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“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 12923 (1990): Cane GUR (Jaggery) [FAD 2: Sugar Industry]
Indian Standard

CANE GUR (JAGGERY)—SPECIFICATION

UDC 664.1 GUR
AMENDMENT NO. 1 JULY 2002
TO
IS 12923 : 1990 CANE GUR (JAGGERY)
—SPECIFICATION

(Page 1, clause 7.2) — Insert the following clause after 7.2:

"7.2.1 BIS Certification Marking

The product may also be marked with the Standard Mark.

7.2.1.1 The use of the Standard Mark is governed by the provisions of Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers, may be obtained from the Bureau of Indian Standards."

(FAD 2)
AMENDMENT NO. 2 JULY 2003
TO
IS 12923: 1990 CANE GUR (JAGGERY) —
SPECIFICATION

(Page 1, clause 7.1) — Insert the following new clause after 7.1:

'7.1.1 In case of smaller consumer packs, the product shall be packed in food-grade plastics conforming to relevant Indian Standard or any other suitable non-toxic materials.'

(FAD 2)


‘2 REFERENCE

The following standards contain provisions, which through reference in this text constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<table>
<thead>
<tr>
<th>IS No.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1070 : 1992</td>
<td>Reagent grade water (third revision)</td>
</tr>
<tr>
<td>15279 : 2003</td>
<td>Sugar and sugar products — Methods of test</td>
</tr>
</tbody>
</table>

[Page 1, clause 7.2(c)] — Substitute ‘Net quantity’ for ‘Net mass’.

[Page 1, clause 7.2(e)] — Add the following after Sl No. (e):

‘f) Any other requirements as given under the Standards of Weights and Measures (Packaged Commodities) Rules, 1977 and the Prevention of Food Adulteration Act, 1955 and the Rules framed thereunder.’

(Page 2, Table 1) — Substitute the following for the existing table:
### Table 1 Requirement for Cane GUR

*(Clauses 4.3 and 6.1)*

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Characteristic</th>
<th>Requirement</th>
<th>Method of Test, Ref to</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Annex of This Standard</th>
<th>Clause of IS 15279</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>Sucrose (on dry basis), percent by mass, <em>Min</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td>Reducing sugars (on dry basis), percent by mass, <em>Max</em></td>
<td>10</td>
<td>20</td>
<td>—</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii)</td>
<td>Moisture, percent by mass, <em>Max</em></td>
<td>5</td>
<td>7</td>
<td>—</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv)</td>
<td>Water insoluble matter (on dry basis), percent by mass, <em>Max</em></td>
<td>1.5</td>
<td>2.0</td>
<td>—</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v)</td>
<td>Sulphated ash (on dry basis), percent by mass, <em>Max</em></td>
<td>3.5</td>
<td>5.0</td>
<td>—</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi)</td>
<td>Sulphur dioxide (on dry basis) ppm, <em>Max</em></td>
<td>50</td>
<td>50</td>
<td>—</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii)</td>
<td>Ash insoluble in dilute hydrochloric acid (on dry basis), percent by mass, <em>Max</em></td>
<td>0.3</td>
<td>0.3</td>
<td>A</td>
<td>—</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE** — Total sugar (expressed as invert sugar) (on dry basis) shall be 90 percent for both Grade 1 and Grade 2 cane GUR.
FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards on 28 February 1990, after the draft finalized by the Sugar Industry Sectional Committee had been approved by the Food and Agriculture Division Council.

Cane Gur is prepared from clarified juice of sugarcane, by heating in open pans. The clarification may be effected by the usual vegetable clarificants or chemicals and by adequately removing scum during boiling. Cane Gur is used for human consumption, for stock feeding, for sweetmeat making and for other purposes. It is estimated that more than 75 percent of cane Gur is used for direct human consumption.

The quality and chemical composition of cane Gur produced in different regions of the country varies widely due to differences in the cane varieties used, soil type, cultivation practices followed, and manufacturing techniques adopted. In the absence of objective and enforceable standards, each part of the country tends to follow the local practices as to quality attributes for cane Gur. Precise grade specifications are also needed for export purposes, as and when needed. Therefore, it is felt that this Standard will go a long way in helping the industry in manufacturing cane Gur of a good quality.

In the preparation of this standard, due consideration has been given to the relevant Rules prescribed by the Government of India, under the Prevention of Food Adulteration Act, 1954 and Standards of Weights and Measures (Packaged Commodities) Rules, 1977. The standard is however, subject to the restrictions imposed under these, wherever applicable.

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 IS 2:1960 ‘Rules for rounding off numerical values (revised)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.
Indian Standard
CANE GUR (JAGGERY) — SPECIFICATION

1 SCOPE

1.1 This standard prescribes the requirements and methods of test for cane GUR (jaggery) for human consumption, manufactured from sugar-cane juice.

2 REFERENCES

2.1 The following Indian Standards are necessary adjuncts to this standard:

<table>
<thead>
<tr>
<th>IS No.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1070 : 1977</td>
<td>Specification for water for general laboratory use (second revision)</td>
</tr>
<tr>
<td>1152 : 1976</td>
<td>Specification for icing sugar (first revision)</td>
</tr>
<tr>
<td>5982 : 1970</td>
<td>Specification for plantation white sugar for identification from other sugars</td>
</tr>
</tbody>
</table>

3 GRADES

3.1 There shall be two grades of cane GUR, namely, Grade 1 and Grade 2.

4 REQUIREMENTS

4.1 Description

Cane GUR shall be prepared in the form of solid lumps which shall be of firm consistency. It shall be golden yellow to light brown in colour, free from dirt, other extraneous matter and substances deleterious to health.

4.2 Cane GUR shall be sweet to taste and shall not possess sour, salty or any other objectionable taste.

4.3 The material shall also comply with requirements of Table 1.

5 SAMPLING

5.1 Sampling shall be done as agreed to between the purchaser and the supplier.

6 TESTS

6.1 Tests shall be carried out in accordance with the methods prescribed in col 5 of Table 1.

6.2 Quality of Reagents

Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (see IS 1070 : 1977) 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 affect the result of analysis.

7 PACKING AND MARKING

7.1 Packing

The material shall be packed in clean, sound and new jute polyethylene lined or polyethylene bags. The mouth of each bag may be either machine stitched or rolled over and hand stitched.

7.2 Marking

Each bag shall be suitably marked so as to give following information:

a) Name of the material;
b) Indication of the source of manufacture;
c) Net mass of cane GUR in the bag;
d) Season of manufacture; and
e) Grade of cane GUR.
Table 1. Requirements for Cane GUR
( Clauses 4.3 and 6.1 )

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Characteristic</th>
<th>Requirements for Grade 1</th>
<th>Requirements for Grade 2</th>
<th>Method of Test, Ref to</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td>(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>Sucrose (on dry basis) percent by mass, Max</td>
<td>80</td>
<td>70</td>
<td>Appendix D of IS 1152 : 1976</td>
</tr>
<tr>
<td>ii)</td>
<td>Reducing sugars (on dry basis), percent by mass, Max</td>
<td>10</td>
<td>20</td>
<td>Appendix C of IS 5982 : 1970</td>
</tr>
<tr>
<td>iii)</td>
<td>Moisture, percent by mass, Max</td>
<td>5</td>
<td>7</td>
<td>Appendix A of IS 5982 : 1970</td>
</tr>
<tr>
<td>iv)</td>
<td>Water insoluble matter (on dry basis), percent by mass, Max</td>
<td>1'5</td>
<td>2'0</td>
<td>Appendix H of IS 5982 : 1970</td>
</tr>
<tr>
<td>v)</td>
<td>Sulphated ash (on dry basis), percent by mass, Max</td>
<td>3'5</td>
<td>5'0</td>
<td>Appendix G of IS 1679 : 1960</td>
</tr>
<tr>
<td>vi)</td>
<td>Sulphur dioxide (on dry basis) ppm, Max</td>
<td>50</td>
<td>50</td>
<td>Appendix E of IS 5982 : 1970</td>
</tr>
<tr>
<td>vii)</td>
<td>Ash insoluble in dilute hydrochloric acid (on dry basis) percent by mass, Max</td>
<td>0'3</td>
<td>0'3</td>
<td>Annex A of this standard</td>
</tr>
</tbody>
</table>

NOTE — Total sugar (expressed as invert sugar) (on dry basis) shall be 90 percent for both Grade 1 and Grade 2 cane GUR.

ANNEX A
[Table 1, Item (vii)]

DETERMINATION OF ACID INSOLUBLE ASH

A-1 REAGENT

A-1.1 Dilute Hydrochloric Acid

Approximately 5 N (prepared from concentrated hydrochloric acid).

A-2 PROCEDURE

A-2.1 Weigh accurately about 5 g of the sample in a tared, clean and dry platinum dish of 100 ml capacity. Carbonize the material in the dish with the flame of a burner. Complete the ignition by keeping in a muffle furnace at 550 ± 25°C until grey ash results. Cool in a desiccator.

A-2.2 To the ash, add 25 ml of the dilute hydrochloric acid, cover with a watch glass and heat on a small flame of a burner to near boiling. Allow to cool and filter the contents of dish through Whatman filter paper No. 42 or its equivalent. Wash the filter paper with hot water until the washings are free from chlorides. Return the filter paper and the residue to the dish. Keep it in an air-oven maintained at 105 ± 2°C for about 3 hours. Ignite in the muffle furnace at 550 ± 25°C for one hour. Cool the dish in a desiccator and weigh. Heat again for 80 minutes in the muffle furnace, cool and weigh. Repeat this process of heating for 30 minutes, cooling and weighing till the difference between two successive weighings is less than one milligram. Note the lowest mass.

A-3 CALCULATION

A-3.1 Acid insoluble ash, percent by mass = \( \frac{100 \, M_1}{M_2} \)

where

- \( M_1 \) = mass in g of the acid insoluble ash, and
- \( M_2 \) = mass in g of the sample taken for the test.
The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing, and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.
Bureau of Indian Standards

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Doc : No. FAD 2 (2833)

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<table>
<thead>
<tr>
<th>Amend No.</th>
<th>Date of Issue</th>
<th>Text Affected</th>
</tr>
</thead>
</table>

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