PHILIPPINE RISK PROFILING PROJECT

FOOD SAFETY BRIEFS

Food additives – are they safe?

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Background

There has been much discussion in recent weeks about the use of chemical substances that are used to either create food products, or are added to food to improve its safety, appearance, or appeal to consumers.

Not surprisingly, some consumers have concerns about what the food industry is adding to their food and, in turn, what they are feeding to their children.

What chemicals are added to food?

A wide range of chemicals may be added to food, including flavoring agents, colors, emulsifiers, stabilizers, and preservatives.

The role of these additives is to maintain or improve the safety, taste, texture, or appearance of a food.

Some common food additives have been used to preserve food for centuries. These include salt to preserve meat and fish, sugar to preserve fruits, and the pickling of food using acids.

Fermentation processes are often used to preserve foods for later consumption. Fermentation by lactic acid bacteria leads to the production of foods such as *burong pipino, kesong puti, burong talangka, longganisa*, and *bagoong alamang*.

Other chemical substances may be used to aid in the transformation of raw materials into foods during processing and manufacture.

Examples of additives

Artificial sweeteners: replace the sweetness provided by sugar, without adding to calorific load

Emulsifiers: added to ensure oil/fat and water in food doesn't separate into layers (*e.g.* emulsifiers used in mayonnaise, ice cream, and margarine)

Food colors: used to restore color to foods or to make food more attractive (*e.g.* colors added to ice cream, softdrinks, vinegar, and confectionary)

Flavor enhancers: added to improve the taste and/or smell of savory foods (*e.g.* Monosodium glutamate (MSG) is used to increase the taste of protein-rich food such as fish and meat)

Preservatives: added to slow or prevent spoilage as a result of the growth of microorganisms (*e.g.* benzoates in dairy desserts, sorbates in fruit and vegetable preparations, and sulphites in fruit juices)

How are additives approved?

The process of approving the use of a food additive is quite rigorous. Additives are examined to establish a good technological reason for using the additive, and then to assess their safety. Safety evaluations may include laboratory trials on the additive to evaluate their effect on laboratory animals.

As a result of these studies, scientists can establish maximum levels for incorporation of an additive in a food.

In the Philippines, the Department of Health has published an Updated list of food additives. By establishing permitted levels in specific foods, a consumer's intake of additives will not exceed a defined acceptable daily intake.

Some food additives have been used safely for decades, and they may be classified as GRAS – generally recognized as safe.

Processing aids

Various chemical substances may also be used to assist in the preparation of a food. These substances are not additives and are usually not present in any significant amount in the finished food.

Processing aids may include bleaching, washing or peeling agents used for vegetables; enzymes such as rennet used in cheese making; and solvents. They also include substances, such as acids used in the hydrolysis of vegetable protein in the industrial production of soy sauce.

Processing aids are not required to be listed on food labels, but are controlled and approved in the same way as food additives.

Summary

The production of many food products requires the use of chemical agents to assist in processing and to improve their appeal and safety. The approval of such chemicals involves careful assessments and carefully control over their use by the authorities.

Chemical substances may be used in the process and manufacture of food, given that the substances are GRAS.

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