

## E 953 — ISOMALT

<b>Synonyms</b>	Hydrogenated isomaltulose, hydrogenated palatinose
<b>Definition</b>	
<i>Chemical name</i>	Isomalt is a mixture of: D-glucopyranosyl-1,6-D-glucitol and D-glucopyranosyl-1,1-D-mannitol dihydrate
<i>Finest</i>	
<i>E number</i>	E 953
<i>Chemical formula</i>	D-glucopyranosyl-1,6-D-glucitol: $C_{12}H_{24}O_{11}$ D-glucopyranosyl-1,1-D-mannitol dihydrate: $C_{12}H_{24}O_{11} \cdot 2H_2O$
<i>Relative molecular mass</i>	D-glucopyranosyl-1,6-D-glucitol: 344,32 D-glucopyranosyl-1,1-D-mannitol dihydrate: 380,32
<i>Assay</i>	Content not less than 95 % of the mixture of D-glucopyranosyl-1,6-D-glucitol and D-glucopyranosyl-1,1-D-mannitol dihydrate determined on the anhydrous basis
<b>Description</b>	Odourless, white, sweet tasting, crystalline slightly hygroscopic substance
<b>Identification</b>	
<i>A. Solubility</i>	Slightly soluble in water, insoluble in ethanol
<i>B. Specific rotation</i>	$[\alpha]_D^{20}$ : between + 90 and + 92° (4 % w/v solution)
<i>C. Melting range</i>	145 to 150 °C
<b>Tests</b>	
<i>Water content</i>	Not more than 7 % (Karl Fischer method)
<i>Sulphated ash</i>	Not more than 0,05 expressed on dry weight basis
<i>Reducing sugars</i>	Not more than 1,5 % expressed as glucose on dry weight basis
<i>Nickel</i>	Not more than 2 mg/kg expressed on dry weight basis
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed on dry weight basis

## E 965 (ii) — MALTITOL

<b>Synonyms</b>	D-maltitol, hydrogenated maltose
<b>Definition</b>	
<i>Chemical name</i>	(6)-D-glucopyranosyl-1,4-D-glucitol

<i>Einecs</i>	209-567-0
<i>E number</i>	E 965 (i)
<i>Chemical formula</i>	$C_{12}H_{22}O_{11}$
<i>Relative molecular mass</i>	344,31
<i>Assay</i>	Content not less than 98 % D-mannitol $C_{12}H_{22}O_{11}$ on the anhydrous basis
<b>Description</b>	Sweet tasting, white crystalline powder
<b>Identification</b>	
<i>A. Solubility</i>	Very soluble in water, slightly soluble in ethanol
<i>B. Melting range</i>	148 to 151 °C
<i>C. Specific rotation</i>	$[\alpha]_D^{20} = + 105,5$ to $+ 105,5^{\circ}$ (5 % w/v solution)
<b>Purity</b>	
<i>Water content</i>	Not more than 1 % (Karl Fischer method)
<i>Sulphated ash</i>	Not more than 0,1 % expressed on dry weight basis
<i>Reducing sugars</i>	Not more than 0,1 % expressed as glucose on dry weight basis
<i>Chlorides</i>	Not more than 50 mg/kg expressed on dry weight basis
<i>Sulphates</i>	Not more than 100 mg/kg expressed on dry weight basis
<i>Nickel</i>	Not more than 2 mg/kg expressed on dry weight basis
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis

**F 965 (ii) — MALTITOL SYRUP**

<b>Synonyms</b>	Hydrogenated high maltose-glucose syrup, hydrogenated glucose syrup
<b>Definition</b>	
<i>Chemical name</i>	A mixture consisting of mainly maltitol with sorbitol and hydrogenated oligo- and polysaccharides. It is manufactured by the catalytic hydrogenation of high maltose-content glucose syrup. The article of commerce is supplied both as a syrup and as a solid product
<i>Einecs</i>	270-337-8

<i>E. number</i>	E 965 (ii)
<i>Assay</i>	The following ranges apply on the anhydrous basis: Maltitol not less than 80% Sorbitol not more than 8% Maltotriitol not more than 2,5% Hydrogenated polysaccharides containing more than three glucose or glucitol units not more than 30%
<b>Description</b>	Sweet-tasting, colourless and odourless, clear viscous liquids or sweet-tasting white crystalline masses.
<b>Identification</b>	
<i>A. Solubility</i>	Very soluble in water, slightly soluble in ethanol
<i>B. Thin layer chromatography</i>	Examine by the thin layer chromatography using a plate coated with a 0,25 mm layer of chromatographic silica gel
<b>Purity</b>	
<i>Water content</i>	Not more than 34% (Karl Fischer method)
<i>Sulphated ash</i>	Not more than 0,1% expressed on dry weight basis
<i>Reducing sugars</i>	Not more than 0,3% expressed as glucose on dry weight basis
<i>Chlorides</i>	Not more than 50 mg/kg expressed on dry weight basis
<i>Sulphates</i>	Not more than 100 mg/kg expressed on dry weight basis
<i>Nickel</i>	Not more than 2 mg/kg expressed on dry weight basis
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 4 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis

**E 966 — LACTITOL**

<b>Synonyms</b>	Lacrit, Lactositol, Lactobiosit
<b>Definition</b>	
<i>Chemical name</i>	4-O-β-D-galactopyranosyl-D-glucitol
<i>Eines</i>	209-566-5
<i>E. number</i>	E 966
<i>Chemical formula</i>	C <sub>12</sub> H <sub>22</sub> O <sub>11</sub>
<i>Relative molecular mass</i>	344,32
<i>Assay</i>	Not less than 95% on the dry weight basis

<b>Description</b>	Sweet-tasting crystalline powders or colourless solutions. Crystalline products occur in anhydrous, monohydrate and dihydrate forms.
<b>Identification</b>	
A. <i>Solubility</i>	Very soluble in water.
B. <i>Specific rotation</i>	$[\alpha]_D^{25} = +13$ to $+16^\circ$ calculated on the anhydrous basis (10% w/v aqueous solution).
<b>Purity</b>	
<i>Water content</i>	Crystalline products: not more than 10,5% (Karl Fischer method).
<i>Other polyols</i>	Not more than 2,5% on the anhydrous basis.
<i>Reducing sugars</i>	Not more than 0,2% expressed as glucose on dry weight basis.
<i>Chlorides</i>	Not more than 100 mg/kg expressed on dry weight basis.
<i>Sulphates</i>	Not more than 200 mg/kg expressed on dry weight basis.
<i>Sulphated ash</i>	Not more than 0,1% expressed on dry weight basis.
<i>Nickel</i>	Not more than 2 mg/kg expressed on dry weight basis.
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis.
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis.
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis.

## E 967 — XYLITOL

<b>Synonyms</b>	Xylitol
<b>Definition</b>	
<i>Chemical name</i>	D-xylitol
<i>Einecs</i>	201 788 0
<i>E number</i>	E 967
<i>Chemical formula</i>	$C_5H_{12}O_6$
<i>Relative molecular mass</i>	152,15
<i>Assay</i>	Not less than 98,5% as xylitol on the anhydrous basis.
<b>Description</b>	White, crystalline powder, practically odourless with a very sweet taste.
<b>Identification</b>	
A. <i>Solubility</i>	Very soluble in water, sparingly soluble in ethanol.
B. <i>Melting range</i>	92 to 96 °C.
C. <i>pH</i>	5 to 7 (10% w/v aqueous solution).

**Purity**

<i>Loss on drying</i>	Not more than 0,5 %. Dry 0,5 g of sample in a vacuum over phosphorus at 60 °C for four hours
<i>Sulphated ash</i>	Not more than 0,1 % expressed on dry weight basis
<i>Reducing sugars</i>	Not more than 0,2 % expressed as glucose on dry weight basis
<i>Other polyhydric alcohols</i>	Not more than 1 % expressed on dry weight basis
<i>Nickel</i>	Not more than 2 mg/kg expressed on dry weight basis
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis
<i>Chlorides</i>	Not more than 100 mg/kg expressed on dry weight basis
<i>Sulphates</i>	Not more than 200 mg/kg expressed on dry weight basis

**F 950 — ACESULFAME K****Synonyms**

Acesulfame potassium, acesulfam, potassium salt of 3,4-dihydro-6-methyl-1,2,3-oxathiazin-4-one-2,2-dioxide

**Definition**

<i>Chemical name</i>	6-methyl-1,2,3-oxathiazin-4(3H)-one-2,2-dioxide potassium salt
<i>Einecs</i>	239-715-3
<i>E number</i>	E 950
<i>Chemical formula</i>	$C_6H_6NO_4SK$
<i>Relative molecular mass</i>	201,24
<i>Assay</i>	Not less than 99 % of $C_6H_6NO_4SK$ on the anhydrous basis

**Description**

Odourless, white, crystalline powder having an intensively sweet taste. Approximately 200 times as sweet as sucrose

**Identification**

<i>A. Solubility</i>	Very soluble in water, very slightly soluble in ethanol
<i>B. Ultra-violet absorption</i>	Maximum $227 \pm 2$ nm for a solution of 10 mg in 1 000 ml of water

**Purity**

<i>Loss on drying</i>	Not more than 1 % (105 °C, two hours)
-----------------------	---------------------------------------

<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Selenium</i>	Not more than 30 mg/kg expressed on dry weight basis
<i>Fluoride</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis

**E 951 — ASPARTAME**

<b>Synonyms</b>	Aspartyl phenylalanine methyl ester
<b>Definition</b>	
<i>Chemical name</i>	N-L-(6-Aspartyl-L-phenylalanine-1-methyl ester)-3-amino-N-(6-carboxymethyl-phenethyl)-succinamic acid-N-methyl ester
<i>Index</i>	245-261-3
<i>E number</i>	E 951
<i>Chemical formula</i>	$C_{21}H_{24}N_2O_8$
<i>Relative molecular mass</i>	294,31
<i>Assay</i>	Not less than 98% and not more than 102% of $C_{21}H_{24}N_2O_8$ on the anhydrous basis
<b>Description</b>	White, odourless, crystalline powder having a sweet taste. Approximately 200 times as sweet as sucrose
<b>Identification</b>	
<i>Solubility</i>	Slightly soluble in water and in ethanol
<b>Purity</b>	
<i>Loss on drying</i>	Not more than 4,5% (105 °C, four hours)
<i>Sulphated ash</i>	Not more than 0,2% expressed on dry weight basis
<i>pH</i>	Between 5,5 and 6,0 (1 in 125 solution)
<i>Transmittance</i>	The transmittance of a 1% solution in 2N hydrochloric acid, determined in a 1-cm cell at 430 nm with a suitable spectrophotometer, using 2N hydrochloric acid as a reference, is not less than 0,95, equivalent to an absorbance of not more than approximately 0,022
<i>Specific rotation</i>	$(\alpha)_D^{20}$ +14,5 to +16,5° Determine in a 4 in 100/15 N formic acid solution within 30 minutes after preparation of the sample solution
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis

*Heavy metals*

Not more than 10 mg/kg expressed as Pb on dry weight basis

*5-Benzyl 3,6-dioxo-2-piperazineacetic acid*

Not more than 1,5% expressed on dry weight basis

**E 952 — CYCLAMIC ACID AND ITS Na AND Ca SALTS****(1) CYCLAMIC ACID****Synonyms**

Cyclohexylsulphamic acid, cyclamate

**Definition***Chemical name*

Cyclohexanesulphamic acid, cyclohexylaminosulphonic acid

*Einecs*

232-898-1

*E number*

E 952

*Chemical formula* $C_6H_{11}NO_3S$ *Relative molecular mass*

179,24

*Assay*Cyclohexylsulphamic acid contains not less than 98% and not more than the equivalent of 102% of  $C_6H_{11}NO_3S$ , calculated on the anhydrous basis.**Description**

A practically colourless, white crystalline powder with a sweet-sour taste. Approximately 40 times as sweet as sucrose.

**Identification***A. Solubility*

Soluble in water and in ethanol

*B. Precipitation test*

Acidify a 2% solution with hydrochloric acid, add 1 ml of an approximately molar solution of barium chloride in water and filter if any haze or precipitate forms. To the clear solution add 1 ml of a 10% solution of sodium nitrite. A white precipitate forms.

**Purity***Loss on drying*

Not more than 1% (105 °C, one hour)

*Selenium*

Not more than 30 mg/kg expressed as selenium on dry weight basis

*Lead*

Not more than 1 mg/kg expressed on dry weight basis

*Heavy metals*

Not more than 10 mg/kg expressed as Pb on dry weight basis

*Arsenic*

Not more than 3 mg/kg expressed on dry weight basis

*Cyclohexylamine*

Not more than 10 mg/kg expressed on dry weight basis

*Dicyclohexylamine*

Not more than 1 mg/kg expressed on dry weight basis

*Aniline*

Not more than 1 mg/kg expressed on dry weight basis

## (II) SODIUM CYCLAMATE

<b>Synonyms</b>	Cyclamate, sodium salt of cyclamic acid
<b>Definition</b>	
<i>Chemical name</i>	Sodium cyclohexanesulphamate, sodium cyclohexylsulphamate
<i>Eurces</i>	205-348-9
<i>E number</i>	E 952
<i>Chemical formula</i>	$C_6H_{11}NNaO_3S$ and the dihydrate form $C_6H_{11}NNaO_3S \cdot 2H_2O$
<i>Relative molecular mass</i>	201,22 calculated on the anhydrous form; 237,22 calculated on the hydrated form
<i>Assay</i>	Not less than 98 % and not more than 102 % on the dried basis Dihydrate form: not less than 84 % on the dried basis
<b>Description</b>	White, odourless crystals or crystalline powder. Approximately 30 times as sweet as sucrose
<b>Identification</b>	
<i>Solubility</i>	Soluble in water, practically insoluble in ethanol
<b>Purity</b>	
<i>Loss on drying</i>	Not more than 1 % (105 °C, one hour) Not more than 15,2 % (105 °C, two hours) for the dihydrate form
<i>Selenium</i>	Not more than 30 mg/kg expressed as selenium on dry weight basis
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis
<i>Cyclohexylamine</i>	Not more than 10 mg/kg expressed on dry weight basis
<i>Dicyclohexylamine</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Aniline</i>	Not more than 1 mg/kg expressed on dry weight basis

## (III) CALCIUM CYCLAMATE

<b>Synonyms</b>	Cyclamate, calcium salt of cyclamic acid
<b>Definition</b>	
<i>Chemical name</i>	Calcium cyclohexanesulphamate, calcium cyclohexylsulphamate
<i>Eurces</i>	205-349-4
<i>E number</i>	E 952
<i>Chemical formula</i>	$C_{12}H_{22}CaN_2O_6S_2 \cdot 2H_2O$



<i>Relative molecular mass</i>	432,57
<i>Assay</i>	Not less than 98 % and not more than 10 % on the dried basis
<b>Description</b>	White, colourless crystals or crystalline powder. Approximately 30 times as sweet as sucrose
<b>Identification</b>	
<i>Solubility</i>	Soluble in water, sparingly soluble in ethanol
<b>Purity</b>	
<i>Loss on drying</i>	Not more than 1 % (105 °C, one hour) Not more than 8,5 % (140 °C, four hours) for the dihydrate form
<i>Selenium</i>	Not more than 30 µg/kg expressed as selenium on dry weight basis
<i>Arsenic</i>	Not more than 3 µg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 µg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 µg/kg expressed as Pb on dry weight basis
<i>Cyclohexylamine</i>	Not more than 10 µg/kg expressed on dry weight basis
<i>Dicyclohexylamine</i>	Not more than 1 µg/kg expressed on dry weight basis
<i>Aniline</i>	Not more than 1 µg/kg expressed on dry weight basis

## E 954 — SACCHARIN AND ITS Na, K AND Ca SALTS

## (1) SACCHARIN

**Definition**

<i>Chemical name</i>	3-oxo-2,1dihydrobenzodisothazol-1,1-dioxide
<i>Emecis</i>	201-321-0
<i>E number</i>	E 954
<i>Chemical formula</i>	C <sub>7</sub> H <sub>4</sub> NO <sub>2</sub> S
<i>Relative molecular mass</i>	183,18
<i>Assay</i>	Not less than 99 % and not more than 101,0 % of C <sub>7</sub> H <sub>4</sub> NO <sub>2</sub> S on the anhydrous basis
<b>Description</b>	White crystals or a white crystalline powder, odourless or with a faint, aromatic odour having a sweet taste even in very dilute solutions. Approximately between 300 and 500 times as sweet as sucrose
<b>Identification</b>	
<i>Solubility</i>	Slightly soluble in water, soluble in basic solutions, sparingly soluble in ethanol

<b>Purity</b>	
<i>Loss on drying</i>	Not more than 1% (105 °C, two hours)
<i>Melting range</i>	226 to 230 °C
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Selenium</i>	Not more than 30 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis
<i>Sulphated ash</i>	Not more than 0,2% expressed on dry weight basis
<i>Benzene and salicylic acid</i>	To 10 ml of a 1 in 20 solution, previously acidified with five drops of acetic acid, add three drops of an approximately molar solution of ferric chloride in water. No precipitate or violet colour appears
<i>o-Toluenesulphonamide</i>	Not more than 10 mg/kg expressed on dry weight basis
<i>p-Toluenesulphonamide</i>	Not more than 10 mg/kg expressed on dry weight basis
<i>Benzene acid p-sulfonamide</i>	Not more than 25 mg/kg expressed on dry weight basis
<i>Readily carbonizable substances</i>	Absent
<b>(II) SODIUM SACCHARIN</b>	
<b>Synonyms</b>	Saccharin, sodium salt of saccharin
<b>Definition</b>	
<i>Chemical name</i>	Sodium o-benzosulphimide, sodium salt of 2,3-dihydro-3-oxobenzosulfonazole, oxobenzosulfonazole, 1,2-benzisothiazolin-3-one-1,1-dioxide sodium salt dihydrate
<i>Einecs</i>	204 886-1
<i>E number</i>	E 954
<i>Chemical formula</i>	$C_7H_4NNaO_5S \cdot 2H_2O$
<i>Relative molecular mass</i>	241,19
<i>Assay</i>	Not less than 99% and not more than 101% of $C_7H_4NNaO_5S$ on the anhydrous basis
<b>Description</b>	White crystals or a white crystalline efflorescent powder, odourless or with a faint, odour, having an intensely sweet taste, even in very dilute solutions. Approximately between 300 and 500 times as sweet as sucrose in dilute solutions
<b>Identification</b>	
<i>Solubility</i>	Freely soluble in water, sparingly soluble in ethanol
<b>Purity</b>	
<i>Loss on drying</i>	Not more than 15% (120 °C, four hours)

<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Selenium</i>	Not more than 30 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis
<i>Benzene and salicylic acid</i>	To 10 ml of a 1 in 20 solution, previously acidified with five drops of acetic acid, add three drops of an approximately molar solution of ferric chloride in water. No precipitate or violet colour appears
<i>o-Toluenesulphonamide</i>	Not more than 10 mg/kg expressed on dry weight basis
<i>p-Toluenesulphonamide</i>	Not more than 10 mg/kg expressed on dry weight basis
<i>Benzene acid p-sulphonamide</i>	Not more than 25 mg/kg expressed on dry weight basis
<i>Readily carbonizable substances</i>	Absent
(III) CALCIUM SACCHARIN	
<b>Synonyms</b>	Saccharin, calcium salt of saccharin
<b>Definition</b>	
<i>Chemical name</i>	Calcium <i>o</i> -benzenesulphonide, calcium salt of 2,3-dihydro-3-oxobenzoisulphonazole, 1,2-benzisothiazolin-3-one-1,1-dioxide calcium salt hydrate (2.7)
<i>Finers</i>	229-349-0
<i>E number</i>	E 954
<i>Chemical formula</i>	$C_{14}H_{11}CaN_2O_6S_2 \cdot 3\frac{1}{2}H_2O$
<i>Relative molecular mass</i>	467,48
<i>Assay</i>	Not less than 95 % of $C_{14}H_{11}CaN_2O_6S_2$ on the anhydrous basis
<b>Description</b>	White crystals or a white crystalline powder, odourless or with a faint odour, having an intensely sweet taste, even in very dilute solutions. Approximately between 300 and 500 times as sweet as sucrose in dilute solutions
<b>Identification</b>	
<i>Solubility</i>	Freely soluble in water, soluble in ethanol
<b>Purity</b>	
<i>Loss on drying</i>	Not more than 13,5 % (120 °C, four hours)
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Selenium</i>	Not more than 30 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis

<i>Benzoic and salicylic acid</i>	To 10 ml of a 1 in 20 solution, previously acidified with five drops of acetic acid, add three drops of an approximately molar solution of ferric chloride in water. No precipitate or violet colour appears
<i>o-Toluenesulphonamide</i>	Not more than 10 mg/kg expressed on dry weight basis
<i>p-Toluenesulphonamide</i>	Not more than 10 mg/kg expressed on dry weight basis
<i>Benzoic acid p-sulfonamide</i>	Not more than 25 mg/kg expressed on dry weight basis
<i>Readily carbonizable substances</i>	Absent
<b>(IV) POTASSIUM SACCHARIN</b>	
<b>Synonyms</b>	Saccharin, potassium salt of saccharin
<b>Definition</b>	
<i>Chemical name</i>	Potassium o-benzosulphimide, potassium salt of 2,3-dihydro-3-oxobenzisulphonazole, potassium salt of 1,2-benzisothiazolin-3-one-1,1-dioxide monohydrate
<i>Index</i>	
<i>E number</i>	E 954
<i>Chemical formula</i>	C <sub>7</sub> H <sub>5</sub> KN <sub>2</sub> O <sub>6</sub> S·H <sub>2</sub> O
<i>Relative molecular mass</i>	239,77
<i>Assay</i>	Not less than 99% and not more than 101% of C <sub>7</sub> H <sub>5</sub> KN <sub>2</sub> O <sub>6</sub> S on the anhydrous basis
<b>Description</b>	White crystals or a white crystalline powder, odourless or with a faint odour, having an intensely sweet taste, even in very dilute solutions. Approximately between 300 and 500 times as sweet as sucrose
<b>Identification</b>	
<i>Solubility</i>	Freely soluble in water, sparingly soluble in ethanol
<b>Purity</b>	
<i>Loss on drying</i>	Not more than 8% (120 °C, four hours)
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Selenium</i>	Not more than 30 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 1 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis
<i>Benzoic and salicylic acid</i>	To 10 ml of a 1 in 20 solution, previously acidified with five drops of acetic acid, add three drops of an approximately molar solution of ferric chloride in water. No precipitate or violet colour appears
<i>o-Toluenesulphonamide</i>	Not more than 10 mg/kg expressed on dry weight basis
<i>p-Toluenesulphonamide</i>	Not more than 10 mg/kg expressed on dry weight basis

*Benzoin acid p sulfonamide*

Not more than 25 mg/kg expressed on dry weight basis

*Readily carbonizable substances*

Absent

**E 957 — THAUMATIN****Synonyms****Definition***Chemical name*Thaumatococcus is obtained by aqueous extraction (pH 2,5 to 4) of the arils of the fruit of the natural strain of *Thaumatococcus danellii* (Kuntze) and consists essentially of the proteins thaumatin I and thaumatin II together with minor amounts of plant constituents derived from the source material*E numbers*

E 957-2

*E number*

E 957

*Chemical formula*Polypeptide of 20<sup>000</sup> aminoacids*Relative molecular mass*

Thaumatococcus I 22209

Thaumatococcus II 22293

*Assay*

Not less than 16% nitrogen on the dried basis equivalent to not less than 94% proteins (N x 5,8)

**Description**

Odourless, cream-coloured powder with an intensely sweet taste. Approximately 2 000 to 3 000 times as sweet as sucrose

**Identification***Solubility*

Very soluble in water, insoluble in acetone

**Purity***Loss on drying*

Not more than 9% (105 °C to constant weight)

*Carbohydrates*

Not more than 3% expressed on dry weight basis

*Sulphated ash*

Not more than 2% expressed on dry weight basis

*Aluminium*

Not more than 100 mg/kg expressed on dry weight basis

*Arsenic*

Not more than 3 mg/kg expressed on dry weight basis

*Lead*

3 mg/kg expressed on dry weight basis

*Microbiological criteria*Total aerobic microbial count: Max 1 000/g *E. Coli* absent in 1 g**F 959 — NEOHESPERIDINE DIHYDROCHALCONE****Synonyms**

Neohesperidin dihydrochalcone, NHDC, hesperetin dihydrochalcone-4'-β-neohesperidoside, neohesperidin DC

**Definition***Chemical name*

2-O-(4-β-thaumatococcosyl-4'-β-D-glucopyranosyl) hesperetin dihydrochalcone obtained by catalytic hydrogenation of neohesperidin

<i>Index</i>	243-978-6
<i>E number</i>	E 959
<i>Chemical formula</i>	$C_{25}H_{36}O_{11}$
<i>Relative molecular mass</i>	612,6
<i>Assay</i>	Content not less than 96 % on the dried basis
<b>Description</b>	Off white, odourless, crystalline powder having a characteristic, intensive sweet taste. Approximately between 1 000 and 1 800 times as sweet as sucrose
<b>Identification</b>	
<i>A. Solubility</i>	Freely soluble in hot water, very slightly soluble in cold water, practically insoluble in ether and benzene
<i>B. Ultraviolet absorption maximum</i>	282 to 283 nm for a solution of 2 mg in 100 ml methanol
<i>C. New's test</i>	Dissolve about 10 mg of neohesperidine DC in 1 ml methanol, add 1 ml of a 1 % 2-aminoethyl diphenyl borate methanolic solution. A bright yellow colour is produced
<b>Purity</b>	
<i>Loss on drying</i>	Not more than 11 % (105 °C, three hours)
<i>Sulphated ash</i>	Not more than 0,2 % expressed on dry weight basis
<i>Arsenic</i>	Not more than 3 mg/kg expressed on dry weight basis
<i>Lead</i>	Not more than 2 mg/kg expressed on dry weight basis
<i>Heavy metals</i>	Not more than 10 mg/kg expressed as Pb on dry weight basis