**Title: Red 3 and Citrus Red 2**

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**Abstract:**

There are currently 9 FDA approved synthetic food dyes in the US. Dyes can be synthesized from chemical compounds such as lead, petroleum, and sodium.

Red 3, a synthetic red (cherry-pink) food coloring, called erythrosine, is created from coal tar and is commonly used as a food dye. Some of the most common uses are for obtaining a watermelon red color in things such as candied cherries (Maraschino Cherries), popsicles, cake decorating gels, pistachio shells and even in medications such as Morphine.

Citrus Red 2 is classified as an azo compound. Citrus Red 2 was one of the first artificial dyes to become legal in the U.S. in 1906. However, it is now only approved for the coloring of orange peels not intended to be ingested due to its possible carcinogenicity.

Much of the research collected in this study examined the effects of artificial dyes overall, but our focus was on Citrus Red 2 and Red 3 specifically. Predominantly the research examined is, as we found, conflicting regarding findings on the potential adverse health effects of artificial dyes in humans conducted through experimentation on lab mice and rats.