DRAFT Jamaican Standard

Specification

for

Bamboo straws



**COMMENT DEADLINE: 8 September 2019 - 29 November 2019** 

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JS 348: 201X

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## CERTIFICATION MARKS



Product Certification Marks



Plant Certification Mark



Certification of Agricultural Produce (CAP) Mark



Jamaica-Made Mark

**Draft Jamaican Standard** 

Specification

For

**Bamboo straws** 

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Month 201X

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#### <mark>ISBN</mark>

Declared by the Bureau of Standards to be a standard specification pursuant to section 7 of the Standards Act 1969.

#### First published Month 201X

This standard specification was circulated in the draft form for comments under the reference DJS 348: 2019.

Jamaican Standards establish requirements in relation to commodities, processes and practices, but do not purport to include all the necessary provisions of a contract.

The attention of those using this standard specification is called to the necessity of complying with any relevant legislation.

No.	Date of issue	Remarks	Entered by and date

#### Amendments

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#### Foreword

This standard has been prepared to provide guidelines for the production of bamboo straws.

This standard is voluntary.

#### **Committee Representation**

The preparation of this standard for the Standards Council, established under the Standards Act 1969, was carried out under the supervision of the BSJ's Bamboo & Indigenous Materials Product Standards Technical Committee which at the time comprised the following members:

#### Acknowledgemnt

Acknowledgment is made to the International Organization for Standardization (ISO) for permission to reproduce materials.

#### **Related Documents**

This standard makes reference to the following:

ISO 18188

Specification of polypropylene drinking straws

# **Draft Jamaican Standard for Bamboo straws**

# 1 Scope

This Jamaican Standard specifies the general characteristics, requirements and methods for testing of bamboo drinking straws. It is applicable to bamboo straws having an inner diameter of 1 mm to 12 mm.

# 2 Terms and definitions

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

#### 2.1

#### bamboo drinking straw

tube of bamboo generally used for sucking up liquid from a container

#### 2.2

straight straw

straw with a straight tube

# 2.3

flexible/bendable straw straw with an angle-adjustable bellows segment

#### 2.4

#### spoon straw

straw with a spoon-shaped end, intended for slushes

## 2.5

#### sharp tip straw

straw with a sharp tip, intended for insertion through film sealed containers

#### 2.6

#### extendable straw

straw composed of concentric sections whose length is extended by pulling the inner tube out of the outer one

#### 2.7

pack primary packaging

## 3 Raw materials

A suitable grade of bamboo conforming to the food contact requirements of the intended market shall be utilized in the manufacture of bamboo straws. Additives, e.g. colorants, if used, shall also be of food grade. Labelling of individual bamboo straws shall be non-toxic and shall not compromise the integrity of the straw.

## **4** Requirements

The following are requirements provided for general guidance. Additional requirements shall be as agreed upon between the interested parties.

## 4.1 Appearance

Bamboo straws shall be free of visible contaminants and any structural defects such as visible cracks or splits.

## 4.2 Tolerance on dimensions

#### 4.2.1 Inner diameter

The tolerance of the inner diameter of straws shall be within ±0.3 mm of the nominal diameter.

#### 4.2.2 Length

The tolerance of the length of straws shall be within  $\pm 3$  mm of the nominal length if the nominal length is less than or equal to 250 mm. In case the nominal length is more than 250 mm, the tolerance shall be within  $\pm 5$  mm of the nominal length.

#### 4.2.3 Wall thickness

Wall thickness of straws shall not be less than 2 % of the nominal diameter.

#### 4.2.4 Uniformity of wall thickness

The difference between the maximum and minimum wall thickness shall be less than 0.05 mm (excluding the thickness of decorative adornment).

## 4.3 Properties

#### 4.3.1 Heat endurance

There shall be no deformation and/or colour fading after testing in accordance with 5.4.1.

#### 4.3.2 Cold endurance

The straws shall not crack after testing according to 5.4.2.

## 5 Test methods

## 5.1 Conditioning and testing atmosphere

Dimensional measurement and testing shall be carried out at room temperature.

## 5.2 Appearance inspection

Inspection for visible contaminants and any structural defects of the straws shall be conducted under microscopic examination.

## 5.3 Dimensional measurement

#### 5.3.1 Inner diameter

Measure the inner diameter of a straw at one end, using a ruler or caliper, capable of reading to 0.01 mm or less. For extendable straws, the measurement shall be done at the outer tube.

## 5.3.2 Length

The length of a straw shall be measured using a graduated ruler or other suitable means, capable of reading to 0.5 mm or less.

Flexible/bendable straws shall be measured as received.

Extendable straws shall be measured at their full extension.

#### 5.3.3 Wall thickness

Measure the wall thickness of a straw at two positions of each end using a micrometer, capable of reading to 0.001 mm or less.

#### 5.3.4 Uniformity of wall thickness

From the values of the wall thickness obtained per 5.3.3, calculate the difference between the maximum and minimum wall thickness.

## **5.4 Properties**

#### 5.4.1 Heat endurance test

Immerse the entire length of the straws in a beaker filled with  $(95 \pm 2)$  °C distilled water. Put the beaker in an oven at a constant temperature of  $(50 \pm 2)$  °C for 30 min. Remove the straws from the water, spread them out and leave at ambient temperature for 30 min. Examine thoroughly for any visible deformation and colour fading.

Flexible/bendable straws shall be tested as received.

Extendable straws shall be tested at their full extension.

## 5.4.2 Cold endurance test

Immerse the entire length of the straws in a beaker filled with  $(1 \pm 1)$  °C ice cold water. Keep the water at a constant temperature of  $(1 \pm 1)$  °C for 30 min by any suitable means. Remove a straw from the water and immediately bend it 90° and release at five different points along its immersed section. After bending all of the straws, examine thoroughly for any cracks.

Flexible/bendable straws shall be tested as received.

Extendable straws shall be tested at their full extension.

## 6 Packaging and labelling

## 6.1 Packaging

The straws shall be packed appropriately to keep them clean and may be individually wrapped with film or paper.

## 6.2 Labelling on packaging

The packaging shall be labelled with the following information:

a) the name of the manufacturer;

- b) the material (bamboo) and size of the straws;
- c) number of straws in a pack;
- d) the month and year of manufacture;

e) any information regarding health and safety required by the buyer.

# 7 Sampling and criteria for conformity

Sampling and criteria for conformity, including sample size for each testing items are specified in Annex A.

# Annex A (informative)

# Sampling and criteria for conformity

# A.1 Sampling

A.1.1 All the straws of the same dimensions in a consignment shall be grouped together to constitute a lot.

**A.1.2** The conformity of the lot to the requirements of this International Standard shall be determined on the basis of tests carried out on samples randomly selected from the lot.

A.1.3 The requirements for sampling for packaging and labelling inspection are specified in Table A.1.

Number of pack in lot (pack)	Sample size for packaging and labelling inspection (pack)	Acceptance number
Up to 50	2	0
51 <b>-</b> 500	8	1
501 - 3 200	13	2
3 201 and above	20	3

Table A.1 — Sample size for packaging and labelling inspection

**A.1.4** For appearance inspection and measurement of dimensions, the sample size shall be 30 % of the corresponding size used for packaging and labelling inspection but in no case less than six pieces.

A.1.5 The requirements for sampling for bending, heat and cold endurance test are specified in Table A.2.

# A.2 Criteria for conformity

The lot shall be considered as conforming to the requirements of this standard if all of the following conditions are satisfied:

a) the number of pack that found defective during the packaging or labelling inspection shall be no more than the acceptance number of the corresponding sample size specified in Table A.1;

b) all of the straws in A.1.4 shall be in accordance with 5.1, 5.2.1, 5.2.2, 5.2.3 and 5.2.4;

c) the number of straws that failed the bending or heat endurance or cold endurance test shall be no more than the acceptance number of the corresponding sample size specified in Table A.2.

Number of straws in lot (piece)	Sample size for bending, heat and cold endurance test (piece)	Acceptance number
Up to 50	2	0
51 <b>-</b> 500	8	1
501 - 3 200	13	2
3 201 and above	20	3

Table A.2 — Sample size for bending, heat and cold endurance test

#### Standards Council

The Standards Council is the controlling body of the Bureau of Standards Jamaica and is responsible for the policy and general administration of the Bureau.

The Council is appointed by the Minister in the manner provided for in the Standards Act, 1969. Using its powers in the Standards Act, the Council appoints committees for specified purposes.

The Standards Act, 1969 sets out the duties of the Council and the steps to be followed for the formulation of a standard.

#### Preparation of standards documents

The following is an outline of the procedure which must be followed in the preparation of documents:

- 1. The preparation of standards documents is undertaken upon the Standard Council's authorisation. This may arise out of representation from national organisations or existing Bureau of Standards' Committees of Bureau staff. If the project is approved it is referred to the appropriate sectional committee or if none exists a new committee is formed, or the project is allotted to the Bureau's staff.
- 2. If necessary, when the final draft of a standard is ready, the Council authorises an approach to the Minister in order to obtain the formal concurrence of any other Minister who may be responsible for any area which the standard may affect.
- 3. The draft document is made available to the general public for comments. All interested parties, by means of a notice in the Press, are invited to comment. In addition, copies are forwarded to those known, interested in the subject.
- 4. The Committee considers all the comments received and recommends a final document to the Standards Council
- 5. The Standards Council recommends the document to the Minister for publication.
- 6. The Minister approves the recommendation of the Standards Council.
- 7. The declaration of the standard is gazetted and copies placed on sale.
- 8. On the recommendation of the Standards Council the Minister may declare a standard compulsory.
- 9. Amendments to and revisions of standards normally require the same procedure as is applied to the preparation of the original standard.

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The Bureau can supply on demand copies of standards produced by some national standards bodies and is the agency for the sale of standards produced by the International Organization for Standardization (ISO) members.

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