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# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# 中华人民共和国国家标准

GB 5009.48–2003
Replace GB/T 5009.48–1996

# Method for analysis of hygienic standard of distilled wines and mixed wines

# 蒸馏酒与配制酒卫生标准的分析方法

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**Jointly issued by the Ministry of Public Health of the People's Republic of China**
**National Standardization Administration Committee of China**

# Contents

# Foreword

This Standard will replace GB/T 5009.48—1996 *Method for analysis of hygienic standard of distilled wines and mixed wines*

Comparison with GB/T 5009.48—1996, main changes of this Standard are as follows:

— It has modified the structure of the original standard according to GB/T 20001.4-2001: *Rules for drafting standards -- Part 4: Methods of chemical analysis*;

— Gas chromatography is methanol and method I of high alcohol.

This standard is proposed and under the jurisdiction of Ministry of Public Health of the People's Republic of China.

This standard is drafted in charge by Beijing Sanitary and Anti-epidemic Station, Food Safety Control and Inspection and Institute of Food Safety Control and Inspection under Ministry of Public Health, Jinan Sanitary and Anti-epidemic Station and Guangdong Sanitary and Anti-epidemic Station.

This Standard is firstly issued on 1985, firstly revised on 1996, this is second revised edition.

# Method for analysis of hygienic standard of distilled wines and mixed wines

## 1 Scope

This Standard specifies the analysis methods of various hygienic indexes of the mixed wines which are made from the wine base produced by white wine, brewed wine or distilled liquor after saccharified fermented and distilled from sugar-containing or starch-containing material with the addition of edible auxiliary materials.

This Standard is applicable to the analysis of various hygienic indexes of diluted wines and mixed wines.

The detection limit of methanol is 0.02g/100mL.

The detection limit of fusel oil (calculated based on isoamylol and isobutanol) is 0.03g/100mL.

The detection limit of manganese is 0.50mg/L.

Distilled wine refers to the wine with the volume fraction of over 60°, and in case the concentration of ethanol is lower than 60°, the results of determination shall be replaced with the content of 60°. If the concentration of ethanol is determined lower than 60° after distillation, the results of determination shall be also replaced with the content of 60°.

## 2 Normative Reference

The following provisions contain provisions which, through reference in this text, constitute provisions of this standard. For dated reference, subsequent amendments to, or revisions of (excluding corrigendum contents), or Revised Edition do not apply. However, it is encouraged that every part of this standard to research the latest edition of these documents. For undated references, the latest edition of the normative document referred to applies.

GB 2757 Hygienic standard for distilled liquor and formulated liquor

GB/T 5009.2 Determination of relative density of foods

GB/T 5009.11-2003 Determination of total arsenic and abio-arsenic in food

GB/T 5009.12 Determination of lead in foods

GB/T 5009.35 Determination of synthetic colour in foods

GB/T 5009.36-2003 Method for analysis of hygienic standard of grains

GB/T 5009.90 Determination of iron, magnesium and manganese in foods

## 3 Sensory test

**3.1** Measure 30mL sample, and drop into 50mL clean, dry and colorless glass beaker, and observe it color; it shall be transparent and free from sediment or impurity.

**3.2** The taste of it shall be fragrant flavor special for this kind of wine, and shall free from musty taste, sour, peculiar smell, which shall comply with the provision of GB 2757.

## 4 Physical and chemical inspection

### 4.1 Concentration of ethanol (hydrometer method)

#### 4.1.1 Principle

Be similar to the principle of GB/T5009.2.

#### 4.1.2 Instruments

The alcohol hydrometer.

#### 4.1.3 Analysis steps

Suck up 100mL sample and place it into 250mL or 500mL full glass distiller, and add 50mL water, and then add several grains of glass beads, distilled; and use 100mL volumetric flask to collect 100mL distilled liquid.

Pour the distilled sample into the graduated cylinder, and slowly sink the clean and dry alcohol meter into the graduated cylinder; after it is still, slightly press it a little down, and after it raises and is still, observe the scale of it and the liquid intersect from the horizontal position, and it is the concentration of ethanol; and at the same time, determine the temperature, and look up Table 1 according to the measured temperature and concentration, and then convert it to the concentration of ethanol (% volume fraction) at the temperature of 20℃.

### 4.2 Methanol and higher alcohols (gas chromatography)

#### 4.2.1 Principle

Be tested by using the chemical ionization of different alcohols in hydrogen flame, and compare

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