

## **International Food Additives Council**

### **Self-Limiting Properties of Food Additives**

Food additives are important to the production of safe and nutritious foods and beverages. Additives can provide nutrition, maintain product quality or freshness, aid in the processing and preparation of food, and make food appealing. Their quantities in food are small, yet their impact is great. Without additives, we would lack the abundant and varied foods that we enjoy today.

While there are some who believe that limiting the number of available food additives will result in less exposure to consumers, the reverse is actually the case. The greater the number of available food additives, the more opportunities there are for reducing the amount of individual additives in foods. In addition, many additives are synergistic, where using small amounts of two or more additives may result in a reduction in the total amount of additive used in a food in comparison to the amount that would be needed if a single additive were used alone. For example, most sweeteners are synergistic, that is the sweetness of a combination of different sweeteners is greater than the sum of the sweetness of the individual sweeteners.

Concerns have been expressed that food and beverage manufacturers may be using more food additives than necessary. This allegation is unfounded for a number of reasons. First, many countries (including the US) have established regulations mandating the maximum amount of a food additive that may be used (usually expressed as a percentage of the food product or limited to good manufacturing practice – that is, only the amount required to achieve the technical effect). Second, there is no economic incentive for a food manufacturer to use more of an additive than absolutely necessary. The cost of producing a product with higher additive levels than necessary increases the cost of producing that product.

The third and most important factor is that the use of food additives is self-limiting, meaning there are inherent properties of food additives (such as taste or technological functions) that limit the amount that can be added to foods. Too much of an additive can result in undesirable effects, as described in the following three examples.

In salad dressings, too much thickener can result in a paste or gel rather than a smooth liquid salad dressing. In foods requiring sweetening, the taste of the finished food product can be compromised if too much intense sweetener is used, resulting in a bitter rather than a sweet tasting product. Finally, while microbial growth is usually unwanted, the use of too much preservative can result in an off-flavor.

For these reasons, manufacturers use no more of any food additive than absolutely necessary in finished foods and beverages. Consumers can rest assured that the amount of additives in foods and beverages is the lowest amount possible to achieve the desired effect.