



DRAFT TANZANIA STANDARD

Dried meat – Specification

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0 FOREWORD

Dried meat is a meat product obtained through appropriate techniques such as but not limited to sun drying, oven drying, air-drying, heat drying and freeze-drying. It was found necessary to prepare this Tanzania standard due to an increased production and importation of dried meat in Tanzania. This Tanzania standard is intended for ensuring safety and quality of dried meat traded in the country.

In the preparation of this Tanzania standard considerable assistance was drawn from KS 2723:2017 *Dried meat – Specification* published by the Kenya Bureau of Standards.

In reporting, the results of a test or analysis made in accordance with this standard, if the final value observed or calculated, is to be rounded off, it shall be done in accordance with TZS 4 (see clause 2).

1.0 SCOPE

This Tanzania standard specifies requirements, methods of sampling and test for dried deboned meat meant for human consumption.

2.0 REFERENCES

For the purpose of this Tanzania standard, the following standards shall apply. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced standard (including any amendments) applies:

TZS 4 – Rounding off numerical values.

TZS 76 – General method for determination of Arsenic silver diethyldithiocarmate photometric method.

TZS 118/ISO 4833, Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of microorganisms – Colony-count technique at 30°C

TZS 121, Microbiological examination for *Clostridium botulinum* and *Clostridium botulinum* toxins – Test method.

TZS 122 – Microbiology of food and animal feeding stuffs – Horizontal method for the detection of *Salmonella* spp.

TZS 125 – Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species) – Part 1: Technique using Baird-parker agar medium – Amendment 1: Inclusion of precision data.

TZS 131 – Microbiology - General guidance for enumeration of yeast and moulds – Colony count technique at 25 °C.

TZS 458 Code of hygiene for meat processing plant.

TZS 538 – Packaging and labelling of foods.

TZS 852-2 – Microbiology of food and animal feeding stuffs – Horizontal method for detection and enumeration of *Listeria monocytogenes* - Enumeration method

TZS 731 – Microbiology of food and feeding stuffs – Horizontal method for detection and enumeration of presumptive *Escherichia coli* – Most Probable Number Technique.

TZS 1760 /ISO 937 Meat and meat products – Determination of nitrogen content (Reference method).

ISO 17604 – Microbiology of the food chain – Carcass sampling for microbiological analysis.

Codex Stan 193 – Codex general standard for contaminants and toxins in food and feed.

TZS 949-1 /ISO 21528-1, Microbiology of food and animal feeding stuffs – Horizontal methods for the detection and enumeration of Enterobacteriaceae – Part 1 – Detection and enumeration by MPN technique with pre-enrichment.

TZS 949-2/ISO 21528-2, Microbiology of food and animal feeding stuffs -- Horizontal methods for the detection and enumeration of Enterobacteriaceae – Part 2 – Colony count method.

TZS 1761/ISO 1443 Meat and meat products – Determination of total fat content.

ISO 1442 Meat and meat products – Determination of moisture content (Reference method)

ISO 936 Meat and meat products – Determination of total ash

3.0 TERMS AND DEFINITIONS

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

3.1 meat

all part of an animal 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 processing irreversibly modifying its organoleptic and physicochemical characteristic.

3.3 dried meat

a product of a food animal that has undergone water loss to achieve desired moisture content.

3.4 food animal

gazetted animal that is wholesome and fit for human consumption.

4.0 REQUIREMENTS

4.1 General requirements

- a) Meat used for preparing dried meat shall be obtained from food animals
- b) Meat used for this product shall be from one type and its flavor must be characteristic of that type.
- c) The products shall be free from foreign bodies, dirt, sign of spoilage and unacceptable odours.

4.1.1 Raw materials

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

4.1.1.2 Permitted ingredients

Spices, seasonings and condiments, edible fat and oil, salts and curing agents may be used and where standards have been declared such ingredients shall conform to such standards.

4.1.1.3 Food additives

Food additives when used in dried meat shall comply with respective levels specified in Codex Stan 192.

4.1.2 Dried meat shall;

- a) have as uniform appearance as possible. The absence of large wrinkles and notches indicates the desired steady and uniform dehydration of meat.
- b) have uniform dark red surface and cross-sectional colour. 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.
- c) have hard texture, 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.
- d) 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.
- e) not be stored for a long period especially, dried meat with a high fat content but used as soon as possible in order to avoid intensive rancidity.

4.2 Specific requirements

The Dried meat shall comply with the requirements prescribed in Table 1.

Table 1: Specific requirements in dry matter basis

S/N	Characteristic	Requirement		Test methods
		Min.	Max.	
1.	Moisture content, %m/m	7	30	ISO 1442
2.	Crude fat, %m/m	1.18	25	TZS 1761
3.	Crude protein, %m/m	20	48	TZS 1760
4.	Total ash, %m/m	1	5	ISO 936

5.0 CONTAMINANTS

5.1 Dried meat shall comply with the requirements for heavy metals prescribed in Table 2.

Table 2: Heavy metals requirements

S/N	Characteristic	Requirement	Test Method
1.	Mercury (Hg), mg/kg, max.	0.03	ICP/AAS
2.	Lead (Pb), mg/kg, max.	0.1	TZS 268
3.	Arsenic (As), mg/kg, max.	0.1	TZS 76
4.	Cadmium (Cd), mg/kg, max.	0.05	ICP/AAS

5.2 Veterinary drug residues

Veterinary drug residues in dried meat shall comply with requirements prescribed in the CAC/MRL 2.

6.0 HYGIENE

6.1 Dried meat shall be prepared under strict hygienic conditions according to TZS 458 (See clause 2).

6.2 Dried meat samples tested shall not contain microbiological count exceeding the requirements prescribed in Table 3.

Table 3: Microbiological requirements for dried meat

S/N	Characteristic	Requirement	Method of test (see clause 2)
1.	Total plate count, cfu/g. max.	10^4	TZS 118
2.	Enterobacteriaceae, max.	10^2	TZS 949 (Part 1 or 2)
3.	<i>Salmonella</i> spp /25 g	Absent	TZS 122
4.	<i>Escherichia coli</i> , MPN/g	Absent	TZS 731
5.	<i>Listeria monocytogenes</i>	Absent	TZS 852 (Part 2)
6.	<i>Clostridium botulinum</i>	Absent	TZS 121
7.	<i>Staphylococcus aureus</i> , cfu/g	Absent	TZS 125 (Part 1)
8.	Yeast/moulds, cfu/ml, max.	10^2	TZS 131

7.0 SAMPLING AND TESTS

7.1 Sampling

Sampling of dried meat shall be done according to ISO 17604 (See clause 2).

7.2 Tests

Testing of dried meat shall be done according to test methods prescribed in Tables 1, 2 and 3.

8.0 PACKAGING, MARKING AND LABELLING

8.1 Packaging

In addition to the packaging requirements prescribed in TZS 538 (see clause 2), dried meat shall not be exposed to direct sun or rain.

8.2 Marking and labelling

Dried meat shall be marked and labeled in accordance with TZS 538 (see clause 2). In addition, each container shall be legibly and indelibly marked with the following information:

- a) Name of the product (of meat used) as appropriate;
- b) Country of origin;
- c) Declaration of method of drying;
- d) Declaration of preservatives used;
- e) Name and physical address of the manufacturer;
- f) Net Weight content;
- g) List of ingredients;
- h) Batch or code number;
- i) Date of manufacture shall be clearly shown on the container;
- j) Expiry date shall be clearly shown on the container;
- k) Instructions for use and storage;
- l) The language on the label shall be “Kiswahili” or Kiswahili and English.
Additional language may be used depending on the designated market.

8.3 The container may also be marked with TBS Certification Mark.

NOTE – The TBS Standards Mark of Quality may be used by the manufacturers only under license from TBS. Particulars of conditions under which the licenses are granted may be obtained from TBS.