www.diatrofologos.com

March, 2006 | Newspaper IV

Food additives and our health.

Everything you should know!

www.diatrofologos.com tells it all.

In its broadest sense, a "**food additive"** is any substance added to food. Legally, the term refers to "*any substance the intended use which results or may reasonably be expected to result-directly or indirectly-in its becoming a component or otherwise affecting the characteristics of any food*." This definition includes any substance used in the production, processing, treatment, packaging, transportation or storage of food.

If a substance is added to a food for a specific purpose in that food, it is referred to as a direct additive. For example, the low-calorie sweetener aspartame, which is used in beverages, puddings, yogurt, chewing gum and other foods, is considered a direct additive. Many direct additives are identified on the ingredient label of foods.

Food additives play a vital role in today's bountiful and nutritious food supply. They allow our growing urban population to enjoy a variety of safe, wholesome and tasty foods year-round. And, they make possible an array of convenience foods without the inconvenience of daily shopping.

Although salt, baking soda, vanilla and yeast are commonly used in foods today; many people tend to think of any additive added to foods as complex chemical compounds. **All food additives are carefully regulated by federal authorities and various international organizations to ensure that foods are safe to eat and are accurately labeled**. The purpose of this e-newspaper is to provide helpful background information about food additives, why they are used in foods and how regulations govern their safe use in the food supply.

Once upon a time, all food was processed in the kitchen and consumed fresh. Then, a very long time ago, division of labor began. In villages, someone would set up as a baker or butcher, offering to take some of the labor out of food preparation. This process has continued unabated with the growth of urban populations and changing lifestyles. Although many people enjoy making bread, cakes, wine, beer, and ice cream at home, we accept that generally these items will be bought from specialists.

Food additives came into being because mass, specialized food production has different

requirements to those of the household kitchen. Problems of keeping qualities became acute in foodstuffs produced a long way from their point of consumption. Food additives came into use to satisfy these requirements for processed foods. In some products additives are so essential that they are retained even in organic foods.

Additives are used in foods for five main reasons:

- To maintain product consistency. Emulsifiers give products a consistent texture and prevent them from separating. Stabilizers and thickeners give smooth uniform texture. Anti-caking agents help substances such as salt to flow freely.
- To improve or maintain nutritional value. Vitamins and minerals are added to many common foods such as milk, flour, cereal and margarine to make up for those likely to be lacking in a person's diet or lost in processing. All products containing added nutrients must be appropriately labeled.
- To maintain palatability and wholesomeness. Preservatives retard product spoilage caused by mold, air, bacteria, fungi or yeast. Bacterial contamination can cause food borne illness, including life-threatening botulism. Antioxidants are preservatives that prevent fats and oils in baked goods and other foods from becoming rancid or developing an off-flavor. They also prevent cut fresh fruits such as apples from turning brown when exposed to air.
- To provide leavening or control acidity/alkalinity. Leavening agents that release acids when heated can react with baking soda to help cakes, biscuits and other baked goods to rise during baking. Other additives help modify the acidity and alkalinity of foods for proper flavor, taste and color.
- To enhance flavor or impart desired color. Many spices and natural and synthetic flavors enhance the taste of foods. Colors, likewise, enhance the appearance of certain foods to meet consumer expectations.

To regulate these additives, and inform consumers, each additive is assigned a unique number. Initially these were the "E numbers" used in Europe for all approved additives. This numbering scheme has now been adopted and extended by the Codex Alimentarius Committee to internationally identify all additives, regardless of whether they are approved for use.

E numbers are all prefixed by "E", but countries outside Europe use only the number, whether the additive is approved in Europe or not. For example, acetic acid is written as E260 on products sold in Europe, but is simply known as additive 260 in some countries. Additive 103, alkanet, is not approved for use in Europe so does not have an E number, although it is approved for use in Australia and New Zealand.

Food additives can be divided into several groups, although there is some overlap between them.

Acids
: Food acids are added to make flavors "sharper", and also act as preservatives and antioxidants. Common food acids include vinegar, citric acid, tartaric acid, malic acid, fumaric acid, lactic acid.

Acidity regulators
: Acidity regulators are used to change or otherwise control the acidity and alkalinity of foods.

Anti-caking agents
: Anti-caking agents keep powders such as milk powder flowing freely.

Antifoaming agents

Antifoaming agents reduce or prevent foaming in foods.

Antioxidants

Antioxidants such as vitamin C act as preservatives by inhibiting the effects of oxygen on food, and are generally beneficial to health.

Bulking agents

Bulking agents such as starch are additives that increase to bulk of a food without affecting its nutritional value.

Food coloring

Colorings are added to food to replace colors lost during preparation, or to make food look more attractive.

Color retention agents

In contrast to colorings, color retention agents are used to preserve a food's existing color.

Emulsifiers

Emulsifiers allow water and oils to remain mixed together in an emulsion, as in mayonnaise, ice cream, and homogenized milk.

Flavors

Flavors are additives that give food a particular taste or smell, and may be derived from natural ingredients or created artificially.

Flavor enhancers

Flavor enhancers enhance a food's existing flavors.

Flour treatment agents

Flour treatment agents are added to flour to improve its color or its use in baking.

Humectants

Humectants prevent foods from drying out.

Preservatives

Preservatives prevent or inhibit spoilage of food due to fungi, bacteria and other microorganisms.

Propellants

Propellants are pressurized gases used to expel food from its container.

Stabilizers

Stabilizers, thickeners and gelling agents, like agar or pectin (used in jam for example) give foods a firmer texture. While they are not true emulsifiers, they help to stabilize emulsions.

Sweeteners

Sweeteners are added to foods for flavoring. Sweeteners other than sugar are added to keep the food energy (calories) low, or because they have beneficial effects for diabetes mellitus and tooth decay.

Thickeners

Thickeners are substances which, when added to the mixture, increase its viscosity without substantially modifying its other properties

Colors	E100 - 180
Preservatives	E200 - 297
Antioxidants, Acidity regulators	E300 - 321
Thickeners, stabilizers, emulsifiers	E322 - 495
Acidity regulators, anti-caking agents	E500 - 585
Flavor enhancers	E620 - 640
Presentation enhancers	E900 - 948

Packaging gases	E941 - 948
Sweeteners	E950 - 967
Additional chemicals	E999 -1518

THIS IS ALL VERY NICE, BUT WHAT DOES IT REALLY MEAN?

We've set the record straight on what "food additives" are, but not ALL consumers mya use ALL food products containing ALL of the food additives, because some may have an allergy or an intolerance to some foods or additives.

If you think you may have a food additive sensitivity, it's important to seek professional help, since all of the symptoms you may be experiencing can also be caused by other disorders.

It may help to keep a food diary and note carefully any adverse reactions. In the case of a sensitivity being identified, the usual practice is to eliminate all suspect foods from the diet and then reintroduce them one by one, to see which additive (or additives) causes the reaction. This should only be done under medical supervision, since some of the reactions - such as asthma - can be serious. The **Clinical Laboratory Chem-Lab** offers a food intolerance test which spots all intorelances and will give you a detailed report. Once you have this report, and with the professional help of **www.diatrofologos.com** you will get a personalized menu plan without the foods that you have the intolerance to.

Αν έχετε συγκεκριμένες ερωτήσεις ή ανησυχίες, επικοινωνήστε μαζί μας στο youcandoit@diatrofologos.com και θα αναφερθούμε στα θέματα αυτά σε μελλοντικές εφημερίδες.