

ICS 67.050
CCS X 04

SN

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

SN 0293-1993

Replacing SN 0293-1993

**Determination of paraquat and diquat residues in foodstuffs of
plant origin for export. LC-MS/MS method
(English Translation)**

Issued on: January 1, 1970

Implemented on: January 1, 1970

Issued by: General Administration of Customs

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Method summary
- 4 Reagents and materials

Foreword

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

This standard replaces SN 0293-1993 "cereals for export diquat, paraquat residues in." this standard compared with SN 0293-1993, the main changes are as follows.

- Modify the standard Chinese name;
- Original standard configuration has been modified;
- Standard Scope of rice increased from corn, soybeans, wheat, cotton, dried mushrooms, cabbage, apples, bananas and strawberries;
- According to the major trading nations of paraquat and diquat limited demand re-enacted the lower limit of detection;
- Liquid chromatography - mass spectrometry/mass spectrometry instead of the original standard gas chromatography;
- Increased confirmatory method.

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

This standard was drafted. Heilongjiang People's Republic of China Exit Inspection and Quarantine.

1 Scope

This standard specifies the sample preparation and liquid chromatography export plant derived food paraquat and diquat - mass spectrometry/mass spectrometry.

This standard applies to rice, soybeans, corn, wheat, cotton, dried mushrooms, cabbage, apples, bananas, strawberries paraquat and diquat residues Determination of the amount and confirmation.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

Laboratory use specifications and test methods GB/T 6682 Analysis

3 Method summary

Sample of paraquat and diquat residue with methanol - hydrochloric acid solution to extract homogenized by weak acid cation exchange solid phase extraction (SPE) After using liquid chromatography - mass spectrometry/mass spectrometer, external standard.

4 Reagents and materials

Unless otherwise specified, the reagents were of analytical grade water as a water GB/T 6682 regulations.

4.1

acetonitrile. chromatography.

4.2

Methanol. chromatographically pure.

4.3

formic acid. Chromatographic pure.

4.4

hydrochloric acid.

4.5

sodium hydroxide.

4.6

hydrochloric acid solution (0.1mol/L). Pipette 9mL hydrochloric acid, water volume to 1L.

4.7

Sodium hydroxide solution (1mol/L). Weigh 4.0g of sodium hydroxide, dissolved in water, and dilute to 100mL.

4.8

formic acid solution (0.1%). Pipette 1.0mL of formic acid, diluted with water, and set the volume to 1L.

4.9 0.1% formic acid in acetonitrile solution (11 volume). Measure 50mL of acetonitrile was added 50mL 0.1% formic acid (4.8), and mix.

4.10

acetonitrile - water - formic acid (88102, volume ratio). acetonitrile amount of 88mL, 10mL 2mL water and acid, and mix.

4.11

methanol - 0.1mol/L hydrochloric acid solution (19 volume). amount of 900mL 0.1mol/L hydrochloric acid solution (4.6), was added 100mL Methanol, and mix.

4.12

paraquat dichloro salt Standards. $C_{12}H_{14}Cl_2N_2$, CAS No. 1910-42-5, purity of greater than or equal to 99.0%.

4.13

diquat salt dibromo standard substance. $C_{12}H_{12}Br_2N_2$, CAS No. 85-00-7, purity of greater than or equal to 99.0%.

4.14

standard stock solution. Accurately weigh each standard substance respectively take the right amount, with 0.1mol/L hydrochloric acid solution was formulated at a concentration of 1000 μ g/mL