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Safety of foodstuffs — Requirements



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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 210, of the Laws of Uganda, as amended. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO),
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and
- (c) the National Enquiry Point on TBT Agreement of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of key stakeholders including government, academia, consumer groups, private sector and other interested parties.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

The committee responsible for this document is Technical Committee UNBS/TC 208, *Food labelling and hygiene*.

This second edition cancels and replaces the first edition (US 2245:2021), which has been technically revised.

Introduction

Access to sufficient amounts of safe and nutritious food is key to sustaining life and promoting good health. Unsafe food causes diseases ranging from diarrhoea to cancers. Unsafe food also affects nutrition and creates a vicious cycle of disease and malnutrition, particularly affecting infants, young children, the elderly and the sick.

Food safety also has a significant impact on trade and the economy. Unsafe food leads to food loss, reduces outputs and leads to loss of markets.

Food becomes unsafe when it contains contaminants namely; harmful bacteria, viruses, parasites or chemical substances. When food exists naturally in plants (for example, fruits and grains), animals (for example, meat and milk) or in mineral forms (for example, water and salt), it may be naturally safe. Once the food is harvested, it could be contaminated from the environment; the equipment used in handling or even from the personnel who handle the food. Food may also become unsafe due to handling technologies such as preservation or other modifications.

Several standards to address food safety concerns have been developed and issued, and these include standards on food hygiene, labelling, codes of practice, specifications, and test methods. These standards may be horizontal covering all food products or specific sometimes dealing with one product. These standards make provisions for safety, identity and quality of the products ranging from handling practices to specific characteristics of the food. These characteristics include limits of certain contaminants in food. Each standard constitutes a pool of knowledge for the food sector as a whole. As a result, standards make reference to other standards. For example, a general standard on food additives applies for all food products. There is also a general standard on food contaminants and toxins in food

This standard lays down general food safety requirements which include safety criteria on the acceptability of food, in particular as regards the presence of certain pathogenic micro-organisms. It also makes reference to standards that deal with other types of contaminants such heavy metal contaminants, mycotoxins, radioactive residues, pesticide residues and residues of veterinary drugs in foods.

Microbiological criteria give guidance on the acceptability of foodstuffs and their manufacturing processes. Preventative actions, such as the application of Good Hygiene Practices (GHP), Good Manufacturing Practices (GMP), and the Hazard Analysis Critical Control Point (HACCP) principles contribute to achieving food safety. Microbiological testing alone cannot guarantee the safety of a foodstuff tested; however the microbiological criteria provide objectives and reference points to assist food businesses and competent authorities in their activities to manage and monitor the safety of foodstuffs, respectively.

This standard lists the maximum permissible levels of food borne microorganisms, among other food safety aspects, that pose a risk to human health.

Safety of foodstuffs — Requirements

1 Scope

This Draft Uganda Standard specifies general food safety requirements for food intended for human consumption or further processing in particular, where there is no specific product standard.

It provides the basic requirements to be met for a food to be passed as safe.

2 Normative references

The following referenced documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

AOAC 967.26, *Salmonella in processed foods. Detection*

ISO 16649-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

CXG 50, *General guidelines on sampling*

CXM 2, *Maximum Residue Limits (MRLs) and Risk Management Recommendations (RMRs) for residues of veterinary drugs in foods*

US 28 EAS 39, *Code of practice for hygiene in the food and drink manufacturing industry*

US EAS 38, *Labelling of pre-packaged foods — General requirements*

US EAS 803, *Nutrition labelling — Requirements*

US EAS 804, *Claims on food — Requirements*

US EAS 805, *Use of nutrition and health claims — Requirements*

US ISO 4832, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coliforms — Colony-count technique*

US ISO 6461-2, *Water quality — Detection and enumeration of the spores of sulfite-reducing anaerobes (clostridia) — Part 2: Method by membrane filtration*

US ISO 7251, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique*

US ISO 7937, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of Clostridium perfringens — Colony-count technique*

US ISO 11290-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Listeria monocytogenes — Part 1: Detection method*

US ISO 21527-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 1: Colony count technique in products with water activity greater than 0.95*

US ISO 21528-1, *Microbiology of the food chain — Horizontal method for the detection and enumeration of Enterobacteriaceae — Part 1: Detection of Enterobacteriaceae*

US 45, *General standard for food additives*

CXS 193, *General standard for contaminants and toxins in food and feed*

AOAC 988.20, *Vibrio cholerae in oysters. Elevated temperature enrichment method*

ISO 22964, *Microbiology of the food chain — Horizontal method for the detection of Cronobacter spp*

US ISO 21527-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0,95*

ISO 7932, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of presumptive Bacillus cereus — Colony-count technique at 30 degrees C*

ISO 9308-1, *Water quality — Enumeration of Escherichia coli and coliform bacteria — Part 1: Membrane filtration method for waters with low bacterial background flora*

US 1659, *Materials in contact with food - Requirements for packaging materials.*

ISO 16140, *Microbiology of the food chain — Method validation — Part 3: Protocol for the verification of reference methods and validated alternative methods in a single laboratory*

US ISO 6579, *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp.*

US ISO 6888-1, *Microbiology of the food chain — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Method using Baird-Parker agar medium*

ISO 4833, *Microbiology of Food and Animal Feeding Stuff - Horizontal Method for the Enumeration of Microorganisms - Colony-Count Technique at 30 Degrees Celcius*

ISO 6611, *Milk and milk products — Enumeration of colony-forming units of yeasts and/or moulds — Colony-count technique at 25 degrees C*

ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 °C by the pour plate technique*

US ISO 6579-1, *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp. — Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC*

US ISO 6888-3, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 3: Detection and MPN technique for low numbers*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

food safety

quality of the food not to cause harm to the consumer and conditions and practices that preserve the quality of food to prevent contamination and food-borne illnesses

3.2

micro-organisms

bacteria, viruses, yeasts, moulds, algae, parasitic protozoa, microscopic parasitic helminths

3.3

lot

quantity of food which is prepared or packed under essentially the same conditions, usually from a particular preparation or packing unit or during a particular time ordinarily not exceeding 24 h

3.4

batch

group or set of identifiable products obtained from a given process under identical circumstances and produced in a given place within one defined production period

3.5

microbiological criterion

criterion defining the acceptability of a product, a batch of foodstuffs or a process, based on the absence, presence or number of micro-organisms, and/or on the quantity of their toxins/metabolites, per unit (s) of mass, volume, area or batch

3.6

defective sample

sample unit that gives a microbiological criterion value higher than a defined value

3.7

defective sample unit

unit in which a micro-organism is detected in a sample unit of a food at a level greater than a defined value

3.8

shelf-life

either the period corresponding to or the period preceding the "use by" or the minimum durability date

3.9

ready-to-eat food

food intended by the producer or the manufacturer for direct human consumption without the need for cooking or further processing to eliminate or reduce to an acceptable level, micro-organisms of concern

3.10

commercial sterility

absence of microorganisms capable of growing in the food at normal non-refrigerated conditions at which the food is likely to be held during manufacture, distribution and storage

3.11

food business operators (FBOs)

person (s) responsible for operating a business at any step in the food chain

3.12

infants

person not more than 12 months of age.

4 General principles of food safety

4.1 Food business operators shall ensure that:

- a) foodstuffs comply with the relevant microbiological criteria set out in this standard at each stage of food production, processing and distribution, including retail and take measures, as part of their procedures based on HACCP principles together with the implementation of good hygiene practice;
- b) supply, handling and processing of raw materials and foodstuffs under their control are carried out in such a way that the process hygiene criteria are met; and
- c) food safety criteria applicable throughout the shelf-life of the products can be met under reasonably foreseeable conditions of distribution, storage and use.

4.2 All foods and food ingredients shall be managed and handled in such a manner to ensure that what is distributed and offered for sale is safe for the consumer and free from adulteration.

4.3 All food shall be suitable for consumption and free from off flavours, off colours, insect infestation, insect fragments, rodent contamination and other extraneous matter, and be characteristic of the product.

4.4 All ingredients used shall be of food grade and fit for human consumption.

4.5 Food business operators shall ensure that food which is placed on the market or, is likely to be placed on the market shall be adequately labelled or identified to facilitate its traceability and recall, through relevant documentation, information or labelling.

4.6 Food contact materials shall be of food grade.

4.7 All necessary measures required for maintaining a hygienic environment throughout the food chain (production, handling, and marketing) shall be established to ensure provision of safe food for human consumption.

5 Hygiene

Products covered by this standard shall be produced, processed, handled and stored in accordance with EAS 39.

6 Food additives

The products covered by this standard shall comply with the requirements for food additives in accordance with CXS 192.

Flavourings when used shall be in accordance with CXG 66

7 Contaminants and toxins

The products covered by this standard shall comply with the requirements for contaminants and toxins in accordance with CXS 193.

8 Pesticide residues

The products covered by this standard shall comply with the maximum residue limits established by the Codex Alimentarius Commission.

9 Residues of veterinary drugs in food

The products shall comply with the limits for veterinary drug residues and pesticide residues specified in CXM 2

10 Microbiological requirements

10.1 Microbiological limits

10.1.1 All food categories shall comply with the relevant microbiological limit as specified in tables 1-, unless otherwise specified in a product standard.

10.1.2 Commercially sterilized canned foods shall pass the sterility test described in the relevant Codex or Uganda standard for canned foods, in accordance with Annex A.

NOTE Establishment of microbiological criterion does not necessarily mean that every lot of product has to be tested.

Table 1 — Microbiological criteria for dairy and dairy products

Food category	Micro-organism	Limit	Test method
Fresh cheese	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10^2	US ISO 6888-1
Raw milk cheese	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10^4	
Cheese from mildly heated milk or ripened	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10^4	
Cheese made from pasteurized milk	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10^2	
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella spp</i> /25g	Absent	AOAC 967.26
Milk powder and cream powder and powder analogues (plain, flavoured or fortified)	Total plate count, Cf/g	5×10^4	ISO 4833-1
	<i>Escherichia coli</i> , Cf/g	Absent	US ISO 7251
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10^3	US ISO 6888-3
	<i>Salmonella spp.</i> /25 g	Absent	US ISO 6579-1
	Yeasts and moulds, Cf/g	10	ISO 6611
Condensed milk and analogues (plain, beverage whiteners)	Total plate count, Cf/g	10	ISO 4833-1
	<i>Escherichia coli</i> , Cf/g	Absent	US ISO 7251
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10^3	US ISO 6888-3
	<i>Salmonella spp.</i> /25 g	Absent	US ISO 6579-1
	Yeasts and moulds, Cf/g	10	ISO 6611
Butter oil, anhydrous milkfat, ghee, ghee blends and substitutes	Total plate count, Cf/g	1×10^3	ISO 4833-1
	<i>Escherichia coli</i> , Cf/g	Absent	US ISO 7251
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10^3	US ISO 6888-3
	<i>Salmonella spp.</i> /25 g	Absent	US ISO 6579-1
	Yeasts and moulds, Cf/g	10	ISO 6611
Dairy-based desserts (for example, pudding)	<i>Escherichia coli</i> , Cf/g	Absent	US ISO 7251
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10^3	US ISO 6888-3
	<i>Salmonella spp.</i> /25 g	Absent	US ISO 6579-1
	Yeasts and moulds, Cf/g	102	ISO 6611
Fermented and renneted milk products (plain)	<i>Escherichia coli</i> , Cf/g	Absent	US ISO 7251
	<i>Coagulase-positive staphylococci</i>	10^3	US ISO 6888-3

Fortified milk (with or without added flavour)	(<i>Staphylococcus aureus</i> and other species), Cf/g		
	<i>Salmonella</i> spp. /25 g	Absent	US ISO 6579-1
	Total plate count, Cf/g	10	ISO 4833-1
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 7251
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ³	ISO 6888-3
	<i>Salmonella</i> spp. /25 g	Absent	ISO 6579-1
	Yeasts and moulds, Cf/g	10	ISO 6611

Table 2 — Microbiological criteria for meat, poultry and its products

Food category	Micro-organism	Limit	Test method
Beef trimmings used in ground beef	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp /25g	Absent	AOAC 967.26
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ³	US ISO 6888-1
Raw minced/pieces meat (chilled/frozen) with soy or marinated (for example, kubba; meat balls, burgers)	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ³	US ISO 6888-1
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
Cured and/or smoked meat; mortadella; luncheon meat, basterma	Aerobic plate count, Cf/g	5 x 10 ⁶	ISO 4833
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	5 x 10 ³	US ISO 6888-1
Cured and/or smoked poultry meat; mortadella, frankfurters, turkey, smoked turkey breast	Aerobic plate count, Cf/g	10 ⁵	ISO 4833
	<i>Salmonella</i> /25g	Absent	AOAC 967.26
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
Cooked uncured meat	<i>Clostridium perfringens</i> /25g	10 ³	US ISO 7937
	<i>Salmonella</i> spp /25 g	Absent	US ISO 6579-1
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2-2

	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), CfU/g</i>	<10	ISO 6888-2
Cooked meat ISO 6888-2	<i>Escherichia coli, CfU/g</i>	Absent	ISO 16649-2
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), CfU/g</i>	<10	ISO 6888-2
	<i>Salmonella/25 g</i>	Absent	ISO 6579
	<i>Listeria monocytogenes/25g</i>	Absent	US ISO 11290-1
Fermented meat	<i>Salmonella /25 g</i>	Absent	AOAC 967.26
Cooked poultry products frozen to be reheated before eating	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), CfU/g</i>	10 ³	US ISO 6888-1
	<i>Listeria monocytogenes/25g</i>	Not detected	US ISO 11290-1
	<i>Salmonella /25 g</i>	Not detected	AOAC 967.26 ISO 6579
	<i>Escherichia coli, CfU/g</i>	Absent	ISO 16649-2
	<i>Campylobacter/25 g</i>	Not detected	ISO 10272-1
Cooked uncured poultry	<i>Clostridium perfringens /25 g</i>	10 ³	US ISO 7937
	<i>Escherichia coli, CfU/g</i>	Absent	ISO 16649-2
	<i>Listeria monocytogenes/25g</i>	Absent	US ISO 11290-1
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), CfU/g</i>	10 ³	US ISO 6888-1
	<i>campylobacter</i>	Not detected	ISO 10272-1
	<i>Salmonella/25 g</i>	Absent	AOAC 967.26
Dried poultry products	<i>Salmonella/25 g</i>	Absent	
Meat and poultry soup (concentrated, powder)	Aerobic plate count, CfU/g	10 ⁵	ISO 4833
	<i>Enterobacteriaceae, CfU/g</i>	10 ²	ISO 21528-2
	<i>Salmonella/25g</i>	Absent	US ISO 6579-1
Dehydrated meat or meat components; protein concentrates from meat	<i>Salmonella/25g</i>	Absent	AOAC 967.26
	<i>Listeria monocytogenes/25g</i>	Absent	US ISO 11290-1
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), CfU/g</i>	10 ³	US ISO 6888-1
Vacuum packed-semi-preserved but perishable meat and poultry products	Aerobic plate count, CfU/g	10 ⁷	ISO 4833
	<i>Salmonella/25g</i>	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), CfU/g</i>	10 ³	US ISO 6888-1
Smoked meats	<i>Salmonella/25 g</i>	Not detected	ISO 6579

	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species)</i> , Cf/g	10 ³	ISO 6888-2
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Table 3 — Microbiological criteria for fish and seafood/shellfish and their products

Food category	Micro-organism	Limit	Test method
Fresh crustaceans, raw (chilled/frozen) crustaceans (for example, shrimp, prawns, lobsters and crab)	<i>Salmonella spp</i> /25 g	Absent	AOAC 967.26
	<i>Vibrio cholerae</i> /25g	Absent	AOAC 988.20
	<i>Listeria monocytogenes</i> /25 g (supporting growth)	Absent	US ISO 11290-1
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species)</i> , Cf/g	10 ³	US ISO 6888-1
Live (raw) molluscs such as bivalves (oysters, clams, mussels, among others), cephalopods (squids, cuttlefish, octopus, among others), gastropods (snails, among others)	<i>Salmonella</i> /25 g	Not detected	AOAC 967.26 ISO 6579
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Vibrio cholerae</i> /25g	10 ³	AOAC 988.20
	<i>V. parahaemolyticus</i> /25g	10 ²	ISO/TS 21872-2
Cooked (chilled/frozen) crustaceans, molluscans shucked, cooked bivalves	Aerobic plate count, Cf/g	10 ⁶	ISO 4833
	<i>Salmonella</i> /25 g	Absent	AOAC 967.26
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Vibrio spp.</i> /25g	Not detected	ISO/TS 21872-1
Lightly preserved fish, pasteurised fish	<i>Listeria monocytogenes</i> /25g (not supporting growth)	Absent	US ISO 11290-1
Fermented fish	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	E-coli, Cf/g	5 x 10 ²	ISO 16649-2
	<i>Clostridium botulinum</i> /25g	Not detected	ISO/TS 17919

Table 4 — Microbiological criteria for egg and egg products

Food category	Micro-organism	Limit	Test method
Any egg product intended for special dietary purposes (infants, aged, relief foods, among others)	Aerobic plate count, CfU/g	10 ⁶	ISO 4833
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
Pudding with egg (powders), egg mix dehydrated, dried cake mixes with high egg content	Aerobic plate count, CfU/g	10 ⁵	ISO 4833
	<i>Salmonella</i> spp	Absent	AOAC 967.26
	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	10 ³	US ISO 6888-1
Pasteurized liquid, frozen, dried, and cooked egg products	Aerobic colony count CfU/g	10 ³	ISO 4833
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	<i>L. monocytogenes</i> /25g	Not detected	ISO 11290-1

Table 5 — Microbiological criteria for fats and oils (oil and fat-based foods)

Food category	Micro-organism	Limit	Test method
Mayonnaise-based salads	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	10 ³	US ISO 6888-1
	<i>Salmonella</i> spp/25 g	Absent	AOAC 967.26
	<i>Listeria monocytogenes</i> /25 g (supporting growth)	Absent	US ISO 11290-1
Baking sprays	Aerobic plate count, CfU/g	10 ⁵	ISO 4833
	Moulds, CfU/g	5 x 10 ²	US ISO 21527-1
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	10 ³	US ISO 6888-1
	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
Food sauces, dressings, dips and condiments	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2-2
	Yeasts and molds	10 ²	ISO 21527-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579

Table 6 — Microbiological criteria for tomato concentrates, sauces, dry soups, vinegar, spices and herbs

Food category	Micro-organism	Limit	Test method
Mustard, salad sauce and other sauces	Aerobic plate count, Cf/g	10 ⁴	ISO 4833
	Yeasts and moulds, Cf/g	10 ²	US ISO 21527-1
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ²	US ISO 6888-1
Dry spice blends, dry soups, gravy and vegetable seasoning	<i>Salmonella spp</i> /25 g	Absent	AOAC 967.26
	Aerobic plate count, Cf/g	10 ⁴	ISO 4833
	Yeasts and moulds, Cf/g	10 ²	US ISO 21527-1
	Coliforms, Cf/g	10 ⁴	US ISO 4832

Table 7 — Microbiological criteria for fruits, vegetables and their products

Food category	Micro-organism	Limit	Test method
Cooked vegetables	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Listeria monocytogenes</i> /25 g (supporting growth)	Not detected	US ISO 11290-1
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Instant banana flour	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ³	US ISO 6888-1
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Absent	AOAC 967.26
Fresh and fresh-cut vegetables (to be eaten without cooking)	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	<i>L. monocytogenes</i> /25g	Not detected	ISO 11290-1
	Aerobic colony count, Cf/g	10 ⁵	ISO 4833
Frozen fruits	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Frozen vegetables and frozen fruits, pH equal or higher than 4.5	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
Frozen vegetables and frozen fruits, pH less than 4.5	pH measured at the time of sampling	pH values shall be less than 4.5 in all tested samples	
Ready-to-eat frozen/refrigerated legumes	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	<i>L. monocytogenes</i> /25g	Not detected	ISO 11290-1

	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ²	ISO 6888-2
Fresh fruits (Whole)	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Fresh-cut fruit minimally processed (ready to eat)	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	<i>L. monocytogenes</i> /25g	Not detected	ISO 11290-1
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ²	ISO 6888-2
Dried fruits; dates (including date paste), figs, apricot, grape (raisins) among others)	Yeasts, Cf/g	10 ²	US ISO 21527-1
	Moulds, Cf/g	10 ³	
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella spp</i> /25g	Absent	AOAC 967.26
Vegetable soup (powder)	Aerobic plate count, Cf/g	10 ⁵	ISO 4833
	Yeasts and moulds, Cf/g	10 ³	US ISO 21527-2
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella spp</i> /25g	Absent	AOAC 967.26
Sprouted seeds (sprouts)	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella spp</i> /25 g	Absent	AOAC 967.26

Table 8 — Microbiological criteria for cereals, legumes, nuts, oil seeds, and their products

Food category	Micro-organism	Limit	Test method
Pizza, meat pies, frozen dough with or without filling	<i>Salmonella spp</i> /25g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ⁴	US ISO 6888-1
Raw ready-to-cook frozen and refrigerated dough products, raw ready-to-eat frozen and refrigerated dough products	Aerobic plate count, CFU/g	10 ⁵	ISO 4833-1
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella spp</i> /25 g	Absent	AOAC 967.26
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
	Yeast and moulds	10 ³	ISO 21527-2
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	<10	ISO 6888-2
Raw ready-to-eat frozen and refrigerated dough products	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	Yeast and moulds	10 ³	ISO 21527-2

	<i>Coagulase-positive staphylococci</i> (Staphylococcus aureus and other species), CfU/g	<10	ISO 6888-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Puffed, flaked cereal products	Aerobic plate count, CfU/g	10 ⁵	ISO 4833
	Yeast and moulds, CfU/g	10 ⁴	US ISO 21527-2
	<i>Salmonella spp</i> /25 g	Absent	AOAC 967.26
Malt, malt derivatives	Aerobic plate count, CfU/g	10 ⁵	ISO 4833
	Yeasts and moulds, CfU/g	5 x 10 ³	US ISO 21527-1
	<i>Salmonella spp</i> /25g	Absent	AOAC 967.26
Bean based products	<i>Salmonella spp</i> /25 g	Absent	
High moisture derivatives of dried legumes and bean-based products	<i>Salmonella spp</i> /25 g	Absent	
Frozen pre-cooked pulses and legumes	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Salmonella spp</i> /25 g	Absent	AOAC 967.26
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
Bakery ware, Baked pastries (Ready to eat)	Aerobic plate count, CfU/g	10 ⁵	ISO 4833
	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Salmonella spp</i> /25 g	Absent	AOAC 967.26
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
	<i>Coagulase-positive staphylococci</i> (Staphylococcus aureus and other species), CfU/g	10 ²	US ISO 6888-1
	<i>Bacillus cereus</i> , CfU/g	10	ISO 7932
Baked/fried, ready-to-eat (RTE) dough products	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	Yeast and moulds	10 ³	ISO 21527-2
	<i>Coagulase-positive staphylococci</i> (Staphylococcus aureus and other species), CfU/g	<10	ISO 6888-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Cooked rice	<i>B. cereus</i> CfU/g	10 ²	ISO 7932
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	<i>Coagulase-positive staphylococci</i> (Staphylococcus aureus and other species), CfU/g	<10	ISO 6888-2
Ready to eat nuts, oilseeds, and nut and /or oilseed butters	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Salmonella spp.</i> /25 g	Not detected	ISO 6579
	<i>Coagulase-positive staphylococci</i> (Staphylococcus aureus and other species), CfU/g	<10	ISO 6888-2

	Yeast and moulds	10 ³	ISO 21527-2
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Table 9 — Microbiological criteria for cocoa, chocolate, sweets, confectionery and their ingredients

Food category	Micro-organism	Limit	Test method
Dehydrated desserts, (bonbons, caramels and other similar products)	Aerobic plate count, Cf/g	10 ⁶	ISO 4833
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ³	US ISO 6888-1
Hard and soft candy	Aerobic plate count, Cf/g	5 x 10 ³	ISO 4833
	Yeasts and moulds, Cf/g	10 ²	US ISO 21527-1
	<i>Enterobacteriaceae</i> , Cf/g	Absent	US ISO 21528-1
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
Arabic sweets	Coliforms, Cf/g	Absent	US ISO 4832
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Escherichia coli</i> O157/25g	Absent	US ISO 16654
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	Absent	US ISO 6888-1
Marshmallow	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Absent	AOAC 967.26
	Yeasts and moulds, Cf/g	10 ²	US ISO 21527-1
Cocoa powder mixtures, Choco malt, and malt based cocoa products	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2-2
	<i>Salmonella</i> spp. /25 g	Not detected	ISO 6579
	Yeast and moulds	10 ²	ISO 21527-2

Table 10 — Microbiological criteria for combination of foods ready-to-eat

Food category	Micro-organism	Limit	Test method
Sandwiches and filled rolls with salad	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
Sandwiches and filled rolls without salad	Aerobic plate count, Cf/g	10 ⁷	ISO 4833
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ²	US ISO 6888-1

Coleslaw (cabbage)	Aerobic plate count, CfU/g	10 ⁶	ISO 4833
	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Listeria monocytogenes</i> /25g	Absent	US ISO 11290-1
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	10 ⁴	US ISO 6888-1
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
Rice	Aerobic plate count, CfU/g	10 ⁶	ISO 4833
	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	10 ²	US ISO 6888-1
Bhaji, Falafel, soup (all kinds), samosa, mashed potato, desserts (tarts, flans, and sweet pies), spring rolls; Trifle Homous, Tzatziki, and other dips	Aerobic plate count, CfU/g	10 ⁶	ISO 4833
	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	10 ²	US ISO 6888-1
Jelly	Aerobic plate count, CfU/g	10 ³	ISO 4833
	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	10 ²	US ISO 6888-1
	<i>Clostridium botulinum</i> , CfU/g	10	US ISO 6461-2
Topped or filled ready-to-eat (RTE) dough products such as cakes, meat pies, tarts, doughnuts, sweet burns, pizza, samosas, kebabs, lasagna, ravioli, dumplings etc	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	Absent	ISO 6888-2
	<i>L. monocytogenes</i> /25g	Not detected	ISO 11290-1
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Topped or filled ready to cook dough products	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	<10	ISO 6888-2
	<i>L. monocytogenes</i> /25g	Not detected	ISO 11290-1
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Ready-to-eat ethnic snacks (Mixture of food categories eg nuts, fruits, vegetables, tubers, cereals, spices, herbs)	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), CfU/g	<10	ISO 6888-2
	<i>Yeast and moulds</i>	10 ²	ISO 21527-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Ready-to-eat frozen/refrigerated cooked foods	<i>Escherichia coli</i> , CfU/g	Absent	ISO 16649-2
	<i>Coagulase-positive staphylococci</i>	<10	ISO 6888-2

(Mixture of food categories eg cereals, legumes, meat dishes)	(<i>Staphylococcus aureus</i> and other species), Cf/g		
	<i>L. monocytogenes</i> /25g	Not detected	ISO 11290-1
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	<i>Clostridium perfringens</i> Cf/g	<10	ISO 7937
Ready to eat food/drink other than those specified above excluding confectionery, chocolates	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	Not detected	ISO 6888-2
	<i>Escherichia coli</i> /g	Not detected	ISO 16649-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579

Table 11 — Microbiological criteria for infants, children and certain categories of dietetic foods

Food category	Micro-organism	Limit	Test method
Biscuits (plain, dried)	Yeasts and moulds, Cf/g	10 ²	US ISO 21527-2
	<i>Salmonella</i> spp, 25g	Absent	AOAC 967.26
	<i>Escherichia coli</i> , Cf/g	Absent	US ISO 16654
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ²	US ISO 6888-1
Shelf-stable dried biscuits coated or filled with chocolate or others	<i>Salmonella</i> spp, Cf/g	Absent	AOAC 967.26
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ²	US ISO 6888-1
Dried and instant products requiring reconstitution	Aerobic plate count, Cf/g	10 ⁵	ISO 4833
	<i>Enterobacteriaceae</i> , Cf/g	Absent	ISO 21528-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	Absent	US ISO 6888-1
	<i>Enterobacter sakazakii</i> (<i>Cronobacter</i> species) , Cf/g	Absent	ISO 22964
Cereal based foods for infant	Aerobic plate count, Cf/g	10 ⁴	ISO 4833
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ²	US ISO 6888-1
	<i>Bacillus cereus</i> , Cf/g	10 ³	ISO 7932
Powdered infant formula, including those with lactic acid-producing cultures	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	Coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species), Cf/g	10 ²	US ISO 6888-1
	<i>Enterobacter sakazakii</i>	Absent	ISO 22964

	(<i>Cronobacter</i> species) , Cfu/g		
Dried products requiring heating to boiling before consumption	Aerobic plate count, Cfu/g	10 ⁶	ISO 4833
	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 9308-1
	<i>Salmonella</i> spp, Cfu/g	Absent	AOAC 967.26
	<i>Enterobacter sakazakii</i> (<i>Cronobacter</i> species) , Cfu/g	Absent	ISO 22964
Thermally processed products in sealed containers	Shall meet the microbiological requirements for canned foods specified in this standard (Annex A)		
Dietetic foods to be eaten by high-risk category of consumers (according to the type of the product)	Aerobic plate count, Cfu/g	10 ⁴	ISO 4833
	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 9308-1
	<i>Salmonella</i> spp, Cfu/g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cfu/g	10 ²	US ISO 6888-1
Body building foods	Aerobic plate count, Cfu/g	10 ⁴	ISO 4833
	Yeasts and moulds, Cfu/g	3x10 ²	US ISO 21527-2
	Coliforms, Cfu/g	Absent	US ISO 4832
	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci</i> (<i>Staphylococcus aureus</i> and other species), Cfu/g	Absent	US ISO 6888-1

Table 12 — Microbiological criteria for food ingredients/additives for food industries

Food category	Micro-organism	Limit	Test method
Enzymes	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
Dyes (food colours)	Aerobic plate count, Cfu/g	10 ⁶	ISO 4833
	<i>Salmonella</i> spp/25g	Absent	US ISO 6579-1
Gums	Aerobic plate count, Cfu/g	10 ⁶	ISO 4833
	<i>Enterobacteriaceae</i> , Cfu/g	10 ³	ISO 21528-2
Eggs products	Aerobic plate count	10 ⁶	ISO 4833
	<i>Salmonella</i> spp /25g	Absent	AOAC 967.26
Yeasts	<i>Bacillus cereus</i> , Cfu/g	10 ³	ISO 7932
	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25g	Absent	AOAC 967.26
Flavours	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> spp/25 g	Absent	AOAC 967.26
Food ingredients/additives e.g. flavours, sweeteners,	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579

food colours, baking aids, essence and coating/glazing agent	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	<10	ISO 6888-2
	Yeasts and moulds Cf/g	10 ²	ISO 21527-2

Table 13 — Microbiological criteria for miscellaneous foods

Food category	Micro-organism	Limit	Test method
Tofu (not UHT)	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10 ³	US ISO 6888-1
Sesame seed products (Tahini, Halwa)	Moulds, Cf/g	10 ³	US ISO 21527-2
	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella spp/25g</i>	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10 ²	US ISO 6888-1
Cultured seeds and grains (bean sprouts, alfalfa among others)	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2
	<i>Salmonella spp/25g</i>	Absent	AOAC 967.26
Edible essential water	Aerobic plate count, Cf/g	10 ²	ISO 4833
	Yeasts, Cf/g	20	US ISO 21527-1
	<i>Candida</i> , Cf/g	Absent	ISO 20743
	Coliforms, Cf/g	10	ISO 9308-1
	<i>Escherichia coli</i> , Cf/g	Absent	
	<i>Pseudomonas aeruginosa</i> Cf/g,	Absent	ISO 16266
Nutritious powder	Aerobic plate count, Cf/g	10 ⁴	ISO 4833
	Coliforms, Cf/g	10	US ISO 4832
	<i>Salmonella spp/25g</i>	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	Absent	US ISO 6888-1
Cream caramel powder	Aerobic plate count, Cf/g	10 ⁶	ISO 4833
	<i>Escherichia coli</i> , Cf/g	10	ISO 16649-2
	<i>Salmonella spp/25g</i>	Absent	AOAC 967.26
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	10 ³	US ISO 6888-1

Table 14 — Microbiological criteria for Packaged ice

Food category	Micro-organism	Limit	Test method
Packaged ice	<i>Escherichia coli</i> /100 mL	Not detected	ISO 9308-1
	Coliforms/100 mL	Not detected	ISO 9308-1
	<i>Enterococci</i> /100 mL	Not detected	ISO 7899-2
	<i>P. aeruginosa</i> /100 mL	Not detected	ISO 16266
	Sulfite reducing <i>anaerobes</i> /100mL	Not detected	ISO 6461-2
	<i>Salmonella</i> /g	Not detected	ISO 19250

Table 15 — Microbiological criteria for canned foods

Food category	Micro-organism	Limit	Test method
Canned food with low acid and high pH	<i>Escherichia coli</i> /100 mL	<10	ISO 16649-2
	<i>Clostridium botulinum</i> /25g	Not detected	ISO/TS 17919

Table 16 — Microbiological criteria for Non-dairy products and beverages

Food category	Micro-organism	Limits (max)	Test method
Non-dairy ghee	Total Plate Count	10 ³	ISO 4833-1
	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cfu/g	<10	ISO 6888-2
	Yeasts and molds	10	ISO 21527-2
Non-dairy cheese	Total coliforms	10 ²	ISO 4832
	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cfu/g	<10	ISO 6888-2
Non-dairy milk	Total Plate Count Cfu/g		ISO 4833-1
	- Ultra-High Temperature (UHT) milk - Pasteurized milk	10 10 ⁴	
	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
Non-dairy fermented milk products eg yoghurts	Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cfu/g	<10	ISO 6888-2
	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	Yeasts and moulds Cfu/g	10 ²	ISO 21527-2
Non-dairy cream and creamer	<i>Escherichia coli</i> , Cfu/g	Absent	ISO 16649-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579

	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	<10	ISO 6888-2
	Yeasts and moulds Cf/g	10 ²	ISO 21527-2
Ready to drink fermented beverages eg Fermented tea	<i>Escherichia coli</i> , Cf/g	Absent	ISO 16649-2-2
	<i>Salmonella</i> /25 g	Not detected	ISO 6579
	<i>Coagulase-positive staphylococci (Staphylococcus aureus and other species), Cf/g</i>	<10	ISO 6888-2

11 Packaging

11.1 The products shall be packaged in food grade packaging material that will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product.

11.2 The packaging materials used shall comply with the requirements provided in US 1659.

12 Weights and measures

The packages shall comply with the Weights and Measures regulations of Uganda.

13 Labelling

13.1 Each product shall be labelled in accordance with the requirements specified in US EAS 38.

13.2 Nutrition labelling, claims on food and use of nutritional and health claims shall be done in accordance with US EAS 803, US EAS 804 and US EAS 805 respectively.

14 Sampling of food for microbial analysis

14.1 Sampling shall be done in accordance with CXG 50. Samples shall be taken from processing, storage areas, equipment used in food production or at point of sale, when such sampling is necessary for ensuring that the criteria are met.

14.2 Approved test methods for food microbiology shall be used to determine whether the food has exceeded the maximum permissible levels of the food borne micro-organisms in relation to that food.

14.3 In the event of the use of alternative analytical methods, such methods shall be validated against the reference method, and if a proprietary method, certified by a third party in accordance with the protocol set out in ISO 16140 or other internationally accepted similar protocols, is used.

Annex A (normative)

Commercial sterility test for canned foods

Item	Micro-organism	Sampling plan		Limit /ml or g	
		<i>n</i>	<i>c</i>	<i>m</i>	<i>M</i>
First action	24 cans shall be tested and the absence of defects; lock; welding or swelling during incubation indicates the efficiency of the commercial sterilization process and the safety of batch production.	24	–	0	–
Second action	When there are one to two defective cans or swelling, larger numbers of cans should be sorted from the batch. In case of presence of more than 1 % of defective cans; reject the batch, but the presence of 1 % or less; the third action is taken.	–	1 %	0	–
Third action	Examine 24 cans during the incubation period for not less than 10 days in the incubator at a temperature of 30 °C - 37 °C for non-acid canned, or in the incubator at 25 °C for acidic canned. Production is not identical in the case of a can or more defective or welding or swelling after incubation.	24	0	0	–
Fourth action	Being in the absence of any swelling or defects lock and welding after the third action. Open and lifting the welding and examine 10 cans. Accept the batch in the absence of any defects in the weld or lock.	10	0	0	–

Bibliography

- [1] US 2245:2021, Safety of foodstuffs – Requirements
- [2] DKS-2455:2024-*Food Safety General-Standard*

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