Foreword

The Philippine National Standard for the Specification of Raw Cane Sugar (PNS/BAFPS 81:2010) was revised in 2010 in order to aid in boosting the local sugar industry and ensure that the locally produced and traded sugars meet current international standards for safety and quality. The Standard intended to provide specification of raw cane sugar intended for human consumption.

In 2016, the Sugar Regulatory Administration (SRA) requested the assistance of the Bureau of Agriculture and Fisheries Standards (BAFS) to lead the revision of PNS/BAFPS 81:2010 in order to update the laboratory procedures for the analysis of sugar.

A Technical Working Group (TWG) for the revision of the said standard was created through Special Order No. 239 Series of 2017 with representations from the Department of Agriculture (DA) namely BAFS and SRA and private sector.

This document was drafted in accordance with the editorial rules of the BPS Directives, Part 3.

This Standard cancels and repeals PNS/BAFPS 81:2010.
1 Scope

This standard applies to raw cane sugar or raw sugar intended for human consumption. It also includes raw cane sugar sold for refining or further processing as raw material or ingredient in foodstuffs.

2 Normative references

The titles of the standards publications referred to in this standard are listed on the inside back cover.

3 Definition

3.1 raw cane sugar

also known as raw sugar, is partially purified sucrose, which is crystallized from partially purified cane juice, but which involves centrifugation, and which is characterized by sucrose crystals covered with a film of cane molasses. The content of sucrose by weight, in dry state, corresponds to a polarimeter reading of less than 99.5 degrees.

4 Essential composition and quality factors

Raw cane sugar should conform with the essential composition and quality factors specified in Table 1.

<table>
<thead>
<tr>
<th>Composition and quality factors</th>
<th>Specification as produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarization, $^oZ_r$</td>
<td>97.4 to &lt; 99.5</td>
</tr>
<tr>
<td>Safety factor, maximum</td>
<td>0.3</td>
</tr>
<tr>
<td>Color (ICUMSA Units), maximum</td>
<td>Whole raw: 5000</td>
</tr>
<tr>
<td>Dextran, mg/kg, maximum</td>
<td>400</td>
</tr>
<tr>
<td>Sulphur dioxide, mg/kg, maximum</td>
<td>20</td>
</tr>
</tbody>
</table>

5 Contaminants

5.1 Heavy metals

Raw cane sugar shall be free from heavy metals in amounts which may represent a hazard to human health.

5.2 Pesticide residues

Raw cane sugar shall comply with those maximum residue limits established by the Codex Alimentarius Commission (CAC) for this commodity.
6  **Hygiene**

It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969 Rev. 4-2003) and its equivalent PNS and other relevant Codes of Hygienic Practices. Provisions of Department of Health (DOH) Administrative Order No. 153 s. 2004: Revised Guidelines on Current Good Manufacturing Practices, Packing, Repacking, or Holding Food, including Inspection Checklist for Sugar Millers/Refiners should apply.

Raw cane sugar should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997 Rev. 2013) and Food and Drug Administration (FDA) Circular 2013-010: Revised Guidelines for the Assessment of Microbiological Quality of Processed Foods.

7  **Labelling**

In addition to the provisions of the General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985, Rev 2010), provisions of Republic Act (RA) 7394: Consumer Act of the Philippines, RA 10611: Food Safety Act of the Philippines, DOH AO No. 2014-0030: Revised Rules and Regulation Governing the Labeling of Prepackaged of Food Products Distributed in the Philippines and other existing FDA rules, regulations and resolutions, the following specific provisions shall apply:

7.1  **The name of food**

The product covered by this standard must conform to the definition given for that product in Section 3 of the standard.

8  **Packaging**

8.1  Raw cane sugar intended for direct consumption or as ingredient for foodstuff shall be directly bagged and properly labeled.

8.2  Raw cane sugar as produced for direct consumption shall be packed in new, clean and sound polypropylene bags lined with polyethylene film, or equivalent packaging or bulk containers. Containers should be of sufficient bursting strength and durability to ensure complete protection during transit and storage under normal conditions.
10 Methods of analysis

Raw cane sugar should be analyzed based on the listed methods in Table 2.

Table 2 – Methods of analysis for raw cane sugar

<table>
<thead>
<tr>
<th>Composition and quality factors</th>
<th>Methods of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarization</td>
<td>ICUMSA GS 1/2/3/9-1(2011)</td>
</tr>
<tr>
<td></td>
<td>Polarimetry</td>
</tr>
<tr>
<td></td>
<td>ICUMSA GS1/2/3-2 (2009)</td>
</tr>
<tr>
<td></td>
<td>Without Wet Lead Clarification</td>
</tr>
<tr>
<td>Color (ICUMSA Units)</td>
<td>ICUMSA GS1/3-7 (2011)</td>
</tr>
<tr>
<td>Dextran</td>
<td>ICUMSA GS1/2/9-15(2011)</td>
</tr>
<tr>
<td></td>
<td>Modified Alcohol Haze Method</td>
</tr>
<tr>
<td>Sulphur dioxide</td>
<td>ICUMSA GS 2/3-35 (2011)</td>
</tr>
<tr>
<td></td>
<td>ICUMSA GS 2/1/7/9-33(2011)</td>
</tr>
<tr>
<td></td>
<td>Rosaniline Colorimetric Method</td>
</tr>
</tbody>
</table>
References

The following referenced documents are indispensable for the application 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:


Food and Drug Administration (FDA). 2013. FDA Circular 2013-010: Revised Guidelines for the Assessment of Microbiological Quality of Processed Foods


Republic Act 7394. The Consumer Act of the Philippines

Republic Act 10611: The Food Safety Act of 2013