

## Food preservatives and additives <sup>[1]</sup>

Dear Alice,

Can you tell me what are the uses of artificial preservatives and additives? Also, can you tell me info on the different types of preservatives and additives and why food manufacturers use them? Can you give examples for those??

Thank you very much!!!

Jeeeeeeaan

### Answer

Dear Jeeeeeeaan,

Food additives help maintain the freshness and shelf life of such food products because without them, they would spoil quickly due to exposure to air, moisture, bacteria, or mold. Either natural or synthetic substances may be added to avoid or delay these problems.

Food additives may be used in a variety of ways, including:

- To maintain consistency or texture — to sustain smoothness or prevent the food from separating, caking, or clumping.
- To improve or retain nutritional value: *Enrichment* replaces nutrients lost in processing — this occurs with grains, as some vitamins and minerals are lost in the milling process. *Fortification* adds a nutrient that wasn't there before and may be lacking in many people's diets. Iodized salt is an example. This has proven useful in preventing goiter, a thyroid disease caused by a deficiency in iodine. Enriched and fortified foods are labeled as such.
- To delay spoilage
- To enhance flavor, texture, or color

Preservatives are centuries old. Since ancient times, salt has been used to cure meats and fish, and sugar has been added to fruits to conserve them. Herbs, spices, and vinegar have also served as preservatives. Today, the U.S. Food and Drug Administration (FDA) regulates food additives and preservatives. Granted, mistakes have been made, which have resulted in taking

some food additives and preservatives off the market. That is because at the time of approval, prevailing testing methods proved the substances as safe. As science continued to evolve and testing methods improved, changes were made. Technology has also assisted in the approval process as it has become more sophisticated over the years as well. In addition, Food Additive Laws are reviewed and revised according to advancing scientific research.

Food additives in and of themselves don't connote something "bad." For example, ascorbic acid refers to vitamin C and alpha-tocopherol is actually vitamin E. Some uses and examples of food additives are:

*Anti-Oxidants:* prevent spoilage, flavor changes, and loss of color caused by exposure to air. Vitamin C and Vitamin E are used as antioxidants.

*Emulsifiers:* used to keep water and oil mixed together. Lecithin is one example used in margarine, baked goods, and ice cream. Mono- and diglycerides are another found in similar foods and peanut butter. Polysorbate 60 and 80 are used in coffee lighteners and artificial whipped cream.

*Thickening Agents:* absorb water in foods and keep the mixture of oil, water, acids, and solids blended properly. Alginate is derived from seaweed and is used to maintain the texture in ice cream, cheese, and yogurt. Casein, a milk protein, is used in ice cream, sherbet, and coffee creamers.

For a complete guide to information about food additives, including the approval process, click onto the [FDA web site](#) [2].

Another useful link describing many food additives and their uses can be found on the [Center for Science in the Public Interest web site](#) [3].

Hope this provides you with lots of useful information,

Alice!

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