

Canned Applesauce — Specification

DKS 2851:2019

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Victoria Juice Co Ltd
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Government chemist
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Canned Applesauce — Specification

KENYA BUREAU OF STANDARDS (KEBS)

Head Office: P.O. Box 54974, Nairobi-00200, Tel.: (+254 020) 605490, 602350, Fax: (+254 020) 604031
E-Mail: info@kebs.org, Web: <http://www.kebs.org>

Coast Region

P.O. Box 99376, Mombasa-80100
Tel.: (+254 041) 229563, 230939/40
Fax: (+254 041) 229448

Lake Region

P.O. Box 2949, Kisumu-40100
Tel.: (+254 057) 23549, 22396
Fax: (+254 057) 21814

Rift Valley Region

P.O. Box 2138, Nakuru-20100
Tel.: (+254 051) 210553, 210555

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Foreword

This Kenya Standard was developed by the Technical Committee on Processed Fruits and Vegetables under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

This standard stipulates the essential compositional, quality, microbiological, contaminants and labelling requirements for canned applesauce.

In the preparation of this Kenya Standard, reference was made to the following publication:

Codex Standard for canned apple sauce (CXS 17-1981).

Acknowledgement is hereby made for the assistance derived from this source.

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Canned applesauce — Specification

1 Scope

This Kenya Standard specifies requirements and methods of test and sampling for canned applesauce, offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

AOAC 972.25, Lead in food. Atomic absorption spectrophotometer

KS 2752, Processed Fruits and Vegetables- Code of practice

KS CODEX STAN 192, General standard for food additives

KS CODEX STAN 193, Codex general standard for the contaminants and toxins in foods

KS EAS 36, Honey — Specification

KS EAS 38, Labeling of prepackaged foods — Specification

KS CODEX STAN 193, Codex general standard for the contaminants and toxins in foods

KS CAC/GL 51, Guidelines for packing media for canned fruits

KS CAC/GL 66, Guidelines for the use of flavourings

KS CAC/RCP 23, Code of hygienic practice for low and acidified low-acid canned foods

CAC/RCP 53, Code of hygienic practice for fresh fruits and vegetables

KS EAS 38, Labeling of prepackaged foods — Specification

KS EAS 803, Nutrition labelling — Requirements

KS EAS 804, Claims — General requirements

KS EAS 805:2014, Use of nutrition and health claims — Requirements

KS ISO 5522, Fruits, vegetables and derived products - Determination of total sulphur dioxide content

KS ISO 6633; Fruits, vegetables and derived products -- Determination of lead content -- Flameless atomic absorption spectrometric method

KS ISO 17240; Fruit and vegetable products -- Determination of tin content -- Method using flame atomic absorption spectrometric

ISO 4833-1, Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 degrees C by the pour plate technique

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ISO 6579-1, Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp.

KS 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

KS ISO 7251, Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive *Escherichia coli* - Most probable number technique

KS ISO 21527-2, Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0.95

3 Product definition

3.1 Canned applesauce is the comminuted or chopped product:

(a) prepared from washed, clean apples, conforming to the characteristics of the fruit of *Malus domestica* Borkhausen which may have been peeled and which after trimming are sound;

(b) prepared with or without other permitted ingredients as described in Section 3.1.2; and

(c) processed by heat, in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.

3.2. Styles

3.2.1 Sweetened - with sugars and/or other carbohydrate sweeteners such as honey; **not less than 16.5% total soluble solids (16.5° Brix).**

3.2.2 Unsweetened - without added sweeteners; **not less than 9% total soluble solids (9.0°Brix).**

3.2.3 Other Styles

Any other presentation of the product should be permitted provided that the product:

(a) is sufficiently distinctive from other forms of presentation laid down in the Standard;

(b) meets all other requirements of the Standard, as applicable; and

(c) is adequately described on the label to avoid confusing or misleading the consumer.

4. ESSENTIAL COMPOSITION AND QUALITY FACTORS

4.1 Composition

4.1.1 Basic Ingredients

Apples as defined in Section 3.1(a).

4.1.2 Other Permitted Ingredients

(a) salt (sodium chloride);

(b) spices;

(c) sugars as defined in the Codex Alimentarius and/or other carbohydrate sweeteners such as honey;

(d) water.

4.2. Quality Criteria

4.2.1 Colour, Flavour and Texture

Applesauce shall have a characteristic colour, flavour and odour and shall possess a texture characteristic of the product. The number, size, and prominence of defects (such as seeds or particles thereof, peel, carpel tissue, bruised apple particles, dark particles, and any other extraneous material of like nature) should not seriously affect the appearance or the eating quality of the product.

4.3 Classification of “Defectives”

A container that fails to meet one or more of the applicable quality requirements, or total solids requirements, as set out in Section 3.2, should be considered as a “defective”.

4.3 Lot Acceptance

A lot should be considered as meeting the applicable quality requirements for total solids referred to in Section 3.2, and the quality criteria in Section 4.2, when the number of “defectives” does not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5.

5 Food additives

5.1 Acidifying Agents

INS No.	Name of the Food Additive	Maximum Level
296	Malic acid	Limited by GMP
330	Citric acid	

5.2 Antioxidants

INS No.	Name of the Food Additive	Maximum Level
300	Ascorbic acid	Limited by GMP (singly or in combination)
315	Erythorbic Acid	

5.3 Flavourings

Natural and synthetic flavourings except those which reproduce the flavour of apples	Limited by GMP
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Colours, Carbohydrate sweeteners, preservatives and nutritive carbohydrates used shall be in accordance to KS CODEX STAN 192.

Flavourings used in canned applesauce should comply with KS CAC/GL 66.

6 Contaminants

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6.1 The product covered by this Standard shall comply with the maximum levels of the General Standard for Contaminants and Toxins in Food and Feed (KS CXS 193-1995).

6.2 The product covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

7.2 Heavy metal contaminants

The products covered by the provisions of this standard shall conform to those maximum limits for heavy metal contaminants established by the Codex Alimentarius Commission for these products and as given in Table 5.

Table 5 — Heavy metal maximum limits for canned applesauce

S/N	Contaminant	Maximum level, mg/kg	Test method
ii)	Lead (Pb)	0.1	KS ISO 6733
iii)	Tin (Sn)	250	KS ISO 17240

8 Hygiene

8.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of code of practice for processed fruits and vegetables (KS 2752) and other relevant codes of hygienic practice and codes of practice.

8.2 The products shall comply with the microbiological requirements given in Table 6 and those provided in KS 2455 when tested in accordance with the test methods prescribed therein.

Table 6 — Microbiological limits for canned apple sauce

S/N	Microorganism	Limit	Test method
i)	Total viable counts, cfu/g	10	KS ISO 4833
ii)	Yeast/moulds cfu/g	absent	KS ISO 21527-1
iii)	<i>Escherichia coli</i> MPN/g	absent	KS ISO 7251
iv)	<i>Salmonella</i> sp. per 25 g	absent	KS ISO 6579

8 WEIGHTS AND MEASURES

8.1 Fill of Container

8.1.1 Minimum Fill

The container should be well filled with applesauce and the product should occupy not less than 90% of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

8.1.2 Classification of “Defectives”

A container that fails to meet the requirement for minimum fill (90% container capacity) of Section 8.1.1 should be considered as a “defective”.

8.1.3 Lot Acceptance

A lot should be considered as meeting the requirement of Section 8.1.1 when the number of “defectives”, as defined in Section 8.1.2, does not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5.

9 Packaging

The products covered by the provisions of this standard shall be packaged in clean food grade packaging material to protect the product from contamination. The packaging materials and process shall not contaminate the product or otherwise affect its technological, nutritional or sensory quality.

10 Labelling

In addition to the requirements of KS EAS 38, the following specific provisions apply:

10.1 Name of the Product

10.1.1 The name of the product as declared on the label shall be “Applesauce”.

10.1.2 If the product has been sweetened in accordance with the provisions of Section 3.2.1, the name of the product shall be accompanied by the designation “Sweetened” in close proximity to the name of the food.

10.1.3 If the product has not been sweetened and conforms with the requirements of Section 3.2.2, the designation “Unsweetened” may be used in close proximity to the name of the food.

10.1.4 The name of the product shall be accompanied in close proximity by a declaration of any seasoning or flavouring which characterizes the product, e.g., “with X” as appropriate.

10.1.5 Other Styles - If the product is produced in accordance with the other styles provision (Section 3.2.3), the label should contain in close proximity to the name of the product such additional words or phrases that will avoid misleading or confusing the consumer.

10.2 List of Ingredients: A complete list of ingredients shall be declared on the label in descending order of proportion.

10.3 Nutrition declaration: Any added essential nutrients declaration should be labelled in accordance with KS EAS 803, KS EAS 804 and the KS EAS 805.

10.4 Net contents: The net contents shall be declared by volume in metric units (*Systeme Internationale*).

10.5 Name or business name and address: Of the manufacturer, packager, distributor, importer, exporter or vendor of the product, whichever may apply, shall be declared.

10.6 Instructions for use and storage shall be declared

10.7 Lot Identification: Each container shall be embossed or otherwise permanently marked in code or in clear identity the producing factory and the lot.

10.8 Place/country of origin

10.9 Date of expiry

10.9 Labelling of Non-Retail Containers

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Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

11 Methods of sampling and test

The products covered by the provisions of this standard shall be sampled and tested using appropriate standard methods declared in this standard. Other test may be performed as per the methods given in the latest AOAC/ CODEX/ ISO and other internationally recognized methods.

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