DRAFT CARICOM REGIONAL STANDARD

WHITE SUGAR - SPECIFICATION

FDCRS 63: 201X

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Contents

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Foreword

This Draft CARICOM Regional Standard has been prepared by the Regional Project Team- Sugars through the CARICOM Regional Organisation for Standards and Quality (CROSQ) to provide a uniform level of acceptance quality for white sugar manufactured and traded in the CARICOM Community. It is a revision of the Caribbean Community Standards, Specification for white sugar.

In the preparation of this standard assistance was derived from:

- Caribbean Community Standard, Specification for white sugar,
- CODEX Stan 212-1999, Standard for Sugars,
- Guyana Standard, GYS 14: 1995, Specification for white sugar.

White sugar - Specification

1 Scope

This standard specifies the requirements for dry granulated white sugar packed in containers and excludes icing sugar.

2 Normative references

ICUMSA Method GS 2/3-10, The Determination of White Sugar Solution Colour - Official

ICUMSA Method GS 2/3/9-17, The Determination of Conductivity Ash in Refined Sugar Products and in Plantation White Sugar – Official

ICUMSA Method GS 2/3/9-5, The Determination of Reducing Sugars in Purified Sugars by the Knight and Allen EDTA Method - Official (Reference) Method

ICUMSA Method GS 2/1/7/9-33, The Determination of Sulphite by the Rosaniline Colorimetric Method in White Sugar - Official (Reference) Method; in VVHP Raw Sugar - Tentative; in Cane Sugar Juices and Syrups - Accepted; and in Plantation White Sugar – Accepted

ICUMSA Method GS 1/2/3/9-1 with lead, The Determination of the Polarisation of Raw Sugar by Polarimetry – Official

ICUMSA Method GS 2/1/3/9-15, The Determination of Sugar Moisture by Loss on Drying – Official

3 Terms and Definitions

For the purpose of this standard, the following terms and definitions shall apply:

3.1 approved or official method:

The International Commission for Uniform Methods of Sugar Analysis (ICUMSA).

3.2 container:

Any can or other receptacle used for packing or holding sugar.

3.3 invert sugar:

The sugar formed by the breaking up of a disaccharide for example sucrose into dextrose and laevulose.

3.4 pol (apparent sucrose):

The value determined by direct or single polarization of the standard weight solution in a sacharimeter (polarimeter).

3.5 sugar:

Crystallized sucrose (saccharose).

3.6 white sugar:

shall be the white, refined crystalline product from the sugar cane or any other acceptable carbohydrate starting material.

4 General requirements

4.1 Processing

4.1.1 All processing areas, plants, equipment, floors, packing materials, personnel practices and hygienic practices related to the production of white sugar shall conform to the requirements of the latest version of the CRCP 5, Code of Practice for General principles of food hygiene.

4.2 Packaging

4.2.1 White sugar for wholesale shall be packed in containers that are not likely to impair the organoleptic or chemical characteristics of the sugar or make it harmful to health. Packing material shall comprise at least two layers. The innermost layer shall be suitable material that shall be chemically safe for use in contact with food and shall be moisture proof. Packages for retail shall be such that the product remains wholesome during the period it is exposed for sale.

4.2.2 The materials used for packaging and the contents shall be mutually compatible. For export goods, consideration shall be given to relevant international legislation dealing with packaging material for food.

4.3 Labelling

The containers shall be labelled in accordance with the latest version of CRS 5 Specification for labelling of pre-packaged foods.

4.4 Storage procedure for bagged and packaged sugar

4.4.1 Storage of sugar shall be under such conditions that the product would not deteriorate below the requirements of this standard.

5 Specific requirements

5.1 When analysed in accordance with the latest version of the International Commission for Uniform Methods of Sugar Analysis (ICUMSA), the following specific requirements shall apply:

Table 1 showing specific requirements for white sugar

Specifics	Limits
Polarisation	Not less than 99.7° Z
Invert sugar	≤ 0.04
Conductivity ash	≤ 0.04
Loss on drying	≤ 0.1% [a]
Colour	≤ 60 ICUMSA units
Sulphur dioxide	15 ppm
Insoluble matter	≤10 ppm

Note: a- does not apply to white sugar in lump or cube form.

5.2 The following limits shall apply for heavy metal contamination.

Table 2 showing limits for heavy metal contamination

Heavy Metal	Limits (mg/kg)
Arsenic	0.5
Copper	1.0
Lead	0.5

5.3 Grain sizes

(a) Not more than 4% by weight of the grains shall remain on a US Standard No. 20 sieve and not more than 8% shall pass through a US Standard No. 100 sieve when tested in accordance with an approved method.

(b) The finished product shall not contain lumps larger than 1.27 cm (1/2 inch) in their greatest diameter that cannot be broken on light finger pressure.

6 Taste and odour

6.1 The white sugar, in dry as well as liquid form, shall be free from objectionable taste and odour.

7 Sedimentation and turbidity

7.1 The sugar in solution shall be free from any sign of sedimentation and turbidity.

8 Microbiological requirements

8.1 Mesophilic bacteria shall not be more than 200/10g sugar.

8.2 Yeast shall be of maximum limit 20 cfu/10g.

8.3 Mould shall be of maximum limit 20 cfu/10g.

9 Methods of sampling and analysis

9.1 The methods of sampling and analysis shall be specified in accordance with the latest version of International Commission for Uniform Methods of Sugar Analysis (ICUMSA) seen in **Table 3.**

Table 3 showing recommended ICUMSA Methods for white sugar

No.	Analysis	Reference Method
1	Colour	ICUMSA Method GS 2/3-10
2	Moisture content	ICUMSA Method GS 2/1/3/9-15
3	Conductivity ash	ICUMSA Method GS 2/3/9-17
4	Polarization	ICUMSA Method GS 1/2/3/9-1
4	Invert sugar content	ICUMSA Method GS 2/3/9-5
6	Sulphur dioxide (SO_2)	ICUMSA Method GS 2/1/7/9-33