

RISKS AND BENEFITS OF FOOD ADDITIVES

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Introduction. Food additives are substances added to food to preserve flavor or enhance its taste and appearance. Some additives have been used for centuries; for example, preserving food by pickling (with vinegar), salting, as with bacon, preserving sweets or using sulfur dioxide as with wines. With the advent of processed foods in the second half of the 20th century, many more additives have been introduced of both natural and artificial origin. Over the past decades the leading countries of the world has experienced a boom in food industry, which gave an opportunity not only to widen the variety of foods, but to enhance them with food additives. Chemically synthesized additives allow prolonging term of storage, improving the looks of the products, saturating them more, making them more tasty and aromatic, and keeping initial consistency and structure longer.

Today food industry uses more than several hundred different food additives. Among which the most widespread are: pigments, preservatives, stabilizers, flavor and taste enhancers, fillers and emulsifiers.

To regulate these additives and in order to inform consumers on food ingredients, in European Union and Switzerland there were assigned “E number” markings to each one. This marking system was adopted and issued by the international Codex Alimentarius Commission for all the most popular food applications in Europe.

Amidst all the gamma of natural and synthetic food applications, there are the safe ones and even somehow beneficial. Examples of such are:

- curcumin (E100), which is used in production of drinks, bread and bakery;
- chlorophyll (E140), applied to ice-creams and yoghurts;
- carmine (E120), carotene (E160), present in non-alcohol drinks.

The above-mentioned applications cleanse blood vessels and make digestion better. But there do exist dangerous food applications and even forbidden ones. Applications of E200-1283 marking are considered most harmful for health. Ones that lead to malignant tumors are E 123 – red amaranth and E240 formaldehyde preservative. Ones that lead to diseases of digestive tract are: E225, E321, E407 and E466. Allergens: E232, E239, E907. One that leads to diseases of liver and kidneys is E173 – aluminum pigment. The most destructive is monosodium glutamate (E621) – salts of this acid cause central nervous system excitement and have a detrimental effect on retina. Strictly forbidden in Ukraine and all other countries of the world are: E103, E105, E111, E121, E125, E126, E130, E152.

Conclusions. There has been significant controversy associated with the risks and benefits of food additives. Some artificial food additives have been linked with cancer, digestive problems, neurological conditions, ADHD, heart disease or obesity. Natural additives may be similarly harmful or be the cause of allergic reactions in certain individuals. For example, safrole was used to flavor root beer until it was shown to be carcinogenic. Taking into consideration how some food manufacturers abuse the applications, and in order to protect public health, constant control of these substances’ content in foods produced must be conducted.

References:

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