

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية
STANDARDIZATION ORGANIZATION FOR G.C.C (GSO)

Final Draft

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المحليات المسموح باستخدامها في المواد الغذائية
Sweeteners Permitted In Food

Prepared by:
Gulf Technical Committee for Food and Agricultural Products

This document is a draft Gulf Standard circulated for comments. It is, therefore, subject to Alteration and modification, and may not be referred it as a Gulf Standard, until by the Board of Director

1. SCOPE AND FIELD OF APPLICATION

The standard is concerned with sugar substitutes permitted for use in energy-reduced Food as sweeteners, or food without added sugar or diabetics and foods for special nutrition uses.

2. COMPLEMENTARY REFERENCES

- 2.1 GSO 9 "Labelling of Prepackaged Foods"
- 2.2 GSO 654 "General Requirement for Prepackaged Food for Special Dietary Use.
- 2.3 GSO 840 "Methods for determination of sweeteners permitted for use in food products - part 1".
- 2.4 GSO/CAC/GL1 "General guidelines on claims
- 2.5 GSO 2233 "Requirements of nutritional labeling.

3. DEFINITION

- 3.1 Acceptable daily intake: The amount of a sweeteners, expressed on a body weight basis, that can be ingested daily over a lifetime without appreciable health risk and expressed as mg/kg body weight.
- 3.2 The term infant means a person not more than 12 months of age.
- 3.3 Children mean persons between 1 to 3 years of age.
- 3.4 Polyols: chemically defined as saccharide derivative in which a ketone or aldehyde group is replaced by a hydroxyl group, and are classified according to the number of existing saccharide unit in the molecule.

4. REQUIREMENTS

The following shall be met in foods containing sweeteners:

- 4.1 Sweeteners shall comply with the relevant GSO standards.
- 4.2 Sweeteners mentioned in table (1) shall be permitted only.
- 4.3 The maximum limits of sweeteners in the product shall not exceed the levels mentioned in table 2.
- 4.4 Acceptable daily intake from sweeteners shall not exceed the limits mentioned in table (1).
- 4.5 Combination of more than one sweetener shall be permitted, the maximum limits of each sweetener shall not exceed the maximum permitted level in individual form calculated on percent of combination.
- 4.6 Combination of sweeteners and polyols with sugar is permitted.
- 4.7 Sweeteners are not allowed in all foods for infant and children, except foods for special dietary uses.

Table (1)
Sweeteners permitted for use in food products

INS	sweeteners	Acceptable daily intake (mg/kg from body weight)
954	Saccharin and its salts	0 - 5
951	Aspartame	0 - 40
950	Acesulfam potassium	0 - 9
955	Sucralose	0 - 5
957	Thaumatococin	Not specified
420	Sorbitol	Not specified
420	Sorbitol syrup	Not specified
421	Mannitol	Not specified
953	Isomaltitol	Not specified
965	Maltitol	Not specified
965	Maltitol syrup	Not specified
966	Lactitol	Not specified
967	Xylitol	Not specified
968	Erythritol*	Not specified
961	Neotame	0 - 2
956	Alitame	Not specified
960	Steviol glycosides	0 - 4
962	Aspartame-acesulfame salt	Not specified

*The maximum limit from the erythritol in beverages shall not exceed 2.5% for purposes other than sweetening.

Table 2
Maximum Limit of sweeteners in Foodstuff
MG/KG or L in final product

polyols	Stevia (Steviol equivalent)	Stevia (Steviol glycoside)	Alitame	Neotame	Thaumation	Saccharin and its salts	Sucralose	Aspartame	Aspartame-acesulfame salt	Acesulfam potassium	Sweeteners/product
GMP	198	600	100	20 (except milk powder & cream powder 65)	-	80	300	600	-	350	Non-alcoholic drinks (such as milk drinks)
GMP	330	1000	-	32	-	100	400	1000	-	350	Breakfast cereals
GMP	330	1000	-	32 (except cooked fruit 65)	-	200	300 (except frozen 400 dried 1500)	1000 (except fruit nectar 600)	350	350	Canned or bottled fruits
GMP	200	1000	100	32	-	200	400	1000	1000	1000	Jams jellies & marmalades
GMP	200	800	100	26	-	100	320	800	-	800	Edible ices
GMP	270	Solid sweet 1000 soft sweet and nojah and cocoa 2000	300	chocolate 65 sweet and chocolate pudding filling and coverage 65 mixtures of cocoa as liquid 32	50	500	1800	(Solid & soft sweet and nojah and powder mixtures of cocoa, cocoa templates, chocolate filling and coverage 3000)	-	500	Confectionery, chocolate, pudding.

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								(mixtures of cocoa as liquid 1000)			
GMP	3300	10000	300	250	50	1200	3000	5500	1000	2000	Chewing gum
GMP	330	1000	-	70	-	170	700	1700	1000	1000	Bakery product
-	-	-	-	12	-	-	-	3000	-	-	Vinegar
-	120	Sauce 350 mustard 350	-	12	-	Sauce 160 mustard 320	Sauce 450 mustard 140	350	350	350	Sauces, mustard, mayonise
Syrup type or Chewable GMP	Solid 670 Liquid 200 Chewable 1800 Syrup type or Chewable 1800	-	-	Solid 60 Liquid 20 Syrup type or Chewable 185	Syrup type or Chewable 400	Solid 500 Liquid 80 Syrup type or Chewable 1200	Solid 800 Liquid 240 Syrup type or Chewable 2400	Solid 2000 Liquid 600 Syrup type or Chewable 5500	Solid 500 Liquid 350 Syrup type or Chewable 2000	Solid 500 Liquid 350 Syrup type or Chewable 2000	Food formula
-	36.3	110	40	5	-	-	-	110	110	-	Soups and sauces
-	100	200	-	20	-	-	-	600	-	-	Nectar vegetables and concentrates

Table (3)

Table top sweeteners

Powder Sweeteners	
Compound	Quantity (ml/kg)
Acesulfame potassium	-
Aspartame	-
Saccharin and its salts, sodium and potassium.	-
Sucralose	-
Thaumatococin	-
Neohesperidine DC	-
Neotame	-
Aspartame-acesulfame salt	-
Calcium lactate	-
Citric acid	-
Sodium citrates	-
Potassium tartrates	-
Calcium phosphates	-
Carrageenan	-
Locust bean gum	-
Guar gum	-
Tragacanth	-
Gum Arabic (acacia gum)	-
Xanthan gum	-
Gellan gum	-
Pectins	-
Cellulose	-
Methyl cellulose	-
Hydroxypropyl cellulose	-
Hydroxypropyl methyl cellulose	-
Ethyl methyl cellulose	-
Carboxy methyl cellulose	-
Cross-linked sodium carboxy methyl cellulose	50.000
Sodium carbonates	-
Potassium carbonates	-
Silicon dioxid—silicates	10.000
Glucono-delta-lactone	-
Sodium gluconate	-
Potassium gluconate	-
Calcium gluconate	-
Glycine and its sodium salt	-
Polydextrose	-
Polyethylene glycol	-

Table (4)
Table top sweeteners

Tablets Sweeteners	
Compound	Quantity (ml/kg)
Acesulfame potassium	-
Aspartame	-
Saccharin and its salts, sodium and potassium.	-
Sucralose	-
Thaumatococin	-
Neohesperidine DC	-
Neotame	-
Aspartame-acesulfame salt	-
Malic acid	-
Citric acid	-
Sodium citrates	-
Tartaric acid (L(+)-)	-
Potassium tartrates	-
Gum Arabic (acacia gum)	-
Pectins	-
Cellulose	-
Microcrystalline cellulose	-
Powdered cellulose	-
methyl cellulose	-
Hydroxypropyl cellulose	-
Hydroxypropyl methyl cellulose	-
Ethyl methyl cellulose	-
Carboxy methyl cellulose	-
Cross-linked sodium carboxy methyl cellulose	50.000
Sodium, potassium and calcium of fatty acids	-
Magnesium salts of fatty acids	-
Mono- and diglycerides of fatty acids	-
Sodium carbonates	-
Potassium carbonates	-
Silicon dioxid—silicates	-
Glucono-delta-lactone	-
Sodium gluconate	-
Potassium gluconate	-
Calcium gluconate	-
Glycine and its sodium salt	-
Polydextrose	-
Polyvinylpyrrolidone	-
Polyvinylpolypyrrolidone	-

5. SAMPLING

Sampling shall be carried out according to the method prescribed in the appropriate food product standard.

6. METHOD OF TEST

Determination of permitted sweeteners shall be carried out according to Gulf Standard mentioned in item 2.3.

7. LABELLING

Without prejudice to what is stated in items (2.1 , 2.2,4.5) the following shall be declared on the label.

- 7.1 The name of sweeteners or E number.
- 7.2 Food products formulated specifically for use by diabetics or for other special nutritional uses shall contain the statement "Food for special dietary use, or food for diabetic.
- 7.3 The amount of sweeteners matter, mg/ liter or kg, in case of using combination of sweeteners, the amount of each in combination shall be declared
- 7.4 Food containing sweetener (s) or mixture of sweetener (s) and sugar (s) shall be marked or labeled with the indication "with sweeteners" next to the name of the product.
- 7.5 In case of Sucralose as table top sweeteners "temperature should not exceed 25C" shall be mentioned the following warnings: (clearly and prominently in the same font size).
- 7.6 The following warning statements shall be written clearly and prominently as the same type size of the product's name:
 - 7.6.1 In the case of aspartame, "Not to be used by persons who have phenyl ketonuria".
 - 7.7.2 In the case of saccharine "Use of this product may be hazardous to your health".
 - 7.6.2 In the case of Mannitol "Excess of consumed quantity 20 gm per day could be cause laxative effects".
 7. 6.3 In the case of Sorbitol or Xylitol "Excess of consumed quantity 40 gm per day could be cause laxative effects.
 - 7.6.4 In the case of Erythritol or Lactitol "Excess of consumed quantity could be cause laxative effects.
 - 7.6.5 "Not suitable for children under three years old", excluded those with special nutritional uses.
 - 7.6.6 Shall not include any misleading statements.

References

- The sweeteners in food (UK) Regulation 2003 (labelling).
- Code federal Regulation part 1 (170.3) (Sucralose).
- European Regulation Directive sweeteners 115/EC.
- European Union Legislation L 259/122.
- European Food Safety Authority (EFSA)
EFSA Panel on food Additives and Nutrient Sources (ANS)
Statement in relation to the safety of Erythritol (E 968).