

DRAFT UGANDA STANDARD

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Smoked meat — Specification



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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. UNBS is mandated to co-ordinate the elaboration of standards and is

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

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

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

The committee responsible for this document is Technical Committee UNBS/TC 2, Food and Agriculture, Subcommittee SC 12, Meat, poultry, eggs and their processed products.

This first edition (DUS 2157:2020, Smoked meat — Specification), which has been technically developed.

Smoked meat — Specification

1 Scope

This Draft Uganda standard specifies the requirements, methods of test and sampling for smoked meat for human consumption.

2 Normative references

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

AOAC Official Method 986.15 Arsenic, Cadmium, Lead, Selenium, and Zinc in Human and Pet Foods (Multielement Method)

AOAC Official Method 999.10 Lead, Cadmium, Zinc, Copper, and Iron in Foods (Atomic Absorption Spectrophotometry after Microwave Digestion)

AOAC Official Method 999.11 Lead, Cadmium, Copper, Iron, and Zinc in Foods Atomic Absorption Spectrophotometry (Dry Ashing)

Method 973.34. Cadmium in food. Atomic Absorption Spectrophotometric Method

Method 971.21; Mercury in Food, Flameless Atomic Absorption Spectrophotometric Method

US 45, General standard for food additives (6th Edition)

US 168, Edible oils and fats - Specification (2nd Edition)

US 737, Production of packaged meat products (processed) — Hygienic requirements

US 734, Design and operation of abattoirs and slaughterhouses — Requirements

US 738, General standard for contaminants and toxins in food and feed (5th Edition)

US CAC/MRL 2, Maximum Residue Limits (MRLs) and Risk Management Recommendations (RMRs) for residues of veterinary drugs in foods

US CAC/RCP 42, (Revised in 2014), Code of hygienic practice for spices and dried aromatic herbs (Second edition)

US CAC/GL 50, General guidelines on sampling

US CAC/RCP 58, Codex code of hygienic practice for meat.

US EAS 35, Fortified food grade salt — Specification

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

US ISO 1442, *Meat and meat products — Determination of moisture content (Reference method)*

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

US ISO 6579, *Microbiology of food and animal feeds — Horizontal method for detection, enumeration and serotyping of Salmonella, Enumeration by a miniaturized most probable number technique*

US ISO 6888-1, *Microbiology of food and animal feeds — Horizontal method for enumeration of Coagulase-positive staphylococci. (Staphylococcus aureus and other species), Detection and MPN technique for low numbers*

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

US ISO 11290-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Listeria monocytogenes -- Part 2: Enumeration method*

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

3 Terms and definitions

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

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

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

3.1

Meat

edible parts of an animal including poultry, rabbits, hares, cattle, sheep, goats, pigs, horses, farmed and wild game that are intended for, or have been judged as safe and suitable for human consumption

3.2

hot smoking

process at which meat is smoked at an appropriate combination of temperature at 60 °C to 80 °C and time sufficient to cause complete coagulation of protein in the meat flesh.

3.3

cold smoking

process of treating meat with a smoke using a time/temperature below 30 °C combination that will not cause significant coagulation of the proteins in the meat flesh but that will cause substantial reduction of the water activity

3.4

warm smoking

process of treating meat with a smoke using an appropriate combination of temperature at 40 °C to 55 °C and time that will not cause significant coagulation of the proteins in the meat flesh but that will cause substantial reduction of the water activity

3.5

smoke flavours

either smoke condensates or artificial smoke flavour blends prepared by mixing chemically defined substances in known amounts or any combination of both

3.6

smoke condensates

products obtained by controlled thermal degradation of wood in a limited supply of oxygen, subsequent condensation of the resultant smoke vapours and fractionation of the resulting liquid products

4 Requirements

4.1 Raw material

4.1.1 The meat used for preparing smoked meat product shall be obtained from food animals which have been slaughtered in accordance with US 734 and specifications for specific meats as applicable.

4.1.2 Smoked meat products shall be prepared in hygienic conditions as stipulated in US CAC/RCP 58.

4.2 Ingredients

4.2.1 Optional ingredients

- a) Spices, Seasonings and Condiments shall comply with relevant US CAC/RCP 42.
- b) Edible fat and oil complying with US 168,
- c) Salts complying with US EAS 35,

Other ingredients used such as salt, seasoning and condiments, herbs and spices and smoke flavours shall be of food grade quality and comply with relevant standards.

4.3 Smoking materials

Wood or other plant material used for the generation of smoke or smoke-condensates shall not contain toxic substances either naturally contained in the material or through contamination, or after being treated with chemicals, paint or impregnating materials. In addition, wood or other plant material must be handled in a way to avoid contamination of food with Polycyclic Aromatic Hydrocarbons (PAH) from smoking and direct drying processes.

Some of the recommended hard wood to be used for smoking meat specified in Annex A.

Smoked meat may be prepared using hot smoking or cold smoking methods

4.4 Finished product

4.4.1 Smoked meat shall;

- a) have pleasant mild fresh smoked flavour
- b) have no acrid, resinous or musty odours or flavours due to the use of unsuitable wood shavings.

4.4.2 Smoked meat shall;

- a) be stored in a suitable storage condition
- b) be free from foreign matter

- c) be free from off flavours and objectionable odours which can come from material used for lighting the wood.
- d) not exhibiting any sourness whatsoever and
- e) be of desirable texture

4.5 Specific requirements

The smoked meat shall not exceed 37.83 ± 0.12 moisture content tested as per the US ISO 1442.

5 Food additives

The food additives used in the smoked meat product shall be in accordance with the US 45.

6 Hygiene requirements

Smoked meat shall be prepared, handled and stored in accordance US CAC/RCP 58.

6.1 Microbiological limits

Smoked meat shall not contain any pathogenic organisms and shall comply with microbiological limits given in Table 1

Table 1 — Microbiological limits for smoked meat

S/N	Type of microorganism	Limit (Max.)	Test method
i)	<i>Escherichia coli</i> cfu/g	Absent	US ISO 7251
ii)	Coagulase positive <i>staphylococcus aureus</i> , per g	10^2	US ISO 6888-1
iii)	Salmonella, per 25g	Absent	US ISO 6579 AOAC 967:26
v)	<i>Listeria monocytogenes</i> cfu/g	≤ 100	US ISO 11290-2
vi)	Yeast and moulds cfu/g	10^2	US ISO 21527-1
vii)	Total plate count cfu/g	10^3	US ISO 4833-1

7 Contaminants

7.1 heavy metal contaminants

Smoked meat shall not contain heavy metal contaminants in excess of the limits given in Table 2 and the limits are subject of US 738.

Table 2 — Limits for heavy metal contaminants in smoked meat

S/N	Contaminants	Maximum limits ppm	Test methods
i)	Arsenic	0.1	AOAC 986.15 EN14332, 14627
ii)	Lead	0.1	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

7.2 Residues of Veterinary Drugs

7.2.1 The product covered by this standard shall comply with the maximum residue limits specified in US CAC/MRL 2.

7.2.2 pesticide residues and other contaminants

The residue limits shall with the maximum residue specified by Codex Alimentarius Committee.

8 Packaging

Packaging of smoked 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. This shall be in accordance with US 737.

9 Labelling

In addition to the requirements of US EAS 38, the following labelling requirements shall apply and shall be legibly and indelibly marked;

- a) Name of the product 'Smoked meat '(Type of the food animals from which meat is obtained; for example, beef, caprine, porcine and others)
- b) Name, and physical address of processor/distributor;
- c) Net weight, in g or kg;
- d) Declaration as "Smoked meat"
- e) Declaration of method of drying.
- f) List of ingredients in descending order;
- g) Nutritive value
- h) Declaration of preservatives used;
- i) Date of packaging;
- j) best before date;
- k) Batch number;
- l) Storage conditions;
- m) Country of origin.

10 Sampling

Samples shall be taken in accordance to the provisions of US CAC/GL 50

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ANNEX A

Recommended hard wood for smoking meat

- 1) Neem tree (*Azadirachta*)
- 2) Mango tree (*Mangifera indica*)
- 3) Musizi (*Maesopsis eminii*)
- 4) Eucalptus spp
- 5) African mahogany (*Khaya anthotheca*)

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Bibliography

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Certification marking

Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

The use of the UNBS Certification Mark is governed by the Standards Act, and the Regulations made thereunder. This mark can be used only by those licensed under the certification mark scheme operated by the Uganda National Bureau of Standards and in conjunction with the relevant Uganda Standard. The presence of this mark on a product or in relation to a product is an assurance that the goods comply with the requirements of that standard under a system of supervision, control and testing in accordance with the certification mark scheme of the Uganda National Bureau of Standards. UNBS marked products are continually checked by UNBS for conformity to that standard.

Further particulars of the terms and conditions of licensing may be obtained from the Director, Uganda National Bureau of Standards.



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