

Use of food additives in our daily lives.

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Description

Food additives are ingredients that are added to food to preserve flavor or improve taste, appearance, or other physical qualities. Some additives have been used for centuries to protect food, for example, vinegar, salt, smoke, sugar, etc. It allows for longer-lasting foods such as bacon, sweets, or wines. Additives are mainly added to extend the shelf-life of the food and increase the nutritional value of supplements such as vitamins and minerals. Food additives are defined as chemical substances that are used to produce specific, desirable effects. Common additives like salt, spices, and sulfites have been used since ancient times to preserve foods and make them more pleasant.

Uses

Food additives are classified into four types: processing agents, nutritional additives, preservatives, and sensory agents. Nutritional additives are mainly used for restoring nutrients that are lost or degraded during production, fortifying or enriching certain foods to maintain dietary deficiencies, or adding nutrients to food substitutes. The main nutritional additives we use are vitamins to increase their nutritional value. Vitamins A and D are added to milk products and rice products, while vitamin C is used in cereals, dairy products, confectioneries, and fruit beverages. Vitamin B is used in flour, cereals, baked food products, and pasta. Other nutritional additives include dietary fiber, fatty acids like linoleic acid, calcium, and iron. Processing agents are the agents that are added to foods to maintain the desired uniformity of the product. The common agents used are sodium aluminosilicate for anticaking, benzoyl peroxide for bleaching, potassium bromate for conditioning, lecithin for emulsifying, and citric acid for pH control. Emulsifiers are used to maintain a uniform dispersion of liquids like oil and water. The basic structure of an emulsifier contains a hydrophobic portion, generally a long-chain fatty acid,

whether it is charged or uncharged. These are mainly used to improve the volume, uniformity, and fineness of baked products. And it also prevents the formation of ice crystals on frozen products. Stabilizers are also known as thickeners and are used in foods. Most stabilizers used are polysaccharides, such as starches or gums, or proteins such as gelatin. The crucial function of these compounds is to increase the viscosity of the final product. These agents stabilize emulsions by adsorbing on the outer surfaces of oil droplets or by improving the viscosity of the water phase. Thus, they prevent the joining of the oil droplets and facilitate the separation of the aqueous phase from the oil phase. Preservatives are divided into two types: antimicrobials and antioxidants. Antimicrobials inhibit the growth of microbes and prevent spoilage and pathogenic microorganisms in food. Antioxidants prevent the deterioration of foods by oxidative mechanisms. Examples of antioxidants are vitamins C and E, selenium, and carotenoids such as beta-carotene, lycopene, lutein, and zeaxanthin. There are some antibiotics that have an inhibitory action on bacteria include penicillin, aminoglycosides, ofloxacin and other bacteriostatic antibiotics. There are some natural antimicrobials like ginger, *echinacea*, goldenseal, clove, and oregano. Sometimes these may cause side effects. Hence, food additives should be tested for potential unsafe effects on human health before they are using.

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