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

GB/T 21912-2008

Determination of titanium dioxide in foods

食品中二氧化钛的测定

(English Translation)

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Foreword

Appendix A of this standard is an informative annex.

This standard by the national food safety emergency standardization working group
proposed and managed.

This standard was drafted. National Processed Food Quality Supervision and Inspection
Center (Guangzhou), Guangzhou Product Quality Supervision and Inspection.

1 Scope

This standard specifies the method for the determination of food titania.

This standard applies to flour, candy coatings, preserved fruits, jelly, puffed food, fried food,
non-carbonated beverage clouding agent, solid drinks and mouth Food titanium dioxide

detection gum and the like.

The detection limit of this standard. Inductively Coupled Plasma - Atomic Emission Spectrometry of 1mg/kg, two methane antipyrine as colorimetry 5mg/kg.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 602 Determination of impurities in chemical reagents prepared using standard solution (GB/T 602-2002, ISO 6353-1. 1982, Reagents for chemical analysis-Part 1. General test methods, NEQ) GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-1992, neq ISO 3696. 1987) the first Inductively Coupled Plasma - Atomic Emission Spectrometry (ICP-AES) Principle 3 After the samples by acid digestion, inductively coupled plasma - atomic emission spectrometer to analyze quantitative standard curve.

4 Reagents

Unless otherwise specified, the reagents were of analytical grade water as a water GB/T 6682 regulations.

4.1

perchloric acid.

4.2

Concentrated sulfuric acid. pure class distinctions, $\rho_{20} \sim 1.84 \text{ g/mL}$.

4.3

concentrated nitric acid. pure class distinctions, $\rho_{20} \sim 1.42 \text{ g/mL}$.

4.4

ammonium sulfate.

4.5 5% sulfuric acid (volume fraction). amount of 5mL of concentrated sulfuric acid (4.2), was slowly added to 95mL of water, and mix.

4.6

mixed acid. nitric acid + perchloric acid (9 + 1). Take 1 part of perchloric acid (4.1) and 9 parts of concentrated nitric acid (4.3) and mix.

4.7

Titanium standard stock solution (1mg/mL). provided by the nationally recognized standard material sales units, or prepared according to GB/T 602 methods.

4.8

Titanium standard solution (10µg/mL). Imbibe 1mL titanium standard stock solution (4.7) in 100mL flask with 5% sulfuric acid (4.5) diluted to the mark.

5 Apparatus

Conventional laboratory equipment and the following instruments.

5.1

Inductively Coupled Plasma - Atomic Emission Spectrometer.

5.2

microwave digestion.

5.3

Analysis of balance. a sense of the amount of 0.1mg.