



Center for Processed-Free Living
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Carolyn Jeletic
Office of Regulations, Policy and Social Sciences, HFS-024
Center for Food Safety and Applied Nutrition
5100 Paint Branch Parkway
College Park, Maryland 20740

Via Email March 21, 2011

RE: Public Argument Against Artificial Food Coloring

Dear Ms. Jeletic:

We are a non-profit dedicated to educating the public about the harmful effects of processed foods. It has come to our attention that the Food Advisory Committee will be reviewing the effects of artificial coloring on March 30th – 31st, 2011.

Below are our arguments against the continued use of artificial coloring in the United States.

Also, attached to the written response of this submission will be 987 names of U.S. citizens who have signed our online petition joining us against these harmful and unnecessary additives. This online petition can be found here:

<http://www.processedfreeamerica.org/index.php?Itemid=113>

Should you have any questions, please feel free to call us.

Sincerely yours,
Michael McCaffrey
Michael McCaffrey
Co-Founder
Center for Processed-Free Living
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Artificial Colorings: Blue 1, Blue 2, Green 3, Orange B, Red 3, Red 40, Yellow 5, and Yellow 6

Most artificial colorings are synthetic chemicals that do not occur in nature. They are used almost exclusively in processed foods, particularly candy, soda pop, breakfast cereals, gelatin desserts, and others. Studies show that artificial colors may be carcinogenic and may contribute to learning disorders, visual disorders, and nerve damage. In addition to other problems, recent studies show colorings cause hyperactivity in some sensitive children.

In general, you should avoid any additive with a number after it, and all artificial colors have either a number or a letter after them.

The following health risks are associated with the below listed artificial colors. The Center for Science in the Public Interest (CSPI) has petitioned the Federal Drug Administration (FDA) to remove them from the nation's food supply:

Blue 1 (FD&C Blue No. 1) - One (unpublished) animal test suggested a small cancer risk, and a test-tube study indicated the dye might affect neurons. It also causes occasional allergic reactions (itching) and low blood pressure. The additive has not been adequately tested.

Blue 2 (FD&C Blue No. 2) - Animal studies found some—but not conclusive—evidence that Blue 2 causes brain cancer in male rats, but the Food and Drug Administration concluded that there is "reasonable certainty of no harm. May also cause occasional allergic reactions (itching).

Green 3 (FD&C Green No. 3) – This artificial color is derived from coal tar dyes. Most of the colors derived from coal tar must be certified by the Federal Drug Administration (FDA) not to contain more than 10 parts per million of lead and arsenic. Certification of these additives does not address any harmful effects these colors may have on the body. Most coal tar colors are potential carcinogens, may contain carcinogenic contaminants, and cause allergic reactions. A 1981 industry-sponsored study gave hints of bladder and testes tumors in male rats, but FDA re-analyzed the data using other statistical tests and concluded that the dye was safe. Fortunately, this possibly carcinogenic dye is not widely used.

Orange-B – This artificial food dye was approved only for use in sausage casings. Studies show that high doses of this dye are harmful to the liver and bile duct. Thankfully Orange B has not been used for many years, but consumption of it in the past may still have lingering effects in the body.

Red 3 (FD&C Red No. 3) - According to a 1983 review committee report requested by the FDA, there is “convincing” evidence that this dye caused thyroid tumors in rats. The FDA recommended banning the dye, but that recommendation was overruled by pressure from elsewhere in the Reagan Administration. Red 3 was formerly used as the red color in maraschino cherries, but it has been replaced by the Red 40 dye. It is still used in a small selection of foods ranging from frostings to fruit roll-ups and chewing gum.

Red 40 (FD&C Red No. 40) - This is another artificial color derived from coal tar dyes, and is one of the most widely used food dyes. Most coal tar colors are potential

carcinogens, may contain carcinogenic contaminants, and cause allergic reactions. Although Red 40 is one of the most-tested food dyes, the key mouse tests were flawed and inconclusive. An FDA review committee acknowledged problems, but said evidence of harm was not "consistent" or "substantial."

Yellow 5 (FD&C Yellow No. 5) – This is the second-most-widely used food dye. It causes hay fever reactions, primarily in aspirin-sensitive persons, gastrointestinal upset, and skin rashes. It has also been shown to trigger hyperactivity in some children. It may be contaminated with such cancer-causing substances as benzidine and 4-aminobiphenyl (or chemicals that the body converts to those substances).

Yellow 6 (FD&C Yellow No. 6) – This is the third most widely used food dye. Animal tests indicated that this dye causes tumors of the adrenal glands and kidneys. It too may also be contaminated with such cancer-causing substances as benzidine and 4-aminobiphenyl (or chemicals that the body converts to those substances). The FDA reviewed those data and found reasons to conclude that Yellow 6 does not pose a significant cancer risk to humans. Yellow 6 may cause occasional, but sometimes-severe hypersensitivity reactions. CSPI still petitioned to have it banned from the food supply. Authorities in the United Kingdom banned these six of these eight artificial colors in response to research linking the consumption of those additives and hyperactive behavior.

Studies in 2004 and 2007 conducted by researchers at the University of Southampton concluded that specific mixtures of artificial colors increase hyperactivity in certain children. Based on these findings, the United Kingdom's Food Standards Agency (FSA) determined there was enough evidence to recommend a ban on six food dyes, calling for their removal from all food and drink products in the United Kingdom by the end of 2009. Since the ban was enacted, the food industry has responded positively, replacing banned colors with natural pigments in products.

However, many of these same products are still sold in the United States using the original artificial food colors. The USFDA still claims they are safe, but consumer advocate groups disagree. In 2008 the Center for Science in the Public Interest (CSPI) petitioned the FDA to remove eight artificial colors from the nation's food supply: Yellow 5, Red 40, Blue 1, Blue 2, Green 3, Orange B, Red 3 and Yellow 6. The CSPI maintains that all artificial colors should be avoided and that eliminating them from the food supply is the most effective public health approach.

Sources:

1. [Center for Science in the Public Interest, Petition to FDA on food dyes, 2008.](#)
2. [Chemical Cuisine, Center for Science in the Public Interest](#)
3. [Feingold Association of the United States.](#)
4. Hoza-Farlow, Christine, D.C. *Food Additives. A Shopper's Guide to What's Safe and What's Not (KISS For Health Publishing: California, 2004).*
5. Seher, Christin L., MS, RD, LD. *Gary Area: Jury's Still Out on Link Between Artificial Colors and Hyperactivity, Today's Dietician, September 20, 2010, Vol. 12, No. 9, p. 8-10.*