

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

SN/T 4675.10-2016

**Determination of ochratoxin A in wine for export--LC-MS/MS
method**

出口葡萄酒中赭曲霉毒素A的测定 液相色谱—质谱/质谱法
(English Translation)

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Foreword

SN/T 4675 "Method for Analysis of Export Wine Quality" is divided into 30 sections.

- SN/T 4675.1 Determination of glycerol in wine exports Enzymatic;
- SN/T 4675.2 Determination of 2,3-butanediol in exported wines by gas chromatography;
- SN/T 4675.3 Determination of Stable Carbon Isotope Ratio of Ethanol in Export Wines;
- SN/T 4675.4 Determination of Lactic Acid in Export Wines Enzymatic;
- SN/T 4675.5 Determination of organic acids in exported wines by ion chromatography;
- SN/T 4675.6 Determination of glucose, fructose and sucrose in exported wines;
- SN/T 4675.7 Determination of acetaldehyde in exported wines by gas chromatography-mass spectrometry;
- SN/T 4675.8 Determination of 5-hydroxymethylfurfural in wines by liquid chromatography;
- SN/T 4675.9 Determination of diethylene glycol in exported wines by gas chromatography-mass spectrometry;
- SN/T 4675.10 Determination of ochratoxin A in wines for liquid chromatography-mass spectrometry/mass spectrometry;
- SN/T 4675.11 Determination of seven anthocyanins in wines exported by ultra-high performance liquid chromatography;
- SN/T 4675.12 Determination of Lysozyme in Export Wines by Liquid Chromatography;
- SN/T 4675.13 Determination of residues of 2,4,6-trichloroanisole in exported wines by gas chromatography-mass spectrometry;
- SN/T 4675.14 Determination of natamycin in wines for export - Liquid chromatography-mass spectrometry/mass spectrometry;

- SN/T 4675.15 Determination of salicylic acid, dehydroacetic acid and p-chlorobenzoic acid in wines by liquid chromatography;
- SN/T 4675.16 Determination of fumaric acid in wine exports by liquid chromatography-mass spectrometry/mass spectrometry;
- SN/T 4675.17 Determination of butyltin content in exported wines by gas chromatography-mass spectrometry/mass spectrometry;
- SN/T 4675.18 Determination of dithiocarbamate residues in exported wines. Headspace gas chromatography;
- SN/T 4675.19 Determination of sodium, magnesium, potassium, calcium, chromium, manganese, iron, copper, zinc, arsenic, selenium, silver, cadmium, and lead in wine exports;
- SN/T 4675.20 Determination of rare earth elements in wines exported by inductively coupled plasma mass spectrometry;
- SN/T 4675.21 Determination of soluble inorganic salts in exported wines by ion chromatography;
- SN/T 4675.22 Determination of total sulfur dioxide in wines by colorimetric method;
- SN/T 4675.23 Determination of ammonia nitrogen in wine and grape juice exported by continuous flow analyzer method;
- SN/T 4675.24 Determination of the export of the Folin-Shaughha index of the wine by spectrophotometry;
- SN/T 4675.25 Determination of color of exported wines CIE1976 ($L^*a^*b^*$) color space method;
- SN/T 4675.26 Determination of export turbidity scattered light method;
- SN/T 4675.27 Determination of alkaline ash content of exported wines;
- SN/T 4675.28 Export of wine bacteria, mold and yeast count;
- SN/T 4675.29 Real-time fluorescent PCR assay for wine yeast extraction in wine exports;
- SN/T 4675.30 Bayer splice yeast assay for real-time fluorescence PCR in exported wines.

This section is Part 10 of SN/T 4675.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part is proposed and managed by the National Certification and Accreditation Regulatory Commission.

This section was drafted. Shanghai Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China Bureau, Guangdong Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

1 Scope

This part of SN/T 4675 specifies liquid chromatography-mass spectrometry/mass spectrometry detection method for ochratoxin A in wine.

This section applies to the detection of ochratoxin A in wine.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 6682 Analysis Laboratory Water Specifications and Test Methods

3 Method summary

After the sample is diluted with buffer solution, the sample is adjusted to neutrality with sodium hydroxide solution, purified by an immunoaffinity column, and finally colored by liquid phase.

Spectrum-tandem mass spectrometer detection, external standard method quantification.

4 Reagents and materials

Unless otherwise stated, all reagents were of analytical grade and water was a grade of water as specified in GB/T 6682.

4.1

Methanol. Chromatographically pure.

4.2

Acetonitrile. Chromatographic purity.

4.3

acetic acid. chromatographic purity.

4.4

Sodium bicarbonate.

4.5

Sodium chloride.

4.6

Sodium hydroxide.

4.7

Ammonium acetate.

4.8

Acetonitrile solution (50%). Pipette 100 mL of acetonitrile (4.2) and dilute to 200 mL with water.

4.9

Acetic acid solution (0.1%). Pipette 1.0 mL of acetic acid (4.3) and dilute to 1 L with water.

4.10

Buffer solution. Accurately weigh 10g of sodium bicarbonate (4.4) and 75g of sodium chloride (4.5), dissolve in water and bring to volume to 500mL.

4.11

sodium hydroxide solution (2%). accurately weighed 20g of sodium hydroxide (4.6), dissolved in water and set to 1L.

4.12

Ammonium acetate solution (0.2mol/L). Weigh 15.4g of ammonium acetate solid (4.7), dissolve with water and make up to 1L.

4.13

Methanolic acetic acid solution (2%). Pipette 2.0 mL of acetic acid (4.3) and dilute to 100 mL with methanol (4.1).

4.14

Reference material. Ochratoxin A (OTACAS No.. 303-47-9). 10.01 mg/L, storage conditions and the validity period refers to the standard substance certificate.

4.15

Standard Intermediate Solution (200µg/L). Pipette an appropriate volume of ochratoxin A (4.14) in a 10mL volumetric flask using acetonitrile (4.8) Set the volume to the tick mark. The solution was stored in the dark at 4°C and was valid for one month.

4.16

standard working solution. Pipette an appropriate amount of the standard intermediate solution (4.15) accurately into a 10 mL volumetric flask and dilute it with acetonitrile solution