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

**GB/T 10651-2026**

Replacing GB/T 10651-2008

**Fresh apples**

鲜苹果

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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 10651-2008 "Fresh Apples". Compared with GB/T 10651-2008, the main differences are structural adjustments and editorial changes. In addition, the main technological changes are as follows:

- a) The basic requirements have been changed (see 4.1, 2008 version 4.1);
- b) The quality grade requirements have been changed (see 4.2, 2008 version 4.2);
- c) The tolerance requirements have been changed (see 4.4, Chapter 5 of the 2008 edition);
- d) The physicochemical requirements have been revised (see Appendix A, Appendix B of the 2008 edition);
- e) The hygiene requirements have been removed (see Chapter 6 of the 2008 edition);
- f) The sample preparation method for the total acid test has been removed (see C.1.2.1 in the 2008 edition);

g) Added requirements for packaging and labeling, storage and transportation (see Chapters 7 and 8). 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 by the All China Federation of Supply and Marketing Cooperatives. This document is under the jurisdiction of the National Technical Committee on Standardization of Fruit Products (SAC/TC501). This document was drafted by: Jinan Fruit Research Institute of the All China Federation of Supply and Marketing Cooperatives, Shandong Provincial Agricultural Technology Extension Center, and Weihai Municipal Agriculture Bureau. Rural Affairs Service Center, Shandong Wangzhanggui Agricultural Development Co., Ltd., China National Institute of Standardization, National Agricultural Technology Extension Service Center Shandong Runda Testing Technology Co., Ltd., Zhongtai Futures Co., Ltd., Zhengzhou Commodity Exchange, Shandong Agricultural University, Qingdao Agricultural University, Dalian University of Technology, Shaanxi Provincial Fruit Industry Center, Yantai Guodu Fresh Food Co., Ltd., Zhengzhou Fruit Research Institute of Chinese Academy of Agricultural Sciences, China Agricultural University Xingcheng Fruit Tree Research Institute of the Chinese Academy of Sciences, Yan'an Fruit Industry Center, Yantai Academy of Agricultural Sciences of Shandong Province, Xiamen University of Technology, Weihai Cuihong Fruit Pin Co., Ltd., and Zhongyi Agricultural Products Co., Ltd. The main drafters of this document are. Song Ye, Zheng Xiaodong, Gao Wensheng, Nie Jiyun, Cao Ning, Xi Xingjun, Pan Shaoxiang, Wang Zhaoshun, Wu Maoyu, and Qin Lei. Zhang Xin, Wang Kejian, Mao Zhiquan, Yan Zhenli, Yang Jianwei, Lu Shuguo, Song Laiqing, Zhao Deying, Chen Xiude, Li Mingli, Guo Qi, Dong Meng, Xiao Longyang Wang Cunbao, Liu Yande, Wang Zhen, Ni Chunping, Du Wenyu, Sun Li, Liu Songming, Shi Zhaohui. The release history of this document and the document it replaces is as follows:

---First published in 1989 as GB/T 10651-1989, and revised for the first time in 2008;

---This is the second revision. Fresh apples

## 1 Scope

GB/T 10651-2026 is the Chinese national standard covering fresh apples graded for market - the size and colour by variety group, the shape and finish, the firmness and soluble solids, and the defects and disorders with their tolerances at each grade. China grows about half the world's apples. It replaces GB/T 10651-2008 and has been in force since 1 September 2026, with the storage standards GB/T 8559-2026 and GB/T 47156-2026. It was issued on 27 February 2026 and has been in force since 1 September 2026, replacing GB/T 10651-2008. This page is published from the official record of the 2026 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.

This document specifies the quality requirements and inspection rules for fresh apples, as

well as the requirements for packaging and labeling, storage, and transportation. It describes the corresponding inspection procedures. Verification method. This document applies to the purchase, sale, storage, and packaging of fresh apples, including 24 varieties such as Fuji, Red Delicious, and Gala. Other varieties... This shall be followed as a reference. Except for apples used for processing.

## 4 Quality Requirements

4.1 Basic Requirements Fresh apples should.

- a) Complete and in good condition;
- b) The physicochemical properties of the main varieties of fresh apples should meet the requirements of Appendix A;
- c) Possesses the inherent characteristics and flavor of this variety; fresh, clean, and odorless;
- d) Possessing a maturity level suitable for market sales or storage;
- e) No abnormal external moisture.

4.2 Quality Grade Requirements Fresh apples are graded into three quality levels, and the requirements for each quality level should meet those specified in Table 1.

4.3 Specifications Fresh apples are classified into three categories based on their variety. large, medium, and small. The specifications for each category should conform to Table 2.

## 4.4 Tolerance Requirements

4.4.1 Quality Tolerance The quality tolerance requirements are as follows:

- a) For superior grade products, up to 10% of the fruit may not meet the requirements of this grade, but must meet the quality requirements specified for first grade products;
- b) For Grade 1 products, up to 15% of the fruit may not meet the requirements of this grade, but must meet the quality requirements specified for Grade 2 products;
- c) For second-grade products, up to 15% of the fruit may not meet the requirements of this grade, but must meet the quality requirements stipulated in the basic requirements.

4.4.2 Specification tolerances It is permissible for 5% of the fruit to not meet the requirements of this specification.

## 5.1 Sensory inspection

5.1.1 Place the sampled fruit on a clean surface and observe its appearance, ripeness, foreign matter, and abnormal external moisture.

5.1.2 Taste or smell the fruit to check for flavor and off-odors.

5.1.3 Visually inspect or use measuring tools to measure the fruit's shape, color, stem, surface defects, russeting, etc.

5.1.4 Randomly select 20 fruits, cut them horizontally first, then vertically, into 4 pieces. Observe the internal diseases and damage of each fruit.

Note. Fruits with watercore that do not cause browning of the flesh are not included in the quality tolerance calculation.

5.2 Specification Inspection The size of the fruit is determined using a standard grading board. For fruits categorized by weight, a balance or platform scale is used.

5.3 Tolerance Test Take all samples from an inspection batch and identify unqualified fruits according to grade and specification requirements. Calculate the quality tolerance and [the percentage of unqualified fruits] according to formula (1). Specification tolerances, results accurate to one decimal place.

#### **5.4 Physicochemical Indicators Testing**

5.4.1 Hardness The handheld hardness tester (11mm probe diameter) was mounted on the stand for measurement. Other procedures were carried out in accordance with NY/T.2009.

5.4.2 Soluble solids Using the refractometer method, 20 fruits were randomly selected before each experiment, and the juice from the flesh on both the sun-facing and shaded sides of the fruit was squeezed into the refractometer lens. Perform the test, calculate the average of the 40 measured data points, rounded to one decimal place, and perform other procedures in accordance with NY/T 2637.

### **6 Inspection Rules**

6.1 Batching Apples from the same place of origin, variety, grade, specification, and batch of purchase are considered as one inspection batch.

#### **6.2 Sampling**

6.2.1 Comply with GB/T 8855.

6.2.2 When sampling by item, if the weight of a single package is insufficient, it should be supplemented, and the packaging should be inspected in accordance with the packaging technical requirements at the same time.

#### **6.3 Judgment Rules**

6.3.1 If a sample has two or more different defects, only the one that has the greater impact on quality should be recorded.