier life.

Sign Me Up

No, Thanks

By subscribing you agree to our [Privacy Policy](#)

DecaBDE was fully banned in 2021 by the US Environmental Protection Agency after being linked to cancer, endocrine and thyroid issues, fetal and child development and neurobehavioral function and reproductive and immune system toxicity.

Despite those restrictions, decaBDE was found in 70% of the samples tested, at levels ranging from five to 1,200 times greater than the European Union's limit of 10 parts per million, Liu said.

Based on exposure to contaminated black plastic kitchen utensils such as spatulas and slotted spoons, study researchers estimated a person could be exposed to an average of 34.7 parts per million of decaBDE each day.

“It was especially concerning that they found retardants that aren’t supposed to be used anymore,” said toxicologist Linda Birnbaum, former director of the National Institute for Environmental Health Sciences and the National Toxicology Program.

“I would recommend not using black plastic for food contact materials or buying toys with black plastic pieces,” said Birnbaum, who was not involved in the study.

Electronics with flame retardants

Electronic devices that use flame retardants as a way to prevent fires are common in homes in the United States, according to the American Chemistry Council’s website: “The average home contains more than 20 electronic products, including televisions, smartphones, computers, gaming systems and tablets. These devices are embedded into our everyday lives, yet they could pose additional safety risks if it weren’t for flame retardants.”

RELATED ARTICLE

**RELATED ARTICLE**

Flame retardants found in thousands of consumer products linked to cancer in people for first time

Manufacturers also use flame retardants in sofas, loveseats, recliners, office chairs, car upholstery, infant car seats, carpet padding, foam-padded yoga mats and padded baby items. From there, flame retardants can “leach from products into the air and then attach to dust, food, and water, which can be ingested,” according to the [National Institute of Environmental Health Sciences](#).

The North American Flame Retardant Alliance, which represents makers and users of flame resistant chemicals, told CNN the new study does not account for actual levels of exposures in humans or any exposure pathways.

“The use of flame retardants in electronics and appliances has been instrumental in reducing fire-related injuries and fatalities and preventing the destruction of property,” Erich Shea, NAFRA’s director of product communications, said in an email.

“Recycling plastics from electronic waste is a critical component of a circular economy, helping to conserve resources and reduce the environmental impact of plastic waste,” Shea said.

**RELATED ARTICLE**

Microplastics discovered in human penises for the first time

Birnbaum told CNN that it’s well known that plastics which may contain or be exposed to dangerous chemicals should not be recycled.

“The novel concern that’s raised in this study is ‘Look, black plastic that shouldn’t be recycled is ending up in all kinds of products that lead to human exposure,’” she said.

No safe level of some flame retardants

The study, published Tuesday in the journal [Chemosphere](#), was conducted by Toxic-Free and the Amsterdam Institute for Life and Environment at Vrije Universiteit in Amsterdam. The study only looked at black plastics, and therefore could not determine if other colors of plastics could also be exposed, Liu said. Nor did researchers name any brand names of the products that were tested.

“There have been previous studies done in other countries where they’ve seen the same issue of black plastic being contaminated with flame retardants, as well as studies which show flame retardants can leach from kitchen utensils into food and into children’s saliva through the mouthing of toys,” Liu said.

**RELATED ARTICLE**

Tampons contain lead, arsenic and potentially toxic chemicals, studies say. Here’s what to know

“Studies specifically looking at food contact materials in the US, however, hadn’t been done,” Liu said. “That’s why we are really interested in testing toys as well as food contact materials like kitchen or food service wear items.”

Researchers examined 203 consumer products for bromine, a key indicator of the use of flame retardants, and then more closely examined 20 products with the highest levels.

Brominated flame retardants are particularly concerning due to their toxicity and tendency to bioaccumulate, or remain within the body for years. said Dr. Leonardo Trasande, a professor of pediatrics and population health at NYU Langone

Health in New York City.

“I’m not aware of any safe level of brominated flame retardants,” said Trasande, who was not involved with the new study. Trasande was the lead author of a paper which found that flame retardants cost the US health care system \$159 billion in 2018 alone.

What consumers can do

Experts say there are ways that consumers can reduce their risk from flame retardants.



RELATED ARTICLE

How to limit PFAS in your drinking water and food, according to experts

“Replace your plastic kitchen utensils with stainless steel options or choose plastic free items to help reduce your overall exposure to harmful additives and plastic,” Liu said. “Some manufacturers also have strong policies about removing retardants from their products, so you can also be a careful shopper.”

Dusting, mopping and vacuuming regularly will remove dust that is likely contaminated with plastics and other worrisome chemicals in addition to flame retardants, Liu said. Frequent hand washing and proper ventilation can help as well.

What do you think?

Join 121 others in the comments

[View Comments](#)

“Many people wash and reuse the black plastic containers their food comes in,” Birnbaum said. “I tell people to immediately take the food out of that black plastic and put it in a glass, stainless steel or ceramic dish.”

Don’t microwave or otherwise heat black plastic containers with food, as heat encourages chemicals to leach out into the food that it is in contact with, Birnbaum added.

While these steps will cut down on exposure there’s only so much that consumers can do, Liu said.



RELATED ARTICLE

Which foods have the most plastics? You may be surprised

“What our study shows is that when harmful chemicals like flame retardants are allowed to be intentionally used in products like televisions and other electronics, they can be recycled and unintentionally contaminate other products downstream,” Liu said.

“We need government and corporate policies that restrict the use of these harmful chemicals like flame retardants and hazardous plastics so that we can safely recycle items without worrying about chemical contamination and our health.”

[121 comments](#)

