

DRAFT KENYA STANDARD

DKS 1773: 2018
ICS

**Water-Based Flavoured drink in Solid
Form -Specification**

PUBLIC REVIEW DRAFT

KS 1773: 2018

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Delmonte Kenya Ltd
Gonas Best Ltd
Kenafric Industries
Aquamist Ltd
PATCO Industries Ltd
Kevian Kenya Ltd
Coca-Cola Central East and West Africa Ltd
Victoria Juice Ltd
Kenya Industrial Research and Development Institute (KIRDI)
Government Chemist's Department
Consumer Information Network
Jomo Kenyatta University of Agriculture and Technology- Department of Food Science and Post-Harvest Technology
Agriculture and Food Authority
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Kenya Bureau of Standards, 2017

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Water- Based Flavoured drink in Solid Form- Specification

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PUBLIC REVIEW DRAFT

NATIONAL FOREWORD

This Kenya Standard has been prepared by the Water Based flavoured Drinks Technical Committee under the guidance of the Standards Projects Committee and it is in accordance with the procedures of the Kenya Bureau of Standards.

Water Based Flavoured drink in Solid Form is consumed as a drink after dissolving with potable water.

Quality of the product is paramount if the consumer's interests are to be protected.

Being a solid product, Water Based flavoured drink in Solid Form has a reasonable shelf-life if stored appropriately. However, the quality of the product is monitored through incorporation of limits of parameters such as moisture content, microbiological status and heavy metal contaminants. This standard also covers aspects related to packaging and labelling of the product.

These products are being marketed as flavoured powders with nature identical, or artificial/synthetic flavors.

During the preparation of this standard wide consultation and laboratory analysis was done.

Acknowledgement is hereby made for the assistance obtained from various sources.

Water- Based Flavoured drink in Solid Form-Specification

1. Scope

This Kenya Standard specifies the requirements for Water Based Flavoured drink in Solid Form intended to be dissolved using potable water into a ready-to-drink beverage.

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.

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.*

KS ISO

3. Terms, definitions and abbreviation

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

3.1. Flavoured soft drink in Solid Form

The dry crystalline product containing permitted sweetening agents either nutritive or non-nutritive sweeteners used singly or in combination and permitted food additives, intended for sale in solid form to be dissolved with portable water for human consumption.

3.2. Ready-to-Drink beverage

shall be the product obtained by dissolving Flavoured soft drink in solid form using potable water in accordance with the directions of use given under 9.1 ix)

3.3. INS

the International Numbering System used in identifying the approved food additives

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. Uniform

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

4. Product Description

The product shall be a soft drink beverage intended for human consumption which contains different types of flavours. The product may be sweetened with nutritive and/or non-nutritive (intense) sweeteners and potable water. The product shall have a uniform colour and particle size. It shall be flowing and free from lumps which dissolves completely in potable water upon stirring.

Ready-to-drink beverage

When the Water- Based Flavoured drink in solid form is dissolved in water in accordance with instructions given, the ready-to-drink product shall

- have a good body, uniform colour, characteristic taste and flavour of the specified flavour;
- be free from suspended particles;

iv) have a maximum moisture content of 3.5 per cent by mass; and

5. Essential composition requirements

Table 1- Requirements for water- based flavoured drinks in solid form

The product shall

SL. No.	Characteristic	Requirement	Test Method
i)	pH	2- 4.5 minimum level	KS ISO 1812
ii)	Moisture	3.5% m/m	KS ISO 712
Methods of test for juices and similar products.			

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, Flavoured soft drink in solid form 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. Limits for heavy metals contaminants

Water Flavoured soft drink in solid form shall not contain heavy metal contaminants in excess of the limits given in Table 2.

Table 2 – Limits for heavy metal contaminants in Flavoured soft drink in solid form

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

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 and CODEX STAN 192- General Standard for Food Additives

8.2. Microbiological Limits

The product shall be free from pathogenic organisms and shall comply with the microbiological limits stipulated in Table 3.

Table 3 – 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 aureas</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

9. Packaging and Labelling

9.1. Packaging

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

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

The can shall have an additional lid after the hermetic seal to ensure good hygienic conditions after opening the can during usage.

9.2. Labelling

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- 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 powder” or “Lemon flavoured powder”;
- 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 weight in g or kg;
- 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”

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

9.2.2. 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.