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

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**Determination of deoxynivalenol in food -- High performance  
liquid chromatographic method with immunoaffinity column  
clean-up**

食品中脱氧雪腐镰刀菌烯醇的测定 免疫亲和层析净化高效液相色谱法

**(English Translation)**

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### Foreword

Appendix A of this standard is an informative annex.

This standard by the National Food Industry Standardization Technical Committee (SAC/TC64) proposed.

This standard by the National Standardization Technical Committee on Food Universal Detection Technology Food Industry Technical Committee (SAC/TC64/SC8) Centralized.

This standard was drafted. Qingdao City Product Quality Supervision and Inspection, People's Republic of China Shandong Exit Inspection and Quarantine, the inspection Wellcome Technology Co., Ltd., Tsingtao Brewery.

### 1 Scope

This standard specifies the immunoaffinity foods deoxynivalenol fungus alcohol content and chromatographic purification by high performance liquid chromatographic method.

This standard applies to the determination of food products, wine, soy sauce, vinegar, soy sauce and sauce products deoxynivalenol alcohol content of food and bacteria.

The standard method detection limits. Food and food products detection limit of 0.5mg/kg, alcohol detection limit of 0.1mg/kg, soy sauce, Vinegar, soy sauce and sauce products, detection limit of 0.1mg/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 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD)

### 3 Method summary

Extracting a sample of deoxynivalenol bacteria extract with alcohol, after immunoaffinity column purified by high performance liquid chromatography UV detector test Fixed, external standard.

### 4 Reagents and materials

Unless otherwise indicated, the reagents used were of analytical grade water as a water line with GB/T 6682 regulations.

#### 4.1

Methanol. chromatographically pure.

#### 4.2

acetonitrile. chromatography.

#### 4.3

polyethylene glycol (molecular weight 8000).

#### 4.4

PBS washing buffer. Weigh 8.0g of sodium chloride, 1.2 g of disodium hydrogen phosphate, potassium dihydrogen phosphate 0.2g, 0.2g potassium chloride, with 990mL water to dissolve the reagent, and then adjusted to pH 7.0 with concentrated hydrochloric acid, and then diluted with water to 1L.

#### 4.5

deoxynivalenol alcohol bacteria standards. purity  $\geq 98\%$ .

#### 4.6

deoxynivalenol fungi alcohol standard stock solution. Weigh accurately a quantity of deoxynivalenol bacteria enolase standards, dissolved in methanol, with to 0.1mg/mL standard stock solution stored at  $-20\text{ }^{\circ}\text{C}$ , can be used for 3 months.

#### 4.7

deoxynivalenol fungi alcohol standard working solution. Depending on needs, accurately draw a certain amount of deoxynivalenol standard stock bacteria enolase Preparation of liquid, mobile phase and dilute, respectively dubbed the equivalent of 0.1 $\mu\text{g/mL}$ , 0.2 $\mu\text{g/mL}$ , 0.5 $\mu\text{g/mL}$ , 1.0 $\mu\text{g/mL}$ , 2.0 $\mu\text{g/mL}$ , Working standard solution 5.0 $\mu\text{g/mL}$  of,  $4\text{ }^{\circ}\text{C}$  preservation,

use 7d.

**4.8**

deoxynivalenol bacteria enol immunoaffinity column.

**4.9**

Glass fiber filter. diameter 11cm, pore size 1.5 $\mu$ m.

## **5 Apparatus**

**5.1**

Balance. a sense of the amount of 0.001g.

**5.2**

High performance liquid chromatograph. equipped with a UV detector or diode array detector.

**5.3**

homogenizer. speed is greater than 10000r/min.