DRAFT TANZANIA STANDARD

Chilled and frozen Ostrich meat – Specification

TANZANIA BUREAU OF STANDARDS

Chilled and frozen Ostrich meat – Specification

0 FOREWORD

Ostrich meat is locally produced in Tanzania. There is potential for the development of internal as well as external trade for ostrich meat. The demand for Ostrich meat is increasing day by day hence the necessity to develop this standard to ensure that the products produced have the required safety and quality.

In the preparation of this Tanzania Standard substantial assistance was drawn from Australian Standard AS 5010:2001 – *Hygienic production of Ratite (Emu/Ostrich) Meat for human consumption.*

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 chilled and frozen Ostrich meat intended for human consumption.

2.0 REFERENCES

For the purpose of this 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 4 – Rounding off numerical values
TZS 76 – General method for determination of Arsenic silver diethyldithiocarmate photometric method
TZS 2180 – Ante-mortem and post-mortem inspections of poultry– Code of practice
TZS 118/ISO 4833, Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of microorganisms – Colony-count technique at 30^{o}C
TZS 109 – Food processing units – code of hygiene
TZS 119 – Microbiology – General guidance for the enumeration *of coliforms* – Most Probable Number technique (MPN)
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 129 – Meat and meat products – Microbiological examination – Sampling

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

TZS 268, General atomic absorption spectrophotometric method for determination of Lead in food and food stuffs

TZS 459 - Poultry processing – Code of hygieneTZS 538 – Labelling of pre-packaged foods – General requirements

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

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

TZS 852-2 – Microbiology of food and animal feeding stuffs – Horizontal method for detection and enumeration of *Listeria monocytogenes* - Enumeration method (Identical to ISO 11290-2)

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

Codex Stan 193 – Codex General Standard for Contaminants and Toxins in Food and Feed

3.0 TERMS AND DEFINITIONS

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

3.1 ostrich (*Struthio camelus*)

the largest living bird, two-toed, swift-footed flightless running domesticated or wild- bird of the ratite family

3.2 ostrich carcass

carcass produced from ostrich slaughtered for human consumption from which blood, feathers, skin, head, feet, oesophagus, trachea, intestine, sexual organs and lungs are removed and it could be with or without edible giblets

3.3 chilled ostrich carcass

ostrich carcass chilled immediately after evisceration so that the temperature at the thermal centre of the product does not exceed 4^{o}C and not less than –1^{o}C, and then preserved under hygienic conditions at this temperature

3.4 frozen Ostrich carcass

ostrich carcass initially chilled for a period not exceeding 24 hours then rapidly frozen until the core temperature of the product reaches -18 ^{o}C, and then preserved under hygienic conditions at this temperature

3.5 ostrich meat

skeletal muscle of an ostrich (with or without accompanying fat), together with the sinew, nerve and blood vessels that ordinarily accompany the muscle tissue and that are not normally separated from it in the process of preparation for sale

3.6 ostrich meat cut

piece of meat separated from the ostrich carcass during butchering

3.7 edible giblets

liver after the removal of bile sac, heart after the removal of pericardial sac, and the gizzard after emptying its contents and removal of the lining membrane

4.0 REQUIREMENTS

4.1 General requirements

4.1.1 Ostrich meat shall be produced by slaughtering healthy ostrich birds free of communicable diseases and fit for human consumption according to TZS 2180.

4.1.2 Ostrich neck shall be separated at the plate joint and the feet at or near the joint.

4.1.3 After evisceration, Ostrich carcasses shall be chilled so that the core temperature of the product reaches 4 ^{o}C or less in a period not exceeding 24 hours.

4.1.4 Frozen product shall be put into the freezer in a period not exceeding 24 hours after the initial chilling (item 4.1.3) and if during this period the product was not packaged and put immediately into the freezer it could be preserved at a temperature of -0.5 ± 1^{o}C.

4.1.5 The core temperature of the frozen product shall reach -18 ^{o}C in a period not exceeding 72 hours from the moment of it is placed into the freezer.

4.1.6 Ostrich meat shall be free from foreign odour dung and dirt.

4.1.7 Ostrich meat shall be free from bloodstains, blood clots, blisters and viscera remain. Drip loss shall not exceed 5% of the frozen unit weight.

4.1.8 Ostrich meat shall be free from foreign matter and colourants**.**

4.2 Specific requirements

Ostrich carcasses can be cut into:

4.2.1 Fillets: Limited to iliofibularis and iliofemoral muscles.

4.2.2 Steak

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

4.2.4 Neck

4.2.5 Wings

4.3 OSTRICH MEAT GRADES

4.3.1 Prime cuts: any cut produced from ostrich carcasses less than 16 months of age. The meat colour is homogenous red without coloured stains and the fat colour is white.

4.3.2 Choice cuts: Any cut produced from ostrich carcasses between 16-24 months of age. The meat colour is homogenous red without coloured stains and the fat colour is white.

4.3.3 Select cuts: Any cut from sections 4.3.1 and 4.3.2 not conforming to the requirement and from carcasses of birds older than 24 months of age.

4.3.4 Commercial cuts: any cut from sections 4.3.1 to 4.3.3 above or from old birds with dark red and heterogeneous meat colour of individual muscle and yellow fat colour.

4.4 STORAGE AND TRANSPORTATION

4.4.1 Temperature in the chiller and transporting vehicles for chilled Ostrich meat shall not exceed 0-4 ^{o}C**.**

4.4.2 Temperature in the freezer and transporting vehicles for frozen Ostrich meat shall not exceed -18 ^{o}C.

5.0 CONTAMINANTS

5.1 Heavy metal contaminants

Ostrich carcasses and cuts shall not contain any metal contaminants in excess of the quantities specified in Codex Stan 193. Also, the products shall comply with the requirements for heavy metals prescribed in Table 1.

Table 1: Heavy metal requirements

S/N	Characteristic	Requirements	Method of test (see clause 2)
1.	Arsenic, mg/kg, max.	0.1	TZS 76
2.	Lead, mg/kg, max.	0.1	TZS 268
3.	Cadmium, mg/kg, max.	0.05	ICP/AAS
4.	Mercury, mg/kg, max.	0.03	ICP/AAS

5.2 Veterinary drug residues

Ostrich meat shall comply with the requirements on maximum allowable veterinary drug residue limits as prescribed in the CAC/MRL 2.

6.0 HYGIENE

6.1 Ostrich meat shall be prepared under strict hygienic conditions according to TZS 109 and 459 (See clause 2).

6.2 On testing, the Ostrich meat shall not contain microbiological count exceeding the requirements prescribed in Table 2.

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Table 2: Microbiological requirements

S/No.	**Microorganisms**	**Requirements(max)**	**Methods of test (see clause 2)**
i)	Total plate count, cfu/g	$1X10^{5}$	TZS 118
ii)	Total Coliforms count,	$1X10^{3}$	TZS 119

	MPN/g		
iii)	*Enterobacteriaceae cfu*/g	$1x10^2$	TZS 852-2
iv)	*Escherichia coli,* MPN/g	absent	TZS 731
v)	*Staphylococcus aureus*, cfu/g	absent	TZS 125
vi)	*Salmonella, /25g.*	absent	TZS 122
vii)	*Listeria monocytogenes, cfu/g*	absent	TZS 852-1 & 2

7.0 SAMPLING AND TESTS

7.1 Sampling

Sampling of ostrich meat shall be done according to TZS 129 (see clause 2).

7.2 Tests

Testing of ostrich meat shall be done according to test methods prescribed in Table 1 and 2.

8.0 PACKAGING, MARKING AND LABELLING

8.1 Packaging

In addition to the packaging and labelling requirements prescribed in TZS 538 (see clause 2), Ostrich meat shall also be;

8.1.1 packaged in suitable hygienic, clean, transparent, intact and with high durability not only to protect the product but also affect its characteristic under the storage, transportation and handling conditions.

8.1.2 Chilled products shall be packed in transparent packages.

8.1.3 All pieces in the same package shall be identical in type,

8.3 Marking and labelling

In addition to marking and labelling requirements prescribed in TZS 538, Ostrich meat containers shall also be legibly and indelibly marked with the following:

a) Name of the product and type (chilled or frozen ostrich meat)
b) Quality grade
c) Country of origin
d) Name, physical and postal address of the manufacturer or packer
e) Date of manufacture shall be clearly shown on the container
f) Expiry date shall be clearly shown on the container
g) Net weight content
h) Batch or code number
i) Storage instructions

8.4 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.