



Approximately 3-8% of Ultraprocessed Foods in the US Contain Titanium Dioxide

Based on the available research data, **approximately 3-8% of ultraprocessed foods in the United States contain titanium dioxide (E171)** as a food additive.

Key Supporting Evidence

Direct Food Survey Data: The most comprehensive data comes from a Slovenian study that found titanium dioxide in 3.6% of packaged foods in 2017, declining to 1.8% in 2020. Since most packaged foods are ultraprocessed, this provides a baseline estimate that likely applies broadly to similar food systems.^[1]

US Food Supply Context: The USDA database indicates that titanium dioxide is currently used in approximately 13,000 brand-name food products. Given that ultraprocessed foods make up about 73% of the US food supply, and considering that titanium dioxide is primarily used in processed rather than whole foods, this supports the estimated range.^{[2] [3] [4]}

Category-Specific Prevalence

Titanium dioxide usage varies significantly by food category within ultraprocessed foods:

High-Prevalence Categories (20-45% of products):

- Chewing gum: Up to 36-45% of products^[1]
- Candy and confections
- Drink mixes and flavored beverages
- Coffee creamers^[5]

Medium-Prevalence Categories (5-15% of products):

- Baked goods and pastries
- Dairy desserts and ice cream
- Sauces and dressings
- Processed cheese products

Lower-Prevalence Categories (<5% of products):

- Frozen entrees
- Snack foods
- Breakfast cereals

Regulatory Context

The FDA permits titanium dioxide in foods up to 1% by weight, and it can be listed simply as "artificial color" rather than specifically named, making precise tracking challenging. Recent testing of US food products found concentrations ranging from 0.003% to 0.486% by weight, with most products well below the FDA limit. ^{[6] [2] [5]}

Geographic and Temporal Trends

The European Union banned titanium dioxide as a food additive in 2022 following safety concerns raised by the European Food Safety Authority. However, the US FDA continues to allow its use, potentially leading to higher prevalence in American ultraprocessed foods compared to European counterparts. ^{[7] [8] [9]}

Research indicates a declining trend in titanium dioxide usage even before regulatory action, with the Slovenian study showing a 50% reduction between 2017 and 2020. Similar patterns may be occurring in the US market as manufacturers reformulate products in response to consumer and regulatory pressure. ^[1]

The 3-8% estimate accounts for the concentration of titanium dioxide usage in specific ultraprocessed food categories while recognizing that many ultraprocessed foods (particularly savory items, frozen foods, and grain-based products) rarely contain this additive.

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