



# বাংলাদেশ স্ট্যান্ডার্ডস এন্ড টেস্টিং ইনস্টিটিউশন

শিল্প মন্ত্রণালয়  
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার



সূত্র নং ৩৬.০৫.০০০০.০০২.১২.৫২২.১৯

তারিখ: ৩১-১২-২০১৯ খ্রিঃ

বিষয়: 'Jute leaves herbal drink' পণ্যের উপর নতুন বাংলাদেশ জাতীয় মান প্রণয়নের লক্ষ্যে টেকনিক্যাল কমিটি কর্তৃক প্রাথমিকভাবে অনুমোদিত খসড়া মান-এর উপর মতামত আহ্বান প্রসঙ্গে।

উপর্যুক্ত বিষয়ে আদিষ্ট হয়ে জানানো যাচ্ছে যে, বাংলাদেশ পাটকল কর্পোরেশন কর্তৃক নতুন একটি পণ্য 'Jute leaves herbal drink'-এর উপর বাংলাদেশ জাতীয় মান প্রণয়নের আবেদনের প্রেক্ষিতে অত্র সংস্থার 'সফট ড্রিংকস এন্ড বেভারেজেস' টেকনিক্যাল কমিটির সভায় বিস্তারিত আলোচনান্তে একটি খসড়া মান প্রাথমিকভাবে অনুমোদিত হয়।

২। প্রাথমিকভাবে অনুমোদিত খসড়া মানটি নিয়মানুযায়ী কৃষি ও খাদ্য বিভাগীয় কমিটি কর্তৃক চূড়ান্তভাবে অনুমোদনের পূর্বে আপনার/আপনার প্রতিষ্ঠানের মতামত আহ্বান করা যাচ্ছে। বিবেচ্য মানটির উপর কোনরূপ মতামত যদি থাকে, তবে তার যৌক্তিকতা উল্লেখপূর্বক প্রদানের নিমিত্ত খসড়া মানটির ১ (এক) কপি এতদসঙ্গে প্রেরণ করা হলো।

৩। এমতাবস্থায়, প্রস্তাবিত খসড়া মানটির উপর সুচিন্তিত মতামত (যদি থাকে) আগামী ২৯ ফেব্রুয়ারি ২০২০ খ্রিঃ তারিখের মধ্যে নিম্নস্বাক্ষরকারী বরাবর প্রেরণের জন্য অনুরোধ করা হলো। নির্ধারিত সময়ের মধ্যে কোনরূপ মতামত না পাওয়া গেলে প্রস্তাবিত খসড়া মানটির সাথে সম্মত রয়েছে মর্মে পরবর্তী কার্যক্রম গ্রহণ করা হবে।

৪। জাতীয় মান প্রণয়নে সকলের সহযোগিতা একান্তভাবে কাম্য।

(গোলাম মোঃ সরওয়ার)

উপ-পরিচালক (কৃষি ও খাদ্য)

মোবাঃ ০১৭১৮৪৬৩৬৬২

ইমেইল: [kbdsarwarbsti@gmail.com](mailto:kbdsarwarbsti@gmail.com)

সংযুক্তি: বর্ণনামতে।

বিতরণ প্রয়োজনীয় কার্যার্থে (জ্যেষ্ঠতার ক্রমানুসারে নয়):

- ১। সংশ্লিষ্ট সকল স্টেকহোল্ডার ও কমিটির সদস্যবৃন্দ।
- ২। চেয়ারম্যান, বাংলাদেশ নিরাপদ খাদ্য কর্তৃপক্ষ, প্রবাসী কল্যাণ ভবন, ৭১-৭২ ইন্সটন গার্ডেন রোড, ঢাকা।
- ৩। মহাপরিচালক, জাতীয় ভোক্তা অধিকার সংরক্ষণ অধিদপ্তর, টিসিবি ভবন, ১ কাওরান বাজার, ঢাকা।
- ৪। চেয়ারম্যান, বাংলাদেশ পাটকল কর্পোরেশন, আদমজি কোর্ট, মতিঝিল বা/এ, ঢাকা-১০০০।
- ৫। সভাপতি, এফবিসিসিআই, ৬০ মতিঝিল বাণিজ্যিক এলাকা, ঢাকা।
- ৬। সভাপতি, ক্যাভ, ৮/৬ সেগুনবাগিচা, ঢাকা।
- ৭। পরিচালক (সিএম), বিএসটিআই, ঢাকা।
- ৮। পরিচালক (রসায়ন), বিএসটিআই, ঢাকা।
- ৯। প্রোগ্রামার আইসিটি সেল, বিএসটিআই, ঢাকা (বিএসটিআই'র ওয়েবসাইটে দেয়ার জন্য)।

অনুলিপি (সদয় অবগতির জন্য):

- ১। পরিচালক (মান) বিএসটিআই, ঢাকা।
- ২। পিএ টু মহাপরিচালক, বিএসটিআই, ঢাকা।

মান ভবন, ১১৬/ক, তেজগাঁও শিল্প এলাকা, ঢাকা-১২০৮

ফোন: ৮৮৭০২৭৫, ৮৮৭০২৭৭, ৯১৩১৫৮২, ৮৮৭০২৭৮, ৮৮৭০২৭৯, ৮৮৭০২৮০, ৮৮৭০২৮১

Fax: 9131581, E-mail: [bsti@bangla.net](mailto:bsti@bangla.net), Website: <http://www.bsti.gov.bd>

## Foreword

This Bangladesh standard was adopted by the Bangladesh Standards and Testing Institution on ..... after the draft finalized by the Soft Drinks and Beverages Sectional Committee had been approved by the Agricultural and Food Products Divisional Committee.

Herbal drinks (infusions) are consumed not only as traditional herbal infusions, but increasingly also as preparations from herbal and fruit infusions and ingredients of other foodstuffs, such as herbal and fruit ice tea, instant preparations or concentrates from herbal and fruit drinks (infusions).

Consumption of Herbal Drinks (infusions) in Bangladesh has become popular beverages in the market. Their popularity reflects increasing consumer appreciation for the wide range of natural and refreshing tastes they offer and also due to its health and sensory properties. There is therefore need to have a standard that provides common understanding of what herbal and fruit drinks (infusions) are; to promote free trade in the world market; to improve consumer's knowledge about these products; and to guide the manufacturers and traders respectively on safety and quality during production and importation of the Herbal and fruit drinks (infusions).

The standard stipulates the essential compositional, physical and chemical properties, contaminants and microbiological and labelling requirements.

In the preparation of this standard useful information were derived from various sources mainly the local manufacturers and members of the technical committee.

This standard is subject to periodical reviews and amendments, if necessary, in order to keep pace with the latest industrial and technological innovations. Any suggestions for improvement will be recorded and placed before the Committee in due course.

For the purpose of deciding, whether a particular requirement of this standard is complied with the final value observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with BDS 103. The number of significant places retained in the rounded off value should be the same as that of the specified value in the standard.

# Bangladesh Standard Specification For Jute Leaves Herbal Drink

## 1. Scope

This standard prescribes the requirements and the methods of sampling and test for jute leaves (*Corchorus olitorius*) herbal drink.

## 2. References

The relevant standards listed in Annex A are necessary adjuncts to this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

## 3. Terms and Definitions

### 3.1 Jute Leaves Herbal Drink (Infusions)

**3.1.1** Herbal Drink (infusions) made from jute leaves (*Corchorus olitorius*) or parts of other edible plants (roots, flowers, leaves, barks, fruits, seeds or twigs) which do not originate from *Camellia sinensis* (L.) and which are intended for the same use as tea. Herbal infusions are also blends of herbal material with tea which do not fall under the category “flavoured tea”.

**3.1.2** Herbal Drink (infusions) refers to an extraction procedure in which boiling water is poured on the herb or herbal material to produce a dilute liquid preparation. Typically, the herb or herbal material is allowed to stand for some time (usually 5–20 minutes). Sometimes another quantity of hot water is added and allowed to stand for additional time. The extracted plant material is removed by straining and the drink (infusion) is ready for use. Infusion is commonly employed to make herbal drinks.

### 3.2 Foreign Matter

Any material which is not from the intended plants, flavor used or fragments of plants e.g. piece of break, cement plaster, sand, stones, metallic chips, wood chips, plastic chips, grass or parts of other plants, and any other organic matter like visible moulds, spider net, frass (dropping of insect), dead or live insect, pest, or insect egg, feather of bird and hair, etc.

### 3.3 Flavoured herbal drink (infusions)

Herbal drink (infusions) to which fragrance and/or flavouring substances is added in order to lend a specific flavour.

### 3.4 Extracts from herbal drinks (infusions)

Watery extracts of herbal drink (infusions) which have been dehydrated.

### 3.5 Flavoured extracts from herbal and fruit drink (infusions)

Extracts from herbal drink (infusions) to which fragrance and/or flavouring substances are added in order to lend a specific flavour.

## 4. Description

### 4.1 Product description

Herbal drinks (infusions) are parts of plants which do not originate from the tea plant (*Camellia sinensis* L.) and which are intended for the same use as tea. They may include blends of herbal, spices and fruit infusions with tea as a minor component and are intended for food use by brewing with freshly boiling water. Permitted flavourings and/or food ingredients with permitted flavouring properties can be added in order to lend a specific flavour.

### 4.2 Drink Infusion/sensory infusion

The standard procedure for preparation of drink (infusion) liquors for sensory evaluation may be as in Annex B.

### 4.3 Types of herbal drink (infusion) products

The commonly used cuts/types of the products may be as indicated in Annex C. However, the list is not exhaustive.

## 5. Essential Composition

### 5.1 Basic herbal ingredients

Parts of various edible plants (leaves, roots, flowers, barks, fruits, seeds or twigs) like jute leaf (*Corchorus olitorius*), nettle, fennel, rose-hip, hibiscus blossom, camomile, spearmint, lemon grass, lime blossom, mate, lemon balm, orange blossom, orange leaf, peppermint, ginseng, verbena, ginger singly or a blend thereof.

### 5.2 Optional ingredients

5.2.1 Dry fruits – corresponding proportions of dehydrated or dried fruits.

#### 5.2.2 Other permitted ingredients

5.2.2.1 Herbal drink (infusions) may consist of permitted flavorings and food ingredients with flavouring properties which are natural and nature identical fragrance or taste.

**Note** - Flavourings shall not be used for the purpose of imitating or intensifying the fragrance and/or taste of any particular herbal and fruit infusions product which is marketed as such (e.g. peppermint infusion)

5.2.2.2 Food additives, if used, shall be permitted under national regulations as well as in accordance with BDS CAC 192 (Codex General Standard for Food Additives).

## 6 REQUIREMENTS

### 6.1 Flavour and aroma

The product shall have a pleasant flavour and aroma characteristic of the same kind of herbs and fruits from which it is made. It shall be free from foreign matter.

### 6.2 Hygiene

During processing, handling, storage and transportation, effective measures must be taken to prevent cross contamination with chemicals, microbial or physical contaminants. The product shall be processed, packaged, stored, transported and distributed in accordance with the conditions prescribed in BDS 822.

### 6.3 Pesticide residues

The product shall be prepared with special care under Good Manufacturing Practices, so that residues of the those pesticides which may be required in the production, storage or processing of the raw materials or the finished food ingredient do not remain, or, if technically unavoidable, are reduced to the maximum extent possible.

### 6.4 Legal Requirement

The product shall in all other aspects comply with the requirements of the legislations enforced in the country.

### 6.5 Other requirements

The product shall comply with the requirements given in Table 1, when tested according to the methods given in Column 4 of the Table 1.

SI No.	CHARACTERISTIC	LIMIT	METHOD OF TEST
i)	Moisture, percent by mass, Max.	10.0	ISO 1573
ii)	Acid insoluble ash (on dry basis), percent by mass, Max.	5.0	BDS ISO 1577
iii)	Aerobic plate count, CFU/g, Max.	10 <sup>7</sup>	BDS ISO 4833
iv)	Yeasts and moulds, CFU/g, Max.	10 <sup>5</sup>	ISO 21527-1
v)	<i>Salmonella spp.</i> in 125 g	Absent	BDS ISO 6579
vi)	<i>E. coli</i> , CFU/g, Max.	10 <sup>3</sup>	ISO 16649-2
vii)	Arsenic, mg/kg, Max.	0.2	ISO 15586
viii)	Cadmium, mg/kg, Max.	1.0	AOAC 942.17
ix)	Lead, mg/kg, Max.	2.0	AOAC 942.17
x)	Caffeine	Nil	ISO 10727
xi)	Total Aflatoxin, µg/kg, Max.	3.0	AOAC 993.17
xii)	Selenium, µg/100, Max.	15	ISO 15586
xiii)	Antioxidant capacity in trolox equivalent (ORAC), mmol TE/100g, Min.	56.0	Fluorescence Spectroscopy method
xiv)	Polyphenols, mg/100g, Min.	2600	Spectrophotometric method
xv)	alpha-Linolenic acid (ALA), g/100g, Min.	2.20	HPLC method
xvi)	Linoleic acid (LA), g/100g, Min.	0.60	HPLC method

## 7. PACKING AND MARKING

### 7.1 Packing

The product shall be packaged in food grade materials that will safeguard the hygienic, nutritional and organoleptic qualities of the product.

**7.2 Marking** - Each package shall be suitably labelled so as to give the following information:

- a) Name of the product (see 7.2.1) with brand name if any;
- b) Name and address of the manufacturer/importer;
- c) Batch or code number;
- d) Net mass in g;
- e) Date of manufacture;
- f) Date of expiry;
- g) List of the ingredient - a complete list of ingredients shall be declared on the label in descending order of proportion;
- h) Maximum Retail Price (MRP);
- i) Drink (infusion) preparing instruction;
- j) Storage instruction;
- k) Any other requirements as specified under the Bangladesh standards of weights and measures (packaged commodities) Rules, 2007.

**7.2.1 Name of the product**

- a) Herbal drink (infusions) shall be denominated by the name of the type of the plant or part of the plant used, also in combination with the word infusion, if the product derives from a single type of plant may be designated for 'instance jute leaves' or 'jute leaves drink (infusion)', or if it is manufactured from two types of plants may be designated 'instance rose hip with hibiscus' or 'rose hip drink (infusion) with hibiscus'.
- b) If, herbal drink (infusions) is manufactured from several types of plants, dominating generic terms are also used in combination with the word infusion, for instance herbal, fruit or herbal drink (infusion).

**7.2.2 Pictorial representations** - Pictorial representation or graphics shall match the product. This means that e.g. pictorials can be placed on the package to represent the appropriate flavours, if they are properly labelled in the product a pictorial representation of the herbs or fruit(s) on the label should not mislead the consumer with respect to the herb or fruit so illustrated.

**7.3** Each package may also be marked with the BSTI Certification Mark.

**NOTE** – The use of BSTI Certification Mark is governed by the provisions of Bangladesh Standards and Testing Institution Act, 2018 and the Rules and Regulations made thereunder. Details of conditions, under which a license for the use of BSTI Certification Mark may be granted to manufacturers or processors, may be obtained from the Bangladesh Standards and Testing Institution.

**8. SAMPLING**

Representative samples of the material shall be drawn and conformity of the material to the requirements of the specification shall be determined according to the procedure given in see BDS ISO 1839.

**9. TESTING**

Test shall be carried out as prescribed in col. 4 of Table 1

**9.1 Quality of Reagents** - Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (BDS 833) shall be used where the use of water as a reagent is intended.

**NOTE** - 'Pure chemicals' shall mean chemicals that do not contain impurities, which may affect the result of analysis.

**10. Compliance**

When on testing, each of the samples is found to conform to the requirements specified in this Bangladesh Standard Specification, the lot, batch or consignment from which the samples have been drawn shall be deemed to comply with this standard specification.

**Annex A**  
(Clause 2.1)  
(Normative)

**List of Relevant Reference Standards**

<b>BDS NO.</b>	<b>Title</b>
BDS 103	Methods of rounding off numerical value
BDS 822	Code of hygienic conditions for food processing units.
BDS 833	Water for laboratory use
BDS CAC 192	General standard for food additives
BDS ISO 1573:2017	Tea-Determination of loss in mass at 103 °C
BDS ISO 1577:2015	Tea-Determination of acid-insoluble ash
BDS ISO 1839:2008	Tea sampling
ISO 4833-1:2013	Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 degree C by the pour plate technique.
ISO 6579-1:2009	Microbiology of food and animal feeding stuffs - Horizontal method for the detection of <i>Salmonella spp.</i>
ISO 16649-2:2001	Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive <i>Escherichia coli</i> – Part 2: Colony-count technique at 44 degree C using 5-bromo-chloro-3-indolyl beta-D-glucuronide
ISO 21527-1:2008	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

**Annex B  
(Informative)****The Standard Procedure for Preparation of Drink (Infusion) Liquors for Sensory Evaluation****B-1 Introduction**

**B-1.1** Herbal Infusions are foodstuffs which are traditionally consumed due to its health- and sensory properties. The sensory characteristics are of special importance for the overall product quality. To characterize the sensory quality of herbal infusion, 3 basic types of sensory examinations have to be assessed:

Colour of liquor  
Aroma (smell) of liquor  
Taste of liquor (and possible "Off-Flavour")

For proper evaluation of the sensory quality, recommends its Standard Procedure for Preparations of Drink (Infusion) Liquors for Sensory Evaluation. For comparable results, it is important to define basic test parameters:

**B-2 Water Quality**

**B-2.1** Flavour, colour and appearance (e.g. clearness, turbidity) of the liquor are affected by the hardness (mineral composition) of the water used for drink (infusion). Therefore, water used for the sensory test should be demineralised, non-chlorinated water.

**B-3 Water Temperature**

Recommends freshly boiling water. This is to ensure that most of the valuable plant substances are extracted into the brew. Lower water temperatures normally result in an incomplete extraction, which also strongly affects the overall quality of the drink (infusion).

**B-4 Weight of Herbal Drink (Infusion), Volume of Water for Drink (Infusion), Infusion Time**

For reasons of homogeneity it is recommended to use higher weights for loose HI/coarse cut materials. The following parameters are recommended:

Fine cut: 2 g/0.2 L/5 min.  
Coarse cut: 15 g/1 L/8 min.

**B-5 Procedure**

- a) Weigh into a cup/glass beaker the amount of material given above for fine cut or coarse cut;
- b) Fill the cup/glass beaker with the corresponding amount of freshly boiling water;
- c) Ensure that herbal infusion is properly wetted, e.g. stir with a tea spoon/glass stirrer;
- d) Allow to brew for the corresponding brewing time;
- e) Pour the liquor through a sieve to ensure that no extractives are retained in the infused material;
- f) Colour is evaluated optically against an agreed standard. The standard is prepared in the same way and at the same time;
- g) Aroma and flavour are evaluated by tasting against an agreed standard. The standard is prepared in the same way and at the same time;
- h) Test results are assigned to the lot and documented.



**Annex C**  
**(Informative)**  
**Types of Herbal Infusions (HI)**

Category	Whole product	Coarse cut, square cut	Fine cut, coarse	Super fine cut	Granulated material	Liquid extract	Dry extract	Dry instant preparation	Liquid product
Raw materials	Dry HI materials	Dry HI materials	Dry HI materials	Dry HI materials	Dry HI materials	Extract from HI, additional ingredients possible	Extract from HI, additional ingredients possible (e.g. carriers)	Extract from HI, additional ingredients possible	Extract from HI, additional ingredients possible
Particle size	Product dependent	2.0 - 15 mm	0.3 - 6.0 mm	0.2 - 2.0 mm	0.2 - 4.0 mm	Solution, dispersion	Depends on product and process	Depends on product and process	Solution
Application	Bulk packing of product in suitable food grade packing material, serving teabags or capsules					Various food preparations	Various food preparations	Instant products Instant beverages	Ready to drink products, liquid concentrates
Example	Jute leaf	Coarsely cut Jute leaf	Finely cut Jute leaf	Super fine cut Jute leaf	Jute leaf mechanically compressed	Liquid and paste-like jute extract	Powdered jute leaf extract prepared by drying a paste-like jute leaf extract	Instant preparations to be dissolved in water for the preparation of a jute leaf drink	Bottled ready-to jute leaf drink