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Edition 4

SOUTH AFRICAN NATIONAL STANDARD

Ready to eat processed meat products

WARNING
This document references other documents normatively.

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SANS 885:2022
Edition 4

Table of changes

Change No.	Date	Scope

Foreword

This South African standard was prepared by National Committee SABS/TC 1027, *Canned and processed meat products*, in accordance with procedures of the South African Bureau of Standards, in compliance with annex 3 of the WTO/TBT agreement.

This document was approved for publication in March 2022.

This document supersedes SANS 885:2011 (edition 3).

This document is referenced in the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972).

Reference is made in the scope to the "relevant national legislation". In South Africa this means the National Regulator for Compulsory Specifications Act, 2008 (Act No. 5 of 2008), the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972) and the Agricultural Products Act, 1990 (Act No. 119 of 1990).

Reference is made in NOTE 1 to 3.10 and 5.2.1 to the "relevant national legislation". In South Africa this means the Meat Safety Act, 2000 (Act No. 40 of 2000).

Reference is made in 4.1.1 to the "relevant national legislation". In South Africa this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the National Health Act, 2003 (Act No. 61 of 2003).

Reference is made in 4.2.2.1 to the "relevant national legislation". In South Africa this means the National Health Act, 2003 (Act No. 61 of 2003).

Reference is made in the NOTE to 4.2.2.3 to the "relevant national department". In South Africa this means the Department of Health.

Reference is made in 5.1.1, 5.1.2 and 7.3.2 to the "relevant national legislation". In South Africa this means the Agricultural Product Act, 1990 (Act No. 119 of 1990).

Reference is made in 5.2.2, 7.1.1.1, 7.2 and 7.3.1(a) to the "relevant national legislation". In South Africa this means the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972).

Reference is made in NOTE 5 to table 2, and 7.3.2 (b) to the "authority administering this standard". In South Africa this means the National Regulator for Compulsory Specifications, 2008 (Act No. 5 of 2008).

Compliance with this document cannot confer immunity from legal obligations.

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Ready to eat processed meat products

1 Scope

1.1 This standard specifies the requirements for the handling, preparation, processing, packaging, refrigeration, freezing, chilling, labelling, marking and storage of heat treated and ready to eat (RTE) processed meat products, and includes microbiological requirements for these products. It also includes RTE processed meat products, that have undergone partial heat treatment in combination with other processing methods, and includes microbiological requirements for these products and food safety related compositional requirements.

1.2 It does not cover the compositional requirements for processed meat products and raw processed meats, as specified in the relevant national legislation (see foreword) and the requirements for canned meats, raw boerewors, species sausages, mixed species sausages and biltong as specified in the relevant national legislation (see foreword).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated, references, the latest edition of the referenced document (including any amendments) applies. Information on currently valid national and international standards can be obtained from the South African Bureau of Standards.

SANS 4833-1/ISO 4833-1, *Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 °C by the pour plate technique.*

SANS 4833-2/ISO 4833-2, *Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 °C by the surface plating technique.*

SANS 6579/ISO 6579, *Microbiology of food and animal feeding stuffs – Horizontal method for the detection of* Salmonella spp*.*

SANS 6888-1/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.*

SANS 6888-2/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.*

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

SANS 10049, *Food safety management – Requirements for prerequisite programmes (PRPs)*.

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

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

SANS 16649-1/ISO 16649-1, *Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 1: Colony-count technique at 44 °C using membranes and 5-bromo-4-chloro-3-indolyl beta-D-glucuronide.*

SANS 16649-2/ISO 16649-2, *Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 2: Colony-count technique at 44 °C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide.*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
acceptable
adequate
appropriate
suitable
acceptable to the authority administering this standard, or to the parties concluding the purchase contract, or to parties implementing this standard, as relevant

3.2
coated product
product of which the surface has been covered with a pre-dust, batter or breading (or any combination thereof)

3.3
comminuted product
product comprising of meat pieces that have been reduced in size by either mincing, grinding, chopping, flaking, dicing or emulsifying, with or without other ingredients, which is then either filled into a casing, formed into a mould or preformed

3.4
contamination
occurrence of any undesirable matter in food or in the food environment from a contaminating source which can be physical, chemical, biological or allergenic

3.5
cured product
product with added curing agents (for example, nitrites or nitrates)

3.6
factory
processing facilities
food handling organization
premises in which meat (see 3.10) or product (see 3.16) is handled or treated to process further for commercial purposes

NOTE This definition excludes shops, hotels, boarding houses, restaurants or other eating establishments.

3.7
fermented product
product that has been processed through the fermentation process and in addition, might have undergone a process of air drying and be smoked or unsmoked

3.8
food safety criteria
FSC
criterion applicable for the acceptability of a product or a batch of products placed on the market

3.9
heat treated product
product that has been subjected to a heat treatment which results in a core temperature of at least 72 °C during processing, for the appropriate time, or equivalent process

NOTE Validations should be produced to show that food safety parameters have been achieved.

3.10
meat
sound skeletal musculature (excluding the musculature of the lips, snout, scalp and ears), of healthy food animals, including poultry, with or without connective tissue, blood vessels, lymphatic and nerve tissue, bone, fat, cartilage, pork rinds, and defeathered skin (poultry) that are naturally associated with such musculature *in situ* in the dressed carcass and head and should be qualified by species

NOTE 1 Food animals means animals slaughtered for human consumption, as in the relevant national legislation (see foreword).

NOTE 2 Poultry means chicken, duck, goose, guinea fowl, ostrich, partridge, pheasant, pigeon, quail, turkey and the chicks thereof.

3.11
name of the product
product name
word (s) providing an accurate description of the nature of the food product concerned, to avoid misleading or confusing the consumer with regard to the true nature, physical condition, type of packing medium, style, condition, content and type of treatment it has undergone and to enable such product to be distinguished from products with which it could be confused with and, if necessary, including a description of the product where the name of a food is not self-evident or self-explanatory

3.12
outer container
box, carton or case into which packages of meat products (with or without wrappers) are packed for storage or distribution

3.13
partial heat treated product
processed meat product that has undergone partial heat treatment (see 3.14)

3.14
partial heat treatment
processing of any processed meat product to a core temperature of below 72 °C

3.15
process hygiene criteria
PHC
criterion indicating the acceptable functioning of the production process and the contamination value above which corrective actions are required to maintain the required level of hygiene of the production process

NOTE Such a criterion is not applicable to products placed on the market.

3.16
product
meat intended for human consumption, which is in the course of handling, preparation, processing, packaging or storage indicated by the context of this standard, and is normally consumed without further processing

3.17
reformed product
processed meat product of which the individual visible meat pieces are no smaller than 13 mm, with or without the addition of finely comminuted meat and other permitted ingredients, of which the soluble proteins bind the meat pieces together and upon cutting, has the typical appearance of meat muscle

3.18
shelf-life
period of time established by the food handling organization, under intended conditions of distribution, storage, retail and use, that the food would remain safe and suitable

3.19
uncured product
product of which the processing does not include curing agents (for example, nitrites or nitrates)

3.20
validations
evidence that a control measure or a combination of measures, if properly implemented, is capable of controlling a hazard to a specific outcome

3.21
whole muscle products
processed meat product with the whole muscle still intact and which might have been subjected to a process resulting in protein extraction and might, in addition, have been placed into a mould to shape the product

NOTE Whole muscle processed meat products can contain bone, rind, show pieces, batter or crumbs, or not, and can be smoked or unsmoked, as well as cured or uncured.

4 Requirements for the factory or processing facility or food handling organization (FHO)

4.1 General

4.1.1 All the factory requirements specified the relevant national legislation (see foreword) shall be complied with.

4.1.2 Additional factory requirements shall be in accordance with non-operational requirements in SANS 10049.

4.1.3 Documentation requirements shall be in accordance with SANS 10049.

4.1.4 Exclusions and alternative measures implemented are permitted. These need to be justified by documented evidence to ensure that food safety is not compromised. Any exclusions or alternative measures adopted should not affect the ability of the factory to comply with the requirements of this standard.

4.2 Specific requirements

4.2.1 Preparation and processing

4.2.1.1 The deboning of red meat or poultry carcasses and the cutting up and preparation of meat shall, except where the nature of the process makes it impossible, be performed in work areas with a temperature that does not exceed 12 °C.

4.2.1.2 Doors used during the firing of smoke rooms shall not open directly into production areas, unless the smoke generator is so designed as to obviate pollution of these areas. Separate facilities shall be provided for the storage of smoke-generating materials.

4.2.2 Health requirements for employees

4.2.2.1 All the health requirements specified in the relevant national legislation (see foreword) shall be complied with.

4.2.2.2 Before being employed, employees shall pass an appropriate medical examination to ensure that they are free from communicable diseases, and shall thereafter pass an annual medical examination (see 4.2.2.1).

4.2.2.3 No employee who is a carrier of, or is suffering from, any communicable disease, especially a carrier of *Salmonella* or *Shigella*, or one who shows symptoms of, or is suffering from, gastro-enteritis or an enterobacterial infection, or a disorder or condition that causes discharge of fluid from any part of the skin or body shall be allowed to come into contact with a high-risk product such as heat-treated products, or high-risk product contact surfaces. Any such employee shall immediately report to the factory management.

NOTE The relevant national department (see foreword) has all the information regarding communicable diseases

4.2.2.4 The management shall ensure that no meat handler, who is known or suspected to be infected with a disease capable of being transmitted through food shall be permitted to work in any part of the production chain in a capacity in which there is a likelihood of the employee contaminating the product with pathogenic organisms. Such persons shall be withdrawn from their tasks as meat handlers and shall be transferred to a position which will avoid the contamination of the product.

4.2.2.5 In the case of any absence of more than one day owing to illness, the employee shall, before resuming duty, report the nature of the illness that necessitated the absence to the factory hygiene officer or supervisor, who shall, should he or she deem it necessary, take the appropriate steps to obtain a medical opinion on the employee's fitness for work.

4.2.2.6 An appropriate medical record of each employee shall be kept. Medical records and medical certificates submitted by an employee of a factory shall be made available for inspection by an acceptable authority.

4.2.2.7 The management shall ensure that no employee who is suffering from any cut, an injury, an infected wound or an infected skin irritation is allowed to come into contact with the product or product contact surfaces, unless the cut or injury has been so treated or dressed by suitable waterproof dressings in a colour different from the product being handled and is so controlled that the discharge of body fluid is prevented, and the wound and its dressing are so covered as to ensure that infection or contamination of the product is no longer possible.

5 Requirements for ingredients and the product

5.1 Condition of ingredients and the final product

5.1.1 The compositional requirements of the final product shall comply with the relevant national legislation (see foreword).

5.1.2 All ingredients and final products shall, with regards to permissible additives and contaminants, comply with the relevant national legislation (see foreword). All the ingredients used in the preparation of the final product shall be sound and of good quality and in every way fit for human consumption. In addition, the product shall not contain any substances that might present a hazard to human health.

5.2 Meat

5.2.1 Meat shall have been inspected and passed as fit for human consumption in accordance with the relevant national legislation (see foreword).

5.2.2 The use of frozen meat is allowed, provided that it has been frozen and stored under acceptable conditions and, where relevant, at the specified temperature, shows no significant evidence of rancidity or discoloration, and has been defrosted in a manner that does not adversely affect the food safety of the product, in accordance with the relevant national legislation (see foreword).

5.3 Microbiological requirements

When tested in accordance with the appropriate methods given in 6.1 to 6.6, the product shall comply with the requirements given in tables 1 and 2.

Table 1 — Microbiological requirements — Process hygiene criteria — 3-Class sampling plan

1	2	3	4	5	6	7	8	9
Category of product	**Microorganism**	**Limits**				**Analytical method**	**Stage at which criterion applies**	**Action to be taken in case of unsatisfactory results**
		n	**c**	**m**	**M**			
Ready to eat products	*Total viable count*[a]	5	2	10^4	10^5	SANS 4833-1 or SANS 4833-2	At end of manufacture	a) Improvements in production hygiene. b) Improvements in selection or origin (or both) of raw materials.
	Escherichia coli	5	2	10^1	10^2	SANS 16649-1 or SANS 16649-2	At end of manufacture	a) Improvements in production hygiene. b) Improvements in selection or origin (or both) of raw materials.
	Staphylococcus aureus	5	1	10^2	10^3	SANS 6888-1 or SANS 6888-2	At end of manufacture	a) Improvements in production hygiene. b) Improvements in selection or origin (or both) of raw materials.
	Clostridium perfringens	5	1	10^2	10^3	SANS 7937	At end of manufacture	a) Improvements in production hygiene. b) Improvements in selection or origin (or both) of raw materials.

Table 1 — Microbiological requirements — Process hygiene criteria — 3-Class sampling plan (*concluded*)

1	2	3	4	5	6	7	8	9
Category of product	**Microorganism**	**Limits**				**Analytical method**	**Stage at which criterion applies**	**Action to be taken in case of unsatisfactory results**
n = number of units comprising the sample c = maximum number of tested samples that may reflect test results between m and M m = limit below which results are considered satisfactory M = limit beyond which results are considered unsatisfactory NOTE 1 Ready-to-eat (RTE) products include the following: a) Whole muscle, cured, heat treated products; b) Whole muscle, uncured, heat treated or partial heat treated products; c) Comminuted, cured, heat treated products; d) Comminuted, uncured, heat treated products; e) Reformed, cured, heat treated products, and f) Unspecified RTE products, that have undergone partial heat treatment in combination with other processing methods for example, fermentation and including coated products. NOTE 2 "At end of manufacture" is the stage in the manufacturing process of a product, where the specific product is finally packaged and labelled and ready for storage, distribution and marketing. This excludes in process stages of the manufacture of products. [a] Not to be done on fermented or dried ready-to-eat (RTE) products.								

Table 2 — Microbiological requirements — Food safety criteria — 2-Class sampling plan

1	2	3	4	5	6	7
Category of product	**Microorganism**	**Limits**			**Analytical method**	**Stage at which criterion applies**
		n	**c**	**M**		
Ready-to-eat (RTE) products	*Salmonella*	5	0	Absent in 25 g	SANS 6579	At end of manufacture or port of entry and at point of sale or both, during their shelf-life
Ready-to-eat (RTE) products able to support growth	*Listeria monocytogenes*	5	0	Absent in 25 g	SANS 11290-1	At end of manufacture or port of entry and at point of sale or both, during their shelf-life
Ready-to-eat (RTE) products unable to support growth	*Listeria monocytogenes*	5	0	100/g	SANS 11290-2	At end of manufacture or port of entry and at point of sale or both, during their shelf-life

n = number of units comprising the sample
c = the maximum number of tested samples that may reflect test results between m and M
m = limit below which results are considered satisfactory

NOTE 1 Ready-to-eat (RTE) products include the following:

a) whole muscle, cured, heat treated products;

b) whole muscle, uncured, heat treated or partial heat treated products;

c) comminuted, cured, heat treated products;

d) comminuted, uncured, heat treated products;

e) reformed, cured, heat treated products, and

f) unspecified RTE products, that have undergone partial heat treatment in combination with other processing methods for example, fermentation and including coated products.

NOTE 2 Types of RTE products that are automatically considered unable to support the growth of *Listeria spp.* are those:

a) with a shelf life less than 5 d;

b) with a ph ≤ 4,4;

c) with a water activity ≤ 0,92;

d) with a combined ph ≤ 5,0 and water activity ≤ 0,94;

e) with a growth potential of ≤ 0,5 log10 cfu/g; or

f) which are frozen and remains frozen.

NOTE 3 Validations thereof (see NOTE 2) should be provided.

NOTE 4 "At end of manufacture" is the stage in the manufacturing process of a product, where the specific product is finally packaged and labelled and ready for storage, distribution and marketing. This excludes in process stages of the manufacture of products.

NOTE 5 "At point of sale" is where the product is offered for sale. "At point of sale" should be read with the definition of "sale" of the authority administering this standard (see foreword).

6 Methods for microbiological examination

6.1 Total viable count

6.1.1 Use SANS 4833-1 or SANS 4833-2 or any other accredited method validated against the reference method and giving results that are better, or at least equal, to the accuracy of the reference method.

6.1.2 Check for compliance with 5.3.

6.2 *Escherichia coli*

6.2.1 Use SANS 16649-1 or SANS 16649-2 or any other accredited method validated against the reference method and giving results that are better, or at least equal, to the accuracy of the reference method.

6.2.2 Check for compliance with 5.3.

6.3 *Clostridium perfringens*

6.3.1 Use SANS 7937 or any other accredited method validated against the reference method and giving results that are better, or at least equal, to the accuracy of the reference method.

6.3.2 Check for compliance with 5.3.

6.4 *Staphylococcus aureus*

6.4.1 Use SANS 6888-1 or SANS 6888-2 or any other accredited method validated against the reference method and giving results that are better, or at least equal, to the accuracy of the reference method.

6.4.2 Check for compliance with 5.3.

6.5 *Salmonella* organisms

6.5.1 Use SANS 6579 or any other accredited method validated against the reference method and giving results that are better, or at least equal, to the accuracy of the reference method.

6.5.2 Check for compliance with 5.3.

6.6 *Listeria monocytogenes*

6.6.1 Use SANS 11290-1 or SANS 11290-2 or any other accredited method validated against the reference method and giving results that are better, or at least equal, to the accuracy of the reference method.

6.6.2 Check for compliance with 5.3.

7 Packing, marking and labelling

7.1 Packaging

7.1.1 Packaging and wrappings materials

7.1.1.1 Packaging and wrapping materials for the product shall be clean, non-toxic and inert, and shall not contain substances deleterious to the product or harmful to health as specified in the relevant national legislation (see foreword).

7.1.1.2 No packaging or wrapping materials shall impart a flavour to the product, or in any way cause discolouration, or enhance colouration of the product, or be discoloured itself by coming into contact with the product.

7.1.1.3 Packaging shall

a) not be such as to impair the organoleptic characteristics of the product,

b) not cause migration of substances injurious to the product or harmful to human health, and

c) be strong enough to protect the product adequately.

7.1.2 Outer container

7.1.2.1 Fibreboards, plastic, and reusable crates or any other acceptable outer containers shall be used for packing wrapped products.

7.1.2.2 Outer containers for distribution purposes, for example, lugs, crates and fibreboard, shall be to prevent damage and contamination of the contents by dust or foreign matter, and shall be strong enough to protect the product adequately.

7.1.2.3 Wooden outer containers shall not be made of green wood and shall not contain any substance that is injurious to the product or harmful to health.

7.2 Marking on packages

The markings shall be in type of such size and presentation as prescribed in the relevant national legislation (see foreword). The information shall appear in legible and indelible marking on each package or on the overwrap covering the package, or on a label attached to the package, or in the case of a transparent package, on a label enclosed in the package.

7.3 Labelling

7.3.1 No person shall

a) manufacture, import, sell, donate or offer for sale any pre-packed food, unless the food container, or bulk stock from which it is sold or taken, labelled in accordance with the relevant national legislation (see foreword); and

b) neglect to fully and accurately inform, omit or withhold information pertaining to a food's character, origin, composition, quality, nutritive value, nature or other properties from the customer or manufacturer, which may result in misinformation to consumers at any point between farm and fork.

7.3.2 In addition to the requirements of the relevant national legislation (see foreword), the following information shall appear in legible and indelible marking on each package or container or on a label securely attached to each package or container:

a) If the product has been smoked or smoke flavoured, this information shall appear on the label in close proximity to the name of the product. The qualifying word(s) shall appear on the label in immediate conjunction to the product name in a font size of at least 1,2 mm vertical height.

b) A date coding or batch code and a way of ensuring traceability of the product to the place and date of manufacture. The use of a code is permissible provided that this is disclosed to the authority administering this standard (see foreword).

c) A date marking of durability.

NOTE A "use by" date is recommended in the case of highly perishable products on a microbiological basis.

Bibliography

SANS 9001/ISO 9001, *Quality management systems – Requirements*.

SANS 10330, *Food safety management – Requirements for a food safety system based on prerequisite programmes and Hazard Analysis and Critical Control Point (HACCP) principles.*

SANS 22000/ISO 22000, *Food safety management systems – Requirements for any organization in the food chain*.

SANS 22005/ISO 22005, *Traceability in the feed and food chain – General principles and basic requirements for system design and implementation*.

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