

STANDARD 1.3.1

FOOD ADDITIVES

Purpose

A food additive is any substance not normally consumed as a food in itself and not normally used as an ingredient of food, but which is intentionally added to a food to achieve one or more of the technological functions specified in Schedule 5. It or its by-products may remain in the food. Food additives are distinguishable from processing aids (see Standard 1.3.3) and vitamins and minerals added to food for nutritional purposes (see Standard 1.3.2).

This Standard regulates the use of food additives in the production and processing of food. A food additive may only be added to food where expressly permitted in this standard. Additives can only be added to food in order to achieve an identified technological function according to Good Manufacturing Practice.

Standard 1.3.4 prescribes standards for the identity and purity of food additives.

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Clauses

1 Definitions

In this Standard –

maximum permitted level means the maximum amount of additive which may be present in the food as set out in relation to that food in Schedule 1.

processed food means food which has undergone any treatment resulting in a substantial change in the original state of the food.

Editorial note:

This definition of ‘processed food’ is used to determine some additive permissions.

Processes such as dividing, parting, severing, boning, mincing, skinning, paring, peeling, grinding, cutting, cleaning, trimming, deep-freezing or freezing, milling or husking, packing or unpacking are not considered to result in a substantial change to the original state of the food.

technological function means a function set out in Schedule 5, but does not include the addition of a food additive to a single ingredient food that is not required by this Code to be labelled where a single process is applied and the food is presented in a manner which suggests that the organoleptic qualities have not been altered, other than through the process.

Editorial note:

When prawns are cooked, they generally turn red in colour. If a red food colour was also added to cooked prawns, consumers may be misled into believing that the red quality was attributable to the cooking process, and not the addition of a red food colour.

Food that has been smoked generally has a ‘smoky’ taste. If a smoke flavouring substance was also added to a smoked food, consumers may be misled into believing that the smoke taste was attributable to the smoking process, and not the addition of a smoke flavouring substance.

2 General prohibition on the use of additives

Unless expressly permitted in this Standard, food additives must not be added to food.

3 Permitted use of additives

The additives listed by name or number in Schedules 1, 2, 3 and 4 may be added to a food or class of food to perform technological functions provided that -

- (a) the use complies with any restrictions on use listed in Schedule 1; and
- (b) the proportion of the additive does not exceed the maximum level necessary to achieve one or more technological functions under conditions of Good Manufacturing Practice (GMP).

Editorial note:

The Codex Alimentarius Commission Procedural Manual sets out the following relevant criteria for use in assessing compliance with Good Manufacturing Practice:

- (a) the quantity of additive added to food shall be limited to the lowest possible level necessary to accomplish its desired effect;

- (b) the quantity of the additive that becomes a component of food as a result of its use in the manufacture, processing or packaging of a food and which is not intended to accomplish any physical, or other technical effect in the finished food itself, is reduced to the extent reasonably possible; and
- (c) the additive is prepared and handled in the same way as a food ingredient.

The manner in which a food is intended to be presented (e.g. by the use of such quality descriptors as natural, pure, traditional etc) may affect the type and level of food additives that could be used in accordance with GMP. Similarly, the type and level of food additives used may affect the way in which a food may be presented.

4 Requirements for use of intense sweeteners

Save where otherwise expressly stated in Schedule 1 and notwithstanding any specific level specified in a Schedule to this Standard, intense sweeteners may only be added to food in an amount necessary to replace the sweetness normally provided by sugars or as a flavour enhancer.

Editorial note:

In general, the use of intense sweeteners is limited to:

1. foods meeting the definition of ‘reduced joule’ or ‘low joule’;
2. ‘no added sugars’ food e.g. artificially sweetened canned fruit without added sugar; or
3. specific foods in which the use of the sweetener is in addition to sugar rather than as an alternative e.g. chewing gum, brewed soft drink (these foods are listed in Schedule 1 on a case-by-case basis).

Conditions relating to the use of reduced/low joule and no added sugar claims can be found in Standard 1.2.8 or in ANZFA’s Code of Practice on Nutrient Claims in Food Labels and in Advertisements (Commonwealth of Australia, AGPS 1995).

Polyols, isomalt and polydextrose may be considered to be food additives when used as humectants and texturisers. Where these substances constitute a significant part of the final food they would be regarded as a food in their own right rather than food additives. Polyols, isomalt and polydextrose are not considered to be bulking agents if used in large amounts to replace sugars as they may contribute significantly to the available energy of the food.

5 Maximum permitted levels of additives

(1) Where a maximum level for an additive in a food is prescribed, unless otherwise stated, the level refers to the maximum amount which may be present in the food as sold or, where there are directions for preparation, when prepared for consumption according to label directions.

(2) For the purposes of this Standard –

annatto and annatto extracts shall be calculated as bixin.

benzoic acid and its salts shall be calculated as benzoic acid.

cyclamate and its salts shall be calculated as cyclohexyl-sulphamic acid.

propionic acid and its salts shall be calculated as propionic acid.

saccharin and its calcium and sodium salts shall be calculated as saccharin.

sorbic acid and its salts shall be calculated as sorbic acid.

sulphur dioxide, sulphites including bisulphites and metabisulphites shall be calculated as sulphur dioxide.

6 Additives performing the same function

(1) Where two or more additives may be added to a food for the purpose of achieving the same technological function, those additives may be used singly or in combination.

(2) Where two or more additives are used in combination to achieve the same technological function, the sum of the quantities obtained by dividing the amount of each food additive used by the maximum permitted level for that food additive must not exceed 1.

Example

A food can have a maximum amount of 40 mg/kg of preservative X or 20 mg/kg of preservative Y. Some of the permitted combinations of the two preservatives are:

Preservative X	Quantity for Preservative X	Preservative Y	Quantity for Preservative Y	Sum of Quantities
40 mg/kg	1	nil	0	1
30 mg/kg	0.75	5 mg/kg	0.25	1
20 mg/kg	0.5	10 mg/kg	0.5	1
10 mg/kg	0.25	15 mg/kg	0.75	1
nil	0	20 mg/kg	1	1

7 Carry-over of additives

Other than by direct addition, an additive may be present in any food as a result of carry-over from an ingredient, provided that the level of the additive in the final food is no greater than would be introduced by the use of the ingredient under proper technological conditions and good manufacturing practice.

Editorial note:

In clause 7, the ingredient can itself be a food additive.

The additive must be permitted to be present in the ingredient and must not be present in any greater quantity than permitted.

8 Food for use in preparation of another food

Any food additive permitted in a food may be added to an ingredient intended for use in the preparation of that food provided that the level in the final food when prepared complies with the maximum permitted level in this Standard.

9 The addition of a garnish to food

The addition of a garnish to a food does not render that food a mixed food for the purposes of this Standard.

Editorial note:

Examples of the addition of a garnish to a food include lemon slice to fish or pepper to steak to make pepper steak.

10 Colours and their aluminium and calcium lakes

A reference to a colour listed in Schedules 1, 3 and 4 of this Standard includes a reference to the aluminium and calcium lakes prepared from that colour.

11 Permitted flavouring substances

Permitted flavouring substances, for the purposes of this Standard, are those flavouring substances which are either –

- (a) Listed in at least one of the following publications -
 - (i) *Food Technology, A Publication of the Institute of Food Technologists*, Generally Recognised as Safe (GRAS) lists of flavouring substances published by the Flavour and Extract Manufacturers' Association of the United States from 1960 to December 2001; or
 - (ii) *Flavouring Substances and Natural Sources of Flavourings*, 4th Edition, Volume 1, Chemically-defined flavouring substances, Council of Europe, 1992; or
 - (iii) *United States Code of Federal Regulations*, 1996, 21 CFR Part 172.515; or
- (b) a substance that is a single chemical entity obtained by physical, microbiological, enzymatic, synthetic or chemical processes, from material of vegetable or animal origin either in its raw state or after processing by traditional preparation process including drying, roasting, and fermentation.

Editorial note:

The Flavour and Fragrance Association of Australia and New Zealand (FFAANZ) has prepared a consolidated list of permitted artificial flavouring substances in the three publications for ease of reference. This list is available from FFAANZ or from the Australia New Zealand Food Authority.

The National Registration Authority has issued a maximum residue limit for longans of 500 mg/kg in the whole fruit (see item 4 of Schedule 1).