



TANZANIA BUREAU STANDARD

Chicken meat — Specification

DRAFT TZS FOR STAKEHOLDER'S COMMENTS ONLY

TANZANIA BUREAU OF STANDARDS

0 Foreword

Chicken is the most common type of domesticated poultry in the world. Chicken meat and chicken meat parts are locally produced and some are imported in Tanzania. There is an ample scope for the development of the internal as well as external trade for these products as they are major products in Tanzanian market especially in butchers and supermarkets. The demand for these products is increasing day by day hence the necessity to develop the standard for chicken meat.

This Tanzania Standard assists in ensuring safety of consumers, export promotion as well as to ensure the quality and safety of chicken meat and chicken meat parts traded in the country.

In the preparation of this Tanzania Standard considerable assistance was drawn from:

TZS 2181:2018 *Chicken meat (Raw and Spiced)*- specification

In reporting the results of a test or analysis made in accordance with this Tanzania Standard, if the final value observed or calculated is to be rounded off, it shall be done in accordance with TZS 4

1 Scope

This Tanzania Standard specifies the requirements, sampling and test methods for raw and spiced chicken "*Gallus domesticus*" meat carcasses or parts intended for human consumption

2 Normative references

The following referenced standards are indispensable for the application of this Tanzania Standard. 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 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 119/ISO 4831, *Microbiology of food and animal feeding stuffs — Horizontal method for detection and enumeration of coliforms — Most probable number technique*

TZS 122 *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 125 –1/ISO 6888-1 *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 125 – 2/ISO 6888-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 2: Technique using rabbit plasma fibrinogen agar medium*

TZS 127/ISO/TS 21872-1, *Microbiology of food and animal feeding stuffs — Horizontal method for detection of potentially enteropathogenic Vibrio spp. — Part 1: Detection of Vibrio parahaemolyticus and Vibrio cholera*

TZS 457 *Code of hygienic practices for spices and dried aromatic plants*

TZS 459 *Code of hygiene for poultry processing*

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*

TZS 852-2/ISO 11290-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Listeria monocytogenes — Part 2: Enumeration method*

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 2428/ISO 17604 *Microbiology of the food chain — Carcass sampling for microbiology analysis*

ISO 10272-1:2006, *Microbiology of food and animal feeding stuffs — Horizontal method for detection and enumeration of Campylobacter spp. — Part 1: Detection method*

ISO 10272-2:2006, *Microbiology of food and animal feeding stuffs — Horizontal method for detection and enumeration of Campylobacter spp. — Part 2: Colony-count technique*

CXS 193, *Codex general standard for contaminants and toxins in food and feed*

TZS 129, *Meat and meat products — Microbiological examination — Sampling*

3 Terms and definitions

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

3.1 carcass

the body of a chicken after dressing.

3.2 chicken meat

dressed carcass, parts thereof and edible offal that has been passed as fit for human consumption by a Competent Authority.

3.3 chicken part

cut-up chicken carcass, whether or not de-boned or de-skinned depending on fabricated process.

3.4 breast meat

chicken part that is separated from the back of the shoulders through sternum.

AFDC 22 (4296) DTZS: 2026

3.5 bone -in -leg

chicken part that includes thigh and drum stick.

3.6 drumstick

distal portion of the leg obtained by cutting off knee joint and hock joint or slightly below.

3.7 fillet

round, elongated fusiform chicken meat that attaches to each side of the keel bone (sternum).

3.8 middle wing

the middle part of the cut off wing stick and wing tip.

3.9 thigh meat

proximal portion of the upper leg which is separated from body and knee joint.

3.10 three-joint wings

whole wing cut from the carcass at the shoulder joint.

3.11 two-joint wings

distal portion of the wing cut off wing stick.

3.12 wing stick

proximal portion of the wing next to body, but cut off two joint wings.

3.13 wing tip

tip of the wing obtained by cutting through the carpal joint.

3.14 conformation

manner of animal formation with general reference to the animal's body proportions and its ratio of edible tissue to bone.

3.15 Competent Authority

official authority charged by the government for implementation of animal health, animal movement control, and welfare measures to ensure meat hygiene and quality

3.16 dressing

progressive separation of offal and inedible parts from a slaughtered chicken.

3.17 giblet

visceral organs fit for human consumption i.e. heart, liver, and gizzard.

3.18 visceral organ

all internal organs of chicken.

3.19 whole chicken

dressed chicken carcass including giblet.

3.20 Freezer-burn

burning or browning damaged caused by dehydration or oxidation due to air reaching the uncovered meat in a freezer.

4 Requirements

4.1 General requirements

4.1.1 Chicken meat and parts shall be derived from healthy chicken slaughtered and processed in approved facilities that shall comply with the requirements specified in TZS 459

4.1.2 Chicken meat parts shall be approved as being wholesome, sound and free from contagious and infectious diseases and fit for human consumption.

4.1.3 The chicken shall be suitably scalded and all feathers removed. The carcass shall be eviscerated; head, feet and oil glands removed, and shall be properly cleaned and washed. The carcass shall then be suitably chilled as required in 4.3.

4.1.4 Chicken meat shall be clean, firm and have uniform natural colours. Skin tears and discoloration due to bruising shall not exceed specified quality grading provisions.

4.1.5 Chicken meat shall be free from objectionable odour and foreign odour, improper bleeding, fecal contamination, freezer-burn and foreign matters which may be harmful to consumers.

4.1.6 All the carcasses inspected and passed as fit for human consumption shall bear an official inspection mark or be traceable to an approved establishment through batch code.

4.2 Other Requirements

4.2.1 Requirements for spiced chicken meat carcasses and/or parts

- a) Spices used in the chicken meat carcasses and/or parts shall comply with relevant standards for a particular spice(s).
- b) For spiced chicken meat carcasses and/or parts, the acid insoluble ash shall not exceed 0.5 % m/m when tested in accordance with relevant TZS
- c) Spices and food colour shall not be used to mask spoilage, dis-coloration and or biological deterioration

4.3 Types of raw and spiced chicken meat

4.3.1 Type A: Chilled chicken meat

The carcass shall be chilled so that the temperature of the deepest portion of the flesh near the bone shall be 0 °C – 4 °C. The temperature shall be maintained throughout storage and transportation of the meat.

4.3.2 Type B: Frozen Chicken meat

The frozen carcass shall be individually packed in a suitable food grade packaging materials, and shall be frozen solid when delivered. The giblets should be removed, packed in a suitable food grade material and frozen separately. The frozen temperatures shall be -18 °C or below.

4.4 Classification requirements

4.4.1 Chicken meat can be categorized into two types, whole chicken and parts, which include breast, fillet, bone-in-leg, thigh, drum stick, three joint wing, wing stick, middle wing, two joint wing, wing tip and others e.g. feet.

4.4.2 Classification of chicken meat are based on consumption requirements as follows:

4.4.2.1 Whole chicken (raw or spiced) is classified into three classes namely Extra Class, Class I and Class II as specified in table 1.

4.4.2.2 Parts (raw or spiced) are classified into Extra Class and Class I as specified in table 2.

Table 1 – Quality criteria for whole chicken

Quality Factors	Criteria		
	Extra Class	Class I	Class II
1. Conformation	Free of deformities, well rounded breast	Free of deformities, slightly thin breast	Moderate deformities
2. Breast bone	Naturally curved breast bone	Slightly curved breast bone	Bent/curved or crooked breast bone
3. Back	No deformities, neither curved nor crooked	Slightly curved or crooked	Crooked
4. Leg	Natural, neither flesh bruises nor blood congestion at skin.	Natural, slight bruises or blood congestion at skin.	Moderate bruises or blood congestion at several parts of skin
5. Wing	All parts of wing shall be intact, free of deformities and full fleshed	All parts of wing shall be intact, slight deformities and full fleshed	All parts of wing shall be intact, moderate deformities.
6. Flesh	Breast meat is thick and firm with the flesh embracing the whole breast bone or full-fleshed according to breed.	Breast meat is less firm than extra class and has a moderately thick flesh embracing the whole breast bone	Breast meat is less firm than class I
7. Pinfeather, diminutive feathers, and hairs	None	few	Numerous
8. Exposed flesh (in length)	Breast and legs shall be free of parts, tears, and missing skin if any, the aggregated length shall not exceed 1.3 cm.	Aggregated length of parts, tears, and missing skin at breast and legs shall not exceed 1.3 cm. or whole body not exceed 7.6 cm.	the aggregated length of parts, tears, and missing skin of the whole body exceed 7.6 cm.
9. Bone - disjointed bone - broken bones	Not more than 1 disjointed bone Free from broken bones	Not more than 2 disjointed bones Not more than 1 broken bone, but non-protruding broken bones	Not more than 4 disjointed bones More than 1 broken bones but no more than 3 non- protruding broken bones
10. Missing part	None	Wing tips may be absent	Wing tips may be absent

11. Skin discoloration	Aggregated breast and leg skin discoloration shall not exceed 2.5 cm. or the total aggregated area of discoloration shall not exceed 5.0 cm.	Aggregated breast and leg skin discoloration shall not exceed 5.0 cm. or the total aggregated area of discoloration shall not exceed 7.6 cm.	The total aggregated area of skin discoloration shall not exceed 8.0 cm.
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Table 2 – Quality criteria for parts

S/No.	Quality factors	Criteria for	
		Extra Class	Class I
1	Flesh	Full fleshed and firm	Reasonably full fleshed and firm
2	Pinfeather and Diminutive feather	A few	Reasonable
3	Skin tears	None	A few
4	Missing skin	None	A few
5	Broken and disjointed bones	None	A few
6	Discoloration (e.g., discoloration from bruising)	None	A few

4.5 Tolerance requirements

Tolerances in respect of quality shall be allowed for product not satisfying the requirements of the class indicated.

4.5.1 Acceptable defect of whole chicken (raw and spiced) (proper numbering)

4.5.1.1 Extra class

Not more than 5 % by quantity of whole chicken not satisfying the requirements of Extra Class, but meeting those of Class I.

4.5.1.2 Class I

Not more than 5 % by weight of whole chicken not satisfying the requirements of the class, but meeting those of Class II.

4.5.1.3 Class II

Defects other than those specified in the class are not allowed.

4.5.2 Acceptable defect of parts (raw and spiced) quality

4.5.2.1 Extra class

Not more than 5 % by weight of cutting part not satisfying the requirements of Extra Class, but meeting those of Class I.

4.5.2.2 Class I

Defects other than those specified in the class are not allowed.

5 Storage and transportation

5.1 Storage

5.1.1 All packed raw and spiced chicken meat carcass and parts shall be kept in cold storage. Vehicle(s) for chicken meat transport shall be equipped with cooling unit in the storage area and shall be able to maintain core temperature of the deepest muscle at 4 °C or lower at all time. Storage time shall not exceed 7 days for chilled at 4 °C and 12 months for frozen at -18 °C meat.

5.1.2 The raw and spiced chicken meat carcass and parts shall not show any evidence of deterioration, discoloration or any slimy appearance on storage.

5.2 Transportation

5.2.1 All raw and spiced chicken meat carcass and parts shall be handled, transported and delivered clean and under good hygienic conditions as per meat transport regulations from the relevant authorities.

5.2.2 Vehicle for raw and spiced chicken meat carcass and parts transport shall be designed such that packaged chicken meat shall not have direct contact with vehicle's surfaces and will be able to keep its quality during transportation. It shall be designed and constructed in such a way that it is possible to clean both interior and exterior surface thoroughly.

5.2.3 Both fresh and frozen Raw and spiced chicken meat carcass and parts shall be moved to refrigerated vehicle and the packages shall be handled with due care to preserve the quality and hygienic conditions of the products.

5.2.4 After unloading chicken meat, the vehicle shall be cleaned immediately with potable water and/or be disinfected. The vehicle shall be drained and dried properly and shall be free from objectionable odors.

6 Contaminants

6.1 Heavy metal contaminants

Raw and spiced chicken meat shall Comply with heavy metals limits established in the CXS 193

6.2 Pesticides and veterinary drug residues

Raw and spiced chicken meat carcass and parts shall have maximum residue limits for veterinary drugs in accordance with CXM 2

6.3 pesticides residues

Raw and spiced chicken meat carcass and parts shall have maximum pesticide residues in accordance with the Codex Alimentarius pesticide residues database.

7 food additives

Food additive if used shall comply with CXS 192

8. Hygiene

7.1 Raw and spiced chicken meat carcass and parts shall be produced, processed, packed, stored, transported and handled under good hygienic conditions according to TZS 459 and TZS 109.

7.2 Raw and spiced chicken meat carcass and parts shall comply with the microbiological limits provided in table 3 when determined by the methods therein.

Table 3 – Microbiological limits for chicken meat

S/No	Characteristic	Requirement	Method of test (see clause 2)
1	Total plate count, CFU/g, max.	1 x 10 ⁵	TZS 118
2	Total Coliforms count, MPN/g max.	1 x 10 ³	TZS 119
3	<i>Enterobacteriaceae</i> , CFU/g max.	10 ²	TZS 949 (Part 1 or 2)
4	<i>Escherichia coli</i> (enteropathogenic type)	Absent	TZS 731
5	<i>Staphylococcus aureus</i> in 25g	Absent	TZS 125 (Part 1 or 2)
6	<i>Salmonella</i> spp 25g.	Absent	TZS 122
7	<i>Clostridium perfringens</i> in 25g	Absent	TZS 123
8	<i>Campylobacter</i> spp in 25g.	Absent	ISO 10272 (Part 1 or 2)
9	<i>Vibrio cholera</i> (<i>Vibrio</i> spp.) in 25g	Absent	TZS 127
10	<i>Listeria monocytogenes</i> in 25g	Absent	TZS 852 (Part 1 & 2)

8 Packaging and Labeling

8.1 Packaging

Raw and spiced chicken meat shall be packaged in a food grade packaging materials that safeguard the quality and safety of the products during handling and storage

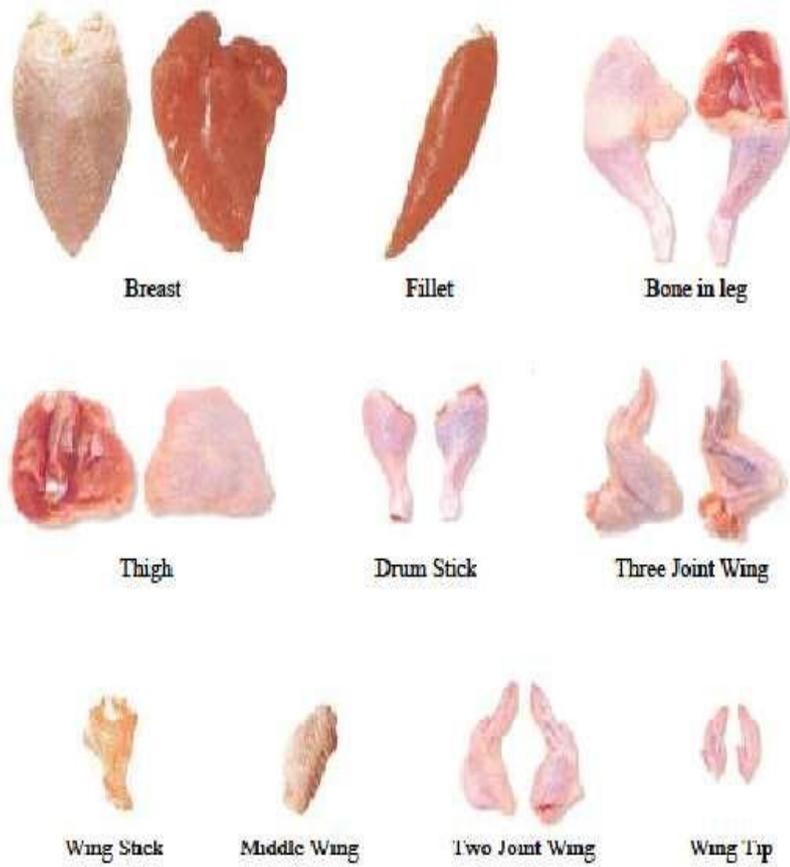
8.2 Labeling

In addition to the labelling requirements given in TZS 538 raw and spiced chicken meat shall be legibly and indelibly labelled with the following information:

- a) Name, type and class of the chicken meat;
- b) Name and physical address of the manufacturer/packer;
- c) Batch or code number;
- d) Net weight;
- e) List of ingredients
- f) Date of manufacture
- g) best before date;
- h) Country of origin;
- i) Storage condition;

9 Sampling

For the purpose of this Tanzania Standard sampling of Raw and spiced chicken meat carcass and parts shall be done in accordance with TZS 129.



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Figure 1 – Chicken meat parts

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