

KENYA STANDARD

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ICS 67.140.10

Fourth Edition

Tea industry — Code of practice



**Kenya Bureau of
Standards**

Standards for Quality life



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TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Tea Board of Kenya
Tea Research Institute
Kenya Tea Development Agency
Karatina University
Egerton University
Ministry of Agriculture, Livestock and Fisheries — State Department of Agriculture
Ministry of Foreign Affairs and International Trade
Ministry of Industry and Enterprise Development
Ministry of Health — Food Safety Unit
Government Chemist's Department
James Finlays (K) Ltd.
Unilever Tea (K) Ltd.
Melvin Marsh International Ltd.
Kenya Tea Growers Association
Kenya Tea Packers Ltd.
Consumer Information Network
East African Tea Trade Association
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

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Foreword

This Kenya Standard was prepared by the Tea Technical Committee under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

This code of practice is aimed at providing guidance to all stakeholders in the value chain to conduct all activities in a manner that ensures food safety and quality; personnel safety and welfare; environmental protection and sustainability. It also intends to enhance compliance with statutory and regulatory requirements in Kenya.

This fourth edition provides updates on existing national legislations. It also covers requirements for production of organic tea and maximum residue limits for pesticides.

This fourth edition cancels and replaces the third edition KS 2128:2015 that has been technically revised.

During the development of this standard, reference was made to the following documents:

CAC/RCP 1: 1969, General principles of food hygiene

CAC/GL: 1999, Guidelines for the production, processing, labelling and marketing of organically produced foods,

CODEX Online Commodity Details for Tea

Acknowledgement is hereby made for the assistance received from these sources.

Tea industry — Code of practice

1 Scope

This Kenya Standard provides guidelines for achieving requirements for food safety and quality; worker health, safety and welfare; environmental protection and sustainability by stakeholders along the tea value chain in Kenya.

2 Normative references

The following referenced 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.

ISO 9884-2, *Tea sacks — Specification — Part 2: Performance specification for sacks for palletized and containerized transport*

KS EAS 12, *Potable water — Specification*

KS EAS 38, *Labelling of pre-packaged foods — General requirements*

KS EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

KS EAS 804, *Claims — General requirements*

KS ISO 1839, *Tea sampling*

KS ISO 8589, *Sensory analysis — General guidance for the design of test rooms*

KS ISO 3103, *Tea — Preparation of liquor for use in sensory tests*

KS ISO 9884-1, *Tea sacks — Specification — Part 1: Reference sack for palletized and containerized transport of tea*

KS ISO 22000, *Food safety management systems — Requirements for any organization in the food chain*

KS ISO 22005, *Traceability in the feed and food chain — General principles and basic requirements for system design and implementation*

KS ISO 22006, *Quality management systems — Guidelines for the application of ISO 9001 to crop production*

KS 1927, *Specification for tea packets and container*

3 Terms and definitions

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

3.1

tea value chain

sequence of the steps and operations involved in the production, processing, distribution, storage and handling of tea and [its ingredients], from primary production to consumption

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3.2

contaminant

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

3.3

contamination

introduction or occurrence of a contaminant in tea or tea environment

3.4

hazard

biological, chemical or physical agent in tea, or condition of, tea, equipment or environment, with a potential to cause an adverse health effect or environmental deterioration

3.5

Hazard Analysis Critical Control Point (HACCP)

system which identifies, evaluates, and controls hazards which are significant for food safety, worker safety, and environmental protection

3.6

Critical Control Point (CCP)

step or operation at which control can be applied and is essential to prevent, eliminate or reduce a food safety hazard to acceptable levels

3.7

critical limit

criterion (threshold) which separates acceptable tea from unacceptable tea

3.8

calibration

process of comparing, detecting, correlating, adjusting, and rectifying the accuracy of measuring and application equipment against a standard instrument of predetermined accuracy.

3.9

Integrated pest management (IPM)

consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep plant protection products and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment

3.10

field establishment

field planting, bringing into bearing and in filling of a tea plantation

3.11

organoleptic evaluation / sensory analysis

method of establishing acceptable tea quality based on appearance of dry leaf, liquor and infused leaf; colour and odour of dry leaf; and taste characteristics of tea liquor

3.12

traceability

ability to follow the movement of a feed or food through specified stage(s) of production, processing and distribution

3.13

certification

procedure by which official certification bodies, or officially recognized certification bodies, provide written or equivalent assurance that foods or food control systems conform to requirements. Certification of food may be, as appropriate, based on a range of inspection activities which may include continuous on-line inspection, auditing of quality assurance systems and examination of finished products

3.14

audit

systematic and functionally independent examination to determine whether activities and related results comply with planned objectives

3.15

food grade material

material for use in food processes that when in direct contact with or nearby food does not contaminate the food with harmful substances or impart objectionable characteristics

4 General requirements

4.1 Tea value chain

4.1.1 Stakeholders within the tea value chain shall undertake production, processing, distribution and trading of tea in a manner that ensures food safety and quality; worker health, safety and welfare; environmental protection and sustainability.

4.1.2 Adequate measures shall be taken, as appropriate throughout the value chain in accordance with relevant Kenya Standards but not limited to KS EAS 39, KS ISO 22006, KS ISO 22000, and KS ISO 22005 to achieve the following:

- a) Food safety by identifying practices, control measures, and monitoring hazards associated with the product at each step;
- b) Food quality by identifying factors that compromise made tea quality and implement measures to ensure conformity to product specifications;
- c) Environmental protection and sustainability by adopting sustainable environmental practices; and
- d) Worker health, safety and welfare by adhering to relevant legislations control.

4.2 Documentation requirements

4.2.1 Stakeholders within the tea value chain shall establish, approve, implement and maintain necessary documents to demonstrate effective control of processes within the value chain, that have potential to negatively affect food safety; environmental protection and workers welfare and health.

4.2.2 Documentation may include but not limited to the following:

- a) Policies and manuals for tea quality and food safety, environmental protection, and worker welfare and health;
- b) Records of personnel training;
- c) Records of approved tea growing sites;
- d) Records of soil analysis;
- e) Records of prequalification of suppliers of materials, services and transport;
- f) Records of stocked and applied fertilizer and crop protection products;
- g) Programs and records for pests and disease incidences and control;
- h) Records of pesticide residue monitoring;
- i) Personnel hygiene policy;
- j) Food handlers health certificates;
- k) Procedures for handling harvested leaf;
- l) Records for harvested leaf quality;

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- m) Records of production, processing and distribution;
- n) Procedures and programs for cleaning and disinfection;
- o) Records of heavy metals monitoring;
- p) Procedure for management of nonconforming products; and
- q) Procedure for traceability, withdrawal and recall.

4.3 Transport

All modes of transport used for transfer of tea throughout the value chain shall be maintained in a manner that ensure product quality and safety; package integrity, worker safety and security of the tea in transport.

4.4 Competence

A capacity development system shall be established and maintained to ensure personnel at each stage of the value chain are equipped with appropriate training, knowledge and skills that ensure safe handling of food, protection of environment and workers' health.

4.5 Security

Measures shall be established and implemented to control access to the tea processing area, storage and handling facilities.

5 Primary production

Agronomic practices shall comply with Good Agricultural Practices (GAP) and recommendations in approved tea producer manuals.

5.1 Site selection

5.1.1 Tea shall be grown in recommended agro-ecological sites complying with the relevant national legislative requirements for industrial crop production.

5.1.2 In case of forested land, and land use change, an environmental impact assessment (EIA) license from National Environment Management Authority shall be obtained.

5.2 Nursery

Nurseries shall be established and managed in a manner that ensures sustainability of plant health, protection of the environment and workers' safety. Ensure that:

- a) The nursery site shall have adequate water supply, sheltered from wind and exposed to the sun;
- b) The nursery soils shall have top soils with a pH of about 5.6 and the subsoil pH of about 5.0;
- c) Sites excavated for nursery soils are rehabilitated;
- d) Nursery construction and management practices shall comply with the recommendations in the approved tea producer manuals;
- e) Wooden construction materials used are from a sustainable source while complying with the legislations on protection of plant species;
- f) Fertilizers use, type and application rates be as per tea grower's handbook or approved producer manual;
- g) Non-biodegradable materials such as polythene used in the nursery are disposed of in accordance with Environmental Management and Coordination Act (EMCA);
- h) Planting material used are approved in accordance with the Seed and Plant Varieties Act, Biosafety Act and other relevant legislations;

- i) Use of agrochemicals for pest and disease control are limited to those approved for use in the tea industry and in accordance with applicable legislations on chemical use.

5.3 Field operations

5.3.1 Land preparation

Land preparation techniques (time, methods and technology) that minimize soil erosion and compaction, and safeguard the environment shall be applied.

Ensure the following:

- a) Where necessary, soil PH correction is based on soil analysis reports to effect rehabilitation;
- b) Field establishment that ensures complete bush canopy for the control of weeds and prevent use of herbicide is applied;
- c) Pruning is done in accordance with approved tea producer manuals and left in field for sustainable soil fertility.

5.3.2 Fertilizer

Fertilizers shall be selected and used in a manner that promotes plant health while ensuring product safety of the workers and environment.

Ensure the following:

- a) Fertilizer used do not contain potentially harmful substances and shall comply with relevant Kenya Standards;
- b) Fertilizer application rates are established and controlled to ensure sustainability of the crop and environmental protection;
- c) Where applicable, fertilizer application machinery are calibrated and maintained in a manner that will ensure accurate delivery rate and records are maintained;
- d) Records of fertilizer application indicating location, date of application, type and quantity of fertilizer applied shall be established and maintained;
- e) The stock records of fertilizer shall be established and maintained. The fertilizer shall be stored in a covered dry location and not in the same room with pesticides or tea.

5.3.3 Crop protection products

The grower shall use crop protection products that are approved for use in tea crops and applied in a manner that protects the worker and the environment in accordance with approved manuals and relevant legislations; and ensures that acceptable maximum residue limits prescribed in Annex B are complied with to safeguard human health.

Ensure the following:

- a) The choice of crop protection products, their storage and application, shall be appropriate and in accordance to the instructions on the label;
- b) The product used shall be registered by the Pest Control Products Board;
- c) Where they are technically feasible, recognized IPM techniques shall be applied by competent persons;
- d) An up to date and complete list of all the crop protection products that are used and/or stored on the farm shall be maintained;
- e) All applications of crop protection products shall be recorded, including: field identification (number or code, location), application date, product trade name (brand), name of the operator/supervisor, application machinery (e.g. knapsack) and name of pest or diseases controlled;

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- f) Application and measuring equipment shall be well maintained and where necessary calibrated regularly to ensure accuracy of application rates and proper records shall be maintained;
- g) All crop protection products shall be transported in a safe manner with attention to minimizing possible danger to people, food products and the environment;
- h) When an original package is broken or damaged, and the product is transferred to another package, the new package shall contain key information of the original label;
- i) Storage facilities shall be appropriately designed with safety features, and a product inventory and manufacturer's safety information shall be maintained;
- j) Empty containers of crop protection products shall not be re-used in any form or manner. Such containers shall be safely stored and later disposed in accordance with relevant legislations;
- k) The disposal of the surplus application mixes and wash downs shall be carried out in a manner that is not injurious to the worker and the environment;
- l) Obsolete crop protection products shall be labelled, stored and handled in a manner that prevents contamination of tea and environmental pollution.

5.4 Harvesting

Harvesting shall be done in a manner that is hygienic and protects the quality of the leaf. Measures shall be taken to control leaf contamination during plucking, handling, buying, weighing, transportation, and reception at the factory.

Ensure the following:

- a) There shall be a clear process for handling of fresh tea leaves from harvesting to receipt at the factory;
- b) Appropriate personal hygiene practices shall be maintained and the personnel shall be sensitized on appropriate behaviours, handling of equipment and personal protection;
- c) Harvesting and transportation containers shall be clean, and free from contamination;
- d) Where harvesting machines are used, they shall be maintained in good hygienic condition and the lubricants used shall be of food grade quality;
- e) Harvested plucked leaf shall be transported to the factory for withering as soon as possible to avoid deterioration, contamination and the subsequent loss of quality;
- f) The leaf shall be transported and handled in a manner that allows free-air circulation, and prevents contamination;
- g) Mode of transport, equipment and containers used shall be designed to prevent contamination and maintain leaf quality and hygiene;
- h) Measures shall be put in place to prevent falsification of weights at tea buying and collection centres; those found culpable, appropriate action taken.
- i) Measures shall be put in place at buying and collection points to control contamination and ensure the leaf complies with set quality specification;
- j) Weighing equipment shall be calibrated and in accordance with the Weights and Measures Act Cap. 512; and
- k) Records for harvested leaf shall be maintained.

6 Processing

6.1 General

To ensure tea products are wholesome, safe for human consumption and the worker is protected from occupational hazards, tea processing location, premises and steps shall conform to Good Manufacturing

Practices (GMP) in accordance with KS EAS 39, and other relevant legislations, but not limited to Public Health; and Occupational Safety and Health.

6.2 Location, design and layout

Tea processing premises shall be located, designed, and constructed to facilitate necessary hygienic practices and effectively control food hazards and protect the environment.

The location, design and layout shall ensure the following:

- a) Sources of contamination, pollution, and threats to product quality and food safety are identified and appropriately controlled;
- b) Adequate maintenance, cleaning, disinfection and monitoring of equipment, surfaces, ceilings and overhead structures is achieved;
- c) Materials in contact with tea are of food grade quality, appropriately designed; and easy to maintain and clean;
- d) Wet and dry operations are adequately separated to reduce microbiological contamination of the finished tea;
- e) A room for sensory analysis of tea is available and designed in accordance with KS ISO 8589;
- f) Workers safety and welfare is assured and maintained by use of appropriate controls;
- g) Waste is managed effectively to prevent recontamination of food, pest access and infestation.

6.3 Hygiene facilities

Tea processing premises shall have appropriate internal design, equipment layout and location that ensure maintenance of good hygiene throughout the plant and prevention of cross contamination.

The following shall be provided:

- a) Foot baths, washrooms, changing rooms, and hand-washing facilities supplied with water, disinfectants liquid soap, sanitizer, disposable towels and/or hot air hand driers, as appropriate;
- b) Potable water conforming to Kenya Standards for Potable water KS EAS 12;
- c) Adequate lighting and "Glass" policy;
- d) Clean compressed air for dry cleaning;
- e) Food grade quality lubricants;
- f) Appropriate storage facilities for packaging materials, finished products (unpackaged and packaged), lubricants, fumigants, etc;
- g) Facilities for appropriate waste disposal; and
- h) Where required, stairs in close proximity to production lines shall be appropriately designed and maintained;

6.4 Maintenance and sanitation

Maintenance and sanitation procedures and programmes shall be established to cover all areas of the manufacturing premises

Ensure the following:

- a) Efficient operation programmes are in place for all plant machinery and equipment;
- b) Effective cleaning and disinfection programs for all facilities and equipment are undertaken;

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- c) Use of approved solvents, oils, lubricants, detergents and disinfectants is adhered to; and
- d) Monitoring is done to establish effectiveness of maintenance, cleaning and sanitation programs

6.5 Personal hygiene

A personal hygiene policy shall be established and implemented to ensure tea is not contaminated by food handlers

Ensure the following:

- a) Written instructions for acceptable personal hygiene shall be visibly displayed at appropriate areas and enforced;
- b) Visitors to manufacturing and storage areas shall be sensitized on hygiene practices and wear protective clothing as appropriate;
- c) A documented and effective training program will be in place to ensure employees, contractors and sub-contractors are competent in assigned duties, and are conversant with hygiene, accidents, and emergency procedures and any other issue critical to food safety.

6.6 Process control

All process steps shall be designed, implemented, monitored, measured, documented and reviewed for effectiveness of controls and compliance with critical limits for contaminants in accordance with Kenya Standards for various tea products.

Ensure the following:

- a) A systematic and effective control system which identifies potential food safety hazards arising from value chain and their measures such as HACCP shall be established;
- b) Incoming leaf shall be inspected for foreign matter and be within the acceptable standards;
- c) Measures shall be established to ensure tea spillages in the processing area are appropriately handled and that those intended for reuse are collected in clean and clearly marked containers and handled in a hygienic manner;
- d) Equipment and facilities used for process controls shall be calibrated and maintained in good state of repair;
- e) Measures shall be established as appropriate, but not limited to control of pesticide residues, iron filings, foreign matter, moisture levels and microbiological contamination;
- f) Appropriate temperature time controls shall be established to prevent spoilage and eliminate pathogens;
- g) Monitoring shall be undertaken to identify processing points and products that are out of specification; identify non-conforming products as appropriate for isolation, rework, release and /or disposal, and records of actions taken maintained;
- h) Sensory evaluation shall be undertaken as appropriate during and after processing in accordance with KS ISO 3103 to ensure production of tea with acceptable organoleptic characteristics; and
- i) Cleaning and disinfection shall be done in a manner that will safeguard the package integrity and product quality.

6.7 Product control

The finished product shall be stored, packaged, dispatched and transported in a manner that maintains its wholesomeness and complies with relevant Kenya Standards and customer contractual agreements; and shall be traceable to the market.

Ensure the following:

- a) Contractual agreement for supplies shall be honoured by both parties;
- b) A quality control system shall be established to verify compliance of finished products with specifications, and maintain records;
- c) Storage bins for finished tea shall be designed to ease cleaning, constructed of food grade materials and managed in a manner that prevents additional moisture pick up;
- d) Consumer packages shall be designed to comply with KS 1927, Specification for tea packets and container and labelled in accordance KS EAS 38 and KS EAS 804;
- e) Packages for palletized and containerized transport shall be designed for compliance with KS ISO 9884-1 and KS ISO 9884-2 and customer requirements;
- f) Containers and packages shall be designed in a manner that minimise damage and prevent contamination;
- g) Where recycled materials are used, they shall not be in direct contact with the product;
- h) Where required, pallets for product packaging shall not compromise product safety and quality, and straps holding packages shall be used in a manner that prevents damage to packages;
- i) A dispatch procedure and criteria shall be established to ensure only clean vehicles capable of preserving safety and quality of the product are used;
- j) Tea transportation containers shall be dry, clean, and free from holes, odours, leak proof and designated only for tea transport at a time;
- k) Transport personnel and drivers shall be sensitized and aware of food safety requirements, and appropriate vehicle and security conditions for transporting finished products;
- l) Vehicles and containerized transport shall be locked with a security seal to be opened only by authorized personnel at the designated point of offloading and the seal identification number shall be traced to the warehouse;
- m) The producer/exporter shall establish a documented system to ensure every unit or batch of the products is traceable;
- n) A procedure shall be established to ensure tea samples are representative of the offered lot and that non-conforming products are handled appropriately.

7 Tea trade practices

7.1 Buying and selling

Tea buying and selling shall be carried out in accordance with relevant tea industry rules, national legislations and Kenya Standards.

Ensure that:

- a) Tea samples shall be prepared and handled in a manner that is representative of the lot and preserves traceability and product integrity in accordance with KS ISO 1839, and in a manner that preserves product integrity and traceability;
- b) Organoleptic tasting shall be done in accordance with KS ISO 3103 to ascertain quality and value of tea by relevant parties;
- c) Tea intended for auction shall be catalogued and offered for sale in accordance with relevant legislations;
- d) Direct sales, factory door sales and forward contract sales shall be executed in accordance with contractual agreements and applicable legislations;
- e) Auction purchased teas and direct sales destined for export shall be registered prior to shipment;
- f) Imported and transit teas shall be registered and monitored in accordance with the relevant legislation.

7.2 Warehouse operations

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In addition to the requirements in Clause 6, warehouses, blending, packaging and dispatch shall be done in a manner that facilitates identification, and implementation of control measures that ensure acceptable food quality, safety and traceability; health conditions of personnel; and integrity of packaging materials, machines and premises.

7.2.1 Warehouses

Warehouses in which tea is handled shall have adequate space to ease movement of equipment and goods without damaging packages and prevent product contamination.

Ensure the following:

- a) A prequalification and traceability system shall be established and monitored to ensure all materials and equipment received or operating within and around the warehouse are of approved quality and are traceable to the supplier;
- b) Specific covered areas shall be designated for loading and offloading vehicles to prevent packages from wetness and potential contamination;
- c) Clean and hygienic environmental conditions shall be maintained to preserve tea quality during receiving, loading, storage and inter-warehouse transportation;
- d) Criteria shall be established to verify product quality for acceptance in the warehouse;
- e) Effective measures shall be established to control temperatures, humidity and other environmental conditions in the warehouse to prevent damages to packages, pick up of taints, moisture, and accumulation of dust;
- f) Vehicles, conveyances and containers shall be of good state of repair and cleanliness;
- g) Gasoline- or diesel-powered fork-lift trucks shall not be used within storage areas for food ingredients or products;
- h) Fumes from vehicles shall be prevented from entering the warehouses;
- i) Where wooden pallets are used, they shall be treated to destroy pests using approved methods and chemicals;
- j) Access to warehouses shall be controlled to allow only authorised staff and visitors.

7.2.2 Blending

Blending shall be done in a manner that prevents contamination and maintains product safety and integrity by ensuring that:

- a) Blending areas shall have appropriate lighting; clean and free from dust; and prevent moisture pick up;
- b) Procedures shall be established to identify and control potential sources of contamination;
- c) Where necessary, measures shall be implemented to eliminate and prevent foreign matter contamination;
- d) Measures shall be established to prevent personnel having direct contact with tea;
- e) Personnel shall have appropriate protective clothing;
- f) All materials in contact with food shall be clean, dry and food grade;
- g) Measures shall be taken to control tea spilling onto the floor, and any spillages shall be rejected, disposed of appropriately and records maintained.

7.2.3 Packaging and dispatch

Measures shall be established to ensure tea product packaging and dispatch operations maintains quality, integrity and traceability by ensuring that:

- a) Procedures shall be established to ensure only food grade packaging materials are used and appropriately labelled to ensure traceability;
- b) Tea packages shall be kept away from the floor on pallets (no contact with floor);
- c) Pallets used shall be constructed and treated in a manner that preserves tea quality and integrity of packages;
- d) Hygienic and mechanical conditions of dispatch vehicles and integrity of packages shall be confirmed before dispatch and records maintained.

7.3 Transport

- a) Measures shall be established, implemented, monitored and documented to ensure transportation maintains the tea quality and integrity.
- b) Transporters shall be prequalified based on their ability to provide services in a manner that does not compromise product quality and package integrity;
- c) Prequalified transporters shall have systems in place to ensure accidental damages to the product on transit are appropriately addressed;
- d) Vehicles shall be checked prior to loading, and during unloading to verify that the quality and safety of the material or product is maintained;
- e) Vehicles transporting finished products shall be equipped with fire safety equipment;
- f) Containers shall be dry, clean, and free from holes, odours, leak proof and designated only for tea transport at a time; and
- g) Procedures shall be established and implemented to ensure transport personnel have adequate knowledge on preservation of tea quality and integrity. This may include but not limited to:
 - i) potential impact of environmental conditions and weather on tea;
 - ii) hygienic handling of tea;
 - iii) criteria for acceptance of tea;
 - iv) mechanical soundness of tea transport vehicles; and
 - v) security protocols.

8 Shipping

Tea shall be shipped in food grade containers and in accordance with the relevant rules and regulations for food safety.

Ensure the following:

- a) Designated containers shall be dry, odourless, and dust-free;
- b) Shipment records shall be maintained but not limited to the following:
 - i) consigner,
 - ii) consignee,
 - iii) quantity,
 - iv) type or grade, and
 - v) port of destination.

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9 Product tracking information

Information on tracking of the product shall be documented at the factory and shall include, but not limited to the following:

- a) truck/trailer registration number;
- b) date and time of dispatch;
- c) name of manufacturing factory;
- d) garden mark and grade;
- e) product invoice numbers;
- f) delivery note;
- g) goods received note.

10 Traceability, withdrawal and recall

A traceability, withdrawal and recall system shall be established and maintained across the value chain to ensure the customer is informed correctly of the product origin and identity.

Ensure the following:

- a) A procedure shall be established, implemented and maintained to facilitate traceability of products and recall of non-conforming products at any stage of the value chain;
- b) The traceability procedures shall ensure identification of the product one step forward and one step backward;
- c) Products failing to meet required food safety standards shall be identified, segregated, withdrawn from the value chain, recalled from the market, evaluated and disposed, as appropriate and records maintained.

11 Labour and workers welfare

All stakeholders within the value chain shall comply with relevant legislations on labour and employment.

12 Environmental management

12.1 Sustainable environmental management shall be maintained to conserve energy, soils, water resources, wildlife and forests in accordance with the relevant environmental related legislations;

12.2 Emissions from factories shall be managed in a manner that minimizes environmental degradation; and

12.3 Proper waste management systems shall be established, monitored and maintained.

Annex A (normative)

Organic tea — Variations from conventional tea

A.1 Scope

This Annex provides additional practices required for production of organic tea. Organic tea shall be produced and processed in accordance with organic products standard (KS EAS 456) and the integrity of the tea shall be maintained throughout the production, processing and distribution steps.

A.2 Differences in the growing and handling of organic tea

The following are the differences between organic and conventional tea:

A.2.1 Isolation of site for organic farming:

- a) The area shall be sufficiently isolated to ensure there is no possibility of any pollutants or contaminants flowing into the growing area;
- b) A risk assessment shall be undertaken to establish the potential contamination from adjacent farms and appropriate measures implemented;
- c) Water used in compost preparation shall be free from pollutants;
- d) A detailed history of a period of about five years, fully documented to give details of external inputs during pre-conversion period, be maintained to facilitate inspection of organic tea cultivation.

A.2.2 Conversion period of site for organic farming

- a) The minimum conversion period shall be three years from the last usage of synthetic agrochemicals or at least three years in the case of land on perennial crops other than grassland. Tea can be marketed as “in conversion organic tea” only after one year from the start of conversion;
- b) Based on risk assessment tea may be marketed as “organic tea” only after the completion of conversion of three years;
- c) In cases where land is not in use for more than two years, a competent authority shall determine the period of conversion, but shall not be less than twelve (12) months, based on risk assessment;
- d) In cases where a whole farm is progressively converted, permitted techniques monitored by a competent authority shall apply;
- e) Areas in conversion as well as areas converted to organic production shall not be alternated or switched back and forth between organic and conventional production methods;
- f) Manure and bio-fertilizers used in organic tea farming shall comply with KS 2290 and KS 2356.

A.2.3 Handling, storage and processing

- a) Appropriate measures shall be taken to avoid cross contamination of organic tea with organic tea in conversion and conventional teas;
- b) Packaging materials and printing ink shall preferably be chosen from bio-degradable materials;
- c) Additives and processing aids shall be in accordance with the Annex D of KS EAS 456;
- d) Tea labelled as “organic tea” shall have certification for organic products

Annex B (normative)

Maximum pesticide residue limits for tea

B.1 Maximum pesticide limits in this Annex are based on the Codex database for pesticide residues, 2014.

B.2 The pesticide residue database is regularly reviewed and updated.

B.3 It is therefore recommended that the list of the current pesticide residue be confirmed by accessing the codex database.

B.4 Current limits can be found on CODEX Online Commodity Details for Tea at http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities-detail/en/?c_id=101 , accessed in October 2021

B.5 List of pesticides and maximum residue limits

SL No	Pesticides	Maximum Residue Limit (mg/kg) Green tea/Black tea
i.	<i>Paraquat</i>	0.2
ii.	<i>Methidathion</i>	0.5
iii.	<i>Clothianidin</i>	0.7
iv.	<i>Fenpropathrin</i>	2
v.	<i>Chlorpyrifos</i>	2
vi.	<i>Deltamethrin</i>	5
vii.	<i>Indoxacarb</i>	5
viii.	<i>Propargite</i>	5
ix.	<i>Endosulfan</i>	10
x.	<i>Etoxazole</i>	15
xi.	<i>Hexythiazox</i>	15
xii.	<i>Cypermethrins (including alpha- and zeta- cypermethrin)</i>	15
xiii.	<i>Permethrin</i>	20
xiv.	<i>Thiamethoxam</i>	20
xv.	<i>Bifenthrin</i>	30
xvi.	<i>Dicofol</i>	40
xvii.	<i>Flubendiamide</i>	50

Annex C
(informative)

Relevant legislations

- Plant Varieties Act
- Biosafety Act
- The Tea Act, 2020
- Kenya Agricultural and Livestock Research Organization Act 2013.
- The Employment Act, Cap. 226.
- The Environmental Management and Coordination Act, 1999.
- Occupational Safety and Health Act, 2007.
- The Food, Drugs and Chemical Substances Act, Cap. 254.
- The Irrigation Act, Cap. 347.
- The Lakes and Rivers Act, Cap. 409.
- The National Hospital Insurance Fund Act, Cap. 255.
- The National Social Security Fund Act, Cap. 258.
- The Pest Control Products Act, Cap. 346.
- The Physical Planning Act, 1996.
- The Regulation of Wages and Conditions of Employment Act, Cap. 229 (ROWA).
- The Standards Act, Cap. 496.
- The Trade Disputes Act, Cap. 234.
- The Children's Act, 2001.
- The Trade Union Act, Cap. 233.
- The Water Act, Cap. 372.
- The Seed Act, Cap. 326.
- The Public Health Act, Cap. 242.
- The Forest Act, 2005

Annex D
(informative)

Relevant manuals

- Tea growers' handbook, 5th Edition 2002, Tea Research Foundation of Kenya.
- Fertilizer User Manual guide for tea, 1st Edition 2012. Tea Research Foundation of Kenya.
- Tea pest and disease handbook, 1st Edition 2012, Tea Research Foundation of Kenya.
- Tea cultivation manual for good agricultural practices, 1st Edition 2012, Tea Research Foundation of Kenya.
- TRFK clonal catalogue, 1st Edition 2012, Tea Research Foundation of Kenya.
- Waste management manual, 1st Edition 2012, Tea Research Foundation of Kenya.
- Soil, plant tissue and fertilizer sampling and analytical methods, Tea Research Foundation of Kenya.
- Soil conservation manual, 1st Edition 2012, Tea Research Foundation of Kenya.
- Tea plucking practices manual, 1st Edition 2013, Tea Research Foundation of Kenya.
- The biochemical Methods Manual, 1st Edition 2014, KALRO-TRI.
- Tea extension providers manual, 1st Edition 2014, KALRO-TRI.
- Integrated pest and disease management sampling and analytical manual, 1st Edition 2014. KALRO-TRI
- Manual for Tea Soil Sampling and Methods of Physical Analysis. 1st Edition 2021, Tea Research Foundation.
- Manual for Tea Processing in Kenya. 1st Edition 2021, Tea Research Foundation.

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KENYA BUREAU OF STANDARDS (KEBS)

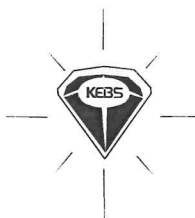
KEBS CERTIFICATION MARKS

1. Product Certification Marks



KEBS Standardization Mark (S-Mark) is issued for use on products that comply with the minimum quality requirements prescribed in Kenya standards. It uses standards as a benchmark for quality compliance and aims at giving manufacturers improved market access and also giving consumers an assurance of quality for the products bearing the mark.

Standardization Mark
SYMBOL FOR PRODUCT QUALITY



Diamond Mark of Quality
SYMBOL FOR PRODUCT QUALITY EXCELLENCE



Import Standardization Mark
SYMBOL FOR PRODUCT QUALITY

2. Systems Certification Marks



ISO 9001 REGISTERED FIRM
QUALITY MANAGEMENT SYSTEM



OCCUPATIONAL HEALTH AND SAFETY
OHSAS 18001



ISO 14001 REGISTERED FIRM
ENVIRONMENTAL MANAGEMENT SYSTEM



ISO 22000 REGISTERED FIRM
FOOD & SAFETY MANAGEMENT SYSTEM

KEBS is mandated to provide Standardization, Metrology and Conformity Assessment Services through:

- Promotion of standardization in commerce and industry
- Provision of testing and calibration facilities
- Control of the use of standardization marks
- Undertaking educational work in standardization
- Facilitation of the implementation and practical application of standards
- Maintenance and dissemination of the International System of Units (SI) of measurements

KEBS offers the following services:

- Standards development and harmonization
- Testing services
- Measurement services (Calibration)
- Enforcement of standards
- Product inspection services
- Education and Training in Standardization, Metrology and Conformity Assessment
- Product and Management Systems Certification Services

INFORMATION ON STANDARDS

Standards are documents that provide a common reference point for the assessment of the quality of goods and services. Standards facilitate transparency in the exchange of products and enhance market access of Kenyan products into local, regional and international markets.

Information on standards and related documents is available at the KEBS standards information centre.

KEBS houses the WTO-TBT National Enquiry Point (NEP) which disseminates notification likely to affect international trade to the industry.

KEBS also provides technical advice on installation and improvement of quality goods and services to the industry so as to facilitate efficient implementation of standards. Some of the advantages of standards include: enhancement of quality assurance, safety and environmental protection measures, minimization of waste, reduction of costs and unnecessary varieties and promotion of interchangeability and increased productivity in industry.

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