# **Draft of Sanitation Standard for Microbiological in**

## Foods

#### Article 1

This Standard is prescribed in accordance with the provisions of Article 17 of the Act Governing Food Safety and Sanitation.

#### Article 2

The scopes of this standard include food microorganisms and their toxins or metabolites, not include fungi and mycotoxins.

#### Article 3

The limits for food microorganisms and their toxins or metabolites shall meet the requirements in the table on Annex.

### Article 4

This Standard shall be implemented from January 1, 2020.

### Annex

Note.

1. The meaning of the symbol in the "sampling plan" and "Limits":

"n" means number of units comprising the sample.

"c" means number of sample units giving values between m and M.

"m" means a microbiological limit that acceptable quality.

"M" means a microbiological limit above which sampling results are unacceptable.

- 2. The detected results allowable between m and M from  $\leq$  c sample quantity. Unacceptable  $\geq$  M for any sample.
- 3. If "m=M", means unacceptable  $\geq$  m or M for any sample.

Food astronom	Microorganisms and their	Sampli	ng plan	Limits		
Food category	toxins or metabolites	n	c	m	Μ	
<ul><li>1.1 Milk, flavored milk and milk drink</li><li>1.2 Milk powder, flavored milk powder</li></ul>	Enterobacteriaceae	5	0	10 CFU/mL(g) Negative Negative Negative		
and whey powder as raw material for food processing.	Salmonella	5	0			
1.4 Condensed milk, except of canned condensed milk listed in 1.6	Listeria monocytogenes	5	0			
	Staphylococcal enterotoxins	5	0			
1.5 Cheese, butter and cream		5	2	10	100	
	Escherichia coli	5		MPN/g(mL)	MPN/g(mL)	
	Salmonella	5	0	Neg	ative	
	Listeria monocytogenes	5	0	Neg	ative	
	Staphylococcal enterotoxins	5	0	Neg	ative	
1.6 Canned food <sup>2</sup> : Sterilized milk,				Passes inspec	tion by	
sterilized flavored milk, sterilized				incubation te	st (37°C for	
milk drink and condensed milk	_	5	0	10 days): Sha	all not growth	
		C C	Ū	of microorga	nisms cause	
				of swelling, t	ransform or	
-				pH value abn	ormal.	
<sup>1</sup> The test item of <i>Escherichia coli</i> here, not	applicable cheese.					

Table1. Milk and dairy products

Food optogram	Microorganisms and their	Sampling plan		Limits		
roou category	toxins or metabolites	n	c	m	Μ	
<sup>2</sup> Canned food here refers to those canned food meet the commercial sterility requirements in Regulations on Good Hygiene						
Practice for Foods.						

Food cotogory	Microorganisms and their	Sampling plan		plan Limits	
roou category	toxins or metabolites	n	С	m	Μ
<ul><li>2.1 Infant formula</li><li>2.2 Follow-up infant formula</li></ul>	Enterobacteriaceae	10	0	10 CFU	J/g(mL)
2.3 Infant formula for special medical purposes	Salmonella	10	0	Neg	ative
	Listeria monocytogenes	10	0	Neg	ative
	<sup>2</sup> Cronobacter spp. ; Enterobacter sakazakii	10	0	Negative	
2.4 Other infant food <sup><math>3</math></sup> , except list in 2.5	Coliform	5	2	<3	
	Salmonella	5	0		
	Listeria monocytogenes	5	0		
2.5 Canned food <sup>4</sup> : Other ready-to-eat canned infant foods. For example, the ready-to-feed liquid infant formula, meat puree, fruit puree, vegetable puree.	_	5	0	Passes inspection by incubation test (37°C for 10 days): Shall not growth of microorganisms cause of swelling, transform or pH value abnormal.	

**Table2.** Infant foods<sup>1</sup>

Food astagowy	Microorganisms and their	Sampling plan		lan Limits		
rood category	toxins or metabolites	n	c	m	Μ	
<sup>1</sup> Infant food referred to in this table means the food sold exclusively for infants less than 12 months of age.						
<sup>2</sup> The test item of <i>Cronobacter</i> spp. ( <i>Enterobacter sakazakii</i> ) here, just applicable food sold exclusively for infants less than						
6 months of age.						
<sup>3</sup> Other infant foods mean other foods sold exclusively for infants less than 12 months of age, include cereal-based foods,						
milk-based drinks and similar products.						
<sup>4</sup> Canned food here refers to those canned food meet the commercial sterility requirements in Regulations on Good Hygiene						
Practice for Foods.						

# Table3. Raw ready-to-eat foods<sup>1</sup> and ready-to-eat foods contain both raw and processed food ingredient at once<sup>2</sup>

Food astagowy	Microorganisms and their	Sampling plan		Lir	nits
roou category	toxins or metabolites	n	С	m	Μ
<ul><li>3.1 Raw ready-to-eat aquatic products</li><li>3.2 Ready-to-eat foods contain both raw</li></ul>	Salmonella	5	0	Neg	ative
aquatic products and processed food ingredient at once	Vibrio parahaemolyticus	5	0	100 N	/IPN/g
3.3 Fresh/raw ready-to-eat fruit and vegetables	Escherichia coli	5	0	10 M	IPN/g
3.4 Ready-to-eat foods contain both	<sup>3</sup> Escherichia coli O157:H7	5	0	Neg	ative
processed food ingredient at once	Salmonella	5	0	Neg	ative
3.5 Ready-to-eat not fully cooked eggs, and ready-to-eat foods that contain not fully cooked eggs	Salmonella	5	0	Neg	ative
<sup>1</sup> Ready-to-eat food means food intended by	the producer or the manufacturer for	or direct l	numan co	nsumption wi	thout the

need for cooking or other processing effective to eliminate or reduce to an acceptable level the microorganisms of concern.

<sup>2</sup> Ready-to-eat foods contain raw aquatic products, fresh/raw fruit and vegetables, and eggs not fully cooked, must merge all related inspection items.

<sup>3</sup> Escherichia coli test results if negative, do not need to test Escherichia coli O157:H7.

East astasser	Microorganisms and their	Sampling plan		Limits	
Food category	toxins or metabolites	n	c	m M	
4.1 Packaged drinking water and	Coliform	5	0	Negative	
containerized drinking water	Fecal Streptococci	5	0	Negative	
	Pseudomonas aeruginosa	5	0	Negative	
4.2 Carbonated beverages, for example, the soft drinks, cola and other sugary carbonated beverages	Enterobacteriaceae	5	0	Negative	
<ul> <li>4.3 Reconstituted fruit and vegetable juices, fruit and vegetable juice drinks, puree<sup>1</sup> and other similar, except listed in 4.7, 4.8</li> <li>4.4 Beverages containing coffee, cocoa, tea or cereals, legumes and other food materials, except listed in 4.7, 4.8</li> </ul>	Enterobacteriaceae	5	0	Negative	
4.5 Unpasteurized fresh fruit and	Escherichia coli	5	0	10 MPN/mL	
vegetable juices. Unpasteurized fresh	<sup>2</sup> Escherichia coli O157:H7	5	0	Negative	
fruit and vegetable juices containing milk less than 50%	Salmonella	5	0	Negative	
4.6 Fermented fruit and vegetable juice, flavored acidic beverages containing lactic acid or fermentation broth (contain active probiotics), except	Enterobacteriaceae	5	0	Negative	

 Table4. Packaged/containerized drinking water and beverage

Food astagory	Microorganisms and their	anisms and their Sampling plan		Li	mits
r obu category	toxins or metabolites	n	c	m	Μ
listed in 4.7					
4.7 Beverages that is made on the spot,	Enterobacteriaceae	5	2	10 CFU/mL	100 CFU/mL
unpasteurized, and the shelf-life less than 24 hours, except listed in 4.5	Salmonella	5	0	Negative	
4.8 Canned foods <sup>3</sup> : Canned beverages	-	5	0	Passes inspection by incubation test (37°C for 10 days): Shall not growth of micro-organisms cause of swelling, transform or pH value abnormal.	
<sup>1</sup> Fruit juice syrup (which contain reconstituted fruit juices or natural fruit juices above 50%, sugary and total soluble solids					
above 50° Brix, must be diluted drink) not applicable.					
<sup>2</sup> <i>Escherichia coli</i> test results if negative, do	o not need to test Escherichia coli O	157:H7.			

<sup>3</sup>Canned food here refers to those canned food meet the commercial sterility requirements in Regulations on Good Hygiene Practice for Foods.

Food astagowy	Microorganisms and their	Sampling plan		Limits		
r ood category	toxins or metabolites	n	c	m M		
<ul> <li>5.1 Ice cubes, food grade</li> <li>5.2 Frozen ready-to-eat foods<sup>1</sup>,include:</li> <li>-Ice products include ice cream, gelato, popsicle, shaved ice, sundae, sorbet, smoothie etc.</li> </ul>	Enterobacteriaceae	5	2	10 CFU/g(mL)		
<ul> <li>-Frozen fruits</li> <li>5.3 Frozen cooked<sup>2</sup> foods, may provide ready-to-eat after thawing or re-heat, except listed in 5.6, include:</li> <li>-Frozen cooked vegetables</li> </ul>	Salmonella	5	0	Negative		
<ul> <li>5.4 Frozen non ready-to-eat foods</li> <li>-Frozen food that must be cooked<sup>2</sup></li> <li>before provide.</li> <li>-Frozen raw aquatic products that not provide ready-to-eat.</li> </ul>	Escherichia coli	5	0	50 MPN/g		
5.5 Frozen raw aquatic products that provide ready-to-eat.	Salmonella	5	0	Negative		
	Vibrio parahaemolyticus	5	0	100 MPN/g		
5.6 Frozen cooked <sup>2</sup> aquatic products, may provide ready-to-eat after	Vibrio parahaemolyticus	5	0	Negative		

## Table5. Frozen foods and ice products

Food estagony	Microorganisms and their	Sampling plan		anisms and their Sampling plan Li		Limits
roou category	toxins or metabolites	n	c	m	Μ	
thawing or re-heat.						
<sup>1</sup> Ready-to-eat food means food intended by the producer or the manufacturer for direct human consumption without the need						
for cooking or other processing effective to eliminate or reduce to an acceptable level the microorganisms of concern.						
<sup>2</sup> Cooked means heat-treated food thoroughly to make sure foods keep the minimum internal temperature above 75 $^{\circ}$ C and may						
provide ready-to eat.						

Food cotogory	Microorganisms and their	Sampli	ng plan	L	<i>i</i> mits
roou category	toxins or metabolites	n	с	m	Μ
<ul><li>6.1 Foods that can eat after rehydration list other than table1 to 5.</li><li>6.2 Ready-to-eat foods that stored at hot holding or room temperature list</li></ul>	Staphylococcus aureus	5	1	100 CFU/g(mL)	1000 CFU /g(mL)
other than table1 to 5. 6.3 Ready-to-eat foods that stored at refrigeration or below room temperature list other than table 1 to	Salmonella	5	0	Negative 100 CFU /g(mL) Passes inspection by incubation test (37°C for 10 days): Shall not growth of micro-organisms cause of swelling, transform or pH value abnormal.	
5, include: -Ready-to-eat foods that stored at refrigeration or below room temperature, can re-heat before eat. For example, 18°C delicatessen. -dessert, sauces etc.	<sup>1</sup> Listeria monocytogenes	5	0		
6.4 Canned foods <sup>2</sup> list other than table1 to 5.	-	5	0		

## **Table6. Other ready-to-eat foods**

Microorganisms and their	Sampling plan		I	Limits		
toxins or metabolites	n	c	m	Μ		
<sup>1</sup> The test item of <i>Listeria monocytogenes</i> is not applied the sugar, honey, confectionery (including cocoa and chocolate						
products) and food grade salt.						
<sup>2</sup> Canned food here refers to those canned food meet the commercial sterility requirements in Regulations on Good Hygiene						
Practice for Foods.						
	Microorganisms and their toxins or metabolites not applied the sugar, honey, confe	Microorganisms and their toxins or metabolites       Sampli n         s not applied the sugar, honey, confectionery         cod meet the commercial sterility requirement	Microorganisms and their toxins or metabolitesSampling plannca not applied the sugar, honey, confectionery (including bood meet the commercial sterility requirements in Reg	Microorganisms and their toxins or metabolitesSampling planIncms not applied the sugar, honey, confectionery(including cocoa and complete cocoa)bood meet the commercial sterility requirements in Regulations on G		