

ICS 67.040

CCS X 04



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

GB/T 25220-2010

**Inspection of grain and oils -- Determination of ochratoxin A in
grains by high performance liquid chromatography and
fluorometer**

粮油检验 粮食中赭曲霉毒素A的测定 高效液相色谱法和荧光光度法

(English Translation)

Issued on: September 26, 2010

Implemented on: March 1, 2011

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People 's Republic of China**

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Foreword

Appendix A and Appendix B of this standard are informative.

This standard is proposed by the National Grain Bureau.

This standard by the National Grain Standardization Technical Committee.

This standard is responsible for the drafting unit. State Food Bureau Science Research Institute.

This standard participates in the drafting unit. Shanghai National Grain Quality Monitoring Center, Beijing Zhongwei Weikang Technology Co., Ltd., Jilin Province grain and oil hygiene Inspection station.

1 Scope

This standard specifies the use of high performance liquid chromatography and fluorescence spectrophotometric determination of ochratoxin A in food the principles, reagents and materials, Instruments and equipment, operating procedures and results.

This standard applies to the determination of ochratoxin A in wheat, maize and rice.

Immunoaffinity column purification and high performance liquid chromatography and immunoaffinity column purification fluorescence spectrophotometry detection limit of 1 μ g/kg, ion exchange the detection limit of high performance liquid chromatography was 0.8 μ g/kg.

2 Normative reference documents

The terms of the following documents are hereby incorporated by reference into this standard. Whichever is the date of the reference file, which is followed by all (Excluding corrigenda) or revisions do not apply to this standard, however, encourage the parties to

reach an agreement under this standard Whether you can use the latest version of these files. For undated references, the latest edition applies to this standard.

GB/T 6682 Analytical laboratory water specifications and test methods

3.1 Principles

Ochratoxin A in the sample was extracted with acetonitrile water, and the specific immunological affinity reaction between the antibody and its corresponding antigen was used.

Purification of the extract with an immunoaffinity chromatography column containing ochratoxin A-specific antibody was performed using a high performance liquid chromatograph equipped with a fluorescence detector Determination of external standard method.

3.2 Reagents and materials

Unless otherwise specified, the reagents used are analytical pure, experimental water should be consistent with GB/T 6682 secondary water requirements.

3.2.1

acetonitrile. pure chromatography.

3.2.2

Methanol. Chromatographic Purification.

3.2.3

Sodium chloride.

3.2.4

glacial acetic acid.

3.2. Tween-20 (Tween-20).

3.2.6

Sodium bicarbonate.

3.2.7

disodium hydrogen phosphate.

3.2.8

potassium dihydrogen phosphate.

3.2.9

Potassium chloride.

3.2.10

concentrated hydrochloric acid.

3.2.11

ochratoxin A (OchratoxinA, OTA) standards. purity $\geq$ 99%.

3.2.12

Extract. acetonitrile (3.2.1) water = 60 40.

3.2.13

Phosphate buffer solution (PBS). 8.0 g sodium chloride (3.2.3), 1.2 g disodium hydrogen phosphate (3.2.7), 0.2 g potassium dihydrogen phosphate (3.2.8) and 0.2 g of potassium chloride (3.2.9) were dissolved in about 990 mL of water, adjusted to pH 7.0 with concentrated hydrochloric acid (3.2.10), diluted with water to 1 L.

3.2.14

Litter buffer. 25 g sodium chloride (3.2.3), 5 g sodium bicarbonate (3.2.6) dissolved in water, 0.1 mL Tween-20 (3.2.5) Diluted with water to 1L.