# T/GXAS

# Association standard

T/GXAS 543-2023

Code of practice for cross border cold chain transportation of sugared fruit

# 糖渍水果跨境冷链运输技术规程

(English Translation)

# Foreword

In case of any doubt about the contents of English translation, the Chinese original shall be considered authoritative.

This document is drafted in accordance with the rules given in the GB/T 1.1-2020 *Directives* for standardization—Part 1: Rules for the structure and drafting of standardizing documents, the GB/T 20000.11—2016 Guides for standardization—Part 11: General presentation of the English translation of Chinese national standards and GB/T 20000.10—2016 Guidelines for standardization—Part 10: General rules for the English translation of Chinese national standards.

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This document was proposed, prepared and publicized by Guangxi Subtropical Crops Research Institute.

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# Code of practice for cross border cold chain transportation of sugared fruit

#### 1 Scope

This document defines the terms and definitions of sugared fruits, and specifies the operation requirements, processing sites, packaging materials and transportation of sugared fruits.

This document applies to the cold chain transport of sugared mango, pineapple, jackfruit and other fruits from ASEAN countries into China by sea or land transport.

## 2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. 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 - Pictorial marking for handling of goods

GB/T 317 White granulated sugar

GB 4806.7 National food safety standards - Plastic materials and articles for food contact

GB/T 5737 Plastic container for food

GB/T 7392 Series 1 thermal containers - Specification and testing

GB 14881 National food safety standards - General hygienic code for food production

GB 29753 Road transportation - Perishable food and biological product of refrigerated van - Security requirement and test methods

# 3 Terms and definitions

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

# 3. 1

sugared fruit

Semi-finished products made of fresh ripe mangoes, pineapples, jackfruits and other fruits as raw materials, cleaned, peeled, pitted, sliced, sugared and leached, and then added with white sugar and food additives.

#### 4 Requirements for operation

# 4.1 Requirements for environment

The temperature of sugar leaching packaging room should not be higher than 15  $^{\circ}$ C, and the sanitary conditions shall meet the requirements of GB 14881.

# 4.2 Requirements for packaging

#### 4.2.1 Packing bag

The thickness of the plastic bag should be 0.05 mm-0.1 mm, without external moisture and other foreign matters, and the quality shall meet the requirements of GB 4806.7.

## 4.2.2 Packing boxes (baskets)

It is recommended to use plastic boxes (baskets) with pressure resistance, air permeability, easy handling and stable stacking, which shall meet the requirements of GB/T 5737.

#### 4.2.3 Marking

The packing boxes (baskets) shall be marked with product name, production batch number, producer name, place of origin, specifications and packing date, etc. The writing on the marking shall be clear, complete and accurate. The storage and transportation pictorial marking shall conform to the requirements of GB/T 191.

#### 4.3 Leaching package

Separate the material from the sugar solution, and the operation time should not exceed 5 min. Put the leached material into a packing bag, evenly dust the surface with white sugar, the weight of which is 20% of the weight of the material, and then seal the bag with plastic belts, and seal the box (basket). Operation time of the packing should not exceed 10 min. White sugar shall meet the requirements of GB/T 317.

#### 5 Transport

# 5.1 Requirements for transport equipment

Transport equipment shall be clean, non-toxic, harmless, no odor, no pollution, and the inner wall shall be flat and smooth. It shall be equipped with abnormal alarm function of automatic temperature recording equipment or remote data monitoring equipment, and be able to monitor and record the temperature inside during transport in real time. The transport equipment compartment shall be pre-cooled in advance before loading, so that the temperature of the compartment can reach  $5\,^{\circ}\text{C-8}\,^{\circ}\text{C}$ .

#### 5.2 Loading

- 5. 2.1 It is recommended to use enclosed platforms and door cover sealing devices docking with transport equipment for loading.
- 5.2.2 The stacking shall be orderly and stable and arranged according to the direction of air circulation in the carriage. The height of the cargo stack should not exceed 6 layers. The space between the cargo stack and the four walls of the transport carriage should be higher than 10 cm, and the distance between the cargo stack and the top of the carriage should be longer than 20 cm.

## 5.3 Transport process

The cold air inside the carriage shall be circulated smoothly, and the temperature inside

shall be controlled at 5 °C-8 °C.

## 5.4 Inbound connection

It is recommended to use enclosed platforms and door cover sealing devices docking with transport equipment for unloading. The unloading shall be completed as soon as possible and transferred to the qualified pre-cooled transport equipment compartment in a timely manner. The transport equipment compartment shall have refrigeration equipment and automatic temperature monitoring and recording equipment, which shall meet the requirements of GB/T 7392 and GB 29753.



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