# **SWEETENERS IN FOOD REGULATIONS, 1987**

This version is out of date

Subsidiary 1987/045

Regulations made under sections 6, 8 and 58.

# **SWEETENERS IN FOOD REGULATIONS, 1987**

(LN. 1987/045)

1.8.1987

# **EU Legislation/International Agreements involved:**

Directive 74/329/EEC Directive 78/663/EEC

ARRANGEMENT OF REGULATIONS.

## Regulation

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**SCHEDULE 1.** 

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## Title and commencement.

- 1.(1) These regulations may he cited as the Sweeteners in Food Regulations 1987.
- (2) These regulations shall come into operation on the 1st day of August, 1987.

# Interpretation.

- 2. (1) In these regulations, unless the context otherwise requires-
  - "the British Pharmacopoeia 1980" means the edition of the British Pharmacopoeia published in 1980 in London by the Department of Health and Social Security;
  - "the British Pharmacopoeia 1980 Addendum 1982" means the Addendum to the British Pharmacopoeia 1980 published in 1982 in London by the Department of Health and Social Security;
  - "carbohydrate" means a substance which contains carbon, hydrogen and oxygen only, and in which the hydrogen and oxygen occur in the same proportion as in water;
  - "natural food substance" means any substance, suitable for use as food and commonly used as food, which is wholly a natural product, whether or not that substance has been subjected to any process or treatment;
  - "the Act" means the Food and Drugs Act;
  - "permitted antioxidant" means any antioxidant in so far as its use is permitted by the Antioxidants in Food Regulations 1987;
  - "permitted bleaching agent" means any bleaching agent in so far as its use is permitted by the Bread and Flour Regulations 1987;
  - "permitted colouring matter" means any colouring matter in so far as its use is permitted by the Colouring Matter in Food Regulations 1980, as amended;
  - "permitted emulsifier" means any emulsifier in so far as its use is permitted by the Emulsifiers and Stabilisers in Food Regulations 1987;

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- "permitted improving agent" means any improving agent in so far as its use is permitted by the Bread and Flour Regulations 1987;
- "permitted miscellaneous additive" means any miscellaneous additive in so far as its use is permitted by the Miscellaneous Additives in Food Regulations 1987;
- "permitted preservative" means any preservative in so far as its use is permitted by the Preservatives in Food Regulations 1987;
- "permitted solvent" means any solvent in so far as its use is permitted by the Solvents in Food Regulations 1987;
- "permitted stabiliser" means any stabiliser in so far as its use is permitted by the Emulsifiers and Stabilisers in Food Regulations 1987;
- "permitted sweetener" means any Sweetener specified in Part I of Schedule 1 which satisfies the specific purity criteria for that sweetener specified or referred to in Part II of that Schedule and, so far as is not otherwise provided for by any such specific purity criteria, satisfies the general purity criteria specified in Part III of that Schedule;
- "sell" includes offer or expose for sale and includes have in possession for sale, and 'sale' shall be construed accordingly;
- "sweetener" means any substance, other than a carbohydrate, whose primary organoleptic characteristic is sweetness, but does not include—
  - (a) any natural food substance,
  - (b) any permitted antioxidant,
  - (c) any permitted bleaching agent,
  - (d) any permitted colouring matter,
  - (e) any permitted emulsifier,
  - (f) any permitted improving agent,
  - (g) any permitted miscellaneous additive,
  - (h) any permitted preservative,

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- (i) any permitted solvent,
- (j) any permitted stabiliser,
- (k) any starch, whether modified or not;
- (2) For the purposes of these regulations, the supply of food, otherwise than by sale, at, in or from any place where food is supplied in the course of a business shall be deemed to be a sale of that food.
- (3) Unless a contrary intention is expressed, all proportions mentioned in these regulations are proportions calculated by weight of the product as sold.
- (4) Any reference in these regulations to a numbered regulation or schedule shall, unless the reference is to a regulation of, or schedule to, specified regulations, be construed as a reference to the regulation on schedule so numbered in these regulations.

## Exemptions.

- 3. These regulations do not apply to any food (including any sweetener) which is-
  - (a) not intended for sale for human consumption; or
  - (b) intended at the time of sale or importation, as the case may be, for exportation to any place outside Gibraltar.

## Sale and importation of food containing added sweeteners.

4. No person shall sell or import any food which has in it or on it any added sweetener other than a permitted sweetener.

### Sale, importation and advertisement of sweeteners.

- 5.(1) No person shall sell or import any sweetener (including any sweetener with which any other substance has been mixed) which is intended for use in a catering establishment or for use by the ultimate consumer other than a permitted sweetener.
- (2) No person shall sell or advertise for sale any sweetener (including any sweetener with which any other substance has been mixed) for use as an

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ingredient in the preparation of food unless the sweetener is a permitted sweetener.

## Food for babies and young children.

- 6.(1) No person shall sell any food that is specially prepared for babies or young children if it has in it or on it any added sweetener.
- (2) Paragraph (1) of this regulation shall not apply to food specially prepared for babies or young children with special dietary requirements.

## Labelling provisions.

- 7.(1) No person shall sell a permitted sweetener (including a permitted sweetener with which any other substance has been mixed) which is not ready for delivery to the ultimate consumer or a catering establishment unless it is marked or labelled with-
  - (a) the name of the permitted sweetener;
  - (b) the serial number, if any, specified for the permitted sweetener in column 2 of Part I of Schedule 1;
  - (c) the words 'for foodstuffs (restricted use)';
  - (d) the name or business name and an address or registered office of the manufacturer or packer, or of a seller established within the European Economic Community; and
  - (e) in the case of the permitted sweetener sorbitol syrup (E420) which contains after hydrolysis a level of total sugars exceeding 1%, the words 'contains after hydrolysis a level of total sugars of more than 1%' or substantially similar words.
- (2) Without prejudice to paragraph (1) of this regulation, no person shall sell a permitted sweetener with which any other substance (including another permitted sweetener) has been mixed and which is not ready for delivery to the ultimate consumer or a catering establishment unless it is marked or labelled with the name of every other substance in the mixture.
- (3) A permitted sweetener (including a permitted sweetener with which any other substance has been mixed) shall not be regarded as being marked or labelled in accordance with the foregoing paragraphs of this regulation unless the particulars with which it is required to be marked or labelled by those paragraphs appear-

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- (a) on the packaging, or
- (b) on a label attached to the packaging, or
- (c) on a label that is clearly visible through the packaging,

in such a way that they are easy to understand, clearly legible and indelible and are not hidden, obscured or interrupted by any other written or pictorial matter.

#### Condemnation of food.

8. Where any food is certified by a public analyst as being food which it is an offence against regulation 4 to sell or import, that food may be treated for the purposes of section 10 of the Act (under which food may be seized and destroyed on the order of a justice of the peace) as being unfit for human consumption.

#### Penalties.

9. If any person contravenes or fails to comply with any of the foregoing provisions of these regulations he shall be guilty of an offence and shall be liable on summary conviction to a fine not exceeding £1,000.

# Application of various sections of the Act.

10. Sections 46(2) and (3) (which relate to prosecutions), 47(1) and (2) (which relate to evidence of analysis), 49 (which relates to the power of a court to require analysis by the Government Chemist in the United Kingdom), 50 (which relates to a contravention due to some person other than the person charged), 51(2) (which relates to the conditions under which a warranty may be pleaded as a defence) and 52 (which relates to offences in relation to warranties and certificates of analysis) of the Act shall apply for the purposes of these regulations as if references therein to proceedings, or a prosecution, under or taken or brought under the Act included references to proceedings, or a prosecution as the case may be, taken or brought for an offence under these regulations and as if the reference in the said Section 49 to subsection (3) of Section 46 included a reference to that subsection as applied by these regulations.

#### Revocation.

11. The Artificial Sweeteners in Food Regulations are hereby revoked.

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#### **SCHEDULE 1**

#### PART I

#### PERMITTED SWEETNERS

Column 1 Column 2
Name of Sweetener Serial Number

Acesulfame potassium

Aspartame

Hydrogenated glucose syrup

Isomalt

Mannitol E421

Saccharin

Sodium saccharin Calcium saccharin

Sorbitol E420

Sorbitol syrup E420

Thaumatin Xylitol

## PART II

#### SPECIFIC PURITY CRITERIA FOR PERMITTED SWEETENERS

Acesulfame potassium

Synonym

Chemical name Potassium 3 ,4-dihydro-6-methyl-2 ,2, 4-trioxo-

1,26 3-oxathiazin-3-ide.

Empirical formula C<sub>4</sub>H<sub>4</sub>KNO<sub>4</sub>S.

Molecular weight 201.2

Description White, odourless, crystalline powder or granules

with an intensely sweet taste.

Content Not less than 99.0% of C<sub>4</sub>H<sub>4</sub>KNO<sub>4</sub>S on a volatile

matter-free basis.

Volatile matter Not more than 1.0% (determined by drying

at 150°C to constant weight).

pH of a 1% aqueous

solution Not less than 6.5 and not more than 7.5.

Potassium acetate Not more than 0.5%. Fluoride Not more than 30 mg/kg.

Aspartame.

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Chemical name (3s)-3-Amino-N[(x)-x methoxycarbonyl-

phenethyl] succinamic acid

Synonym L-Aspartyl-L-phenylalanine methyl ester

Empirical formula  $C_{14}H_{18}N_2O_5$ .

Moecular weight 294.3.

Description White, odourless, crystalline powder with an

intensely sweet taste.

Content Not less than 98.0% of C<sub>14</sub>H<sub>18</sub>N<sub>2</sub>O<sub>5</sub> on a volatile

matter-free basis.

Volatile matter Not more than 4.5% (determined by drying at

105°C to constant weight).

Specific rotation, [x]

 $20^{0 \, \text{C}}$ 

Not less than +12.5° and not more than +17.5° (determined using a 4% weight/volume solution on a volatile matter-free basis in 15M formic

acid).

pH of a 0.8% aqueous

solution Not less than 4.0 and not more than 6.5.

Sulphated ash Not more than 0.2% after ignition at  $800 \pm 25$ °C

5-Benzyl-3,6-dioxo-2 -

piperazineacetic acid Not more than 1.5%.

Hydrogenated glucose

syrup

Synonym Hydrogenated high maltose glucose syrup.

Description Clear, colourless, sweet-tasting, aqueous solution

of sorbitol, hydrogenated oligosac charides and hydrogenated polysaccharides prepared by the catalytic hydrogenation of glucose syrup. When dried or crystallised the product is white and

crystalline

Content D-glucitol: not more than 8%. 4-O-x-D-

glucopyransoyl-D-glucitol: not less than 50% and not more than 90%.0-x-D-glucopyranosyl-(1-4)-0-x-D- glucopyranosyl-(1-4)-D-glucitol: not less than 5% and not more than 20% -Hydrogenated

tetrasaccharides and hydrogenated higher

polysaccharides: not less than

2% and not more than 30%. Hydrogenated polysaccharides containing 21 or more D-

glucopyranosyl or D-glucitol units: not more than

3%.

The percentages referred to are calculated on a

dry weight basis in each case.

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Water Not more than 26% (Karl Fischer).

Reducing sugars Not more than 0.3% on a dry weight basis,

expressed as dextrose.

pH of a 40% aqueous Not less than 4.0 and not more than 7.0

solution

...

Sulphur dioxide Not more than 10 mg/kg on a dry weight basis. Sulphated ash Not more than 0.1% after ignition at 800 + 25°C

calculated on a dry weight basis.

Sulphate Not more than 0.01% on a dry weight basis,

expressed as SO<sub>4</sub>.

Chloride Not more than 50 mg/kg on a dry weight basis,

expressed as Cl.

Nickel Not more than 2 mg/kg on a dry weight basis,

expressed as Ni.

Lead Not more than 1 mg/kg on a dry weight basis,

expressed as Pb.

**Isomalt** 

Chemical description An approximately equimolar mixture of 6-0-x-D-

glucopyranosyl-D-glucitol and 1-0-x-D-

glucopyranosyl-D-mannitol.

Emperical formula C<sub>12</sub>H<sub>24</sub>O<sub>11</sub>

Molecular weight 6-0-x-D- glucopyranosyl-D-glucitol (C12H24O11):

344.3

1-0-cx-D- glucopyranosyl-D-mannitol.

(C12H24O112H2O):380.3.

Description White, ordourless, crystalline. slightly hygroscopic

solid with a sweet taste.

Content Not less than 98.0% of 6-0-x-D- glucopyranosyl-

D-glucitol and 1-0-cx-D- glucopyranosyl-D-mannitol; ech shall be present in a proportion of not less than 43% (on a dry weight basis in each

case).

Water Not more than 7.0% (Karl Fisher).

Specific rotation, [x] Not less than +91.5° (using a 4% weight/volume

 $20^{0}$  C aqueous solution).

D

Reducing sugars Not less than 1.5% on a dry weight basis,

expressed as dextrose.

D-Mannitol Not less than 0.5% on a dry weight basis.

D-Sorbitol Not less than 0.5% on a dry weight basis.

Ash Not more than 50 mg/kg after ignition at 800+25°

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C, calculated on a dry weight basis.

Nickel Not more than 2 mg/kg on a dry weight basis,

expressed as Ni.

Lead Not more than 1 mg/kg on a dry weight basis,

expressed as Pb.

#### E421 Mannitol

The criteria for mannitol contained in Council Directive 78/663/EEC and in article 6(1)(a) of Council Directive 74/329/EEC, as amended.

### Saccharin

The criteria in the monograph for saccharin contained in the British Pharmacopoeia 1980 at page 393.

### Sodium saccharin

The criteria in the monograph for saccharin sodium contained in the British Pharmacopoeia 1980 at page 394, as amended by the British Pharmacopoeia 1980 Addendum 1982 at page 99.

Calcium saccharin Chemical name

1,2- Benzisothiazol-3(2H)-one 1,1-dioxide,calcium

salt.

Empirical formula C14H8CaN2O6S2

Molecular weight 404.4.

Description White crystals or a white, crystalline powder;

odourless or with a faint aromatic odour; with an

intensely sweet taste.

Content Not less than 99.0% of C<sub>14</sub>H<sub>8</sub>CaN<sub>2</sub>O<sub>6</sub>S<sub>2</sub> on a

volatile matter-free basis.

Volatile matter Not less than 11.0% and not more than

15.0%(determined by drying at 105°C to constant

weight)

Free acid or alkali Complies with the test in the monograph for

saccharin sodium in the British Pharmacopoeia

1980.

Melting point of Complies with the test in the monograph for

isolated saccharin saccharin sodium in the British Pharmacopoeia

1980.

Related substances Complies with the test in the monograph for

saccharin sodium in the British Pharmacopoeia

1980.

Arsenic Complies with the test in the monograph for

saccharin sodium in the British Pharmacopoeia

1980

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Heavy metals Complies with the test in the monograph for

saccharin sodium in the British Pharmacopoeia

1980.

#### E420 Sorbitol

The criteria for sorbitol contained in Council Directive 78/663/EEC and in article 6(1)(a) of Council Directive 74/329/EEC, as amended

# E420 Sorbitol syrup

The criteria for sorbitol syrup contained in Council Directive 78/663/EEC and in article 6(1)(a) of Council Directive 74/329/EEC, as amended

#### Thaumatin

Description

Odourless, cream coloured, proteinaceous powder with an intensely sweet taste obtained from aqueous extracts of the arils of the fruit of Thaumatococcus daniellii (Benth).

Specific absorption, Not less than 12.0 and not more than

 $E_{1\%}$  12.5(determined at the wavelength of maximum

absorbance, about 279 nm, using a 0.1% weight/volume aqueous solution at pH 2.7).

Nitrogen Not less than 16.0% on a volatile matter-free

basis

Carbohydrate Not more than 3.0% on a volatile matter-free

basis.

Volatile matter Not more than 9.0% (determined by drying at

105°C to constant weight)

Sulphated ash Not more than 2.0% after ignition at  $800 \pm 25$ °C

calculated on a volatile matter-free basis.

Aluminium Not more than 0.01% on a volatile matter-free

basis.

**Xylitol** 

Chemical name meso-Xylitol

Empirical formula C<sub>5</sub>H<sub>12</sub>O<sub>5</sub>

Description White, odourless, crystalline powder or crystals.

with a sweet taste

Content Not less than 98.0% of meso-xylitol,

C<sub>5</sub>H<sub>12</sub>O<sub>5</sub>.on a volatile matter-free basis

Volatile matter. Not more than 0.5% (determined by drying at

60°C over phosphorus pentoxide in a vacuum for

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4 hours).

Reducing sugar Not more than 0.2% on a volatile matter-free

basis, expressed as dextrose.

pH of a 10% aqueous Not more than 0.5% singly and not more than solution 1.0% in total on a volatile matter-free basis Other polyols 1.0% in total on a volatile matter-free basis Not more than 0.1% after ignition at  $800 \pm 25$ °C

Nickel Not more than 2 mg/kg on a volatile matter-free

basis, expressed as Ni.

Lead Not more than 1 mg/kg on a volatile matter-free

basis, expressed as Pb

### PART III.

GENERAL PURITY CRITERIA APPLICABLE TO PERMITTED SWEETENERS EXCEPT WHERE OTHERWISE PROVIDED BY SPECIFIC PURITY CRITERIA.

No permitted sweetener shall contain more than-

- (a) 3 milligrams per kilogram of arsenic;
- (b) 10 milligrams per kilogram of lead.