

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of
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Organization

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TO: - Codex Contact Points
- Interested International Organizations

FROM: Secretariat,
Codex Alimentarius Commission
Joint FAO/WHO Food Standards Programme

SUBJECT: REQUEST FOR COMMENTS AND INFORMATION ON FOOD ADDITIVE PROVISIONS CERTAIN PROCESSED FRUITS AND VEGETABLES

DEADLINE: 31 July 2014

COMMENTS: To:

Secretariat,
Codex Alimentarius Commission,
Joint FAO/WHO Food Standards Programme,
Viale delle Terme di Caracalla 00153
Rome, Italy
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BACKGROUND

Pickled fruits and vegetables

1. The 26th Session of the Committee on Processed Fruits and Vegetables (October 2012) considered food additive provisions in a number of Codex standards for processed fruits and vegetables namely: desiccated coconut, table olives, canned citrus fruits, preserved tomatoes, processed tomato concentrates and pickled fruits and vegetables. This exercise was done within the framework of the General Standard for Food Additives (CODEX STAN 192-1995) with a view to establishing a general reference to the GSFA when feasible and to provide justification in light of section 3 of the Preamble of the GSFA for exceptions to the general reference if or when such reference was not appropriate.
2. The Committee finalized the revision of food additive provisions for the above-mentioned standards with the exception of pickled fruits and vegetables where opposing views were noted in regard to the use of a general reference to the GSFA and concerns were expressed in favour or against the use of this reference.¹
3. As no agreement could be reached, Annex I provides the proposed food additive provisions presented to the 26th CCPFV (as extracted from CX/PFV 12/26/7). The proposed provisions are intended to supersede current food additive provisions in Standard for Pickled Fruits and Vegetables (CODEX STAN 260-2007). The provisions for food additives in CODEX-STAN 260-2007 were endorsed by the 39th Session of the Committee on Food Additives (April 2007)².
4. Annex I also includes the rationale for the proposals for revised food additive provisions for pickled fruits and vegetables (for information only). However, some of the information provided to support these proposals may be outdated in view of the progress made by CCFA since the issuance of CX/PFV 12/26/7 in September 2012. Nonetheless, the technical justification provided at that time has been retained to assist Codex members and observers in understanding the rationale for these proposals.

¹ REP13/PFV, paras 115-118.

² ALINORM 07/20/12 Rev, para 67, Appendix V.

Canned Bamboo Shoots

5. The 26th CCPFV noted the request of CCFA to consider whether other tartrates, included in the Acceptable Daily Intake established by the Joint FAO/WHO Committee on Food Additives could be used as acidity regulators in the Standard for Canned Bamboo Shoots (CODEX STAN 241-2003), singly or in combination, and what the reporting basis would be in that case, noting that in the GSFA the reporting basis was “as tartaric acid” for consistency with JECFA.³

6. Due to time constraints, the Committee could not consider this request and agreed to seek comments and information from Codex members and interested observer organizations in order to provide a reply to CCFA. The current provisions for food additives in CODEX STAN 241-2003 are reproduced in Annex II for ease of reference. They were endorsed by the 43rd CCFA (March 2011)⁴.

Canned Vegetables (mushrooms)

7. The 26th Session of CCPFV also noted the request of CCFA on whether other colours and flavour enhancers listed in food category 04.2.2.4 “canned or bottled (pasteurized) or retort pouch vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera) and seaweeds” are applicable to the annex on mushrooms in the Standard for Certain Canned Vegetables (CODEX STAN 297-2009).³

8. Due to time constraints, the Committee could not consider this request and agreed to seek comments and information from Codex members and interested observer organizations in order to provide a reply to CCFA. The current provisions for food additives in CODEX STAN 297-2009 (general provisions applying to canned vegetables including specific provisions for canned mushrooms) are reproduced in Annex III for ease of reference. The provisions for food additives applying to canned vegetables in general were endorsed by the 41st CCFA (March 2009)⁵ and specific provisions for food additives in canned mushrooms were endorsed by the 43rd CCFA⁶.

REQUEST FOR COMMENTS

9. Codex members and observers are invited to submit comments and information on the above standards in light of the information provided in the paragraphs above.

10. Revised provisions for additives for inclusion in the Standard for Pickled Fruits and Vegetables should be made based on the proposals presented in Annex I and in light of section 3 of the Preamble of the GSFA in particular as to the need for exceptions to the general reference to the GSFA. If providing additional lists of additives, technological justification for their use should accompany the proposals as laid down Section II, Elaboration of Codex Texts, Relations between Commodity Committees and General Subject Committees, Food Additives and following the relevant provisions in Tables 1, 2 and 3 of the GSFA.

11. Comments and information in relation to bamboo shoots and mushrooms should be limited to provide the relevant replies to the request of CCFA in relation to use of tartrates (bamboo shoots) and other colours and flavour enhancers (mushrooms).

³ REP13/PFV, paras 6, 119-122.

⁴ REP11/FA, paras 29-31, Appendix II.

⁵ REP11/FA paras 46-47, Appendix III.

⁶ REP11/FA, paras 27, 30-31, Appendix II.

ANNEX I**FOOD ADDITIVE PROVISIONS FOR PICKLED FRUITS AND VEGETABLES**

CODEX STANDARD FOR PICKLED FRUITS AND VEGETABLES (CODEX STAN 260-2007) – Proposed food additive provisions for pickled fruits and vegetables to supersede food additive provisions in CODEX STAN 260-2007 (as extracted from CX/PFV 12/26/7)

FOR COMMENTS*Pickled fruits and vegetables:*

The following general reference to the GSFA should be inserted in section 4 of the standard concerning food additives:

“Acidity regulators, antifoaming agents, antioxidants, colours, firming agents, flavour enhancers, preservatives, sequestrants and sweeteners used in accordance with Tables 1 and 2 of the Codex General Standard of Food Additives in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, and 04.2.2.7 or listed in Table 3 of the General Standard for Food Additives are acceptable for use in foods conforming to this standard.”

Regarding the food additive provisions in the step procedure for the inclusion for food category 04.1.2.3, the eWG did not provide specific comments and, therefore, no technological need could be identified in pickled fruits and vegetables for sodium diacetate, annatto extracts, bixin-based, tartrates and aspartame-acesulfame salt. CCFA should be informed accordingly.

Regarding the food additive provisions in the step procedure for the inclusion for food category 04.1.2.10, the eWG did not provide specific comments and, therefore, no technological need could be identified in pickled fruits and vegetables for tartrates, Annatto extracts, norbixin-based, and aspartame-acesulfame salt. CCFA should be informed accordingly.

Regarding the food additive provisions in the step procedure for the inclusion for food category 04.2.2.3, the eWG did not provide specific comments and, therefore, no technological need could be identified in pickled fruits and vegetables for adipates, sodium diacetate, tartrates, amaranth, azorubine (carmoisine), brown HT, brilliant black (black PN), curcumin, quinoline yellow, tartrazine, annatto extracts, bixin-based, annatto extracts, norbixin-based, aluminium ammonium sulphate, sorbates and propylene glycol alginate. CCFA should be informed accordingly.

Regarding the food additive provisions in the step procedure for the inclusion for food category 04.2.2.7, the eWG did not provide specific comments and, therefore, no technological need could be identified in pickled fruits and vegetables for the following food additives. CCFA should be informed accordingly.

INS No.	Name of the Food Additive
355-357, 359	Adipates
300	Ascorbic acid, l-
170(i)	Calcium carbonate
327	Calcium lactate
504(i)	Magnesium carbonate
501(i)	Potassium carbonate
500(i)	Sodium carbonate
365	Sodium fumarates
325	Sodium lactate
350(ii)	Sodium dl-malate
334; 335(i),(ii); 336(i),(ii); 337	Tartrates
331(iii)	Trisodium citrate

INS No.	Name of the Food Additive
472c	Citric and fatty acid esters of glycerol
322(i)	Lecithin
301	Sodium ascorbate
316	Sodium isoascorbate (sodium isoascorbate)
123	Amaranth
170(i)	Calcium carbonate
150a	Caramel I - plain Caramel
100(i)	Curcumin
161b(i)	Lutein from tagetes erecta
102	Tartrazine
160b(i)	Annatto extracts, bixin-based
160b(ii)	Annatto extracts, norbixin-based
523	Aluminium ammonium sulphate
634	Calcium 5'-ribonucleotides
627	Disodium 5'-guanvlate
631	Disodium 5'-inosinate
635	Disodium 5'-ribonucleotides
508	Potassium chloride
957	Thaumatococcus
260	Acetic acid, glacial
262(i)	Sodium acetate
400	Alginic acid
472c	Citric and fatty acid esters of glycerol
576	Sodium gluconate
420(i)	Sorbitol
420(ii)	Sorbitol syrup

FOR INFORMATION**PICKLED FRUITS AND VEGETABLES (CODEX STAN 260-2007)**

The products covered by the standard are included under the following food categories in the GSFA:

- Pickled fruit - 04.1.2.3 (Fruit in vinegar, oil, or brine).
- Fermented fruit - 04.1.2.10 (Fermented fruit products).
- Pickled vegetables - 04.2.2.3 (Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweeds in vinegar, oil, brine, or soybean sauce).
- Fermented vegetables - 04.2.2.7 (Fermented vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweed products. Excluding fermented soybean products of food categories 06.8.6, 06.8.7, 12.9.1, 12.9.2.1, and 12.9.2.3).

Please note: Food category 04.2.2.7 is listed in the Annex to Table 3. Food categories in the Annex to Table 3 are excluded from the general conditions of Table 3, meaning that only those food additives that are listed in Tables 1 and 2 for food category 04.2.2.7 are permitted for use.

Based on the current food additive provisions in the standard, the eWG concluded that food additives with the following functional classes are technologically justified:

- Acidity regulators
- Antifoaming agents
- Antioxidants
- Colours
- Firming agents
- Flavour enhancers
- Preservatives
- Sequestrants
- Sweeteners

Acidity regulators

Tables 1 and 2 of the GSFA list the following acidity regulators for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2	903	Carnauba wax	400 mg/kg		Adopted 2004
04.1.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.1.2.3	262(ii)	Sodium diacetate	GMP		Step 7
04.1.2.4	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	GMP	45	Step 7
04.1.2.10	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2009

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.10	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	GMP	45	Step 7
04.2.2.3	355-357, 359	Adipates	50000 mg/kg	1	Step 7
04.2.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.2.2.3	262(ii)	Sodium diacetate	GMP		Step 7
04.2.2.7	260	Acetic acid, glacial	GMP		Step 4
04.2.2.7	355-357, 359	Adipates	50000 mg/kg	1	Step 4
04.2.2.7	300	Ascorbic acid, l-	GMP		Step 4
04.2.2.7	170(i)	Calcium carbonate	10000 mg/kg	58	Step 4
04.2.2.7	327	Calcium lactate	10000 mg/kg	58	Step 4
04.2.2.7	330	Citric acid	GMP		Step 4
04.2.2.7	270	Lactic acid, l-, d- and dl-	GMP		Step 4
04.2.2.7	504(i)	Magnesium carbonate	5000 mg/kg	36	Step 4
04.2.2.7	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2010
04.2.2.7	501(i)	Potassium carbonate	GMP		Step 4
04.2.2.7	262(i)	Sodium acetate	GMP		Step 4
04.2.2.7	500(i)	Sodium carbonate	GMP		Step 4
04.2.2.7	365	Sodium fumarates	GMP		Step 4
04.2.2.7	325	Sodium lactate	GMP		Step 4
04.2.2.7	350(ii)	Sodium dl-malate	GMP		Step 4
04.2.2.7	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	10000 mg/kg	45	Step 4
04.2.2.7	331(iii)	Trisodium citrate	GMP		Step 4

Table 3 of the GSFA lists the following acidity regulators:

INS	Additive Name	INS	Additive Name
170(i)	Calcium carbonate	365	Sodium fumarates
260	Acetic acid, glacial	380	Triammonium citrate
261	Potassium acetates	500(i)	Sodium carbonate
262(i)	Sodium acetate	500(ii)	Sodium hydrogen carbonate
263	Calcium acetate	500(iii)	Sodium sesquicarbonate
264	Ammonium acetate	501(i)	Potassium carbonate
270	Lactic acid, L-, D- and DL-	501(ii)	Potassium hydrogen carbonate
296	Malic acid, DL-	503(i)	Ammonium carbonate

INS	Additive Name	INS	Additive Name
297	Fumaric acid	503(ii)	Ammonium hydrogen carbonate
300	Ascorbic acid, L-	504(i)	Magnesium carbonate
325	Sodium lactate	504(ii)	Magnesium hydroxide carbonate
326	Potassium lactate	507	Hydrochloric acid
327	Calcium lactate	514(i)	Sodium sulfate
328	Ammonium lactate	514(ii)	Sodium hydrogen sulfate
329	Magnesium lactate, DL-	515(i)	Potassium sulfate
330	Citric acid	515(ii)	Potassium hydrogen sulfate (Step 3)
331(i)	Sodium dihydrogen citrate	524	Sodium hydroxide
331(iii)	Trisodium citrate	525	Potassium hydroxide
332(i)	Potassium dihydrogen citrate	526	Calcium hydroxide
332(ii)	Tripotassium citrate	527	Ammonium hydroxide
333(iii)	Tricalcium citrate	528	Magnesium hydroxide
350(i)	Sodium hydrogen DL-malate	529	Calcium oxide
350(ii)	Sodium DL-malate	575	Glucono delta-lactone
351(i)	Potassium hydrogen malate	577	Potassium gluconate
351(ii)	Potassium malate	578	Calcium gluconate
352(ii)	Calcium malate, DL-	580	Magnesium gluconate

Based on the current food additive provisions in the standard, there is a technological need for acetic acid, sodium diacetate, and lactic acid as acidity regulators in pickled fruits and vegetables.

There is also a technological need for malic acid and citric acid as acidity regulators in pickled fruits and vegetables.

The eWG could not identify a justification for excluding acidity regulators listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7 or in Table 3 of the GSFA for use in pickled fruits and vegetables. However, the eWG could not identify a technological need for acidity regulators that are currently in the step process for inclusion in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 or 04.2.2.7 of the GSFA with the exception of acetic acid, sodium diacetate, lactic acid and citric acid in food category 04.2.2.7. The eWG also could not identify a technological need for other acidity regulators that are not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables.

Antifoaming agents

Tables 1 and 2 of the GSFA list the following antifoaming agents for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Step
04.1.2.3	900a	Polydimethylsiloxane	10 mg/kg	Adopted 1999
04.1.2.10	900a	Polydimethylsiloxane	10 mg/kg	Adopted 2008
04.2.2.3	900a	Polydimethylsiloxane	10 mg/kg	Adopted 1999
04.2.2.7	900a	Polydimethylsiloxane	10 mg/kg	Adopted 2008

Table 3 of the GSFA lists the following antifoaming agents:

INS	Additive Name
404	Calcium alginate
471	Mono- and di-glycerides of fatty acids

Based on the current food additive provisions in the standard, there is a need for polydimethylsiloxane as an antifoaming agent in pickled fruits and vegetables. The eWG could not identify a justification for excluding antifoaming agents listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7 or in Table 3 of the GSFA for use in pickled fruits and vegetables. However, the eWG could not identify a technological need for antifoaming agents that are currently in the step process for inclusion in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, or 04.2.2.7 of the GSFA. The eWG also could not identify a technological need for other antifoaming agents that are not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7 or in Table 3 of the GSFA for use in pickled fruits and vegetables.

Antioxidants

Tables 1 and 2 of the GSFA list the following antioxidants for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.3	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2008
04.1.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.1.2.3	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2006
04.1.2.3	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	GMP	45	Step 7
04.1.2.10	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2008
04.1.2.10	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2009
04.1.2.10	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2008
04.1.2.10	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	GMP	45	Step 7
04.2.2.3	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2001
04.2.2.3	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2006
04.2.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.2.2.3	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	15000 mg/kg	45	Step 7
04.2.2.7	300	Ascorbic acid, l-	GMP		Step 4
04.2.2.7	330	Citric acid	GMP		Step 4
04.2.2.7	472c	Citric and fatty acid esters of glycerol	GMP		Step 4
04.2.2.7	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2001
04.2.2.7	322(i)	Lecithin	GMP		Step 4
04.2.2.7	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2010
04.2.2.7	301	Sodium ascorbate	GMP		Step 4
04.2.2.7	316	Sodium isoascorbate (sodium isoascorbate)	GMP		Step 4
04.2.2.7	325	Sodium lactate	GMP		Step 4
04.2.2.7	220-225, 227, 228, 539	Sulfites	500 mg/kg	44	Adopted 2006
04.2.2.7	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	10000 mg/kg	45	Step 4

In Table 3 of the GSFA there are the following antioxidants:

INS Number	Additive Name	INS Number	Additive Name
300	Ascorbic acid, L-	325	Sodium lactate
301	Sodium ascorbate	326	Potassium lactate
302	Calcium ascorbate	330	Citric acid
303	Potassium ascorbate	472c	Citric and fatty acid esters of glycerol
315	Erythorbic Acid (Isoascorbic acid)	942	Nitrous oxide
316	Sodium erythorbate (Sodium isoascorbate)	1102	Glucose oxidase
322(i)	Lecithin		

Based on the current food additive provisions in the standard, there is a technological need for ascorbic acid as an antioxidant in pickled fruits and vegetables. The eWG could not identify a justification for excluding antioxidants listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, or 04.2.2.7 or in Table 3 of the GSFA for use in pickled fruits and vegetables. However, the eWG could not identify a technological need for antioxidants that are currently in the step process for inclusion in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, or 04.2.2.7 of the GSFA with the exception of ascorbic acid in food category 04.2.2.7. The eWG also could not identify a technological need for other antioxidants that are not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7 or in Table 3 of the GSFA for use in pickled fruits and vegetables.

Colours

Tables 1 and 2 of the GSFA list the following colours for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2	150b	Caramel II - sulfite caramel	80000 mg/kg	182	Step 4
04.1.2.3	160b(i)	Annatto extracts, bixin-based	20 mg/kg	8	Step 4
04.1.2.3	150c	Caramel III - ammonia caramel	200 mg/kg		Adopted 2010
04.1.2.3	150d	Caramel IV - sulfite ammonia caramel	7500 mg/kg		Adopted 2011
04.1.2.3	160a(ii)	Carotenes, beta-, vegetable	1000 mg/kg		Adopted 2005
04.1.2.3	160a(i),a(iii),e,f	Carotenoids	1000 mg/kg		Adopted 2009
04.1.2.3	141(i),(ii)	Chlorophylls and chlorophyllins, copper complexes	100 mg/kg	62	Adopted 2005
04.1.2.3	163(ii)	Grape skin extract	1500 mg/kg	161	Adopted 2009
04.1.2.10	160b(ii)	Annatto extracts, norbixin-based	200 mg/kg	185	Step 4
04.1.2.10	160a(ii)	Carotenes, beta-, vegetable	200 mg/kg		Adopted 2005
04.1.2.10	160a(i),a(iii),e,f	Carotenoids	500 mg/kg		Adopted 2009
04.1.2.10	141(i),(ii)	Chlorophylls and chlorophyllins, copper complexes	100 mg/kg	62	Adopted 2005
04.1.2.10	163(ii)	Grape skin extract	500 mg/kg	161, 181	Adopted 2009
04.1.2.10	101(i),(ii)	Riboflavins	500 mg/kg		Adopted 2008
04.2.2.3	129	Allura red AC	300 mg/kg	161	Adopted 2009
04.2.2.3	123	Amaranth	300 mg/kg		Step 7
04.2.2.3	122	Azorubine (carmoisine)	500 mg/kg		Step 7
04.2.2.3	155	Brown HT	500 mg/kg		Step 7
04.2.2.3	151	Brilliant black (black PN)	500 mg/kg		Step 7
04.2.2.3	133	Brilliant blue FCF	500 mg/kg	161	Adopted 2009

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.2.2.3	150c	Caramel III - ammonia caramel	500 mg/kg		Adopted 1999
04.2.2.3	120	Carmines	500 mg/kg	161, 178	Adopted 2008
04.2.2.3	160a(ii)	Carotenes, beta-, vegetable	1320 mg/kg		Adopted 2011
04.2.2.3	160a(i),a(iii),e,f	Carotenoids	50 mg/kg	161	Adopted 2010
04.2.2.3	100(i)	Curcumin	500 mg/kg		Step 7
04.2.2.3	143	Fast green FCF	300 mg/kg		Adopted 1999
04.2.2.3	163(ii)	Grape skin extract	100 mg/kg	179, 181	Adopted 2011
04.2.2.3	132	Indigotine (indigo carmine)	150 mg/kg	161	Adopted 2009
04.2.2.3	104	Quinoline yellow	500 mg/kg		Step 7
04.2.2.3	101(i),(ii)	Riboflavins	500 mg/kg		Adopted 2005
04.2.2.3	102	Tartrazine	500 mg/kg		Step 7
04.2.2.3	160b(i)	Annatto extracts, bixin-based	20 mg/kg	8	Step 4
04.2.2.3	160b(ii)	Annatto extracts, norbixin-based	300 mg/kg	185	Step 4
04.2.2.7	123	Amaranth	300 mg/kg		Step 4
04.2.2.7	162	Beet red	GMP		Step 4
04.2.2.7	133	Brilliant blue FCF	100 mg/kg	92, 161	Adopted 2009
04.2.2.7	170(i)	Calcium carbonate	10000 mg/kg	58	Step 4
04.2.2.7	150a	Caramel I - plain Caramel	GMP		Step 4
04.2.2.7	150c	Caramel III - ammonia caramel	50000 mg/kg	161	Adopted 2010
04.2.2.7	160a(ii)	Carotenes, beta-, vegetable	1000 mg/kg		Adopted 2005
04.2.2.7	160a(i),a(iii),e,f	Carotenoids	50 mg/kg		Adopted 2009
04.2.2.7	140	Chlorophylls	GMP		Step 4
04.2.2.7	141(i),(ii)	Chlorophylls and chlorophyllins, copper complexes	100 mg/kg	62	Adopted 2005
04.2.2.7	100(i)	Curcumin	500 mg/kg		Step 4
04.2.2.7	127	Erythrosine	30 mg/kg		Adopted 2011
04.2.2.7	143	Fast green FCF	100 mg/kg	161	Adopted 2009
04.2.2.7	163(ii)	Grape skin extract	100 mg/kg	161, 181	Adopted 2009
04.2.2.7	132	Indigotine (indigo carmine)	300 mg/kg	161	Adopted 2009
04.2.2.7	161b(i)	Lutein from tagetes erecta	GMP		Step 4
04.2.2.7	124	Ponceau 4R (cochineal red A)	500 mg/kg	161	Adopted 2008
04.2.2.7	101(i),(ii)	Riboflavins	500 mg/kg		Adopted 2008
04.2.2.7	110	Sunset yellow FCF	200 mg/kg	92	Adopted 2008
04.2.2.7	102	Tartrazine	500 mg/kg		Step 4
04.2.2.7	160b(i)	Annatto extracts, bixin-based	20 mg/kg	8	Step 4
04.2.2.7	160b(ii)	Annatto extracts, norbixin-based	200 mg/kg	185	Step 4

Table 3 of the GSFA lists the following colours:

INS	Additive Name	INS	Additive Name
140	Chlorophylls	160d(iii)	Lycopene, Blakeslea trispora
150a	Caramel I – plain caramel	162	Beet red
160d(i)	Lycopene, synthetic (Step 3) (Recommended for adoption at Step 5/8 by the 44 th CCFA (REP 12/FA, Apx. VI))	170(i)	Calcium carbonate
160d(ii)	Lycopene, tomato (Step 3) (Recommended for adoption at Step 5/8 by the 44 th CCFA (REP 12/FA, Apx. VI))	171	Titanium dioxide

Based on the current food additive provisions in the standard, there is a technological need for the following colours in pickled fruits and vegetables:

INS	Additive Name
101(i),(ii)	Riboflavins
140	Chlorophylls
141(i),(ii)	Chlorophylls and chlorophyllins, copper complexes
150d	Caramel IV - sulfite ammonia caramel
160a(i),a(iii),e,f	Carotenoids
163(ii)	Grape skin extract

There is also a technological need for beet red as a colour in pickled fruits and vegetables. The eWG could not identify a justification for excluding colours listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, or 04.2.2.7 or in Table 3 of the GSFA for use in pickled fruits and vegetables. However, the eWG could not identify a technological need for colours that are currently in the step process for inclusion in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, or 04.2.2.7 of the GSFA with the exception of beet red and chlorophylls in food category 04.2.2.7. The eWG also could not identify the technological need for other colours that are not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, or 04.2.2.7 or in Table 3 of the GSFA for use in pickled fruits and vegetables.

Firming agents

Tables 1 and 2 of the GSFA list the following firming agents for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.1.2.10	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2009
04.2.2.3	523	Aluminium ammonium sulfate	500 mg/kg	6	Step 3
04.2.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.2.2.7	509	Calcium chloride	10000 mg/kg	58	Step 4
04.2.2.7	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2010

Table 3 of the GSFA lists the following firming agents:

INS	Additive Name	INS	Additive Name
333(iii)	Tricalcium citrate	516	Calcium sulfate
424	Curdlan	518	Magnesium sulfate
466	Sodium carboxymethyl cellulose (Cellulose gum)	526	Calcium hydroxide
509	Calcium chloride	578	Calcium gluconate
511	Magnesium chloride	580	Magnesium gluconate

Based on the current food additive provisions in the standard, there is a technological need for calcium chloride and calcium lactate as firming agents in pickled fruits and vegetables. The eWG noted that calcium lactate is not classified as a firming agent in the GSFA. The eWG could not identify a justification for excluding firming agents listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables. However, the eWG could not identify a technological need for firming agents that are currently in the step process for inclusion in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 or 04.2.2.7 of the GSFA with the exception of calcium chloride in food category 04.2.2.7. Other than calcium lactate, the eWG could not identify a technological need for other firming agents that are not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables.

Flavour enhancers

Tables 1 and 2 of the GSFA list the following flavour enhancers for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.3	950	Acesulfame potassium	200 mg/kg	161, 188	Adopted 2007
04.1.2.3	951	Aspartame	300 mg/kg	144, 191	Adopted 2007
04.1.2.3	961	Neotame	100 mg/kg	161	Adopted 2007
04.1.2.10	950	Acesulfame potassium	350 mg/kg	161, 188	Adopted 2007
04.1.2.10	951	Aspartame	1000 mg/kg	161, 191	Adopted 2007
04.1.2.10	961	Neotame	65 mg/kg	161	Adopted 2007
04.2.2.3	950	Acesulfame potassium	200 mg/kg	144, 188	Adopted 2007
04.2.2.3	951	Aspartame	300 mg/kg	144, 191	Adopted 2007
04.2.2.3	961	Neotame	10 mg/kg	144	Adopted 2007
04.2.2.7	950	Acesulfame potassium	1000 mg/kg	188	Adopted 2008
04.2.2.7	951	Aspartame	2500 mg/kg	161, 191	Adopted 2008
04.2.2.7	634	Calcium 5'-ribonucleotides	GMP		Step 4
04.2.2.7	627	Disodium 5'-guanylate	GMP		Step 4
04.2.2.7	631	Disodium 5'-inosinate	GMP		Step 4
04.2.2.7	635	Disodium 5'-ribonucleotides	GMP		Step 4
04.2.2.7	621	Monosodium l-glutamate	GMP		Step 4
04.2.2.7	961	Neotame	33 mg/kg	161	Adopted 2007
04.2.2.7	508	Potassium chloride	GMP		Step 4
04.2.2.7	957	Thaumatococin	GMP		Step 4

Table 3 of the GSFA lists the following flavour enhancers:

INS	Additive Name	INS	Additive Name
508	Potassium chloride	630	Inosinic acid, 5'-
518	Magnesium sulfate	631	Disodium 5'-inosinate
580	Magnesium gluconate	632	Potassium 5'-inosinate
620	Glutamic acid, L(+)-	633	Calcium 5'-inosinate
621	Monosodium L-glutamate	634	Calcium 5'-ribonucleotides
622	Monopotassium L-glutamate	635	Disodium 5'-ribonucleotides
623	Calcium di-L-glutamate	957	Thaumatococcus
624	Monoammonium L-glutamate	968	Erythritol
625	Magnesium di-L-glutamate	1101(i)	Protease
626	Guanylic acid, 5'-	1101(ii)	Papain
627	Disodium 5'-guanylate	1101(iii)	Bromelain
628	Dipotassium 5'-guanylate	1104	Lipases
629	Calcium 5'-guanylate		

Based on the current food additive provisions in the standard, there is a technological need for monosodium L-glutamate as a flavour enhancer in pickled fruits and vegetables. The eWG could not identify a justification for excluding flavour enhancers listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables. However, the eWG could not identify a technological need for flavour enhancers that are currently in the step process for inclusion in food category 04.2.2.7 of the GSFA with the exception of monosodium L-glutamate in food category 04.2.2.7. The eWG also could not identify a technological need for other flavour enhancers that are not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables.

Preservatives

Tables 1 and 2 of the GSFA list the following preservatives for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.3	210-213	Benzoates	1000 mg/kg	13	Adopted 2001
04.1.2.3	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2008
04.1.2.3	214, 218	Hydroxybenzoates, para-	800 mg/kg	27	Adopted 2012
04.1.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.1.2.3	262(ii)	Sodium diacetate	GMP		Step 7
04.1.2.3	200-203	Sorbates	1000 mg/kg	42	Adopted 2009
04.1.2.3	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2006
04.1.2.10	210-213	Benzoates	1000 mg/kg	13	Adopted 2001
04.1.2.10	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2008
04.1.2.10	214, 218	Hydroxybenzoates, para-	800 mg/kg	27	Adopted 2010
04.1.2.10	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2009
04.1.2.10	200-203	Sorbates	1000 mg/kg	42	Adopted 2009

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.10	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2008
04.2.2.3	210-213	Benzoates	2000 mg/kg	13	Adopted 2001
04.2.2.3	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2001
04.2.2.3	214, 218	Hydroxybenzoates, para-	1000 mg/kg	27	Adopted 2010
04.2.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.2.2.3	262(ii)	Sodium diacetate	GMP		Step 7
04.2.2.3	200-203	Sorbates	2000 mg/kg	42	Adopted 2012
04.2.2.3	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2006
04.2.2.3	243	Lauric arginate ethyl ester	200 mg/kg		Adopted 2011
04.2.2.7	260	Acetic acid, glacial	GMP		Step 4
04.2.2.7	210-213	Benzoates	1000 mg/kg	13	Adopted 2001
04.2.2.7	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2001
04.2.2.7	214, 218	Hydroxybenzoates, para-	300 mg/kg	27	Adopted 2012
04.2.2.7	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2010
04.2.2.7	262(i)	Sodium acetate	GMP		Step 4
04.2.2.7	200-203	Sorbates	1000 mg/kg	42	Adopted 2012
04.2.2.7	220-225, 227, 228, 539	Sulfites	500 mg/kg	44	Adopted 2006

Table 3 of the GSFA lists the following preservatives

INS	Additive Name	INS	Additive Name
260	Acetic acid, glacial	281	Sodium propionate
261	Potassium acetates	282	Calcium propionate
262(i)	Sodium acetate	283	Potassium propionate
263	Calcium acetate	290	Carbon dioxide
280	Propionic acid		

Based on the current food additive provisions in the standard, there is a technological need for sorbates, benzoates, para-hydroxybenzoates, and sulfites as preservatives in pickled fruits and vegetables. The eWG could not identify a justification for excluding preservatives listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables. However, the eWG could not identify a technological need for preservatives that are currently in the step process for inclusion in food categories 04.1.2.3, 04.2.2.3, or 04.2.2.7 of the GSFA. The eWG also could not identify a technological need for other preservatives that are not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables.

Sequestrants

Tables 1 and 2 of the GSFA list the following sequestrants for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.3	472e	Diacetyltartaric and fatty acid esters of glycerol	1000 mg/kg		Adopted 2005
04.1.2.3	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2008
04.1.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.1.2.3	262(ii)	Sodium diacetate	GMP		Step 7
04.1.2.3	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2006
04.1.2.3	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	GMP	45	Step 7
04.1.2.10	472e	Diacetyltartaric and fatty acid esters of glycerol	2500 mg/kg		Adopted 2005
04.1.2.10	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2008
04.1.2.10	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2009
04.1.2.10	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2008
04.1.2.10	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	GMP	45	Step 7
04.2.2.3	472e	Diacetyltartaric and fatty acid esters of glycerol	2500 mg/kg		Adopted 2005
04.2.2.3	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2001
04.2.2.3	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2012
04.2.2.3	262(ii)	Sodium diacetate	GMP		Step 7
04.2.2.3	220-225, 227, 228, 539	Sulfites	100 mg/kg	44	Adopted 2006
04.2.2.3	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	15000 mg/kg	45	Step 7
04.2.2.7	400	Alginic acid	GMP		Step 4
04.2.2.7	330	Citric acid	GMP		Step 4
04.2.2.7	472c	Citric and fatty acid esters of glycerol	GMP		Step 4
04.2.2.7	472e	Diacetyltartaric and fatty acid esters of glycerol	2500 mg/kg		Adopted 2005
04.2.2.7	385, 386	Ethylene diamine tetra acetates	250 mg/kg	21	Adopted 2001
04.2.2.7	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2010

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.2.2.7	338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542	Phosphates	2200 mg/kg	33	Adopted 2010
04.2.2.7	262(i)	Sodium acetate	GMP		Step 4
04.2.2.7	576	Sodium gluconate	GMP		Step 4
04.2.2.7	420(i)	Sorbitol	70000 mg/kg		Step 4
04.2.2.7	220-225, 227, 228, 539	Sulfites	500 mg/kg	44	Adopted 2006
04.2.2.7	334; 335(i),(ii); 336(i),(ii); 337	Tartrates	10000 mg/kg	45	Step 4
04.2.2.7	331(iii)	Trisodium citrate	GMP		Step 4
04.2.2.7	420(ii)	Sorbitol syrup	70000 mg/kg		Step 4

Table 3 of the GSFA lists the following sequestrants:

INS	Additive Name	INS	Additive Name
262(i)	Sodium acetate	404	Calcium alginate
330	Citric acid	420(i)	Sorbitol
331(i)	Sodium dihydrogen citrate	420(ii)	Sorbitol syrup
331(iii)	Trisodium citrate	472a	Acetic and fatty acid esters of glycerol
332(i)	Potassium dihydrogen citrate	472b	Lactic and fatty acid esters of glycerol
332(ii)	Tripotassium citrate	472c	Citric and fatty acid esters of glycerol
333(iii)	Tricalcium citrate	516	Calcium sulfate
400	Alginic acid	575	Glucono delta-lactone
401	Sodium alginate	576	Sodium gluconate
402	Potassium alginate	577	Potassium gluconate
403	Ammonium alginate	578	Calcium gluconate

Based on the current standard there is a need for ethylene diamine tetra acetates (385, 386) and phosphates (338; 339(i)-(iii); 340(i)-(iii); 341(i)-(iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i),(ii); 452(i)-(v); 542) as sequestrants in pickled fruits and vegetables. The eWG could not identify a justification for excluding sequestrants listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or Table 3 of the GSFA in pickled fruits and vegetables. However, the eWG could not identify a technological need for sequestrants that are currently in the step process for inclusion in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, or 04.2.2.7 of the GSFA, with the exception of citric acid in food category 04.2.2.7. The eWG also could not identify a technological need in pickled fruits and vegetables for other sequestrants not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or Table 3 of the GSFA.

Sweeteners

Tables 1 and 2 of the GSFA list the following sweeteners for food categories 04.1.2.3, 04.1.2.10, 04.2.2.3 and 04.2.2.7:

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.3	950	Acesulfame potassium	200 mg/kg	16, 188	Adopted 2007
04.1.2.3	951	Aspartame	300 mg/kg	144, 191	Adopted 2007
04.1.2.3	962	Aspartame-acesulfame salt	450 mg/kg	113, 144	Step 3
04.1.2.3	961	Neotame	100 mg/kg	161	Adopted 2007
04.1.2.3	954(i)-(iv)	Saccharins	160 mg/kg	144	Adopted 2007
04.1.2.3	955	Sucralose (trichlorogalactosucrose)	180 mg/kg	144	Adopted 2007
04.1.2.3	960	Steviol glycosides	100 mg/kg	26	Adopted 2011

Food Cat.	INS	GSFA Mainterm	ML	Notes	Step
04.1.2.10	950	Acesulfame potassium	350 mg/kg	161, 188	Adopted 2007
04.1.2.10	951	Aspartame	1000 mg/kg	161, 191	Adopted 2007
04.1.2.10	962	Aspartame-acesulfame salt	790 mg/kg	113	Step 3
04.1.2.10	961	Neotame	65 mg/kg	161	Adopted 2007
04.1.2.10	954(i)-(iv)	Saccharins	160 mg/kg	161	Adopted 2008
04.1.2.10	955	Sucralose (trichlorogalactosucrose)	150 mg/kg	161	Adopted 2007
04.1.2.10	960	Steviol glycosides	115 mg/kg	26	Adopted 2011
04.2.2.3	950	Acesulfame potassium	200 mg/kg	144, 188	Adopted 2007
04.2.2.3	951	Aspartame	300 mg/kg	144, 191	Adopted 2007
04.2.2.3	962	Aspartame-acesulfame salt	200 mg/kg	113, 161	Adopted 2009
04.2.2.3	961	Neotame	10 mg/kg	Note 144	Adopted 2007
04.2.2.3	954(i)-(iv)	Saccharins	160 mg/kg	144	Adopted 2007
04.2.2.3	955	Sucralose (trichlorogalactosucrose)	400 mg/kg		Adopted 2007
04.2.2.3	960	Steviol glycosides	330 mg/kg	26	Adopted 2011
04.2.2.7	950	Acesulfame potassium	1000 mg/kg	188	Adopted 2008
04.2.2.7	951	Aspartame	2500 mg/kg	161, 191	Adopted 2008
04.2.2.7	962	Aspartame-acesulfame salt	2270 mg/kg	113	Step 3
04.2.2.7	953	Isomalt (hydrogenated isomaltulose)	50000 mg/kg		Step 4
04.2.2.7	966	Lactitol	10000 mg/kg		Step 4
04.2.2.7	965(i)	Maltitol	100000 mg/kg		Step 4
04.2.2.7	961	Neotame	33 mg/kg	161	Adopted 2007
04.2.2.7	954(i)-(iv)	Saccharins	200 mg/kg	161	Adopted 2008
04.2.2.7	420(i)	Sorbitol	70000 mg/kg		Step 4
04.2.2.7	955	Sucralose (trichlorogalactosucrose)	580 mg/kg	161	Adopted 2008
04.2.2.7	957	Thaumatococcus	GMP		Step 4
04.2.2.7	967	Xylitol	10000 mg/kg		Step 4
04.2.2.7	420(ii)	Sorbitol syrup	70000 mg/kg		Step 4
04.2.2.7	965(ii)	Maltitol syrup	100000 mg/kg		Step 4
04.2.2.7	960	Steviol glycosides	200 mg/kg	26	Adopted 2011

Table 3 of the GSFA lists the following sweeteners:

INS	Additive Name	INS	Additive Name
420(i)	Sorbitol	965(i)	Maltitol
420(ii)	Sorbitol syrup	965(ii)	Maltitol syrup
421	Mannitol	966	Lactitol
953	Isomalt (Hydrogenated isomaltulose)	967	Xylitol
957	Thaumatococcus	968	Erythritol
964	Polyglycolol syrup		

Based on the current food additive provisions in the standard, there is a technological need for acesulfame potassium, aspartame, saccharins, and sucralose as sweeteners in pickled fruits and vegetables. The eWG could not identify a justification for excluding sweeteners listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables. However, the eWG could not identify a technological need for sweeteners that are currently in the step process for inclusion in food category 04.2.2.7 of the GSFA. The eWG also could not identify a technological need for other sweeteners that are not listed in food categories 04.1.2.3, 04.1.2.10, 04.2.2.3, 04.2.2.7, or in Table 3 of the GSFA for use in pickled fruits and vegetables.

ANNEX II**FOOD ADDITIVE PROVISIONS FOR BAMBOO SHOOTS****CODEX STANDARD FOR CANNED BAMBOO SHOOTS (CODEX STAN 241-2007)****FOR COMMENTS AS TO CCFA REQUEST ON USE OF OTHER TARTRATES INCLUDED IN THE JECFA ADI
FOR USE AS ACIDITY REGULATORS (SINGLY OR IN COMBINATION) AND THE REPORTING BASIS****4 FOOD ADDITIVES****4.1 ACIDITY REGULATORS**

Acidity regulators used in accordance with Table 3 of the Codex General Standard for Food Additives (CODEX STAN 192-1995) are acceptable for use in foods conforming to this Standard. In addition:

INS No.	Name of the Food Additive	Maximum Level
334	Tartaric acid, L(+)-	1300 mg/kg

ANNEX III**FOOD ADDITIVE PROVISIONS FOR CANNED MUSHROOMS****CODEX STANDARD FOR CERTAIN CANNED VEGETABLES
(ANNEX ON MUSHROOMS) (CODEX STAN 207-2009)****FOR COMMENTS AS TO CCFA REQUEST ON USE OF OTHER
COLOURS AND FLAVOUR ENHANCERS IN CANNED MUSHROOMS
LISTED IN FOOD CATEGORY 04.2.2.4 OF THE GSFA****4 FOOD ADDITIVES (Applying to canned vegetables in general)**

Only those food additive classes listed below and in the corresponding Annexes are technologically justified and may be used in products covered by this Standard. Within each additive class only those food additives listed below and in the corresponding Annexes, or referred to, may be used and only for the functions, and within limits, specified.

4.1 Acidity regulators, colours, colour retention agents and calcium salts of firming agents used in accordance with Table 3 of the Codex General Standard for Food Additives (CODEX STAN 192-1995) are acceptable for use in foods conforming to this Standard.

4.2 COLOURS

INS No.	Name of the Food Additive	Maximum Level
102	Tartarazine	100 mg/kg
133	Brilliant Blue FCF	20 mg/kg
143	Fast Green FCF	200 mg/kg
150d	Caramel IV - sulfite ammonia caramel	50,000 mg/kg

4.3 COLOUR RETENTION AGENTS

INS No.	Name of the Food Additive	Maximum Level
385	Calcium disodium ethylenediaminetetraacetate	365 mg/kg (singly or in combination)
386	Disodium ethylenediaminetetraacetate	
512	Stannous chloride	25 mg/kg calculated as tin. Should not be added to foods in uncoated tin cans.

3. FOOD ADDITIVES (applying to canned mushrooms in particular)

3.1 Thickeners, emulsifiers and stabilizers used in accordance with Table 3 of the Codex General Standard for Food Additives (CODEX STAN 192-1995) for Food Category 04.2.2.4 are acceptable for use in canned mushrooms in sauce only.

3.2 Only the colour listed below is permitted for use in canned mushroom in sauce.

INS No.	Name of the Food Additive	Maximum Level
150d	Caramel IV - sulfite ammonia caramel	50,000 mg/kg

3.3 Only the flavour enhancer listed below is permitted for use, under the conditions of good manufacturing practices, in the products covered by this Annex.

INS No.	Name of the Food Additive	Maximum Level
621	Monosodium L-glutamate	GMP