

# Proposed Amendments to the Preservatives in Food Regulation (Cap. 132BD)

Consultation Forum

# Outline

- **Background**
- **Proposed amendments**
- **Public consultation and way forward**

# Background

# Chief Executive's 2022 Policy Address

- One of the Policy Measures
  - To review and update by phases the food safety legislation relating to additives in food
  - To further enhance food safety
- The first phase
  - To review the standards for preservatives and antioxidants under the Preservatives in Food Regulation (Cap. 132BD)



# Use of Preservatives and Antioxidants

## ● Preservatives

- To restrict the growth of harmful microorganisms
- To protect food against deterioration caused by microorganisms

## ● Antioxidants

- To protect food against deterioration caused by oxidation
- Deterioration and discolouration of fats and oils

- ✓ Prolong shelf-life
- ✓ Avoid the wastage of food due to spoilage

# Regulation of preservatives and antioxidants in Hong Kong

- Preservatives in Food Regulation (Cap. 132BD)
  - Regulates the use of preservatives and antioxidants in food
  - Adopts a positive list approach to regulate
    - ✓ Any food being imported, manufactured for sale or sold
    - ✓ Only contain the specified permitted preservative or antioxidant
    - ✓ In the proportion that does not exceed the specified maximum permitted level (MPL)

# Regulation of preservatives and antioxidants in Hong Kong

Cap. 132BD (Schedule 1)

Adopt a “**positive list**” approach to regulate

Clearly listed the preservative or antioxidant permitted for use in food

Column 1	Column 2	Column 3	Column 4		
No.	Food category or sub-category	Permitted food additives		Maximum permitted level (ppm, unless otherwise specified)	Note
		INS no.	Name		
4.5	Canned or bottled (pasteurized or heat-sterilized)	210	Benzoic acid	800	Note 20
		214	Ethyl para—hydroxybenzoate	800	Note 20
		218	Methyl para—hydroxybenzoate	800	Note 20
		220	Sulphur dioxide	350	Note 10
		512	Stannous chloride	20	Note 11
4.6	Jams, jellies, marmalades	200	Sorbic acid	1000	Note 18
		218	Ethyl para—hydroxybenzoate	500	Note 18
		220	Sulphur dioxide	100	Note 10
		386	Disodium ethylene diamine tetraacetate	130	Note 9

Clearly listed the specified maximum permitted level

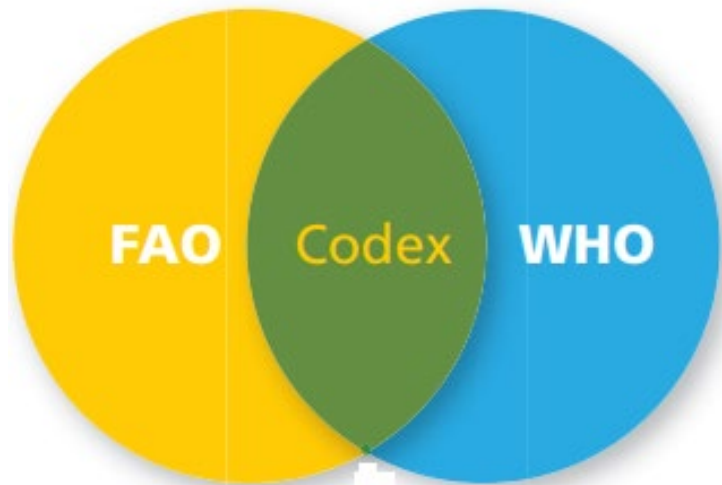
# Regulation of preservatives and antioxidants in Hong Kong

- Preservatives and antioxidants
  - Mainly applied in processed food
- Sources of processed food
  - Mainly from different parts of the world

- International food standards
  - Removing trade barriers
  - Codex Alimentarius Commission



# Codex Alimentarius Commission

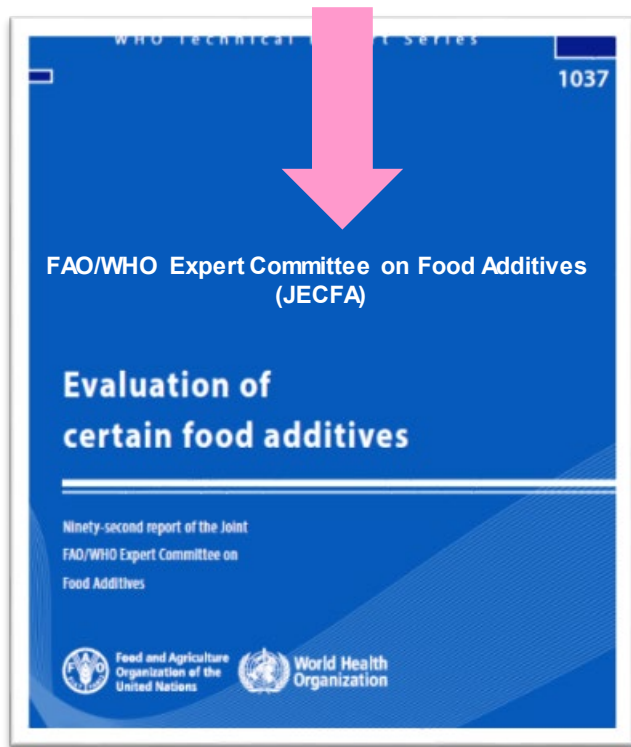


# Codex Alimentarius Commission

- Established by FAO and WHO in 1960s
  - 188 member countries and 1 member organisation (the European Union (EU))
  - Codex standards are developed through thorough discussion among its members and adopted by consensus
- International food standards, code of practice
  - Protecting consumer health
  - Ensuring fair international food trade (removing barriers to trade)
  - Recognised by the World Trade Organization as the standard-setting body for food safety
  - The most important international reference

# Codex Committee on Food Additives

- Codex Committee on Food Additives (CCFA)
  - Hosted by the Mainland (since 2007)
  - The chair person is from the Mainland
  - Establishes food additive standards
- All additives included in the Codex General Standard for Food Additives (GSFA) (including preservatives and antioxidants)



- Undergone stringent evaluation
- Acceptable for use in foods

Not represent a hazard to health

# General Standard for Food Additives

- Preservatives and antioxidants

- Maximum use levels in food

(1) Specify “maximum use level”

Expressed in numerical values

<b>BENZOATES</b>	
FoodCategory	MaxLevel
Dairy-based desserts (e.g. pudding, fruit or flavoured yoghurt)	300 mg/kg
Fat spreads, dairy fat spreads and blended spreads	1000 mg/kg
Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions	1000 mg/kg
Fat-based desserts excluding dairy-based dessert products of food category 01.7	1000 mg/kg
Dried fruit	800 mg/kg
Fruit in vinegar, oil, or brine	1000 mg/kg
Jams, jellies, marmelades	1000 mg/kg
Fruit-based spreads (e.g. chutney) excluding products of food category 04.1.2.5	1000 mg/kg
Candied fruit	1000 mg/kg

# General Standard for Food Additives

- Preservatives and antioxidants
  - Maximum use levels in food

(2) Use level expressed as “GMP”

Not necessary to express in numerical form

**JECFA** evaluated the additives

- ✓ Not represent a hazard to health

**Codex Alimentarius Commission**

- ✓ No need to express “Maximum use level” in numerical form
- ✓ The use of the additives should follow GMP principles

## CARBON DIOXIDE

FoodCategory	MaxLevel
Fermented milks (plain), heat-treated after fermentation	GMP
Renneted milk (plain)	GMP
Sterilized and UHT creams, whipping and whipped creams, and reduced fat creams (plain)	GMP
Peeled or cut fresh fruit	GMP
Fresh pastas and noodles and like products	GMP
Smoked, dried, fermented, and/or salted fish and fish products, including mollusks, crustaceans, and echinoderms	GMP

# Proposed amendments

# Proposed amendments

- Principles:
  - Keeps the Codex standards as the backbone
  - Supplemented with relevant standards of the Mainland and other major trading partners
  
- Major areas of the proposed amendments:
  - a) To update the definitions of “preservatives” and “antioxidants”
  - b) To update the permitted preservatives / antioxidants in the “positive list”
  - c) To update / stipulate the MPLs of the permitted preservatives and antioxidants
    - including the list of GMP additives
    - i.e. additives that are acceptable for use in food in general when used as *quantum satis* levels and in accordance with the principles of GMP

# Proposed updated definition of preservative

Preservative (防腐劑) means any substance, not normally consumed as a food by itself nor normally used as a typical ingredient of the food, which is added to, or used in or on, food at any food processing stage to prolong its shelf-life by protecting against deterioration caused by microorganisms,

but does not include —

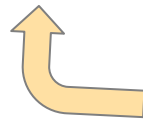
- (a) common salt (sodium chloride);
- (b) sugars;
- (c) alcohol or potable spirits, isopropyl alcohol, monoacetin;
- (d) herbs or hop extract;
- (e) spices or essential oils when used for flavouring purposes;
- (f) any substance added to food by the process of curing known as smoking; or
- (g) any vitamins and minerals added to food as nutrients.

Reference to Codex standard



# Proposed updated definition of antioxidant

Antioxidant (抗氧化劑) means any substance, not normally consumed as a food by itself nor normally used as a typical ingredient of the food, which is added to, or used in or on, food at any food processing stage to prolong its shelf-life by protecting against deterioration caused by oxidation, but does not include any vitamins and minerals added to food as nutrients.



Reference to Codex standard

# To update the permitted preservatives / antioxidants in the “positive list”

- Keeps Codex standards as the backbone, supplemented with relevant standards of the Mainland and other major food trading partners

	No. of preservatives / antioxidants under existing Cap. 132BD:	<b>32</b>
+	No. of new preservatives / antioxidants	<b>29 (25+4)</b>
-	No. of preservatives / antioxidants removed from existing Cap. 132BD:	<b>3</b>
Total no. of proposed preservatives / antioxidants:		<b>58</b>

- All newly added preservatives and antioxidants
  - JECFA has conducted stringent evaluation; not represent a hazard to health
- 3 preservatives to be removed (copper carbonate, diphenyl, formic acid)
  - Safe, not represent a hazard to health
  - There are suitable alternatives

## Comparison of existing Cap. 132BD and proposed amendments: permitted preservatives and antioxidants

Preservatives and antioxidants permitted under existing Cap. 132BD	<i>Additional</i> preservatives and antioxidants permitted under proposed amendments
1. Benzoates	1. Acetic acid, glacial
2. Butylated hydroxyanisole (BHA)	2. Ascorbic acid, L-
3. Butylated hydroxytoluene (BHT)	3. Ascorbyl esters
4. Calcium propionate	4. Calcium acetate
5. Dimethyl dicarbonate	5. Calcium ascorbate
6. Dodecyl gallate	6. Calcium lactate
7. Ethoxyquin	7. Carbon dioxide
8. Ethylenediaminetetraacetates	8. Citric acid
9. Ferrous gluconate	9. Citric and fatty acid esters of glycerol
10. Guaiac resin	10. Erythorbic acid (isoascorbic acid)
11. Hexamethylene tetramine	11. Glucose oxidase
12. Hydroxybenzoates, para-	12. Lecithins
13. Isopropyl citrates	13. Nitrous oxide
14. Lysozyme	14. Phosphates
15. Natamycin (pimaricin)	15. Potassium acetate
16. Nisin	16. Potassium lactate
17. Nitrates	17. Sodium acetate
18. Nitrites	18. Sodium ascorbate
19. Octyl gallate	19. Sodium diacetate
20. ortho-Phenylphenols	20. Sodium erythorbate (sodium isoascorbate)
21. Potassium propionate	21. Sodium lactate
22. Propionic acid	22. Tartrates
23. Propyl gallate	23. Tocopherols
24. Sodium propionate	24. Tricalcium citrate
25. Sorbates	25. Tripotassium citrate
26. Stannous chloride	26. Benzoyl peroxide (Newly added from Codex standard)
27. Sulphites	27. Lauric arginate ethylester (Newly added from Codex standard)
28. Tertiary butylhydroquinone (TBHQ)	28. Rosemary extract (Newly added from other standards)
29. Thiodipropionates	29. Stearyl citrate (Newly added from Codex standard)
<del>30. Copper carbonate (proposed to remove)</del>	
<del>31. Diphenyl (proposed to remove)</del>	
<del>32. Formic acid (proposed to remove)</del>	

# To update maximum permitted levels

- Keeps Codex standards as the backbone, supplemented with relevant standards of the Mainland and other major food trading partners
  - No. of MPLs increased from some 900 to around 2000
  - To update the food category system in light of the latest Codex GSFA

Column 1		Column 2		Column 3	Column 4
No.	Food category or sub-category	Permitted food additives		Maximum permitted level (ppm, unless otherwise specified)	Note
		INS no.	Name		
4.5	Canned or bottled (pasteurized or heat-sterilized) fruit	210	Benzoic acid	800	Note 20
		214	Ethyl para—hydroxybenzoate	800	Note 20
		218	Methyl para—hydroxybenzoate	800	Note 20
		220	Sulphur dioxide	350	Note 10
		512	Stannous chloride	20	Note 11

# Set out GMP additives in a separate list

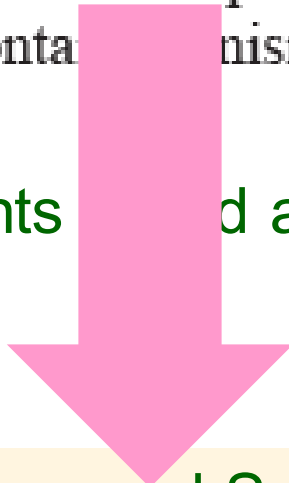
- Proposed with reference to the Codex GSFA
  - JECFA conclusion: not represent a hazard to health
  - MPLs not necessary expressed in numerical values
  - Acceptable for use when used at *quantum satis* levels and in accordance with GMP principles
  - Includes 24 preservatives / antioxidants
  - Specify a list that such general use is not applicable to certain food categories or individual food items

# Other proposed amendments (1)

- Section 3(8) of the existing Cap. 132BD specifies that:
  - (8) Any canned food may contain nisin, and any food may contain nisin introduced in the preparation of that food by the use of canned food containing nisin.
- The proposed amendments would add MPLs for nisin in some specified food

No.	Food category or sub-category	Permitted food additives		Maximum permitted level (mg/kg, unless otherwise specified)	Note
		INS <sup>5</sup> no.	Name		
4.2.2.4	Canned or bottled (pasteurized or heat-sterilized) or retort pouch vegetables (including mushrooms and fungi, root tubers, pulses and legumes, and aloe vera) and seaweeds	320	Butylated hydroxyanisole	200	Note 12 and Note 70
		321	Butylated hydroxytoluene	200	Note 12 and Note 70
		365	Ethylenediaminetetraacetates	365	Note 42
		234	Nisin	5	Note 63

# Other proposed amendments (1)

- Section 3(8) of the existing Cap. 132BD specifies that:
    - (8) Any canned food may contain nisin, and any food may contain nisin introduced in the preparation of that food by the use of canned food containing nisin.
  - The proposed amendments would add MPLs for nisin in some specified food
- 
- We therefore propose to amend Section 3(8):
    - To clarify that canned food (including canned or bottled) with applicable MPLs for nisin in specified food categories should comply with the relevant standards

# Other proposed amendments (2)

- The proposed amendments include antioxidants (with MPLs) in foods for infants and young children
  - Infant formulae, follow-up formulae, and formulae for special medical purposes for infants
  - Complementary foods for infants and young children

Examples:

Column 1		Column 2		Column 3	Column 4
No.	Food category or sub-category	Permitted food additives		Maximum permitted level (mg/kg, unless otherwise specified)	Note
		INS <sup>5</sup> no.	Name		
	infants				
13.1.1	Infant formulae	304, 305	Ascorbyl esters	10	Note 128 and Note 137
		330	Citric acid	GMP	
		472c	Citric and fatty acid esters of glycerol	9000	Note 128 and Note 136
		322	Lecithins	5000	Note 128
		307a, b, c	Tocopherols	10	Note 128

Column 1		Column 2		Column 3	Column 4
No.	Food category or sub-category	Permitted food additives		Maximum permitted level (mg/kg, unless otherwise specified)	Note
		INS <sup>5</sup> no.	Name		
13.2	Complementary foods for infants and young children, excluding products of food category 13.1 and its sub-categories (if applicable)	300	Ascorbic acid, L-	500	
		304, 305	Ascorbyl esters	200	Note 12 and Note 137
		302	Calcium ascorbate	200	Note 139
		263	Calcium acetate	GMP	
		330	Citric acid	5000	Note 140
		472c	Citric and fatty acid esters of glycerol	5000	



# Other proposed amendments (2)

- Inclusion of antioxidants
  - Update making reference to the Codex standards
  - Related standards in other places (e.g. EU, Australia, New Zealand, Singapore, etc.)
  - Evaluated by JECFA as no health concern
- Currently, they may be present in foods for infant and young children
  - Excluded from the definition of antioxidants under existing Cap. 132BD
- Section 4 of the existing Cap. 132BD specifies that:
  - Food containing antioxidant not to be recommended for babies and young children
- Consider appropriate adjustment to Section 4

# Other proposed amendments (3)

- Food items “Liquid foam headings” and “Gelatin capsules” under food category 15 are proposed to be deleted from Cap. 132BD
  - neither Codex nor our major food trading partners such as the Mainland, the EU, Singapore, Australia/New Zealand, United States and Canada have set any maximum levels for food additives in these two food items

# Other proposed amendments (4)

- Unit for the proposed MPLs
  - Will be changed from “ppm” to “mg/kg”
  - Following the Codex GSFA

# Comparison of proposed amendments and existing Cap. 132BD

MPLs for major “additive-food category” pairs

## 12 major “additive-food category” pairs of the proposed amendments with MPLs more stringent than that of the existing Cap. 132BD

	Proposed food category or sub-category		Food additive	Proposed MPL (mg/kg)	Existing MPL (mg/kg)
1	1.4.3	Clotted cream (plain)	Nisin	10	GMP
2	4.1.1.2	Surface-treated fresh fruit (including apple and pear)	Sulphites	30 (Longan, litchi: 50)	50
3	4.1.2.5	Jams, jellies, marmalades	Parabens	250	500
4	4.1.2.6	Fruit-based spreads	Sulphites	100	500
5	4.1.2.7	Candied fruit	Sorbates	500	1000
6	4.1.2.8	Fruit preparations, including pulps, purees, fruit sauces, fruit toppings, coconut milk and coconut cream	Sulphites	100	500

## 12 major “additive-food category” pairs of the proposed amendments with MPLs more stringent than that of the existing Cap. 132BD

	Proposed food category or sub-category		Food additive	Proposed MPL (mg/kg)	Existing MPL (mg/kg)
7	4.2.2.6	Vegetable, seaweed, and nut and seed pulps, pastes and preparation (including candied vegetables), excluding food category 4.2.2.5, and its sub-categories (if applicable)	Sulphites	300  [Candied : 350]	500
8	14.1.4.3	Concentrates (liquid or solid) for water-based flavoured drinks	Benzoates	250	800
9			Parabens	500	800
10			Sorbates	500	2000
11	14.2.3	Grape wines	Sorbates	200	400
12	14.2.5	Mead	Sorbates	200	400

## 12 major “additive-food category” pairs of the proposed amendments with MPLs more stringent than that of the existing Cap. 132BD ~ Local situation ~

- These 12 major “additive-food category” pairs
  - Codex standards
    - ✓ developed through thorough discussion among its members and adopted by consensus
    - ✓ remove barriers to trade
  - Our routine food surveillance data
    - ✓ indicated that the food available in food in Hong Kong can generally comply with the proposed MPLs

## 12 major “additive-food category” pairs of the proposed amendments with MPLs more stringent than that of the existing Cap. 132BD

	Proposed food category or sub-category		Food additive	Proposed MPL (mg/kg)	Existing MPL (mg/kg)
1	1.4.3	Clotted cream (plain)	Nisin	10	GMP
2	4.1.1.2	Surface-treated fresh fruit (including apple and pear)	Sulphites	30 (Longan, litchi: 50)	50
3	4.1.2.5	Jams, jellies, marmalades	Parabens	250	500
4	4.1.2.6	Fruit-based spreads	Sulphites	100	500
5	4.1.2.7	Candied fruit	Sorbates	500	1000
6	4.1.2.8	Fruit preparations, including pulps, purees, fruit sauces, fruit toppings, coconut milk and coconut cream	Sulphites	100	500



# Regulation of sulphites in surface-treated fresh fruits in different places

- **Proposed MPL 50 mg/kg → 30 mg/kg**

	Sulphites (mg/kg)
<b>Codex</b>	30 (Fruit, except litchi and longan) 50 (Litchi and longan)
<b>The Mainland</b>	50 (Fruit)
<b>European Union</b>	10 (Only table grapes, fresh lychees and blueberries)
<b>Thailand</b>	30 (Fruit, except litchi and longan) 50 (Litchi and longan)
<b>Singapore</b>	30 (Fruits (fresh, whole and unpeeled, except longans and lychees)) 50 (Lychees / longan, fresh, whole and unpeeled)
<b>Japan</b>	30 (Other food)
<b>Australia, New Zealand</b>	Not permitted
<b>USA</b>	Not permitted (Not permitted on fruits or vegetables intended to be served raw to consumers)
<b>Canada</b>	Not permitted (prohibits the use of sulphites in any fruit or vegetable that is intended to be consumed raw, except grapes)

# Local situation on sulphites in surface-treated fresh fruits

- Over 150 fresh fruits samples, collected in the last 4 years, were not detected with sulphites
- Recent study conducted by CFS also found that sulphites were not detected in 20 fresh fruit samples

# Summary

# Summary of the proposed amendments to Cap. 132BD

- Definitions of “preservatives and antioxidants”
  - Update with reference to the definitions adopted by Codex
- Total number of permitted preservatives and antioxidants will increase from 32 to 58
  - Among them, 24 are GMP additives
  - Will be set out in a separate list in the amended Cap. 132BD (see Annex V)
- MPLs of the permitted preservatives / antioxidants in specific food categories would be updated / stipulated (see Annex IV)

# Expert Committee on Food Safety

- To advise the Director of Food and Environmental Hygiene
  - formulation of food safety measures, review of food safety standards, risk communication strategies, etc.
- The Expert Committee consists of 18 members including academics, food experts, members of the trade and other experts
- The current membership includes 4 experts from the Mainland and overseas (Germany and Australia)
- Consulted the Expert Committee in early March
  - Supported the proposal of making reference to the Codex standards

# Transitional period

- Propose a transitional period of 18 months after enactment of the amended legislation
  - Processed foods have longer shelf-lives
  - Allow adequate time for the trade to get prepared for the updated standards
  - Allow local laboratories to build up testing capacities
- Will update the “Preservatives and Antioxidants User Guidelines”
  - To assist the trade to better understand that amendments and facilitate their compliance

# Public consultation and way forward

- Have launched the 3-month public consultation (till 28 August 2023)
- Plan to introduce the legislative amendments to the Legislative Council in late 2023 / early 2024

# Consultation forums

<b>Date:</b>	<b>9 June 2023 (Friday)</b>	<b>29 June 2023 (Thursday)</b>
<b>Time:</b>	<b>2:30 pm – 4:00 pm</b>	<b>2:30 pm – 4:00 pm</b>
<b>Format:</b>	<b>Physical meeting</b>	<b>Online video conferencing (Zoom Cloud Meeting)</b>
<b>Venue:</b>	<b>Conference Room, 1/F, New Wan Chai Market, 258 Queen's Road East, Wan Chai, Hong Kong</b>	<b>-</b>
<b>Registration deadline:</b>	<b>5 June 2023</b>	<b>26 June 2023</b>



# Views sought

- Please send your comments to the CFS by post, facsimile or e-mail within the consultation period (i.e. from 29 May 2023 to 28 August 2023) –

**Centre for Food Safety**

**Food and Environmental Hygiene Department**

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# Thank you