

RWANDA
STANDARD

DRS
343

Second edition

2017-mm-dd

**Banana based alcoholic beverages —
Specification**



Reference number

DRS 343: 2017

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

Committee membership

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

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Banana based alcoholic beverages — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements and methods of sampling and test for banana based alcoholic beverages other than Urwagwa .

2 Normative references

The following referenced documents are indispensable for the application 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 972.25, *Lead in Food, atomic absorption spectrophotometric method*

AOAC 999.11, *Lead, Cadmium, Copper, Iron and Zinc in Food, Atomic Absorption Spectrophotometry*

RS 164, *Honey — Specification*

RS CAC/RCP1, *Code of practice — General Principle for Food Hygiene*

RS EAS 104, *Alcoholic Beverages — Method of sampling and testing*

RS EAS 12, *Potable Water — Specification*

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

RS EAS 757, *Sorghum grains — Specification*

RS ISO 16050, *Foodstuffs Determination of aflatoxin B₁, and cereals, nuts and derived products — High-performance liquid chromatographic method the total content of aflatoxins B₁, B₂, G₁ and G₂ in*

RS ISO 17240, *Fruit and vegetable products — Determination of tin content — Method using flame Atomic Absorption Spectrometry*

RS ISO 1842, *Fruit and vegetable products — Determination of pH*

RS ISO 4833-2, *Microbiology of the food chain -- Horizontal method for the enumeration of microorganisms -- Part 2: Colony count at 30 degrees C by the surface plating technique*

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

RS ISO 6634, *Fruits, vegetables and derived products — Determination of arsenic content — Silver diethyldithiocarbamate spectrophotometric method*

RS ISO 6888, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species)*

3 Terms and definitions

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

3.1

based alcoholic beverage alcoholic beverage derived from the fermentation of ripe banana pulpe or banana juice (obtained by any method) and other safe agriculture products

3.2

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

3.3

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

3.7

banana juice

unfermented but fermentable liquid obtained from the edible part of sound, appropriately mature and ripe banana fruit

4 Requirements

4.1 Essential ingredients

The following ingredients shall be used for the production of banana based beverages:

- a) Banana pulp or banana juice free from extraneous matter; shall constitute more of 50% of the mixture to be fermented.
- b) Other safe plants products

c) BBAB may be fortified by the addition of spirit complying with RS EAS (...) to the extent that meet the ethyl alcohol maximum limits

4.2 General requirements

Banana based alcoholic beverage shall:

- a) be free from any harmful ingredients, substances, and any other contaminants injurious to health or any extraneous matter;
- b) have the characteristic taste and aroma of banana

4.3 Specific quality requirements

Banana based alcoholic beverage shall comply with the quality requirements specified in Table 1.

Table 1 — Quality requirements for Banana based alcoholic

S/No.	Characteristic	limits	Test method
i.	Ethyl alcohol content, %, v/v, max	17.0	RS EAS 104
ii.	pH	4.0 - 5.0	ISO 1842
iii.	Total suspended solids %, m/v, max	5	
iv.	Total acidity, g/ L, max.	12.0	RS EAS 104
v.	Volatile acidity as acetic acid, g/L, max.	3	

5 Processing aids

Only food grade processing aids recognized as safe for human consumption shall be used during the manufacture of products covered by this standard.

6 Additives

Additives complying with RS CODEX STAN 192 may be used

7 Contaminants

7.1 Pesticide residues

Banana based alcoholic beverages shall comply with the maximum residue limits for pesticides as established by the Codex Alimentarius Commission for the commodity used in the manufacture of alcohols.

7.2 Heavy metals

7.2.1 Banana based alcoholic beverages shall not contain heavy metals in levels exceeding the limits indicated in Table 2.

Table 2 — Limits for heavy metal contaminants in Banana based alcoholic

S/No.	Type of impurity	Limit	Test method
1.	Arsenic (as As), mg/L, max.	0.01	ISO 6634
2.	Lead (as Pb), mg/L, max.	0.2	AOAC 972.25
3.	Cadmium (as Cd) mg/L, max	0.1	AOAC 999.11

7.3 Aflatoxin limits

Total aflatoxin in Banana based alcoholic shall not exceed 10 µg/kg and aflatoxin B1 shall not exceed 5 µg/kg, when tested in accordance with ISO 16050.

8 Hygiene

8.1 General

Banana based alcoholic shall be manufactured and handled in a hygienic manner in accordance with RS CAC/RCP 1.

8.2 Microbiological requirements

8.1 When tested in accordance with the appropriate method, Lactic Acid Bacteria shall be absent in Banana based alcoholic

8.2 When the alcohol is less than 10%, Banana based alcoholic shall comply with limits for micro-organisms specified in Table 3.

Table 3 — Microbiological limits for Banana based alcoholic

S/No.	Organism	Maximum limit	Test method
1	<i>Staphylococcus aureus</i> , cfu/ml,	100	ISO 6888-1
2	<i>Salmonella spp</i> , cfu/25 ml	Absent	ISO 6579
3	<i>E. Coli</i> , cfu/ml	Absent	ISO 11866-2
4	Total viable count, cfu/ml	100	ISO 4833-2
	Moulds cfu/ml	100	

9 Weights and measures

The volume and fill of Banana based alcoholic shall comply with national Weights and measures regulations

10 Packaging

10.2 Banana based alcoholic shall be packaged suitable packaging materials that will maintain the quality and not impart toxic substances to the products.

10.3 The contents of the products shall occupy not less than 90 % of the total volume capacity of the container.

11 Labelling

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

- a) name of the product as banana based alcoholic beverages
- b) name and physical and postal address of manufacturer;
- c) net contents in millilitres or litres;
- d) ethyl alcohol content;
- e) date of manufacture;
- f) Expiry date, if alcohol content is less than 10%;
- g) storage instruction;
- h) statutory warnings; and
- i) list of ingredients in descending order

12 Sampling

Sampling shall be done in accordance with RS EAS 104.

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