

Instant coffee — Specification

PUBLIC REVIEW DRAFT

DKS 175: 2016

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Coffee Board of Kenya
Kenya Industrial Research and Development Institute (KIRDI)
Coffee Research Foundation
Kenya Coffee Traders Association
Consumer Information Network
Government Chemist's Department
Institute of Packaging of Kenya
Kenya Institute of Food Science and Technology
C. Dorman Ltd.
Kofinaf Company Ltd.
Kenya Plant Health Inspectorate Service (KEPHIS)
NKG Coffee Mills
Sasini Ltd.
Nestle Kenya Ltd.
Kenya Coffee Producers Association
GrainPro Kenya Ltd. Inc.
4C Association
Kenya Bureau of Standards — Secretariat

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Foreword

This Kenya Standard has been developed by the Coffee Technical Committee under the guidance of the Standards Project Committee and it is in accordance with the procedures of Kenya Bureau of Standards

The standard will streamline and create better understanding of most commonly used coffee terms in coffee trade.

During the revision of this standard reference was made to the following document:

ISO Standard 3509 — Vocabulary of coffee and its products.

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

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1 Scope

This Kenya Standard specifies the requirements and the methods of test and sampling for instant/soluble coffee.

2 Normative references

The following documents are necessary in the application of this standard.

- Codex Standard 192: *Codex standard for food additives*
Codex Standard 193: *General Standard for the Contaminants and Toxins*
KS ISO 4052: *Coffee — Determination of caffeine content (Reference method)*
KS ISO 15141 Part 1 and 2, *Foodstuffs — Determination of ochratoxin A in cereals and cereal products*
KS EAS 38; *Labelling of pre-packaged foods*
KS 173: *Glossary of terms used in coffee trade*
KS 174: *Methods of sampling and analysis of green coffee*
KS 660: *Guide to the safe use of food additives*
KS EAS 39: *Code of practice for hygiene in the food and drink manufacturing industry*
KS 1039: *Methods for liquoring coffee for analysis*
AOAC 942.17, *Arsenic in foods Molybdenum blue method*
AOAC 999.10, *Lead, Cadmium, Copper, Iron, and Zinc in foods, Atomic Absorption Spectrophotometry after dry ashing*
KS EAS 39, *Code of practice for food hygiene in the food and drink manufacturing industry*
KS ISO 18593; *Microbiology of food and animal feeding stuffs – Horizontal methods for sampling techniques from surfaces using contact plates and swabs*
KS ISO 4831:2006; *Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of coliforms - Most probable number technique)*
KS ISO 4832; 2006; *Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coliforms - Colony-count technique.*
KS ISO 4833-1; *Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of microorganisms - Colony-count technique at 30 degrees C*
KS ISO 21527; *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*
KS ISO 6579; *Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp*
KS EAS 38, *Labelling of pre-packaged foods*
KS CODEX STAN 193, *Codex general standard for contaminants and toxins in foods*
KS ISO 8968-1, *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*

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KS EAS 12, Drinking (Potable) water - Specification

US 500, General requirements for nutrition labelling

US 508, General requirements for nutrition and health claims

US 566, Use of nutrition terms - Requirements

KS EAS 105, Roasted coffee beans and roasted ground coffee – Specification

KS EAS 106, Coffee and its products – Glossary and terms

KS ISO 20481:2008, Coffee and its products – Determination of caffeine content using High Performance Liquid Chromatography (HPLC) – Reference method

KS ISO 20938:2008, Instant coffee – Determination of moisture content – Karl Fisher method (Reference method)

3 Definitions

For the purposes of this standard, the following definitions and those given in KS 173 shall apply.

3.1 Coffee

General term for the fruits and seeds of plants of the genus *Coffea*, generally the cultivated species, as well as products from these fruits and seeds in different stages of processing and use which are intended for consumption

NOTE This term applies to products such as cherry, cherry buni, parchment coffee, green coffee, monsooned coffee, polished coffee, decaffeinated coffee, roasted coffee as beans or ground coffee, coffee extract, instant coffee and coffee brew.

3.2 agglomerated instant coffee

Instant coffee which has been obtained by a process in which the dried particles of instant coffee are fused together to form large particles

3.3 decaffeinated coffee

Coffee from which caffeine has been extracted

4 Product description

4.1

Instant coffee (herein referred to as coffee)

is a soluble product derived from aqueous extracts of roasted and ground coffee beans. The product shall be in the form of a free flowing powder or in the agglomerated form (granules) having the colour, taste and flavour characteristic of coffee when exposed to cup test as in KS 1039

5 Requirements

5.1 General requirements

The coffee shall meet the following requirements:

- 5.1.1 Shall be practicably free from extraneous and foreign matter.
- 5.1.2 Shall be free from foreign odour.
- 5.1.3 Shall be free from fungal infestation.
- 5.1.4 Shall be free from adulterants.
- 5.1.5 Shall be free from contaminants.
- 5.1.6 shall not contain chicory.
- 5.1.7 Shall have the characteristic coffee flavour
- 5.1.8 Coffee in the agglomerated form shall as far as possible have granules of uniform size.

5.2 Compositional requirements/limits

The coffee shall comply with the compositional requirements/limits stipulated in Table 1.

Table 1— Compositional requirements/Limits

SI no	Parameter	Requirement	Test method
i)	Moisture, % by mass, max.	4 ^{a)}	KS ISO 20938
ii)	Total ash (on dry matter basis), % by mass, max	15	KS ISO 3726
iii)	Acid insoluble ash, % mass, max.	1.0	KS 1039
iv)	Caffeine content (on dry basis), % by mass, max.	2.8- 5 ^{b)}	KS ISO 4052
v)	Solubility in boiling water	Dissolves readily in 30 s with moderate stirring	KS 1039
vi)	Solubility in cold water at 16 °C ± 2 °C	Soluble with moderate stirring in 3 min.	KS 1039
a)	For granulated coffee the maximum moisture content will be 5 % by mass.		
b)	For decaffeinated coffee the limit for this parameter shall not apply		

5. Hygiene

- 5.1 It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of KS EAS 39, and other relevant Kenya standards and

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regulations. The products should comply with any microbiological criteria established in accordance with CAC/GL 21

5.2 The products shall comply with any microbiological criteria established in accordance with Table 2 below

Table 2 — Microbiological limits

SI no.	Characteristic	Limit	Test method
i)	Total Plate Count/g	1000	KS ISO 4833-1
ii)	Coliforms/10 g	Absent	KS ISO 4831/ 4832
iii)	<i>Salmonella</i> / 30 g	Absent	KS ISO 6579
iii)	<i>S. aureus</i> / 30 g	Absent	KS ISO 8968-1
iv)	Yeast	<100	KS ISO 21527
v)	moulds/g	100	KS ISO 21527

8 Contaminants

The product covered by this standard shall comply with the maximum levels of CODEX STAN 193 and the maximum residue limits for pesticides established by the Codex Alimentarius Commission (CAC).

8.1 Heavy metals

Heavy metal contaminants, if present, shall comply with the limits specified in Table 3.

Table 3 — Heavy metal contaminant limits

SI no	Contaminants	Max limits (mg/kg)	Test method
i)	Lead	1.0	AOAC 942.17

ii)	Tin	200	AOAC 942.17
iii)	Arsenic	0.5	AOAC 999.10
iv)	Cadmium	1.0	AOAC 942.17

8.2 Mycotoxin residues

Total aflatoxin levels in Coffee shall not exceed the limits in table 4 below, when tested according to KS ISO 15141: Parts 1 and 2

Table 4 — Mycotoxin residue limits

SI no.	Parameter	Max. limit(ppb)	Test method
i)	Ochratoxin A	10	KS ISO 15141: Parts 1 and 2

5.6 Food additives

Coffee may contain permitted food additives limited to processing aids and preservatives complying with Codex Stan 192 and Act, Cap. 254 of the Laws of Kenya.

7 Packaging

7.1 The Coffee shall be packed in suitable, clean and dry containers, made of material, which does not change the coffee quality (preserves coffee quality)

7.2 The fill of the package shall comply with the Weights and Measures Act, Cap. 513 of the Laws of Kenya.

7.3 The disposal of used package and condemned coffee shall be carried out in compliance with the Environmental Management and Coordination Act (EMCA), Waste Regulations, 2006 of the Laws of Kenya on disposal of solid and liquid wastes.

8 Labelling

8.1 In addition to the provisions of the General Standard for the Labelling of Prepackaged Foods; KS EAS 38, the following specific provisions apply

i) name of the product as “Instant/Soluble coffee”

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- ii) brand/trade name;
- iii) Name, location, contact details and physical address of the manufacturer/packer/importer/vendor;
- iv) Country of origin as:
 - a) packed by;
 - b) imported from;
 - c) manufactured by;
 - d) produced in.
- vi) Date of manufacture;
- vii) Expiry date;
- viii) Storage instructions as "Store in a Cool Dry Place, Away from Contaminants and direct sunlight";
- ix) Net weight in metric units;
- x) lot/batch/code number;
- xii) Instruction for disposal of used package;
- xiii) Declaration, if genetically modified.

8 Sampling

The sampling of Instant Coffee shall be in accordance with KS 174 and/or International Coffee Organization (ICO) requirements.