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

GB/T 21488-2025

Replacing GB/T 21488-2008

Navel orange

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 21488-2008 "Navel Orange". Compared with GB/T 21488-2008, the main differences are structural adjustments and editorial changes. In addition, the main technological changes are as follows:

a) Added the Latin name for navel orange to the "Scope" (see Chapter 1), and changed the scope of the document (see Chapter 1, 2008 edition). Chapter 1);

b) The following terms were removed. "navel orange", "appearance quality", "fruit shape", "size", "color", "fruit surface smoothness", "uniformity", "fruit defects", "flavor", and "appearance quality". Terms and definitions for "soluble solids," "titerable acid," "edible percentage," and "grade tolerance" (see

3.2 of the 2008 edition). Sections 3.2.1-3.2.3, 3.2.5-3.2.7, 3.3-3.5, 3.7, and

3.8 added the term and definition of "fruit surface defects" (see 3.2).

c) Added "Basic Requirements" (see 4.1), and removed the sensory grading indicators for "Fruit Shape," "Peel Thickness," "Flavor," and "Edible Rate." The "Safety and Hygiene Indicators" and "Plant Quarantine" (see Tables 1, 4.3, and

4.4 in the 2008 edition) have been revised, including changes to color, fruit surface, and soluble solids content. The content of organic matter and the ratio of solids to acid (see Table 1, 2008 edition) have been updated, and "grade tolerance" and "specification tolerance" have been added (see Table 1). 4.2.2, 4.3.2);

d) The testing methods for "sensory indicators" have been changed (see 5.1,

5.2 in the 2008 edition), and a method for determining "fruit surface area" has been added (see Version 5.1.1) removed the testing method for "safety and hygiene" (see version

5.7 of the 2008 edition).

e) The judgment format and content of the "Judgment Rules" have been changed (see 6.5, 6.4 in the 2008 version);

f) The requirements for "marking", "packaging", "transportation" and "storage" have been changed (see Chapter 7, Chapter 7 of the 2008 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the All China Federation of Supply and Marketing Cooperatives. This document was drafted by: Ganzhou Municipal Fruit Industry Development Center, Ganzhou Municipal Citrus Research Institute, Gannan Normal University, and the All China Federation of Supply and Marketing Cooperatives. Jinan Fruit Research Institute, Head Office. The main drafters of this document are: Li Hang, Xi Jianlong, Huang Chuanlong, Zhou Dasen, Xie Jinzhao, Hu Yan, Zhang Hongming, Wang Xiaoli, Mi Lanfang, and Huang Suchan. Yao Fengxian, Lu Junhua, Chen Zhaoxing, and He Mingyang. The release history of this document and the document it replaces is as follows:

1 Scope

GB/T 21488-2025 is the Chinese national standard covering navel oranges as a graded product - the size and colour, the soluble solids and acid ratio that decide the taste, the skin defects and the tolerances at each grade. It replaces GB/T 21488-2008. It was issued on 2 December 2025 and has been in force since 1 July 2026, replacing GB/T 21488-2008. The document is under the responsibility of the All China Federation of Supply and Marketing Cooperatives. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

The loading, transportation, and storage processes are described, along with the corresponding testing methods. This document applies to the quality grading and distribution of navel oranges.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 191 Packaging and Storage Graphic Symbols

GB/T 8210 Test Methods for Fresh Citrus Fruit

GB/T 8855 Sampling Methods for Fresh Fruits and Vegetables

GB/T 33129 General Operating Procedures for Packaging and Cold Chain Transportation of Fresh Fruits and Vegetables NY/T 1189 Citrus Storage

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Pigmentation ratio The ratio of the colored area of the fruit to the surface area of the fruit.

Note. Expressed as a percentage.

3.2 Fruit surface defects Abnormalities or damage to the surface of the fruit caused by natural or human factors.

Note. This includes blemishes such as scars, drug stains, insect stains, and fat deposits.

3.3 The ratio of soluble solids (TSS) to titratable acid (TA) in fruit juice.

4 Requirements

4.1 Basic Requirements The following basic requirements should be met.