



**SOUTH AFRICAN ASSOCIATION OF THE FLAVOUR & FRAGRANCE INDUSTRY**

## **FLAVOURING STANDARD FOR THE SOUTH AFRICAN FLAVOUR INDUSTRY**

(Final v.1 of 01 September 2017)  
(Final v.1.1 of 14 May 2019)  
(Final v.1.2 of 28 June 2019)

### **PURPOSE**

1. To provide an industry standard for flavourings in South Africa.
2. To give direction on those flavouring materials that have been evaluated and accepted, and thus may be considered as permitted for use in foodstuffs in South Africa.
3. To provide guidance on business to business description of flavourings, particularly with respect to qualifications, such as natural.

### **SCOPE**

These principles apply to flavourings, as defined below, which are to be added to foodstuffs intended for sale in South Africa.

### **GENERAL PRINCIPLES**

1. The use of flavourings in foodstuffs should not lead to unsafe levels of their intake.<sup>2</sup>
2. Flavourings should be of a purity suitable for use in foodstuffs. Unavoidable impurities should not be present in the final foodstuffs at levels that would pose an unacceptable risk to health.<sup>2</sup>
3. The use of flavourings is justified only where they impart, modify or enhance the flavour of the foodstuff, provided that such use does not mislead the consumer about the nature or quality of the foodstuff.<sup>2</sup>
4. Flavourings should be used under conditions of good manufacturing practice, which includes limiting the quantity used in foodstuffs to the lowest level necessary to accomplish the desired flavouring effect.<sup>2</sup>
5. Flavourings may contain non-flavouring food ingredients, including food additives and foodstuffs, necessary for their production, storage, handling, and use. Such ingredients may also be used to facilitate the dilution, dissolution, or dispersion of flavourings in food. Non-flavouring food ingredients should be:

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- a. Limited to the lowest level required to ensure the safety and quality of the flavourings, and to facilitate their storage and ease of use;
  - b. Reduced to the lowest level reasonably possible when not intended to accomplish a technological function in the foodstuff itself; <sup>2</sup>
6. Where non-flavouring food ingredients provide a technological function in the finished foodstuff, they should be used and labelled in accordance with the provisions of the Foodstuffs Cosmetics and Disinfectants Act 54 of 1972. Examples include flavoured emulsions, sprinkle flavourings, snack food flavourings, flavoured coatings etc., all of which incorporate non-flavouring food ingredients and/or additives such as salt, sugar, MSG, colourants, preservatives, cloudifiers and stabilizers that may provide a technological function in the finished foodstuff<sup>1,2</sup>
  7. The “functional/technological effect” in the final foodstuff at the intended use level of Flavourings with Modifying Properties (FMPs), as either a flavouring or a food additive, must be determined by the flavour house or supplier and communicated to the end-user to ensure appropriate labelling.
  8. This document is to be read in conjunction with all the relevant South African regulations, such as those promulgated under the Foodstuffs Cosmetics and Disinfectants Act 54 of 1972 and the Agricultural Product Standards Act 119 of 1990.

## DEFINITIONS <sup>1,2,3,4,5</sup>

**‘appropriate physical process’** shall mean a physical process which does not intentionally modify the chemical nature of the components of the flavouring, without prejudice to the listing of traditional food preparation processes listed under the definition “*traditional food preparation & physical processes*”, and does not involve, *inter alia*, the use of singlet oxygen, ozone, inorganic catalysts, metal catalysts, organometallic reagents and/or UV radiation. <sup>3</sup>

**‘derived smoke flavourings’** shall refer to flavourings produced as a result of the further processing of primary products and which are used or intended to be used in or on foods in order to impart smoke flavour to those foods.<sup>5</sup>

**‘flavour precursor’** shall mean a product, not necessarily having flavouring properties itself, intentionally added to food for the sole purpose of producing flavour by breaking down or reacting with other components during food processing; it may be obtained from:

- (i) food;
- and/or
- (ii) source material other than food.<sup>3</sup>

**‘flavouring’**: means a product that is added to food to impart, modify, or enhance the flavour of food with the exception of flavour enhancers considered as food additives under the Codex Class Names and the International Numbering System for Food Additives -CAC/GL 36-1989. Flavourings do not include substances that have an exclusively sweet, sour, or salty taste (e.g. sugar, vinegar, and table salt). Flavourings may consist of flavouring substances, natural flavouring complexes, thermal process flavourings or smoke flavourings and mixtures of them and may contain non-flavouring food ingredients within defined conditions such as carriers, solvents, etc. Flavourings are not intended to be consumed as such.<sup>7</sup>

**‘flavouring preparation’** shall mean a product, other than a flavouring substance, obtained from:

- (i) food by appropriate physical, enzymatic (i) or microbiological processes either in the raw state of the material or after processing for human consumption by one or more of the traditional food preparation processes listed under the definition “*traditional food preparation & physical processes*”;
- and/or
- (ii) material of vegetable, animal or microbiological origin, other than food, by appropriate physical, enzymatic or microbiological processes, the material being taken as such or prepared by one or more of the traditional food preparation processes listed under the definition “*traditional food preparation & physical processes*”.<sup>3</sup>

**‘flavouring substance’** shall mean a defined chemical substance with flavouring properties (including those obtained by chemical synthesis or isolated using chemical processes, and natural flavouring substances).<sup>3</sup>

**'food ingredient with flavouring properties'** shall mean a food ingredient other than flavourings which may be added to food for the main purpose of adding flavour to it or modifying its flavour and which contributes significantly to the presence in food of certain naturally occurring undesirable substances<sup>3</sup>  
(Refer to Annex III Presence of certain substances part B of Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods ).

**'foodstuff' or 'food'** means any article or substance (except a medicine as defined in the Medicines and Related Substances Act, 1965 (Act No. 101 of 1965)) ordinarily eaten or drunk by a person or purporting to be suitable, or manufactured or sold, for human consumption, and includes any part or ingredient of any such article or substance, or any substance used or intended or destined to be used as a part or ingredient of any such article or substance; <sup>4</sup>

**'natural flavouring substance'** shall mean a flavouring substance obtained by appropriate physical, enzymatic or microbiological processes from material of vegetable, animal or microbiological origin either in the raw state or after processing for human consumption by one or more of the traditional food preparation processes as defined under "*traditional food preparation & physical processes*". Natural flavouring substances correspond to substances that are naturally present and have been identified in nature.<sup>3</sup>

**'other flavouring'** shall mean a flavouring added or intended to be added to food in order to impart odour and/or taste and which does not fall under definitions for flavouring substances, natural flavouring substance, flavouring preparation, thermal process flavouring, smoke flavouring or flavor precursor.<sup>3</sup>

**'primary products'** shall refer to primary smoke condensates and primary tar fractions.<sup>5</sup> (refer to Permitted Primary Products)

**'primary smoke condensate'** shall refer to the purified water-based part of condensed smoke and shall fall within the definition of 'smoke flavourings'.<sup>5</sup>

**'primary tar fraction'** shall refer to the purified fraction of the water-insoluble high-density tar phase of condensed smoke and shall fall within the definition of 'smoke flavourings'.<sup>5</sup>

**'source material'** shall mean material of vegetable, animal, microbiological or mineral origin from which flavourings or food ingredients with flavouring properties are produced; it may be:  
(i) food;  
or  
(ii) source material other than food  
(refer to Annex IV of Regulation (EC) No 1334/2008 and future amendments thereof – List of source materials to which restrictions apply for their use in the production of flavourings and food ingredients with flavouring properties)<sup>3</sup>.

**'thermal process flavouring'** shall mean a product obtained after heat treatment from a mixture of ingredients not necessarily having flavouring properties themselves, of which at least one contains nitrogen (amino) and another is a reducing sugar; the ingredients for the production of thermal process flavourings may be:  
(i) food;  
and/or  
(ii) source material other than food  
(refer to Annex V of Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods) <sup>3</sup>.

**'traditional food preparation & physical processes'** :

Absorption<sup>7</sup>

Adsorption<sup>7</sup>

Chopping<sup>3</sup>

Coating<sup>3</sup>

Crystallization<sup>7</sup>

Heating, cooking, baking, frying (up to 240 °C at atmospheric pressure) and pressure cooking (up to 120 °C)<sup>3</sup>

Cooling<sup>3</sup>

Cutting<sup>3,7</sup>

Distillation<sup>2,3,7</sup>/rectification<sup>3</sup>

Drying<sup>2,3,7</sup>  
Emulsification<sup>3,7</sup>  
Encapsulation<sup>7</sup>  
Enzymatic processes<sup>2</sup>  
Evaporation<sup>3</sup>  
Extraction, incl. solvent extraction<sup>2,3,7</sup>  
Extrusion<sup>7</sup>  
Fermentation<sup>2,3</sup>  
Filtration<sup>3,7</sup>  
Grinding<sup>3,7</sup>  
Heating<sup>7</sup>  
Infusion<sup>3</sup>  
Maceration<sup>3</sup>  
Microbiological processes<sup>2,3</sup>  
Mixing<sup>3,7</sup>  
Osmosis<sup>7</sup>  
Peeling<sup>3</sup>  
Percolation<sup>3</sup>  
Precipitation<sup>7</sup>  
Pressing<sup>3</sup>  
Refrigeration/Freezing<sup>3</sup>  
Roasting/Grilling<sup>3,7</sup>  
Torrification (roasting)<sup>2</sup>  
Squeezing<sup>3,7</sup>  
Steeping<sup>3</sup>  
Sublimation<sup>7</sup>  
Ultrasonic Treatment<sup>7</sup>

## ACCEPTED FLAVOURING MATERIALS

### Flavouring substances

For purposes of these guidelines, **flavouring substances** are considered acceptable if they meet one or more of the following requirements identifying the material as appropriate for the formulation of flavourings:

- Listed in the IOFI Global Reference List of Flavorings (GRL)<sup>7</sup>
- Flavouring substances accepted by the Joint FAO/WHO Experts Committee on Food Additives (JECFA) as posing no safety concerns at current levels of intake.<sup>8</sup>
- Materials that have been evaluated and found, using the same or similar methodology as used by JECFA, to present “no safety concern under conditions of intended use” by authoritative bodies such as the European Food Safety Authority (EFSA)<sup>9</sup> or the Japanese Food Safety Commission (FSC).<sup>10</sup>
- Materials that are deemed to be Generally Recognized As Safe (GRAS), approved by the US Food and Drug Administration (FDA) including GRAS determination published by the Expert Panel of the Flavor and Extract Manufacturers Association of the United States (FEMA).<sup>11</sup>

### Accepted Flavourings other than Flavouring Substances

For purposes of these guidelines, **flavourings other than flavouring substances** are considered acceptable if they meet one or more of the following requirements identifying the material as appropriate for the formulation of flavourings:

- Flavouring preparations, thermal process flavouring and flavor precursor produced from food<sup>3</sup>
- Materials of vegetable, animal or microbiological origin that can be considered food materials as per regulation Regulation (EC) No 1334/2008 (para. 16)<sup>3</sup>
- Listed in the IOFI Global Reference List of Flavorings (GRL)<sup>7</sup>
- Flavouring substances accepted by the Joint FAO/WHO Experts Committee on Food Additives (JECFA) as posing no safety concerns at current levels of intake.<sup>8</sup>
- Materials that have been evaluated and found, using the same or similar methodology as used by JECFA, to present “no safety concern under conditions of intended use” by

authoritative bodies such as the European Food Safety Authority (EFSA)<sup>9</sup> or the Japanese Food Safety Commission (FSC)<sup>10</sup>.

- Materials that are deemed to be Generally Recognized As Safe (GRAS), approved by the US Food and Drug Administration (FDA) including GRAS determination published by the Expert Panel of the Flavor and Extract Manufacturers Association of the United States (FEMA).<sup>11</sup>

## PERMITTED PRIMARY PRODUCTS USED FOR THE PRODUCTION OF SMOKE FLAVOURINGS AND REACTION CONDITIONS UNDER WHICH THEY ARE PREPARED

**Permitted Primary products** are those evaluated and authorized by the Scientific Panel on Food Contact Materials, Enzymes, Flavourings and processing Aids (CEF) of EFSA. Smoke flavourings should follow the requirements of Regulation (ec) no 2065/2003 of the European Parliament and of the Council of 10 November 2003 on smoke flavourings used or intended for use in or on foods<sup>5</sup>

## RESTRICTION ON THE PRESENCE OF CERTAIN SUBSTANCES

*Substances which shall not be added as such to food  
(Annex III Part A)<sup>3</sup>*

Agaric acid  
Aloin  
Capsaicin  
1,2-Benzopyrone, coumarin  
Hypericine  
Beta-asarone  
1-Allyl-4-methoxybenzene, estragole  
Hydrocyanic acid  
Menthofuran  
4-Allyl-1,2-dimethoxybenzene, methyleugenol  
Pulegone  
Quassin  
1-Allyl-3,4-methylene dioxy benzene, safrole  
Teucrin A  
Thujone (alpha and beta)

*Maximum levels of certain substances, naturally present in flavourings and food ingredients with flavouring properties, in certain compound food as consumed to which flavourings and/or food ingredients with flavouring properties have been added.  
(Annex III Part B)<sup>3</sup>*

Name of the substance	Compound food in which the presence of the substance is restricted	Maximum level mg/kg
1-Allyl-4-methoxybenzene, Estragol (*)	Dairy products	50
	Processed fruits, vegetables (incl. mushrooms, fungi, roots, tubers, pulses and legumes), nuts and seeds	50
	Fish products	50
	Non-alcoholic beverages	10
Hydrocyanic acid	Nougat, marzipan or its substitutes or similar products	50
	Canned stone fruits	5
	Alcoholic beverages	35
Menthofuran	Mint/peppermint containing confectionery, except micro breath freshening confectionery	500
	Micro breath freshening confectionery	3 000
	Chewing gum	1 000
	Mint/peppermint containing alcoholic beverages	200

4-Allyl-1,2-dimethoxybenzene, Methyleugenol (*)	Dairy products	20
	Meat preparations and meat products, including poultry and game	15
	Fish preparations and fish products	10
	Soups and sauces	60
	Ready-to-eat savouries	20
	Non-alcoholic beverages	1
Pulegone	Mint/peppermint containing confectionery, except micro breath freshening confectionery	250
	Micro breath freshening confectionery	2 000
	Chewing gum	350
	Mint/peppermint containing non-alcoholic beverages	20
	Mint/peppermint containing alcoholic beverages	100
Quassin	Non-alcoholic beverages	0,5
	Bakery wares	1
	Alcoholic beverages	1,5
1-Allyl-3,4-methylene dioxy benzene, safrole (*)	Meat preparations and meat products, including poultry and game	15
	Fish preparations and fish products	15
	Soups and sauces	25
	Non-alcoholic beverages	1
Teucrin A	Bitter-tasting spirit drinks or bitter (1)	5
	Liqueurs (2) with bitter taste	5
	Other alcoholic beverages	2
Thujone (alpha and beta)	Alcoholic beverages, except those produced from Artemisia species	10
	Alcoholic beverages produced from Artemisia species	35
	Non-alcoholic beverages produced from Artemisia species	0,5
Coumarin	Traditional and/or seasonal bakery ware containing a reference to cinnamon in the labelling	50
	Breakfast cereals including muesli	20
	Fine bakery ware, with the exception of traditional and/or seasonal bakery ware containing a reference to cinnamon in the labelling	15
	Desserts	5

(\*) The maximum levels shall not apply where a compound food contains no added flavourings and the only food ingredients with flavouring properties which have been added are fresh, dried or frozen herbs and spices.

(1) As defined in Annex II, paragraph 30 of Regulation (EC) No 110/2008.

(2) As defined in Annex II, paragraph 32 of Regulation (EC) No 110/2008.

## RESTRICTION ON THE USE OF CERTAIN SOURCE MATERIALS

*Source materials which shall not be used for the production of flavourings and food ingredients with flavouring properties  
(Annex IV Part A)<sup>3</sup>*

Source material	
Latin name	Common name
Tetraploid form of <i>Acorus calamus</i> L.	Tetraploid form of Calamus

*Conditions of use for flavourings and food ingredients with flavouring properties produced from certain source materials  
(Annex IV Part B)<sup>3</sup>*

Source material		Conditions of use
Latin name	Common name	
Quassia amara L. and Picrasma excels (Sw)	Quassia	Flavourings and food ingredients with flavouring properties produced from the source material may only be used for the production of beverages and bakery wares.
Laricifomes officinales (Vill.: Fr) Kotl. et Pouz or Fomes officinalis	White agaric mushroom	Flavourings and food ingredients with flavouring properties produced from the source material may only be used for the production of alcoholic beverages.
Hypericum perforatum L.	St John's wort	
Teucrium chamaedrys L.	Wall germander	

## **LABELLING OF FLAVOURINGS (Not intended for sale to the final consumer)**

### **General**

The sales description shall be 'flavouring'. A more specific name or description of the flavouring, without any further qualification such as 'natural', may be added.

### **Voluntary qualification of flavourings as natural**

The term "natural" for the description of a flavouring may only be applied as follows:

- Natural may only be used to qualify flavouring(s) if the flavouring component is made up solely of the categories 'flavouring preparations' and/or 'natural flavouring substances' as defined above. Additives and other ingredients present in a flavouring do not jeopardise the natural status<sup>12</sup>. (See General Principle 5)
- The term "natural" may only be used in combination with a reference to a food, food category or a vegetable or animal flavouring source if the flavouring component has been obtained exclusively or by at least 95% by w/w from the source material referred to. The description shall read "natural <<food(s) or food category or source(s)>> flavouring"<sup>3</sup>

## **COMMENT ON THE LABELLING OF FLAVOURINGS IN THE LIST OF INGREDIENTS ON CONSUMER PACKS**

As required in regulations relating to the labelling and advertising of foodstuffs, in accordance with the provisions of the Foodstuffs Cosmetics and Disinfectants Act 54 of 1972, any additive which is added to or used in a foodstuff to perform the function of the category of ingredient defined as flavouring shall be indicated in the list of ingredients as "flavouring".<sup>1</sup>

It should be noted that the denominations "nature-identical" and "artificial" and the distinction between them are no longer relevant and should not be used to qualify flavourings.

## **IMPORTANT NOTE**

Please note that this Standard is a living document and will continue to be updated in line with the latest international and local approaches and interpretations as appropriate.

## **REFERENCES:**

- 1 Regulations relating to the Labelling and Advertising of Foodstuffs, R.146 of 2010 (as amended)  
<http://www.doh.gov.za/healthtopics.php?t=Food Control&c=Legislation>
- 2 Codex Alimentarius Guidelines for the use of flavourings CAC/GL 66-2008.  
[www.codexalimentarius.net](http://www.codexalimentarius.net)
- 3 Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods and amending Council Regulation (EEC) No 1601/91, Regulations (EC) No2232/96 and (EC) No 110/2008 and Directive 2000/13EC

- 4 Foodstuffs, Cosmetics and Disinfectant Act 54 of 1972
- 5 Regulation (EC) No 2065/2003 of the European Parliament and of the Council of 10 November 2003 on smoke flavourings used or intended for use in or on foods
- 6 Regulations relating to the Labelling and Advertising of Foodstuffs, R.146 of 2010 (as amended) Guideline 7; [http://www.doh.gov.za/healthtopics.php?t=Food Control&c=Legislation](http://www.doh.gov.za/healthtopics.php?t=Food%20Control&c=Legislation)  
<http://tna.europarchive.org/20100910172942/http://www.food.gov.uk/multimedia/pdfs/markcritguidance.pdf>
- 7 International Organization of The Flavour Industry [www.iofi.org](http://www.iofi.org)
- 8 Joint FAO/WHO Expert Committee on Food Additives JECFA [www.fao.org](http://www.fao.org)
- 9 The EU Flavour Information System FLAVIS  
<http://www.flavis.net/>  
[http://ec.europa.eu/food/food/chemicalsafety/flavouring/database/dsp\\_search.cfm](http://ec.europa.eu/food/food/chemicalsafety/flavouring/database/dsp_search.cfm)
- 10 Japan Flavor and Fragrance Materials Association (JFFMA)  
<http://www.jffma-jp.org/english/>
- 11 Flavour and Extract Manufacturers Association [www.femaflavor.org](http://www.femaflavor.org)
- 12 Food and Drink Europe Guidelines on “Regulation (EC) No. 1334/2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods”, visit:  
<http://www.fooddrinkeurope.eu/publications/category/guidelines/>
- 13 EFFA Guidance Document on the EC Regulation on Flavourings  
<http://www.ffa.eu/media/news/28/668/FFAGuidanceDocumentonthenewECFlavouringRegulationrevisedversionFINAL030910.pdf>
- 14 DG Sanco Flav DG Sanco: Flavourings  
[http://ec.europa.eu/food/food/chemicalsafety/flavouring/index\\_en.htm](http://ec.europa.eu/food/food/chemicalsafety/flavouring/index_en.htm)

## UPDATE HISTORY

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1<sup>st</sup> modification to correct omissions in Annex III Part B (highlighted in yellow) 14<sup>th</sup> May 2019

2<sup>nd</sup> modification to correct a spelling mistake 28<sup>th</sup> June 2019