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Canned fruit cocktail — Specification

PUBLIC REVIEW DRAFT



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Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

This Draft Uganda Standard, DUS DEAS 1061: 2021, *Canned fruit cocktail — Specification*, is identical with and has been reproduced from an East African Standard, EAS 1061: 2021, *Canned fruit cocktail — Specification*, and adopted as a Uganda Standard.

The committee responsible for this document is Technical Committee UNBS/TC 204, *Fruits, vegetables, tubers and processed products*.

Wherever the words, "East African Standard" appear, they should be replaced by "Uganda Standard".



DEAS 1061: 2021

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DRAFT EAST AFRICAN STANDARD

Canned fruit cocktail — Specification

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EAST AFRICAN COMMUNITY

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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 016/02, *Processed fruits, vegetable and tubers*.

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Canned fruit cocktail — Specification

1 Scope

This standard prescribes the requirements, sampling and test methods for canned fruit cocktail (peach, pineapple, grapes, pears, cherries) intended for direct 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.

AOAC 999.10, *Determination of Lead, Cadmium, Zinc, Copper and Iron in foods Atomic absorption spectrometry after microwave digestion*

CODEX STAN 192, General Standard for food additives

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

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

ISO 1842, *Fruits and vegetable products — Determination of pH*

ISO 2447, *Fruit and vegetable products — Determination of tin*

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*

ISO 6633, *Fruits, vegetables and derived products — Determination of lead content — Flameless atomic absorption spectrometric method*

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*

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 document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

**3.1
canned fruit cocktail**
a canned mixture of small fruits and/or small pieces of fruits prepared by a mixture of small fruits and/or small pieces of fruits

**3.2
peaches**
any firm yellow variety of the species *prunus persica* L. including clingstone and freestone types but excluding nectarines, peeled, pitted and diced.

**3.3
pears**
any variety of the species *Pyrus communis* L. or *Pyrus sinensis* L. peeled, cored, and diced.

**3.4
pineapple**
any variety of the species *Ananas comosus* L., peeled, cored, in sectors, or diced.

**3.5
cherries**
any variety of the species *Prunus cerasus* L., halves or whole, pitted or unpitted, and which may be:

- i) any light, sweet variety; or
- ii) artificially coloured red; or
- iii) artificially coloured red with added flavourings, whether natural or synthetic.

**3.6
grapes**
any seedless variety of the species *Vitis vinifera* L. or *Vitis labrusca* L., whole.

4 Product description

4.1 Canned fruit cocktail

The fruits may include but not limited to the following kinds and styles

- a) Peaches
- b) Pears
- c) Pineapple
- d) Cherries

4.2 Forms of pack

4.2.1 Five fruits – Fruit cocktail

A mixture of the five fruits of the kinds and styles described in 4.1.1

4.2.2 Four fruits – Fruit cocktail

A mixture of four fruits of the kinds and styles described in 4.1.1 except that cherries and grapes may be omitted.:

4.3 Forms of packing media

Canned fruit cocktail may be packed in any one of the following packing media with or without sugars and/or optional ingredients:

- a) Water - in which water is the sole liquid packing medium.
- b) Water and fruit juice - in which water and fruit juice(s) from the specified fruits, which may be strained or filtered, is the sole liquid packing medium.
- c) Fruit juice - in which one or more fruit juice(s) from the specified fruits, which may be strained or filtered, is the sole liquid packing medium.

5 Requirements

5.1 Ingredients

5.1.1 Basic ingredients

5.1.1.1 Fruit as defined in 4.1.1;

5.1.1.2 Water complying to EAS 12 and or Fruit juice;

5.1.1.3 Fruit juice

5.1.2 Other ingredients

5.1.2.1 One or more of the following sugars: sucrose, honey, invert sugar syrup, dextrose, glucose syrup, dried glucose syrup;

5.1.2.2 Spices and herbs

5.2 Formulation

5.2.1 Fruit content

5.2.1.1 Proportions of fruits

The products shall contain fruits in the following proportions, based on the individual drained fruit weights in relation to the total drained weight of all the fruits: Table 1

	5 Fruits - Fruit Cocktail	4 Fruits - Fruit Cocktail
Peaches	30% to 50%	30% to 50%
Pears	25% to 45%	25% to 45%
Pineapple	6% to 16%	6% to 25%
Grapes	6% to 20%	- and either - 6% to 20%
		or

Cherries	2% to 6%	2% to 15%
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5.2.1.2 Compliance with fruit content requirements

A lot will be considered as meeting the requirements for Proportions of fruits (2.2.1.1) when:

5.2.1.2.1 The average of the individual fruit proportions from all containers in the sample is within the range required for the individual fruits; and

5.2.1.2.2 The number of individual containers which are not within the range for any one or more fruits do not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5 (see relevant Codex texts on methods of analysis and sampling).

5.2.2 Packing media

5.2.2.1 Classification of packing media when sugars are added

5.2.2.1.1 When sugars are added to water or water and one or more fruit juices the liquid media shall be classified on the basis of the cut-out strength as follows:

- a) Basic syrup strengths

Light Syrup - Not less than 14°Brix

Heavy Syrup - Not less than 18°Brix

- b) Optional packing media

When not prohibited in the country of sale, the following packing media may be used:

Water Slightly Sweetened)

Slightly Sweetened Water) Not less than 10°Brix but less than 14°Brix

Extra Light Syrup)

Extra Heavy Syrup) Not less than 22°Brix

5.2.2.1.2 When sugars are added to fruit juice(s), the liquid media shall be not less than 14°Brix and they are classified on the basis of the cut-out strength as follows:

Lightly sweetened

(name of fruits) juice - Not less than 14°Brix

Heavily sweetened

(name of fruits) juice - Not less than 18°Brix

5.2.2.2 Compliance with packing media classification

Cut-out strength of sweetened juice of syrup is to be determined on sample average, but no container may have a Brix value lower than that of the minimum of the next category below, if such there be.

5.3 Sizes and shapes of fruits

5.3.1 Diced peaches, pears or pineapple

75 % or more of all such drained fruits are of approximate cube-shapes which: are not over 20 mm in greatest edge dimension; and will not pass through square meshes of 8mm.

5.3.2 Section/part of pineapple

80% or more of all the drained pineapple portion approximate wedge-shapes of the following dimensions:

Outside arc - 10 mm to 25 mm; and

Thickness - 10 mm to 15 mm; and

Radius (from inside to outside arc) - 20 mm to 40mm.

5.3.3 Whole grapes or cherries

90 % or more by count (based on sample average) of whole grapes, or of whole cherries, approximate normal shape except for proper preparation (such as removing pits or stems) and:

- a) are not broken into two or more parts;
- b) are not seriously crushed, mutilated, or torn.

5.3.4 Halved cherries

80 % or more by count (based on sample average) of the cherry units are approximate halves which are not broken into two or more parts.

5.4 Quality Criteria

5.4.1 Colour

Canned fruit cocktail shall have normal colour except that a slight leaching of colour from the coloured cherries is acceptable.

5.4.2 Flavour

Canned fruit cocktail shall have a normal flavour characteristic for each fruit and for the entire mixture.

Canned fruit cocktail with special ingredients shall have the flavour characteristic of that imparted by the fruits in the product and the other substances used.

5.4.3 Texture

The fruit ingredients shall not be excessively firm nor excessively soft, as is appropriate for the respective fruit.

5.4.4 Defects and allowances

Canned Fruit Cocktail shall be substantially free from defects within the limits set forth as follows: (see relevant Codex texts on methods of analysis and sampling).

		Maximum Limits
		(based on the weight of drained fruit)
(a)	Blemished fruit pieces - (consisting of pieces of fruit with dark surface areas, spots penetrating the fruit, and other abnormalities)	20 % m/m Total of all fruit units so affected
(b)	Peel (based on averages) (considered a defect only when occurring on, or from, those fruits which are peeled)	25 cm ² aggregate area per kg
(c)	Pit material (based on averages) - (consisting of pieces of pit or of fruit stones and hard and sharp pit points; very small pit fragments of less than 5 mm in greatest dimension which do not have sharp points or edges are disregarded)	1 piece, of any size per 2 kg
(d)	Small stems (based on averages) - (such as capstems from grapes)	5 per kg
(e)	Large stems (based on averages) - (such as from peaches, pears, or cherries)	1 large stem, or piece thereof, per kg

5.4.5 Classification of “defectives”

A container shall be considered a “defective” when it fails to meet one or more of:

- a) the applicable requirements in 5.3.1 through 5.3.4 (except for style and shapes for grapes and cherries which are based on averages); and
- b) the applicable quality requirements in 5.4.1 through 5.4.4 (except for peel, pit material, and stems which are based on averages).

5.4.6 Lot Acceptance

A lot will be considered as meeting the applicable quality and other requirements referred to in sub-section 5.4.5 when:

- a) for those requirements which are not based on averages the number of “defectives”, as defined in sub-section 5.4.5, does not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5 and
- b) the requirements which are based on sample average are complied with.

5.5 Specific requirements

Canned fruit cocktail shall comply with the specific requirements in Table 2 when tested in accordance with the methods specified therein.

Table 2 — Specific requirements for canned fruit cocktail

Characteristic	Requirement	Test method
Ethanol content, %, max.	0.3	ISO 2448
Acid insoluble ash, %, max.	0.02	ISO 763
pH	3.6-4	ISO 1842

6 Food additives

Food additives when used in processed canned fruit cocktail shall be in accordance with CODEX STAN 192.

7 Contaminants

7.1 Pesticide residues

Canned fruit cocktail shall comply with the pesticide residue limits prescribed by the Codex Alimentarius Commission of the respective commodity.

7.2 Heavy metal contaminants

Canned fruit cocktail shall not contain heavy metal contaminants in excess of the limits specified in Table 4 when tested in accordance with the methods specified therein.

Table 4 – Heavy metal contaminants limit in canned fruit cocktail

Heavy metals	Maximum limit mg/kg	Test method
Lead (Pb) mg/kg	0.1	ISO 6633
Tin(Sn) mg/kg	250	ISO 2447
Cadmium (Cd)	0.05	AOAC 999.10

8 Hygiene

8.1 Canned fruit cocktail shall be produced and handled under hygienic conditions in accordance with EAS 39.

8.2 Canned fruit cocktail shall comply with microbiological limits given in Table 5 when tested in accordance with the methods specified therein.

Table 5 — Microbiological limits for canned fruit cocktail

Microorganism	Maximum limit cfu/g	Test method
Total plate count	50	ISO 4833-2
<i>Escherichia coli</i>	Absent	ISO 16649-2

Yeasts and moulds	30	ISO 21527-1
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9 Packaging

Canned fruit cocktail shall be packaged in food grade material that ensures the integrity and safety of the product.

10 Labelling

10.1 General labeling requirements

In addition to the requirements of EAS 38, EAS 803, EAS 804 and EAS 805, the following specific labelling requirements shall apply and shall be legibly and indelibly marked on the container:

- a) Name of the product
- i) The name of the product shall be "Fruit Cocktail".
 - ii) The following, as applicable, shall be included as part of the name or in close proximity to the name, unless in the country where the product is sold a true pictorial representation of the product accompanied by a complete list of the fruits in the statement of ingredients would suffice in accordance with its national legislation: "5 Fruits" or "With Five Fruits"; or "4 Fruits" or "With Four Fruits".
 - iii) When the packing medium is composed of water, or water and one or more fruit juices in which water predominates, the packing medium shall be declared as part of the name or in close proximity thereto as: "In water" or "Packed in water".
 - iv) When the packing medium is composed solely of a single fruit juice, the packing medium shall be declared as part of the name or in close proximity thereto as: "In (name of fruit) juice".
 - v) When the packing medium is composed of two or more fruit juices, it shall be declared as part of the name or in close proximity thereto: "In (name of fruits) juice" or "In fruit juices" or "In mixed fruit juices"
 - vi) When sugars are added to water, or water and one or more fruit juices in which water predominates, the packing medium shall be declared as may be appropriate:
 - "Water slightly sweetened" or
 - "Slightly sweetened water" or
 - Extra light syrup" or
 - "Light syrup" or
 - "Heavy syrup" or
 - "Extra heavy syrup".
 - vii) when the packing medium contains water and one or more fruit juice(s), in which the fruit juice comprises 50% or more by volume of the packing medium, the packing medium shall be designated to indicate the preponderance of such fruit juice, as for example: "In (name of fruits) juice(s) and water"

viii) When sugars are added to one or more fruit juices, the packing medium shall be declared as may be appropriate:

“Lightly sweetened (name of fruit(s)) juice” or

“Heavily sweetened (name of fruit(s)) juice” or “Lightly sweetened fruit juices” or

“Lightly sweetened mixed fruit juices” or “Heavily sweetened fruit juice” or

“Heavily sweetened mixed fruit juices”

ix) A declaration, as part of the name or in close proximity to the name, shall be made of any characteristic flavouring; e.g. “With X”, as appropriate.

b) List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with the EAS 38.

When cherries are artificially coloured and/or have added flavourings, the following declarations are permitted in the list of ingredients in lieu of naming the additive:

“Cherries artificially coloured red”; or

“Cherries artificially coloured red with added flavourings”.

If ascorbic acid is added to preserve colour, its presence shall be declared in the list of ingredients in the following manner:

“L-ascorbic acid added as an anti-oxidant”.

- c) date of manufacture;
- d) expiry date;
- e) brand /trade name;
- f) net contents;
- g) instructions for use;
- h) storage conditions;
- i) name and address of the manufacturer; and
- j) country of origin.

11 Sampling

Sampling shall be done in accordance with corresponding Annex.

Bibliography

- [1] ISO #####-#, *General title — Part #: Title of part*
- [2] ISO #####-##:20##, *General title — Part ##: Title of part*

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