

Wafers — Specification

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— Division of Nutrition
Ministry of Industry, Trade & Cooperatives — Department of Industry
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Technical University of Kenya
Kenya Industrial Research Development Institute
Government Chemist's Department
DSM Nutritional Products
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Foreword

This Second Edition of KS 1270 was prepared by the Processed Cereals and Pulses Technical Committee under the guidance of the Food Industry Standards Committee and it is in accordance to the procedures of the Kenya Bureau of Standards.

This Kenya Standard was prepared to control the quality of wafers consumed in Kenya. It prescribes requirements and methods of test for wafers. This standard will ensure that local and imported wafers are of acceptable and wholesome quality for the consumers.

The standard has taken into account the information which members of the manufacturing firms submitted.

During the preparation of this Kenya Standard reference was made to the following document:

IS: 2397-1988 Specification for wafers.

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

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Wafers — Specification

1 Scope

This Kenya Standard prescribes requirements and methods of test for wafers.

2 Normative references

The following documents are indispensable in the application of this standard:

KS EAS 767, *Fortified wheat flour*

KS EAS 12, *Potable water*

KS 346, *Specification for baking powder or other approved leavening agents*

KS EAS 781, *Specification for biscuits*

KS EAS 43, *Specification for bread*

KS EAS 35, *Specification for fortified edible salt*

KS CODEX 192, *General Standard for food additives*

KS EAS 39, *Code of practice for hygiene in the food and drink manufacturing industry*

KS EAS 38, *Labelling of pre-packaged foods*

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 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

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

ISO 21527-2, *Microbiology of food and animal feedstuffs — 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*

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*

3 Definition

3.1 wafer

is a thin unleavened bread made from batter, with essential material specified in Clause 3, and with or without the addition of other ingredients specified in Clause 4

4 Requirements

4.1 General requirements

4.1.1 Wafers shall be free from insects, moulds, yeast, any harmful or foreign matters and contamination.

4.1.2 Each pack of wafers shall not have more than 5 % broken pieces.

4.1.3 Sandwich wafers shall have two or more plain wafers sandwiched with filling in between. The filling may be cream (e.g. orange, lemon or strawberry flavoured cream, among others.), jam, jelly, caramel, raisins or similar products and shall not be less than 50 % by mass of the filled wafers.

NOTE 'Cream' here means a homogeneous mixed preparation of hydrogenated fat, or bakery shortening, icing sugar, flavours and permitted food colours, with or without other ingredients in small proportions (see Clause 5).

4.1.4 Coated wafers, these include both half-coated and full-coated wafers. The coating may be of chocolate, caramel or similar coating and shall not be less than 50 % by mass of the coated wafer.

4.2 Essential ingredients

The following material shall be used in the preparation of wafer batter:

4.2.1 Baker's wheat flour, complying with the requirements of the latest edition of KS EAS 767.

4.2.2 Water, complying with the requirements of the latest edition of KS EAS 12.

4.2.3 Aerating agent, complying with the requirements of the latest edition of KS 346, Specification for baking powder or other approved leavening agents, e.g. sodium bicarbonate or ammonium bicarbonate.

5 Compositional requirements

5.1 The wafers shall conform to the requirements given in Table 1. In the case of coated/sandwiched wafers, the coating or the filling shall be removed before carrying out the tests.

Table 1 — Compositional requirements

SI No.	Characteristic	Requirements		Test method
		Plain wafers	Sandwiched or coated Wafers	
i)	Moisture, % by mass (max.)	4.5	6.0	KS EAS 781
ii)	Acid insoluble ash, on dry basis, % by mass (max.)	1.0	1.0	
iii)	Acidity of extracted fat (as oleic acid), % by mass (max.)	1.0	1.0	
iv)	Crude fibre, % (max.), on dry basis	5	5	KS EAS 43
v)	Fat, % (min.)	0.7	2.0	KS EAS 43

6 Optional ingredients

In addition to the essential ingredients specified in Clause 3, wafers may contain any other optional ingredient complying to relevant Kenya Standard such as

6.1 Edible salt

6.2 permitted Flavouring agents

6.3 Butter

6.4 Fat spread

6.5 Milk powder

6.6 Corn starch

7 Food additives

Only permitted food additives in accordance with KS CODEX STAN 192 may be used.

7 Hygiene

7.1 The wafers shall be prepared and packaged in premises built and maintained under hygienic condition in accordance with Public Health Act Cap 242, the Food Drugs and Chemicals Substances Act, Cap. 254 of the Laws of Kenya and, KS EAS 39.

7.2 Wafers shall be free from pathogenic organisms and shall comply with the microbiological requirements indicated in Table 2.

7.3 The total aflatoxins limits in the wafers shall not exceed 10 ppb and 5 ppb for aflatoxin B1.

Table 2 — Microbiological limits for wafers

SI No.	Type of micro-organism	Maximum number of counts	Test method
i)	<i>Salmonella</i> in 30 g	Shall be absent	ISO 6579-1
ii)	<i>Escherichia Coli</i> in 1 g	Shall be absent	ISO 16649-2
iii)	<i>Staphylococcus aureus</i> in 1 g	Shall be absent	ISO 6888-1
iv)	Yeast and moulds in 1 g	10 ²	ISO 21527-2

8 Heavy metal contaminants

Wafers shall also comply with the heavy metal contaminants limits indicated in Table 3.

Table 3 — Limits for heavy metal contaminants

SI No	Contaminant	Max. limits	Test method
i)	Lead (Pb)	0.5 mg/kg	ISO 6633
ii)	Arsenic (Ar)	0.1 mg/ kg	AOAC 6633

9 Packaging and labelling

9.1 Packaging

9.1.1 The wafers shall be packaged in food grade materials that will ensure the safety and integrity of the product throughout the shelf life.

9.1.2 The fill of the container shall be in accordance with the Weights and Measures Act Cap. 513 of the Laws of Kenya.

9.1.3 The disposal of used packages and expired wafers shall comply with Environment Monitoring and Coordination Act No. 8 of 1999 on the disposal of solid and liquid waste.

9.2 Labelling

In addition to the Labelling requirements of KS EAS 38, the label shall include:

- i) name of the product shall be 'wafers'.
- ii) date of manufacture,
- iii) expiry date,
- iv) country of origin,
- v) storage instructions,

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