

FACTSHEET No. 14

ADDITIVES IN BREAD

- Additives are not new. Additions to food have been made since pre-historic times, mainly to help preserve food and make it safer to eat. Salt, vinegar and sugar are traditional methods of preservation. In today's kitchen we use many flavourings and colours, cream of tartar and baking powder - but seldom recognise that these are food additives. Many additives also occur naturally in foods, e.g. citric acid in fruits.
- Without additives it would be impossible to feed modern urban populations. There would be a dramatic reduction in the number and variety of foods available and there would be a significant increase in food poisoning outbreaks and foodborne diseases.
- Consumers nowadays want fewer and fewer additives in their food. The baking industry has responded by developing breadmaking techniques that reduce additives to a minimum.
- Before they can be used for food production, additives must pass rigorous approval procedures at national, European and international level. They must be shown to be both necessary and safe. Because they undergo such stringent testing, more is known about their biological, physiological and toxicological effects than about many of the natural foods we commonly eat. Consumers can therefore be confident that approved additives are safe and serve a useful purpose.
- Bread, as our staple food, has always been very closely governed by law. The Bread and Flour Regulations (1995) govern the use of additives as well as requiring the addition of certain nutrients*.
- The Food Labelling Regulations require that all additives (except flavourings, which are not used in bread) be individually listed in ingredient lists. Bread wrappers carry a full list of ingredients, including additives. The provision of nutrition information is voluntary but bread wrappers will always include this on the label.
- Processing Aids - various enzymes and processing aids are also permitted for use in breadmaking. They are destroyed by the baking process and therefore there is no requirement for these to be listed on the label.

The following additives would normally be included among the ingredients listed on bread wrappers:

▪ **Flour Treatment Agents**

These are used to ensure good loaf volume and improve the crumb structure, softness and colour. Vitamin C, or ascorbic acid, (E300) is the most common flour treatment agent used in breadmaking.

▪ **Emulsifying Agents**

These are used to provide dough stability and tolerance in addition to improving loaf volume and crumb structure and in maintaining softness.

- E471
- E472(e)

▪ **Preservatives**

The most common form of preservative used is vinegar. This adjusts the acidity level (pH) of the loaf to prevent the development of mould spores and other spoilage organisms. Vinegar is a natural ingredient and is not regarded as a food additive.

Calcium Propionate (E282) inhibits the growth of mould spores and bacteria directly.

* **Nutritional Fortification of Bread**

The Bread and Flour Regulations require that flour should contain not less than 0.24 mg. thiamin (vitamin B1), 1.60mg. nicotinic acid and 1.65mg. of iron per 100g. of flour. These amounts are found naturally in wholemeal flour. White and brown flours must be fortified to restore their nutritional value to the required level.

In addition calcium carbonate, at a level of not less than 235mg. and not more than 390mg. per 100g. of flour, is added to all flours except wholemeal and certain self-raising varieties.

This ensures the high nutritional value of all bread, whether it is white, brown or wholemeal.