CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - E-mail: codex@fao.org - www.codexalimentarius.org

**Agenda Item 7** **CRD04**

**JOINT FAO/WHO FOOD STANDARDS PROGRAMME**

**CODEX COMMITTEE ON FATS AND OILS**

**Twenty-Sixth Session**

**Kuala Lumpur, Malaysia, 25 February- 01 March 2019**

# REPORT OF THE IN-SESSION WORKING GROUP ON FOOD ADDITIVES

The 26th session of CCFO decided to establish an in-session working group, chaired by the European Union, to consider the following topics:

- Revocation and updating certain food additive provisions in fats and oils standards as proposed by CCFA in document CX/FO 19/26/2 (agenda item 2 of CCFO26)
- Alignment of food additive provisions in fats and oils standards (except fish oils) on the basis of document CX/FO 19/26/10 (agenda item 7 of CCFO26)
- Technological justification for the use of emulsifiers in FC 02.1.2 on the basis of document CX/FO 19/26/10 (agenda item 7 of CCFO26).

## Revocation and updating certain food additive provisions in fats and oils standards

The WG agreed with the revocation of provisions on tartrates in the *Standard for Fat Spreads and Blended Spreads* (CXS 256-2007) as proposed in paragraph 13 of CX/FO/19/26/FO.

Concerning the revocation of the provision for sodium sorbate (INS 201) in the *Standard for Fat Spreads and Blended Spreads* (CXS 256-2007) as proposed in paragraph 14 of CX/FO/19/26/FO, views were divided. Some members opposed the revocation as this food additive was still used in commodities conforming to CXS 256-2007. Other members were in favour of revocation as no data was available for JECFA assessment, there were no prospects of receiving such data and there were alternative substances available.

The WG agreed with updates of certain food additive provisions in fats and oils standards as proposed in paragraphs 15(i) and 15(ii) of CX/FO/19/26/FO.

Concerning the updates proposed in paragraph 15(iii) of CX/FO/19/26/FO, the WG agreed with the proposal on lecithin (INS 322(i)). Concerning the proposal on mono- and di-glycerides of fatty acids (INS 471), some delegations noted that the proposal of CCFA was not based on advice from CCFO, CCFO has not identified a technological need for this food additive and functional class "antifoaming agents" does not currently exist in CXS 211-1999.

Recommendations:

- The Committee is invited to consider the revocations and additions of food additive provisions in fats and oils standards as proposed in Annexes I and II and send them for endorsement by CCFA51 and for adoption by CAC 42, if appropriate. Proposals on which the WG had diverging views are indicated with square brackets.
- The Committee should inform CCFA about the discrepancy in the INS number of Tricalcium citrate which should read INS 333(ii**i**).

## Alignment of food additive provisions in fats and oils standards (except fish oils)

The WG agreed on the proposal as presented in Annex III for the alignment of food additive provisions in standards CXS 210-1999, CXS 211-1999, CXS 19-1981, CXS 33-1981 and CXS 256-2007 with GSFA.
Recommendations:

- The Committee is invited to consider the document presented in Annex III and, if considered appropriate, to forward it to CCFA as a proposal of CCFO for the alignment of food additive provisions in standards for fats and oils (CXS 210-1999, CXS 211-1999, CXS 19-1981, CXS 33-1981, CXS 256-2007) with GSFA.
- The Committee should remind CCFA that the updates proposed in Annex II, if adopted, will have to be taken into account in the alignment process.
- The Committee should remind Members that they will have an opportunity for further comments when CCFA considers the alignment of food additive provisions in fats and oils standards with GSFA.

**Technological justification for the use of emulsifiers in FC 02.1.2**

The WG took note of the technological justification provided by the industry[1]:

"Polyglycerol esters of fatty acids (INS 475), sorbitan esters of fatty acids (INS 491-495), and stearoyl lactylates (INS 481(i)-482(i)) are emulsifiers used for anti-crystallization purposes in cooking oil. Cooking oil is liquid in hot climates, but will crystallize during storage on the shelves of air-conditioned supermarkets. Although crystallization is reversible and temperature-dependent, consumers tend to interpret the crystallized oil as spoiled. Emulsifiers can postpone the onset of the crystallization process and thereby enhance consumer perception and prevent food waste."

The industry further provided the following maximum use levels:

| INS No. | Additive | Maximum Use Level |
|---|---|---|
| 475 | Polyglycerol esters of fatty acids | 600 mg/kg |
| 491-495 | Sorbitan esters of fatty acids | 750 mg/kg |
| 481(i)<br>482(i) | Stearoyl lactylates | 300 mg/kg |

Some delegates were not convinced that there was a reasonable technological need for emulsifiers and questioned why other emulsifiers with ADI not specified would not be suitable for the described use (e.g. INS 471, INS 472c).

Other delegates supported the use of emulsifiers in cooking oils for anti-crystallization and proposed to add sucrose esters of fatty acids (INS 473) with ML of 2,000 mg/kg. They also proposed ML of 10,000 mg/kg for INS 475.

Recommendations:

- The Committee is invited to consider, on the basis of the above information, whether there is a technological need for emulsifiers in GSFA food category 02.1.2 and to inform CCFA accordingly.

[1] International Food Additives Council (IFAC) and European Food Emulsifiers Manufacturers Association (EFEMA)

**Annex I**

**Revocation of food additive provisions in fats and oils standards**

The following provisions should be revoked in Section 4.1 Acidity regulators in the *Standard for Fat Spreads and Blended Spreads* (CXS 256-2007):

Monosodium tartrate (INS 335(i))
Monopotassium tartrate (INS 336(i))
Dipotassium tartrate (INS 336(ii))

**[**The following provision should be revoked in Section 4.7 Preservatives in the *Standard for Fat Spreads and Blended Spreads* (CXS 256-2007):

Sodium Sorbate (INS 201)**]**

**Annex II**

**Update of food safety provisions in fats and oils standards**

The following food additive provisions should be added to the *Standard for Edible Fats and Oils Not covered by Individual Standards* (CXS 19-1981):

Section 3.3 Antioxidants and Section 3.4 Antioxidant synergists:
Lecithin (INS 322(i)) with a maximum use level (ML) of good manufacturing practice (GMP)

Section 3.4 Antioxidant synergists:
Tricalcium citrate (INS 333(iii)) with ML of GMP
Tripotassium citrate (INS 332(ii)) with ML of GMP

Section 3.5 Antifoaming agents (for oils and fats for deep frying):
Mono- and di-glycerides of fatty acids (INS 471) with a ML of GMP

The following food additive provisions should be added to the *Standard for Named Vegetable Oils* (CXS 210-1999):

Section 4.2 Antioxidants and Section4.3 Antioxidant synergists:
Lecithin (INS 322(i)) with a maximum use level (ML) of good manufacturing practice (GMP)

Section 4.3 Antioxidant synergists:
Tricalcium citrate (INS 333(iii)) with ML of GMP
Tripotassium citrate (INS 332(ii)) with ML of GMP

The following food additive provisions should be added to the *Standard for Named Animal Fats* (CXS 211-1999):

Section 4.2 Antioxidants and Section 4.3 Antioxidant synergists:
Lecithin (INS 322(i)) with a maximum use level (ML) of good manufacturing practice (GMP)

**[**New Section 4.4 Antifoaming agents (for oils and fats for deep frying):
Mono- and di-glycerides of fatty acids (INS 471) with a ML of GMP**]**

**Annex III**

**ALIGNMENT OF FOOD ADDTIVE PROVISIONS IN FATS AND OILS STANDARDS WITH GSFA**

Note: this Annex does not address the alignment of the GSFA provisions in the step process except for the provisions for the same additives for which the adopted provisions are in the CCFO' standards.

**Standard for Named Vegetable Oils (CXS 210-1999)**

Commodities conforming to CXS 210-1999 fall in the GSFA food category (FC) 02.1.2 (Vegetable oils and fats).

The current provisions in section 4 of CXS 210-1999 list individual food additives associated with the following functional classes:

- antioxidants (including antioxidant synergists)
- anti-foaming agents (oils for deepfrying)

According to section 4 of CXS 210-1999, no food additives are permitted in virgin or cold pressed oils.

FC 02.1.2 is listed in the Annex to Table 3. Therefore, food additive provisions implied by Table 3 do not apply to commodities conforming to CXS 210-1999.

**The following issues will need to be addressed in aligning the food additive provisions in section 4 of CXS 210-1999 with the provisions of Tables 1 and 2 of GSFA:**

1. The following food additives are listed under FC 02.1.2 in GSFA but are not listed in section 4 of CXS 210-1999:

| INS No. | Additive | Maximum Use Level |
|---|---|---|
| 160a(ii) | beta-Carotenes, vegetable | 1,000 mg/kg |
| 160a(i), a(iii),e,f | Carotenoids | |
| 314 | Guaiac resin | 1,000 mg/kg |
| 484 | Stearyl citrate | GMP |

**Note XS210 indicating "excluding products conforming to the Standard for Named Vegetable Oils (CXS 210-1999)" should be introduced for these provisions in Tables 1 and 2 of GSFA for 160a(ii), 314 and 484.**

The following food additives in the functional class emulsifiers are listed under FC 02.1.2 in GSFA but no technological justification has been provided for their use in commodities conforming to CXS 210-1999:

| INS No. | Additive | Maximum Use Leve |
|---|---|---|
| 472e | Diacetyltartaric and fatty acid esters of glycerol | 10,000 mg/kg |
| 432-436 | Polysorbates | 5,000 mg/kg |
| 477 | Propylene glycol esters of fatty acids | 10,000 mg/kg |
| 322 (i) | Lecithin | GMP |

**Provided the use of INS 475, INS 491- 495 and INS 481(i)- 482(i) is allowed in CXS 210-1999, Note XS210 indicating "excluding products conforming to the Standard for Named Vegetable Oils (CXS 210-1999)" should be introduced for INS 472e, INS 322(i), INS 432-436 and INS 477 in Tables 1 and 2 of GSFA.**

**As the use lecithin (INS 322(i)) is justified as an antioxidant but not as an emulsifier, a new note should be introduced for lecithin in Tables 1 and 2 of GSFA indicating "for use as an antioxidant only in products conforming to the Standard for Named Vegetable Oils (CXS 210-1999)".**

The group thiodipropionates (thiodipropionic acid (INS 388) and dilauryl thiodipropionate INS (389)) is listed under FC 02.1.2 with antioxidant function in GSFA but it is not listed in section 4 of CXS 210-1999. However, dilauryl thiodipropionate (INS 389) is listed in CXS 210-1999. In line with the working principles for alignment work it is appropriate to include all the individual additives with the appropriate functional

class in the group in the alignment exercise thus allowing the use of the group thiodipropionates in foods conforming to CXS 210-1999.

Tricalcium citrate (INS 333(iii)) and tripotassium citrate (INS 332(ii)) are listed under FC 02.1.2 in GSFA but they are not listed in section 4 of CXS 210-1999. However, CCFO25 concluded that the use of tricalcium and tripotassium citrate like other citrates is technologically justified as antioxidant synergists (except in virgin or cold pressed oils. It should be noted INS 332(ii) and INS 333(iii) is currently associated with the functional class 'antioxidant' neither in GSFA nor in CXS 36-1989.

2. Section 4 of CXS 210-1999 provides for a maximum level of 100 mg/kg for Propyl gallate (INS 310) while GSFA sets a maximum level of 200 mg/kg.

**A new note should be introduced for propyl gallate in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 210-1999 at 100 mg/kg".**

Section 4 of CXS 210-1999 provides for a maximum use level of 120 mg/kg for tertiary butylhydroquinone (INS 319) while GSFA sets a maximum use level of 200 mg/kg.

**A new note should be introduced for tertiary butylhydroquinone in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 210-1999 at 120 mg/kg".**

Section 4 of CXS 210-1999 provides for a maximum use level of 75 mg/kg for butylated hydroxytoluene (INS 321) while GSFA sets a maximum use level of 200 mg/kg.

**A new note should be introduced for butylated hydroxytoluene in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 210-1999 at 75 mg/kg".**

Section 4 of CXS 210-1999 provides that any combination of gallates, BHA, BHT, or TBHQ should not to exceed 200 mg/kg within individual limits.

**Note 133 (Any combination of butylated hydroxyanisole (INS 320), butylated hydroxytoluene (INS 321), and propyl gallate (INS 310) at 200 mg/kg, provided that single use limits are not exceeded) should be introduced for propyl gallate, BHA, BHT and TBHQ in Tables 1 and 2 of GSFA.**

Section 4 of CXS 210-1999 provides for a maximum use level of 100 mg/kg for isopropyl citrates (INS 384) while GSFA sets a maximum use level of 200 mg/kg.

**A new note should be introduced for isopropyl citrates in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 210-1999 at 100 mg/kg".**

3. Antifoaming agents are technologically justified in products conforming to CXS 210-1999 only if they are destined for deepfrying. There is one antifoaming agent listed in FC 02.1.2: polydimethylsiloxane (900a).

**A new note should be introduced for polydimethylsiloxane (900a) in Tables 1 and 2 of GSFA indicating "for use only in oils for deepfrying in products conforming to CXS 210-1999".**

4. The use of ASCORBYL ESTERS, butylated hydroxyanisole (INS 320), butylated hydroxytoluene (INS 321), isopropyl citrates (INS 384), polydimethylsiloxane (900a), propyl gallate (INS 310), thiodipropionates and tertiary butylhydroquinone (INS 319) is not excluded in virgin and cold pressed oils and products conforming to the *standard for Olive Oils and Olive Pomace Oils* (CXS 33-1981) in Tables 1 and 2 of GSFA.

**Note 277 (Excluding virgin and cold pressed oils and products conforming to the standard for Olive Oils and Olive Pomace Oils (CXS 33-1981)) should be introduced in Tables 1 and 2 of GSFA for the above provisions.**

**Recommendation:**

Provided that the above issues are addressed as proposed, the current provisions in Section 4 of CXS 210-1999 could be replaced by the following provision ensuring the alignment with GSFA:

*Antioxidants, anti-foaming agents and emulsifiers used in accordance with Tables 1 and 2 of the General Standard for Food Additives (CXS 192-1995) in food category 02.1.2 (Vegetable oils and fats) and its parent food categories are acceptable for use in foods conforming to this Standard.*

*The flavourings used in products covered by this standard should comply with the Guidelines for the Use of Flavourings (CXG 66-2008).*

**Standard for Named Animal Fats (CXS 211-1999)**

Commodities conforming to CXS 211-1999 fall in the GSFA food category (FC) 02.1.3 (Lard, tallow, fish oil, and other animal fats).

The current provisions in section 4 of CXS 211-1999 list individual food additives associated with the following functional classes:

- colours
- antioxidants (including antioxidant synergists)

Concerning Table 3 of GSFA, FC 02.1.3 is listed in the Annex to Table 3. Therefore, food additive provisions implied by Table 3 do not apply to commodities conforming to CXS 211-1999.

**The following issues will need to be addressed in aligning the food additive provisions in section 4 of CXS 211-1999 with the provisions of Tables 1 and 2 of GSFA:**

1. The following food additives are listed under FC 02.1.3 in GSFA without having Note XS211 but are not listed in section 4 of CXS 211-1999:

| INS No. | Additive | Maximum Use Level |
|---|---|---|
| 472e | Diacetyltartaric and fatty acid esters of glycerol | 10000 mg/kg |
| 143 | Fast green FCF | GMP |
| 314 | Guaiac resin | 1000 mg/kg |
| 132 | Indigotine (Indigo carmine) | 300 mg/kg |
| 900a | Polydimethylsiloxane | 10 mg/kg |
| 432-436 | POLYSORBATES | 5000 mg/kg |
| 477 | Propylene glycol esters of fatty acids | 10000 mg/kg |
| 110 | Sunset yellow FCF | 300 mg/kg |
| 484 | Stearyl citrate | GMP |
| 388, 389 | THIODIPROPIONATES | 200 mg/kg |

**Note XS211 (Excluding products conforming to the Standard for Named Animal Fats (CODEX STAN 211-1999)) should be introduced for the above provisions in Tables 1 and 2 of GSFA.**

2. The following food additives listed in section 4 of CXS 211-1999 under the functional class colours and antioxidants are not listed under FC 02.1.3 in GSFA:

| INS No. | Additive | Maximum Use Level |
|---|---|---|
| 100(i) | Curcumin | 5 mg/kg |
| 160b(i) | Annatto extracts, bixin-based | 10 mg/kg (as bixin) |
| 331(i) | Sodium dihydrogen citrate | GMP |
| 331(iii) | Trisodium citrate | GMP |

The provisions to include curcumin, sodium dihydrogen citrate and trisodium citrate in Tables 1 and 2 of GSFA are currently at step 7. There is no provision in the step procedure to include annatto extracts, bixin-based, in Tables 1 and 2 of GSFA.

**Provisions to include the above food additive provisions in Tables 1 and 2 of GSFA should be advanced for adoption with a note restricting their use to products conforming to CXS 211-1999.**

3. **A new note should be introduced for curcumin (INS100(i)), beta-carotenes (vegetable) (INS160a(ii)), carotenoids (INS160a(i),a(iii),e,f), annatto extracts, bixin-based (160b(i) indicating "to be used in commodities conforming to CXS 211-1999 only for the purpose of restoring natural colour lost in processing.**

4. Section 4 of CXS 211-1999 provides for a maximum level of 25 mg/kg for beta-Carotenes (vegetable) (INS 160a(ii)) while GSFA sets a maximum level of 1,000 mg/kg.

**A new note should be introduced for beta-carotenes (vegetable) in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 211-1999 at 25 mg/kg".**

Section 4 of CXS 211-1999 provides for a maximum level of 100 mg/kg for Propyl gallate (INS 310) while GSFA sets a maximum level of 200 mg/kg.

**A new note should be introduced for propyl gallate in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 211-1999 at 100 mg/kg".**

Section 4 of CXS 211-1999 provides for a maximum level of 120 mg/kg for tertiary butyl hydroquinone (TBQH) (INS 319) while GSFA sets a maximum level of 200 mg/kg.

**A new note should be introduced for tertiary butyl hydroquinone in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 211-1999 at 120 mg/kg".**

Section 4 of CXS 211-1999 provides for a maximum level of 175 mg/kg for butylated hydroxyanisole (BHA) (INS 320) while GSFA sets a maximum level of 200 mg/kg.

**A new note should be introduced for butylated hydroxyanisole in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 211-1999 at 175 mg/kg".**

Section 4 of CXS 211-1999 provides for a maximum level of 75 mg/kg for butylated hydrotoluene (BTA) (INS 321) while GSFA sets a maximum level of 200 mg/kg.

**A new note should be introduced for butylated hydroxytoluene in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 211-1999 at 75 mg/kg".**

Section 4 of CXS 211-1999 provides that any combination of gallates, BHA, BHT, or TBHQ should not to exceed 200 mg/kg within individual limits.

**Note 133 should be introduced for propyl gallate, BHA, BHT and TBHQ in Tables 1 and 2 of GSFA.**

Section 4 of CXS 211-1999 provides for a maximum level of 100 mg/kg for isopropyl citrates (INS 384) while GSFA sets a maximum level of 200 mg/kg.

**A new note should be introduced for Isopropyl citrates in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 211-1999 at 100 mg/kg".**

**Recommendation:**

Provided that the above issues are addressed as proposed, the current provisions in Section 4 of CXS 211-1999 could be replaced by the following provision ensuring the alignment with GSFA:

*Colours and antioxidants used in accordance with Tables 1 and 2 of the General Standard for Food Additives (CXS 192-1995) in food category 02.1.3 (Lard, tallow, fish oil, and other animal fats) and its parent food categories are acceptable for use in foods conforming to this Standard.*

**Standard for Edible Fats and Oils Not Covered by Individual Standards (CXS 19-1981)**

Commodities conforming to CXS 19-1981 fall in the GSFA food category (FC) 02.1 (Fats and oils essentially free from water). Food additive provisions are laid down in subcategories 02.1.1 (Butter oil, anhydrous milkfat, ghee), 02.1.2. (Vegetable oils and fats) and 02.1.3 (Lard, tallow, fish oil, and other animal fats).

The current provisions in section 3 of CXS 19-1981 list individual food additives associated with the following functional classes:

- colours
- antioxidants (including antioxidant synergists)
- anti-foaming agents

According to section 3 of CXS 19-1981, no food additives are permitted in virgin or cold pressed oils. No colours are permitted in vegetable oils covered by this Standard.

Concerning Table 3 of GSFA, FC 02.1.1, FC 02.1.2 and FC 02.1.3 are listed in the Annex to Table 3. Therefore, food additive provisions implied by Table 3 do not apply to commodities conforming to CXS 19-1981.

As regards colours, the current food additive provisions in section 3 of CXS 19-1981 are identical to those in section 4 of Standard for Named Animal Fats (CXS 211-1999).

As regards antioxidants and anti-foaming agents, the current food additive provisions in section 3 of CXS 19-1981 are identical to those in section 4 of Standard for Named Vegetable Oils (CXS 210-1999).

Food additive provisions of FC 02.1.1 are covered by food additive provisions of section 3 of CXS 19-1981.

**The following issues will need to be addressed in aligning the food additive provisions in section 3 of CXS 19-1981 with the provisions of Tables 1 and 2 of GSFA:**

1. The following food additives are listed under FC 02.1.2 and 02.1.3 in GSFA but are not listed in section 3 of CXS 19-1981 (there is no additive in FC 02.1.1 which is not listed in CXS 19-1981):

| INS No. | Additive | Maximum Use Level |
|---|---|---|
| 472e | Diacetyltartaric and fatty acid esters of glycerol | 10000 mg/kg |
| 143 | Fast green FCF | GMP |
| 314 | Guaiac resin | 1000 mg/kg |
| 132 | Indigotine (Indigo carmine) | 300 mg/kg |
| 900a | Polydimethylsiloxane | 10 mg/kg |
| 432-436 | Polysorbates | 5000 mg/kg |
| 477 | Propylene glycol esters of fatty acids | 10000 mg/kg |
| 110 | Sunset yellow FCF | 300 mg/kg |
| 484 | Stearyl citrate | GMP |

**Note XS19 (Excluding products conforming to the Standard for Edible Fats and Oils Not Covered by Individual Standards (CXS 19-1981)) should be introduced for the above provisions in Tables 1 and 2 of GSFA.**

2. The following food additives listed in section 3 of CXS 19-1981 under functional the class colours and antioxidants are not listed under FC 02.1.3 in GSFA:

| INS No. | Additive | Maximum Use Level |
|---|---|---|
| 100(i) | Curcumin | 5 mg/kg |
| 160b(i) | Annatto extracts, bixin-based | 10 mg/kg (as bixin) |
| 331(i) | Sodium dihydrogen citrate | GMP |
| 331(iii) | Trisodium citrate | GMP |

The provisions to include curcumin, sodium dihydrogen citrate and trisodium citrate in Tables 1 and 2 of GSFA are currently at step 7. There is no provision in the step procedure to include annatto extracts, bixin-based, in Tables 1 and 2 of GSFA.

**Provisions to include the above food additive provisions in Tables 1 and 2 of GSFA should be advanced for adoption with a note restricting their use to products conforming to CXS 19-1981.**

3. **A new note should be introduced for curcumin (INS100(i)), beta-carotenes (vegetable) (INS160a(ii)), carotenoids (INS160a(i),a(iii),e,f), annatto extracts, bixin-based (160b(i) indicating "to be used in commodities conforming to CXS 19-1981 only for the purpose of restoring natural colour lost in processing.**

4. Section 3 of CXS 19-1981 provides for a maximum level of 300 mg/kg singly or in combination for tocopherol, d-alpha (INS 307a), tocopherol concentrate, mixed (INS 307b) and tocopherol, dl-alpha (307c) while GSFA FC 02.1.1 sets a maximum level of 500 mg/kg.

   **A new note should be introduced for tocopherols in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 19-1981 at 300 mg/kg".**

   Section 3 of CXS 19-1981 provides for a maximum level of 25 mg/kg for beta-carotenes (vegetable) (INS 160(ii)) while GSFA sets a maximum level of 1,000 mg/kg.

   **A new note should be introduced for beta-carotenes (vegetable) in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 19-1981 at 25 mg/kg".**

   Section 3 of CXS 19-1981 provides for a maximum level of 100 mg/kg for propyl gallate (INS 310) while GSFA sets a maximum level of 200 mg/kg.

   **A new note should be introduced for propyl gallate in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 19-1981 at 100 mg/kg".**

   Section 3 of CXS 19-1981 provides for a maximum level of 120 mg/kg for tertiary butyl hydroquinone (TBQH) (INS 319) while GSFA sets a maximum level of 200 mg/kg.

   **A new note should be introduced for tertiary butyl hydroquinone in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 19-1981 at 120 mg/kg".**

   Section 3 of CXS 19-1981 provides for a maximum level of 175 mg/kg for butylated hydroxyanisole (BHA) (INS 320) while GSFA sets a maximum level of 200 mg/kg.

   **A new note should be introduced for butylated hydroxyanisole in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 19-1981 at 175 mg/kg".**

   Section 3 of CXS 19-1981 provides for a maximum level of 75 mg/kg for butylated hydrotoluene (BTA) (INS 321) while GSFA sets a maximum level of 200 mg/kg.

   **A new note should be introduced for butylated hydroxytoluene in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 19-1981 at 75 mg/kg".**

   Section 3 of CXS 19-1981 provides for a maximum level of 100 mg/kg for isopropyl citrates (INS 384) while GSFA sets a maximum level of 200 mg/kg.

   **A new note should be introduced for isopropyl citrates in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 19-1981 at 100 mg/kg".**

5. Antifoaming agents are technologically justified in products conforming to CXS 19-1981 only if they are destined for deepfrying. There is one antifoaming agent listed in FC 02.1.2: polydimethylsiloxane (900a).

   **A new note should be introduced for polydimethylsiloxane (900a) in Tables 1 and 2 of GSFA indicating "for use only in oils for deepfrying in products conforming to CXS 19-1981".**

**Recommendation:**

Provided that the above issues are addressed as proposed, the current provisions in Section 3 of CXS 19-1981 could be replaced by the following provision ensuring the alignment with GSFA:

*Colours, antioxidants and antifoaming agents used in accordance with Tables 1 and 2 of the General Standard for Food Additives (CXS 192-1995) in food category 02.1, its parent food category, and its sub-categories are acceptable for use in foods conforming to this Standard.*

*The flavourings used in products covered by this standard should comply with the Guidelines for the Use of Flavourings (CXG 66-2008).*

**Standard for Olive Oils and Olive Pomace Oils (CXS 33-1981)**

The food additive provisions in section 4 of CXS 33-1981 only allow the addition of alpha-tocopherols (d-alpha tocopherol (INS 307a); mixed tocopherol concentrate (INS 307b); dl-alpha-tocopherol (INS 307c)) to refined olive oil, olive oil, refined olive-pomace oil and olive-pomace oil for the specific purpose of restoring natural tocopherol lost in the refining process with the concentration of alpha-tocopherol in the final product not exceeding 200 mg/kg.

The above provision is reflected in food additive provisions of Table 2 for FC 02.1.2 (Vegetable oils and fats) where there is note 357 for tocopherols indicating: "Except for use in refined olive oil, olive oil, refined olive-pomace oil and olive-pomace oil at 200 mg/kg to restore natural tocopherol lost in production."

In food additive provisions of Table 2 for FC 02.1.2 there is note 277 (Excluding virgin and cold pressed oils and products conforming to the standard for Olive Oils and Olive Pomace Oils (CODEX STAN 33-1981)) for certain antioxidants (but not all). In addition, there is note XS33 (Excluding products conforming to the standard for Olive Oils and Olive Pomace Oils (CODEX STAN 33-1981)) for tricalcium citrate (INS 333(ii).and tripotassium citrate (INS 333(iii).

**In order to replace the current food additive provisions in Section 4 of CXS 33-1981 with a reference to FC 02.1.2 of GSFA, note XS33 should be introduced to all food additive provisions in FC 02.1.2 with the exception of alpha-tocopherols (d-alpha tocopherol (INS 307a); mixed tocopherol concentrate (INS 307b); dl-alpha-tocopherol (INS 307c)). In addition, it is proposed to replace Note 277 by notes 356 (Excluding virgin or cold pressed oils) and XS33.**

**Recommendation:**

Provided that the above action is completed as proposed, the current provisions in Section 4 of CXS 33-1981 could be replaced by the following provision ensuring the alignment with GSFA:

*Food additives used in accordance with Tables 1 and 2 of the General Standard for Food Additives (CXS 192-1995) in food category 02.1.2 (Vegetable oils and fats) and its parent food categories are acceptable for use in foods conforming to this Standard.*

**Standard for Fat Spreads and Blended Spreads (CXS 256-2007)**

Commodities conforming to CXS 256-2007 fall in the GSFA food category (FC) 02.2.2 (Fat spreads, dairy fat spreads and blended spreads).

The current provisions in section 4 of CXS 256-2007 list individual food additives associated with the following functional classes:

- acidity regulators
- antifoaming agents
- antioxidants
- colours
- emulsifiers
- preservatives
- stabilizers
- thickeners

Concerning Table 3 of GSFA, the current provision in section 4 of CXS 256-2007 reads:

"Acidity regulators, antifoaming agents, antioxidants, colours, emulsifiers, flavour enhancers, packing gases, preservatives, stabilizers and thickeners used in accordance with Table 3 of the Codex General Standard for Food Additives are acceptable for use in foods conforming to this Standard."

**The following issues will need to be addressed in aligning the food additive provisions in section 4 of CXS 256-2007 with the provisions of Tables 1 and 2 of GSFA:**

1. The following food additives listed under FC 02.2.2 in GSFA are not listed in section 4 of CXS 256-2007:

| INS No. | Additive | Maximum Use Level |
|---|---|---|
| 161g | Canthaxanthin | 15 mg/kg |
| <br>214<br>218 | HYDROXBENZOATES, PARA-<br>Ethyl para-hydroxybenzoate<br>Methyl para-hydroxybenzoate | 300 mg/kg |
| 243 | Lauric arginate ethyl ester | 200 mg/kg |
| 473a | Sucrose oligoesters, type I and type II | 10,000 mg/kg |

**A new Note XS256 for consistency with the Guidance on alignment 'Excluding products conforming to the Standard for Fat Spreads and Blended Spreads (CODEX STAN 256-2007)' should be introduced for INS 161g, INS 214, 218 and INS 243 in Tables 1 and 2 of GSFA replacing the current Note 215. For INS 473a no amendment of GSFA is suggested since the additive is authorised singly or in combination with INS 473 and 474 thus it is considered as acceptable for the use in CSX 256-2007.**

2. The following food additives listed in section 4 of CXS 256-2007 under functional class colours are not listed under FC 02.2.2 in GSFA:

| INS No. | Additive | Maximum Use Level |
|---|---|---|
| 100(i) | Curcumin | 10 mg/kg, |
| 150b | Caramel II | 500 mg/kg |
| 160b(i) | Annatto extracts, bixin-based | 100 mg/kg (as bixin) |

The provisions to include curcumin and caramel II in Tables 1 and 2 of GSFA are currently at step 4. However, a maximum use level of 20,000 mg/ kg is recommended for caramel II. There is no provision in the step procedure to include annatto extracts, bixin-based, in Tables 1 and 2 of GSFA.

**The provisions to include the above provisions in Tables 1 and 2 of GSFA should be advanced for adoption with a note restricting their use to products conforming to CXS 256-2007 and with**

**a note for caramel II indicating "except for use in products conforming to CXS 256-2007 at 500 mg/kg.**

Note: CCFA50 recommended withdrawing the provisions for sodium sorbate, (INS 201) potassium hydrogen malate (INS 351(i), potassium malate (INS 351(ii), monosodium tartrate (INS 336(i), dipotassium tartrate (INS 336(ii) from CXS 256-2007 (see paras 48(vi) and 134(vii), REP18/FA). It is observed that INS 351(i) and INS 351(ii) are not included in CXS 256-2007 and that sorbates and tartrates will be subject to the food additives listed under these groups in the GSFA after the alignment has been completed (this in practice implies that those additives will not be permitted/ will be withdrawn from CXS 256-2007 after the alignment).

3. Section 4 of CXS 256-2007 provides for a maximum use level of 1,000 mg/kg for phosphates (as phosphorus) while GSFA sets a maximum use level of 2,200 mg/kg for phosphates (as phosphorus).

**A new note should be introduced for phosphates in Tables 1 and 2 of GSFA indicating "except for use in products conforming to CXS 256-2007 at 1,000 mg/kg".**

**A new note should be introduced for sorbates and benzoates in Tables 1 and 2 of GSFA indicating "For use in products conforming to the Standard for Fat Spreads and Blended Spreads benzoates and sorbates singly or in combination. If used in combination, the combined use shall not exceed 2000 mg/kg of which the benzoic acid portion shall not exceed 1000 mg/kg".**

**For thermally oxidized soya bean oil interacted with mono- and diglycerides of fatty acid (INS 479) a new note should be introduced indicating "in fat emulsions for frying or baking purpose, only")**

**Recommendation:**

Provided that the above issues are addressed as proposed, the current provisions in Section 4 of CXS 256-2007 could be replaced by the following provision ensuring the alignment with GSFA:

*Acidity regulators, antifoaming agents, antioxidants, colours, emulsifiers, flavour enhancers, packing gases, preservatives, stabilizers and thickeners used in accordance with Tables 1 and 2 of the General Standard for Food Additives (CXS 192-1995) in food category 02.2.2 (Fat spreads, dairy fat spreads and blended spreads) and its parent food categories or listed in Table 3 of the General Standard for Food Additives are acceptable for use in foods conforming to this Standard.*

*The flavourings used in products covered by this standard should comply with the Guidelines for the Use of Flavourings (CXG 66-2008).*