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Herbal infusions — Specification

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In order to match with technological development and to keep continuous progress in industries, standards are subject to periodic review. Users shall ascertain that they are in possession of the latest edition

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Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 390 was prepared by Technical Committee RSB/TC 002, *Tea and derived products*

In the preparation of this standard, reference was made to the following standards:

1) US 980, Herbal tea — Specification

2) KS 2676, Herbal and Fruit infusions — Specification

The assistance derived from the above source is hereby acknowledged with thanks.

This second edition cancels and replaces the first edition (RS 390: 2019), which has been technically revised.

Committee membership

The following organizations were represented on the Technical Committee on *Tea and derived products* (RSB/TC 002) in the preparation of this standard.

COTIKA

E & Foods Direct Ltd

Gisovu Tea company

IGISURA Company Ltd

IPRC MUSANZE

Karongi Tea factory

National Agricultural Export Development Board (NAEB)

National Industrial Research and Development Agency (NIRDA)

Rwanda Mountain Tea Ltd

Silverback Tea Company

University of Rwanda, College of Agriculture, Animal Sciences and Veterinary Medicine(UR-CAVM)

ZAMURA Feeds Ltd

Rwanda Standards Board (RSB) – Secretariat

Herbal infusions — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for herbal infusions intended for human consumption.

This Standard excludes tea from *Camellia sinensis.*

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 999.10, *Lead, Cadmium, Zinc, Copper, and Iron in Foods — Atomic Absorption Spectrophotometry after Microwave Digestion*

RS CXC 1, *General principles of food hygiene*

RS CXS 193, *General Standard for Contaminants and Toxins in Food and Feed*

RS CXS192, *General standard for food additives*

RS EAS 803, *Nutrition labelling — Requirements*

RS EAS 804, *Claims on foods — General requirements*

RS EAS 805, *Use of nutrition and health claims — Requirements*

RS ISO 1573, Tea — *Determination of loss in mass at 103 °C*

RS ISO 1577, Tea — *Determination of acid insoluble ash*

RS ISO 16050, *Foodstuffs — Determination of aflatoxins*

RS 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*

RS ISO 1839, *Tea — Sampling*

RS 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*

RS 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*

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

RS 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 Terms and definitions

For the purposes of this standard, the following terms and definitions apply

3.1

herbal infusions

products made from herbs or parts of plants (such as roots, flowers, leaves, barks or seeds) in the form of powder or granules or in finely/coarsely cuts of plant parts, which are intended for the same use as tea and give the active substances from the herb used. They may include blends of herbs with tea as a minor component.

3.2

extraneous matter

all organic and inorganic material other than herbal infusion composition

3.3

adulterant

any material intentionally added to an herbal infusion that changes its original composition and compromises its quality and safety

3.4

food grade packaging material

packaging material, made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour or flavour to the product

4 Requirements

4.1 Essential ingredient

Herbs or parts of plants (such as roots, flowers, leaves, barks or seeds)

4.2 Optional ingredients

They may include:

Tea from *Camellia sinensis* as minor component

4.3 General requirements

Herbal infusions shall:

a) be free from off flavours and odours;

b) have a characteristic colour of the raw material used and the process used;

c) be free from insects or their eggs;

d) be clean and reasonably free from extraneous matter;

e) be free from adulterants;

f) roots, flowers, leaves or barks from which the herbal infusion is made shall comply with relevantstandards or have been proven being food grade;

g) flavourings shall not be used for the purpose of imitating or intensifying the fragrance and/ or taste of any particular herb infusion

4.4 Common herbal infusions

4.4.1 General

Herbal infusions are made from different types of herbs. They include but are not limited to the following:

4.4.2 Stinging nettle infusions

Dried leaves whole or crushed, and parts of the top shoots of *Urtica dioica* L., occasionally also from *Urtica urens* L. from the stinging nettle family (Urtica spec.)

4.4.3 Fennel infusions

Dried fruit usually separated into two halves, whole or crushed, of *Foeniculum vulgare* Mill. Ssp. Vulgare from the umbellifer family, often containing parts of stamen, stem and carpophor.

4.4.4 Rose-hip infusions

Peel of rose-hips, whole or crushed, consisting of the dried cupule of the spurious fruit of various types of the species Rosa L. belonging to the rose-tree family (Rosaceae), predominantly without the short hairs found at the base of the fruit, and with no more than a 10 % proportion of small fruits.

4.4.5 Hibiscus blossom infusions

Dried calyx and outer calyx of *Hibiscus sabdariffa* L. belonging to the mallow family (Malvaceae), whole or crushed, harvested when the fruit is developed.

4.4.6 Camomile infusions

Dried flowers of *Matricaria recutitas* L. (*Chamomilla recutita* (L.) Rauschert), whole or crushed, belonging to the Compositae or Asteraceae family, with a technically unavoidable proportion of other over ground plant arts.

4.4.7 Spearmint infusions

Whole or crushed top shoots of the variety Mentha spicata L. var. Crispa belonging to the Labiate flower family (Lamiaceae).

4.4.8 Lemon /citron grass infusion

Dried leaves, whole or crushed, of *Cymbopogon flexuosus* W. Watson and other types of Cymbopogon belonging to the grass family (Poaceae).

4.4.9 Lime blossom infusion

Dried pedicles (top leaves and blossoms), whole or crushed, of *Tilia cordata* Miller, *Tilia platyphyllos* Scop. and/or other types of Tilia belonging to the Linden plant family (Tiliaceae).

4.4.10 Mate, Paraguay infusions

Dried and crushed leaves and parts of shoots, toasted or untoasted, from the top shoots of the Mate tree Ilex paraguariensis St. Hil belonging to the Holly family (Aquifoliaceae).

4.4.11 Lemon balm infusions

Dried leaves, whole or crushed, and parts of the top shoots of *Melisse officinalis* L. belonging to the Labiate flower family (Lamiaceae).

4.4.12 Orange leaf infusions

Dried leaves and stems, whole or crushed, of certain varieties of *Citrus aurantium* L. belonging to the Rue family (Rutaceae).

4.4.13 Orange blossom infusions

Dried buds and petals, whole or crushed, of certain varieties of *Citrus aurantium* L. belonging to the Rue family (Rutaceae).

4.4.14 Peppermint infusions

Dried leaves, whole or crushed, and parts of the top shoots of varieties of Mentha(x) Piperita L. belonging to the Labiate flower family (Lamiaceae).

4.4.15 Verbena infusions/ lemon verbena infusions

Dried leaves, whole or crushed, and top shoots of *Aloysia triphylla* (L'Herit.) Britt., syn. *Lippia triphylla* (L'Herit.)O. Kuntze, syn. *Lippia citriodora* (Lam.) H.B.K., syn. Verbena triphylla L'Herit. belonging to the Herba Verbenae family (Verbenaceae)

4.5 Specific requirements

Acid insoluble ash and Loss of mass in herbal infusions shall comply with the specific requirements in Table 1 when tested in accordance with RS ISO 1573 and RS ISO 1577 respectively.

Table 1 — Specific requirements for herbal infusions

S/N	Commercial description (Herbal infusions)	Acid insoluble ash of dry mass, %, max.	Loss of mass (moisture content) %, max.
1.	Nettle	5.0	14
2.	Fennel	2.5	12
3.	Rose-hip	1.5	14
4.	Hibiscus blossom	2.5	15
5.	Camomile	2.5	13
6.	Spearmint	2.5	13
7.	Lemon grass	5.0	11
8.	Lime blossom	2.5	13
9.	Mate	1.0	10
10.	Lemon balm	2.5	13
11.	Orange blossom	2.5	12
12.	Orange leaf	3.0	12
13.	Peppermint	2.5	13
14.	Verbena	3.5	12
15.	Others	5.0	15

5 Food additives

Food additives which may be used shall comply with RS CXS192.

6 Hygiene

Herbal infusions shall be processed and handled in a hygienic manner in accordance with RS CXC 1.

7 Microbiological limits

Herbal infusions shall not exceed microbiological limits in Table 2 when tested in accordance with test methods specified therein

Table 2 — Microbiological limits in herbal infusions

S/N	Micro-organism	Maximum limits	Test method
i.	Total Viable Count, CFU/g	10^3	RS ISO 4833-1
ii.	*E. Coli*, CFU/g	Absent	RS ISO 16649-2
iii.	*Staphylococcus aureus*, CFU/g	Absent	RS ISO 6888-1
iv.	*Salmonella spp,* in 25 g	Absent	RS ISO 6579-1
v.	Yeasts and moulds, CFU/g	10^2	RS ISO 21527-2

8 Contaminants

8.1 Pesticide residues

Herbal infusions shall comply with the updated maximum pesticide residue limits established by the Codex Alimentarius Commission.

8.2 Iron filings

When tested in accordance with Annex A, the amount of iron filings in herbal infusions shall not exceed 150 mg/kg

8.3 Aflatoxin levels

The maximum content of aflatoxins in herbal infusions when tested in accordance with RS ISO 16050 shall not exceed 5 µg/kg for aflatoxin B1 and 10 µg/kg for total aflatoxins.

8.4 Other contaminants

Herbal infusions shall not exceed the maximum limits for contaminants set in CXS 193.

9 Packaging

Herbal infusions shall be packaged in food grade packaging materials that shall not affect the quality of the product.

10 Labelling

9.1 In addition to the requirements specified in RS EAS 38, each package of the herbal infusions shall be legibly and indelibly labelled with the following:

a) name of the product;

1) herbal infusion shall be denominated by the name of the type of the plant or part of the plant used, also in combination with the word infusion, if the product in question derives from a single plant type, for instance " peppermint infusion", or if it is manufactured from two types of plants, for instance "rose hip infusion with hibiscus",

2) if herbal Infusions are manufactured from several types of plants, generic terms are also used in combination with the word infusion, for instance herbal infusion,

3) if one type of plant - except tea - accounts for a considerable percentage of the total weight and determines the character of the product, it is possible to name the herb infusion after this plant or combination thereof, and

4) if tea is also used and the presence of tea is emphasized, the tea content is stated in percentage of the product.

b) brand name/trade name (optional);

c) name and physical address of the manufacturer/packer/importer/exporter;

d) country of origin;

e) list of ingredients in descending order of proportions;

f) date of manufacture;

g) best before date;

h) instructions for use;

i) storage conditions;

j) net content in metric units; and

k) declaration of allergens if any.

9.2 Health claims and nutritional labelling if made, shall be in accordance with RS EAS 803, RS EAS 804, RS EAS 805.

11 Sampling

Sampling of herbal infusions shall be done in accordance with RS ISO 1839.

(normative)

Determination of iron filings

A.1 Apparatus

A.1.1 Magnet (at least 4 000 gauss)

A.1.2 Polythene sheet

A.1.3 Petri dish

A.2 Procedure

A.2.1 A known amount of (25 g) tea is spread evenly on petri dish.

A.2.2 A powerful magnet wrapped in polythene sheet is run over the sample repeatedly till no more iron filings cling to the magnet.

A.2.3 Collect the iron filings in a clean, dry and previously weighed petri dish.

A.2.4 Note down and express the mass of iron filings as mg/kg.

A.3 Calculation

$$Iron\ filings = \frac{M_1 \times 1000}{M_2}$$

where

M_1 is the mass, in grams, of iron filings, and

M_2 is the mass, in grams, of sample taken for the test.

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