

Translated English of Chinese Standard: GB29202-2012

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GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

GB 29202-2012

**National Food Safety Standard –
Food Additives – Nitrogen**

食品安全国家标准

食品添加剂 氮气

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People's Republic of China**

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National Food Safety Standard – Food Additives – Nitrogen

1 Application Scope

This Standard applies to food additive nitrogen produced by deep cooling air separation, pressure swing absorption, membrane separation and small special nitrogen making machine.

2 Molecular Formula and Relative Molecular Mass

2.1 Molecular formula

N₂

2.2 Relative molecular mass

28.01 (in accordance with International Relative Atomic Masses 2007)

3 Technical Requirements

3.1 Sensory requirements

As specified in Table 1.

Table 1 – Sensory Requirements

3.2 Physiochemical indexes

As specified in Table 2.

Annex A

Test Method

A.1 Warning

A high-pressure gas cylinder is used in the test method of this Standard, so appropriate safety and protection measures shall be taken.

A.2 Identification test

Insert a small wood stick ignited carefully into a test tube filled with test gas; the flame extinguishes.

A.3 Determination of nitrogen (N₂) content

The volume fraction of nitrogen (N₂) content φ is calculated in accordance with the following equation:

$$\varphi = 100\% - \varphi_1 \quad \dots\dots\dots (A.1)$$

where

φ_1 – volume fraction of oxygen determined in A.4.

A.4 Determination of oxygen (O₂)

A.4.1 Electrochemical process

A.4.1.1 Method summary

Place samples in an appropriate form into an electrochemical reactor; measure and calculate oxygen content through direct determination method or comparative measurement method.

A.4.1.2 Apparatus

Trace oxygen analyzer: as specified in GB/T 6285.

A.4.1.3 Analysis procedure

Measurement shall be as specified in GB/T 6285; specific operation shall be as specified in the specifications of apparatus.

A.4.2 Zirconia detector gas chromatographic method

A.4.2.1 Method summary

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