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DRAFT TANZANIA STANDARD

Pork carcasses and cuts – Specification

Draft standard for public comments only

TANZANIA BUREAU OF STANDARDS

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Arusha Meat Company Ltd
Kongwa Beef Company Ltd
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Pork carcasses and cuts – Specification

0 FOREWORD

Pork is mostly the muscle tissue of a pig (swine) that is eaten as food and is highly valued because of its richness in nutrients such as protein. Pork carcasses and cuts are products of commercial importance and have a high export potential.

Pork carcasses and cuts are locally produced in Tanzania, some are exported and some are imported. It is, therefore, found necessary to formulate this Tanzania standard in order to ensure the safety and quality of pork and pork cuts traded in the country.

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

Indian Standard IS: 1723 — 1960 *Specification for pork*, published by Indian Bureau of standards

Malaysian standard MS 547:1978: *Specification for fresh, chilled and frozen*, published by the Standards and Industrial Research Institute of Malaysia.

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 (see clause 2).

1.0 SCOPE

This Tanzania Standard prescribes the requirements, methods of sampling and test for Pork carcasses and cuts.

2.0 REFERENCES

The following referenced standards are indispensable for the application of this draft 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 131 /ISO 7954, Microbiology of food and animal feeding stuff – General guidance for enumeration of yeasts and moulds – Colony count technique at 25°C

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 feeding stuffs – Horizontal method for detection of Salmonella spp.

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 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 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 183, Fresh meat in retail – Code of hygiene.

TZS 110, Ante mortem and post mortem inspection of slaughter animals, fresh meat and processed meat products – Code of hygiene.

3.0 TERMS AND DEFINITIONS

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

3.1 abattoir/slaughter house

premises approved and registered by the controlling authority used for the slaughtering pigs intended for human consumption.

3.2 pork carcass

the trunk of a slaughtered pig (swine) de-haired and the head, hocks, guts and gut fill removed.

3.3 external fat

the subcutaneous fats also known as back fat and clear plate; the amount of external fat should be within the specifications for the individual grades.

3.4 firmness

the characteristic of the fat which can be very soft and oily to very firm; the lean portion can also be very soft to very firm.

3.5 fresh pork carcass

pork carcass from slaughtered pig (swine), which has not undergone any processing.

3.6 chilled pork carcass

pork carcass that has been cooled to a temperature range of 1—4°C at the deepest portion within 24 h.

3.7 frozen pork carcass

pork carcass that has been previously chilled and exposed to an air temperature of 1- 4 °C and then brought to an internal temperature of -18°C at the deepest portion of muscle.

3.8 wholesale cut

any pork cut handled in bulk.

3.9 per cent fat yield

the trimmed bellies, jowls, clear plates and back fat as a percentage of carcass weight.

3.10 per cent lean yield

flesh devoid of subcutaneous fat expressed as a percentage of carcass weight.

3.11 conformation

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

3.12 primal cuts

major pork cuts such as loins, leg, and shoulders. .

3.13 competent authority

the official institution charged by the government with the control of pork quality, safety and certification.

3.14 dressing

removal of bristles, viscera, genital, urinary bladder and feet up to the carpal and tarsal joints and udder of lactating sows and where necessary splitting of the carcass lengthwise.

3.15 edible offal

non-carcass part passed fit for human consumption.

3.16 marbling

the amount, size and distribution of intramuscular fat deposits in the *muscles* of a pork carcass.

3.17 pork

edible part of any pig (swine) slaughtered for human consumption.

3.18 cuts

pieces of meat derived from primal cuts.

3.19 split

dividing the carcass lengthwise into two halves.

4.0 REQUIREMENTS

4.1 General requirements

4.1.1 Pork shall be derived from a healthy pig (swine) and slaughtered in a hygienically managed abattoir/slaughter house. The slaughtering shall be supervised by a competent authority. Pig and pork carcasses thereof shall be subjected to ante-and post-mortem inspection as prescribed in TZS 110, and carcasses, sides and cuts thereof shall be certified as being wholesome, sound and free from contagious and infectious diseases and fit for human consumption.

4.1.2 Certified carcasses, sides and cuts shall bear suitable marks of such inspection giving the symbol or number or name of the establishment where they were slaughtered and the legend 'PASSED' denoting wholesomeness but not denoting the grade or quality. The marking fluid used shall be of food grade material.

4.1.3 Pork carcasses and cuts shall be;

- a) properly dressed, washed, butchered, trimmed, weighed, packaged and labelled as well as free from bruises or blemishes of any kind.
- b) intact, taking into account the presentation.
- c) free from visible blood clots, or bone dust.

- d) free from any visible foreign matter (e.g. dirt, wood, plastic, metal particles)
- e) free from offensive odours.
- f) free from obstructive blood stains.
- g) free from unspecified protruding or broken bones.
- h) free from contusion denoting material impact on the product.
- i) free from freezer-burns and hair.

4.2 Specific requirements

4.2.1 Types of Pork carcasses and/or cuts

- a) **Type A — fresh pork carcass.** They shall not be hung for more than 12h prior to delivery and shall not be frozen at any time prior to delivery.
- b) **Type B — fresh, chilled pork carcass.** They shall be maintained at a temperature between 1-4°C and shall not be hung for more than 7 days prior to delivery or processing. The chilled pork carcass shall not show any sign of deterioration (slimy, mouldy surface, discolouration, foul odour, etc.)
- c) **Type C fresh, frozen pork carcass.** They shall be maintained in a hard-frozen condition, or stored at -18°C or lower.

Note: Each type and class of pork carcass shall conform to the grade specification given in Table 1.

- d) **Fresh pork cuts.** These shall be prepared from carcasses, which conform to the requirements given in 4.2.2. The pork cuts may be as follows:
 - i. **Leg.** This is a well-trimmed, commercial cut. Fat shall not exceed 4 cm in thickness at the butt end and shall have a minimum weight of 5.0 kg.
 - ii. **Shoulder.** This shall be well-trimmed commercial cut, and shall have a minimum weight of 2.5 kg.
 - iii. **Loin.** This is a well-trimmed commercial cut from the middle part of the carcass excluding the belly and may include tender loin
 - iv. **Tenderloin.** This shall include the whole fillet, free from fat.
 - v. **Spare-ribs.** These are usually derived from the belly butts??**Butts.** These shall be commercial-cut, well-trimmed butts; shall weigh from 1.5 kg to 3.0 kg.
- e) **Fresh chilled pork cuts.** These shall be the same as fresh (see 6.3) except that they shall be prepared from carcasses which conform to the requirements given in 6.1 .2.
- f) **Fresh, frozen pork cuts.** These shall be the same as chilled except that the pork shall be frozen solid when delivered and shall show no evidence of refreezing or deterioration. Frozen pork cuts shall be in refrigeration for not more than three months from the time they were placed in the freezer to the time they are offered for delivery at final destination.

4.2.2 Storage and Temperature treatment

Pork carcasses and cuts shall be subjected to the following temperature treatment:

- a) Chilling – fresh pork carcasses sides or cuts shall be brought to a temperature of between 1 °C and 4 °C and should be consumed within a period of 7 days.

- b) Freezing – The pork carcass sides or cuts shall be pre-chilled before freezing. Freezing shall be at -18 °C at the highest, within three days. The frozen product shall be consumed within 12 months.

4.3 Classes and Grades requirements

4.3.1 Pork and pork cuts classes shall be as in Table 1.

Table 1: The Tanzania Pig carcass grades

Grade	Carcass weight (kgs)	Fat thickness (mm)
1	Up 20	1 – 17
2	Between 20 and 55	18 – 27
3	Between 55 and 100	28 – 32
4	Above 100	33 and above

5.0 CONTAMINANTS

5.1 Heavy metal contaminants

The products covered by this Standard shall comply with the requirements for heavy metals prescribed in Table 2.

Table 2: 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

Fresh, chilled and frozen pork meat shall comply with veterinary drug residue limits as prescribed in the CAC/MRL 2.

6.0 HYGIENE

6.1 Pork shall be produced and prepared under strict hygienic conditions according to TZS 109 and TZS 112 (See clause 2).

6.2 Pork shall not contain microbiological counts exceeding requirements prescribed in Table 3.

Table 3: Microbiological limits for Pork carcasses and meat cuts

S/N	Characteristics	Requirements	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.	Salmonella spp, /25 g	Absent	TZS 122
4.	<i>Esherichia coli</i> , MPN/g	Absent	TZS 731
5.	<i>Listeria monocytogenes</i>	Absent	TZS 852 (Part 1 & 2)
6.	<i>Clostridium botulium</i>	Absent	TZS 121
7.	<i>Staphylococcus aureus</i>	Absent	TZS 125 (Part 1 or 2)
8.	Yeast/moulds, cfu/ml, max.	10 ²	TZS 131

7.0 SAMPLING AND TESTS

7.1 Sampling

Sampling of pork carcasses and meat cuts shall be done according to TZS 34-1 and test samples shall be prepared in accordance with TZS 821 (see clause 2).

7.2 Tests

Testing of pork shall be done according to test methods prescribed in Tables 1 and 2.

8.0 PACKAGING, MARKING AND LABELING

8.1 Packing and transport

In addition to the packaging and labeling requirements prescribed in TZS 538 (see clause 2), pork carcasses and cuts shall also be packed and transported as follows:

8.1.1 Fresh and chilled meat and meat cuts shall be wrapped in suitable food grade paper, polyethylene or any other food grade material permitted by health authorities for use in wrapping foods. The products if wrapped may be packed in wax cartons or other approved containers.

8.1.2 Vacuum packed cuts shall be delivered intact.

8.1.3 All fresh, chilled and frozen pork and cuts shall be moved to refrigerated transport and the packages shall be handled with due care of preserving the quality and hygienic conditions of the products.

8.1.4 The packages shall not be exposed to direct sun or rain.

8.2 Marking and labeling

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

- a) Name and grade of the product;
- b) Name and address of the manufacturer;
- c) Batch or code number;
- d) Number of pieces;
- e) Net weight;
- f) Date of packing/ freezing;
- g) Expiry date;
- h) Country of origin;

- i) Storage and cooking instructions;
- j) 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.

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