Dried meat — Specification
Compliance with this standard does not, of itself confer immunity from legal obligations

A Uganda Standard does not purport to include all necessary provisions of a contract. Users are responsible for its correct application

© UNBS 2018

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from UNBS.

Requests for permission to reproduce this document should be addressed to

The Executive Director
Uganda National Bureau of Standards
P.O. Box 6329
Kampala
Uganda
Tel: +256 414 333 250/1/2/3
Fax: +256 414 286 123
E-mail: info@unbs.go.ug
Web: www.unbs.go.ug
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>iv</td>
</tr>
<tr>
<td>1 Scope</td>
<td>1</td>
</tr>
<tr>
<td>2 Normative references</td>
<td>1</td>
</tr>
<tr>
<td>3 Terms and definitions</td>
<td>2</td>
</tr>
<tr>
<td>4 Raw materials</td>
<td>2</td>
</tr>
<tr>
<td>5 Requirements</td>
<td>2</td>
</tr>
<tr>
<td>5.1 General requirements</td>
<td>2</td>
</tr>
<tr>
<td>5.2 Essential compositional and quality requirements</td>
<td>3</td>
</tr>
<tr>
<td>5.2.1 Compositional requirements</td>
<td>3</td>
</tr>
<tr>
<td>5.2.2 Quality requirements</td>
<td>3</td>
</tr>
<tr>
<td>6 Optional ingredients</td>
<td>3</td>
</tr>
<tr>
<td>7 Food additives</td>
<td>4</td>
</tr>
<tr>
<td>8 Hygiene requirements</td>
<td>4</td>
</tr>
<tr>
<td>9 Microbiological limits</td>
<td>4</td>
</tr>
<tr>
<td>10 Dried Meat speciation</td>
<td>4</td>
</tr>
<tr>
<td>11 Limits for heavy metal contaminants in dried meat</td>
<td>4</td>
</tr>
<tr>
<td>12 Residues of Veterinary Drugs</td>
<td>5</td>
</tr>
<tr>
<td>13 Packaging and labelling</td>
<td>5</td>
</tr>
<tr>
<td>13.1 Packaging</td>
<td>5</td>
</tr>
<tr>
<td>13.2 Labelling</td>
<td>5</td>
</tr>
<tr>
<td>14 Sampling</td>
<td>5</td>
</tr>
<tr>
<td>Bibliography</td>
<td>6</td>
</tr>
</tbody>
</table>
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 and processed products].
Dried meat — Specification

1 Scope

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

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.


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

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


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 936, *Meat and meat products — Determination of total ash*

ISO 937, *Meat and meat products, Determination of nitrogen content*


ISO 1443, *Meat and meat products, Determination of total fat content*

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*
3 Terms and definitions

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

3.3 Dried Meat
product of a food animal that has undergone water loss to achieve desired moisture content. This can be obtained through appropriate techniques such as but not limited to sun drying, solar drying, oven drying, air drying, heat drying and freeze drying.

3.4 Food animals
gazetted animals that are wholesome and fit for human consumption

3.5 Ready-to-eat
Products that are intended to be consumed without any further cooking steps

4 Raw materials

4.1 Meat shall be inspected and approved as wholesome and fit for human consumption and free from diseases, objectionable odours, off flavours and other contamination.

4.2 All ingredients shall be of acceptable biological, chemical and physical quality and complying with the relevant Uganda standards.

5 Requirements

5.1 General requirements

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

5.1.2 Dry meat products shall be prepared in hygienic conditions as stipulated in US CAC/RCP 58.
5.1.3 The meat used for this processing shall be from one type and its flavour must be characteristic of that type.

5.1.4 The products shall be free from foreign bodies, dirt, sign of spoilage and unacceptable odors.

5.2 Essential compositional and quality requirements

5.2.1 Compositional requirements

The Dried meat shall comply with the compositional requirements as given in Table 1

<table>
<thead>
<tr>
<th>S/N</th>
<th>Parameter</th>
<th>Limits for the final product (% m/m)</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Min.</td>
<td>Max.</td>
</tr>
<tr>
<td>i)</td>
<td>Moisture content</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>ii)</td>
<td>Crude fat</td>
<td>1.18</td>
<td>25</td>
</tr>
<tr>
<td>iii)</td>
<td>Crude protein</td>
<td>20</td>
<td>48</td>
</tr>
<tr>
<td>iv)</td>
<td>Total ash</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

5.2.2 Quality requirements

Dried meat shall comply with the following quality requirements;

5.2.2.1 The appearance of the dried meat shall be as uniform as possible. Dried meat shall be free from large wrinkles and notches.

5.2.2.2 The colour of the surface, as well as of the cross-cut should be uniform and dark red. A darker peripheral layer and bright red colour in the centre indicates excessively fast drying. Because of the remaining higher water content in the centre, these meat parts may still be susceptible to microbiological growth.

5.2.2.3 The texture of properly dried meat shall be hard, similar to frozen meat. A softer texture can be recognized by pressing the meat between your fingers. These pieces shall be kept for one more day in the dryer for finishing.

5.2.2.4 Taste and flavour are very important criteria for the acceptance of dried meat by the consumer. Dried meat shall possess a mild salty taste which is characteristic for naturally dried meat with no added spices. Off-odours shall not occur. However, a slightly rancid flavour, which occurs because of chemical changes during drying and storage, is commonly found in dried meat and is acceptable. Dried meat with a high fat content shall not be stored for a long period but used as soon as possible in order to avoid intensive rancidity.

6 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,
7 Food additives
The food additives used in the dried meat product shall be in accordance with the US 45.

8 Hygiene requirements
Dried meat shall be prepared, handled and stored in accordance US CAC/RCP 58.

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

<table>
<thead>
<tr>
<th>S/N</th>
<th>Type of microorganism</th>
<th>Limit (Max.)</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Escherichia coli MPN per g</td>
<td>Absent</td>
<td>US ISO 7251</td>
</tr>
<tr>
<td>ii)</td>
<td>Coagulase positive <em>staphylococcus aureus</em>, per g</td>
<td>Absent</td>
<td>US ISO 6888-1</td>
</tr>
<tr>
<td>iii)</td>
<td>Salmonella, per 25g</td>
<td>Absent</td>
<td>US ISO 6579 AOAC 967:26</td>
</tr>
<tr>
<td>v)</td>
<td><em>Listeria monocytogenes</em> per g</td>
<td>Absent</td>
<td>US ISO 11290-2</td>
</tr>
<tr>
<td>vi)</td>
<td>Yeast and moulds</td>
<td>$10^4$</td>
<td>US ISO 21527-1</td>
</tr>
</tbody>
</table>

10 Dried Meat speciation
The identification/isolation of meat species shall be done according to the Polymerase Chain Reaction (PCR) test and Enzyme Linked Immuno-Sorbent Assay (ELISA) procedure amongst other validated methods.

11 Limits for heavy metal contaminants in dried meat
Dried meat shall not contain heavy metal contaminants in excess of the limits given in Table 3 and the limits are subject to the latest revision of US 738.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Contaminants</th>
<th>Maximum limits ppm</th>
<th>Test methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Arsenic</td>
<td>0.1</td>
<td>AOAC 986.15 EN14332, 14627</td>
</tr>
<tr>
<td>ii)</td>
<td>Lead</td>
<td>0.1</td>
<td>AOAC 999.10, 999.11, 986.15 EN14082, 14083, 14084</td>
</tr>
<tr>
<td>iii)</td>
<td>Cadmium</td>
<td>0.05</td>
<td>AOAC 986.15, 999.11, 973.34 EN 14082, 18083, 14084</td>
</tr>
<tr>
<td>iv)</td>
<td>Mercury</td>
<td>0.03</td>
<td>AOAC 971.21</td>
</tr>
</tbody>
</table>
12 Residues of Veterinary Drugs

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

13 Packaging and labelling

13.1 Packaging

Packaging of dried 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.

13.2 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 (Type of the food animal)
b) Name, and physical address of processor/distributor;c) Net weight, in g or kg;d) Declaration as “Dried”
e) Declaration of method of drying.
f) List of ingredients in descending order;g) Nutritive valueh) Declaration of preservatives used;i) Date of packaging;j) best before date;k) Batch number;1) Storage conditions;m) Country of origin.

14 Sampling

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


[2] Polymerase Chain Reaction (PCR) test and Enzyme Linked Immuno Sorbent Assay (ELISA) methods

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.