

# 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 5a, 5b, 5c and 5

CRD22

Original language only

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON FOOD ADDITIVES

#### Fifty-third Session

(Comments of Burundi, Ghana, Russian Federation, IACM and IFT)

#### Part A: Comments to agenda item 5a

##### Burundi

General Standard for Food Additives (GSFA): Food additive provisions for colors in food categories 01.0 through 03.0 and their subcategories including adopted provisions for colors with Note 161 and draft and proposed draft provisions (outstanding from CCFA52); CX/FA 23/53/7

**Comment:** Burundi supports the recommendations of final EWG proposal for each food additives.

**Justification:** proposal for each food additives given by the EWG is implementable

##### Ghana

**Position:** Ghana supports the final proposals of the EWG.

**Rationale:** The use of colours is necessary to enhance appearance of these food categories (except plain food products, e.g., 01.1.2).


##### Russian Federation

The Russian Federation confirms the position outlined earlier on this issue and reflected in document CX/FA 23/53/7.

##### IACM (International Association of Color Manufacturers)

#### Category No. 01.1.4 (Flavoured fluid milk drinks)

Additive	INS	Max Level (mg/kg)	Notes	Step/ Adopted	Final EWG Proposal	Additional Comments
Paprika Extract	160c(ii)	10	39	2	INS160c(ii) was evaluated by JECFA after CODEX STAN 243-2003 was finalized. Request comments on whether INS 160c(ii) is used in products covered by CODEX STAN 243 and if CODEX STAN should be revised. Adopt at 10 with note 39 "on a total carotenoid basis" and new note "Except for use in	IACM requests a level of 150 mg/kg, which reflects products currently in global trade. 10 mg/kg provides a very bland color. There should be no safety concerns at 150 mg/kg. We note that in JECFA's 2014 intake assessment of paprika extract from all foods and beverages the highest intake at the 95th% of 0.2 mg/kg bw/day as carotenoids, is below the JECFA ADI of 1.5 mg/kg bw as carotenoids (up to 13% of ADI). JECFA concluded that dietary exposure to paprika extract used as a food color does not present a health concern. Additionally, the EFSA usage levels published in 2015 are understood to be overestimates of actual consumption that would result from use of paprika extract in this category. The intake data that were submitted to CCFA 49 in support of


					<p>concentrates at 50 mg/kg”.</p>	<p>the draft GSFA provisions with food label market survey data (from Mintel) suggest no concern about dietary exposure, because it is unlikely that levels above 100 ppm are or will be applied in a large percentage of products in this category.</p>  <p>10 ppm    30 ppm    150 ppm</p>
--	--	--	--	--	-----------------------------------	--

**Category No. 01.6.1 (Unripened cheese)**

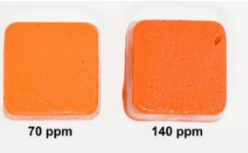
Additive	INS	Max Level (mg/kg)	Notes	Step / Adopted	Final EWG Proposal	Additional Comments
Paprika Extract	160c(ii)	15	39	2	Chair's Note (CCFA52): Proposal does not include notes XS262, XS221 or XS275 as per comments from observers (See below). EWG members are requested to discuss the revision of these two commodity standards to include paprika extract (INS 160c(ii). Adopt at 15 with Notes 39, XS273 Chair's note (CCFA53): CCFA52 has completed alignment of food additive sections in CXS 221 and CXS275. As a result there currently is only a general reference to the GSFA in these two standards. Alignment for CXS262 will be considered at CCFA53. Adopt at 15 with Notes 39, XS273	IACM supports final EWG proposal. We note use is limited to flavored, unripened cheese. Paprika is an excellent color for use in a hot pepper flavored mozzarella stick. In JECFA's 2014 intake assessment of paprika extract from all foods and beverages the highest intake at the 95th% of 0.2 mg/kg bw/day as carotenoids, is below the JECFA ADI of 1.5 mg/kg bw as carotenoids (up to 13% of ADI). JECFA concluded that dietary exposure to paprika extract used as a food color does not present a health concern.

**Category No. 01.6.2.3 (Cheese powder (for reconstitution; e.g. for cheese sauces))**

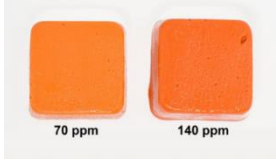
Additive	INS	Max Level (mg/kg)	Notes	Step	Final EWG Proposal	Additional Comments
Annatto Extracts, Bixin-Based	160b(i)	50	8	4	Adopt	IACM supports final EWG proposal. We note that 50 mg/kg is needed to match the color expected by consumers for use in dishes such as macaroni and cheese or cheese dips. Based on JECFA's refined intake assessment conducted in 2006 and an ADI of 12 mg/kg bw, there should be no safety concerns since the estimated average daily intake from all foods and beverages is only up to 0.2% of the ADI.
Annatto Extracts, Norbixin-Based	160b(ii)	50	185	4	Adopt	IACM supports final EWG proposal. We note that 50 mg/kg is needed to match the color expected by consumers for use in dishes such as macaroni and cheese or cheese dips. Based on JECFA's refined intake assessment conducted in 2006 and an ADI of 0.6 mg/kg bw, there should be no safety concerns since the estimated average daily intake from all foods and beverages is only up to 4% of the ADI.
Paprika Extract	160c(ii)	600	39	2	Adopt at 140 mg/kg with Note 39 provided confirmation reported use levels are on a total carotenoid basis (see note	IACM supports final EWG proposal and can confirm that level is on a total carotenoid basis.  We note that 140 mg/kg is needed to match color expected by consumers for

					39) and not on an extract basis.	<p>use in dishes such as macaroni and cheese or cheese dips; and to standardize the color of cheese powders for which cheddar cheese may be used as an ingredient. Photos of cheese powder and reconstituted cheese sauce from powders (ratio 1 part powder to 4 parts butter and milk) are provided.</p>  <p>In JECFA's 2014 intake assessment of paprika extract from all foods and beverages the highest intake at the 95th % of 0.2 mg/kg bw/day as carotenoids, is below the JECFA ADI of 1.5 mg/kg bw as carotenoids (up to 13% of ADI). JECFA concluded that dietary exposure to paprika extract used as a food color does not present a health concern.</p>
--	--	--	--	--	----------------------------------	--

**Category No. 01.6.4.1 (Plain processed cheese)**

Additive	INS	Max Level (mg/kg)	Notes	Step / Adopted	Final EWG Proposal	Additional Comments
Paprika Extract	160c(ii)	140	39		Adopt at 70 mg/kg with Note 39 "on a total carotenoid basis".	<p>IACM supports the final EWG proposal, but we request consideration of 140 mg/kg level to reflect the scope of products currently in global trade as level should not cause any safety concerns and is used to standardize the color of plain processed cheddar cheese.</p> <p>In JECFA's 2014 intake assessment of paprika extract from all foods and beverages the highest intake at the 95th% of 0.2 mg/kg bw/day as carotenoids, is below the JECFA ADI of 1.5 mg/kg bw as carotenoids (up to 13% of ADI). JECFA concluded that dietary exposure to paprika extract used as a food color does not present a health concern.</p> 

**Category No. 01.6.4.2 (Flavoured processed cheese, including containing fruit, vegetables, meat, etc.)**

Additive	INS	Max Level (mg/kg)	Notes	Step / Adopted	Final EWG Proposal	Additional Comments
Paprika Extract	160c(ii)	140	39		Adopt at 100 mg/kg with Note 39.	<p>IACM supports the final EWG proposal, but we request consideration of 140 mg/kg to standardize the color of processed cheddar cheese.</p> <p>In JECFA's 2014 intake assessment of paprika extract from all foods and beverages the highest intake at the 95th% of 0.2 mg/kg bw/day as carotenoids, is below the JECFA ADI of 1.5 mg/kg bw as carotenoids (up to 13% of ADI). JECFA concluded that dietary exposure to paprika extract used as a food color does not present a health concern.</p> 

**Category No. 01.6.5 (Cheese analogues)**



Additive	INS	Max Level (mg/kg)	Notes	Step / Adopted	Final EWG Proposal	Additional Comments
Paprika Extract	160c(ii)	50	39	2	Adopt at 70 mg/kg with Note 39 "on a total carotenoid basis"	<p>IACM support levels ranging from 70-140 mg/kg to standardize the color of cheese analogues for which cheddar cheese may be used as an ingredient. For consistency, we seek alignment with levels proposed for processed cheese (FC 1.6.4.1), flavored processed cheese (FC 1.6.4.2), and cheese powders (FC 1.6.4.2) (i.e., 70, 100, 140 mg/kg, respectively) on total carotenoid basis. Therefore, we propose a note that allows for the various levels for appropriate cheese type.</p> <p>In JECFA's 2014 intake assessment of paprika extract from all foods and beverages the highest intake at the 95th% of 0.2 mg/kg bw/day as carotenoids, is below the JECFA ADI of 1.5 mg/kg bw as carotenoids (up to 13% of ADI). JECFA concluded that dietary exposure to paprika extract used as a food color does not present a health concern.</p>

**Category No. 01.7 (Dairy-based desserts (e.g. pudding, fruit or flavoured yoghurt))**

<b>Additive</b>	<b>INS</b>	<b>Max Level (mg/kg)</b>	<b>Notes</b>	<b>Step / Adopted</b>	<b>Final EWG Proposal</b>	<b>Additional Comments</b>
Allura Red AC	129	300	161	2009	Revise Adopted. Adopt at 300 to align with CXS-243-2003. Remove Note 161	IACM supports final EWG proposal and notes the level reflects use in products currently in global trade. In JECFA's most recent safety evaluation, the highest intake of Allura red from all foods was 2.9 mg/kg bw/day at the 95th % for children 3–9 years in Europe under the most conservative brand-loyal scenario; however more realistically the intake is up to 1.2 mg/kg bw/day at the 95th% in the non-brand loyal scenario, assuming 100% products contain this color. Estimates in the USA (using 2-day dietary survey that overestimates exposure) confirm the range of intake is well below the ADI, with total intake from all foods and beverages up to 2.2 mg/kg bw/day at the 90th % of the high exposure scenario and assuming 100% products contain this color (Doell et al 2016), and more realistic intake up to 0.22 mg/kg bw/day at the 95th% consumption and at maximum use levels, when accounting for frequency of products in each food category with this color on the label (Bastaki et al 2017). JECFA noted that the range of estimated dietary exposures to Allura Red AC from all foods and beverages were well below the ADI (0.4–41% of the ADI) including intake for children and including the conservative estimate by EFSA.
Annatto Extracts, Bixin Based	160b(i)	500	8	4	Adopt at 100 mg/kg with Note 8 new note "Except for use in non-plain products conforming to the Standard for Fermented Milks (CXS-2003) at 20 mg/kg"	IACM supports final EWG proposal. Level reflects use in products currently in global trade. Based on JECFA's refined intake assessment conducted in 2006 and an ADI of 12 mg/kg bw, there should be no safety concerns since the estimated average daily intake from all foods and beverages is only up to 0.2% of the ADI.
Annatto Extracts, Norbixin Based	160b(ii)	20	185	4	Adopt at 100 with Note 185 and new note "Except for use in non-plain products conforming to the Standard for Fermented Milks (CXS 243-2003) at 20 mg/kg"	IACM supports final EWG proposal and notes level reflects use in products currently in global trade. JECFA's refined intake assessment conducted in 2006 and an ADI of 0.6 mg/kg bw, there should be no safety concerns since the estimated average daily intake from all foods and beverages is only up to 4% of the ADI.
Curcumin	100(i)	150		7	Adopt with note 402 ("For use in products conforming to the Standard for Fermented Milks (CODEX STAN 243-2003) at 100 mg/kg")	IACM supports final EWG proposal and notes level reflects use in products currently in global trade. Considering that only a fraction of products contains this color no concern is raised of potential average daily intake exceedance of the JECFA ADI of 3 mg/kg bw set in 2003

Sunset Yellow FCF	110	300	161	2009	Remove Note 161 – proposal aligns with CXS 243-2003	<p>IACM supports final EWG proposal and notes level reflects use in products currently in global trade.</p> <p>In its most recent safety evaluation (2011), JECFA concluded that there is no concern for a likely exceedance of the JECFA ADI of 4 mg/kg bw based on realistic lifetime intake of 0.12 mg/kg bw/day in children in Australia/New Zealand at the 90th% from all foods and beverages. More recent estimates in the USA (using 2-day dietary survey that overestimates exposure) confirm the range of intake is well below the ADI, with total intake from all foods and beverages up to 0.8 mg/kg bw/day at the 90th% of the high exposure scenario and assuming 100% products contain this color (Doell et al 2016), and more realistic intake up to 0.2 mg/kg bw/day at the 95th% consumption and at maximum use levels, when accounting for frequency of products in each food category with this color on the label (Bastaki et al 2017). JECFA noted that the more realistic FSANZ intake was up to 3% of the ADI and concluded that there is no health concern for sunset yellow intake as a color additive.</p>
Tartrazine	102	300		7	Adopt with note 362 – proposal aligns with CXS 243-2003	<p>IACM supports final EWG proposal. Level reflects use in products currently in global trade.</p> <p>JECFA concluded that the range of estimated dietary exposures to tartrazine from all foods and beverages were well below the ADI of 10 mg/kg bw (%), set by JECFA in 2016 (4-73% of the ADI) including intake for children and including the conservative estimate by EFSA. In JECFA's most recent safety evaluation, under the most conservative exposure scenario assuming maximum use levels in all foods and beverages, the highest intake of tartrazine from all foods was 0.4-7.3 mg/kg bw/day at the 95th% for children in Europe. More realistic intake of up to 0.08 mg/kg bw/day at the 90th% of consumers only was reported from FSANZ. Estimates in the USA (using 2-day dietary survey that overestimates exposure) confirm the range of intake is well below the ADI, with total intake from all foods and beverages up to 0.7 mg/kg bw/day at the 90th% of the high exposure scenario and assuming 100% products contain this color (Doell et al 2016), and more realistic intake up to 0.1 mg/kg bw/day at the 95th% consumption and at maximum use levels, when accounting for frequency of products in each food category with this color on the label (Bastaki et al 2017).</p>

**Category No. 02.2.2 (Fat spreads, dairy fat spreads and blended spreads)**

Additive	INS	Max Level (mg/kg)	Notes	Step / Adopted	Final EWG Proposal	Additional Comments
Annatto Extracts, Bixin Based	160b(i)	100	8	4	Adopt at 100 mg/kg with note 8 and new note "Except for use in products conforming to the Standard for Dairy Fat Spreads (CXS 253-2006), at 20 mg/kg" proposal aligns with corresponding commodity standards	IACM supports final EWG proposal. Photo demonstrates 74.4 ppm level.  Based on JECFA's refined intake assessment conducted in 2006 and an ADI of 12 mg/kg bw, there should be no safety concerns since the estimated average daily intake from all foods and beverages is only up to 0.2% of the ADI.
Paprika Extract	160c(ii)	40	39	2	Revise to 50 mg/kg. Refer to CCFO for guidance on the use and use level of paprika extract in products conforming to CXS 253 and 256. Request information on whether use is limited to fat spreads or is also used in dairy fat spreads.	IACM supports final EWG proposal. Paprika extract is used to impart color to fat spreads, including dairy fat spreads.  In JECFA's 2014 intake assessment of paprika extract from all foods and beverages the highest intake at the 95th % of 0.2 mg/kg bw/day as carotenoids, is below the JECFA ADI of 1.5 mg/kg bw as carotenoids (up to 13% of ADI). JECFA concluded that dietary exposure to paprika extract used as a food color does not present a health concern.

**Category No. 02.3 (Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions)**

Additive	INS	Max Level (mg/kg)	Notes	Step / Adopted	Final EWG Proposal	Additional Comments
Paprika Extract	160c(ii)	35	39	2	Adopt at 65 with Note 39	IACM supports final EWG proposal. At least 40 mg/kg is needed to restore dairy appearance for fats and oils. Paprika extract provides a reddish orange or caramel tone depending on base and is typically used in fat-based products. In JECFA's 2014 intake assessment of paprika extract from all foods and beverages the highest intake at the 95th% of 0.2 mg/kg bw/day as carotenoids, is below the JECFA ADI of 1.5 mg/kg bw as carotenoids (up to 13% of ADI). JECFA concluded that dietary exposure to paprika extract used as a food color does not present a health concern.






						
--	--	--	--	--	--	--



**IACM Response to CX/FA 23/53/8: General Standard for Food Additives (GSFA): Report of the EWG on the GSFA**




IACM reiterates support for alignment of levels for Beta-carotenes and beta-carotenes, vegetable as these colors can be used substitutionally. Additionally, we support including new notes for all provisions: “expressed as beta-Carotene” and “singly or in combination.”

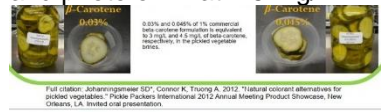
**Annex 1: Final EWG Proposals for Beta-Carotenes (beta-carotenes, synthetic (INS 160a(i)), beta-carotenes, Blakeslea trispora (INS 160a(iii)), beta-Carotene-Rich Extract from Dunaliella salina (INS 160a(iv)), formerly called “Carotenoids”**

		CAROTENOIDS INS 160a(i), 160a(iii), 160a(iv) Functional effect: Colour			Beta-Carotene-Rich Extract from Dunaliella salina INS 160a(iv) Functional effect: Colour				
Food Cat. No.	Food Category Name	Max Level	Notes	Year Adopted	Max Level	Notes	Step	Final EWG Proposal for “BETA-CAROTENES”	Additional Comments
01.1.4	Flavoured fluid milk drinks	150	52 & 402	2017	150	52 & XS243	2	Adopt at 20 mg/kg with Note 52, new reporting basis note (Expressed as beta-Carotene), and new “singly or in combination” note	IACM supports final EWG proposal. We note that 20 mg/kg is necessary to achieve color associated with highly flavored products such as orange, mango, papaya milks.  Picture demonstrates 16.3 ppm (L) vs 27.5 ppm (R)



01.4.4	Cream analogues	20		2011	20		2	Adopt at 20 mg/kg (based on request to third circular for beta-carotenes, vegetable) with new reporting basis note (Expressed as beta-Carotene) and new "Singly or in combination" note.	IACM supports final EWG proposal for alignment with beta-carotenes, vegetable.
01.5.2	Milk and cream powder analogues	100	XS251	2021	100	XS251	2	Adopt at 6 mg/kg with Note XS251, new reporting basis note (Expressed as beta-Carotene) and new "singly or in combination" note.	IACM supports final EWG proposal. We note this level is needed to provide a light cream shade in dairy powder analogues.  Picture demonstrates 0 ppm (L) vs 5 ppm (R)
01.6.2.1	Ripened cheese, includes rind	100	458, 500, XS208, XS278	2021	100	XS208, XS263, XS264, XS265, XS266, XS267, XS268, XS269, XS270, XS271, XS272, XS274, XS276, XS277, XS278, XS283	2	Adopt at 25 mg/kg with XS208, XS278, new reporting basis note (Expressed as beta-Carotene), new "singly or in combination" note, revised Note 458 (CAROT458) "Except for use in cheese mass only for products conforming to the Standards for Cheddar (CXS 263-1966), Danbo (CXS 264-1966), Edam (CXS 265-1966), Gouda (CXS 266-1966), Havarti (CXS 267-1966), Samsø (CXS 268-1966),	IACM supports final EWG proposal and notes that level is necessary to achieve color expected in some varieties such as cheddar and mimolette.  Photo demonstrates 3 ppm (L) vs 27.3 ppm (R)


								Emmental (CXS 269-1967), Tilster (CXS 270-1968), Saint Paulin (CXS 271-1968), Provolone (CXS 272-1968), Coulommiers (CXS 274-1969), Camembert (CXS 276-1973) and Brie (CXS 277-1973) at 35 mg/kg”, Chair’s note: Revised note 500 is not necessary if the use level for beta-Carotenes in FC 01.6.2.1 is 25 mg/kg	
01.6.2.3	Cheese powder (for reconstitution, e.g. for cheese sauces)	100		2009	100		2	Adopt at 20 mg/kg with Note 381 (“As consumed”) to clarify that the use level is for after reconstitution, new reporting basis note (Expressed as beta-Carotene), and new “singly or in combination” note	IACM supports final EWG proposal. Photo demonstrates difference between 3 ppm (L) and 27.3 ppm (R) 
01.6.4	Processed cheese	100		2009	100		2	Maintain use level at 100 mg/kg, add new reporting basis note (Expressed as beta-Carotene) and new “singly or in combination” note.	Level necessary to provide deep yellow to orange colors for some processed cheese types (ex. soft cheddar, Colby, American) that require higher concentration of pigment.  Levels from L to R: 52 ppm, 76 ppm, 100 ppm

01.6.5	Cheese analogues	200		2009	200		2	Adopt at 100 mg/kg (for consistency with beta-carotene, vegetable), add new reporting basis note (Expressed as beta-Carotene) and new “singly or in combination” note.	IACM supports final EWG proposal and notes the need to align with the level adopted for FC 1.6.4, as products are used substitutionally. Identical levels needed to mimic the color expected in dairy version of analogue (See photo for FC 01.6.4)
01.7	Dairy-based desserts (e.g. pudding, fruit or flavored yoghurt)	100		2009	100	XS243	2	Adopt at 20 mg/kg with new reporting basis note (Expressed as beta-Carotene), and new “singly or in combination note”.	IACM supports final EWG proposal. 20 mg/kg is necessary to achieve color associated with highly flavored products such as orange, mango, papaya milks
02.2.1	Butter	25	146 & 291	2008	25	146, 291, XS279	2	Adopt at 12 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note.	IACM supports final EWG proposal. Levels up to 12 mg/kg allow for higher concentration of pigment.  Photo demonstrates levels from L to R: 12 ppm, 9 ppm, 6 ppm, 3 ppm
02.2.2	Fat spreads, dairy fat spreads and blended spreads	35		2010	35	XS253, XS256	2	Maintain use at 35 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal  Photo demonstrates levels L to R: 30 ppm, 27 ppm, 24 ppm, 21 ppm, 18 ppm
02.3	Fat emulsions mainly of type oil-in-water, including mixed and/or flavored products based on fat emulsions	200		2009	200		2	Adopt at 10 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal.  Photo demonstrates difference between 12 ppm (L) and 9 ppm (R)

04.1.2.9	Fruit-based desserts, including fruit-flavored water based desserts	150		2009	150		2	Adopt at 15 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note.	IACM supports final EWG proposal. We note that 15 mg/kg is necessary for jellies.
04.1.2.11	Fruit fillings for pastries	100		2009	100		2	Adopt at 10 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note.	IACM supports final EWG proposal.
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	50	161	2010				Adopt at 5 mg/kg with Note 161 and new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal. 5 mg/kg is needed to enhance color lost in production or to enhance natural color vibrancy. Photo demonstrates beta-carotene in pickled, brined, fermented vegetables. Photo on left at 3 mg/L and photo on R at 4.5 mg/L. 
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	50		2009	50	XS38, XS151, XS223, XS260, XS294R	2	Adopt at 5 mg/kg with XS38, XS151, XS223, XS294R (these standards do not permit colors), new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal. See photo for 04.2.2.7 for further technological justification.


	categories 06.8.6, 06.8.7, 12.9.1, 12.9.2.1 and 12.9.2.3								
05.1.4	Cocoa and chocolate products	100	183	2016	100	183, XS87	2	Maintain use at 100 mg/kg with Note 183 with new reporting basis note (Expressed as beta- Carotene), and “singly or in combination” note	IACM supports final EWG proposal
05.1.5	Imitation chocolate, chocolate substitute products	100		2009	100		2	Maintain use at 100 mg/kg, new reporting basis note (Expressed as beta- Carotene), and “singly or in combination” note.	IACM supports final EWG proposal
05.2	Confectionery including hard and soft candy, nougats, etc. other than food categories 05.1, 05.3 and 05.4	100	XS309R	2017	100		2	Adopt at 150 mg/kg (for parity with beta- carotenes, vegetables) with XS309R, new reporting basis note (Expressed as beta- Carotene), and “singly or in combination” note	IACM supports final EWG proposal
05.3	Chewing gum	100		2009	100		2	Adopt at 180 mg/kg with new reporting basis note (Expressed as beta- Carotene), and “singly or in combination” note	IACM supports final EWG proposal and defers to ICGA for further technological justification.
05.4	Decorations (e.g. for fine bakery wares), toppings (non- fruit) and sweet	100		2009	100		2	Adopt at 200 mg/kg (for parity with beta- carotene, vegetable) with new reporting basis note	IACM supports final EWG proposal. This photo demonstrates a 10% carotene suspension using a fungal beta-carotene in low fat icing at 200 ppm.

	sauces							(Expressed as beta-Carotene), and “singly or in combination” note.	
06.3	Breakfast cereals, including rolled oats	200		2009	200		2	Adopt at 50 mg/kg (for parity with beta-carotenes, vegetable) with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal
06.4.3	Pre-cooked pastas and noodles and like products	1200	153, 474	2019	1200	153 & XS249	2	Adopt at 40 mg/kg with note 153, new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal
06.5	Cereal and starch based desserts (e.g. rice pudding, tapioca pudding)	150		2009	150		2	Adopt at 40 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal.
06.6	Batters (e.g. for breading or batters for fish or poultry)	500		2009	500		2	Adopt at 50 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note.	IACM supports final EWG proposal to provide a medium yellow colour associated with certain batter types, such as tempura. 50 ppm is needed in batter to compensate for thermal degradation of up to 20% and surface leaching of colour into the frying oil. Batter (ppm presented on dry basis) levels from left to right: 40, 50, and 60 ppm 



07.1.2	Crackers, excluding sweet crackers	1000		2009	1000		2	Adopt at 200 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal and notes at least 10 mg/kg is needed to support IACM member products currently in global trade.
07.1.4	Bread-type products, including bread stuffing and bread crumbs	200	116	2011	200	116	2	Adopt at 30 mg/kg with Note 116, new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	30 mg/kg is necessary to provide a light-yellow color. In addition to dough, this color is used in products such as flavored croutons, where there is expected thermal loss of up to 20% beta-carotene. The first photo illustrates 19 ppm added to dough prior to baking. Second photo demonstrates levels added to bread type products on dry basis, L to R: 20, 30 and 40 ppm. 
07.2	Fine bakery wares (sweet, salty, savoury) and mixes	100		2009	100		2	Adopt at 42 mg/kg (for parity with beta-carotenes, vegetable) with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal
09.2	Processed fish and fish products, including mollusks, crustaceans, and echinoderms	100	95, 304, XS36, XS92, XS95, XS165, XS167, XS189, XS190, XS191, XS222, XS236, XS244,	2018	100	95, 304, XS36, XS92, XS95, XS165, XS167, XS189, XS190, XS191, XS222, XS236, XS244,	2	Maintain 100 mg/kg with New Note (APP1B) “For nonstandardized foods: for use in surimi, fish roe products, and dried mollusks and crustaceans, only”, revised note 304 (CAROT304) “For use only in breaded	IACM supports final EWG proposal. IACM members indicate use in frozen minced and creamed fish products, including mollusks, crustaceans, and echinoderms.



			XS292, XS311, XS312 & XS315			XS292, XS311, XS312 & XS315		or batter coatings in products conforming to the Standard for Quick Frozen Fish Sticks (Fish Fingers), Fish Portions and Fish Fillets –Breaded or in Batter (CODEX STAN 166- 1989), singly or in combination: carotenoids beta-Carotenes (beta-carotenes, synthetic (INS 160a(i)), beta-carotenes, Blakeslea trispora (INS 160a(iii)), beta-Carotene-Rich Extract from Dunaliella salina (INS160a(iv)), carotenal, beta-apo-8' (INS 160e), carotenoic acid, ethyl ester, betaapo-8'- (INS 160f)) and beta-carotenes, vegetable (INS 160a(ii))", XS36, XS92, XS95, XS165, XS167, XS189, XS190, XS191, XS222, XS236, XS244, XS292, XS311, XS312, XS315 and new reporting basis note (Expressed as beta-Carotene), and	
--	--	--	--------------------------------------	--	--	--------------------------------------	--	--	--

								"singly or in combination" note	
09.3	Semi-preserved fish and fish products, including mollusks, crustaceans, and echinoderms	100	95 & XS291	2018	100	96 & XS291	2	Adopt at 20 mg/kg with Notes 95, XS291, new reporting basis note (Expressed as beta-Carotene), and "singly or in combination" note.	IACM supports final EWG proposal
09.4	Fully preserved, including canned or fermented fish and fish products, including mollusks, crustaceans, and echinoderms	100	95, XS3, XS37, XS70, XS90, XS94 & XS119	2018	100	95, XS3, XS37, XS70, XS90, XS94, XS119	2	For parity with "beta-carotenes, vegetable" adopt at 20 mg/kg with Notes 95, XS3, XS37, XS70, XS90, XS94, XS119, new reporting basis note (Expressed as beta Carotene), and "singly or in combination" note.	IACM supports final EWG proposal
10.4	Egg-based desserts (e.g. custard)	150		2009	150		2	Adopt at 15 mg/kg with new reporting basis note (Expressed as beta-Carotene), and "singly or in combination" note	IACM supports final EWG proposal  Photo demonstrates difference at 5 ppm (L) and 16.3 ppm (R)

12.2.2	Seasonings and condiment	500		2009	500		2	Adopt at 100 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal and notes at least 10 mg/kg is needed to support IACM member products currently in global trade.
12.4	Mustards	300		2009	300		2	Adopt at 5 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal
12.5	Soups and broths	300	341	2015	300	341 & XS117	2	Adopt at 10 mg/kg with revised note 341 (CAROT341) “For use in products conforming to the Codex Standard for Bouillons and Consommés (CODEX STAN 117-1981), singly or in combination: beta-Carotenes (INS 160a(i), 160a(iii), and 160a(iv)), Carotenes, beta-, vegetable (INS 160a(ii)) and carotenal, beta-apo-8'- (INS 160e) at 50 mg/kg” and new reporting basis note (Expressed as beta Carotene).	IACM supports final EWG proposal.





12.6	Sauces and like products	500	XS302	2018	500	XS302	2	Adopt at 80 mg/kg with XS302, new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal. 80 mg/kg is necessary to achieve color associated with eggs and flavorings used in this category.
14.1.4	Water-based flavoured drinks, including “sport,” “energy,” or “electrolyte” drinks and particulate drinks	100		2009	100		2	Adopt use level of 50 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM members note 25 mg/kg is needed to support products currently in global trade.
14.2.2	Cider and perry	200		2009	200		2	Adopt use level of 2.5 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal.
14.2.6	Distilled spirituous beverages containing more than 15% alcohol	200		2009	200		2	Adopt at 3 mg/kg (for parity with beta-carotenes, vegetable) with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal  Photo demonstrates 3.2 ppm in alcoholic beverage
14.2.7	Aromatized alcoholic beverages (e.g. beer, wine and spirituous cooler type beverages, low alcoholic refreshers)	200		2009	200		2	Adopt use level of 15 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal.  Photo demonstrates 6.4 ppm in alcoholic



									beverage
15.1	Snacks- potato, cereal, flour or starch based (from roots and tubers, pulses and legumes)	100		2010	100		2	Adopt use level of 30 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal. 30 mg/kg is necessary to achieve color associated with flavored snacks with cheese or peppery flavors (ex. Cheese puffs, cheese crackers)
15.2	Processed nuts, including coated nuts and nut mixtures (with e.g. dried fruit)	100		2009	100		2	Adopt at 4 mg/kg (for parity with beta-carotenes, vegetable) with new reporting basis note (Expressed as beta-Carotene).	IACM supports final EWG proposal





#### **Annex 2: Final EWG Proposals for Beta-apo-8'-carotenal (INS 160e)**

<b>Food Cat. No.</b>	<b>Food Category Name</b>	<b>Max Level</b>	<b>Notes</b>	<b>Final EWG Proposal</b>	<b>Additional Comments</b>
05.1.4	Cocoa and chocolate products	100	183	Adopt at 50 mg/kg with Note 183.	IACM supports final EWG proposal.
05.2	Confectionery including hard and soft candy, nougats, etc. other than food categories 05.1, 05.3 and 05.4	100	XS309R	Adopt at 50 mg/kg with Note XS309R	IACM supports final EWG proposal.
12.6	Sauces and like products	500	XS302	Adopt at 80 mg/kg with Note XS302.	IACM supports final EWG proposal.
14.1.4	Water-based flavoured drinks, including “sport,” “energy,” or “electrolyte” drinks and particulate drinks	100		Adopt at 10 mg/kg	IACM supports final EWG proposal.

## Annex 3: Final EWG Proposals for beta-Carotenes, Vegetable (INS 160a(ii))



Food Cat. No.	Food Cat. Name	Max Level (mg/kg)	Notes	Year Adopted	Final EWG Proposal	Additional Comments
01.1.4	Flavoured fluid milk drinks	1000	52 & 401	2017	Adopt at 20 mg/kg (consistent with beta-carotenes) with Note 52, new reporting basis note (Expressed as beta-Carotene), and new “singly or in combination” note.	<p>IACM supports final EWG proposal. We note that 20 mg/kg is necessary to achieve color associated with highly flavored products such as orange, mango, papaya milks.</p>  <p>Photo demonstrates 16.3 ppm (L) vs 27.5 ppm (R)</p>
01.4.4	Cream analogues	20		2011	Adopt at 20 mg/kg with new reporting basis note (Expressed as beta-Carotene) and new “singly or in combination note”	<p>IACM supports final EWG proposal. We note this level is needed to provide a light cream shade in cream analogues.</p>  <p>Photo demonstrates levels from L to R: 0 ppm, 5 ppm, 16.3 ppm</p>
01.5.2	Milk and cream powder analogues	1000	XS251	2021	Adopt at 6 mg/kg with Note XS251, new reporting basis note (Expressed as beta-Carotene) and new “singly or in combination” note	<p>IACM supports final EWG proposal. We note this level is needed to provide a light cream shade in dairy powder analogues.</p>  <p>Picture demonstrates 0 ppm (L) vs 5 ppm (R)</p>
01.6.2.1	Ripened cheese, includes rind	600	463, XS208, XS278	2021	Adopt at 25 mg/kg (to align use level with beta-Carotenes) with XS208, XS278, new reporting basis note (Expressed as beta-Carotene), new “singly or in combination” note, revised Note 458 (CAROT458) “Except for use in cheese mass only for products conforming to the Standards for Cheddar (CXS 263-1966), Danbo (CXS 264-1966), Edam (CXS 265-	<p>IACM supports final EWG proposal and notes that level is necessary to achieve color expected in some varieties such as cheddar and mimolette.</p>  <p>Photo demonstrates 3 ppm (L) vs 27.3 ppm (R)</p>

					1966), Gouda (CXS 266-1966), Havarti (CXS 267-1966), Samsø (CXS 268-1966), Emmental (CXS 269-1967), Tilsiter (CXS 270-1968), Saint-Paulin (CXS 271-1968), Provolone (CXS 272-1968), Coulommiers (CXS 274-1969), Camembert (CXS 276-1973) and Brie (CXS 277-1973) at 35 mg/kg”, Chair’s note: Revised notes 458 (CAROT458) would tie use levels with those for the beta-Carotenes which are expected to be on a beta-carotene basis and would also be covered by the general “singly or in combination” note.	
01.6.2.3	Cheese powder (for reconstitution; e.g. for cheese sauces)	1000		2005	Adopt at 20 mg/kg with Note 381 (“As consumed”) to clarify that the use level is for after reconstitution, new reporting basis note (Expressed as beta-Carotene), and new “singly or in combination” note.	IACM supports final EWG proposal. Photo demonstrates difference between 3 ppm (L) and 27.3 ppm (R) 
01.6.4	Processed cheese	1000		2005	Adopt at 100 mg/kg with new reporting basis note (Expressed as beta-Carotene) and new “singly or in combination” note.	Level necessary to provide deep yellow to orange colors for some processed cheese types (ex. soft cheddar, Colby, American) that require higher concentration of pigment.  Levels from L to R: 52 ppm, 76 ppm, 100 ppm
01.6.5	Cheese analogues	1000	3	2005	Adopt at 100 mg/kg (for parity with beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene) and new “singly or in combination” note.	IACM supports final EWG proposal and notes the need to align with the level adopted for FC 1.6.4, as products are used substitutionally. Identical levels needed to mimic the color expected in dairy version of analogue (See photo for FC 01.6.4)


01.7	Dairy-based desserts (e.g. pudding, fruit or flavoured yoghurt)	1000		2005	Adopt at 20 mg/kg (for parity with beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene) and new “singly or in combination” note.	IACM supports final EWG proposal. 20 mg/kg is necessary to achieve color associated with highly flavored products such as orange, mango, papaya milks
02.2.1	Butter	600		2008	Adopt at 12 mg/kg (for consistency with beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note	IACM supports final EWG proposal. Levels up to 12 mg/kg allow for higher concentration of pigment.  Photo demonstrates levels from L to R: 12 ppm, 9 ppm, 6 ppm, 3 ppm
02.2.2	Fat spreads, dairy fat spreads and blended spreads	1000		2005	Adopt at 35 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note	IACM supports final EWG proposal.  Photo demonstrates levels L to R: 30 ppm, 27 ppm, 24 ppm, 21 ppm, 18 ppm
02.3	Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions	1000		2005	Adopt at 10 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note.	IACM supports final EWG proposal.  Photo demonstrates difference between 12 ppm (L) and 9 ppm (R)
04.1.2.9	Fruit-based desserts, including fruit-flavoured water-based desserts	1000		2005	Adopt at 15 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note.	IACM supports final EWG proposal. 15 mg/kg is necessary for jellies.
04.1.2.11	Fruit fillings for pastries	100		2009	Adopt at 10 mg/kg (for parity with beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note.	IACM supports final EWG proposal.
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	1320		2011	Adopt at 5 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal. 5 mg/kg is needed to enhance color lost in production or to enhance natural color vibrancy. Photo demonstrates beta-carotene in pickled, brined, fermented vegetables. Photo on left at 3 mg/L and photo on R at 4.5 mg/L.  <small>Full citation: Johanningsmeier SD, Connor K, Truong A. 2012. "Natural colorant alternatives for pickled vegetables." Food Packaging International 2012 Annual Meeting Product Showcase, New Orleans, LA. Invited crop presentation.</small>





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	1000		2005	Adopt at 5 mg/kg with XS38, XS151, XS223, XS294R (these standards do not permit colors), new reporting basis note (Expressed as beta-Carotene), and "singly or in combination" note.	IACM supports final EWG proposal. See photo for FC 04.2.2.7 for further technological justification.
05.1.4	Cocoa and chocolate products	100	183	2016	Maintain use at 100 mg/kg with Note 183 with new reporting basis note (Expressed as beta-Carotene), and "singly or in combination" note	IACM supports final EWG proposal
05.1.5	Imitation chocolate, chocolate substitute products	100	183	2016	Maintain use at 100 mg/kg, new reporting basis note (Expressed as beta-Carotene), and "singly or in combination" note	IACM supports final EWG proposal.
05.2	Confectionery including hard and soft candy, nougats, etc. other than food categories 05.1, 05.3 and 05.4	500	XS309R	2017	Adopt at 150 mg/kg with XS309R, new reporting basis note (Expressed as beta-Carotene), and "singly or in combination" note	IACM supports final EWG proposal
05.3	Chewing gum	500		2005	Adopt at 180 mg/kg with new reporting basis note (Expressed as beta-Carotene), and "singly or in combination" note	IACM supports final EWG proposal and defers to ICGA for further technological justification
05.4	Decorations (e.g. for fine bakery wares), toppings (non-fruit) and sweet sauces	20000		2005	Adopt at 200 mg/kg with new reporting basis note (Expressed as beta-Carotene), and "singly or in combination" note.	IACM supports final EWG proposal.
06.3	Breakfast cereals, including rolled oats	400		2005	Adopt at 50 mg/kg with new reporting basis note (Expressed as beta Carotene), and "singly or in combination" note.	IACM supports final EWG proposal

06.4.3	Pre-cooked pastas and noodles and like products	1000	153	2010	Adopt at 40 mg/kg (for parity with beta-Carotenes) with note 153, new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal
06.5	Cereal and starch based desserts (e.g. rice pudding, tapioca pudding)	1000		2005	Adopt at 40 mg/kg (for parity with beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal.
06.6	Batters (e.g. for breading or batters for fish or poultry)	1000		2005	Adopt at 50 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note	IACM supports final EWG proposal to provide a medium yellow colour associated with certain batter types, such as tempura. 50 mg/kg is needed in batter are needed to compensate for thermal degradation of up to 20% and surface leaching of color into the frying oil. Batter (ppm presented on dry basis) levels from left to right: 40, 50, and 60 ppm 
07.1.2	Crackers, excluding sweet crackers	1000		2005	Adopt at 200 mg/kg (same as beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene)	IACM supports final EWG proposal and notes at least 10 mg/kg is needed to support IACM member products currently in global trade.
07.1.4	Bread-type products, including bread stuffing and bread crumbs	1000		2005	Adopt at 30 mg/kg with Note 116, new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note	30 mg/kg is necessary to provide a light yellow color. In addition to dough, this color is used in products such as flavored croutons, where there is expected thermal loss of up to 20% beta-carotene. The first photo illustrates 19 ppm added to dough prior to baking. Second photo demonstrates levels added to bread type products on dry basis, L to R: 20, 30 and 40 ppm. 
07.2	Fine bakery wares (sweet, salty, savoury) and mixes	1000		2005	Adopt at 42 mg/kg and add new reporting basis note (Expressed as beta-Carotene), and “singly or	IACM supports final EWG proposal

					in combination” note	
09.2.3	Frozen minced and creamed fish products, including mollusks, crustaceans, and echinoderms	1000	16	2005	For alignment with “beta-Carotenes”, propose moving provisions to higher FC 9.2 by adopting at 100 mg/kg with New Note (APP1B) “For non-standardized foods: for use in surimi, fish roe products, and dried mollusks and crustaceans, only”, revised note 304 (CAROT304) “For use only in breaded or batter coatings in products conforming to the Standard for Quick Frozen Fish Sticks (Fish Fingers), Fish Portions and Fish Fillets –Breaded or in Batter (CODEX STAN 166-1989), singly or in combination: carotenoids beta-Carotenes (beta-carotenes, synthetic (INS 160a(i)), beta carotenes, Blakeslea trispora (INS 160a(iii)), beta-Carotene-Rich Extract from Dunaliella salina (INS160a(iv)), carotenal, beta-apo-8’ (INS 160e), carotenoic acid, ethyl ester, betaapo-8’- (INS 160f)) and beta-carotenes, vegetable (INS 160a(ii))”, XS36, XS92, XS95, XS165, XS167, XS189, XS190, XS191, XS222, XS236, XS244, XS292, XS311, XS312, XS315 and new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal.
09.3.1	Fish and fish products, including mollusks, crustaceans, and echinoderms, marinated and/or in jelly	1000	16	2005	For parity with “beta-carotenes”, propose to move to higher food category 9.3 and adopt at 20 mg/kg with Notes 95, XS291, new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal

09.3.2	Fish and fish products, including mollusks, crustaceans, and echinoderms, pickled and/or in brine	1000	16	2005	For parity with “beta-carotenes”, propose to move to higher food category 9.3 and adopt at 20 mg/kg with Notes 95, XS291, new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal
09.3.3	Salmon substitutes, caviar, and other fish roe products	1000	XS291	2018	For parity with “beta-carotenes”, propose to move to higher food category 9.3 and adopt at 20 mg/kg with Notes 95, XS291, new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal
09.3.4	Semi-preserved fish and fish products, including mollusks, crustaceans, and echinoderms (e.g. fish paste), excluding products of food categories 09.3.1-09.3.3.	1000	16	2005	For parity with “beta-carotenes”, propose to move to higher food category 9.3 and adopt at 20 mg/kg with Notes 95, XS291, new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal
09.4	Fully preserved, including canned or fermented fish and fish products, including mollusks, crustaceans, and echinoderms	500	XS3, XS37, XS70, XS90, XS94 & XS119	2018	For parity with “beta-carotenes” adopt at 20 mg/kg with Notes 95, XS3, XS37, XS70, XS90, XS94, XS119, new reporting basis note (Expressed as beta-Carotene), and singly or in combination” note.	IACM supports final EWG proposal
10.4	Egg-based desserts (e.g. custard)	150		2005	Adopt at 15 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note	IACM supports final EWG proposal.  Photo demonstrates difference at 5 ppm (L) and 16.3 ppm (R)
12.2.2	Seasoning and condiments	500		2011	Adopt at 100 mg/kg (for parity with beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal and notes at least 10 mg/kg is needed to support IACM member products currently in global trade.

12.4	Mustards	1000		2005	Adopt at 5 mg/kg with new reporting basis note (Expressed as beta-Carotene) and “singly or in combination” note	IACM supports final EWG proposal
12.5	Soups and broths	1000	341	2015	Adopt at 10 mg/kg with revised note 341 (CAROT341) “For use in products conforming to the Codex Standard for Bouillons and Consommés (CODEX STAN 117-1981), singly or in combination: beta-Carotenes (INS 160a(i), 160a(iii), and 160a(iv)), Carotenes, beta-, vegetable (INS 160a(ii)) and carotenal, beta-apo-8’- (INS 160e) at 50 mg/kg” and new reporting basis note (Expressed as beta-Carotene)	IACM supports final EWG proposal.
12.6.1	Emulsified sauces and dips (e.g. mayonnaise, salad dressing, onion dip)	2000		2005	Propose moving to FC 12.6 (for parity with beta-carotenes) with adoption at 80 mg/kg with XS302 new reporting basis note (Expressed as beta-Carotene) and “singly or in combination note”.	IACM supports final EWG proposal. 80 mg/kg is necessary to achieve color associated with eggs and flavorings used in this category.
12.6.2	Non-emulsified sauces (e.g. ketchup, cheese sauce, cream sauce, brown gravy)	2000		2005	Propose moving to FC 12.6 (for parity with beta-carotenes) with adoption at 80 mg/kg with XS302 new reporting basis note (Expressed as beta-Carotene) and “singly or in combination note”.	IACM supports final EWG proposal. 80 mg/kg is necessary to achieve color associated with flavorings used in this category.
12.6.3	Mixes for sauces and gravies	2000		2005	Propose moving to FC 12.6 (for parity with beta-carotenes) with adoption at 80 mg/kg with XS302 new reporting basis note (Expressed as beta-Carotene) and “singly or in combination note”	IACM supports final EWG proposal. 80 mg/kg is necessary to achieve color associated with flavorings used in this category.
14.1.4	Water-based flavoured drinks, including “sport,” “energy,” or “electrolyte” drinks and particulate drinks	2000		2005	Adopt use level of 50 mg/kg (for parity with beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene).	IACM members note 25 mg/kg is needed to support products currently in global trade.

14.2.2	Cider and perry	600		2005	Adopt use level of 2.5 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal.
14.2.6	Distilled spiritous beverages containing more than 15% alcohol	600		2005	Adopt use level of 3 mg/kg with new reporting basis note (Expressed s beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal.  Photo demonstrates 3.2 ppm in alcoholic beverage
14.2.7	Aromatized alcoholic beverages (e.g. beer, wine and spiritous cooler-type beverages, low alcoholic refreshers)	600		2005	Adopt at 15 mg/kg (for parity with beta-Carotenes) with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal.  Photo demonstrates 6.4 ppm in alcoholic beverage
15.1	Snacks – potato, cereal, flour or starch based (from roots and tubers, pulses and legumes)	100		2009	Adopt use level of 30 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note	IACM supports final EWG proposal. 30 mg/kg is necessary to achieve color associated with flavored snacks with cheese or peppery flavors (ex. Cheese puffs, cheese crackers)
15.2	Processed nuts, including coated nuts and nut mixtures (with e.g. dried fruit)	20000	3	2011	Adopt use level of 4 mg/kg with new reporting basis note (Expressed as beta-Carotene), and “singly or in combination” note.	IACM supports final EWG proposal

#### **Future Work of the GSFA Electronic Working Group**

IACM appreciates the efforts made by the GSFA Working Group thus far to make progress on the outstanding color provisions that remain draft in the General Standard for Food Additives. We encourage the GSFA WG to continue this work and recommend the following food categories (and related subcategories) as the next in priority, due to the impact that the continuation of draft provisions is having on international trade: 04.0, 06.0, 07.0, 12.0 and 15.0.

**Part B: Comments to agenda item 5b****Burundi**

General Standard for Food Additives (GSFA): Report of the EWG on the GSFA;CX/FA 23/53/8

**Comment: Burundi objects the adoption of the proposed provision for the carotenoids**

**Justification:** Cognizant of the fact that the EWG recommendation is not aligned with preamble section 1.1 of CXS 192-1995, and aware of JECFA-87 evaluation which led to the withdrawal of group ADI, established a new individual ADI for INS 160e and that it could not establish individual ADI for INS 160a(i),160a(iii), 160a(iv) and 160f due to data limitation. Therefore, EAC proposes new data be generated and submitted to JECFA for re-evaluation of INS 160a(i),160a(iii), 160a(iv) and 160f with a view of developing ADI for individual (specific) ADI.

**Ghana**

**Issue 1:** Review of Carotenoids and Related Additives: The result of review of the 87th JECFA on CAROTENOIDS

**Position:** Ghana does not support the EWG's proposals for adoption of provisions in Appendix 1 of CX/FA 22/53/8

**Rationale:** The proposal does not align with the provisions in the GSFA which requires that inclusion of additives in the GSFA should be done under the guidance of JECFA. The seem be to going contrary to the known procedure.

**Issue 2:** Appendix 2: Replies of Codex Committee on Processed Fruits and Vegetables (CCPFV)

**Position:** Ghana supports the EWG's proposals. **Rationale:** The technological justification has been provided and alignment is to allow consistency with Codex texts.

On colours in the Annex on French fried potatoes of the Standard for Quick Frozen Vegetables, the use of colour has the potential to mislead consumers on the true nature of the product contrary to guidance provided by the GSFA preamble.

**Part C: Comments to agenda item 5c****Burundi**

General Standard for Food Additives (GSFA): Proposals for new and/or revision of food additive provisions (replies to CL 2021/55-FA);CX/FA 23/53/7

**Comment:** Burundi seeks more clarification on why the proposal by Egypt are under GMP, yet they have ADIs.

**Comment:** Burundi suggests IFAC reconsiders the note- "Subject to national legislation of the importing country".

**Justification:** The note should be considered in line with the decision of this committee in the previous sessions on use of note 161.

**Russian Federation**

- Colombia's proposal to revise the provisions of Table 3 of the GSFA governing the use of titanium dioxide

The Russian Federation proposes to complement the titanium dioxide INS171 specification with the requirement "the content of particles with a diameter of less than 100 nm - no more than 1% by weight" in order to level out the risks of using this colour.

- Egypt's proposal on the use of colours in fruit and vegetable nectars according to GMP

The Russian Federation considers that the regulations proposed by Egypt on the use of food colours in fruit and vegetable nectars according to GMP cannot be allowed for food additives having an established ADI level. The proposed standards can be set only for caramel colour I, carotenes and chlorophylls.

- New Zealand's proposal to establish MLs for Sorbic acid (200) Potassium Sorbate (202) and Calcium sorbate (203) at the level of 3000 mg/kg in cheeses

The Russian Federation considers that the MLs proposed by New Zealand for sorbic acid and its salts, potassium and calcium sorbates, at the level of 3000 mg/kg in cheeses cannot be accepted, since the ML values are inconsistent with toxicity data of the preservatives.

- Senegal's proposal for the use of Basic methacrylate copolymer (BMC) INS 1205 in FC 06.1 Whole, Broken or Flaked Grain Including Rice – GMP; FC 11.1.1 White Sugar – GMP; FC 11.2 Brown Sugar (Excluding Products of FC 11.1.3) – GMP; FC 11.1.2 – Powdered Sugar (Powdered Dextrose)

The Russian Federation believes that INS 1205 cannot be used in the manufacture of these types of food products, since there is no technological justification.

#### **Part D: Comments to Agenda Item 5**

##### **IFT (Institute of Food Technologists)**

#### **IFT Position on the application of food additive provisions “as consumed”**

Section 6 of the preamble of the Codex GSFA (CXS 92-1995) reads “*Unless otherwise specified, maximum use levels for additives in Tables 1 and 2 are set on the final product as consumed*”. Despite this language in the preamble, there are still many food additive provisions that include a footnote specifying that a specific provision should be applied “On the ready-to-eat basis” (Note 72) or “As consumed” (Note 381).

The use of these Notes on some provisions in the GSFA, which is simply a reinforcement of the interpretation of the language in the preamble that applies to all additive provisions “unless otherwise specified”, has led to confusion as to whether additives without such a note (e.g., 72 or 381) would also be applied to products “as consumed”. This is especially true in some product categories, such as Category 13 and 14, where all products are consumed as liquids, even though products within the category are sold both as liquids (ready for consumption) and powders (that require reconstitution prior to consumption).

IFT proposes that it would be beneficial to the interpretation of the provisions within the GSFA for the Codex Committee on Food Additives (CCFA) to clarify during the plenary that the language in the preamble, that provisions should be applied to products “as consumed”, would apply to all provisions within GSFA, unless otherwise specified. This would aid in future discussions at CCFA to ensure consistency in the application of these Notes to new provisions, as well as help with ongoing alignment activities.