



INTERNATIONAL
FOOD INFORMATION
COUNCIL FOUNDATION



What You Should Know About Approved Food Additives

THE FUNCTIONS OF FOOD ADDITIVES

Why are food additives used?

Food additives provide a specific function in a wide variety of foods—in particular, in maintaining or improving their safety, freshness, taste, texture, appearance or nutritional value. Below are some more specific reasons for why food additives are used:



- **To maintain or improve safety and freshness** Food additives known as preservatives slow product spoilage caused by mold, air, bacteria, fungi or yeast. In addition to maintaining the quality of the food, they help control contamination that can cause foodborne illness, including life-threatening botulism. One group of preservatives—antioxidants—prevents fats, oils and the foods containing them from becoming rancid or developing an off flavor. They also prevent cut fresh fruits such as apple slices from turning brown when exposed to air.
- **To improve or maintain nutritional value** Vitamins, minerals and dietary fiber are added to many foods to make up for cases in which those nutrients are lacking in a person's diet or in which they are lost in food processing, or to otherwise enhance the nutritional quality of a food. Such fortification and enrichment have helped prevent and reduce malnutrition in the U.S. and many other countries worldwide. All products containing added nutrients must be appropriately labeled.
- **To improve taste, texture and appearance** Spices, natural and artificial flavors, low and no-calorie sweeteners, salt and pepper are often added to enhance the taste of food. Food colors maintain or improve appearance. Emulsifiers, stabilizers and thickeners give foods the texture and consistency. Leavening agents allow baked goods to rise during baking. Some additives help control the pH balance of foods, while other added ingredients help maintain the taste and appeal of foods while reducing the fat content.

Food additives can be naturally or synthetically derived. Some food additives may be identical to those found in nature but are produced synthetically to maintain consistency and to reduce costs during manufacturing. This also helps promote sustainable food additive production.

THE BENEFITS OF FOOD ADDITIVES

Safety, taste and convenience

Some food additives could be eliminated if we grew all our own food and cooked every meal from scratch. Modern life makes this difficult for many of us, so food additives help ensure that prepared and semi-prepared foods convenient and safe. The ingredients may help us get dinner on the table more quickly (saving time) or keep the food in our pantry or refrigerator from going bad before we can eat it (saving money). By slowing spoilage, food additives also help reduce food waste and prevent food poisoning.

Sustainability

Less food waste means fewer resources are expended growing and shipping food, so less stress is put on the environment.



FOOD ADDITIVE REGULATIONS

In the U.S., the Food and Drug Administration (FDA) is responsible for evaluating the safety and uses of approved food additives. Before a new additive can be used or before an existing additive can be used in a new way, the manufacturer must get FDA approval, showing that the food additive is safe. During the approval process, the FDA determines its immediate and long-term health effects, other safety factors and permitted amounts in food. If the additive is approved, the FDA sets limits on where it can be used and in what amounts, as well as stipulating how it should appear on the food label.

When it comes to the amount that can be used, the FDA limit is generally a tiny fraction (1/100th or 1%) of the amount of the additive that is shown to be safe. If in the future there is new evidence that an additive in use might be unsafe, the FDA can reassess its safety to determine if any action is needed to protect public health.



There are many food ingredients that are generally recognized as safe (GRAS) by experts based on scientific evidence. These ingredients do not need to undergo a pre-market evaluation by the FDA, but they are reviewed by the agency and can be challenged or receive a letter of “no objection.” Simply put, the letter is documentation that the FDA has reviewed the ingredient’s safety data and that it has met the necessary requirements for its safe use in food. Many food ingredients with longstanding historical use in foods were included as “prior sanctioned” when the GRAS guidelines were established in 1958. Examples of prior sanctioned additives include ingredients such as spices, salt, sugar and some vitamins.

Other countries around the world have their own regulatory agencies that oversee food additives in similar ways. Globally, the Joint Food and Agriculture Organization of the United Nations and

World Health Organization (FAO/WHO) Expert Committee on Food Additives (JECFA) sets worldwide standards for the safety of food additives. U.S. consumers can be confident that the ingredients in foods legally imported into the U.S. have met all FDA regulations, confirming their safety no matter where they are made.

Food additives are required to be included in the list of ingredients on a food package. Most food additives usually appear towards the end of the ingredient list because they are present in very small amounts since ingredients in ingredient lists are presented in order of their amount in the product. Most food additives are listed individually by name, although some can be listed collectively as “flavors,” “spices” or “artificial flavoring.” Some are required to include their functionality, such as “to maintain freshness,” in the label’s ingredient statement.



The JECFA functions as an independent scientific committee that conducts risk assessments and dispenses guidance regarding food additives to the member countries of both organizations. Along with the numerous working groups that make up the Codex Alimentarius Commission (CAC), the committee works to develop worldwide food standards and establish guidelines for the purpose of safeguarding public health and promoting fair trade across the globe.

According to its records, over the years the JECFA has assessed “more than 2,500 food additives, approximately 40 contaminants and naturally occurring toxicants. See the JECFA for more information about its evaluation of food additives.

FOOD ADDITIVES AND PUBLIC HEALTH



Food additives have many public health benefits. For example, many provide enrichment and fortification to prevent or reduce nutrient deficiency. Folic acid is used to prevent neural tube defects and spina bifida in infants. Likewise, food additives and preservatives are used to prevent foodborne illness. Commonly used ingredients such as vinegar and lemon juice are useful in extending shelf life. Low- and no-calorie sweeteners are effective for weight management and for individuals living with diabetes.

Despite these public health benefits, misinformation and unwarranted controversy regarding the safety of food additives still abound.

- In 1995, the FDA asked an independent group of scientists from the Federation of American Societies for Experimental Biology (FASEB) to evaluate reported adverse reactions from the consumption of monosodium glutamate (MSG) in foods, with adverse reactions

including MSG symptom complex, neurotoxic effects, asthma, cardiac issues, and others. The FASEB report concluded that “MSG is safe” and that some “transient and mild reactions may occur in some sensitive individuals who consume 3 grams or more of MSG without food.” The report further suggested that “Consuming more than 3 grams of MSG without food at one time is unlikely,” and that typical servings of food contain less than 0.5 grams of MSG. Source: [U.S. FDA](#)

- Likewise, food colors have been suggested to be linked to behavior and learning problems in children, although no clinical evidence supports this link. In 2011, the [FDA examined](#) whether there was a causal link between food colors and hyperactivity. At the end of the process, experts concluded that the current data did not prove that food colors cause hyperactivity or other adverse behavior in children.

WHAT YOU REALLY NEED TO KNOW ABOUT APPROVED FOOD ADDITIVES



Food and color additives are strictly studied, regulated and monitored. Federal regulations require evidence that each substance is safe at its intended level of use before it may be added to foods. Furthermore, approved food additives are subject to ongoing safety review as scientific understanding and methods of testing continue to improve.

It's important to make food choices that are right for you and your family. If you would like to limit the amount of food

additives or any food ingredient you eat, you can do so by reading the ingredient lists on food labels and choosing products with fewer food additives or ingredients.

To eat a healthier diet, the [U.S. Dietary Guidelines for Americans](#) recommend eating a variety of foods in various amounts and forms: canned, dried, fresh and frozen. Strive for a mix of fruits, vegetables, whole grains, low-fat dairy, and lean proteins while limiting fats, added sugar and sodium.

RESOURCES

California Office of Environmental Health Hazard Assessment (OEHHA): [Synthetic Food Dye Risk Assessment, 2020](#)

IFIC Foundation FoodInsight: [Food Color Facts, 2020](#)

Joint FAO/WHO Expert Committee on Food Additives (JECFA): [Chemical Risks and JECFA, 2020](#)

U.S. Department of Health and Human Services (DHHS) and U.S. Department of Agriculture (USDA): [2015-2020 Dietary Guidelines for Americans, 2020](#)

U.S. Food and Drug Administration (FDA): [Generally Recognized as Safe \(GRAS\), 2019](#)

FDA Science Board: [Color Additives and Behavioral Effects in Children, 2019](#)

Academy of Nutrition and Dietetics, Eatright.org: [What are Food Additives, 2018](#)

FDA: [Questions and Answers of Monosodium Glutamate, 2018](#)

FDA/IFIC Foundation: [Overview of Food Ingredients, Additives and Colors, 2018](#)



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