Processing Standards and Ingredient Specifications for Livestock Products

2015

1. The translated document herein reflects the Ministry of Food and Drug Safety Notice(No. 2015－94, 12/16/2015)
2. The translated document into English herein is a service provided for user's convenience and it shall not be constructed as having official authority. Ministry of Food and Drug Safety(MFDS) shall bear no legal responsibility for the accuracy of such translation, and in the event of any dispute of interpretation of the Korean and English version thereof, the Korean version shall apply.
3. For accurate content of the Notification, please refer to MFDS website(www.mfds.go.kr).

Processing Standards and Ingredient Specifications for Livestock Products

Ministry of Agriculture and Forest (MAF) Notice	No. 1998 - 34	(Establishment:06/26/1998)
MAF Notice	No. 1999 - 23	(Revision: 05/01/1999)
National Veterinary Research and Quarantine Services (NVRQS) Notice	No. 2000 - 20	(Revision: 01/04/2001)
NVRQS Notice	No. 2002 - 4	(Revision: 06/05/2002)
NVRQS Notice	No. 2003 - 14	(Revision: 12/17/ 2003)
NVRQS Notice	No. 2005 - 2	(Revision: 02/28/ 2005)
NVRQS Notice	No. 2006 - 4	(Revision: 04/03/2006)
NVRQS Notice	No. 2007 - 1	(Revision: 01/09/2007)
NVRQS Notice	No. 2007 - 20	(Revision: 06/05/2007)
NVRQS Notice	No. 2007 - 21	(Revision: 10/05/2007)
NVRQS Notice	No. 2008 - 9	(Revision: 07/31/2008)
NVRQS Notice	No. 2008 - 10	(Revision: 08/21/2008)
NVRQS Notice	No. 2008 - 27	(Revision: 12/30/2008)
NVRQS Notice	No. 2010 - 1	(Revision: 03/12/2010)
NVRQS Notice	No. 2010 - 2	(Revision: 04/07/2010)
NVRQS Notice	No. 2010 - 5	(Revision: 11/04/2010)
NVRQS Notice	No. 2010 - 13	(Revision: 11/26/2010)
NVRQS Notice	No. 2010 - 16	(Revision: 12/17/2010)
Animal, Plant and Fisheries Quarantine and Inspection Agency (QIA) Notice	No. 2011 - 43	(Revision: 06/15/2011)
QIA Notice	No. 2011 - 105	(Revision: 10/12/2011)
QIA Notice	No. 2012 - 69	(Revision: 03/26/2012)
QIA Notice	No. 2012 - 118	(Revision: 04/02/2012)
QIA Notice	No. 2012 - 137	(Revision: 08/22/2012)
QIA Notice	No. 2012 - 162	(Revision: 11/13/2012)
QIA Notice	No. 2012 - 177	(Revision: 12/28/2012)
Ministry of Food and Drug Safety (MFDS) Notice	No. 2013 - 137	(Revision: 04/05/2013)
MFDS Notice	No. 2013 - 206	(Revision: 08/08/2013)
MFDS Notice	No. 2013 - 230	(Revision: 10/08/2013)
MFDS Notice	No. 2013 - 244	(Revision: 12/10/2013)
MFDS Notice	No. 2014 - 7	(Revision: 02/06/2014)
MFDS Notice	No. 2014 - 128	(Revision: 06/30/2014)
MFDS Notice	No. 2014 - 186	(Revision: 11/20/2014)
MFDS Notice	No. 2015 - 3	(Revision: 01/30/2015)

MFDS Notice No. 2015‐13 (Revision: 03/25/2015)
MFDS Notice No. 2015‐55 (Revision: 08/25/2015)
MFDS Notice No. 2015‐72 (Revision: 10/06/2015)
MFDS Notice No. 2015‐94 (Revision: 12/16/2015)

Article 1 (Purpose) The purpose of this notice is to establish processing standards and ingredient specifications for livestock products according to Article 4, Section 2 of the Livestock Products Sanitary Control Act (hereafter referred to as the "Act"), in order to improve sanitary and quality control of livestock products and ensure public health.

Article 2 (Scope of Application) Processing standards and ingredient specifications for livestock products shall be in accordance with this regulation unless otherwise defined by the Act. Same rules apply to imported livestock products for sale purposes as well.

Article 3 (Limited Approval) In regards to a livestock product that is not specified in this notice, business owners may submit the processing standards and ingredient specifications for such product to receive temporary approval until the submission is reviewed by the Animal Health Laboratory designated by Article 6 of the Act on Test and Inspection of Food and Drugs and reflected on this notice.

Article 4 (Livestock Products for Export) As for the livestock products to be exported, processing standards and specifications may be set by those requested by the importers notwithstanding this notice, as prescribed by Article 4, Section 4 of the Act.

Article 5 (Processing Standards and Ingredient Specifications) The content of processing standards and ingredient specifications for livestock products shall be determined by the attachment, “Processing Standards and Ingredient Specifications for Livestock Products.”

Article 6 (Reassessment Deadline) As of January 1, 2016, Minister of the Ministry of Agriculture, Food and Rural Affairs shall review the validity of this notice every three years (by December 31 of the third year) and take appropriate measure including the improvement the notice, etc.

Supplementary Provision <No. 1998 - 34, 06/26/1998>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Supplementary Provision <No. 1999 - 23, 05/1/1999>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2000 - 20, 01/04/2001>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Application Exception) The previously revised regulation (J) and (K) under Heading 8 "Storage and Distribution Standards" in Chapter 1 "General Standards and Specifications for Livestock Products," and the previous revision for (D) "Expiration Date," under (6) "Storage and Distribution Standards" in A. "Milks" under Heading 1 "Milk Products" in Chapter 2 "Standards and Specifications for Individual Livestock Product Categories" shall be effective as of June 1, 2002, regardless of the implementation of this notice.

Article 3 (Interim Measures) Livestock products manufactured in accordance with the previous processing standards and ingredient specifications for livestock products (NVRQS Notice No. 1999-23) shall be considered to have complied with this notice during the period of its implementation.

Supplementary Provision <No. 2002 - 4, 06/05/2002>

Article 1 (Effective Date) This notice shall be effective as of July 1, 2002.

Article 2 (Interim Measures) Livestock products manufactured in accordance with the previous processing standards and ingredient specifications for livestock products (NVRQS Notice No. 2000-20) shall be considered to have complied with this notice during the period of its implementation.

Supplementary Provision <No. 2003 - 14, 12/17/2003>

Article 1 (Effective Date) This notice shall be effective as of January 1, 2004.

Article 2 (Interim Measures) Livestock products manufactured in accordance with the previous processing standards and ingredient specifications for livestock products (NVRQS Notice No. 2002-3, 06/15/2002) shall be considered to have complied with this notice during the period of its implementation.

Supplementary Provision <No. 2005 - 2, 02/28/2005>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Interim Measures) Livestock products manufactured in accordance with the previous processing standards and ingredient specifications for livestock products (NVRQS Notice No. 2003-14, 12/17/2003) shall be considered to have complied with this notice during the period of its implementation.

Supplementary Provision <No. 2006 - 4, 04/03/2006>

Article 1 (Effective Date) This notice shall be effective from the date of announcement with the exception of the revision of Chapter 2, 2, A, (2), (H) and Chapter 2, 2, G and L, which are effective as of September 24, 2006.

Article 2 (Interim Measures) Livestock products manufactured in accordance with the previous processing standards and ingredient specifications for livestock products (NVRQS Notice No. 2005-2, 02/28/2005) shall be considered to have complied with this notice during the period of its implementation.

Supplementary Provision <No. 2007 - 1, 01/09/2007>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2007 - 20, 06/05/2007>

① **(Effective Date)** This notice shall be effective from the date of announcement (June 5, 2007).

② **(Interim Measures)** The product that has been manufactured or imported before the implementation of this notice shall comply with the previous regulations.

Supplementary Provision <No. 2007 - 21, 10/05/2007>

① **(Effective Date)** This notice shall be effective from the date of announcement (October 5, 2007).

Supplementary Provision <No. 2008 - 9, 07/31/2008>

Article 1 (Effective Date) This notice shall be effective from the date of announcement (July 31, 2008).

Article 2 (Appliction Exception) As attached to this notice, revisions of (1) Definition and (B) Meat extracted products in (2) Types of livestock processed product under the Heading H. Meat extracted products in 2. Processed Meats and Packaged Meats in Chapter 2 Standards and Specifications for Livestock Products shall be effective as of October 1, 2008, regardless of the implementation of this notice.

Article 3 (Interim Measures) Products that have been manufactured or imported in accordance with Article 7 of the Food Sanitation Act, shall be considered to have complied with this notice during the implementation period of Article 2 (Application Exception) of this supplementary provision.

Supplementary Provision <No. 2008 - 10, 08/21/2008>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Application Exception) The revision of (F) under the Heading 8 "Storage and Distribution Standards" in Chapter 1 "General Standards and Specifications for Livestock Products," shall be effective as of July 1, 2011, regardless of the implementation of this notice.

Supplementary Provision <No. 2008 - 27, 12/30/2008>

Article 1 (Effective Date) This notice shall be effective as of January 1, 2009.

Article 2 (Interim Measure) Livestock products manufactured in accordance with the previous processing standards and ingredient specifications for livestock products (NVRQS Notice No. 2008-10, 08/21/2008) shall be considered to have complied with this notice during the period of its implementation.

Supplementary Provision <No. 2010 - 1, 03/12/2010>

Article 1 (Effective Date) This notice shall be effective as of the date of announcement.

Supplementary Provision <No. 2010 - 2, 04/07/2010>

Article 1 (Effective Date) This notice shall be effective as of June 1, 2010.

Supplementary Provision <No. 2010 - 5, 11/04/2010>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2010 - 13, 11/26/2010>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2010 - 16, 12/17/2010>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2011 - 43, 06/15/2011>

Article 1 (Effective Date) This notice shall be effective as of June 15, 2011.

Article 2 (Reassessment Deadline) This notice shall be reassessed by June 14, 2015, pursuant to Article 7, Section 3, Clause 2 of the Policy on Issuing and Supervising Instructions, Established Rules, etc. (Presidential Instruction No. 248).

Supplementary Provision <No. 2011 - 105, 10/12/2011>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2012 - 69, 03/26/2012>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Interim Measures) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Article 3 (Reassessment Deadline) This notice shall be reassessed by March 22, 2015, pursuant to Article 7, Section 3, Clause 2 of the Policy on Issuing and Supervising Instructions, Established Rules, etc. (Presidential Instruction No. 248).

Supplementary Provision <No. 2012 - 118, 04/02/2012>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (General Interim Measures) Livestock products that have been manufactured, processed, sold, or imported in accordance with the previous processing standards and ingredient specifications for livestock products (QIA Notice No. 2012-69, 03/26/2012) shall be considered to have complied with this notice during the period of its implementation.

Article 3 (Interim Measure for Heated Seasoned Meat and Meat Extracted Products) Products that have been manufactured, processed, sold, or imported in accordance with Article 7 of the Food Sanitation Act, shall be considered to have complied with this notice during the period of its implementation. However, beginning October 1, 2012, manufacturing, processing, selling, or importing must be in accordance with this notice.

Article 4 (Reassessment Deadline) This notice shall be reassessed by March 31, 2015, pursuant to Article 7, Section 3, Clause 2 of the Policy on Issuing and Supervising Instructions, Established Rules, etc. (Presidential Instruction No. 248).

Supplementary Provision <No. 2012 - 137, 08/22/2012>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Interim Measures) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Article 3 (Reassessment Deadline) This notice shall be reassessed by August 21, 2015, pursuant to Article 7, Section 3, Clause 2 of the Policy on Issuing and Supervising Instructions, Established Rules, etc. (Presidential Instruction No. 248).

Supplementary Provision <No. 2012 - 162, 11/13/2012>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Interim Measure) As for the products that are manufactured, processed, sold, or imported by business owners who have received a business license or have filed a report of business prior to the implementation of this notice, previous processing standards and ingredient specifications for livestock products (QIA Notice No. 2012-137, 08/22/2012) may be applied by March 31, 2013,.

Article 3 (Reassessment Deadline) This notice shall be reassessed by November 12, 2015, pursuant to Article 7, Section 3, Clause 2 of the Policy on Issuing and Supervising Instructions, Established Rules, etc. (Presidential Instruction No. 248).

Supplementary Provision <No. 2012 - 177, 12/28/2012>

Article 1 (Effective Date) This notice shall be effective from the date of announcement. However, the revised item on 4) under Heading Chapter 3, III, 9, M, (3), (A), 4) shall be applied from April 1, 2013.

Article 2 (Interim Measures) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Article 3 (Reassessment Deadline) This notice shall be reassessed by December 27, 2015, pursuant to Article 7,Section 3, Clause 2 of the Policy on Issuing and Supervising Instructions, Established Rules, etc. (Presidential Instruction No. 248).

Supplementary Provision <No. 2013 - 137, 04/05/2013>

This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2013 - 206, 08/08/2013>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Application Case) This notice shall be applied to manufactured, processed, or imported products (based on the date of shipment) after the implementation of the notice.

Article 3 (Interim Measures) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Supplementary Provision <No. 2013 - 230, 10/08/2013>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Application Case) This notice shall be applied to manufactured, processed, or imported products (based on the date of shipment) after the implementation of the notice.

Article 3 (Interim Measures) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Supplementary Provision <No. 2013 - 244, 12/10/2013>

This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2014 - 7, 02/06/2014>

Article 1 (Effective Date) This notice shall be effective from the date of announcement. However, revision on (4) Specifications of Milk formulas under the Heading R under 1 of Chapter 2 shall be effective as of October 1, 2014, excluding enterobacter sakazakii.

Article 2 (Application Case) This notice shall be applied to manufactured, processed, sold or imported products (based on the date of shipment) after the implementation of the notice.

Article 3 (Interim Measures) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Supplementary Provision <No. 2014 - 128, 06/30/2014>

Article 1 (Effective Date) This notice shall be effective from the date of announcement. **Article2 (Application Case for *Staphylococcus aureus*)** Revision on (B) of (3) under the Heading Chapter 1, 6, A shall be applied to manufactured, processed, or imported products pursuant to the previous regulations.

Article 3 (Interim Measures) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Supplementary Provision <No. 2014 - 186, 11/20/2014>

Article 1 (Effective Date) This notice shall be effective from the date of announcement. However, the revised item on Chapter 2, 2, H, (3) shall be applied from the date on which one year has passed since the date of announcement.

Article 2 (Application Case) This notice shall be applied to manufactured, processed, or imported products after the implementation of the notice.

Article 3 (Interim Measures) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Supplementary Provision <No. 2015 - 3, 01/30/2015>

Article 1 (Effective Date) This notice shall be effective from the date of announcement. However, revised items on Chapter 1, 6, A, (3); Chapter 1, 6, D, (2); Chapter 2, 1, S, (4), (D); Chapter 2, 1, U, (4), (C); Chapter 2, 1, U, (4), (C); Chapter 2, 2, F, (4), (F); Chapter 2, 2, K, (4), (E); Chapter 3, III, 9, L, (1), (I); Chapter 3, III, 9, L, (2); Chapter 3, III, 9, L, (3), (A), (B); and Chapter 3, VIII, 2, (32,33) Q',R' shall be applied from the date on which 30 days have passed since the date of announcement. On the other hand, revised items on Chapter 2, 1, R, (4); Chapter 3, III, 1, E; and Chapter 3, V, 1, R, (3), (4), (5) shall be applied from the date on which one year has passed since the date of announcement.

Article 2 (Application Case) This notice shall be applied to manufactured, processed, or imported products (based on the date of shipment) after the implementation of the notice.

Article 3 (Interim Measure for Products Under Inspection, etc.) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Article 4 (Interim Measure for Previously Manufactured Products, etc.) Products which have been already manufactured, processed, or imported pursuant to the previous regulations (including the products loaded for import) may be sold, displayed or shipped for sales purpose, or used for business purposes by the expiration date of the corresponding product.

Supplementary Provision <No. 2015 - 13, 03/25/2015>

This notice shall be effective from the date of announcement.

Supplementary Provision <No. 2015 - 55, 10/06/2015>

Article 1 (Effective Date) This notice shall be effective from the date of announcement.

Article 2 (Application Case) This notice shall be applied to manufactured, processed, or imported products (based on the date of shipment) after the implementation of the notice.

Article 3 (Application Case for Standard Criteria for *Clostridium Perfringens*)Notwithstanding Chapter 2, revised items on Chapter 1, 6, A, (3), (C) 1) for *Clostridium Perfringens* shall be also applied to products which have been already manufactured, processed, sold or imported pursuant to the previous regulations.

Article 4 (Interim Measure for Products Under Inspection, etc.) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Article 5 (Interim Measure for Seasoned Meat and Heated Seasoned Meat) Not withstanding Chapter 2, 2, E, (1) and Chapter 2, 2, E, (2), (A) and (B), products to which Article 7 of the Food Sanitation Act and the Criteria and Standard of Food (MFDS Notice) are applied shall comply with the previous regulation by August 24, 2017.

Supplementary Provision <No. 2015 - 94, 12/16/2015>

Article 1 (Effective Date) This notice shall be effective from the date of announcement. However, revised items on Chapter 2, 1, A, (4), (F); Chapter 2, 1, B, (4), (F); Chapter 2, 1, D, (4), (E); Chapter 2, 1, E, (4), (D); Chapter 2, 1, F, (4), (F); Chapter 2, 1, R, (4), (41SS); and Chapter 2, 3, (4), (C) shall be applied from January 1, 2017.

Article 2 (Application Case) This notice shall be applied to manufactured, processed, or imported products (based on the date of shipment) after the implementation of the notice.

Article 3 (Interim Measure for Products Under Inspection, etc.) In-progress inspection which has begun prior to the implementation of this notice shall comply with the previous regulation.

Article 4 (Interim Measure for Previously Manufactured Products, etc.) Products which have been already manufactured, processed, or imported pursuant to the previous regulations (including the products loaded for import) may be sold, displayed or shipped for sales purpose, or used for business purposes by the expiration date of the corresponding product.

Contents

Chapter 1. General Standards and Specifications for Livestock Products

1. Definitions

Terms used in the standards and specifications for livestock products are defined as follows:

A. “Definition” identifies individual livestock products, and if the characteristics of the livestock product match the definition even if the livestock is not classified as “the type of processed livestock products,” the standards and specifications related to the definition shall apply to the regarded livestock. In addition, even in cases when “etc.” is not included in the type of processed livestock products, the standards and specification shall be applied to the livestock products that are suitable to the “definition.” However, if separate standards and specifications are established for such livestock products, such standards and specifications shall take precedence for application.

B. The term “meat” refers to bone meat, deboned meat, internal organs, and other animal parts that can be used for human consumption. Bone meat means a carcass from which head, tail, foot, and intestines have been removed. Deboned meat means the meat from which the bones have been removed that is from a carcass. Internal organs mean treated liver, lung, heart, stomach, pancreas, spleen, kidney, or intestine for human consumption. Other parts mean head, tail, foot, skin, blood, etc., obtained from slaughtered animals for human consumption.

C. “...etc.” is a concept that represents the recording of things that are used most frequently and is inclusive of other related things that are not listed.

D. “A or B” may be interpreted as “A and B,” “A or B,” “A only,” or “B only,” and the same principle shall apply to the case of “A, B, C, or D”

E. “A and B” means both A and B shall be satisfied.

F. “Appropriate procedures (process)” refers to processes that are necessary for the manufacture and processing of individual livestock products as well as the methods that ensure safety and soundness of livestock products. They are generally widely used or sufficiently proven in a scientific manner.

G. The statement “foods and food additives shall meet relevant standards and specifications” means that foods and food additives shall meet the standards and specifications for general and individual food categories of food processing provided in Article 7 of the Food Sanitation Act and the standards and specifications for food additives as provided in the Food Additive Code as mentioned.

H. By giving consideration to the statement “shall be stored and managed,” storage and management shall be conducted in a manner that helps maintain the best quality raw materials.

I. “If possible,” “recommended,” and “is allowed” are expressions used for the purpose of promoting sanitary levels and quality improvement as well as making specification of recommendations.

J. “A method with equivalent or even more advanced effectiveness” refers to a method other than the specified method(s) that enable(s) the maintenance of sanitation as well as nutritional and organoleptic quality. It is generally in wide use or sufficiently proven through a scientific manner.

K. In the definitions or the type of livestock products, what is expressed in “_%, greater than or equal to _%, less than or equal to_%, etc.” refers to the standard of ingredient content expressed in terms of the standard for the mixture of raw materials. .

L. “Dried material (solids)” refers to the solids remaining after the raw material is dried, and the water content of the material shall be no greater than 15% unless separate specifications are established.

M. ”Liquid livestock products” refer to the products that are in a liquid state and are for drinking purposes.

N. Livestock products not specified in “Chapter 2 Standards and Specifications for Individual Livestock Products Categories” are processed livestock products that are specified in “Chapter 2 Standards and Specifications for Individual Livestock Products Categories” regarding definition, manufacturing and processing standards, main ingredients, characteristics, product name, usage, etc. However, if the products do not meet the specific standards and specifications, such livestock products shall be excluded from the classification.

O. “Distribution period” refers to the longest period when products may be sold to consumers, and the shelf life may be determined autonomously within the distribution period based on the characteristics of products. However, during its shelf life, the product shall meet the standards and specifications as specified in this livestock product’s code.

P. “Ingredient specifications” refers to the specifications for the final product.

Q. The statement “shall not be detected” means that nothing shall be detected when a test is conducted according to the method specified in the livestock products code.

R. The claim “derived from a raw material” may be recognized if it is proven through official documents or the literature displaying that the raw material meets the relevant standards and specifications or that the regarded substance is inevitably derived from qualified raw material.

S. Besides the products that are specified in this livestock products code, the storage temperatures for frozen and refrigerated livestock products shall not be lower than －18°C for frozen products and 0－10°C for cooled products (temperatures shall be indicated in Celcius (°C)).

T. “Foreign material” refers to a material that is not an ingredient of normal livestock products, and includes materials of animal origin such as arthropods and their eggs, larvae, and excretions, gnawed marks left by rodents and insects, animal hair and excretions, and parasites and their eggs; materials of plant origin such as other plants and seeds, fungi, straw, and husks; and minerals such as earth and sand, glass, metal, and pieces of ceramic ware.

U. Besides those that are specified, “pasteurization” refers to destroying nutritive cells of microorganisms such as bacteria, yeast, and fungi.

V. Besides those that are specified, “sterilization” refers to destroying nutritive cells and spores of microorganisms, thus creating a sterile condition.

W. “Hermetic sealing” means cutting off airflow between interior and exterior parts of a container or packaging by appropriate methods.

X. “Processed products” refers to those products that are manufactured, processed, and packaged through addition of food additives; through means of grinding, cutting, or otherwise changing the forms of raw materials so that the original forms may not be discerned; through mixing such changed forms; or by adding other foods or food additives to such raw materials whose forms are changed or even through the mixture of changed raw materials.

Y. The definition and explanation that are not specified in this chapter shall follow the standards and specifications for general foods as provided in Food Code in Article 7 of Food Sanitation Act.

Z. Ready-to-eat livestock products refer to those that are generally consumed in original state without any treatment, processing, mixing, or cooking.

AA. Terms used in microbiological specifications, (n, c, m, M), are defined as follows:

(1) n: number of samples to be tested

(2) c: maximum allowed number of samples. It refers to the number of samples that is greater than allowed threshold (m) and less than maximum allowed limit (M). If the result shows that the number of samples that is greater than m and less than or equal to M is less than or equal to c, it is considered appropriate.

(3) m: allowed threshold for microorganisms. If the result is all less than or equal to m, it is considered appropriate.

(4) M: maximum allowed limit. If the result shows that at least one of them is greater than M, it is considered inappropriate.

※ Unless otherwise mentioned, m and M refer to number of clusters (CFU) per 1 g or 1 mL.

BB. “Eggs that contain blood” refers to eggs where blood is spread in the contents of eggs.

CC. “Blood spots” refers to spots of blood created by small blood veins that have ruptured when the yolk is released.

DD. “Meat spots” refers to small pieces of a body tissue in a breeding organ or blood spots that have lost their characteristic red color.

EE. “Cracked eggs” refers to eggs whose eggshells have been broken or cracked, but because the eggshell’s membrane is not destroyed, the contents are not released.

FF. “Contaminated eggs “refers to eggs whose eggshells are unaffected, but its surface is contaminated by substances such as excrement, blood, contents of eggs, feathers, etc. or other clear stains.

GG. “Soft-shelled eggs” refers to eggs whose shell membrane is not destroyed, but because the egg shell is accumulated so thinly that a firm shape cannot be maintained.

2. Requirements for Raw Materials

A. Raw Materials of livestock products

(1) A raw material shall be qualified, fresh, and safe such that it is not rotten, deteriorated, or contaminated with toxic and hazardous materials, etc.

(2) When using natural raw materials that are not licensed for livestock business by processing them directly, foreign materials such as earth, sand, dust, etc., shall be sufficiently removed and, if necessary, the materials shall be washed cleanly with drinking water, and non-edible parts shall be removed sufficiently.

(3) If livestock products that are subjects of permission (report) are to be purchased and applied, a relevant manufacturing business license (notice) shall be issued or filed or a relevant importation notice shall be filed, and raw materials shall meet the relevant standards and specifications.

(4) Any food, food additives, water treatment agents, etc., which have set standards and specifications, shall appropriately meet the standards and specifications.

(5) Livestock products that are to be used as raw materials of livestock products shall comply with inspection standards provided in Article 12 of Livestock Processing and Treatment Act. In addition, crude fat to be used shall be fats that are collected from livestock that have passed the inspection in accordance with the Livestock Processing and Treatment Act, and handled, processed, and controlled for the edible processing method. Collection of crude fat shall be done through sanitary means at a place licensed as a slaughter house or an edible meat processing business or registered as a livestock product selling business pursuant to Livestock Processing and Treatment Act. Crude fats shall be sanitary fats, which do not contain foreign materials other than normal fat ingredients and are not mixed with adipose tissue, etc., of other animals.

(6) Raw materials of animal, plant or any other origin as mentioned in the following shall not be used for manufacture, processing, and cooking of food.

(A) Materials that are not normally used as food in the traditional diet of normal people.

(B) Materials that are not collected, handled, processed, manufactured, or managed for eating purposes.

(C) Materials that have not been verified for safety and soundness as a raw material of food.

(D) Newly developed raw materials for which safety is not proven or verified.

(E) Other materials determined as unsuitable for human consumption by the Ministry of Food and Drug Safety.

(7) Intant formula shall use ingredients that are suitable for intake by babies and infants.

(8) Infant formula shall not include irradiated ingredients.

(9) Eggs used as raw materials shall be kept in cold storage (0 - 15°C) and not directly exposed to the sun; milk shall be stored at temperatures between 0 - 10°C; and meat shall be stored at a temperature of 5°C or below when stored for cooling and - 18°C or below when stored in a frozen state.

(10) Eggs used as raw materials for manufacturing and processing of livestock products shall not be rotten, rancid, moldy, mixed with foreign ingredients, containing blood, containing destroyed egg yolk (excluding physical reason) or exposed contents, and shall not have ceased or failed the hatching..

B. Equipment and containers for packaging

(1) Containers and packaging materials to be used for foods shall be those manufactured by a business registered as a manufacturing business for container and packaging according to the regulations in the Food Sanitation Act. However, this requirement does not apply to the manufacturer of containers and packaging materials that are to be used for the packaging of own products.

(2) Equipment and containers used for packaging materials shall meet the relevant standards and specifications prescribed in Article 9 of the Food Sanitation Act.

3. Permissible food or food additives

Food or Food additives to be used in livestock products shall be in accordance with the Food/Food additives code in Article 7 of the Food Sanitation Act.

4. Main Raw Materials of Livestock Products

A. “Main raw materials” refer to the ingredients that are used for the purpose of differentiating and characterizing livestock products from other livestock products in consideration of the main usage, characteristics, etc., of the livestock products.

B. Processed livestock products for which ingredient content standards are established in 2. Standards and Specifications for Individual Livestock Products Categories shall be subject to such standards. However, if standards are not established, it refers to a raw material, which has the highest percentage among the ingredients of the relevant products (water or diluting agent can be excluded). However, if 100% is specified for the content of ingredient contained in the product, the content of food additives shall be excluded.

C. Contents of water added due to the characteristics of products shall be excluded, and as for dried or concentrated products that are to be restored with the addition of water, the relevant standards shall apply on the basis of the calculated ingredient content ratios (%) of the restored state of such product.

5. Manufacturing and Processing Standards

A. General standards

(1) Machinery and equipment and auxiliary facilities, which are to be used for the manufacturing and processing of livestock products, are to be maintained and managed sanitarily. Furthermore, those which come in direct contact with raw materials shall be easy to clean, corrosion resistant, and cleaned and sterilized hygienically before and after work.

(2) Water to be used for the manufacturing and processing of livestock products shall meet the water quality standards as provided in the Drinking Water Management Act.

(3) Adequate preventive measures shall be taken if possible to prevent livestock products from being contaminated by foreign materials or pathogenic microorganisms during manufacturing, processing, and packaging.

(4) A frozen ingredient shall be thawed sanitarily.

(5) Any livestock products that are difficult to keep at an ambient temperature for an extended period of time shall be refrigerated, frozen, or pasteurized or sterilized by a suitable method considering the products' characteristics.

(6) Self-quality control shall be conducted frequently during the manufacturing and processing procedures.

(7) Antibiotics, synthetic antibacterial agents, and hormones shall not be used during the manufacture, processing, packaging, storage, and distribution of livestock products.

(8) During the manufacturing and processing of livestock products, drying, condensing, heat treatment, cooling and freezing processes shall be carried out in an appropriate manner, taking nutritional and safety considerations into account.

(9) Livestock product containers and packaging materials may be reused after they are thoroughly washed with drinking water, etc., and after it is confirmed that no impurities, etc., are left.

(10) Raw milk shall undergo a consistent process in order to refine particles of butter fat if a purification process is needed in order to remove foreign materials.

(11) Excluding special cases, the pasteurization or sterilization process of processed milk products shall be performed under low-temperature long-term pasteurization (63 – 65°C, 30min), high-temperature short-term pasteurization (72 – 75°C, 15 – 20 sec), ultrahigh temperature treatment (130 – 150°C, 0.5 – 5 sec), or by a method that has similar or better effectiveness. In addition, pasteurized products shall be immediately cooled at a temperature 10°C or below after pasteurization, and sterilized products shall be packaged using sterilized containers or packaging material by an aseptic process.

(12) Heated meat products out of the meat products shall be heated and pasteurized for 30 min by setting the temperature of the center of the product at 63°C or higher, or by a method that has an equal or better

effectiveness. Sterilized meat products shall be sterilized after it is put into an airtight container by setting the temperature of the center of the product at 120℃ or higher for over 4 min, or by a method that has an equal or better effectiveness.

(13) Unheated livestock product (processed products which is not sterilized by heating the center part at a temperature over 63°C for 30 min or by other similar methods) shall be managed with appropriate methods from the following standard or other effective methods.

(A) Pork meat used as a raw material shall be stored and cooled at a temperature 5°C or below within 24 hours of slaughter.

(B) In terms of the form of the meat used as a raw material or defrosting of frozen meat, the temperature of the central part of the meat shall not exceed 10℃.

(14) The indoor temperature of working place of livestock processing and packaging operations shall be maintained at15°C or below (heat processing operation establishments are excluded).

(15) Livestock products and packaged meat shall be processed as soon as possible, excluding special cases.

(16) Food additives shall not be added to packaged meat.

(17) Livestock shall be placed in containers and packaged as soon as possible, and the packaging process shall be conducted in a hygienic manner in order to prevent microorganism contamination. Sterilized products shall be packaged in sterilized containers, or aseptic processing shall be conducted on packages.

(18) Dried products shall be sealed and packaged as quickly as possible in order to prevent water absorption and contamination.

(19) Food additives shall be used in the minimum quantity that can achieve the intended purpose.

(20) Refined or purified salt shall be used for eating purposes. When saline solution is manufactured with bay salt, it shall be refined sufficiently in order to remove foreign materials. Bay salt may be used during the pre-treatment process of ingredients, provided that foreign materials, etc., shall not be carried into livestock products.

(21) The pre-treatment process of ingredients shall be conducted in a place separate from the place of storage. Each treatment process of ingredients shall prevent contamination and be connected to the next process immediately.

(22) Oil or fat used for livestock products shall be fresh.

(23) Freezing shall be done by quick-freezing of each item individually as much as possible.

(24) Livestock products may be manufactured and processed by a method that is more sanitary and appropriate than those specified in the manufacturing and processing standards.

B. Standards for individual livestock product categories

(1) Canned and bottled products

(A) Raw materials shall be placed in a clean container and transported, and according to the product's characteristics, they shall be put into a can or bottle in a way that the shape of the livestock products is not damaged.

(B) Seasoning liquid shall be sufficiently pasteurized or sterilized in order to prevent contamination by microorganisms, and poured at an appropriate temperature.

(C) In order to ensure the preservability of the products, the product shall be subjected to degasification at an appropriate temperature, and then sealed hermetically.

(D) Products shall be pasteurized or sterilized in a manner that is appropriate for their preservability; and the pasteurized or sterilized product shall be refrigerated in a proper manner to prevent discoloration of the contents as well as the proliferation of thermophiles.

(E) For sterilization of products, products shall be heated for 4 min with the center of the product exposed to a temperature of 120°C, or shall be heat-treated by a method that has similar or better effectiveness.

(F) Low acid food with a pH higher than 4.6 shall be sterilized.

(G) Acidic food with a pH less than or equal to 4.6 shall be pasteurized or sterilized.

(H) Manufacturing and processing of products shall be controlled so that the destruction of nutrients, vitamins, etc. can be minimized in consideration of the product characteristics.

(I) To guarantee the suitability of a sealing, thorough naked-eye examination shall be conducted on cans that are randomly selected per lot, and thorough breaking tests shall be conducted on seams.

(2) Retort products

(A) The manufacturing and processing processes shall be conducted with consideration of product characteristics in a way that minimizes the destruction of nutrients, vitamins, etc.

(B) Sterilization shall be conducted by setting the temperature of the center of the product at 120°C for 4 min or by a method that has the same or better effectiveness. Low acid food with a pH higher than 4.6 shall be sterilized. Acidic food with a pH less than or equal to 4.6 shall be pasteurized or sterilized.

(C) Products shall be pasteurized or sterilized in a manner that is appropriate for their preservability; and the pasteurized or sterilized product shall be refrigerated in a proper manner to prevent discoloration of the contents as well as the proliferation of thermophiles.

(D) No preservatives shall be used.

6. Specifications for Livestock Products

A. General specifications

(1) Food additives

(A) The standards for the use of a food additive in a livestock product shall be pursuant to the Food Additive Code in Article 7 of Food Sanitation Act.

(B) If food additives whose use is prohibited in a specific product is derived from an ingredient which allows the use of the food additive in question, the food additive content contained in the product may be exempted from the restriction on the use of food additives to the extent that it is derived from an ingredient.

(2) Foreign materials

(A) Any product shall not contain foreign materials more than the amount that cannot be further removed through the treatment process of ingredients and shall not contain contaminated, insanitary, and hard and sharp foreign materials that can cause hazards for human health. However, this provision shall not apply if foreign materials practically cannot be removed entirely during normal manufacturing and processing processes, such as the rind of other plants or plants used as ingredients, earth, and sand left behind in small quantities, and to the extent that they may not cause hazards to the human health.

(B) Metal foreign materials shall not exceed 2 mm and non-metal foreign materials shall not be over 3 mm. Even if they are fine particles that are smaller than 2 - 3 mm, they may be assessed for suitability by the Livestock Sanitary Deliberation Commission if it is judged that they may be dangerous to infants and children.

(3) Food poisoning bacteria

Food poisoning bacteria including *Salmonella* spp., *Staphylococcus aureus*, *Vibrio parahaemolyticus*, *Clostridium perfringens*, *Listeria monocytogenes*, Enterohaemorrhagic *E.coli,* etc. shall be n=5, c=0, m=0/25g in edible meat (excluding raw material to be used for manufacturing and processing purposes) or food products that have been pasteurized, sterilized, or can be directly consumed without further processing or thermal treatment. However, *V. parahaemolyticus*, *S. aureus*, and *C. perfringens* for the following livestock products shall apply as follows:

(A) *Vibrio parahaemolyticus*: Among the livestock products that are eaten as is without being pasteurized, sterilized, or processed further including being heated for cooking, it is limited to livestock products that contain seafood.

(B) *Staphylococcus aureus*

1) Raw hams, fermented sausages, and natural and processed cheeses: n = 5, c = 2, m = 10, M = 100.

2) Heated hams and sausages: n = 5, c = 1, m = 10, M = 100 (Sterilized products have to be n = 5, c = 0, m = 0/25 g).

3) Aside from 1) above, raw meat (excluding raw material to be used for manufacturing and processing purposes) and livestock products that are eaten as they are without being pasteurized, sterilized, or processed further including being heated for cooking : n = 5, c = 0, m = 0/25 g.

(C) *Clostridium perfringens*

1) Raw ham and fermented sausages, natural cheeses, processed cheeses: n = 5, c = 2, m = 10, M = 100. Heated hams and sausages: n = 5, c = 1, m = 10, M = 100 (Sterilized products have to be n = 5, c = 0, m = 0/25 g).

2) Aside from 1) above, raw meat (excluding raw material for manufacturing and processing purposes) and livestock products that have not been pasteurized, sterilized, or those that are not further processed or heated for cooking and eaten as they are: n = 5, c = 0, m = 0/25 g.

(4) The number of bacteria on livestock products to which lactic acid bacteria have been added shall be measured by subtracting the number of lactic acid bacteria from the total number of bacteria.

(5) Maximum residue limits (MRLs) for antibiotics, etc.

(A) MRLs for antibiotics, synthetic antibacterial agents, and synthetic hormones in edible meat shall be pursuant to the Food Code in Article 7 of the Food Sanitation Act.

(B) Livestock products in which MRLs were established may be allowed to contain the antibiotics, etc., within the residue limits.

(6) The standards for heavy metals, radiation exposure, radioactivity, and mycotoxin and permissible limits for benzopyrene, melamine, dioxin, and substances that are similar to erectile-dysfunction pills, etc. shall comply with the Food Code in Article 7 of the Food Sanitation Act.

B. Specifications for canned and bottled products

"Canned or bottled products" refer to products manufactured and processed in ways where food is put into cans or bottles, deaerated, sealed, and pasteurized or sterilized so that the original quality of the canned or bottled food may be maintained for an extended period of time.

(1) Characteristics: The cap of the can or bottle shall not be swollen, deformed, or rusted, and the contents shall maintain its own unique color and be free of foreign taste or odor.

(2) Tin (mg/kg): No greater than 150 (bottled-type or aluminium cans shall be excluded).

(3) Bacteria: Bacterial growth shall be negative.

C. Specifications for retort products

"Retort products" refer to instant products manufactured in a manner where meat or egg product is put in a container made of a single plastic or metal film or several layers thereof glued together and formed into pouches or other shapes, deaerated, and sterilized with heat and pressure so that it can be eaten immediately or with simple cooking procedures and with its high preservability, it can be carried or delivered easily.

(1) Characteristics: The external shape shall not be swollen or deformed, and the contents shall maintain its unique flavor, color, properties and be free of foreign taste or odor.

(2) Bacteria: Bacterial growth shall be negative.

(3) Tar color: shall not be detected.

D. Inspection standards for meat

(1) Volatile basic nitrogen (mg %): No more than 20

(2) Enterohaemorrhagic *E.coli* : n=5, c=0, m=0/25 g(limited to only ground meat)

E. Inspection standards for raw milk

(1) General standards

(A) Medications must not be added for neutralization, pasteurization, and inhibition of microbiological growth, as well as for storage.

(B) Cow's milk and sheep's milk must not be nursed or mingled in the same facilities.

(2) Standards for individual products

(A) Milk (raw after being milked)

1) Count of bacteria and somatic cells: shall be based on the standard for hygiene ranking of livestock products listed in Article 4, Section 2 of the Act.

2) Specific gravity: shall be between 1.028 to 1.034 at 15°C.

3) Acidity: 0.18% or less for Holstein type of milk and 0.20% or less for other types of milk.

4) Alcohol testing: Suitable

5) Sediment testing: 2.0 mg or less

6) Sensory testing: Suitable

7) Water and salt testing: shall be based on the processing standard and ingredient specifications for livestock products listed in Article 4, Section 2 of the Act.

(B) Goat milk (raw after being milked)

1) Number of bacteria (standardized plate count method): 50,000 or less per 1 mL.

2) Specific gravity: shall be between 1.028 to 1.034 at 15°C.

3) Acidity: 0.2% or less

F. Inspection standards for edible shell eggs

(1) Edible shell eggs shall satisfy the MRLs specified in the Egg Code in Article 7 of the Food Sanitation Act.

(2) *Salmonella* enteritidis shall not be detected in edible shell eggs that are eaten by people without being processed or heated.

G. Specifications for miscellaneous food products other than those specified in Chapter 2 Standards and Specifications for Individual Livestock Product Categories

(1) Characteristics: shall be suitable

(2) Foreign materials: shall be suitable

(3) Coliforms: shall be negative (only applicable to pasteurized products).

(4) Bacterial count: shall be negative (only applicable to sterilized products).

(5) Tar color: shall be suitable only for livestock products for which usage standards are specified in the Food Additive Code in Article 7 of the Food Sanitation Act.

(6) Synthetic preservatives: shall be suitable only for livestock products for which usage standards are specified in the Food Additive Code in Article 7 of the Food Sanitation Act.

(7) Antioxidants: shall be suitable only for livestock products for which usage standards are specified in the Food Additive Code in Article 7 of the Food Sanitation Act.

7. Application of Standards and Specifications

The standards and specifications specified in this Food Code shall be applied according to the types of livestock products classified in consideration of the product name, characteristics, main ingredients, ingredient content standards, manufacturing methods, usage, etc., and Chapter 1. General Standards and Specifications for Livestock Products shall apply as follows to all livestock products including the products specified in Chapter 2. Standards and Specifications for Individual Livestock Product Categories."

A. For livestock products for which standards and specifications are established from "Chapter 2. Standards and Specifications for Individual Livestock Product Categories," relevant standards and specifications shall take precedence, while "Chapter 1. General Standards and Specifications for Livestock Products" is still applicable. However, if any of the general standards and specifications for livestock products in Chapter 1 are rarely required or considered ineffective in consideration of product characteristics, they may be applied selectively when required.

B. For products for which standards and specifications are not established in "Chapter 2. Standards and Specifications for Individual Livestock Product Categories," Chapter 1. General Standards and Specifications for Livestock Products shall be applied. However, under "A. General Specifications" in 6. Ingredient Specification for Livestock Products, (3) Food poisoning bacteria, (4) Maximum residue limits of antibiotics, etc., and (5) The standards may apply selectively as specified in clause A for heavy metals, product investigation handling, radiation exposure, radioactivity, and mycotoxins; and permissible limits for benzopyrene, melamine, dioxin, and substances that are similar to erectile-dysfunction pills, etc.

C. Notwithstanding the regulations stated in B, among the products whose standards and specifications are not determined by Chapter 2. Standards and Specifications for Individual Livestock Product Categories, "canned and bottled products," "retort products," and "miscellaneous products not defined by Chapter 2. Standards and Specifications for Individual Livestock Product Categories" shall be respectively subject to "B. Specifications for Canned and Bottled Products," "C. Specifications for Retort Products," and D. Specifications for Miscellaneous Livestock Products other than those specified in Chapter 2. Standards and Specifications for Individual Livestock Product Categories." And depending on the characteristics of products, they may be subject to "A. General Specifications for livestock products" under 6. Ingredient Specifications of Livestock Products in a selective manner.

D. For products for which standards and specifications are established in "Chapter 2. Standards and Specifications for Individual Livestock Product Categories," and as for miscellaneous food

products that are manufactured and processed in a manner specified for “canned and bottled products” and “retort products,” the products shall be subject respectively to the standards and specifications for “canned and bottled products” and “retort products” as well as to the standards and specifications for relevant livestock products. However, if standards and specifications overlap each other, stricter provisions shall apply. (However, provisions on microorganisms among the specifications for livestock products manufactured and processed as canned and bottled products and retort products shall be pursuant, respectively, to specifications for B. Canned and Bottled Products and C. Retort Products under 6. Ingredient Specifications of Livestock Products).

F. Standards and specifications that are not determined in this processing standards and ingredient specifications for livestock products shall be pursuant to the CODEX rules.

8. Storage and Distribution Standards

A. All livestock products shall be handled and sold sanitarily and shall not be stored or sold in unsanitary locations.

B. Livestock products shall be protected from rain, snow, etc., and shall not be kept together with chemicals, pesticide, or toxic materials that may inflict danger to human health.

C. Foreign materials shall not enter the product, and the product shall be separated from other foods, food additives, etc. that may affect the flavor and taste of the product.

D. Products shall be kept and distributed at a cool place, and food that cannot maintain its quality for more than 7 days at an ambient temperature shall be frozen or refrigerated as soon as possible for storage and distribution.

E. Frozen products shall be frozen in a manner of minimum quality change and not be refrozen after they are thawed. However, this may not apply to frozen meat that needs to thaw for cutting or deboning, but it shall be immediately frozen after the required work.

F. Pasteurized Milk, low-fat milk, non-fat milk, hydrolyzed lactose milk, processed milk, goat milk, butter milk, concentrated milk, and whey shall be stored at a temperature of 0 ~ 10°C; fermented milk shall be refrigerated at a temperature of 0 ~ 10°C, and frozen products shall be stored at a temperature below −15°C. Also, Natural cheese and processed cheese shall be stored at 0 ~ 10°C, frozen products shall be stored at a temperature below −18°C, and butter shall be refrigerated or frozen.

G. The meat shall be kept at a temperature −2 ~ 10°C. (However, poultry meat shall be stored at −2 ~ 5°C), and frozen meat shall be kept at a temperature of −18°C or below.

H. Storage temperature of edible meat products and packaged meat shall be −2 ~ 10°C for refrigerated products (however, that for poultry meat and packaged meat shall be −2 ~ 5°C). And frozen meat products shall be stored and distributed at temperatures of −18°C or below. Yet, sterilized meat products or dried meat product, etc., may be stored at a room temperature.

I. Edible shell eggs shall be cooled (0 ~ 15°C) as far as possible, and egg products shall be refrigerated or frozen at temperatures of 10°C or below (5°C or below for egg liquid products). Thus, products that have been processed to prevent decomposition through procedures such as drying and sugar or salt may not be refrigerated or frozen.

J. Ready-to-eat livestock products shall be stored and distributed at temperatures of 6°C or below.

K. Frozen or refrigerated food shall be transported through refrigerated vehicles, which have the ability to maintain appropriate temperatures or through other methods that have an equal or more effective way.

L. For products with a concern for moisture absorption, cautions shall be taken to prevent products

from absorbing moisture.

M. Seller of livestock products shall restrain from purchasing excessive stock of products, taking into consideration the normal sales quantities, etc., and products that have been manufactured at earlier dates shall be first shipped or selled.

N. Upon receiving complaints from consumers about faulty products, the manufacturer shall find out the reason and make best efforts to protect the rights of the consumers.

O. Except for cases below packaged products shall not be divided into smaller portions; and livestock products subject to labeling requirements shall not be purchased or sold if they are not labeled.

(1) When meat sales business or spot meat retail sellers are dividing packaged product for sales

(2) When spot meat retail sellers are making processed products (except for canned, bottled products) or dividing them for sales.

P. If products are degenerated or damaged during the storage due to negligence, they shall be returned to the manufacturer or destroyed.

Q. The “sell-by date” shall be determined when the packaging is completed (as for products that undergo manufacturing processes after packaging, it shall be when the final process is completed)If more than one product with different shelf lives are packaged together in a gift set, etc., the shelf life of the product with the shortest shelf life shall become the shelf life for the entire set.; and the sell-by date of products which undergo a simple processing without changing the preservation of the original ingredient product shall be determined on when the original product was packaged.

R. Frozen products shall not be thawed and distributed at a room temperature or as a refrigerated product.

S. Sell-by date of the products shall be established by the livestock processing business, meat packaging business, meat sales business, egg-collecting and sales business, or spot meat retail sellers of the relevant products (even in case of an imported product, the importer is responsible within the distribution period determined by the manufacturer) in consideration of the product characteristics such as packaging materials, storage conditions, processing methods, and ingredient content ratios, and distribution conditions such as the refrigeration or cold storage conditions to prevent hazards and maintain the quality of the product.

Chapter 2

Standards and Specifications for Individual Livestock Product Categories

1. Milk Products

Milk products refer to products made by using raw milk or milk products as the main ingredient and include: Milks, Low-fat milks, Non-fat milks, Hydrolyzed lactose milks, Processed milks, Goat milk, Fermented milks, Butter milks, Condensed milks, Milk creams, Butters, Cheeses, Milk powders, Wheys, Lactose, Hydrolyzed milk protein products, Infant formulas, Ice creams, Ice cream powders, Ice cream mixes, etc.

A. Milks

(1) Definition

Milks refer to the products made through pasteurizing or sterilizing of raw milk or raw milk fortified with vitamins or minerals; aseptically adding lactic acid bacteria, vitamins, minerals to pasteurized or sterilized raw milk or vitamin- or mineral-fortified raw milk; or pasteurizing or sterilizing a product restored from the dairy product that contains similar ingredients as the raw milk.

(2) Types of products

(A) Milk: Pasteurized or sterilized milk (100% raw milk).

(B) Fortified milk: Refers to milk fortified with vitamins or minerals (100% raw milk, excluding fortifying agent).

(C) Restored milk: Product restored from milk products so that the ingredients are similar to raw milk and pasteurized or sterilized (with ingredient specifications that are identical to those of a whole milk powder) and has more than 11% of milk solids.

(D) Lactic acid bacteria-added milk: Milk that lactic acid bacteria are added into (100% raw milk, but lactic acid is excluded).

(3) Processing standards

(A) In cases when enhancers have to be supplemented to the milk, they shall be added during an appropriate period considering thermal stability and microorganism contamination.

(B) Milks can be standardized by reducing the amount of milk fat.

(C) In milks, other materials shall not be combined. However, similar ingredient as raw milk can be added to the restored milk, and vitamins and minerals can be added to the fortified milk.

(4) Specifications

(A) Characteristics: Milky whitish-yellow liquid without abnormal taste or odor

(B) Specific gravity (15°C): 1.028 ~ 1.034

(C) Acidity (%): Not more than 0.18 (as lactic acid)

(D) Milk solids-not-fat (%): Not less than 8.0

(E) Milk fat (%): Not less than 3.0

(F) Bacterial count: n=5, c=2, m=10,000, M=50,000 (sterilized product shall be n=5, c=0, m=0 when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 37°C. However, the lactic acid bacterial count is excluded for products containing lactic acid bacteria.)

(G) Coliforms: n=5, c=2, m=0, M=10 (sterilized product shall be negative)

(H) Phosphatase: shall be negative (only applicable to products pasteurized by the low-temperature long-term pasteurization method or a high-temperature short-term pasteurization method)

(I) Lactic acid bacterial count: Not less than 1,000,000 per mL (only applicable to products containing lactic acid bacteria)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

B. Low-fat milks

(1) Definition

Low-fat milks refer to raw milk from which milk fat is partially removed, low-fat milk that is fortified with vitamins or minerals followed by pasteurization or sterilization, pasteurized or sterilized low-fat milk, aseptically added with lactic acid bacteria, vitamins, and minerals, or a pasteurized or sterilized low-fat product restored from milk products.

(2) Types of products

(A) Low-fat milk: Pasteurized or sterilized raw milk whose milk fat content is adjusted between 0.6 ~ 2.6% (100% raw milk).

(B) Restored low-fat milk: Product restored from milk products in a form similar to the low-fat milk and includes not less than 8% of milk solids-not-fat (same specification as the powdered skim milk).

(C) Fortified low-fat milk: Low-fat milk fortified with vitamins or minerals (100% raw milk, excluding fortifying agent).

(D) Restored fortified low-fat milk: Product restored from milk products to a form similar to low-fat milk and fortified with vitamins or minerals including not less than 8% of milk solids-not-fat (same specification as the powdered skim milk).

(E) Lactic acid bacteria-added low-fat milk: Low-fat milk added with lactic acid bacteria. (100% raw milk, excluding added lactic acid bacteria).

(3) Processing standards

(A) In cases when enhancers are supplemented to low fat milk, they shall be added during an appropriate period considering the thermal stability and microorganism contamination.

(B) Other materials shall not be added to low fat milks. However, materials that are equivalent as raw milk can be added to restored low-fat milk; vitamins and minerals can be added to fortified low-fat milk and restored fortified low-fat milk.

(4) Specifications

(A) Characteristics: Milky whitish-yellow liquid without abnormal taste or odor

(B) Specific gravity (15°C): 1.030 ~ 1.045

(C) Acidity (%): Not more than 0.18 (as lactic acid)

(D) Milk fat (%): 0.6 ~ 2.6

(E) Milk solids-not-fat (%): Not less than 8.0

(F) Bacterial count n=5, c=2, m=10,000, M=50,000 (sterilized product shall be n=5, c=0, m=0 when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C. However, the lactic acid bacterial count is excluded for

products containing lactic acid bacteria.)

(G) Coliforms: n=5, c=2, m=0, M=10 (sterilized product shall be negative)

(H) Phosphatase: shall be negative (only applicable to products pasteurized by the low-temperature long-term pasteurization method or a high-temperature short- term pasteurization method)

(I) Lactic acid bacterial count: Not less than 1,000,000 per mL (only applicable to products containing lactic acid bacteria)

(5) Examination Method

Examination shall be conducted according to the livestock products test method.

C. Non-fat milks

(1) Definition

Non-fat milks refer to raw milk or low-fat milk from which milk fat is adjusted to be no higher than 0.5%, such non-fat milk fortified with vitamins or minerals followed by pasteurization or sterilization, pasteurized or sterilized non-fat milk, aseptically added with lactic acid bacteria, vitamins, and minerals , or pasteurized or sterilized non-fat product restored from milk products.

(2) Types of products

(A) Non-fat milk: Pasteurized or sterilized raw milk whose milk fat content is adjusted to 0.5% or less (100% raw milk).

(B) Restored non-fat milk: Product restored from milk products to be in a form similar to non-fat milk and includes not less than 8% of milk solids-not-fat (same specification as the powdered skim milk).

(C) Fortified non-fat milk: Non-fat milk fortified with vitamins or minerals (100% raw milk, excluding fortifying agent).

(D) Restored fortified non-fat milk: Product restored from milk products to be in a similar form as non-fat milk and fortified with vitamins or minerals including no less than 8% of non-fat milk solids (same specification as the powdered skim milk).

(E) Lactic acid bacteria-added non-fat milk: Non-fat milk added with lactic acid bacteria (100% raw milk, excluding added lactic acid bacteria).

(3) Processing standards

(A) In cases when enhancers are supplemented to non-fat milk, they shall be added during an appropriate period considering the thermal stability and microorganism contamination.

(B) Other materials shall not be added to non-fat milks. However, materials that are equivalent as raw milk can be added to restored non-fat milk; vitamins and minerals can be added to fortified non-fat milk and restored fortified non-fat milk.

(4) Specifications

(A) Characteristics: Milky whitish-yellow liquid without abnormal taste or odor

(B) Specific gravity (15°C): 1.030 ~ 1.045

(C) Acidity (%): Not more than 0.18 (as lactic acid)

(D) Milk fat (%): 0.6 ~ 2.6

(E) milk solids-not-fat (%): Not less than 8.0

(F) Bacterial count: n=5, c=2, m=10,000, M=50,000 (sterilized product shall ben=5, c=0, m=0 when tested according to the general bacterial counting methods after being stored for 1 week

at 55°C or for 2 weeks at 30°C. However, the lactic acid bacterial count is excluded for products containing lactic acid bacteria.)

(G) Coliforms: n=5, c=2, m=0, M=10 (sterilized product shall be negative)

(H) Phosphatase: shall be negative (only applicable to products pasteurized by the low-temperature long- term pasteurization method or a high-temperature short- term pasteurization method)

(I) Lactic acid bacterial count: Not less than 1,000,000 per mL (only applicable to products containing lactic acid bacteria)

(5) Examination Method

Examination shall be conducted according to the livestock products test method.

D. Hydrolyzed lactose milks

(1) Definition

Hydrolyzed lactose milks refer to raw milk, milk, low-fat milk or non-fat milk, from which lactose is hydrolyzed with a lactose hydrolyzing enzyme or physically removed, or such hydrolyzed lactose milk that is fortified with vitamins and minerals followed by pasteurization or sterilization. (Raw milk, milk, low-fat milk, or non-fat milk 100%).

(2) Types of products

(A) Hydrolyzed lactose milk: Pasteurized or sterilized raw milk in which lactose is hydrolyzed or removed and fortified with vitamins and minerals.

(B) Low-fat hydrolyzed lactose milk: Pasteurized or sterilized raw milk or low-fat milk, from which lactose is dissolved or removed so that the milk fat is adjusted between 0.6% and 2.6%, or such low-fat hydrolyzed lactose milk supplemented with vitamins and minerals.

(C) Non-fat hydrolyzed milk: Pasteurized or sterilized raw milk, milk, low-fat milk, or skimmed milk, from which lactose is dissolved or removed so that the milk fat is adjusted to 0.5% or less, or such lactose-deficient skim milk supplemented with vitamins and minerals.

(3) Processing standards

(4) Specification

(A) Characteristics: A milky white or yellow homogenized liquid without abnormal taste or odor

(B) Acidity (%): Not more than 0.18 (as lactic acid)

(C) Lactose (%): Not more than 1.0

(D) Milk fat (%): Not less than 3.0 (between 0.6 ~ 2.6 for low-fat hydrolyzed lactose milk and not more than 0.5% for skim hydrolyzed lactose milk)

(E) Bacterial count: n=5, c=2, m=10,000, M=50,000 (sterilized product shall be n=5, c=0, m=0 when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C.)

(F) Coliforms: n=5, c=2, m=0, M=10 (sterilized product shall be negative)

(5) Examination Method

Examination shall be conducted according to the livestock products test method.

E. Processed milks

(1) Definition

Processed milks refer to products that use raw milk or a dairy product as the main ingredient, and are made by adding other food or food additives to the main ingredient followed by pasteurization or sterilization, or by adding food or food additives aseptically after pasteurization or sterilization. They contain not less than 4% of milk solids-not-fat (same specification as skim milk powder).

(2) Types of products

(A) Processed milk: Product that uses raw milk or a dairy product as the main ingredient, and is made by adding other foods or food additives to the main ingredient followed by pasteurization or sterilization, or by adding food or food additives aseptically after pasteurization or sterilization. .

(B) Low-fat processed milk: Product that uses raw milk or a dairy product as the main ingredient, and is made by adding other foods or food additives to the main ingredient followed by pasteurization or sterilization, or by adding food or food additives aseptically after pasteurization or sterilization. They contain 0.6 ~ 2.6% of crude fat.

(C) Skimmed processed milk: Product that uses raw milk or a dairy product as the main ingredient, and is made by adding other foods or food additives to the main ingredient followed by pasteurization or sterilization, or by adding food or food additives aseptically after pasteurization or sterilization. They contain no greater than 0.5% of crude fat.

(D) Milk beverage: Beverages containing no less than 4% of non-fat milk solid and not classified as other milk products.

(3) Processing specification

(4) Specifications

Types / Specification	Processed milk	Low-fat processed milk Non-fat processed milk	Milk beverages
(A) Characteristics	Liquid displaying its own distinctive color and flavor without abnormal taste or odor	Liquid displaying its own distinctive color and flavor without abnormal taste or odor	Liquid displaying its own distinctive color and flavor without abnormal taste or odor
(B) Milk solids-not-fat (%)	Not less than 7.2	Not less than 5.5	Not less than 4.0
(C) Milk fat (%)	No less than 2.7	Low fat processed milk: 0.6-2.6, Non-fat process milk: not more than 0.5% (based on the crude fat)	-

Specification \ Types	Processed milk	Low-fat processed milk Non-fat processed milk	Milk beverages
(D) Bacterial count	n=5, c=2, m=10,000, M=50,000 (sterilized product shall have n=5, c=0, m=0 when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C.)	n=5, c=2, m=10,000, M=50,000 (sterilized product shall have n=5, c=0, m=0 when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C)	n=5, c=2, m=10,000, M=50,000 (sterilized product shall have n=5, c=0, m=0 when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C)
(E) Coliforms	n=5, c=2, m=0, M=10 (sterilized products shall be negative)	n=5, c=2, m=0, M=10 (sterilized products shall be negative)	n=5, c=2, m=0, M=10 (sterilized products shall be negative)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

F. Goat milk

(1) Definition

Goat milk refers to pasteurized or sterilized raw milk obtained from goats (goat milk 100%).

(2) Types of products

(3) Processing standards

(4) Specifications

(A) Characteristics: A milky whitish-yellow homogenized liquid without abnormal taste or odor

(B) Specific gravity (15°C): 1.030 ~ 1.034

(C) Acidity (%): Not more than 0.20 (as lactic acid)

(D) Milk solids-not-fat (%): Not less than 7.5

(E) Milk fat (%): Not less than 3.2

(F) Bacterial count: n=5, c=2, m=10,000, M=50,000 (sterilized product shall be n=5, c=0, m=0 when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C.)

(G) Coliforms: n = 5, c = 2, m = 0, M = 10 (sterilized product shall be negative)

(H) Phosphatase: shall be negative (only applicable to products pasteurized by the low-temperature long-term pasteurization method or a high-temperature short-term pasteurization method).

(5) Examination method

Examination shall be conducted according to the livestock products test method.

G. Fermented milks

(1) Definition

Fermented milks refer to raw milk or milk products fermented with lactic acid bacteria or yeast, or such fermented milks to which other foods or food additives are hygienically added.

(2) Types of products

(A) Fermented milk: Fermented raw milk or milk products, or such fermented milk to which other foods or food additives are added through hygienic means, with not less than 3% of milk solids-not-fat.

(B) Thickened fermented milk: Fermented raw milk or milk products, or such fermented milk to which other foods or food additives are added through hygienic means, with not less than 8% of milk solids-not-fat in forms of powder or liquid.

(C) Creamy fermented milk: Fermented raw milk or milk products, or such creamy fermented milk to which other foods or food additives are added through hygienic means, with not less than 3% of milk solids-not-fat and not less than 8% of milk fat.

(D) Thickened creamy fermented milk: Fermented raw milk or milk products, or such thickened creamy fermented milk to which other foods or food additives are added through hygienic means, with not less than 8% of non-fat milk solids and not less than 8% of milk fat.

(E) Fermented butter milk: Fermented butter milk with not less than 8% of milk solids-not-fat.

(F) Fermented milk powder: Fermented raw milk or milk products, or such fermented milk powder to which other foods or additives are added through hygienic means, with not less than 85% of powdered milk solids.

(3) Processing Standards

(A) Combined raw materials (excluding lactic acid bacteria and yeast) shall go through pasteurization or sterilization and freezing processes, and afterwards caution is needed to prevent pollution by microorganisms of a different kind.

(B) Lactic acid bacteria and yeast shall be maintained at appropriate temperatures and shall be cultured or fermented.

(C) Fermented milks may go through the freezing process.

(4) Specifications

Types / Specification	Fermented milk	Thickened fermented milk	Creamy fermented milk	Thickened creamy fermented milk	Fermented buttermilk	Fermented milk powder
(A) Characteristics	Liquid displaying its own distinctive color and	Liquid displaying its own distinctive color and	Liquid displaying its own distinctive color and	Liquid displaying its own distinctive color and	Liquid displaying its own distinctive color and	Liquid displaying its own distinctive color and

Types / Specification	Fermented milk	Thickened fermented milk	Creamy fermented milk	Thickened creamy fermented milk	Fermented buttermilk	Fermented milk powder
	flavor without abnormal taste or odor	flavor without abnormal taste or odor	flavor without abnormal taste or odor	flavor without abnormal taste or odor	flavor without abnormal taste or odor	flavor without abnormal taste or odor
(B) Water Content (%)	-	-	-	-	-	Not more than 5.0
(C) Milk solids (%)	-	-	-	-	-	Not less than 85
(D) Non-fat milk solids (%)	Not less than 3.0	Not less than 8.0	Not less than 3.0	Not less than 8.0	Not less than 8.0	-
(E) Milk fat (%)	-	-	Not less than 8.0	Not less than 8.0	Not less than 1.5	
(F) Lactic acid bacterial count or yeast count	Not less than 10,000,000 per mL	Not less than 10,000,000 per mL (No less than 10,000,000 for frozen products)	Not less than 10,000,000 per mL	Not less than 10,000,000 per mL(Not less than 10,000,000 for frozen products)	Not less than 10,000,000 per mL	-
(G) Coliforms	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10

(5) Examination Method

Examination shall be conducted according to the livestock products test method.

H. Buttermilks

(1) Definition

Buttertmilks refer to products made by pasteurizing or sterilizing the remains that are left after butter is manufactured from milk cream, or such buttermilk made into a powder form (raw buttermilk 100%).

(2) Types of products

(A) Buttermilk: A product made by pasteurizing or sterilizing the remains that are left after butter is manufactured from milk cream.

(B) Powdered buttermilk: A product made by pasteurizing or sterilizing the remains that are left after butter is manufactured from milk cream and putting it in a powder form.

(3) Processing standards

(A) Food additives cannot be used during the processing stage.

(4) Specifications

Types / Specifications	Buttermilk	Powdered buttermilk
(A) Characteristic	shall display its own distinctive color and flavor without abnormal taste or odor	shall display its own distinctive color and flavor without abnormal taste or odor
(B) Water content (%)	-	Not more than 5.0
(C) Milk solid (%)	Not less than 6.5	Not less than 95.0
(D) Bacterial count	Not more than 20,000 per mL (however, sterilized products shall be negative when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C)	Not more than 20,000 per 1g
(E) Coliforms	n=5, c=2, m=<3, M=10 (sterilized products shall be negative)	n=5, c=2, m=<3, M=10 (sterilized products shall be negative)

(5) Examination Method

Examination shall be conducted according to the livestock products test method.

I. Concentrated milks

(1) Definition

Concentrated milks refer to products made by concentrating raw milk, milk, low-fat milk, or non-fat milk alone or to which other foods or food additives are added.

(2) Types of products

(A) Concentrated milk: A product made by concentrating pure raw milk.

(B) Concentrated skim milk: A product made by concentrating raw milk whose milk fat content is adjusted no greater than 0.5%.

(C) Sweetened condensed milk: A product made by concentrating raw milk that is added with saccharides.

(D) Sweetened condensed skim milk: A product made by concentrating raw milk after adjusting milk fat to no greater than 0.5% and adding saccharides.

(E) Processed condensed milk: A product made by adding foods or food additives to raw milk, milks, low-fat milks, or non-fat milks and concentrating.

(3) Processing specification

(A) When using lactose to prevent precipitation, it shall be processed as a fine powder to prevent contamination by microorganisms.

(B) Other materials shall not be added to concentrated milk. However, sweetened condensed milk and sweetened condensed skim milk can contain sugar (sugar, glucose, fruit sugar, and oligosaccharide), and processed condensed milk can contain foods or food additives.

(4) Specifications

Types / Specifications	Concentrated milk, concentrated skim milk	Sweetened condensed milk	Sweetened condensed skim milk	Processed condensed milk
(A) Characteristics	Homogenized milk of whitish-yellow liquid without abnormal taste or odor	Homogenized sweet milk of whitish-yellow liquid without abnormal taste or odor	Homogenized sweet milk of whitish-yellow liquid without abnormal taste or odor	Homogenized milk with its own distinctive color and flavor and without abnormal taste or odor
(B) Water content (%)	-	Not more than 27.0	Not more than 29.0	-
(C) Milk solids (%)	Not less than 22.0	Not less than 29.0	Not less than 25.0	Not less than 22.0
(D) Milk fat (%)	Not less than 6.0 (only applicable to concentrated milk)	Not less than 8.0	-	-

Types / Specifications	Concentrated milk, concentrated skim milk	Sweetened condensed milk	Sweetened condensed skim milk	Processed condensed milk
(E) Acidity (%)	Not more than 0.4 (using lactic acid as the basis and only applicable to concentrated milk)	-	-	-
(F) Sugar content (including lactose, %)	-	Not more than 58.0	Not more than 58.0	Not more than 58.0
(7) Bacterial count	Not more than 20,000 per 1 g (sterilized products shall be negative when tested according to the general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C)	Not more than 20,000 per 1 g	Not more than 20,000 per 1 g	Not more than 20,000 per 1 g
(8) Coliforms	n=5, c=2, m=<3, M=10 (sterilized products shall be negative)	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10

(5) Examination method

Examination shall be conducted according to the livestock products test method.

J. Milk creams

(1) Definition

Milk creams refer to products made by pasteurizing or sterilizing the milk fat isolated from raw milk or milks, products made by pasteurizing or sterilizing such milk cream added with foods and food additives, etc., or products made by changing previously described milk creams product into a powder form.

(2) Types of products

(A) Milk cream: Milk fat isolated from raw milk or milks, with not less than 30% of milk fat.

(B) Processed milk cream: Product made by processing the milk cream added with other foods or food additives, with not less than 18% of milk fat.

(C) Powdered milk cream: Product made by changing the milk cream added with other foods or food additives into a powder form, with not less than 50% of milk fat.

(3) Processing standards

(A) The pasteurization or sterilization process shall be performed under low-temperature long-term pasteurization (63 ~ 65°C, 30min), high-temperature short-term pasteurization (72 ~ 75°C, 15 ~ 20 sec), ultrahigh temperature sterilization (130 ~ 150°C, 0.5 ~ 5 sec), or by a method that has the same or better effect.

(B) Other materials shall not be added to milk creams (with an exception of processed milk cream and powdered milk cream).

(4) Specifications

Types / Specifications	Milk cream	Processed milk cream	Powdered milk cream
(A) Characteristics	Homogenized milk of whitish-yellow liquid or semisolid without abnormal taste or odor	shall have its own distinctive color and flavor without abnormal taste or odor	Powder displaying its own distinctive color and flavor without abnormal taste or odor
(B) Water content (%)	-	-	Not more than 5.0
(C) Acidity (%)	Not more than 0.20 (as lactic acid)	-	-
(D) Milk fat (%)	Not less than 30.0	Not less than 18.0	Not less than 50.0
(E) Bacterial count	Not more than 20,000 per 1 g	Not more than 20,000 per 1 g (sterilized product shall be negative when tested according to the general bacterial counting	Not more than 20,000 per 1 g

Types / Specifications	Milk cream	Processed milk cream	Powdered milk cream
		methods after being stored for 1 week at 55°C or for 2 weeks at 30°C)	
(F) Coliforms	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10 (sterilized products shall be negative).	n=5, c=2, m=<3, M=10 (sterilized products shall be negative).

(5) Examination method

Examination shall be conducted according to the livestock products test method.

K. Butters

(1) Definition

Butters refer to products made by separating or fermenting milk fat obtained from raw milk or milks and stirring and processing it as is, or processing it with other foods or food additives, etc. added

(2) Types of products

(A) Butter: A product made by separating or fermenting milk fat obtained from raw milk or milks and stirring and processing it with a weak pressure as is, and contains no less than 80% of milk fat.

(B) Processed butter: A product made by separating or fermenting milk fat obtained from raw milk or milks and stirring and processing it with a weak pressure as is, or processing it with foods or other food additives added. It contains not less than 30% of milk fat (However, the amount of milk fat shall be no less than 50% in terms of the weight ratio of the fat content of the product).

(C) Butter oil: A product made by removing almost everything besides the milk fat such as water and non-fat milk solids from butters or milk creams.

(3) Processing standards

(A) When processing fermented butter, sufficient caution shall be taken so that it is not contaminated by microorganisms of a different kind. .

(B) In order for products to possess desired internal structure and moisture content, temperature and time management shall be thoroughly carried out during the stirring process.

(4) Specifications

Types / Specifications	Butter	Processed butter	Butter oil
(A) Characteristic	shall have its own distinctive color and flavor without abnormal taste or odor	shall have its own distinctive color and flavor without abnormal taste or odor	shall have its own distinctive color and flavor without abnormal taste or odor
(B) Water content (%)	Not more than 18.0	Not more than 18.0	Not more than 0.3
(C) Milk fat (%)	Not less than 80.0	Not less than 30.0	Not less than 99.6
(D) Acid value	Not more than 2.8 (excluding fermented products)	Not more than 2.8 (excluding fermented products)	Not more than 2.8
(E) Butyric spores	20.0 ± 2	-	20.0 ± 2
(F) Tar colors	shall not be detected	shall not be detected	shall not be detected

Types / Specifications	Butter	Processed butter	Butter oil
(G) Coliforms	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10
(H) Antioxidants (g/kg) : Antioxidants not listed below shall not be detected			
Butylated hydroxy anisole (BHA) Butylated hydroxy toluene (BHT) tert-Butylhydroquinone (TBHQ)	Not more than 0.2 (when used together, the aggregate quantity of BHA, BHT, AND TBHQ shall not be more than 0.2)		
Propyl gallate (PG)	Not more than 0.1		
(I) Preservatives (g/kg) : Preservatives not listed below shall not be detected			
Sodium dehydroacetate	Not more than 0.5(using dehydroacetic acid as the basis)		

(5) Examination method

Examination shall be conducted according to the livestock products test method.

L. Natural cheese

(1) Definition

Natural cheese refers to products made by coagulating raw milk or milk products through the action of lactic acid bacteria, protein coagulating enzymes, organic acids, etc., and by draining the whey.

(2) Types of products

(A) Hard cheese

(B) Semi-hard cheese

(C) Soft cheese

(D) Fresh cheese

(3) Processing standards

(A) Raw milk or other milk products that are used to make cheese shall be sterilized at 63 ~ 65°C for 30 min or for more than 15 sec at 72 ~ 75°C, or through other methods that have an equivalent or better effect. However, cheeses that are individually recognized as shown in Attachment 1 are exempt.

(B) During inoculation of lactic acid bacteria, caution shall be taken to prevent the second contamination on microorganisms of different kinds, and acidity and time management shall be thoroughly executed.

(C) During the fermentation or ripening procedures, temperature and humidity management shall be thoroughly carried out in operating rooms in order to prevent the surface from being contaminated by harmful microorganisms.

(4) Specifications

(A) Characteristics: shall have its own distinctive color and flavor without abnormal taste or odor.

(B) Coliforms (*E.coli*): n=5, c=1, m=10, M=100

(C) Milk solids and milk fat

Specifications / Types	Milk solids (%)	Milk fat (%)
Hard cheese	Not less than 60.0	Not less than 24.0
Semi-hard cheese	Not less than 40.0	Not less than 9.8
Soft cheese	Not less than 35.0	Not less than 7.0
Fresh cheese	Not less than 18.0	Not less than 3.6

(D) Preservatives (g/kg): The preservatives not specified below shall not be detected

Sodium dehydroacetate	Not more than 0.5 (using dehydroacetic acid as the basis)
Sorbic acid Potassium sorbate Calcium sorbate	Not more than 3.0 (using sorbic acid as the basis, and when used together with calcium propionate or sodium propionate, the aggregate of sorbic acid and propionic acid shall be no more than 3.0)
Propionic acid Calcium propionate Sodium propionate	Not more than 3.0 (using propionic acid as the basis, and when used together with sorbic acid or potassium sorbate, the aggregate of propionic acid and sorbic acid shall be no more than 3.0)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

M. Processed cheese

(1) Definition

Processed cheese refers a product manufactured from natural cheese as main ingredients to which other foods or food additives are added followed by process of melting and emulsifying, or a product that do not belong to natural cheese and have not less than 50% of the milk solids that originates from natural cheese in the total of milk solids.

(2) Types of products

(A) Hard processed cheese

(B) Semi-hard processed cheese

(C) Combined processed cheese

(D) Soft processed cheese

(3) Processing standards

(A) Natural cheese shall be used after eliminating foreign substances on the surface such as fungi, etc.

(B) After being crushed, natural cheese shall be sufficiently stirred and emulsified to form a homogeneous mass.

(C) Hard processed cheese shall be produced in a way that milk solids besides the raw cheese used is not more than 10%.

(D) In terms of the emulsified and sterilized cheese mix, it shall be quickly charged and packaged so that it is not affected by the second contamination.

(E) When preservatives are added, the amount of preservatives derived from natural cheese shall be considered so that the amount used would not exceed the standard amount.

(4) Specifications

(A) Characteristics: shall have its own distinctive color and flavor without abnormal taste or odor

(B) Coliforms (*E.coli*): n=5, c=2, m=<3, M=100

(C) Milk solids and milk fat

Specifications / Types	Milk solids (%)	Milk fat (%)
Hard processed cheese	Not less than 50.0	Not less than 25.0
Semi-hard processed cheese	Not less than 46.0	Not less than 18.4
Combined processed cheese	Not less than 38.0	Not less than 7.6
Soft processed cheese	Not less than 34.0	Not less than 6.8

(D) Preservatives (g/kg): The preservatives not specified below shall not be detected.

Sodium dehydroacetate	Not more than 0.5 (using dehydroacetic acid as the basis)
Sorbic acid Potassium sorbate Calcium sorbate	Not more than 3.0 (using sorbic acid as the basis, and when used together with calcium propionate or sodium propionate, the aggregate of sorbic acid and propionic acid shall be no more than 3.0)
Propionic acid Calcium propionate Sodium propionate	Not more than 3.0 (using propionic acid as the basis, and when used together with sorbic acid or potassium sorbate, the aggregate of propionic acid and sorbic acid shall be no more than 3.0)

(5) Examination Method

Examination shall be conducted according to the livestock products test method.

N. Milk powders

(1) Definition

Milk powders refer to the products that use raw milk or skim milk as main ingredients to which other foods or food additives, etc. are added followed by process to convert the product into dry powder form.

(2) Types of products

(A) Whole milk powder: A product made by removing water from raw milk to turn it into a power form (100% raw milk).

(B) Skim milk powder: A product made by removing water from skim milk to turn it into a powder form (skim milk 100%).

(C) Sweetened milk powder: A product made by changing the raw milk (100%) added with saccharide (sugar, glucose, fructose, and oligosaccharide) into a power.

(D) Mixed milk powder: A product made by adding food or food additives such as grains, grain products, cocoa products, whey, and whey powder to raw milk, whole milk powder, skim milk, or skim milk powder and processing to convert the product into dry powder form, with not less than 50% of raw milk, whole milk powder, skim milk, or skim milk powder (as milk solids).

(3) Processing standards

(A) For milk powders besides mixed milk powders, other substances shall not be added. However, for sweetened milk powder, sugars (sugar, fructose, glucose, and oligosaccharide) can be added.

(4) Specifications

Types / Specifications	Whole milk powder	Skim milk powder	Sweetened milk powder	Mixed milk powder
(A) Characteristics	Fine light-yellow powder without abnormal taste or odor	Fine light-yellow powder without abnormal taste or odor	Fine light-yellow powder without abnormal taste or odor	Its own distinctive color and flavor without abnormal taste or odor
(B) Water content (%)	Not more than 5.0	Not more than 5.0	Not more than 5.0	Not more than 5.0
(C) Milk solids (%)	Not less than 95.0	Not less than 95.0	Not less than 70.0	Not less than 50.0
(D) Milk fat (%)	Not less than 25.0	Not less than 1.3	Not less than 18.0	Not less than 12.5 (excluding products which use skim milk powder as a raw material)

Types / Specifications	Whole milk powder	Skim milk powder	Sweetened milk powder	Mixed milk powder
(E) Sugar content (excluding lactose, %)	-	-	Not more than 25.0	-
(F) Bacterial count	Not more than 20,000 per 1 g	Not more than 20,000 per 1 g	Not more than 20,000 per 1 g	Not more than 20,000 per 1 g
(G) Coliforms	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10	n=5, c=2, m=<3, M=10

(5) Examination method

Examination shall be conducted according to the livestock products test method.

O. Wheys

(1) Definition

Wheys refer to products made by fermenting raw milk, milk, or low-fat milk with lactic bacterium or by adding enzymes or acids to raw milk, milk, or low-fat milk, followed by process of pasteurizing/sterilizing or concentrating or converting into dry powder form (Raw whey 100%).

(2) Types of products

(A) Whey: A product made by pasteurizing raw whey.

(B) Concentrated whey: A product made by concentrating raw whey.

(C) Whey powder: A powdered product made by removing almost all water content from raw whey.

(D) Whey protein powder: A powdered product made by removing lactose, minerals, and almost all water from raw whey.

(3) Processing specifications

(4) Specification

Type / Specification	Whey	Concentrated whey	Whey powder	Whey protein powder
(A) Characteristic	Liquid with its own distinctive color and flavor without abnormal taste or odor	Liquid with its own distinctive color and flavor without abnormal taste or odor	Powder with its own distinctive color and flavor without abnormal taste or odor	Powder with its own distinctive color and flavor without abnormal taste or odor
(B) Water content (%)	-	-	Not more than 5.0	Not more than 5.0
(C) Milk solid (%)	Not less than 5.0	Not less than 25.0	Not less than 95.0	Not less than 95.0 (milk protein shall be not less than 35% of milk solids)
(D) Bacterial count	Not more than 20,000 per mL (pasteurized product shall be negative when tested according to general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C)	Not more than 20,000 per mL (pasteurized product shall be negative when tested according to general bacterial counting methods after being stored for 1 week at 55°C or for 2 weeks at 30°C)	Not more than 20,000 per mL	Not more than 20,000 per mL

Type / Specification	Whey	Concentrated whey	Whey powder	Whey protein powder
(E) Coliforms	n=5, c=2, m=<3, M=10 (sterilized products shall be negative)	n=5, c=2, m=<3, M=10 (sterilized products shall be negative)	n=5, c=2, m=<3, M=10 (sterilized products shall be negative)	n=5, c=2, m=<3, M=10 (sterilized products shall be negative)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

P. Lactose

(1) Definition

Lactose refers to a product made from powdering carbohydrates separated from skim milk or whey. (Raw milk or milk product 100%).

(2) Types of products

(3) Processing standards

(A) By heating with high temperature or inflicting coagulant, protein or milk fat besides carbohydrate shall be sufficiently eliminated.

(B) Salt components shall be removed as much as possible through the ion exchange process, before it is subsequently powdered.

(4) Specifications

(A) Characteristics: Powder displaying its own distinctive color and flavor without abnormal taste or odor

(B) Water content (%): Not more than 5.0

(C) Lactose (%): Not less than 95.0

(D) Bacterial count: Not more than 20,000 per 1 g

(E) Coliforms: n=5, c=2, m=<3, M=10

(5) Examination method

Examination shall be conducted according to the livestock products test method.

Q. Hydrolyzed milk protein products

(1) Definition

Hydrolyzed milk protein products refer to those made by hydrolyzing the milk protein with enzyme or acid and processing it suitably for human consumption or those made by mixing such hydrolyzed milk protein with other food or food additives.

(2) Types of products

(A) Hydrolyzed Milk protein: A product made by hydrolyzing and processing milk protein in a form that is suitable for eating. It refers to 100% hydrolyzed milk protein.

(B) Hydrolyzed milk protein product: A product that is made with hydrolyzed milk protein as main ingredient and is manufactured for the purpose of being used in the milk products.

(3) Processing standards

(A) During hydrolysis, appropriate amount of acid or enzymes shall be used, and in case of acidic hydrolysis, acids shall be eliminated or neutralized.

(B) Hydrochloric acid shall be used for acidic hydrolysis.

(C) An adequate sterilization process shall be conducted before the completion of the final product.

(4) Specifications

(A) Characteristics: shall have its own distinctive color and flavor without abnormal taste or odor

(B) Water content (%): Not more than 5.0

(C) Crude protein (%): Not less than the content specified in the label

(D) Amino nitrogen (%): Not less than the content specified in the label

(E) Casein phosphopeptide (C.P.P) (%): Not less than the content specified in the label (only applicable to hydrolyzed milk protein)

(F) Bacterial count: Not more than 20,000 per 1 g

(G) Coliforms: n=5, c=2, m=<3, M=10

(5) Examination method

Examination shall be conducted according to the livestock products test method.

R. Milk formula

(1) Definition

Infant formulas refer to products that use raw milk and milk products as main ingredients to which minerals, vitamins, or other nutrients necessary for the development and growth of infants or young children and processing it similarly to the breast milk.

(2) Types of products

(A) Powdered infant formula: A powdered substitute for human milk that uses raw milk or milk products as main ingredients and is manufactured by processing it similarly to the ingredients of human milk contains not less than 60% milk ingredients (ingredients other than water contained in the milk).

(B) Liquid infant formula: A liquid substitute for human milk that uses raw milk or milk products as main ingredient and is manufactured by processing it similarly to the ingredients of human milk. Contains not less than 9.0% of milk ingredients.

(C) Powderd follow-up formula: A powdery product made for infants and young children from the age of more than 6 months, and contains not less than 60% of milk ingredients.

(D) Liquid follow-up formula: A liquid product made for infants and young children from the age of more than 6 months, and contains not less than 9.0% of milk ingredients.

(E) Other powdered formula: A powdered substitute for human milk that uses raw milk or milk products as main ingredients and is manufactured by processing it similarly to the ingredients of human milk, and contains not less than 60% of milk ingredients, which is not included in powdered infant formula and powdered follow-up formula.

(F) Other liquid formula: A liquid substitute for human milk that uses raw milk or milk products as main ingredients and is manufactured by processing it similarly to the ingredients of human milk, and contains not less than 9.0% of milk ingredients, which is not included in liquid formula and liquid follow-up formula.

(3) Processing standards

(A) When vitamins that are easily destroyed by heat or minerals that do not easily dissolve are added to the solution before sterilization, it shall be conducted in a proper way that assumes the destruction rate of vitamins and solubility of minerals.

(B) Vitamins, minerals, and nutritional ingredients, etc. shall be mixed evenly in the products.

(C) In cases of liquid infant formula, liquid follow-up formula, and other liquid formula, dried power, or dried powder which is added with vitamins and minerals with an accurate concentration shall be packaged aseptically after being sterilized and cooled.

(D) Powderd infant formula, powdered follow-up formula, and other powdered formula shall be charged with automatic packaging processes by inserting the nitrogen gas.

(F) In addition to the compositional requirements, other ingredients may be added in order to provide substances ordinarily found in human milk and to ensure that the formulation is suitable as the sole source of nutrition for the infant and young children. However, reliability of the relevant nutrients shall be certified scientifically and the amounts added shall be based on the breast milk.

(G) Milk formula shall not be processed through irradiation.

(H) Products for babies and infants who have metabolic disorders or allergies for milk ingredient can be processed without being influenced by the milk ingredient amongst ingredient specifications.

(4) Specifications

Specification \ Types	Infant formula		Follow-on formula	Other formula
		Guidance Upper Level		
(1) Characteristics	shall have its own distinctive color and flavor and without abnormal taste or odor		shall have its own distinctive color and flavor and without abnormal taste or odor	shall have its own distinctive color and flavor and without abnormal taste or odor
(2) Calorie(kcal/100 mL)	60 ~ 70		60 ~ 85	-
(3) Water content (%)	Not more than 5.0 (not applicable to liquid products)		Not more than 5.0 (not applicable to liquid products)	Not more than 5.0 (not applicable to liquid products)
(4) Crude protein (g/100 kcal)	1.8 ~ 3.0		2.4 ~ 5.5	-
(5) Crude fat (g/100 kcal)	4.4 ~ 6.0		3.0 ~ 6.0	-
(6) Linoleic acid (mg/100 kcal)	Not less than 300	1400	Not less than 300	
(7) α- Linoleic acid (mg/100 kcal)	Not less than 50		-	-
(8) Ratio between Linoleic acid and	5:1 ~ 15:1		-	
(9) Carbohydrate (g/100 kcal)	9.0 ~ 14.0		-	
(10) Milk ingredients (g/100 kcal)	Not less than 12.0		Not less than 12.0	-
(11) Vitamin A (μg/100 kcal or IU/100 kcal)	60 ~ 180 or 200 ~ 600		75 ~ 225 or 250 ~ 750	-
(12) Vitamin D (μg/100 kcal or IU/100 kcal)	1.0 ~ 2.5 or 40 ~ 100		1.0 ~ 3.0 or 40 ~ 120	-

Specification \ Types	Infant formula		Follow-on formula	Other formula
		Guidance Upper Level		
(13) Vitamin C (mg/100 kcal)	Not less than 10.0	30 (70 for liquid infant formula)	Not less than 8.0	-
(14) Vitamin B1 (mg/100 kcal)	Not less than 60	300	Not less than 40	-
(15) Vitamin B2 (㎍/100 kcal)	Not less than 80	500	Not less than 60	-
(16) Nicotinic acid (㎍/100 kcal)	Not less than 300	1500	Not less than 250	-
(17) Vitamin B6 (㎍/100 kcal)	Not less than 35	175	Not less than 45 (When protein is 3.0 g or above, the minimum Vitamin B6 shall be 15 μg per 1 g of protein exceeding 3.0 g.)	-
	(When protein is 2.3 g or above, the minimum Vitamin B6 shall be 15 μg per 1 g of protein exceeding 2.3 g.)			
(18) Folic acid (㎍/100 kcal)	Not less than 10.0	50	Not less than 4.0	-
(19) Pantothenic acid (㎍/100 kcal)	Not less than 400	2000	Not less than 300	-
(20) Vitamin B12 (㎍/100 kcal)	Not less than 0.1	1.5	Not less than 0.15	-
(21) Vitamin K1 (㎍/100 kcal)	Not less than 4.0	27	Not less than 4.0	-
(22) Vitamin E (mg α-TE/100 kcal or IU/100 kcal)	Not less than 0.5 or 0.7	5.0 or 7.0	Not less than 0.5 or 0.7 (When linoleic acid is 1 g or above, the minimum Vitamin E shall be 0.5 mg α-TE or 0.7 IU per 1 g of linoleic acid exceeding 1 g)	-
	(When linoleic acid is 1 g or above, the minimum Vitamin E shall be 0.5 mg α-TE or 0.7 IU per 1 g of linoleic acid exceeding 1 g)			
(23) Sodium (mg/100 kcal)	20 ~ 60		20 ~ 85	-
(24) Potassium (mg/100 kcal)	60 ~ 180		Not less than 80	-
(25) Chloride (mg/100 kcal)	50 ~ 160		Not less than 55	-
(26) Calcium (mg/100 kcal)	Not less than 50	140	Not less than 90	-
(27) Phosphorus (mg/100 kcal)	Not less than 25	100	Not less than 60 (The ratio between calcium and phosphorus shall be 1:1 ~ 2:1)	-
	(The ratio between calcium and phosphorus shall be 1:1 ~ 2:1)			

Specification \ Types	Infant formula		Follow-on formula	Other formula
		Guidance Upper Level		
(28) Magnesium (mg/100 kcal)	Not less than 5.0	15	Not less than 6.0	-
(29) Iron (mg/100 kcal)	Not less than 0.45 (Iron fortified products shall be not less than 1.0)		1.0 ~ 2.0	-
(30) Iodine (㎍/100 kcal)	Not less than 10.0	60	Not less than 5.0	-
(31) Copper (㎍/100 kcal)	Not less than 35	120	-	-
(32) Zinc (mg/100 kcal)	Not less than 0.5	1.5	Not less than 0.5	-
(33) Manganese (㎍/100 kcal)	Not less than 1.0	100	Not less than 5.0	-
(34) Selenium (㎍/100 kcal)	1.0 ~ 9.0		Not more than 9.0	Not more than 9.0
(35) Artificial sweeteners	shall not be detected		shall not be detected	shall not be detected
(36) Tar colors	shall not be detected		shall not be detected	shall not be detected
(37) Bacterial count	n=5, c=2, m=1,000, M=10,000 (liquid infant formula shall be negative) (However, for products to which lactic acid bacteria added the number of lactobacillus shall be excluded)		n=5, c=2, m=1,000, M=10,000 (liquid follow-up formula shall be negative) (However, for products to which lactic acid bacteria added , the number of lactobacillus shall be excluded)	n=5, c=2, m=1,000, M=10,000 (other liquid formula shall be negative) (However, for products to which lactic acid bacteria added, the number of lactobacillus shall be excluded)
(38) Coliforms	n=5, c=1, m=<3, M=10		n=5, c=1, m=<3, M=10	n=5, c=1, m=<3, M=10
(39) *Enterobactersakazakii*	n=5, c=0, m=0/60 g (only for powderd infant formula)		-	n=5, c=0, m=0/60 g (only for other powdered formula)
(40) Scorched particle	Not more than 7.5 mg/100 g		Not more than 7.5 mg/100 g	Not more than 7.5 mg/100 g

Specification \ Types	Infant formula		Follow-on formula	Other formula
		Guidance Upper Level		
(41) *Bacilluscereus*	n=5, c=0, m=100 (However, liquid products are exempt.)		n=5, c=0, m=100 (However, liquid products are exempt.)	n=5, c=0, m=100 (However, liquid products are exempt.)

※ Vitamin A 1 ㎍ = 3.33 IU, Vitamin D 1 ㎍ = 40 IU, Vitamin E 1 mg = 1.49 IU, 1 mg α-TE (alpha-tocopherol equivalent) = 1 mg d-α-tocopherol

※ Nutrients of other milk formula powders and milk formula shall be no less than the specified content. However, nutrients that need to be restricted shall be less than or within the specified content.

Note) Application of ingredient specifications for milk formula and follow-up milk formula shall be made by converting and applying ingredient specifications of milk formula powder and follow-up milk formula powder respectively with the water content specification (5.0%) as a basis .

(5) Examination method

Examination shall be conducted according to the livestock products test method.

S. Ice creams

(1) Definition

Ice creams refer to products that use raw milk and milk products as main ingredients to which other food or food additives, etc. are added followed by process of freezing or hardening. Lactic acid bacteria containing products refer to ice creams which are marked as containing lactic acid bacteria (including lactobacillus, lactococcus and bifidobacteria or fermented milk.

(2) Types of products

(A) Ice cream: Ice cream containing not less than 6% of milk fat (fat attained from milk, same for below) and not less than 16% of milk solids (combination of milk fat and milk solids-not-fat).

(B) Ice milk: Ice cream containing not less than 2% of milk fat and no less than 7% of milk solids.

(C) Sherbet: Ice cream containing not less than 2% of milk solids-not-fat.

(D) Low-fat ice cream: Ice cream containing not less than 2% of crude fat and not less than 10% of milk solids-not-fat.

(E) Non-milk fat ice cream: Ice cream containing not less than 5% of crude fat and not less than 5% of milk solids-not-fat.

(3) Processing standards

(A) When eggs are used, the outer surface of the egg shall be washed and sterilized before opening the shell.

(B) In order to enhance the texture of the product, homogenization treatment is recommended to reduce the size of milk fat globules to 2㎛ or less.

(C) Sterilization shall be conducted at 68.5°C for no less than 30 min, or by other methods that have equal to greater effect.(For lactic acid bacteria containing products, the sterilization process can be omitted, if necessary).

(D) When adding other raw materials after sterilization, caution must be taken in order to prevent contamination by microorganisms.

(E) During production, non-fat milk solids of the final product shall contain no less than 75% of the identical components (based on the weight) as skim milk powder.

(F) For sherbet, soft-type ice cream, etc., the freezing or hardening process can be omitted depending on the characteristics of the product.

(4) Specifications

Types / Specifications	Ice cream Low-fat ice cream	Ice milk Sherbet Non-milk fat ice cream
(1) Characteristic	shall have its own distinctive flavor and without abnormal taste or odor	shall have its own distinctive flavor and without abnormal taste or odor
(2) Milk fat (%)	Not less than 6.0 (however, low-fat ice cream shall contain not more than 2.0 of crude fat)	Not less than 2.0 (only applicable to ice milk)
(3) Bacterial count	n=5, c=2, m=10,000, M=100,000 (however, the lactic acid bacterial count shall be excluded for products containing lactic acid bacteria or for fermented milk)	n=5, c=2, m=10,000, M=50,000 (however, the lactic acid bacterial count shall be excluded for products containing lactic acid bacteria or for fermented milk)
(4) Coliforms	n=5, c=2, m=10, M=100	n=5, c=2, m=10, M=100
(5) Lactic acid bacterial count	Not less than the specified count (only applicable to products containing lactic acid bacteria)	Not less than the specified count (only applicable to products containing lactic acid bacteria)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

T. Ice cream powders

(1) Definition

Ice cream powders refer to the products that use raw milk, milk products, etc. as main ingredients to which other food, food additives, etc. are added, followed by process to convert the product into dry powder form, to which water can be added and frozen to make ice cream.

(2) Types of products

(A) Ice cream powder: Ice cream powder containing not less than 18% of milk fat (attained from milk, the same for below) and 48% of milk solids (a combination of milk fat and milk solids-not-fat).

(B) Ice milk powder: Ice cream powder containing not less than 6% of milk fat and not less than 21% of milk solids.

(C) Sherbet powder: Ice cream powder containing not less than 6% of milk solids-not-fat.

(D) Non-milk fat ice cream powder: Ice cream containing not less than 15% of crude fat and not less than 15% of milk solids-not-fat.

(3) Processing standards

(A) When eggs are used, the outer surface of the egg shall be washed and sterilized before opening the shell.

(B) In order to enhance the texture of the product, homogenization treatment is recommended to reduce the size of milk fat globules to 2㎛ or less.

(C) Sterilization shall be conducted at 68.5°C for no less than 30 min, or by other methods that have equal to greater effect.(For lactic acid bacteria containing products, the sterilization process can be omitted, if necessary).

(D) When adding other raw materials after sterilization, caution must be taken in order to prevent contamination by microorganisms.

(E) During production, non-fat milk solids of the final product shall contain no less than 75% of the identical components (based on the weight) as skim milk powder.

(4) Specifications

(A) Characteristics: shall have its own distinctive flavor and without abnormal taste or odor.

(B) Water content (%): Not more than 5.0.

(C) Milk fat (%)

1) Ice cream powder: Not less than 18.0.

2) Ice milk powder: Not less than 6.0.

(D) Bacterial count: n=5, c=2, m=10,000, M=50,000 (excluding the lactic acid bacterial count for products containing lactic acid bacteria or for fermented milk).

(E) Coliforms: n=5, c=2, m=<3, M=10

(F) Lactic acid bacterial count: Not less than 3,000,000 per 1 g (only applicable to products containing lactic acid bacteria).

(5) Examination method

Examination shall be conducted according to the livestock products test method.

U. Ice cream mixes

(1) Definition

Ice cream mixes refer to products in a liquid state, that use raw milk, milk products, etc. as main ingredients to which other food, food additives, etc. are added and sterilized, which then can be frozen to make ice cream.

(2) Types of products

(A) Ice cream mix: Ice cream mix containing not less than 6% of milk fat (attained from milk, the same for below) and not less than 16% of milk solids (combination of milk fat and milk solids-non-fat).

(B) Ice milk mix: Ice cream mix containing not less than 2% of milk fat and not less than 7% of milk solids.

(C) Sherbet mix: Ice cream mix containing not less than 2% of milk solids-non-fat.

(D) Low-fat ice cream mix: Ice cream mix containing not more than 2% of crude fat and not less than 10% of milk solids-non-fat.

(E) Non-milk fat ice cream mix: Ice cream mix containing not less than 5% of crude fat and not less than 5% of milk solids-non-fat.

(3) Processing standards

(A) When eggs are used, cleaning and sterilization shall be done on the egg surface before egg-breaking.

(B) In order to enhance texture of the product, homogenizing treatment shall be suggested to have the size of milk fat globule below 2 mm.

(C) Pasteurization shall be conducted at 68.5°C for no less than 30 min, or with other methods that have the same or better effect. (If needed, lactic acid bacteria-contained products can bypass pasteurization).

(D) When adding other raw materials after sterilization, caution must be taken in order to prevent microorganism contamination.

(E) During the production, no less than 75% of non-fat milk solids that have the identical components (based on the weight) as skim milk powder shall be added.

(4) Specifications

Types / Specifications	Ice cream mix Law-fat ice cream mix	Ice milk mix Sherbet mix Non-fat ice cream mix
(A) Characteristics	shall have its own distinctive flavor without abnormal taste or odor	shall have its own distinctive flavor without abnormal taste or odor

Types / Specifications	Ice cream mix Law-fat ice cream mix	Ice milk mix Sherbet mix Non-fat ice cream mix
(B) Milk fat (%)	Not less than 6.0 (but, for low-fat ice cream mix, crude fat is not more than 2.0)	Not less than 2.0 (only applicable to ice milk mix)
(C) Bacterial count	n=5, c=2, m=10,000, M=100,000 (however, sterilized products shall be n=5, c=0, m=0, and the lactic acid bacterial count shall be excluded for products containing lactic acid bacteria or for fermented milk)	n=5, c=2, m=10,000, M=50,000 (however, sterilized products shall be n=5, c=0, m=0, and the lactic acid bacterial count shall be excluded for products containing lactic acid bacteria or for fermented milk)
(D) Coliforms	n=5, c=2, m=10, M=100 (however, sterilized products have to be n=5, c=0, m=0)	n=5, c=2, m=10, M=100 (however, sterilized products have to be n=5, c=0, m=0)
(E) Lactic acid bacterial count	Not less than 10,000,000 per mL (only applicable to products containing lactic acid bacteria)	Not less than 10,000,000 per mL (only applicable to products containing lactic acid bacteria)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

2. Meat Products and Packaged Meats

Processed meat products refer processed products that use meat or processed meat as ingredients such as hams, sausages, bacon, dried stored meat, seasoned meats, ground meat products, processed rib product, meat extract product, beef tallow and pork tallow, etc.

A. Hams

(1) Definition

Hams refer to processed products made from cuts of meat that are cut and cured, followed by either maturing and drying, smoking or heat treatment, or products made from pieces of meat to which other foods or food additives are added, followed by either maturing and drying, smoking or heat treatment.

(2) Types of products

(A) Ham: Processed products made from cuts of meat that are cut and cured, followed by either maturing and drying, smoking or heat treatment (including products with bones or skin).

(B) Raw ham: Processed products made from cured cuts of meat or to which food additives are added, followed by either maturing and drying, or smoking at low temperature. (including products with bones and skin).

(C) Pressed ham: Processed products made from cured pieces of meat or to which food additives are added, followed by either maturing and drying, smoking or heat treatment. (containing not less than 85% of meat and not more than 5% of starch)

(D) Mixed pressed ham: Processed products made from cured pieces of meat or to which remnants or those mixed with fish meat remnants (not more than 10% of meat); by ripening, drying, or smoking these cured meat remnants added with other food or food additives; or heat treatment (containing not less than 75% of meat and not more than 8% of starch).

(3) Processing standards

(4) Specifications

(A) Characteristics: shall have its own distinctive color without abnormal taste or odor

(B) Nitrite ion (g/kg): Not more than 0.07

(C) Tar colors: shall not be detected

(D) Preservatives (g/kg): No preservatives not listed below shall be detected:

Sorbic acid Potassium sorbate Calcium sorbate	Not more than 2.0 (using sorbic acid as the basis)

(E) Bacterial count: shall be negative (only applicable to sterilized meat products).

(F) *E. coli*: n=5, c=2, m=10, M=100 (only applicable to raw ham).

(G) Coliforms: n=5, c=2, m=10, M=100 (not applicable to non-heated meat products and sterilized meat products shall be negative).

(5) Examination method

Examination shall be conducted according to the livestock products test method.

B. Sausages

(1) Definition

Sausages refer to products made by grinding or binding meat with or without curing; or after adding other food or food additives, made by fermenting and maturing it at a low temperature, or by smoking or heating it (containing no less than 70% of meat and no more than 10% of starch).

(2) Types of products

(A) Sausage: A product made by maturing and drying the meat, or smoking and heating the meat after adding other food or food additives (including products that contain eggs for less than 10% of the total meat content).

(B) Fermented sausage: A product made by adding other foods or food additives to the meat and fermenting it with or without smoking it, followed by maturing and drying at a low temperature.

(C) Mixed sausage: A product made by grinding or binding meat with or without curing, which subsequently is added with other foods or food additives followed by maturing and drying, or smoking and heating (including products containing eggs or fish meat that account for less than 20% of the total meat content).

(3) Processing standards

(A) In sausages, dry represents processing with no more than 35% of water, and semi-dry refers to no more than 55% of moisture.

(4) Specifications

(A) Characteristics: shall have its own distinctive color without abnormal taste or odor

(B) Nitrite ion (g/kg): Not more than 0.07

(C) Tar colors: shall not be detected

(D) Preservatives (g/kg): No preservatives not listed below shall be detected:

Sorbic acid Potassium sorbate Calcium sorbate	Not more than 2.0 (using sorbic acid as the basis)

(E) Bacterial count: shall be negative (only applicable to sterilized meat products).

(F) *E. coli*: n=5, c=2, m=10, M=100 (only applicable to fermented sausage).

(G) Coliforms: n=5, c=2, m=10, M=100 (not applicable to non-heated meat products; sterilized meat products shall be negative).

(5) Examination method

Examination shall be conducted according to the livestock products test method.

C. Bacon

(1) Definition

Bacon refers to product made from by dressing and curing, and then smoking or heating the abdominal parts (bacon) or other specific parts (sirloin, shaller meat) of the pork.

(2) Types of products

(3) Processing stands

(4) Specifications

(A) Characteristics: shall have its own distinctive color without abnormal taste or odor

(B) Nitrite ion (g/kg): Not more than 0.07

(C) Tar colors: shall not be detected

(D) Preservatives (g/kg): No preservatives not listed below shall be detected:

Sorbic acid Potassium sorbate Calcium sorbate	Not more than 2.0 (using sorbic acid as the basis)

(E) Bacterial count: shall be negative (only applicable to sterilized meat products).

(F) Coliforms: n=5, c=2, m=10, M=100 (not applicable to non-heated meat products; sterilized meat products shall be negative).

(5) Examination method

Examination shall be conducted according to the livestock products test method.

D. Dry stored meat

(1) Definition

Dry stored meats refer the product that are made by drying or thermally processing the meat by itself or by adding foods or food additives, with not more than 55% of water (and with not less than 85% of meat content).

(2) Types of products

(3) Processing stands

(A) In dry stored meat, dry represents processing with not more than 55% of water.

(4) Specifications

(A) Characteristics: shall have its own distinctive color without abnormal taste or odor

(B) Nitrite ion (g/kg): Not more than 0.07

(C) Tar colors: shall not be detected

(D) Preservatives (g/kg): No preservatives not listed below shall be detected:

Sorbic acid Potassium sorbate Calcium sorbate	Not more than 2.0 (using sorbic acid as the basis)

(E) Bacterial count: shall be negative (only applicable to sterilized meat products)

(F) Coliforms: n=5, c=2, m=10, M=100 (not applicable to non-heated meat products; sterilized meat products shall be negative)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

E. Seasoned meats

(1) Definition

Seasoned meats refer to the meats added with other foods or food additives for seasoning and then thermally processed, or the intestines of a pork or lam, etc., that are salted with salt or salty solvents so that meat or processed meat products can be packed.

(2) Types of products

(A) Seasoned meat: A product (not less than 60% of meat content) made by seasoning the meat by adding other foods or food additives e.

(B) Heated seasoned meat: A meat product that is made by heating the meat by itself or with other foods or food additives added, or by seasoning and heating the meat added with other food or food additives (not less than 60% of meat contents).

(C) Natural casing: Livestock intestines that are processed in a way that they can be packed with meat or meat products after being salted with salt or salt solvents.

(3) Processing standards

(4) Specifications

(A) Characteristics: shall have its own distinctive color without abnormal taste or odor

(B) Nitrite ion (g/kg): Not more than 0.07 (natural casing shall be excluded)

(C) Tar colors: shall not be detected

(D) Preservatives (g/kg): shall not be detected

(E) Bacterial count: shall be negative (only applicable to sterilized meat products)

(F) Coliforms: n=5, c=2, m=10, M=100 (not applicable to non-heated meat products; sterilized meat products shall be negative)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

F. Ground meat product

(1) Definition

Ground meat product refers to product such as hamburger patties, meat balls, cutlets, etc., that are made by grinding or cutting the meat (excluding intestines) and adding other foods or food additives to it, which is formed into a shape; frozen and cut to be refrigerated or frozen; or smoked, heated, or fried (with not less than 50% of meat contents).

(2) Types of products

(3) Processing standards

(4) Specifications

(A) Characteristics: shall have its own distinctive color without abnormal taste or odor

(B) Nitrite ion (g/kg): Not more than 0.07

(C) Tar colors: shall not be detected

(D) Preservatives (g/kg): shall not be detected

(E) Bacterial count: shall be negative (only applicable to sterilized meat products)

(F) *E. coli* O157:H7: n=5, c=0, m=0/25 g

(G) Coliforms: n=5, c=2, m=10, M=100 (not applicable to non-heated meat products; sterilized meat products shall be negative)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

G. Processed rib product

(1) Definition

Processed rib product refers to the product made with rib cuts with bone, by adding other foods or food additives to it for seasoning which subsequently is smoked or heated.

(2) Types of products

(3) Processing standards

(4) Specifications

(A) Characteristics: shall have its own distinctive color without abnormal taste or odor

(B) Nitrite ion (g/kg): Not more than 0.07

(C) Tar colors: shall not be detected

(D) Preservatives (g/kg): shall not be detected

(E) Bacterial count: shall be negative (only applicable to sterilized meat products)

(F) Coliforms: n=5, c=2, m=10, M=100 (not applicable to non-heated meat products; sterilized meat products shall be negative)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

H. Meat extract products

(1) Definition

Meat extracted products refer to products which, using meat as its ingredient, is processed by methods like extraction after adding other foods or food additives to raw material extract with water, raw material extract meat, meat, or simple meat extract product that are extracted with water.

(2) Types of products

(A) Simple meat extract product: A simple mixed product made by extracting single ingredient or mixed ingredients with water and then mixing them (ingredient extract 100%).

(B) Meat extracted products: Meat or meat-extracted product to which other food or food additives are added and subsequently processed with a method like extraction, etc..

(C) Meat extracted and processed meat: A raw material extracted meat that is extracted from a singular raw material or compound raw material with water.

(3) Processing standards

(A) During extraction, it has to go through proper filtration processes.

(B) When extracting the raw material, water shall be used as the solvent and followed by methods that are appropriate to the properties of the raw material.

(C) In case of liquid, syrup, or paste products, products shall be sterilized with methods that are appropriate to the properties of the product.

(4) Specifications

(A) Characteristics: shall have its own distinctive color and flavor without abnormal taste or odor

(B) Water content (%): Not more than 10.0% (only applicable to dried products)

(C) Tar color: shall not be detected

(D) Bacterial count: No more than 100/mL (only applicable to directly drinkable products).

(E) Coliforms: n=5, c=0, m=<3/g (only applicable to pasteurized products or those eaten as is)

(F) *E. coli*: n=5, c=0, m=<3 (excluding pasteurized products or those eaten as is)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

I. Beef tallow

(1) Definition

Beef tallow refers to the grease obtained from the adipose tissues of cattle and processed for human consumption.

(2) Types of products

(A) Raw beef tallow: Raw material of beef tallow which is made by processing and eluting raw fat (adipose tissues of cattle that are used as the raw material of raw tallow).

(B) Beef tallow: A product obtained by processing the raw beef tallow appropriately for human consumption.

(3) Processing standards

(A) Raw beef tallow taken from cow adipose tissues through appropriate methods shall be processed through degumming, bleaching, deoxidizing, deodorizing processing, or through complex refining processes that are equivalent or more advanced.

(B) It shall be processed so that sodium hydroxide used in production processing does not remain in the final product.

(C) Raw beef fat and raw tallow shall be used after implementing physicochemical inspections according to the needs.

(D) Since overheating can cause negative influence on the quality of the product, it shall be avoided.

(E) Packages or delivery containers of raw fat cannot be used together, and containers and packages shall be hygienic such that they can prevent the exposure of inner contents as well as oxidation and contamination.

(4) Specifications

(A) Characteristics: shall have its own distinctive color and flavor without abnormal taste or odor

(B) Specific gravity (40°C /20°C): 0.893 ~ 0.904 (excluding raw beef tallow)

(C) Refractive index (40°C): 1.448 ~ 1.460 (excluding raw beef tallow)

(D) Water content (%): Not more than 0.3 (not more than 0.7 for raw beef tallow)

(E) Unsaponifiable matter (%): Not more than 1.2 (excluding raw beef tallow)

(F) Acid value: Not more than 0.3 (not more than 4.0 for raw beef tallow)

(G) Saponification value: 190 ~ 202 (excluding raw beef tallow)

(H) Iodine value: 32 ~ 50 (excluding raw beef tallow)

(I) Antioxidants (g/kg): The antioxidants specified below shall meet the following standards:

Butylated hydroxy anisole (BHA) Butylated hydroxy toluene (BHT) tert-Butylhydroquinone (TBHQ)	Not more than 0.2 (when used together, the aggregated amount of BHA, BHT, and TBHQ shall be no more than 0.2)
Propyl gallate	Not more than 0.1

(5) Examination method

Examination shall be conducted according to the livestock products test method.

J. Pork tallow

(1) Definition

Pork tallow refers to grease obtained from the adipose tissues of swine and processed for human consumption.

(2) Types of products

(A) Raw pork tallow: Raw material of pork tallow which is made by processing and eluting raw fat (adipose tissues of swine that are used as the raw material of raw tallow).

(B) Pork tallow: A product obtained by processing the raw tallow appropriately for human consumption

(3) Processing standards

(A) Raw pork tallow taken from pork adipose tissues through appropriate methods shall be processed through degumming, bleaching, deoxidizing, deodorizing processing, or through complex refining processes that are equivalent or more advanced.

(B) It shall be processed so that sodium hydroxide used in production processing does not remain in the final product.

(C) Raw fat and raw pork tallow shall be used after implementing physicochemical inspections according to the needs.

(D) Since overheating can cause negative influence on the quality of the product, it shall be avoided.

(E) Packages or delivery containers of raw fat cannot be used together, and containers and packages shall be hygienic such that they can prevent exposure of inner contents as well as oxidation and contamination.

(4) Specifications

(A) Characteristics: shall have its own distinctive color and flavor without abnormal taste or odor

(B) Specific gravity (40°C/20°C): 0.894 ~ 0.906 (excluding raw pork tallow)

(C) Refractive index (40°C): 1.448 ~ 1.460 (excluding raw pork tallow)

(D) Water content (%): Not more than 0.3 (not more than 0.7 for raw pork tallow)

(E) Unsaponifiable matter (%): Not more than 1.2 (excluding raw pork tallow)

(F) Acid value: Not more than 0.3 (not more than 4.0 for raw pork tallow)

(G) Saponification value: 192 ~ 203 (excluding raw pork tallow)

(H) Iodine value: 45 ~ 70 (excluding raw pork tallow)

(I) Atioxidants (g/kg): The antioxidants specified below shall meet the following standards:

Butylated hydroxy anisole (BHA) Butylated hydroxy toluene (BHT) tert-Butylhydroquinone (TBHQ)	Not more than 0.2 (when used together, the aggregate amount of BHA, BHT, and TBHQ shall be no more than 0.2)
Propyl gallate	Not more than 0.1

(5) Examination method

Examination shall be conducted according to the livestock products test method.

K. Packaged meat

(1) Definition

With the intent of sale, packaged meat refers to product made by refrigerating or freezing after cutting (including cutting into pieces or grinding) without addition of chemical synthetic materials or other foods (100% of meat content).

(2) Types of products

(3) Processing standards

(4) Specifications

(A) Characteristics: shall have its own distinctive color and be free of foreign taste or odor

(B) Tar colors: shall not be detected

(C) Volatile basic nitrogen (mg%): Not more than 20

(D) Preservatives (g/kg): shall not be detected

(E) Enterohaemorrhagic *E.coli*: n=5, c=0, m=0/25 g (only applicable to ground meat products)

(5) Examination method

Examination shall be conducted according to the livestock products test method.

3. Egg Products

(1) Definition

Egg products refer to those made by adding food or food additives to eggs, the contents of eggs, or egg products, or by processing eggs by separating, drying, freezing, heating, fermenting, maturing, or processing the ingredients, including whole egg liquid, liquid yolk, liquid egg white, whole egg powder, yolk powder, egg white powder, and heat-formed products, salted egg, and pidan.

(2) Types of products

(A) Whole egg liquid: The entire contents of an egg or such contents added with table salt, saccharide, etc., or such egg contents in a frozen state (not less than 80% of egg contents).

(B) Liquid yolk: Yolk of an egg, yolk added with table salt, saccharide, etc., or such yolk in a frozen state (not less than 80% of egg contents).

(C) Liquid egg white: White of an egg, white added with table salt, saccharide, etc., or such liquid white in a frozen state (not less than 80% of egg contents).

(D) Whole egg powder: Powdered entire contents of an egg (not less than 90% of egg contents).

(E) Yolk powder: Powdered yolk of an egg (not less than 90% of egg contents).

(F) Egg white powder: Powdered white of an egg (not less than 80% of egg contents).

(G) Heat-formed products: Egg products formed through heat treatment processes such as heating, pasteurization, etc., at a temperature higher than the congealing temperature of eggs (not less than 30% of egg contents).

(H) Salted egg: Egg products made by boiling and cooking or processing it as is or unshelled by adding other foods or food additives (not less than 50% of egg contents).

(I) Pidan: Egg products made by making the seasonings, spices, etc., infiltrate into eggs from outside the eggshells and ripening it to give eggs a peculiar taste and hard texture (not less than 90% of egg contents).

(3) Processing standards

(A) Egg breaking shall be taken place in constructed work places in hygienic ways to prevent contamination.

(B) In case when using eggs that have surfaces contaminated by fecal matter, they shall be cleaned and at the same time, they shall be pasteurized with sodium hypochlorite of no less than 150 ppm or those with even more outstanding effectiveness.

(C) Pasteurized eggs shall be filtered, homogenized, and pasteurized.

(D) Pasteurization temperature and time management shall be thorough following the properties of the product. Especially, in terms of heat formed products, it shall heat pasteurized at 90°C

for 20 min and whole egg liquid shall be heat pasteurized at 64°C for 2 min and 30 sec. In addition, liquid yolk shall be heat pasteurized for 3 min and 30 sec at 60°C and liquid white shall be heat pasteurized for 9 min and 30 sec at 55°C or methods that have more outstanding effectiveness shall be applied.

(E) For egg white power among dry products, glucide shall be removed and dried in order to prevent color and characteristic changes in the product.

(F) Non-pasteurized products shall be manufacturing and processing of normal eggs excluding cracked, contaminated, and soft shelled eggs and shall be promptly cooled at a temperature below 5°C after breaking the eggs. It shall not be stored for more than 72 hours.

(G) Pasteurized products shall be quickly cooled at a temperature below 5°C in order to minimize the multiplication of microorganisms.

(H) When refrigerating eggs that are used as raw materials, they shall be stored in a separate compartment from processed egg products.

(I) Ingredient eggs that contain blood spots or meat spots must be used after these spots are properly removed properly.

(4) Specifications

(A) Characteristics: shall have its own distinctive color and flavor without abnormal taste or odor

(B) Water content (%): No greater than 10.0 (only applicable to powdery products)

(C) Bacterial count: Pasteurized products or products that are eaten as is shall be n=5, c=1, m=10,000, M=50,000. Non-pasteurized products shall be n=5, c=1, m=500,000, M=1,00,000

(D) Coliforms: n=5, c=1, m=10, M=100, for pasteurized products; n=5, c=1, m=100, M=1000, for non-pasteurized products (however, pidan has to be n=5, c=0, m=0)

(E) *Salmonella*: n=5, c=0, m=0/25 g

(5) Examination method

Examination shall be conducted according to the livestock products test method.

Chapter 3

Test Methods for Livestock Products

I. General Provisions

1. Except as otherwise specified, tests for livestock products shall be performed principally according to a general test method. The general test method here, however, signifies a representative method among the entire available test methods.
2. In a case where the testing components or substances are not specified in the general test method, references for the applied test method shall be written on the report. When this test method is altered, the reason and revised contents shall be written in the test report.
3. Units for the measurements shall be applied according to the International System of Units (SI) and the units are as follows:

A. Length: m, cm, mm, μm, nm

B. Volume: L, mL, μL

C. Weight: kg, g, mg, μg, ng

D. Area: cm^2

E. Calories: kcal, kj

4. Weight percentage is indicated with the symbol of %. However, material content (g) in 100 ml solution is indicated with w/v% and material content (ml) in 100 ml solution with v/v%. Weight parts per million is indicated with mg/kg and may also be indicated with ppm, mg/L, or ml/m^3.
5. Temperature is indicated in degrees Celsius(°C).
6. Standard temperature is defined as 20°C, ordinary temperature as 15 – 25°C, room temperature as 1 – 35°C, and slightly-warm temperature as 30 – 40°C.
7. Except when otherwise specified, cold water is defined as water of 15°C or hot water as water of 60 – 70°C, boiling water as water of approximately 100°C.Heating temperature “in/under water bath” is, except when otherwise specified, defined as approximately 100°C, and a water bath can be replaced with a steam bath of about 100°C.
8. A cold place, except when otherwise specified, means a place of 0 – 15°C.
9. Freezing, except when otherwise specified, means −20°C.
10. Water used in a test is, except when otherwise specified, distilled water or purified water.
11. Solution, when the solvent is not marked, means aqueous solution.
12. Decompression means, except when otherwise specified, the pressure of 15 mmHg or lower.

13. Liquid is, except when otherwise specified, determined as acidic, alkaline, or neutral using litmus paper or a pH meter (glass electrode). When indicating detailed liquid, pH values can be used. Strongly acid is defined as approximately pH 3.0 or lower, weakly acid as pH 3.0 – 5.0, slightly acid as pH 5.0 – 6.5, neutral as pH 6.5 – 7.5, slightly alkaline as pH 7.5 – 9.0, weakly alkaline as pH 9.0 – 11.0, and strongly alkaline as pH 11.0 or higher.
14. Indication of a solution concentration such as (1→5), (1→10), and (1→100) means that a solid reagent of 1 g or liquid reagent of 1 ml is dissolved in solvent to produce each of 5 ml, 10 ml, or 100 ml. Indication of a solution concentration such as (1+1) or (1+5) means that the solid reagent of 1 g or the liquid reagent of 1 ml is mixed with solvent of 1 ml or 5 ml. If the solvent is not marked, the solution is diluted with water.
15. Indication of mixtures such as (1:1) or (4:2:1), etc. means the mixed volume ratio of liquid reagent or the mixed weight ratio of solid reagent.
16. In measuring the number of drops, when 20 drops of distilled water are loaded at 20°C, use equipment whose weight is in the range of 0.90 – 1.10 g.
17. Nessler's tubes shall be a flat bottom tube, made with colorless glass of inner diameter (ID) 20 mm, outer diameter (OD) 24 mm, and length 20 cm from its bottom to the bottom of stopper; its volume shall be 50 ml. The difference between scales in each tube shall be not more than 2 mm.
18. Sealed containers mean a container that prevents its contents from the ventilation of air while being handled or stored.
19. Shading means intercepting the light.
20. Dilute acid or alkaline solution means, except when otherwise specified, acid or alkaline solution of 2N concentration.
21. When pass/fail is determined by the comparison of an acquired value (experimental value) to a test with a specified value (standard value), the experimental value shall be rounded off to the nearest whole number to one decimal place more than the standard value and then compared with the standard value. Indication of a standard value such as a – b means not less than “a” and not more than “b”.
22. “Precisely measuring” a weight means to weigh to 0.1 mg, 0.01 mg, or 0.001 mg in consideration of the minimum weight unit. “Correctly measuring” a weight means to measure the weight to the number of digits indicated.
23. Indication of “approximately” in sampling quantity means to collect in a range of 90 – 110% of the indicated quantity, except when otherwise specified.
24. Indication of “constant weight” after drying or heating means the weight difference between the weight first measured after drying or heating and the weight measured after one more

hour of drying or heating, which shall be within 0.1% of the first measured weight. However, if the weight difference is not more than 0.5 mg when measured by chemical balance, or not more than 0.01 mg by micro-chemical balance, it is regarded as “constant weight.”

25. The desiccating agent shall be silica gel, except when otherwise specified.
26. Test shall, except when otherwise specified, be performed at ordinary temperature and observed within 30 sec after operation. However, a test that is affected by temperature, shall be performed at a standard temperature.
27. “Tar color” means to contain its aluminum lake dye.
28. “Preservatives” described in Chapter 2 mean dehydroacetic acid, sorbic acid and its salts (potassium and calcium), benzoic acid and its salts(sodium, potassium, and calcium), p-hydroxybenzoates(methyl and ethyl), and propionic acid and its salts (sodium and calcium).
29. “Antioxidants” described in Chapter 2 mean butylated hydroxy toluene, butylated hydroxy anisole, tert-butylhydroquinone, propyl gallate, sodium EDTA, and calcium disodium EDTA.
30. Pass/Fail determination for standards and specifications designated in the Processing Standards and Ingredient Specifications for Livestock Products is performed and judged by the test method specified in the Test Methods for Livestock Products. However, when a method is judged to be more precise than the test method specified in the Test Methods for Livestock Products, the method can be used. In particular, a test for a microorganism or toxin, etc., may be performed with commercial kits. However, when their results are dubious, the test shall be performed and confirmed through the specified method.
31. In the case where there is no test method specified in the Test Methods for Livestock Products, the test can be performed using authorized test methods specified in other regulations or certified test methods according to CODEX regulations or AOAC methods.

II. Sampling and Handling Methods

1. Meaning of the Sampling

Hygiene observers collect samples from inspection targets according to the rules specified in the Livestock Products Sanitary Control Act, perform tests to identify the suitability of standards and specifications and safety against contaminants, and take administrative actions based on the test results. Therefore, sampling shall be scientifically performed to secure its efficiency at selecting the test target, collecting samples, handling, and transportation and test, etc. In addition, because the tests requested on collected samples provided to livestock laboratory services is a critical task for them, the observers shall conduct their duties with full knowledge of sampling and handling methods.

2. Definitions

A. “Sample” means material collected from the test target.

B. “Sample Unit” means the unit of target for sampling, as a package unit collected for the purpose of testing, a portion of a package unit, or combination of different package units.

C. “Test Target” means the same type of livestock products manufactured, processed, and packaged in the same condition.

D. “Bulk” means the test target, which is not packaged in order to be distributed and sold as it is to final consumers.

3. General Guidelines for Sampling

A. Sampling shall be performed by the person specified in Articles 13, 14, and 19 of the Livestock Products Sanitary Control Act.

B. The minimum quantity of samples shall be collected so that it shall represent the whole test target in consideration of test purpose and test items etc.

C. Samples are collected from the test target with the same lot number, manufacture date, and expiration date. In the case when this information is unknown, after understanding several points such as product class, food type, manufacturing company, symbol, export country, export date, arrival date, cargo vessel, transportation vehicle, cargo train, packaging type, and appearance, etc., and considering characteristics of the livestock products and test purpose, collected samples shall be as identical as possible with one another.

D. In the case of collecting samples from unpackaged livestock products, or from packaged livestock products after opening, the sample shall be not adulterated with foreign substance or contaminated by microorganisms.

E. Collected samples shall be sealed so that they shall be opened only by breakdown.

4. Technique in Sampling and Handling

When samples are collected from target livestock products, the sample's physical/chemical/biological states such as test purpose, the class and quantity of food, possibility of contamination, homogeneity etc. of the target livestock products shall be considered.

A. Sampling Technique

(1) In the case of heterogeneous test livestock products,

It is generally necessary to collect numerous samples when the sample is heterogeneous. In the case of collecting a small quantity of sample because of test efficiency and economical efficiency, the sample can be collected from the suspected target after totally considering its appearance and storage condition etc.

(2) Homogeneity judgment according to test items.

The homogeneity and heterogeneity of a sample can be changed depending on what items are tested. Components of test target livestock products such as heavy metal and food additives etc, are regarded to be homogeneous and a sample can be collected, even though they are judged to be heterogeneous according to the freshness test of certain test livestock products.

(3) Collection of packaged samples

(A) Samples of livestock products, circulated in a container and packaging such as can, bottle, box etc., shall be collected in itself.

(B) For livestock products put into a large container/packaging, some of the products that represent the whole test target shall be collected as the sample.

(4) Sampling of refrigerated and frozen livestock products.

In the case of sampling refrigerated or frozen livestock products, the sample shall be collected as its status is maintained.

(5) Sampling for a required microorganism test

(A) When a sample is collected, transported, or stored, an airtight container/package shall be used so that its sampling state can be maintained.

(B) When a portion of livestock products is collected as a sample, it shall be aseptically performed using sterilized utensils and containers, etc.

(C) A sample shall be, except in unavoidable situations, collected from products stored and circulated normally.

(6) Cautions for sampling according to test items

(A) Moisture.

To prevent the moisture content from changing due to evaporation or absorption, a sample shall be put into airtight container, and the temperature change shall be minimized.

(B) Acid value and peroxide value.

To prevent the oxidation of fat from being promoted due to light or temperature etc., a sample shall be put into an airtight container, in which light is intercepted and the changes in both sample volume of collection container and sample temperature shall be minimized.

B. Sample Transportation Technique

(1) The collected sample shall be transported to the test room in itself so that it is not contaminated, broken, damaged, thawed, or deformed, etc.

(2) In the case of transporting a sample a long distance or by public vehicle, special attention is required to ensure that packaging is not damaged.

(3) Transportation of frozen sample

(A) Frozen samples shall be transported in their frozen state.

(B) In the case of being unable to utilize a freezer, the sample can be transported in a dry ice, etc. to maintain its frozen state.

(4) Transportation of refrigerated samples.

A refrigerated sample shall maintain its temperature and shall not be frozen.

(5) Transportation of samples for microorganism tests

(A) Samples with the possibility of spoilage deterioration.

A sample requiring a microbiological test shall be aseptically collected into a sterilized container and immediately transported to a Livestock Products Hygiene Test Agency while maintaining the cold-storage temperature (5±3°C) of livestock products. The test shall be conducted within 36 hours of transportation. When refrigeration temperature cannot be maintained, or the sample cannot be immediately transported because of an unavoidable situation, it shall be re-collected or its test is requested to Livestock Product Hygiene test Agency after recording its collection date and status.

(B) Samples with no possibility of spoilage deterioration.

It is not always necessary to transport samples at refrigerated temperatures, such as when there is no possibility of spoilage deterioration during transportation, even though the sample requires a microbiological test. However, please be cautious about contamination and damage of the sample and its packaging, etc.

(C) Caution when using ice etc.

When using ice etc., in order to maintain low temperatures, please be cautious not to

contaminate the sample with water from the melting ice.

5. Sampling Equipment and Containers

A. Sampling equipment and containers shall be suited to the purpose of sampling , as there is a variety of classes, shapes, and containers or packaging of target livestock products.

B. Convenient equipment and containers shall be used for transportation, cleaning, and sterilization. The parts of equipment and container that contact directly with the sample collected for a microbiological testing must be sterilized.

(1) Sampling utensils: pincettes, scissors, knife, can opener, wooden hammer, electric saw or hand saw, dryer, pipette, cutter, and pump or tube for liquid sampling.

(2) Sampling container or packaging: sampling bags (large, medium, and small), and sampling bottles (jar), etc.

(3) Sterilization instruments: alcohol lamp, alcohol, and cotton, etc.

(4) Others: tape, icebox, camera, and writing materials, etc.

C. Conditions of Equipment and Containers

(1) Utensils Equipment and containers shall be suitable according to the Standards and Specifications of Equipment, Container and Packaging described in Article 9 of the Food Sanitation Act.

(2) Utensils Equipment and container or packaging that are directly in contact with the sample, shall be sterilized, and pasteurized, etc., so that it shall not affect test results.