

Flavoured Soft Drinks- Specification

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Kenya Bureau of Standards, 2017

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Water- Based Flavoured Drink- Specification

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PUBLIC REVIEW DRAFT

NATIONAL FOREWORD

This Kenya Standard was developed by the Technical Committee on Flavoured soft drink under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

This standard covers all types of Flavoured soft drinks made from water, permitted sweetening agents either nutritive or nonnutritive sweeteners used singly or in combination and permitted food additives, natural or synthetic colourings, flavouring emulsions, among other permitted ingredients. Flavoured soft drinks shall be distinguished from carbonated soft drinks, fruit squashes, fruit juices fruit-based soft drinks and flavoured water through appropriate labelling.

The standard stipulates the chemical, microbiological and other quality limits for flavoured soft drinks.

Labelling requirements of Water-Based flavoured drinks have been incorporated in this standard to prevent any misrepresentations of the products through, say, fruit pictorials on the labels.

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

Water Based Flavoured drink -Specification

1. Scope

This Kenya Standard prescribes the requirements, methods of test and methods of sampling for water based flavoured drinks.

1.2 Field of application

This standard covers water based flavoured drinks made from natural or synthetic colourings, natural and artificial flavourings, emulsions, water, sweetening agents and other optional permitted ingredients.

2. Normative Reference

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.

KS 224:2017- *Fruit drinks and squashes - Specification*

KS 77-2000- *soft fruit juice- Specification*

KS EAS 38: 2014- *Labelling of pre-packaged foods*

KS EAS 39: 2000- *Code of practice- Hygiene in the food and drink manufacturing industry*

CODEX STAN 192- *General Standard for Food Additives*

KS EAS 29:2000- *Carbonated (beverages) soft drinks - Specification.*

KS EAS 12: 2014- *Potable Water- Specification*

KS EAS 770: 2012- *Fortified sugar — Specification*

KS 660:2007- *Guide to the safe use of food additives*

KS 1701-2009- *Refined white sugar — Specification*

KS ISO 4831- *Microbiology of food and animal feeding stuffs- Horizontal method for the detection and enumeration of Coliforms-Most probable number techniques*

KS ISO 4832- *Microbiology of food and animal feeding stuffs- Horizontal method for the enumeration of coliforms- Colony-count technique*

KS ISO 7251- *Microbiology of food and animal feeds- Horizontal method for the detection and enumeration of presumptive Escherichia coli- Most probable number technique*

KS 6561-1- *Fruits, vegetables and derived products- Determination of cadmium content- Part 1: Method using graphite furnace atomic absorption spectrometry*

KS ISO 6888-1- *Microbiology of food and animal feeding stuffs- Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species)*

KS ISO 4833-1- *Microbiology of the food chain- Horizontal method for the enumeration of microorganisms- Part 1: Colony count at 30°C by the pour plate technique.*

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

KS ISO 17239- *Fruits, Vegetables and derived products- Determination of arsenic content- Method using hydride generation atomic absorption spectrometric*

KS ISO 17240- *Fruits and vegetable products- Determination of tin content- Method using flame atomic absorption spectrometric*

KS ISO 12193:2004- *Animal and vegetable fats and oils - Determination of lead by direct graphite furnace atomic absorption spectroscopy.*

3. Terms, definitions and abbreviation

For the purposes of this standard, the following definitions shall apply:

3.1 Water Based flavoured drinks

shall be the concentrated or ready-to-drink products prepared from water, sweetening agents, natural, nature identical or artificial fruit flavourings, permitted colourings and other optional permitted ingredients

3.2 Absence of defects

these products shall be free from foreign material such as grit and dirt

3.3 INS

the International Numbering System used in identifying the approved food additive

3.4 Portable Water

shall be the product complying with KS EAS 12

3.5 Food Additive

means any substance not normally consumed as a food by itself and not normally used as a typical

ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its by-products becoming a component of or otherwise affecting the characteristics of such foods. The term does not include contaminants or substances added to food for maintaining or improving nutritional qualities. (general standard for food additives Codex STAN 192)

3.6 Concentrated Products

A concentrate is a form of substance which does not have the majority of its base solvent, water.

3.7 Ready to drink-define

Ready to drink are packaged beverages that are those sold in a prepared form, ready for consumption.

3.8 hermetically sealed

A hermetic seal is the quality of a container or structure that is airtight (excluding passage of air, oxygen, or other gases).

3.9 Uniform

Not changing in form or character; remaining the same in all cases and at all time.

4. Requirements

4.1. General Requirements

Flavoured soft drinks shall be prepared from portable water complying with KS EAS 12, Refined white sugar complying KS 1701, KS EAS 38, Labelling of pre-packaged foods, permitted colourings, permitted flavourings and other optional permitted ingredients contained in the Food, Drugs and Chemical Substances Act, Cap. 254 of the Laws of Kenya and CODEX STAN 192, General Standard for Food Additives. The mixing, processing and packaging of the Flavoured soft drinks shall be done in accordance KS EAS 39: Code of practice- Hygiene in the food and drink manufacturing industry

4.2. Degrees brix

Water based flavoured drinks shall show a minimum reading of 30° Brix for the concentrated products and 10° Brix for ready to drink products when measured at 20°C in accordance with the test methods stipulated in the Annex A of KS 224. Special dietary foods recommended for calorie reduced diet shall be foods that contain not more than 50% of the total calorie normally present in foods of the same class

Note: For example, for a 50% reduce calorie drink, the brix will be 15° Brix and 5 ° Brix for the concentrated and ready to drink, respectively.

4.3. For special dietary water based drinks sweetened exclusively with permitted non-nutritive sweeteners the requirements stipulated in 4.2 shall not apply.

5. Essential composition and quality factors

5.1. Permitted Ingredients

5.1.1. Food Colors

Only permitted food colours in accordance with the Food, Drugs and Chemical Substances Act shall be applied and codex General Standard for Food Additives.

5.1.2. Sweetening Agents

Sucrose, glucose (dextrose anhydrous) or fructose, natural sweeteners and any other nutritive permitted nutritive sweeteners can be used. Non-nutritive sweeteners are prohibited unless clearly declared as a product for special dietary uses.

5.1.3. Preservatives

Only those preservatives permitted by the Food, Drugs and Chemical Substances Act shall be applied and in amounts not exceeding the limits in KS 660 and Codex General Standard for Food Additives.

5.2. General requirements of finished products

5.2.1. The product shall

- i) have a uniform color
- ii) shall possess a good body,
- iii) shall be free from defects
- iv) shall possess normal characteristic taste and flavour.

5.2.2. Absence of toxic substances

Water based flavoured drink shall not contain any substances harmful or injurious to health.

6. Food Additives

The use of food additives is justified only when such use has an advantage, does not present an appreciable health risk to consumers, does not mislead the consumer, and serves one or more of the technological functions set out by the (Codex STAN 192).

The product shall comply with the maximum use levels stipulated in the Codex STAN 192, General Standard for Food Additives. Water based -flavoured drink shall contain permitted food additives in accordance with the Food, Drugs and Chemical Substances Act, Cap. 254 of the Laws of Kenya and Codex STAN 192).

7. Contaminants

7.1. Limits for heavy metals contaminants

Water based -flavoured drink in solid form shall not contain heavy metal contaminants in excess of the limits given in Table 1.

Table 1 – Limits for heavy metal contaminants in flavoured soft drink

| SL. No. | Contaminants | Maximum level | Test Method |
|----------------|---------------------|----------------------|--------------------|
| i) | Arsenic (As) | 0.2 mg/kg | ISO 17239 |
| ii) | Lead (Pb) | 0.3 mg/kg | KS ISO 9526 |
| iii) | Tin (Sn) | 200 mg/kg | KS ISO 2447 |

7.2. Other Contaminants

The products covered by the provisions of this standard shall conform to those maximum levels for contaminants established by the Codex Alimentarius Commission for these products

8. Hygiene

8.1. Manufacturing Premises

The product shall be manufactured in approved and licensed premises in accordance with the Food, Drugs and Chemical Substances Act, Cap. 254 and the Public Health Act Cap. 242 of the Laws of Kenya. The product shall also be prepared in accordance with the requirements of KS 05-1500- KS EAS 38.

8.2. Microbiological Limits

The product shall be free from pathogenic organisms and shall comply with the microbiological limits stipulated in Table 2.

Table 2 – Microbiological limits for flavoured soft drink in solid form

| SL. No. | Micro-Organism | Limit | Test Method |
|---------|---|----------------|----------------------------|
| i) | <i>Coliforms</i> , per 100mL | Not detectable | KS ISO 4831 or KS ISO 4832 |
| ii) | <i>Escherichia coli</i> , per 25g, (cfu/g), max | Not detectable | KS ISO 7251 |
| iii) | Yeast and moulds (cfu/g), max. | 10 | KS ISO 6881-1 |
| iv) | <i>Staphylococcus aureus</i> , per 25g | Not detectable | KS ISO 6881-1 |
| v) | <i>Shigella</i> per 25g | Not detectable | KS ISO 4833-1 |
| vi) | <i>Salmonella</i> , per 25g | Not detectable | KS ISO 6579-1 |
| vii) | <i>Vibrio cholera</i> , per 25g | Not detectable | KS ISO 6579-1 |

7 Packaging

7.1 The product shall be packed in food-grade packaging material which is inert, water proof and hermetically sealed.

7.2 Where packaging has been done in cans, they shall be lacquered

8 Labelling

8.1 Labelling of flavoured soft drink in solid form shall be done in accordance with the requirements on labelling KS EAS 38, Labelling of Prepackaged Foods, and CODEX STAN 1-1985- General Standard for the Labelling of Prepackaged Foods.

Prepackaged food shall not be described or presented on any label or in any labelling in a manner that is false, misleading or deceptive or is likely to create an erroneous impression regarding its character in any respect and shall include the following:

- i) Name of product such as “Orange flavoured drink” or “Lemon flavoured drink”;

- ii) List of all ingredients shall be listed in descending order of ingoing weight (m/m) and it shall include specific names of additives and/or the INS number at the time of the manufacture of the food.
- iii) Name, physical location and address of manufacturer;
- iv) Net Volume in ml or L;
- v) Batch number;
- vi) Expiry date including day, month and year;
- vii) Country of manufacture or “Made in Kenya” for locally manufactured products;
- viii) Storage conditions;
- ix) Directions of use stating the recommended amount of the product that should be applied in a stated volume of potable water;
- x) Cautionary statement that “upon opening a can of the product, contents should be consumed within a stated time period”

9.2. Pictorial representations- Pictorial representations- The use of fruit pictorials in either form such as pictures, graphics are prohibited.

9.3. Non- Nutritive sweeteners- The use of nonnutritive sweeteners shall necessitate the clear indication that the product is for special dietary uses.

10. Sampling

The products covered by the provisions of this standard shall be tested using appropriate standard methods declared in this standard. Other tests may be performed as per the methods given in the latest edition of AOAC/Codex/ISO and other internationally recognized methods.