KENYA STANDARD

KS 2745: 2017
ICS67.140.10

Purple tea — Specification

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee.

Egerton University
Agriculture and Food Authority- Tea Directorate
Ministry of Health — Food Safety Unit
Government Chemist's Department
Melvin Mash International Ltd
Unilever Tea Kenya Ltd
Kenya Plant Health inspectorate Service
James Finlay (Kenya) Limited
Kenya Agricultural and Livestock organization -Tea Research Institute
Ministry of industry, Trade and cooperatives
Ministry of Agriculture, Livestock and Fisheries
Kenya Tea Development Agency Ltd
Institute of Packaging of Kenya
Consumer Information Network
Gold crown beverages-Kenya LTD
Karatina University
Kenya Bureau of Standards- Secretariat

REVISION OF KENYA STANDARDS

Inordertokeepabreastof progressinindustry,KenyaStandardsshallberegularlyreviewed. Suggestionsfor improvementstopublishedstandards, addressedtotheManagingDirector,KenyaBureau ofStandards,are welcome.

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Foreword

ThisKenyaStandardhasbeenpreparedbytheTeaTechnicalCommitteeundertheguidanceoftheStandardsProjects Committee and it is in accordancewiththe procedures ofthe Kenya Bureau of Standards.

Tea is grown and manufactured in numerous countries of the world and is blended or consumed in many more. Purple tea may be produced from tea from more than one garden or region or may be a blend of teas from twoor more origins.
The objective of this Standard is to specify the plant source from which the purple tea is to be manufactured and to set requirements for certain physical, chemical and microbiological characteristics which, if met, are an indication that the tea had been subjected to good production practice.
The desired characteristics of a purple tea and the resulting liquor depend upon many factors including; thetype of water to be used for brewing, the preparation method and on individual tastes.
It is a matter for the parties concerned to apply the requirements of this Standard to aconsignment or lot of purple tea. The quality of purple tea is usually assessed organoleptically by skilled tea tasters, who base their judgements on their previous experience of purple tea, their knowledge of theconditions in the producing areas, and the preferences of the consuming country. Account may be taken ofcharacteristics such as the appearance of the tea before preparation of liquor (such as shape, colour,cleanliness, and evenness), the appearance of the infused leaf and the appearance, odour, and taste of theliquor. In practice, teas are submitted for physical, chemical and microbiological analysisto ascertain conformity.

This Kenya Standard also specifies the packing and marking requirements for purple tea in containers.

During the preparation of this standard, reference was made to thefollowing documents:

ISO 11257: Green tea — Definitions andbasic requirements.

Acknowledgement is herebymade for theassistance derived from these sources.

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Purpletea - specification

1 Scope

This Kenya Standard specifies the parts of Camelliasinensis (Linneaus) O. Kuntzesuitable for making purple tea for consumption as a beverage and the chemical requirements used to indicate that tea from that source has been produced in accordance with good production practice. This standard does not apply to flavoured teas and decaffeinated purple teas.

2 Normativereferences

The following referenced documents are indispensable for the application of this Kenya Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1572, Tea — Preparation of ground sample of known dry matter content
ISO 1573, Tea — Determination of loss in mass at 103 °C
ISO 1575, Tea — Determination of total ash
ISO 1576, Tea — Determination of water-soluble ash and water-insoluble ash
ISO 1577, Tea — Determination of acid-insoluble ash
ISO 1578, Tea — Determination of alkalinity of water-soluble ash
ISO 1839, Tea — Sampling
ISO 5498, Agricultural food products — Determination of crude fibre content — General method
ISO 9768, Tea — Determination of water extract
ISO 14502-1, Determination of substances characteristic of green and black tea — Part 1: Content of total polyphenols in tea — Colorimetric method using Folin-Ciocalteu reagent
ISO 14502-2, Determination of substances characteristic of green and black tea — Part 2: Content of catechins in green tea — Method using high-performance liquid chromatography
ISO 15598, Tea — Determination of crude fibre content
AOAC 2005.02; Method for the determination of anthocyanins
KS ISO 11286;Teaclassification by particlesize

3 Terms and definitions

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

3.1Purple tea

Tea derived from the tender leaves, buds, and shoots of varieties of the species *Camellia sinensis*(L.) O. Kuntze, known to be suitable for making tea for consumption as a beverage. Purple tea is derived from tea varieties whose leaves have purple colouration due to anthocyanin and produced by acceptable processes including aeration, semi aeration and non-aeration.

3.2 Extraneous matter

Any material of tea origin such as twigs, barkand stems

3.3 Foreign matter

Any material which is not tea leaf, flavour used or fragments of tea plant e.g. sand, stones, metallic chips and any organic matter other than extraneous matter

3.4 Contaminants

Any physical or chemical or biological agent, foreign matter, or any other substances not intentionally added to food which may compromise food safety or suitability

3.5 Adulterant

Any material intentionally added that changes the original composition and compromises the quality and safetyof black tea

3.6 Filth

Any material such as, but not limited to dead insects, rodents and their derivatives

3.7 Taint

Taste and odour foreign to tea

4 Requirements

4.1 Generalrequirements

Purple teashall comply withthe following:

4.1.1 The tea shall be clean and reasonably free from extraneous matter when inspected visually.

4.1.2 The tea shall be free from taint, and shall have the characteristics, appearance, colour and taste of purple tea, when examined by sensory analysis.

4.1.3 The tea shall be free from any additives such as colouring agents and flavourings.

4.2 Chemical requirements

4.2.1 The tea shall comply with the requirements specified in Table 1 using the methods quoted, in which all the figures given are expressed on the basis of material oven dried to constant mass at (103 ± 2) °C by the method specified in ISO 1573.

4.2.2 If no limit is specified for the moisture content of the tea, the actual loss in massat 103 °C of the sample may be determined and the result recorded in the test report. In suchcases, the determination shall be carried out by the method described in ISO 1573.

4.2.3 Liquor for sensory assessment can be prepared by the method specified in ISO 3103. The assessment shall be described in the test report using terms defined in ISO 6078

4.2.3 Compositionalqualityrequirements/limits

The Purple tea shallcomplywith the requirements/limits specified in Table 1.

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Table 1 — Chemical requirement for purpletea.

SL No.	Characteristic	Requirement		Methods of te
		Aerated	Non aerated	
(i)	Moisture content %, m/m	7.0max	7.0max	KS ISO 157
(i)	Water extract, % mass fraction	32 min.	32 min.	ISO 9768
(ii)	Total ash, % mass fraction.	8 max 4 min.	8 max 4 min.	ISO 1575
(iii)	Water-soluble ash, % mass fraction of total ash	45 min	45 min	ISO 1576
(vi)	Alkalinity of water-soluble ash (as KOH), % mass fraction	1,0 min[a] 3,0 max[a]	1,0 min[a] 3,0 max[a]	ISO 1578
(v)	Acid-insoluble ash, % mass fraction	1.0 max.	1.0 max.	. ISO 1577
(iv)	Crude fibre, % mass fraction	16,5 max	16,5 max	ISO 5498 or ISO 1
(vii)	Total catechins, % mass fraction	3min.	7 min.	ISO 14502-2
(viii)	Total polyphenols, % mass fraction	19 min	22min	ISO 14502-1
(ix)	Ratio total catechins to total polyphenols, mass fraction	0.2 min.	0.3 min.	
(x)	Total monomeric anthocyaninns, mg/L	14 min	75 min	AOAC 2005.0

NOTE

[a] When the alkalinity of water-soluble ash is expressed in terms of millimoles of KOH per 100 g of ground sample, the limits shall be:17,8 min; max.

[b] The specific method for the determination of crude fibre in tea is specified in ISO 15598; however, for the purpose of routineestimation, the g method specified in ISO 5498 is adequate. In cases of dispute, the method of determination should always bethat specified in ISO 15598. The requirement remains unchanged, regardless of the method used.

5. CONTAMINANTS

5.1 Purple tea shall comply with maximum levels of the Codex General standard for contaminants and toxins in Food and feed (CODEX STAN 193-1995)

5.2Pesticides

Purple tea shall comply with maximum residue limits for pesticides established by the Codex Alimentarius Commission in the Codex General standard for contaminants and toxins in Food and feed (CODEX STAN 193-1995)

5. Heavy Metals

Heavy metal contaminants, if present, shall comply with the limits specified in Table 2.

Table2—HeavymetalcontaminantlimitsinPurpletea

SL No.	Parameter	Limit	Test method
i)	Arsenic (As),ppm, max.	0.1	AOAC 999.10
iv)	Cadmium (Cd), ppm, max.	0.1	AOAC 942.17
	Lead (Pb), ppm Max	0.1	AOAC 942.17

Figures in table above set as minimum default subject to endorsement by CODEX Alimentarius Commission

5. Iron Fillings

Iron fillings, if present, shall comply with the limits specified in Table 3.

Table3—Iron fillingslimitsin Purpletea

SL No.	Parameter	Limit	Test method
1.	Iron filings,ppmmax.	50	KS 2160

6. HYGIENE

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

6. 2 Herbaland fruit infusions productsshallcomplywithmicrobiologicalrequirementsinTable4

Table3—Microbiological limits for Purpletea

SL No	Type of micro-organism	Limits	Test method
(i)	Yeasts cfu/ g, max	10^3	KS ISO 21527-2
	Mouldscfu/ g, max	10^4	KS ISO 21527-1
(ii)	P~~athogenic~~*Staphylococcus aureus*cfu/ g, max	Absent	KS ISO 6888-1
(iii)	*E. Coli*, cfu/ g, max	Absent	KS ISO 7251
(iv)	*Salmonella* spp, cfu/ 25 g, max	Absent	KS ISO 6579

7 Environment

Purpletea shallbeproduced,processedandhandledunderconditionscomplyingwiththestipulationsofthe EnvironmentalManagementand Co-ordinationAct(EMCA), No.8 of1999ofthe LawsofKenya,on environmental managementand complying with cleaner productiontechnologicalpractices.

8 Packaging

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

8.1 Purpleteashallbepackagedinfoodgradematerialthatensuresproductsafetyandintegrity,and complying with KS 1927.

8.2 The fill of the package shallcomply with the Weights and Measures Act, Cap. 513 of the Lawsof Kenya.

8.3 Thedisposalofusedpackageandcondemnedpurpleteashallbecarriedoutincompliancewiththe EnvironmentalManagementand CoordinationAct(EMCA),WasteRegulations,2006 oftheLawsofKenyaon disposal of solid and liquidwastes.

9 Labelling

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

i) product name as “purpleTea’’;

ii) name, address and physical location of the manufacturer/ packer/ importer/ exporter;

iii) date of manufacture;

iv) expiry date;

v) method of manufacturing;

vi) the declaration “Food for Human Consumption”;

vii) storage instructions as ‘’Store in a Cool Dry Place, Away from Contaminants and direct sunlight’’;

viii) lot/batch/code number;

ix) net weight in g or kg;

x) instructions on disposal of used package; and

xi) country of origin

9.2 A declaration of any inaccurate information in marking/labelling is prohibited and shall be punishable by law under the Standards Act, Cap. 496, of the Laws of Kenya.

10 Sampling

Sampling of purple tea for analysis shall be carried out in compliance with KS ISO1839.

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KEBSCERTIFICATIONMARKS

1. ProductCertificationMarks

KEBSStandardizationMark(S-Mark)isissued foruseonproductsthatcomplywiththeminimum quality requirements prescribed in Kenya standards.Itusesstandardsasabenchmarkfor quality compliance and aims at givingmanufacturersimprovedmarketaccessand also givingconsumersanassuranceofqualityforthe productsbearingthemark.

StandardizationMark

SYMBOLFORPRODUCTQUALITY

DiamondMarkofQuality

SYMBOLFORPRODUCTQUALITYEXCELLENCE

ImportStandardizationMark

SYMBOLFORPRODUCTQUALITY

2. SystemsCertificationMarks

ISO9001REGISTEREDFIRM

QUALITYMANAGEMENTSYSTEM

OCCUPATIONALHEALTHANDSAFETY

OHSAS18001

ISO14001REGISTEREDFIRM

ENVIRONMENTALMANAGEMENTSYSTEM

ISO22000REGISTEREDFIRM

FOOD&SAFETYMANAGEMENTSYSTEM

KEBSismandatedtoprovideStandardization, MetrologyandConformityAssessmentServices through:

- Promotionofstandardizationincommerceandindustry
- Provisionoftestingandcalibrationfacilities
- Controloftheuseofstandardizationmarks
- Undertakingeducationalworkinstandardization
- Facilitationoftheimplementationandpracticalapplicationofstandards
- MaintenanceanddisseminationoftheInternationalSystemof Units(SI)ofmeasurements

KEBSoffersthefollowingservices:

- Standardsdevelopmentandharmonization
- Testingservices
- Measurementservices(Calibration)
- Enforcementofstandards
- Productinspectionservices
- EducationandTraininginStandardization,MetrologyandConformityAssessment
- ProductandManagementSystemsCertificationServices

INFORMATIONONSTANDARDS

Standardsaredocumentsthatprovideacommonreferencepointfortheassessmentofthequalityofgoodsandservices.Standardsfacilitatetranparencyintheexchangeofproductsandenhancemarketaccessof Kenyanproductsintolocal, regionalandinternationalmarkets.

Informationonstandardsandrelateddocumentsisavailableat theKEBSstandardsinformationcentre.

KEBShousestheWTO-TBTNationalEnquiryPoint(NEP)whichdisseminates notificationlikelytoaffectinternationaltradetotheindustry.

KEBSalsoprovidestechnicaladviceoninstallationandimprovementofquality goodsandservicestotheindustrysoastofacilitateefficientimplementationof standards.Someoftheadvantagesofstandardsinclude:enhancementofquality assurance,safetyandenvironmentalprotectionmeasures,minimizationofwastage,reductionofcostsandunecessaryvarietiesandpromotionofinterchangeabilityandincreasedproductivityinindustry.

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