

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

SN/T 4675.6-2016

**Determination of glucose, fructose and sucrose in wine for
export**

出口葡萄酒中葡萄糖、果糖和蔗糖的测定

(English Translation)

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Foreword

SN/T 4675 "Method for Analysis of the Quality and Safety of Exported Wines" 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 6 of SN/T 4675.

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

This part of the second method of enzymatic modification using the International Organization of Grapes and Wine (OIV) method OIV-MA-AS311-02 "glucose and fructose".

This section adds sucrose determination methods. This part is consistent with this method in terms of technical content, but taking into account the special Point and expression habits in Chinese, combined with actual conditions of reagents, instruments, etc.

The editor only made editorial changes.

1 Scope

This part of SN/T 4675 specifies the determination of glucose, fructose, and sucrose in wine.

This section applies to the determination of glucose, fructose, and sucrose 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 First method ion chromatography

3 Method summary

The glucose, fructose, and sucrose in the sample are diluted with water, filtered through a 0.22 μm membrane filter, and the diluted solution is determined by ion chromatography.

After the sub-exchange separation, electrochemical detection analysis, retention time qualitative, external standard method.

4 Reagents and materials

Unless otherwise specified, the reagents used were of analytical grade, and the test water was a grade of water specified in GB/T 6682.

4.1

Sodium hydroxide (NaOH). CAS No. 1310-73-2.

4.2

Glucose [$\text{CH}_2\text{OH}(\text{CHOH})_4\text{CHO}$]. CAS No. 50-99-7; Purity $\geq 99\%$; dried in a $107^\circ\text{C} \pm 3^\circ\text{C}$ oven for 3 hours.

4.3

fructose ($\text{C}_5\text{H}_{12}\text{O}_5\text{CO}$). CAS number 57-48-7; purity $\geq 99\%$; drying in a $96^\circ\text{C} \pm 2^\circ\text{C}$ oven 2h.

4.4

Sucrose (C₁₂H₂₂O₄). CAS No. 57-50-1; Purity $\geq$ 99%; dried in an oven at 105°C $\pm$ 2°C for 2 hours.

4.5

sodium hydroxide solution (50%). Weigh 50g of sodium hydroxide (4.1), dissolved in water, all transferred to a 100mL volumetric flask, let cool Dilute to volume with water and transfer to reagent bottle.

4.6

glucose standard stock solution (2mg/mL). Weigh glucose (4.2) 0.1g (accurate to 0.1mg), dissolved in water, transfer to 50mL in a volumetric flask, dilute to volume with water and transfer to a reagent bottle.

4.7

fructose standard stock solution (2mg/mL). Weigh fructose (4.3) 0.1g (accurate to 0.1mg), dissolved in water, transfer to 50mL capacity in the bottle, dilute with water to volume and transfer to the reagent bottle.

4.8

Sucrose standard stock solution (2mg/mL). Weigh out sucrose (4.4) 0.1g (accurate to 0.1mg), dissolve in water, transfer to 50mL capacity in the bottle, dilute with water to volume and transfer to the reagent bottle.

4.9

Mix standard stock solution (500mg/L). Pipette 25.0mL glucose (4.6), fructose (4.7), sucrose (4.8) single standard storage Prepare the solution in a 100 mL volumetric flask, dilute it to volume with water, and transfer it to the reagent bottle.

4.10

Filter. 0.22 μ m, water system.