

Marinated meat-specification

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Government Chemist's Department
Farmer's Choice (K) Ltd.
University of Nairobi — Department of Food Science, Nutrition and Technology
Consumer Information Network
Kenchic (K) Ltd.
Kenya Meat Commission
Directorate of Livestock Production
Directorate of Veterinary Services
Alpha fine foods limited
Kenya Nut Company- Morendat farm
Meat Training institute
Quality Meat Packers
Choice Meats limited
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

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KENYA STANDARD

Marinated Meat — Specification

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Foreword

This Kenya Standard was prepared by the Meat and Poultry Products Technical Committee under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

Marinated meat products have a wide application due to their convenience. The process of marination enhances the flavour of meat and may also tenderize the meat. Trade in such products is on the rise. However, the process of marination may alter the safety and quality of the product and as such, this has necessitated the development of the first edition of this standard.

The standard specifies requirements that enhance maintenance of quality and safety of marinated meat products. It also incorporates parameters which facilitate fair trade practices

During the preparation of this standard, reference was made to the following documents:

The Food, Drugs and Chemical Substances Act, Cap 254 of the Laws of Kenya.

International Commission on Microbiological Specifications for Foods - Micro-organisms in Foods, Book 8.

The assistance derived from the above sources is highly acknowledged.

KENYA STANDARD

Marinated Meat — Specification

1. Scope

This standard prescribes the quality and safety requirements, sampling and analysis of marinated meat.

2. Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- I. *KS CAC/MRL 2- Maximum Residue Limits for Veterinary Drugs in Food*
- II. *KS ISO 16649-2, Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide.*
- III. *KS ISO 6579 Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Salmonella spp.*
- IV. *KS ISO 11290 - 1 Microbiology of the food chain - Horizontal method for the detection and enumeration of Listeria monocytogenes and other Listeria spp. -- Part 1: Detection method.*
- V. *KS 2761 code of hygienic practice for meat*
- VI. *KS 1051 Guide on maximum limits of pesticide residues in foods*
- VII. *EAS 39 Standard Code of Hygiene Practice for Food and Drink Manufacturing Industry*
- VIII. *EAS 38, Labelling of pre-packaged food*
- IX. *Codex standards GSFA 192.*
- X. *KS 2763 meat speciation – method of test*
- XI. *ISO 4833 Microbiology of the food chain -- Horizontal method for the enumeration of microorganisms*
- XII. *AOAC 986.15*
- XIII. *EN14332, 14627*
- XIV. *AOAC 999.10, 999.11, 986.15*
- XV. *EN14082, 14083,14084*
- XVI. *AOAC 986.15, 999.11,973.34*
- XVII. *EN 14082,18083,14084*
- XVIII. *AOAC 971.21*

3. Definitions

For the purpose of this standard, the following definitions shall apply:

3.1. Meat

Meat is all parts of an animal that are intended for and have been judged as safe and suitable for human consumption

3.2. Meat Product

Is meat that has been subjected to treatment irreversibly modifying its Organoleptic and physiochemical characteristic

3.3. Marinade

Is a liquid or sauce that can either be acidic or enzymatic in which meat is soaked to enrich its flavor and/or to tenderize it. A dry rub can also be considered as marinades.

3.4. Marination

Is the process of tenderizing and/or flavouring meat often in an acidic, liquid, sauce or a rub before cooking.

3.5. Rub

is a dry marinade that is sprinkled or patted onto meat before cooking. It may contain salt, sugar and spices.

4. General requirements

- 4.1. Food animal from which meat is derived shall be slaughtered in a hygienically managed slaughter house. The slaughter shall be supervised by a competent authority. The animals and carcasses thereof shall be subjected to ante-mortem and post-mortem veterinary inspection as prescribed in the Meat Control Act, Cap. 356 of the Laws of Kenya and shall comply with KS 2761 code of hygienic practice for meat
- 4.2. The inspected meat shall bear suitable marks of such inspection, the symbol and/or number of the establishment where they were prepared. The marking ink used shall be food grade and shall be approved by the competent authority.
- 4.3. The meat shall be prepared in a plant which is regularly operated under supervision of the competent authority.
- 4.4. The meat shall be transported in accordance with Meat Control Act CAP 356. The meat shall be prepared and, handled fresh, chilled or frozen. under hygienic conditions.
- 4.5. The meat shall comply with maximum pesticide and Veterinary drugs residue limits prescribed in KS 05-1051 and CAC/MRL2.
- 4.6. The marination process shall be conducted in a manner that will not compromise on the keeping quality and safety of the product. The cold chain shall be maintained at all times.
- 4.7. The facility used for marination process shall comply with the requirements of KS EAS 39.

5. Raw materials requirements

5.1. Meat

- 5.1.1. The meat prepared for marinating shall be obtained from animals slaughtered according Meat control Act cap 356 and shall be in compliance with KS 2761
- 5.1.2. The product shall be prepared according to the hygienic regulations as mentioned EAS 39
- 5.1.3. The meat shall be inspected and approved as wholesome and fit for human consumption and free from objectionable odours, flavours and blood clots any other contamination.
- 5.1.4. The meat used for this processing shall be from one type and its flavor shall be characteristic of that type.
- 5.1.5. The meat shall be free from foreign bodies, dirt, sign of spoilage and unacceptable odours.

5.2. Marinades

- 5.2.1. Ingredients used in the marinade shall comply with the specific Kenyan standards on herbs and spices, condiments, sauces, vinegar, alcoholic beverages, flavours, oil(s) or any other appropriate ingredients
- 5.2.2. The ingredients used in the marinade compositions shall be hygienically prepared as per KS EAS 39
- 5.2.3. The food additives used in the marinated meat product shall be in accordance with the Food, Drugs and Chemical Substances Act, Cap. 254 of the Laws of Kenya and Codex standards GSFA 192.

6. Safety Requirements

6.1. Microbiological limits

Marinated meat shall not contain any pathogenic organisms and shall comply with microbiological limits given in Table 2.

Table 2 — Microbiological limits for marinated meat

SL No.	Type of organisms	Marinated Meat	Test method
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		Max	
i.	<i>E. coli</i> 0157:H7	Absent	KS ISO 16649-2
i.	<i>Salmonella</i> , per 25g.	Absent	KS ISO 6579
ii.	<i>Listeria monocytogenes</i> per 25g	Absent	KS ISO 11290-1

7. Meat Identification

The identification/isolation of meat species shall be done according to the Polymerase Chain Reaction test as per KS 2763 or any other validated test method.

8. Limits for veterinary drugs and pesticide residues

Meat and meat products shall comply with maximum pesticide and Veterinary drugs residue limits prescribed in KS 05-1051 and CAC/MRL2

9. Limits for heavy metal contaminants

Marinated meat shall not contain heavy metal contaminants in excess of the limits given in Table 3.

Table 3 — Limits for heavy metal contaminants in marinated meat

SL No.	Heavy Metals	Maximum limits Ppm	Test methods
I.	Arsenic (Ar)	0.1	AOAC 986.15 EN14332, 14627
II.	Lead (Pb)	0.5	AOAC 999.10, 999.11, 986.15 EN14082, 14083,14084
III.	Cadmium	0.05	AOAC 986.15, 999.11,973.34 EN 14082,18083,14084
IV.	Mercury	0.03	AOAC 971.21

* Note: where a risk assessment indicated the possibility of occurrence of other heavy metal contaminants not listed, then the product shall be tested.

10. Packaging and labelling

10.1. Packaging

Packaging of marinated meat shall be done in food grade packaging materials that protect the meat product from any physical, microbiological, chemical or any other type of contamination during storage and distribution.

10.2. Labelling

Labelling of packages marinated meat shall be done in accordance with the requirements stipulated in EAS 38, *Labelling of pre-packaged food* and shall include the following:

- a. Name of the product (type of meat or meats used) as appropriate
- b. List of ingredients in the marinade descending order
- c. Allergens declaration
- d. Name, location and address of manufacturer;
- e. Net weight, in g or kg;
- f. Declaration as either “raw”, “cooked” and/or “smoked”.
- g. Date of manufacture;

- h. Expiry date;
- i. Batch number;
- j. Instructions for use;
- k. Storage conditions;
- l. Country of origin or “Made in Kenya” for locally manufactured products.

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