

Why are four notorious carcinogens approved by FDA for food?

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While exposure data are scant, people who are choosing decaf coffee during pregnancy or for other health reasons may not realize that some popular brands contain [methylene chloride](#).

What's Happening?

On December 21, 2023, FDA filed a food-additive petition and a color-additive petition submitted by [EDF and partners](#) that asks FDA to revoke its approval for four carcinogenic chemicals approved for use in food.

There is broad agreement that benzene, trichloroethylene (TCE), methylene chloride, and ethylene dichloride are carcinogenic,¹ and federal law² is clear: additives that cause cancer in humans or animals are not considered “safe.” All the chemicals have been identified as causing cancer in humans or animals since the 1970s and 1980s.³

Why It Matters

The petition addresses the following chemicals: (*Please note that all links in this list are to PDFs.*)

- **Benzene:** [known to cause cancer in humans](#) since 1980, is allowed in hops extracts (used in beer production and supplements). Benzene causes leukemia in humans and is also associated with other cancers in humans, including lymphomas and other blood cancers.
- **Trichloroethylene (TCE):** [known to be carcinogenic to humans](#) is allowed in decaffeinated coffee, certain extracts of spices used as food and/or color additives, and hops extracts. TCE causes kidney cancer, non-Hodgkin lymphoma, and liver cancer in humans.
- **Methylene chloride:** “[likely to be carcinogenic to humans](#),” is allowed in decaffeinated coffee, certain extracts of spices used as food and/or color additives, ink used to mark produce, and hops extracts. Methylene chloride is also considered “[reasonably anticipated to be a human carcinogen](#).”
- **Ethylene dichloride:** a “[probable human carcinogen](#),” allowed in certain extracts of spices used as food and/or color additives, hops extracts, in water used to wash sugar beets, and to dilute pesticides. It is also considered “[reasonably anticipated to be a human carcinogen](#).”

In fact, FDA has acknowledged that these chemicals cause cancer and other health harms. Based on the cancer evidence, FDA [proposed](#) to prohibit trichloroethylene in food in 1977, and in 1989 declared cosmetics to be [adulterated](#) if they contained methylene chloride as an ingredient.

The agency also [alerts](#) drug manufacturers that “benzene is a known human carcinogen that causes leukemia and other blood disorders” and [advises](#) them not to use benzene or ethylene dichloride to manufacture drugs “because of their unacceptable toxicity.”

In 2023, the EPA proposed banning all uses of [trichloroethylene](#) and most uses of [methylene chloride](#) regulated under the Toxic Substances Control Act, because of their known cancer risks and other health harms.

Our Take

Safer alternatives are available and allowing these notorious chemicals in food is unacceptable and unnecessary.

For example, safer alternatives—like water—can be used to decaffeinate coffee. Independent testing in [2020](#) [PDF, 332KB] and [2022](#) [PDF, 1.9MB] by the [Clean Label Project](#) revealed that coffee manufacturers may opt for methylene chloride to extract

caffeine, leaving trace amounts of the carcinogen in some popular brands of decaffeinated coffee.

To safeguard the health of consumers, workers and communities, companies should prioritize adopting safer alternatives. Clearly, the transition is not only feasible but necessary.

Considering the evidence, FDA's decision on this petition should be easy. There is a clear requirement in the law barring cancer-causing additives in food, and a scientific consensus that these chemicals cause cancer. FDA most recently exercised its authority on cancer-causing additives in 2018 when it granted another of our petitions to remove approval of certain [carcinogenic flavors](#). FDA should quickly act to do the same in this case to follow the law, protect public health, and ensure the use of safer alternatives in the food industry.

Next Steps

Comments on the petitions are due March 11, 2024, barring any extensions. You can comment in support of both petitions:

- [Comment on the food-additive petition.](#)
- [Comment on the color-additive petition.](#)

Go Deeper

[Read our blogs on food-additive petitions.](#)

[Read our blogs on color-additive petitions.](#)

NOTES

¹ The carcinogenicity of all four chemicals is recognized by the [Agency for Toxic Substances and Disease Registry](#), [American Cancer Society](#), [California](#), [Department of Health and Human Services/NTP](#), [EPA](#), and the World Health Organization's [International Agency for Research on Cancer](#).

² Known as the Delaney Clause. See 21 U.S.C. § 348(c)(3)(A) for food additives and 21 U.S.C. § 379e(b)(5)(B) for color additives.

³ TCE in [1976](#), ethylene dichloride in [1978](#), benzene since at least [1980](#), methylene chloride in [1986](#).