



DRAFT TANZANIA STANDARD

Edible offal – Specification

Draft standard for comments only

TANZANIA BUREAU OF STANDARDS

Edible offal – Specification

0 FOREWORDS

Edible offal's are parts of the carcass that has been passed as fit for human consumption. In the case of food animals other than poultry, these include red offal, green offal and white offal and exterior parts such as hooves, hides, head and feet. In the case of poultry, these include giblets (the heart, gizzard and the liver without the gall bladder).

This draft Tanzania standard has been prepared to ensure that edible offal produced or imported in the country meet the safety and quality requirements.

In the preparation of this Tanzania standard assistance was drawn from US 2027 Edible offal— Specification published by the Uganda National Bureau of Standards (UNBS).

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 Scope

This draft Tanzania standard specifies requirements, methods of sampling and test for edible offal for human consumption from the cattle, buffalo, sheep, goats, deer, horses, pigs, ratites, camelids and poultry.

2 NORMATIVE REFERENCES

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

TZS 789/EAS 12, *Potable water — Specification*

TZS 4, Rounding off numerical values.

TZS 109, Food processing units - Code of hygiene.

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 122/ISO 6579-1, Microbiology of food and feeding stuffs – Horizontal method for detection of *Salmonella spp.*

TZS 123 /ISO 7937, Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of *Clostridium perfringens* – Colony-count technique.

TZS 458:2016 Code of hygiene for meat processing plant

TZS 538, Labelling of pre-packaged foods — General requirements

TZS 731/ISO 7251, Microbiology of food and feeding-stuffs – Horizontal method for the detection and enumeration of presumptive *Escherichia Coli* – Most Probable Number Technique

TZS 852-1/ISO 11290-1, Microbiology of food and animal feeding stuffs – Horizontal method for the detection and enumeration of *Listeria monocytogenes* – Part 1 – Detection method

ISO 17604, Microbiology of the food chain – Carcass sampling for microbiology analysis

ISO 10272-1, Microbiology of food and animal feeding stuffs – Horizontal method for detection and enumeration of *Campylobacter* spp. – Part 1: Detection method

TZS 110:2016 Abattoir design, ante mortem and post mortem inspection of slaughtered animals, fresh meat and processed meat products – code of hygiene

OI CAC/GL 50, *General guidelines on sampling*

CAC/MRL 2, *Maximum residue limits for veterinary drugs in food*

CAC/RCP 58, *Code of hygienic practice for meat*

Codex Stan 192, *General standard for food additives*

Terrestrial Animal Health Code

TZS 110:2016 Abattoir design, ante mortem and post mortem inspection of slaughtered animals, fresh meat and processed meat products – code of hygiene

TZS 2843/EAS 955, Production of Packaged Meat Products — Hygienic Requirements

3 Terms and definitions

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

3.1 meat

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

3.2 edible offal

parts of the carcass that has been passed as fit for human consumption. In the case of food animals other than poultry, these include red offal, green offal and white offal and exterior parts such as hooves, hides, head and feet. In the case of poultry, these include giblets (the heart, gizzard and the liver without the gall bladder)

3.3 red edible offal

include heart, liver, kidney, spleen, tongue, lungs, pancreases

3.4 green edible offal

include the rumen, reticulum, omasum, abomasum, small intestines, large intestines, colon and gizzards

3.5 white edible offal

include the brain, spine, bone marrow, testicles and mammary gland

3.6 tripe

refers to the muscle walls (with the interior mucosal lining removed) of the first three chambers of a ruminant stomach the rumen, reticulum and omasum.

3.7 condemned

parts or organs so marked unfit for human consumption meant to be destroyed or rendered unfit for food purposes

3.8 food grade material

materials that are free from substances that are hazardous to human health and may be permitted to come in contact with food

4 Requirements

4.1 General requirements

All animals shall be slaughtered in a hygienically managed slaughter-house in accordance with TZS 458. The slaughter shall be supervised by a competent authority. The offal thereof shall be subjected to meat inspection as prescribed in TZS 110. They shall be certified as being sound and free from contagious and infectious diseases and fit for human consumption.

The edible offal shall be;

- a) obtained from carcasses that have been slaughtered in a licensed premise.
- b) obtained from food producing animals which have been slaughtered according to TZS 110.
- c) prepared under hygienic conditions as stipulated in TZS 458.
- d) free from signs of spoilage
- e) from animals whose meat inspection has been conducted under conditions simulating natural light.
- g) free from infectious parasites
- h) from a specified animal specie
- i) Intact, taking into account the presentation
- j) free from blood clots bone dust or bone fragments
- k) free from any visible foreign matter (e.g. dirt, wood, plastic, metal particles) and offensive odours
- n) free of contusions having a material impact on the product
- o) free from freezer-burn

4.2 Requirements for routine inspection of edible offal of cattle, pig, goats, sheep, buffalo, deer, horses, ratites, camelids and poultry.

The Edible offal shall comply with the inspection requirements as given in Table 1

SN	Organ	Requirements
i	Stomach, intestines and spleen	The outer, and when necessary the inner, surfaces of the stomach, and intestines shall be inspected. The surface and substance of the spleen shall be inspected, together with the lymph nodes of the stomach and bowel, gastro-splenic and mesenteric) and web (omentum). The spleen shall be put where necessary, for the inspection of the substance (pulp). They shall be free from haemorrhage, cysts and swellings, free from worms
ii	liver	The surfaces and substance of the liver shall be inspected. The associated lymph nodes (hepatic) shall also be inspected and the bile ducts incised where necessary. They shall be free from haemorrhage, cysts,swellings andfree from worms.
iii	kidneys	The lymph-nodes of the kidneys (renal) and the adrenal glands shall be inspected before the removal of the kidneys. Thereafter the kidneys shall be exposed, and the surface inspected and, If necessary, the kidneys shall be split by incision and the substance inspected. They shall be free from swellings, free from kidney stones, free from haemorrhage, free from cysts and any discolourations.
iv	lungs	The lungs shall be inspected and if obviously diseased, they shall be incised at the base. The associated lymph-nodes (bronchial and mediastinal) shall also be inspected and if found obviously diseased, shall be incised.They shall be free from haemorrhage, cysts,swellings, and worms.
v	heart	The heart sac (pericardium) shall be opened, and the heart inspected and if necessary, incised. It shall be free of abnormal swelling, haemorrhage, free of worms and cysts.
vi	Poultry offal (liver, heart and gizzard)	Heart shall be free of abnormal swelling, haemorrhage, free of worms and cysts. Liver shall be free from gal, discolouration, contaminants and ulcerations and worms. Gizzard shall be clean, shall be free of abnormal swelling, haemorrhage, free of worms and cysts
vii	Testicles and Penis	The outer surface and the substance of the testicles and penis and the superficial inguinal lymph-nodes shall be inspected routinely if meant for the consumption. They shall be free of abnormal swelling, haemorrhage, free of worms and cysts

Note 2: All the other unmentioned internal and external offal shall be inspected to be of good quality and safety as guided by table 1 above.

5. Storage

1. Edible offal are highly perishable and shall be chilled at 1-4 °C before leaving the premises.

2. Edible offal may be presented fresh (warm, chilled, frozen) . Storage temperatures throughout the supply chain shall be such as to ensure uniform internal product temperatures as follows;

a) Chilled - Internal product temperature should be maintained at-1.5° C to +4°C at any time following the post-slaughter chilling process.

b) Frozen - Internal product temperature maintained at -18°C at any time after freezing.

6 Hygiene

6.1 In addition to CAC/RCP 58, Edible offal shall be produced, processed, handled and stored in accordance with TZS 109 and TZS 2843.

6.2 Edible offal shall comply with the microbiological limits given in Table 2, when tested in accordance with the methods given therein.

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Table 2 — Microbiological limits for Edible offal

S/No.	Microorganism	Edible offal				Test method
		Heart, liver kidney, spleen, lungs, trachea, testicles, tongue	Stomach, esophagus, gizzard	Small intestines	Large intestines	
i	Total plate count, cfu/g ,max	10 ⁵	10 ⁵	10 ⁵	10 ⁸	ISO 4833-1
ii	<i>Staphylococcus aureus</i> , cfu/g,max	10 ²	10 ³	10 ³	10 ⁴	ISO 6888-1
iii	<i>Escherichia Coli</i> , cfu/g,max	10 ²	10 ³	10 ³	10 ⁴	ISO 7251
iv	<i>Escherichia Coli</i> 0157:H7 per 25 g	Absent	Absent	Absent	Absent	ISO 16654
v	<i>Salmonella</i> spp, per 25 g	Absent	Absent	Absent	Absent	ISO 6579
vi	<i>Clostridium perfringes</i>	Absent	Absent	Absent	Absent	ISO 7937
vii	<i>Listeria monocytogens</i> , per 25 g,	Absent	Absent	Absent	Absent	ISO 11290-1
viii	<i>Campylobacter</i> per 25 g	Absent	Absent	Absent	Absent	TZS 2280

Note 3: All the other unmentioned internal and external offal shall comply with the microbiological limits in table 2 above

7 Food additives

Food additives, if used in edible offal shall comply with Codex Stan 192.

8 Contaminants

8.1 Heavy metals

Edible offal shall not contain heavy metal in excess of the limits as specified in Table 2, when tested in accordance with the methods given therein.

Table 2 — Maximum limits of heavy metals

S/No.	Heavy metals	Maximum limits ppm	Test method
i	Arsenic (As)	0.1	TZS 76
ii	Lead (Pb)	0.1	TZS 268
iii	Cadmium (Cd)	0.03	AOAC 973:34
iv	Mercury (Hg)	0.01	AOAC 971:21

8.2 Pesticides and Veterinary drug residues

Edible offal shall comply with the maximum residue limits (MRLs) for pesticides and veterinary drug residues as specified in relevant Codex Alimentarius Commission.

9 Sampling and method of tests

9.1 Sampling

Sampling of edible offal shall be done in accordance with ISO 17604.

6.2 Methods of tests

Samples of edible offal shall be tested to ascertain conformity of the product to the requirements of each specification by the methods described in the respective standards provided under Table 1, 2 and 3 of this standard.

7 Packaging, marking and labeling

7.1 Packing

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

7.2 Marking and labelling

The container shall be marked and labelled in accordance with TZS 538. In addition, each container of edible offal shall be legibly and in legibly marked with the following information.

- a) name of the product (Edible offal);
- b) name of the animal from which the edible offal is derived;
- c) name, location and address of manufacturer/processor;
- d) net weight, in g or kg;
- e) date of production/packaging;
- f) expiry date;
- g) batch number;
- h) storage conditions;
- i) country of origin
- k) declaration of preservatives used;

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 licence from TBS. Particulars of conditions under which the licenses are granted may be obtained from TBS.

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