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## Banana juice — Specification



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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 358 was prepared by Technical Committee RSB/TC 001, *Beverages*.

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

- 1) RS 224: 2016, *Urwagwa — Specification*
- 2) RS 202: 2013, *Fruit juices and nectars — Specification*

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

## Committee membership

The following organizations were represented on the Technical Committee on Beverages (RSB/TC 001) in the preparation of this standard.

Braseries et Limonaderies du Rwanda (BRALIRWA)

Duhange kuby'iwacu Enterprise

Enterprise UMURAGE

Enterprise URWIBUTSO

Imbaraga z'ibimera (IHC Ltd)

INDAKEMWA Ltd

Institut Catholique de Kabgayi (ICK)

KASESE Distillers

La Carmela Delice

SALUNA Company Ltd

University of Rwanda, College of Agriculture, Animal sciences and Veterinary medicine (UR-CAVM)

Rwanda Standards Board (RSB) – Secretariat

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# Banana juice — Specification

## 1 Scope

This Rwanda Draft Standard specifies the requirements and methods of sampling and test for banana juice intended for human consumption.

## 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.

RS CAC/RCP1, *Code of practice — General principles of food hygiene*

RS EAS 38, *General Standard for the labelling of pre-packaged foods*

RS EAS 12, *Potable water — Specification*

RS ISO 4833-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 degrees C by the pour plate technique*

RS ISO 16649-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 1: Colony-count technique at 44 degrees C using membranes and 5-bromo-4-chloro-3-indolyl Beta-D-glucuronide*

RS ISO 6579, *Microbiology of food and animal feeding stuffs — Horizontal method for the 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*

RS ISO 21527-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 1: Colony count technique in products with water activity greater than 0,95*

## 3 Terms and definitions

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

### 3.1

#### **banana juice (umuhama/umwikamire)**

unfermented but fermentable liquid obtained by suitable means from the edible part of sound, appropriately mature and ripe banana fruits without further addition

### 3.2

#### **concentrated banana juice**

banana juice in which water has been removed by suitable means

### 3.3

#### **banana nectar**

banana juice to which water has been added with or without the addition of sugars, honey and/or food additives

### 3.4

#### **extraneous matter**

includes inorganic matter such as sand, glass, metal, gravel, dirt, pebbles, stones, lumps of earth, clay and mud and organic matter such as chaff, straw, weed seeds and grains of crops, insects or insects' fragments, rodent hairs or any other foreign matter

### 3.5

#### **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 Quality requirements**

### **4.1 General requirements**

Banana juice shall be:

- a) free from any substances injurious to health;
- b) clean, practically free of any visible extraneous matter;
- c) free from any harmful ingredients or substances;
- d) have the characteristic appearance, taste and aroma of natural banana juice;



- e) free from any signs of fermentation; and
- f) where water has been added, it shall comply with RS EAS 12.

#### 4.2 Specific quality requirements

Banana juice shall comply with the specific quality requirements stipulated in Table 1

**Table 1 — Specific requirements for banana juice**

S/N	Characteristic	Requirement			Method of test
		concentrated	Umuhamu/ Umwikamire	Nectar/ufunguye	
1.	pH,	4-5	4-5	4.0-5.0	AOAC 940.19
2.	Fructose, %, min	10.5	7.0	3.5	RS EAS 104
3.	Total solids (Brix) min	30	20	10	
4.	Glucose, % m/m, min	7.5	5.0	2.5	
5.	Total Acidity as anhydrous citric-acid, % m/m, max.	1.05	0.7	0.35	
6.	Sucrose, % m/m, max.	5.0 - 9.0	5.0 - 9.0	5.0 - 9.0	
7.	Volatile acidity as acetic acid, g/l, max	Absent			

## 5 Hygiene

**5.1** Banana juice shall be processed, packaged, stored and distributed under hygienic conditions prescribed in the RS CAC/RCP 1.

**5.2** When tested in accordance with appropriate methods, banana juice shall be free from microorganisms in amounts which may represent a hazard to health and shall meet the requirements specified in Table 2.

**Table 2 — Microbiological limits for banana juice**

S/N	Characteristic	Requirements	Method of Test
1.	Total viable counts, CFU/ml, max	10 <sup>2</sup>	RS ISO 4833-1
2.	<i>E. coli</i> , CFU/ml, max	Absent	RS ISO 16649-1
3.	<i>Salmonella</i> , CFU per 25 ml max	Absent	RS ISO 6579
4.	<i>Staphylococcus aureus</i> , CFU/ml, max	Absent	RS ISO 6888-1
5.	Yeast and moulds, CFU/ml, max	100	RS ISO 21527-1

## 6 Contaminants

### 6.1 Pesticide residues

The products covered by the provisions of this standard shall comply with those maximum residue limits for pesticides established by the Codex Alimentarius Commission for these products.

### 6.2 Heavy metals

Banana juice shall not contain heavy metals in levels exceeding the limits indicated in Table 3.

**Table 3 — Limits for heavy metal contaminants in Banana juice**

S/N	Type of impurity	Limit	Test method
1.	<i>Arsenic</i> (as As), mg/L, max.	0.01	RS ISO 6634
2.	<i>Lead</i> (as Pb), mg/L, max	0.2	AOAC 972.25
3.	<i>Cadmium</i> (as Cd) mg/L, max	0.1	AOAC 999.11

## 7 Packaging

Banana juice shall be packaged in food grade packaging material.

## 8 Labelling

In addition to the requirements of RS EAS 38, the following specific labelling requirements shall apply and shall be legibly and indelibly marked:

- name of the product "Banana juice";
- type of banana juice as concentrated, umuhama/umwikamire and/or nectar;
- name and physical and postal address of manufacturer;
- net contents shall be declared by volume in metric units;
- date of manufacture;
- expiry date;
- storage instructions;
- list of ingredients;
- batch number; and

- j) country of origin or the declaration 'made in Rwanda' for locally manufactured products. When the product undergoes processing in a second country which changes its nature, the country in which processing is performed shall be considered to be the country of origin for the purpose of labelling.

## 9 Sampling

Each container of banana juice sampled at random shall constitute a sample for purpose of testing.

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