



**Food and Agriculture
Organization of
the United Nations**



**World Health
Organization**

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: codex@fao.org - www.codexalimentarius.net

Agenda Item 5(d)

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CODEX COMMITTEE ON FOOD ADDITIVES

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PROVISIONS FOR ALUMINIUM CONTAINING FOOD ADDITIVES

Prepared by an electronic Working Group led by Brazil with the assistance of Argentina, Australia, Belgium, Canada, China, European Union, Hungary, Iran, Japan, Malaysia, Mexico, South Africa, The United States of America, FAO JECFA Secretariat, WHO JECFA Secretariat, CEFIC, CEFS, CIAA, EuSalt, International Aluminium Institute, IADSA, ICGA, ICBA, ICGMA, IFAC and NATCOL

Background

1. The 42nd Session of the Codex Committee on Food Additives (CCFA) that took place in Beijing, China, from the 15th to the 19th of March 2010, agreed to establish an electronic Working Group (eWG) on aluminium-containing food additives¹. This eWG, hosted by Brazil and working in English only, was tasked to revise the maximum use levels (MLs) for aluminium-containing food additives included in the General Standard for Food Additives (GSFA): sodium aluminium phosphates (acidic and basic) (INS 541(i), (ii)), aluminium ammonium sulfate (INS 523), sodium aluminium silicate (INS 554), calcium aluminium silicate (INS 556), and aluminium silicate (INS 559) based upon information submitted by eWG members.
2. The Committee also agreed that all MLs for aluminium-containing food additives that were not numeric and not expressed on an aluminium basis would be discontinued or revoked at its 43rd Session. The revised MLs could thereby be considered by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) as part of its assessment of aluminium and aluminium-containing food additives.

Proceeding of the Electronic Working Group

3. In April 2010, Brazil sent an invitation to all Codex members and observers interested in participating in the eWG. Twenty-six countries and organizations provided their contact information.
4. To facilitate its work, the eWG revised Appendix 8 of CRD 2 (Report of the 42nd CCFA's Physical Working Group on the GSFA) to include all comments on the reporting basis of the provisions for aluminium-containing food additives received in response to CL 2009/10-FA (CX/FA 10/42/7, CX/FA 10/42/7 Add. 1 and CRD 10). This document was used as a starting point for discussion by the eWG.
5. The eWG analyzed three drafts of provisions for aluminium-containing food additives. The first draft was submitted for comments on June 2nd, along with a proposed timeline for the eWG. The third draft was sent on September 27th. Eleven participants forwarded their comments on the first draft and 6 members of the eWG submitted comments to the second and third drafts.

Discussion and recommendations by the eWG

6. Based on the information provided by the participants, the eWG forwards the following general recommendations to the CCFA.

¹ ALINORM 10/33/12, paras. 78-83

Recommendation 1

A horizontal approach should be applied when addressing the safe use of aluminium-containing food additives. That is, limitations should be placed on total aluminium from the use of all aluminium-containing food additives, either singly or in combination. Therefore, the following actions are recommended for the affected provisions in the GSFA:

- a) Only numerical MLs should be set for aluminium-containing food additives. All MLs should be expressed on an aluminium (Al) basis, and all provisions for aluminium-containing food additives should include Note 6 (*As aluminium*);
- b) All provisions for aluminium-containing food additives at GMP level should be discontinued or revoked;
- c) Provisions for which no comments or proposed MLs were submitted, including those containing Note 29 (*Reporting basis not specified*), should be discontinued or revoked;
- d) Provisions with numerical MLs and Note 6 for which no comments were submitted by the eWG participants should circulate for further discussion and decision by the Committee;
- e) Proposed MLs with reporting basis not specified and those clearly expressed “as compound” should be converted to be expressed as Al, considering the following criteria:
 - Molecular formulas of the aluminium-containing food additives should be used to calculate the Al proportion in the compound. These formulas can be found in the JECFA and Food Chemicals Codex (FCC) specifications or other appropriate references;
 - When more than one molecular formula is identified for an aluminium-containing food additive (for example, the proportion of Al can range from 20.9 to 38% for silicates), the CCFA may wish to decide on the appropriate proportion of Al to be used when converting the maximum level into the aluminium basis:
 - i) the highest percentage of Al; or
 - ii) an average percentage of Al.
 - The following information could be used to convert the MLs for aluminium-containing food additives:

INS	Name	Molecular Formula	Molecular Weight	(%Al)		Reference
541i	Sodium aluminium phosphate, acid	$\text{Na}_3\text{Al}_2\text{H}_{15}(\text{PO}_4)_8$	897.82	6.0%	To convert to Al basis, multiply ML as compound by 0.089 (highest percentage of Al) OR by 0.078 (average)	JECFA/FCC
		$\text{NaAl}_3\text{H}_{14}(\text{PO}_4)_8 \cdot 4\text{H}_2\text{O}$	949.88	8.5%		JECFA/FCC
		$\text{NaAl}_3\text{H}_{14}(\text{PO}_4)_8 \cdot 2\text{H}_2\text{O}$	913.85	8.9%		FCC
541ii	Sodium aluminium phosphate, basic	$\text{Na}_8\text{Al}_2(\text{OH})_2(\text{PO}_4)_4$ Product for which specification was developed contains 30% NaH_2PO_4	652	8.3%	To convert to Al basis, multiply ML as compound by 0.7 (since the product contains 70% of the compound) and then by 0.083	JECFA FCC
554	Sodium aluminosilicate	$\text{Na}_2\text{O}:\text{Al}_2\text{O}_3:\text{SiO}_2$ molar ratios of approximately 1:1:13 $\text{Na} \cdot [(\text{AlO}_2)_x(\text{SiO}_2)_y] \cdot z\text{H}_2\text{O}$	284-2190	5,7%	To convert to Al basis, multiply ML as compound by 0.057	FCC EFSA (2008)

INS	Name	Molecular Formula	Molecular Weight	(%Al)		Reference
559	Aluminium silicate	Al_2SiO_5	162	33%	To convert to Al basis, multiply ML as compound by 0.380 (highest percentage of Al) OR by 0.300 (average)	NNT (2000) Scientific Database Gateway (Cambridge)
		$\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$	258	20.9%		
		$\text{Al}_6\text{O}_{13}\text{Si}_2$	426	38%		
556	Calcium aluminium silicate	$\text{Al}_2\text{Ca}_2\text{O}_{15}\text{Si}_5$ $\text{CaAl}_2\text{Si}_2\text{O}_8$ $\text{Ca}_2\text{Al}_2\text{SiO}_7$ Not less than 44% and not more than 50% of silicon dioxide (SiO_2) Not less than 3% and not more than 5% of aluminium oxide (Al_2O_3) Not less than 32% and not more than 38% of calcium oxide (CaO) Not less than 0.5% and not more than 4% of sodium oxide (Na_2O)	514.5 278 274	10.5% 19-20% 2.65%	To convert to Al basis, multiply ML as compound by 0.050 (Al_2O_3 basis) and then by 0.529	Chemical Book ²
523	Aluminium ammonium sulfate	$\text{AlNH}_4(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$	453.32	6%	To convert to Al basis, multiply ML as compound by 0.060	JECFA

Recommendation 2

The potential exposure to aluminium from aluminium-containing food additives intake should be assessed and compared to the Provisional Tolerable Weekly Intake (PTWI).

For the purpose of assessing the potential intake, if more than one aluminium-containing food additive serving the same technological function is acceptable in a food category, the highest ML (expressed as Al) amongst all of the aluminium-containing additives for that technological function in that food category should be used. If aluminium-containing food additives that serve different technological functions are acceptable for use in a food category, the highest ML (expressed as Al) amongst all of the aluminium-containing additives for each technological function should be selected, and these MLs summed to estimate the total intake of aluminium from the use of these additives across all technological functions in that food category. A proposed ML for an aluminium-containing food additive should not be acceptable if its use in the food at the proposed ML reaches the PTWI through the consumption of a single portion. However, this does not mean that it is automatically acceptable if a single portion does not exceed the PTWI.

It should be noted that MLs as low as 45 mg Al/kg food will exceed the PTWI for a 30 kg child if the food is consumed in amounts equal to or higher than 100 g per day. The CCFA could discuss the possibility to request JECFA for guidance on this issue.

The eWG is aware that JECFA is seeking information on aluminium-containing food additives, including data on actual use levels and dietary intake³. Some of these additives are included in the eWG's mandate.

² NTP (p. 2 of Report and p. 16 of the pdf document: http://ntp.niehs.nih.gov/ntp/htdocs/Chem_Background/ExSumpdf/Aluminum.pdf)

³ http://www.fao.org/ag/agn/agns/jecfa/JECFA74_call_Final_13.9.2010.pdf

Recommendation 3

Note 174 (*Singly or in combination: sodium aluminium silicate (INS 554), calcium aluminium silicate (INS 556), and aluminium silicate (INS 559)*) should be added to provisions in the GSFA where appropriate.

Recommendation 4

Aluminium silicate (INS 559) should be removed from Table 3 of the GSFA⁴.

Recommendation 5

Processing aids should be excluded from the list of functional classes for aluminium silicate (INS 559). As noted in Section 6 of the Preamble, the GSFA does not include references to the use of substances as processing aids. Furthermore, “processing aid” is not listed as a functional class in the Codex Standard for Class Names and the International Numbering System for Food Additives (CAC/GL 36-1989).

Recommendation 6

There are several aluminium-containing food additives that are outside the scope of the eWG’s mandate, such as aluminium lakes of colours and aluminium salts of fatty acids (INS 470). The current review of the MLs of aluminium-containing food additives was initiated in response to the establishment of a new PTWI for aluminium by JECFA, which had evaluated aluminium as a contaminant considering the intake from all sources, including food additives. In keeping with the horizontal approach to food additives, and in order to ensure that the JECFA evaluates the total intake of aluminium from food additives, the consideration of exposure to aluminium from these additional food additives should be discussed at the 43rd Session of the CCFA, in the context of their contribution to the total dietary intake of aluminium.

7. In addition to the above mentioned general recommendations, the eWG also provides comments on specific provisions for aluminum-containing food additives in the following table.

⁴ ALINORM 10/33/12, para. 79

Compilation of proposals from the eWG on maximum levels for aluminium-containing food additives

- Provisions for the use of aluminium-containing food additives in accordance with GMP, and provisions for which only proposals to discontinue or revoke were received are highlighted in **gray**.
- Provisions for which (i) the INS number was not provided, and/or the reporting basis was either not specified or was defined “as compound”, and (ii) a numerical ML with Note 6 (*As aluminium*) is listed but for which no comments or new proposed MLs were submitted, are highlighted in **red**. Codex members and observers are invited to provide further information on these provisions with the understanding that they shall be discontinued or revoked if the requested information on use, reporting basis, or INS number is not provided.
- Submissions should comply with the *Procedures for consideration of entry and review of food additive provisions in the General Standard for Food Additives* (GSFA), included in the Procedural Manual, in particular for the technological justification. To succeed in reducing uses and levels, the technological need should be justified in order to check possible alternatives and reformulations.
- Taking into account Recommendation 1(e), all proposed MLs expressed “as compound” were converted to the “as Al” reporting basis.

1. ALUMINIUM AMMONIUM SULFATE (INS 523)						
Function: firming agent, raising agent, stabilizer						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
01.1.2	Dairy-based drinks, flavoured and/or fermented (e.g., chocolate milk, cocoa, eggnog, drinking yoghurt, whey-based drinks)	350 mg/kg	6 ⁵	3	Be discontinued	EU (INS 523 is not authorized in Codex STAN 243-2003 for fermented milks; dairy-based products are widely consumed by children)
01.7	Dairy-based desserts (e.g., pudding, fruit or flavoured yoghurt)	150 mg/kg	6	3	Be discontinued	EU (no technological justification provided; INS 523 is not authorized in Codex STAN 243-2003 for fermented milks; dairy-based desserts are widely consumed by children and as JECFA indicated explicitly that children exceed the PTWI, EU strongly opposes continuation of work on this category)
04.1.2.7	Candied fruit	200 mg/kg	6	2001	Be revoked	EU (technological need requested)
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	500 mg/kg	6	3	500 mg/kg as Al (for eggplants in brine)	Japan (as firming agent in eggplants in brine)

⁵ **Note 6** As aluminium

1. ALUMINIUM AMMONIUM SULFATE (INS 523)						
Function: firming agent, raising agent, stabilizer						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
					Be discontinued	EU (technological need questioned in salt containing vegetables; not authorized in any of crossed reference Codex standardized foods with 4.2.2.3 of GSFA according to Annex C of GSFA (STAN 66-1981 on table olives, STAN 038-1981 on edible fungi; STAN 115-1981 on pickled cucumbers; STAN 260-2007 on pickled fruits and vegetables)
04.2.2.3	Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweeds in vinegar, oil, brine, or soybean sauce	35 mg/kg	6	2003	<u>Provide information on current use in vegetables other than eggplants</u>	
04.2.2.6	Vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweed, and nut and seed pulps and preparations (e.g., vegetable desserts and sauces, candied vegetables) other than food category 04.2.2.5	200 mg/kg	6	2001	Be revoked	EU (technological need requested; not authorized in STAN 057-1981 on processed tomato concentrates, STAN 259R-1981 on Tehena, STAN 295R-2009 on ginseng products)
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	500 mg/kg	6	3	Be discontinued	EU (technological need requested; not authorized in any of crossed reference Codex standardized foods with 4.2.2.7 of GSFA according to Annex C of GSFA: STAN 151-1985 on Gari, STAN 223-2001 on Kimchi, STAN 294R-2009 on Gochujang, STAN 038-1981 on edible fungi, STAN 260-2007 on pickled fruits and vegetables)
06.2	Flours and starches (including soybean powder)	500 mg/kg	6	3	Be discontinued	EU (JECFA pointed out that "high aluminium content of cereal products and in particular of ordinary baked goods may be of special importance in a number of countries since they constitute staple food and may therefore be consumed regularly in large quantity"; there is a safety concern and cereals/cereal products may be considered as a main contributor already; Al is not authorized in any commodity standards related to flours (STAN 152-1985 on wheat flour, STAN 170-1989 on pearl millet, STAN 173-1989 on sorghum flour, STAN176-1989 for edible cassava flour, STAN 178-1991 for durum wheat semolina and durum wheat flour)

1. ALUMINIUM AMMONIUM SULFATE (INS 523)						
Function: firming agent, raising agent, stabilizer						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
06.2.2	Starches	GMP	6 & 26 ⁶	6	Be discontinued	EU (technological need requested)
06.4.1	Fresh pastas and noodles and like products	470 mg/kg	6	3	300 mg/kg (270 mg/kg in starch noodles as firming agent) (as Al)	Japan
					Be discontinued	EU (strongly opposes in fresh pasta; technological need requested)
06.4.2	Dried pastas and noodles and like products				300 mg/kg (as Al)	Japan (new proposed use)
					Be discontinued	EU (does not support this new proposal on aluminium while PTWI is already exceeded and JECFA recommends to restrict the conditions of its use)
06.6	Batters (e.g., for breading or batters for fish or poultry)				100 mg/kg (as Al)	Japan (new proposed use)
					Be discontinued	EU (opposes any new proposal on aluminium while PTWI is already exceeded and JECFA recommends to restrict the conditions of its use; technological need is questioned)
07.1.2	Crackers, excluding sweet crackers	10000 mg/kg	29 ⁷	3	500 mg/kg as Al (450 mg/kg for ice-cream cone, 5 mg/kg for crackers)	Japan (as raising agent in crackers including ice-cream cone)
					Be discontinued	EU (technological need questioned; INS 523 is not recognized as “raising agent” according to CAC/GL 36-1989, only stabilizer/ firming agent)
07.1.3	Other ordinary bakery products (e.g., bagels, pita, English muffins)	10000 mg/kg	29	3	900 mg/kg (780 mg/kg in American biscuits as raising agent) (as Al)	Japan

⁶ **Note 26** For use in baking powder only

⁷ **Note 29** Reporting basis not specified

1. ALUMINIUM AMMONIUM SULFATE (INS 523)						
Function: firming agent, raising agent, stabilizer						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
07.1.4	Bread-type products, including bread stuffing and bread crumbs	10000 mg/kg	29	4	Be discontinued	EU (for safety reason, considering the 67th JECFA and EFSA 2008 conclusions)
07.1.5	Steamed breads and buns	10000 mg/kg	29	3	1000 mg/kg (300 mg/kg in steamed breads and buns as raising agent) (as Al)	Japan
					Be discontinued	EU (technological need questioned; INS 523 is not recognized as “raising agent” according to CAC/GL 36-1989, only stabilizer / firming agent; the EU comments provided to 7.1.4 apply here too)
07.1.6	Mixes for bread and ordinary bakery wares	10000 mg/kg	6	3	2500 mg/kg as Al	Japan (as raising agent in mixes for bread stuffing, “ <i>okonomiyaki</i> ”, and so on)
					Be discontinued	EU (technological need questioned; INS 523 is not recognized as “raising agent” according to CAC/GL 36-1989, only stabilizer / firming agent)
07.2	Fine bakery wares (sweet, salty, savoury) and mixes	10000 mg/kg	29	3	1300 mg/kg (600 mg/kg in scones and pancake mixes, at 1200 mg/kg in Corn dogs as raising agent) (as Al)	Japan
					Be discontinued	EU (technological need questioned; INS 523 is not recognized as “raising agent” according to CAC/GL 36-1989, only stabilizer / firming agent)
08.3.2	Heat-treated processed comminuted meat, poultry, and game products	5 mg/kg	6	3	-	Brazil questions technological need
					Be discontinued	EU (technological need questioned; not authorized in any CC relevant for 8.3.2: STAN 088-1981 on canned corned beef, STAN 089-1981 on luncheon meat, STAN 098-1981 on cooked cured chopped meat)
09.1.2	Fresh mollusks, crustaceans and echinoderms				300 mg/kg (230 mg/kg in fresh sea urchins as firming agent) (as Al)	Japan

1. ALUMINIUM AMMONIUM SULFATE (INS 523)						
Function: firming agent, raising agent, stabilizer						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
					Be discontinued	EU (technological need questioned; not authorized in any CC relevant for 09.1.2: STAN 191-1995 on quick frozen raw squid, STAN -2008 on raw and live bivalves mollusk)
09.2	Processed fish and fish products, including mollusks, crustaceans, and echinoderms	1500 mg/kg	6	3	-	Brazil questions technological need
					Be discontinued	EU (technological need questioned; not authorized in any CC relevant for 09.2.1: STAN 165-1989 on quick frozen blocks of fish fillets, STAN 190-1995 on quick frozen fish fillets, STAN 095-1981 on quick frozen lobsters)
09.2 09.2.5	Processed fish and fish products, including mollusks, crustaceans, and echinoderms Smoked, dried, fermented, and/or salted fish and fish products, including mollusks, crustaceans, and echinoderms	1500 mg/kg	6	3	1500 mg/kg as Al (for salted jellyfishes)	Japan (proposes to limit the use to subcategory 09.2.5; using as firming agent in salted jellyfishes)
					Be discontinued	EU (technological need questioned; not authorized in any CC relevant for 09.2.5: STAN 222-2001 on crackers from marine and freshwater fish, STAN 236-2003 on dried salted anchovies, STAN 189-1993 on dried shark fins, STAN 244-2004 on salted atlantic herring, STAN 167-1989 on salted fish and dried salted fish)
09.2.4	Cooked and/or fried fish and fish products, including mollusks, crustaceans, and echinoderms	200 mg/kg	6	2001	-	Brazil questions technological need
					200 mg/kg as Al (60 mg/kg as Al for boiled octopus, 200 mg/kg as Al for "tsukudani")	Japan (as firming agent in boiled octopus; as stabilizer in cooked fish products boiled down in soy sauce "tsukudani")
					Be revoked	EU (technological need questioned)
09.3	Semi-preserved fish and fish products, including mollusks, crustaceans, and echinoderms	1500 mg/kg	6	3	-	Brazil questions technological need
					Be discontinued	EU (technological need questioned)

1. ALUMINIUM AMMONIUM SULFATE (INS 523)						
Function: firming agent, raising agent, stabilizer						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
09.3 09.3.3	Semi-preserved fish and fish products, including mollusks, crustaceans, and echinoderms Salmon substitutes, caviar, and other fish roe products	1500 mg/kg	6	3	4500 mg/kg (1200 mg/kg in salted jelly fishes as firming agent) (as AI) 150 mg/kg as AI (for salted cod roe "tarako")	Japan (withdraws previous proposal because food category 09.2.5 is more appropriate for salted jellyfishes in which higher use of this additive is informed; then, would like to propose alternate levels for food category 09.3.3 as firming agent in salted cod roe "tarako")
10.2	Egg products	30 mg/kg	6	2001	<u>Provide information on current use</u>	
10.4	Egg-based desserts (e.g., custard)	380 mg/kg	6	2003	Be revoked	EU (technological need questioned; desserts are widely consumed by children and as JECFA indicated explicitly PTWI is exceeded by children, EU strongly oppose continuation of work on this category)
12.2	Herbs, spices, seasonings and condiments (e.g., seasoning for instant noodles)	500 mg/kg	6	3	Be discontinued	EU (technological need questioned)
15.1	Snacks - potato, cereal, flour or starch based (from roots and tubers, pulses and legumes)	500 mg/kg	6	3	400 mg/kg as AI	Japan (as raising agent in snacks and pretzels)
					Be discontinued	EU (technological need questioned; INS 523 is not recognized as "raising agent" according to CAC/GL 36-1989, only stabilizer/firming agent)

2. ALUMINIUM SILICATE (INS 559)						
Function: processing aid , anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
01.5	Milk powder and cream powder and powder analogues (plain)	10000 mg/kg	6 ⁸ & 174 ⁹	3	10000 mg/kg (as compound) <u>3000 mg/kg (as Al) considering 30% Al</u> <u>3800 mg/kg (as Al) considering 38% Al</u>	IDF (as authorized in the Codex Standard 207)
01.6.1	Unripened cheese	10000 mg/kg	6	3	10000 mg/kg (as compound) <u>3000 mg/kg (as Al) considering 30% Al</u> <u>3800 mg/kg (as Al) considering 38% Al</u>	IDF (as authorized in the Codex Standard 221-2001 for sliced, cut, shredded and grated products only (surface treatment))
					Be discontinued	EU (not authorized in STAN 273-1968 on cottage cheese, STAN 275-1993 on cream cheese; EU questions technological need for unripened cheese which do not present rind; alternatives like silicon dioxide, calcium silicate, magnesium silicates, or potassium silicate can be used)
01.6.2.1	Ripened cheese, includes rind	10000 mg/kg	6, 174 & 177 ¹⁰	3	10000 mg/kg (as compound) <u>3000 mg/kg (as Al) considering 30% Al</u> <u>3800 mg/kg (as Al) considering 38% Al</u>	IDF (as authorized in the Codex Standard 283)
					Be discontinued	EU (EFSA has highlighted that dairy products, in particular cheese, are among the main contributor of aluminium; because of safety concern, EU recommends to discontinue work on this category; substitutes are used by the EU industry)
01.6.2.3	Cheese powder (for reconstitution; e.g., for cheese sauces)	10000 mg/kg	6 & 174	3	10000 mg/kg (as compound) <u>3000 mg/kg (as Al) considering 30% Al</u> <u>3800 mg/kg (as Al) considering 38% Al</u>	IDF

⁸ Note 6 As aluminium

⁹ Note 174 Singly or in combination: sodium aluminium silicate (INS 554), calcium aluminium silicate (INS 556), and aluminium silicate (INS 559)

¹⁰ Note 177 For use in sliced, cut, shredded, or grated cheese only

2. ALUMINIUM SILICATE (INS 559)						
Function: processing aid , anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
01.6.4	Processed cheese	10000 mg/kg	6, 174 & 177	3	10000 mg/kg (as compound) 3000 mg/kg (as Al) considering 30% <u>Al</u> 3800 mg/kg (as Al) considering 38% <u>Al</u>	IDF (technological justification as anticaking agent for sliced, cut, shredded and grated cheese)
					Be discontinued	EU (EFSA has highlighted that dairy products, in particular cheese, are among the main contributor of aluminium; because of safety concern, EU recommends to discontinue work on this category)
01.6.5	Cheese analogues	10000 mg/kg	6, 174 & 177	3	10000 mg/kg (as compound) 3000 mg/kg (as Al) considering 30% <u>Al</u> 3800 mg/kg (as Al) considering 38% <u>Al</u>	IDF (technological justification as anticaking agent for sliced, cut, shredded and grated cheese)
01.7	Dairy-based desserts (e.g., pudding, fruit or flavoured yoghurt)	10000 mg/kg	6 & 174	3	Be discontinued	EU (INS 523 is not authorized in Codex STAN 243-2003 for fermented milks; dairy based desserts are widely consumed by children and as JECFA indicated explicitly that children exceed the PTWI, EU strongly oppose continuation of work on this category)
01.8.2	Dried whey and whey products, excluding whey cheeses	10000 mg/kg	6 & 174	3	<u>Provide information on current use</u>	
01.8.2	Dried whey and whey products, excluding whey cheeses	10000 mg/kg		2006		
05.2	Confectionery including hard and soft candy, nougats, etc. other than food categories 05.1, 05.3 and 05.4	GMP	3, 6 & 174	3	Be discontinued	EU (no technological justification provided; JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion)

2. ALUMINIUM SILICATE (INS 559)						
Function: processing aid, anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
05.3	Chewing gum	GMP	3, 6 & 174	3	< 100 mg/kg (as Al)	ICGA (proposes technological justification and suggests this numerical ML based on reported use levels, as an option to GMP <u>AND</u> suggests deleting the reference to Note 3, as some products subject to international trade may contain such additives in the gum part of the product - therefore not absorbed)
					Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion)
05.4	Decorations (e.g., for fine bakery wares), toppings (non-fruit) and sweet sauces	GMP	3, 6 & 174	3	Be discontinued	EU (technological need questioned, especially at GMP)
06.1	Whole, broken, or flaked grain, including rice	GMP		6	-	Brazil questions technological need
					GMP	Mexico
					Be discontinued	EU (JECFA highlighted the high aluminium content of cereal products which are considered as staple food in a number of countries and consumed regularly in large quantity; the recent EFSA opinion (2008) on aluminium shared JECFA conclusions, spotted cereal and cereal products as main food contributors, and concluded that the EU population could exceed the newly revised PTWI; according to the EU rice millers federation, aluminium is not used in rice)
07.1.6	Mixes for bread and bakery wares	10000 mg/kg	6 & 174	3	GMP	Mexico
					Be discontinued	EU (for safety reason; JECFA highlighted the high aluminium content of cereal products which are considered as staple food in a number of countries and consumed regularly in large quantity; the recent EFSA opinion (2008) on aluminium shared JECFA conclusions, spotted cereal and cereal products as main food contributors, and concluded that the EU population could exceed the newly revised PTWI)

2. ALUMINIUM SILICATE (INS 559)						
Function: processing aid , anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
07.2.3	Mixes for fine bakery wares (e.g., cakes, pancakes)	10000 mg/kg	6 & 174	3	GMP	Mexico
					Be discontinued	EU (for safety reason; JECFA highlighted the high aluminium content of cereal products which are considered as staple food in a number of countries and consumed regularly in large quantity; the recent EFSA opinion (2008) on aluminium shared JECFA conclusions, spotted cereal and cereal products as main food contributors, and concluded that the EU population could exceed the newly revised PTWI)
08.3	Processed comminuted meat, poultry, and game products	GMP	6, 174 & 179 ¹¹	3	Be discontinued	EU (technological need questioned; not authorized in any CC relevant for 8.3.2: STAN 088-1981 on canned corned beef , STAN 089-1981 on luncheon meat , STAN 89-1981 on luncheon meat, STAN 098-1981 on cooked cured chopped meat)
08.4	Edible casings (e.g., sausage casings)	GMP	3, 6 & 174		Be discontinued	EU (technological need questioned, especially at GMP; sausage is widely consumed by children, and is spotted as a main contributor; for safety reason, EU recommends to discontinue the work)
12.1.1	Salt	10000 mg/kg	6	3	Be discontinued	EU (for safety reason, EU recommends to discontinue the work on this kind of staple food which is consumed on a daily basis)
12.1.2	Salt Substitutes	10000 mg/kg		6		
12.2.1	Herbs and spices	GMP	51 ¹²	3	Be discontinued	EU (technological need questioned)

¹¹ Note 179 For use in surface treatment of sausages

¹² Note 51 For use in herbs only

2. ALUMINIUM SILICATE (INS 559)						
Function: processing aid , anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/ Year Adopted	Proposed Levels/ Basis	Comments
12.2.2	Seasonings and condiments	30000 mg/kg	6 & 174	3	GMP	Mexico
12.5.2	Mixes for soups and broths	10000 mg/kg	6 & 174	3	Be discontinued	EU (not authorized in STAN 117-1981 on bouillon and consommés; calcium phosphates are used as anticaking agents)
12.6.3	Mixes for sauces and gravies	10000 mg/kg	6 & 174	3	Be discontinued	EU (opposes any new proposal without robust justification on aluminium while PTWI is already exceeded and JECFA recommends to restrict the conditions of use of aluminium)
13.6	Food supplements	GMP	6 & 174	3	Be discontinued	EU (opposes any new proposal without robust justification; technological need questioned, especially at GMP)

3. CALCIUM ALUMINIUM SILICATE (INS 556)						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
01.5	Milk powder and cream powder and powder analogues (plain)	10000 mg/kg	6 & 174	3	10000 mg/kg (as compound) <u>265 mg/kg (as Al)</u>	IDF (as authorized in the Codex Standard 283)
01.6.1	Unripened cheese	10000 mg/kg	6 & 174	3	10000 mg/kg (as compound) <u>265 mg/kg (as Al)</u>	India
					Be discontinued	IDF
01.6.2.1	Ripened cheese, includes rind	10000 mg/kg	6, 174 &	3	10000 mg/kg (as compound)	EU (not authorized in STAN 273-1968 on cottage cheese, STAN 275-1993 on cream cheese; EU questions technological need for unripened cheese which do not present rind; alternatives like silicon dioxide, calcium silicate, magnesium silicates or potassium silicate can be used)

3. CALCIUM ALUMINIUM SILICATE (INS 556)						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
			177 ¹³		<u>265 mg/kg (as Al)</u>	IDF
					Be discontinued	EU (the recent EFSA opinion on aluminium (2008) shared the conclusion of JECFA and highlighted that dairy products, in particular cheese, are among the main contributor of aluminium; because of safety concern, EU recommends to discontinue work on this category; substitutes are used by the EU industry)
01.6.2.3	Cheese powder (for reconstitution; e.g., for cheese sauces)	10000 mg/kg	6 & 174	3	10000 mg/kg (as compound) <u>265 mg/kg (as Al)</u>	IDF
01.6.4	Processed cheese	10000 mg/kg	6, 174 & 177	3	10000 mg/kg (as compound) <u>265 mg/kg (as Al)</u>	IDF
					Be discontinued	EU (EFSA has highlighted that dairy products, in particular cheese, are among the main contributor of aluminium; because of safety concern, EU recommends to discontinue work on this category)
01.6.5	Cheese analogues	10000 mg/kg	6, 174 & 177	3	10000 mg/kg (as compound) <u>265 mg/kg (as Al)</u>	IDF (should be consistent with other cheese standards)
01.7	Dairy-based desserts (e.g., pudding, fruit or flavoured yoghurt)	10000 mg/kg	6 & 174	3	Be discontinued	EU (INS 523 is not authorized in Codex STAN 243-2003 for fermented milks; dairy based desserts are widely consumed by children and as JECFA indicated explicitly that children exceed the PTW1, EU strongly opposes continuation of work on this category)
01.8.2	Dried whey and whey products, excluding whey cheeses	265 mg/kg	6 & 174	3	265 mg/kg (as compound) <u>7 mg/kg (as Al)</u>	IDF
01.8.2	Dried whey and whey products, excluding whey cheeses	10000 mg/kg		2006		

¹³ **Note 177** For use in sliced, cut, shredded, or grated cheese only

3. CALCIUM ALUMINIUM SILICATE (INS 556)						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
05.2	Confectionery including hard and soft candy, nougats, etc. other than food categories 05.1, 05.3 and 05.4	GMP	3, 6 & 174	3	Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion)
05.3	Chewing gum	GMP	3, 6 & 174	3	< 100 mg/kg (as Al)	ICGA (proposes technological justification and suggests this numerical ML based on reported use levels, as an option to GMP <u>AND</u> suggests deleting the reference to Note 3, as some products subject to international trade may contain such additives in the gum part of the product - therefore not absorbed)
					Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion)
05.4	Decorations (e.g., for fine bakery wares), toppings (non-fruit) and sweet sauces	GMP	3, 6 & 174	3	Be discontinued	EU (technological need questioned, especially at GMP)
06.1	Whole, broken, or flaked grain, including rice	GMP		6	-	Brazil questions technological need
					GMP	Mexico

3. CALCIUM ALUMINIUM SILICATE (INS 556)						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					Be discontinued	EU (JECFA highlighted the high aluminium content of cereal products which are considered as staple food in a number of countries and consumed regularly in large quantity; the recent EFSA opinion (2008) on aluminium shared JECFA conclusions, spotted cereal and cereal products as main food contributors, and concluded that the EU population could exceed the newly revised PTWI; according to the EU rice millers federation, aluminium is not used in rice)
07.1.6	Mixes for bread and ordinary bakery wares	10000 mg/kg	6 & 174	3	GMP	Mexico
					Be discontinued	EU (for safety reason; JECFA highlighted the high aluminium content of cereal products which are considered as staple food in a number of countries and consumed regularly in large quantity; the recent EFSA opinion (2008) on aluminium shared JECFA conclusions, spotted cereal and cereal products as main food contributors, and concluded that the EU population could exceed the newly revised PTWI)
07.2.3	Mixes for fine bakery wares (e.g., cakes, pancakes)	10000 mg/kg	6 & 174	3	GMP	Mexico
					Be discontinued	EU (for safety reason; JECFA highlighted the high aluminium content of cereal products which are considered as staple food in a number of countries and consumed regularly in large quantity; the recent EFSA opinion (2008) on aluminium shared JECFA conclusions, spotted cereal and cereal products as main food contributors, and concluded that the EU population could exceed the newly revised PTWI)

3. CALCIUM ALUMINIUM SILICATE (INS 556)						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
08.3	Processed comminuted meat, poultry, and game products	GMP	6, 174 & 179	3	Be discontinued	EU (technological need questioned; not authorized in any CC relevant for 8.3.2: STAN 088-1981 on canned corned beef , STAN 089-1981 on luncheon meat , STAN 89-1981 on luncheon meat, STAN 098-1981 on cooked cured chopped meat)
08.4	Edible casings (e.g., sausage casings)	GMP	3,6&174	3	Be discontinued	EU (technological need questioned, especially at GMP; sausage is widely consumed by children, and is spotted as a main contributor; for safety reason, EU recommends to discontinue the work on this category)
11.1.2	Powdered sugar, powdered dextrose	15000 mg/kg	6, 56 ¹⁴	3	10000 mg/kg (265 mg/kg as Al) ¹⁵	CEFS (proposes this ML in line with EU in dried powdered stuffs, including sugars; Note 174 “Singly or in combination: sodium aluminium silicate (INS 554), calcium aluminium silicate (INS 556), and aluminium silicate (INS 559) should be added)
					Be discontinued	EU (due to safety concern, the EU intend to revisit its current authorization on aluminum based food additives in sugar and to withdraw this authorization; sugar is a staple foodstuff which is widely consumed on a daily basis)
11.1.2	Powdered sugar, powdered dextrose	15000 mg/kg	56	2006		
12.1.1	Salt	20000 mg/kg	6	3	20000 mg/kg (not specified) Define ML as Al	Mexico
					1960 mg/kg (as Al)	USA
					Be discontinued	EU (for safety reason, EU recommends to discontinue the work on this kind of staple food which is consumed on a daily basis)

¹⁴ **Note 56** Provided starch is not present

¹⁵ The content on the anhydrous basis as Al₂O₃ is not less than 3.0% and not more than 5.0% (Directive 2008/84/EC – specifications for purity criteria on food additives). Thus, 10000 mg INS 556 correspond to max. 500 mg/kg Al₂O₃ (molecular weight = 102 g/Mol or 102000 mg/Mol, which correspond to 54000 mg Al) and 500 mg Al₂O₃ correspond to 265 mg Al (rounded).

3. CALCIUM ALUMINIUM SILICATE (INS 556)						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
12.1.1	Salt	GMP		2006		
12.1.2	Salt substitutes	10000 mg/kg		7		
12.2.2	Seasonings and condiments	30000 mg/kg	6 & 174	3	GMP	Mexico
12.5.2	Mixes for soups and broths	10000 mg/kg	6 & 174	3	Be discontinued	EU (not authorized in STAN 117-1981 on bouillon and consommés; calcium phosphates are used as anticaking agents)
12.6.3	Mixes for sauces and gravies	10000 mg/kg	6 & 174	3	Be discontinued	EU (does not support this new proposal on aluminium while PTWI is already exceeded and JECFA recommends to restrict the conditions of its use)
13.6	Food supplements	GMP	6 & 174	3	Be discontinued	EU (technological need questioned, especially at GMP)
14.2.3	Grape wines	GMP		6	-	Brazil questions technological need
					Be discontinued	EU (strongly opposes ; technological need questioned)

4. SODIUM ALUMINIUM PHOSPHATES ¹⁶ SODIUM ALUMINIUM PHOSPHATE, ACIDIC (INS 541(i)) SODIUM ALUMINIUM PHOSPHATE, BASIC (INS 541(ii))						
Functions: acidity regulator, emulsifier, raising agent, stabilizer, thickening agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
01.6.1	Unripened cheese	670 mg/kg	6	3	7600 mg/kg (450 mg/kg as Al)	IFAC (INS 541ii for emulsification and stabilization) ¹⁷
					<u>3500 mg/kg (as P2O5)</u> <u>Clarify the INS and convert ML to Al basis</u>	IDF (as adopted in the Codex Standard 221)
					Be discontinued	EU (not authorized in STAN 273-1968 on cottage cheese, STAN 275-1993 on cream cheese; EU questions technological need for unripened cheese which do not present rind; alternatives like silicon dioxide, calcium silicate, magnesium silicates or potassium silicate can be used)
01.6.4	Processed cheese	35000 mg/kg	29 ¹⁸	6	35000 mg/kg (2000 mg/kg as Al)	IFAC (INS 541ii for emulsification and stabilization)
					<u>35000 mg/kg (as P2O5)</u> <u>Clarify the INS and convert ML to Al basis</u>	IDF
					<u>30000 mg/kg (as compound)</u> <u>Clarify the INS and convert NL to Al basis</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
					Be discontinued	EU (EFSA has highlighted that dairy products, in particular cheese, are among the main contributor of aluminium; because of safety concern, EU recommends to discontinue work on this category)
01.7	Dairy-based desserts (e.g., pudding, fruit or flavoured yoghurt)	2000 mg/kg	6	6	-	Brazil questions technological need
					120 mg/kg (as Al)	Indonesia (ML established based on consumption and PTDI of 1mg/kg bw/d; ML proposed by Codex exceeds PTWI of Al - 7mg/kg bw/wk)
					<u>10000 mg/kg (not specified)</u> <u>Define ML as Al</u>	Mexico

¹⁶ The USA notes that sodium aluminium phosphates are regulated for use in food in general in the USA, in accordance with good manufacturing practices.

¹⁷ Based on scientific studies that show negligible bioavailability of aluminum-containing food additives, IFAC strongly believes that the use of these additives in foods is safe, and that the current PTWI for aluminum is an unreasonable restriction.

¹⁸ Note 29 Reporting basis not specified

4. SODIUM ALUMINIUM PHOSPHATES ¹⁶ SODIUM ALUMINIUM PHOSPHATE, ACIDIC (INS 541(i)) SODIUM ALUMINIUM PHOSPHATE, BASIC (INS 541(ii))						
Functions: acidity regulator, emulsifier, raising agent, stabilizer, thickening agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					2000 mg/kg (120 mg/kg as Al)	IFAC (INS 541ii for emulsification and stabilization)
					Be discontinued	EU (INS 523 is not authorized in Codex STAN 243-2003 for fermented milks; dairy based desserts are widely consumed by children and as JECFA indicated explicitly that children exceed the PTWI, EU strongly opposes continuation of work on this category)
02.4	Fat-based desserts excluding dairy-based dessert products of food category 01.7	2000 mg/kg	6	6	-	Brazil questions technological need
					120 mg/kg (as Al)	Indonesia (ML established based on consumption and PTDI of 1mg/kg bw/d; ML proposed by Codex exceeds PTWI of Al - 7mg/kg bw/wk)
					2000 mg/kg (120 mg/kg as Al)	IFAC (INS 541ii for emulsification and stabilization)
					Be discontinued	EU (questions technological need; desserts are widely consumed by children and as JECFA indicated explicitly that children exceed the PTWI, EU strongly opposes continuation of work on this category)
04.1.2.9	Fruit-based desserts, including fruit-flavoured water-based desserts	2000 mg/kg	6	6	-	Brazil questions technological need
					2000 mg/kg (170 mg/kg as Al)	IFAC (INS 541i for emulsification and stabilization)
					Be discontinued	EU (questions technological need; desserts are widely consumed by children and as JECFA indicated explicitly that children exceed the PTWI, EU strongly opposes continuation of work on this category)
05.1.1	Cocoa mixes (powders) and cocoa mass/cake	2000 mg/kg	6 & 72 ¹⁹	6	-	Brazil questions technological need
					2000 mg/kg (120 mg/kg as Al)	IFAC (INS 541ii for emulsification and stabilization)

¹⁹ Note 72 Ready-to-eat basis

4. SODIUM ALUMINIUM PHOSPHATES ¹⁶ SODIUM ALUMINIUM PHOSPHATE, ACIDIC (INS 541(i)) SODIUM ALUMINIUM PHOSPHATE, BASIC (INS 541(ii))						
Functions: acidity regulator, emulsifier, raising agent, stabilizer, thickening agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					Be discontinued	EU (technological need questioned; cocoa-based dessert are widely consumed by children and as JECFA indicated explicitly that children exceed the PTWI, EU strongly opposes continuation of work on this category; not authorized in CC relevant to 05.1.1: STAN 141-1983 on cocoa mass; alternatives can be used for cocoa powders like magnesium/calcium silicate, tricalcium phosphate, silicon dioxide)
05.2	Confectionery including hard and soft candy, nougats, etc other than food categories 05.1, 05.3 and 05.4	350 mg/kg	29	3	-	Brazil questions technological need
					2000 mg/kg (120 mg/kg as Al)	IFAC (INS 541ii for emulsification and stabilization)
					Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion)
05.3	Chewing gum	GMP	3, 6 & 174	3	< 100 mg/kg (as Al)	ICGA (proposes technological justification and suggests this numerical ML based on reported use levels, as an option to GMP AND suggests deleting the reference to Note 3, as some products subject to international trade may contain such additives in the gum part of the product - therefore not absorbed)
					Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion)
06.2	Flours and starches (including soybean powder)	3600 mg/kg	6	3	Be discontinued	IFAC

4. SODIUM ALUMINIUM PHOSPHATES¹⁶						
SODIUM ALUMINIUM PHOSPHATE, ACIDIC (INS 541(i))						
SODIUM ALUMINIUM PHOSPHATE, BASIC (INS 541(ii))						
Functions: acidity regulator, emulsifier, raising agent, stabilizer, thickening agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					Be discontinued	EU (technological need questioned; flour is a staple foodstuff widely consumed which contributes substantially to the daily intake; not authorized in any commodity standards related to flours (STAN 152-1985 on wheat flour, STAN 170-1989 on pearl millet, STAN 173-1989 on sorghum flour, STAN 176-1989 for edible cassava flour, STAN 178-1991 for durum wheat semolina and durum wheat flour)
06.2.1	Flours	45000 mg/kg	29	6	1000 mg/kg (as Al) for INS 541i	Brazil (according to industry)
					60 mg/kg (as Al)	Indonesia (ML established based on consumption and PTDI of 1mg/kg bw/d; ML proposed by Codex exceeds PTWI of Al - 7mg/kg bw/wk)
					20000 mg/kg (1700 mg/kg as Al)	IFAC (INS 541i as raising agent)
					Be discontinued	EU (technological need questioned; flour is a staple foodstuff widely consumed which contributes substantially to the daily intake; not authorized in any commodity standards related to flours (STAN 152-1985 on wheat flour, STAN 170-1989 on pearl millet, STAN 173-1989 on sorghum flour, STAN 176-1989 for edible cassava flour, STAN 178-1991 for durum wheat semolina and durum wheat flour)
06.5	Cereal and starch based desserts (e.g., rice pudding, tapioca pudding)	2000 mg/kg	6	6	-	Brazil questions technological need
					2000 mg/kg (170 mg/kg as Al)	IFAC (INS 541i as acidity regulator, thickening agent and raising agent)
					Be discontinued	EU (desserts are widely consumed by children and as JECFA indicated explicitly PTWI is exceeded by children, EU strongly oppose continuation of work on this category)
06.6	Batters (e.g., for breading or batters for fish or poultry)	1600 mg/kg	6	6	96 mg/kg (as Al)	Indonesia (ML established based on consumption and PTDI of 1mg/kg bw/d; ML proposed by Codex exceeds PTWI of Al - 7mg/kg bw/wk)
					20000 mg/kg (1700 mg/kg as Al)	IFAC (INS 541i as raising agent; 2% SALP in batter is required to fulfill its technological function as a raising agent)

4. SODIUM ALUMINIUM PHOSPHATES ¹⁶ SODIUM ALUMINIUM PHOSPHATE, ACIDIC (INS 541(i)) SODIUM ALUMINIUM PHOSPHATE, BASIC (INS 541(ii))						
Functions: acidity regulator, emulsifier, raising agent, stabilizer, thickening agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					<u>25000 mg/kg (as compound)</u> <u>Clarify the INS and convert ML to Al basis</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
07.1	Bread and ordinary bakery wares	2000 mg/kg	6	6	1000 mg/kg (as Al) for INS 541i	Brazil (proposed ML based on actual use in industry)
					<u>10000 mg/kg (as Al) Clarify the INS</u>	Mexico
					20000 mg/kg (1700 mg/kg as Al)	IFAC (level for 541i; functions as a raising agent in this category)
					11000 mg/kg (1000 mg/kg as Al)	ICGMA (to achieve intended function; INS 541i is used as leavening/raising agent to help with dough/texture formation in baking mixes for bread (FC 7.1.1) and pizza crust (FC 7.1.6), for example)
					<u>30000 mg/kg (as compound)</u> <u>Clarify the INS and convert ML to Al basis</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
					Be discontinued	EU (the 67th JECFA highlighted cereal products as main contributor of aluminium; the recent EFSA opinion (2008) on aluminium shared JECFA conclusions, spotted cereal and cereal products as main food contributors, and concluded that the EU population could exceed the newly revised PTWI; there is a safety ground to discontinue work on this category, which is widely consumed, on a daily basis, in large quantities)
07.2.1	Cakes, cookies and pies (e.g., fruit-filled or custard types)	2000 mg/kg	6	6	1000 mg/kg (as Al) for INS 541i	Brazil (proposed ML based on actual use in industry)
					20000 mg/kg (1700 mg/kg as Al)	IFAC (level for 541i; functions as a raising agent in this category)
					2200 mg/kg (190 mg/kg as Al)	ICGMA (to achieve intended function; INS 541i is used as leavening/raising agent to help with dough/texture formation in cookies and pop-tarts)
					<u>12500 mg/kg (as compound)</u> <u>Clarify the INS and convert ML to Al basis</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)

4. SODIUM ALUMINIUM PHOSPHATES ¹⁶ SODIUM ALUMINIUM PHOSPHATE, ACIDIC (INS 541(i)) SODIUM ALUMINIUM PHOSPHATE, BASIC (INS 541(ii))						
Functions: acidity regulator, emulsifier, raising agent, stabilizer, thickening agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					Be discontinued	EU (fine bakery wares are widely consumed by children; as JECFA indicated explicitly that children exceed the PTWI, EU strongly opposes continuation of work on this category)
07.2.2	Other fine bakery products (e.g., doughnuts, sweet rolls, scones, and muffins)	2000 mg/kg	6	6	1000 mg/kg (as Al) for INS 541i	Brazil (proposed ML based on actual use in industry)
					10000 mg/kg (as Al)	Mexico
					20000 mg/kg (1700 mg/kg as Al)	IFAC (level for 541i; functions as a raising agent in this category)
					11000 mg/kg (1000 mg/kg as Al)	ICGMA (to achieve intended function; INS 541i is used as leavening/raising agent to help with dough/texture formation in muffins, french toast, filled sweet rolls, waffles, cinnabon, pancakes, and baked wafers)
					<u>12500 mg/kg (as compound)</u> <u>Clarify the INS and convert ML to Al basis</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
					<u>No proposal submitted</u>	EU (the concentration of 1000mg/kg may raise intake concern; at the proposed ML of 1000mg Al/kg, only one muffin/scone consumed is sufficient to reach the PTWI (20mg Al/week for a child) for children of 20kg)
07.2.3	Mixes for fine bakery wares (e.g., cakes, pancakes)	15300 mg/kg	29	6	1000 mg/kg (as Al) for INS 541i	Brazil (according to industry)
					15300 mg/kg (1300 mg/kg as Al)	IFAC (INS 541i as raising agent)
					11000 mg/kg (1000 mg/kg as Al)	ICGMA (to achieve intended function; INS 541i is used as leavening/raising agent to help with dough/texture formation in baking mixes for muffins, cakes, pancakes, for example)
					<u>30000 mg/kg (as compound)</u> <u>Clarify the INS and convert ML to Al basis</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)

4. SODIUM ALUMINIUM PHOSPHATES ¹⁶ SODIUM ALUMINIUM PHOSPHATE, ACIDIC (INS 541(i)) SODIUM ALUMINIUM PHOSPHATE, BASIC (INS 541(ii))						
Functions: acidity regulator, emulsifier, raising agent, stabilizer, thickening agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					Be discontinued	EU (fine bakery wares are widely consumed by children; as JECFA indicated explicitly that children exceed the PTWI, EU strongly opposes continuation of work on this category)
08.3.3	Frozen processed comminuted meat, poultry, and game products	360 mg/kg	6	3	-	Brazil questions technological need
					6000 mg/kg (510 mg/kg as Al)	IFAC (INS 541i as raising agent for battered portion of product)
					Be discontinued	EU (aluminium based food additives are not authorized in any CC relevant to a food category similar to 8.3.3, the food category 8.3.2: STAN 088-1981 on canned corned beef; not authorized in STAN 089-1981 on luncheon meat, STAN 098-1981 on cooked cured chopped meat; EU questions the rationale to authorize aluminium-containing food additives in 08.3.3 and why the frozen process requires the use of aluminium)
09.2.2	Frozen battered fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms	190 mg/kg	6 & 41 ²⁰	6	-	Brazil questions technological need
					<u>10000 mg/kg (not specified)</u> <u>Clarify the INS and convert ML to Al basis</u>	Mexico
					10000 mg/kg (850 mg/kg as Al)	IFAC (INS 541i as raising agent for battered portion of product)
					Be discontinued	EU (technological need questioned)
09.2.4.3	Fried fish and fish products, including mollusks, crustaceans, and echinoderms	600 mg/kg	6	3	-	Brazil questions technological need
					10000 mg/kg (850 mg/kg as Al)	IFAC (INS 541i as raising agent for battered portion of product)
					Be discontinued	EU (technological need questioned)

²⁰ **Note 41** Use in breading or batter coatings only

4. SODIUM ALUMINIUM PHOSPHATES¹⁶						
SODIUM ALUMINIUM PHOSPHATE, ACIDIC (INS 541(i))						
SODIUM ALUMINIUM PHOSPHATE, BASIC (INS 541(ii))						
Functions: acidity regulator, emulsifier, raising agent, stabilizer, thickening agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
10.4	Egg-based desserts (e.g., custard)	2000 mg/kg	6	6	-	Brazil questions technological need
					Be discontinued	EU (technological need questioned; desserts are widely consumed by children and as JECFA indicated explicitly PTWI is exceeded by children, EU strongly oppose continuation of work on this category)
12.5.2	Mixes for soups and broths	2000 mg/kg	6 & 127 ²¹	6	2000 mg/kg (170 mg/kg as Al)	IFAC (INS 541i for emulsification and stabilization)
					Be discontinued	EU (not authorized in STAN 117-1981 on bouillon and consommés; calcium phosphates are used as anticaking agents)
12.6.3	Mixes for sauces and gravies	2000 mg/kg	6 & 127	6	2000 mg/kg (120 mg/kg as Al)	IFAC (INS 541ii as emulsifier and stabilizer, especially for cheese sauces)
16.0	Composite foods - foods that could not be placed in categories 01 - 15	190 mg/kg	6	6	190 mg/kg (11-16 mg/kg as Al)	IFAC (INS 541i or 541ii as emulsifier, stabilizer or raising agent)
					Be discontinued	EU (opposes any proposal in this category as long as there is no clear food category identified for which a technological need is demonstrated; category 16.0 should not be seen as a way for authorising by default food additives in a wide range of non identified compound foods)

²¹ **Note 127** As served to the consumer

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
01.1.2	Dairy-based drinks, flavoured and/or fermented (e.g., chocolate milk, cocoa, eggnog, drinking yoghurt, whey-based drinks)	20000 mg/kg	6	3	20000 mg/kg (1150 mg/kg as Al)	IFAC (levels for INS 554 (Na ₂ O:Al ₂ O ₃ :13SiO ₂))
					20000 mg/kg (as compound) <u>1150 mg/kg (as Al)</u>	IDF
					1000 mg/kg (as compound) or 57 mg/kg (as Al)	ICGMA (used in dry mix hot chocolate)
					Be discontinued	EU (INS 554 is not authorized in Codex STAN 243-2003 for fermented milks)
01.3	Condensed milk and analogues (plain)	20000 mg/kg	6	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					20000 mg/kg (as compound) <u>1150 mg/kg (as Al)</u>	IDF
					10000 mg/kg (as compound) or 570 mg/kg (as Al)	ICGMA (for beverage whiteners (FC 1.3.2) including non-dairy creamer powder, coffee whitener powder)
					Be discontinued	EU (not authorized in any CC relevant to sub cat.01.3: a) 01.3.2: STAN 250-2006 on blend of evaporated skimmed milk, STAN 252-2006 on blend of sweetened condensed milk, b) 01.3.1: STAN 281-1971 on evaporated milk, STAN 282-1971 on sweetened condensed milk; therefore the technological need is question in the general heading 01.3)
01.4.4	Cream analogues	20000 mg/kg	6	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					20000 mg/kg (as compound) <u>1150 mg/kg (as Al)</u>	IDF
01.5	Milk powder and cream powder and powder analogues (plain)	10000 mg/kg	6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					10000 mg/kg (as compound) <u>570 mg/kg (as Al)</u>	IDF (as authorized in the Codex Standard 207)
					10000 mg/kg (570 mg/kg as Al) for milk/cream powder analogues (e.g., soy oil powder) and 5000 mg/kg as compound for dairy-based creamers (e.g., milk powder and cream powder)	ICGMA

²² The USA notes that sodium aluminosilicate is regulated for use in food in general in the USA at levels up to 550 mg/kg food as aluminium, in accordance with good manufacturing practices. However, the USA has no data on actual use levels of this additive in specific food categories.

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					15000 mg/kg (as compound) <u>860 mg/kg (as Al)</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
01.6.2.1	Ripened cheese, includes rind	10000 mg/kg	6, 174 & 177	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					10000 mg/kg (as compound) (anticaking agent in shredded cheese) <u>570 mg/kg (as Al)</u>	IDF (as authorized in the Codex Standard 283)
					Be discontinued	EU (EFSA has highlighted that dairy products, in particular cheese, are among the main contributors of aluminium, at least in EU; because of safety concern, EU recommends to discontinue work on this category; substitutes are used by the EU industry)
01.6.2.3	Cheese powder (for reconstitution; e.g., for cheese sauces)	10000 mg/kg	6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					10000 mg/kg (as compound) <u>570 mg/kg (as Al)</u>	IDF
					25000 mg/kg (1425 mg/kg as Al)	ICGMA (used as anti-caking agent that helps prevent components from adhering to each other; to ensure flow ability for the cheese powder and to prevent clumping)
					20000 mg/kg (as compound) <u>1150 mg/kg (as Al)</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
01.6.4	Processed cheese	10000 mg/kg	6, 174 & 177	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					10000 mg/kg (as compound) <u>570 mg/kg (as Al)</u>	IDF (technological justification as anticaking agent for sliced, cut, shredded and grated cheese)
					15000 mg/kg (as compound) <u>860 mg/kg (as Al)</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
01.6.5	Cheese analogues	10000 mg/kg	6, 174 & 177	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					10000 mg/kg (as compound) <u>570 mg/kg (as Al)</u>	IDF (technological justification as anticaking agent for sliced, cut, shredded and grated cheese)

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
01.8.1	Liquid whey and whey products, excluding whey cheeses	20000 mg/kg	6	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					20000 mg/kg (as compound) <u>1150 mg/kg (as Al)</u>	IDF
01.8.2	Dried whey and whey products, excluding whey cheeses	10000 mg/kg	6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
01.8.2	Dried whey and whey products, excluding whey cheeses	10000 mg/kg		2006	570 mg/kg (as Al)	Brazil
					20000 mg/kg (1150 mg/kg as Al)	IFAC
04.2.2.2	Dried vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds	20000 mg/kg	6	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
05.2	Confectionery including hard and soft candy, nougats, etc. other than food categories 05.1, 05.3 and 05.4	GMP	3 ²³ , 6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion; the ML proposed of 1150 mg Al/kg is very high - a child of 20kg could reach the PTWI by consuming each day only 3 few gr. of confectionary)
05.3	Chewing gum	GMP	3, 6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					< 100 mg/kg (as Al)	ICGA (proposes technological justification and suggests this numerical ML based on reported use levels, as an option to GMP AND suggests deleting the reference to Note 3, as some products subject to international trade may contain such additives in the gum part of the product - therefore not absorbed)

²³ Note 3 Surface treatment

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion)
05.4	Decorations (e.g., for fine bakery wares), toppings (non-fruit) and sweet sauces	GMP	3, 6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (technological need questioned)
06.1	Whole, broken, or flaked grain, including rice	GMP		6	-	Brazil questions technological need
					GMP	Mexico
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (JECFA highlighted the high aluminium content of cereal products which are considered as staple food in a number of countries and consumed regularly in large quantity; the recent EFSA opinion (2008) on aluminium shared JECFA conclusions, spotted cereal and cereal products as main food contributors, and concluded that the EU population could exceed the newly revised PTWI; according to the EU rice millers federation, aluminium is not used in rice)
06.3	Breakfast cereals, including rolled oats	20000 mg/kg	6	3	GMP	Mexico
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion; EU recommends to discontinue the work on this category which is particularly consumed by children)

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
06.4.3	Pre-cooked pastas and noodles and like products	20000 mg/kg	6	3	GMP	Mexico
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (no technological need in pre-cooked pasta)
06.5	Cereal and starch based desserts (e.g., rice pudding, tapioca pudding)	20000 mg/kg	6	3	GMP	Mexico
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (JECFA raised a safety concern over the exceedance of the PTWI for aluminium by a large extent by some population groups, and spotted explicitly children, who regularly consume foods containing aluminium; the recent EFSA opinion on aluminium shared this conclusion; EU recommends to discontinue the work on this category which is particularly consumed by children)
06.6	Batters (e.g., for breading or batters for fish or poultry)	20000 mg/kg	6	3	GMP	Mexico
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					1400 mg/kg (as compound) 80 mg/kg (as Al)	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
07.1.6	Mixes for bread and ordinary bakery wares	10000 mg/kg	6 & 174	3	GMP	Mexico
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					6000 mg/kg (as compound) or 342 mg/kg (as Al)	ICGMA (use levels range from 0.1-0.6% (6000 mg/kg on the basis of whole compound or 342 mg/kg as Al) to prevent clumping and ensure flow ability)
					20000 mg/kg (as compound) 1150 mg/kg (as Al)	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
07.2.3	Mixes for fine bakery wares (e.g., cakes, pancakes)	10000 mg/kg	6	3	GMP	Mexico
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					20000 mg/kg (1140 mg/kg as Al)	ICGMA (to ensure flow ability and prevent clumping)
					20000 mg/kg (as compound)	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
					Be discontinued	EU (for safety reason; JECFA already spotted that children are a subcategory at risk with regard to the exposure to aluminum; fine bakery wares are widely consumed by children)
08.3	Processed comminuted meat, poultry, and game products	GMP	6, 174 & 179	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (no technological need in pre-cooked pasta; not authorized in any CC relevant for 8.3.2: STAN 088-1981 on canned corned beef, STAN 089-1981 on luncheon meat, STAN 098-1981 on cooked cured chopped meat; there is no reason to authorize this food additive in the heading section 08.3)
08.4	Edible casings (e.g., sausage casings)	GMP	3, 6 & 174	3	Be discontinued	EU (technological need questioned, especially at GMP; sausage is widely consumed by children, and is spotted as a main contributor; for safety reason, EU recommends to discontinue the work on this category)
11.1.2	Powdered sugar, powdered dextrose	10000 mg/kg	6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					10000 mg/kg (794 mg/kg as Al) ²⁴	CEFS (Note 56 "Provided starch is not present" should be added)
					Be discontinued	EU (due to safety concern, the EU intend to revisit its current authorization on aluminum based food additives in sugar and to withdraw this authorization; sugar is a staple foodstuff which is widely consumed on a daily basis)

²⁴ The content on the anhydrous basis as Al₂O₃ is not less than 5.0% and not more than 15.0% (Directive 2008/84/EC – specifications for purity criteria on food additives). Thus, 10000 mg INS 554 correspond to max. 1500 mg/kg Al₂O₃ (molecular weight = 102 g/Mol or 102000 mg/Mol, which correspond to 54000 mg Al) and 1500 mg Al₂O₃ correspond to 794 mg Al (rounded).

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
11.1.2	Powdered sugar, powdered dextrose	15000 mg/kg	56 ²⁵	2006		
12.1.1	Salt	20000 mg/kg	6	3	<u>20000 mg/kg (not specified)</u> <u>Define ML as Al</u>	Mexico
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					20000 mg/kg (as compound) <u>1150 mg/kg (as Al)</u>	EU Salt (proposed ML based on technological perspective and not a feasible level to guarantee the proper functionality in the salt; levels used in practice are <30.000mg/kg salt, as Al compound and not as Al)
					15000 mg/kg (as compound) <u>860 mg/kg (as Al)</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)
					Be discontinued	EU (for safety reason, EU recommends to discontinue the work on this staple food which is consumed on a daily basis; on the basis of the ML of 1.15 mg/g salt, and adult of 60kg reaches the ADI by consuming 7g salt/day; therefore, there is a significant exposure of aluminium that can come from salt also)
12.1.1	Salt	GMP		2006		
12.1.2	Salt Substitutes	10000 mg/kg	6		20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (for safety reason, EU recommends to discontinue the work on this staple food which is consumed on a daily basis)
12.2.2	Seasonings and condiments	30000 mg/kg	6 & 174	3	875 mg/kg (as Al)	Brazil (according to industry)
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					30000 mg/kg (1710 mg/kg as Al)	ICGMA (used as anticaking agent in seasonings to prevent clumping and improving flow ability)
					20000 mg/kg (as compound) <u>1150 mg/kg (as Al)</u>	Canada (ML reported by food industries; it should be converted to Al basis using JECFA or FCC specifications)

²⁵ Note 56 Provided starch is not present

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
12.5.2	Mixes for soups and broths	10000 mg/kg	6 & 174	3	570 mg/kg (as Al)	Brazil
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					10000 mg/kg (570 mg/kg as Al)	ICGMA (used as anticaking agent in these mixes to prevent clumping and improving flow ability)
					Be discontinued	EU (not authorized in STAN 117-1981 on bouillon and consommés; calcium phosphates are used as anticaking agents)
12.6.3	Mixes for sauces and gravies	10000 mg/kg	6 & 174	3	570 mg/kg (as Al)	Brazil
					20000 mg/kg (1150 mg/kg as Al)	IFAC
					20000 mg/kg (1140 mg/kg as Al)	ICGMA (used as anticaking agent in these mixes to prevent clumping and improving flow ability)
					Be discontinued	EU (does not support this new proposal on aluminium while PTWI is already exceeded and JECFA recommends to restrict the conditions of its use)
13.6	Food supplements	GMP	6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					Be discontinued	EU (no technological justification)
14.1.4.3	Concentrates (liquid or solid) for water-based flavoured drinks	10000 mg/kg	6 & 174	3	20000 mg/kg (1150 mg/kg as Al)	IFAC
					1000 mg/kg (as compound)	ICBA (would agree to discontinue the draft provision since there are alternative anticaking agents available and commonly used in powdered drinks)
					Be discontinued	EU (strongly opposes to authorize aluminium in flavoured drinks; a child of 20kg reaches the PTWI by consuming around 2.85mg Al/day; at the ML of 1.15 mg Al/g of drink, few ml of drink are sufficient for the child to reach the PTWI)
15.1	Snacks- potato, cereal, flour or starch based (from roots and tubers, pulses and legumes)	120 mg/kg	6	3	20000 mg/kg (1150 mg/kg as Al)	IFAC

5. SODIUM ALUMINOSILICATE (INS 554) ²²						
Function: anticaking agent						
Food Cat. No.	Food Category	Max Level	Notes	Step/Year Adopted	Proposed Levels/ Basis	Comments
					2000 mg/kg (114mg/kg as Al)	ICGMA (snacks frequently have seasoning mixtures applied to them to create new flavors of products; these seasonings must flow to properly adhere to the product; INS 554 is needed as anticaking agent in these seasonings to prevent components from adhering to each other and then not adhering to the snack product)