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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 15108-2017

Raw sugar
(English Translation)

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1 Scope

This Standard specifies requirements, test methods, inspection rules and marks, packaging, transportation, storage for raw sugar.

This Standard is applicable to cane sugar crystals with molasses made from sugarcane juice after purification, smelting, and honey separation.

2 Normative 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.

GB/T 191, Packaging and storage marks

GB/T 6682, Water for analytical laboratory use - Specification and test methods

GB 7718, National Food Safety Standard - Standard for nutrition labelling of prepackaged foods

GB/T 10498, Sugarcane

GB 13104, National Food Safety Standard - Sugars

3 Requirements

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

3.1 Raw material requirements

The sugarcane used for the production of raw sugar shall meet the requirements of GB/T 10498.

3.3 Physical and chemical indicators

The physical and chemical indicators shall meet the requirements of Table 1.

Table 1 -- Physical and chemical indicators

3.4 Food safety requirements

The food safety requirements shall meet the requirements of GB 13104.

4 Test methods

Unless otherwise specified, the reagents used in the test are all analytically pure, and the water is the grade 3 water specified in GB/T 6682.

4.1 Sensory determination

Take about 1kg of raw sugar sample in a white porcelain dish. Observe under natural light.

4.2.3.4 Allowable error

The difference between the two measured values shall not exceed 0.05% of the average value.

4.3.2.1 Drying

Preheat the drying oven to 105°C. Put the empty weighing bottle together with the open lid into the drying oven.

4.3.2.2 Calculation and result presentation

Loss on drying D is calculated according to formula (4). The value is expressed in%. The calculation result retains two significant digits.

4.4.1 Instruments, equipment

4.4.1.1

Platinum crucible (or quartz crucible, porcelain crucible). 50mL~100mL.

4.4.2 Reagents

Concentrated sulfuric acid. Density is 1.84g/mL.

4.4.3 Determination steps

Use a crucible that is burned to a constant weight to weigh 5g~10g of sample (to the nearest of 0.1mg). Add 5mL~10mL of concentrated sulfuric acid drop by drop.

4.5.1 Instruments, equipment

4.5.1.1

Spectrophotometer. The wavelength error at 420nm is not more than $\pm 1\text{nm}$.

4.5.2 Reagents

4.5.2.1 0.05mol/L sodium hydroxide solution.

4.5.2.2 0.05mol/L hydrochloric acid solution.

4.8 Food safety requirements

Determine according to the method specified in GB 13104.

4.9 Net content

Determine according to the method specified in JJF 1070.

5.1 Delivery batch

Each delivery of raw sugar is a delivery batch. Each batch of sugar shall be accompanied by the quality certificate of the country of origin. The buyer receives the goods with the quality certificate and conducts sampling inspection at the delivery site.

5.2 Inspection batch

Each delivery batch of raw sugar is an inspection batch.

5.3.4.1 Overview

There are three types of original sampling. systematic sampling, stratified sampling and secondary sampling. One of the sampling types can be selected according to the actual situation.

5.3.4.3 Stratified sampling

A batch of raw sugar can be sampled in several layers (not less than 3 layers) in the process of loading-unloading, processing, and stacking, for example, in a cabin. According to the mass of raw sugar contained in each layer, proportionally on the newly exposed surface, distribute points evenly.

5.3.4.5 Special requirements

In case of large batches, long loading-unloading time, high temperature and so on, samples shall be taken and kept as soon as possible to prevent evaporation of water. If the cargo is unloaded on rainy days, prevent rain and moisture absorption.

5.3.5.1 During the sample preparation process, the composition of the sample

shall be prevented from changing and contamination.

5.4.1 Sample inspection requirements

The analysis samples are divided into 3 portions. Inspect according to the test method specified in this Standard. Use the average of the two closest measured values as the final test result of the inspection lot. Or if the difference between two measured values and an intermediate value is equal, then use this intermediate value as the final test result of the inspection lot. This result shall be regarded as the average quality of the batch of raw sugar.

5.4.2 Result determination

If the inspection results have nonconforming indicators, double samples shall be taken.

5.4.3 Storage of inspected sample

The analysis samples shall be kept in a safe place for inspection. The storage period may be in accordance with relevant regulations but shall not be less than

3 months.

6.1 Marks

The label of pre-packaged raw sugar shall meet the requirements of GB 7718.

The packaging, storage and transportation signs shall meet the requirements of GB/T 191. Each batch of raw sugar delivery certificate shall have the following information.