

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

SN 0162-1992

Replacing SN 0162-1992

**Determination of thiophanate-methyl, thiophanate,
carbendazim, benomyl and thiabendazole residues in fruits for
export. HPLC method**

出口水果中甲基托布津残留量检验方法
(English Translation)

Issued on: September 9, 2011

Implemented on: April 1, 2012

Issued by: General Administration of Customs

Table of Contents

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

Foreword

Accordance with the standards GB/T 1.1-2009. Drafting "Standardization Guide Part 1 standard structure and writing" requirement.

This standard is SN 0162-1992 "fruits for export thiophanate methyl residues in" amendments and SN 0162-1992 Compared to the main changes are as follows.

- Text structurally different. SN 0162-1992 according to GB/T 1.1-1987 prepared, according to the present standard GB/T 1.1-2009 write;
- Detect substances increased. SN 0162-1992 only thiophanate-methyl, an increase of this standard thiophanate, carbendazim, benomyl and thiophene Benomyl;
- Increased detection object. SN 0162-1992 only citrus, this standard adds apples, pears, peaches and grapes;
- Remove SN 0162-1992 sample content (SN 0162-1992 "2 sampling and sample preparation");
- Increasing the sample preparation and preservation (see this standard "6 Sample Preparation and Storage");
- Different detection methods. SN 0162-1992 by gas chromatography, high performance liquid chromatography of this standard;
- Increasing the lower limit of the determination recoveries (see this standard "8 Limit of determination recovery").

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

This standard by the People's Republic of China Hunan Exit Inspection and Quarantine is responsible for drafting.

1 Scope

This standard specifies the fruit for export methyl thiophanate,, carbendazim, benomyl, HPLC thiabendazole residues Method and HPLC - MS/MS confirmation methods.

This standard is applicable to the export of citrus, apples, pears, peaches and grapes methyl thiophanate,, carbendazim, benomyl, thiabendazole 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

Pesticide residues in samples extracted with acetonitrile, after solid phase extraction column purified by high performance liquid chromatography, quantified by external standard liquid Chromatography - mass spectrometry/mass spectrometry confirmation.

4 Reagents and materials

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

4.1

acetonitrile. HPLC grade.

4.2

Methanol. HPLC grade.

4.3

toluene.

4.4

acetic acid.

4.5

sodium chloride.

4.6

sodium hydroxide.

4.7

Sodium hydroxide solution (0.5mol/L). Weigh 2.0g of sodium hydroxide dissolved in water and dilute to 100mL.

4.8 0.1% methanol solution of acetic acid. Take 1mL acetic acid, diluted with methanol and set the volume to 1000mL.

4.9

Toluene - acetonitrile (13 volume). Measure 100mL of toluene, 300mL of acetonitrile and mix.

4.10

methanol - water (11 volume). amount of 100mL of methanol was added 100mL of water, and mix.

4.11

Standard substances. thiophanate-methyl (thiophanate-methyl, CAS number. 23564-05-8), thiophanate (thiophanate, CAS number.

25564-06-9), carbendazim (carbendazim, CAS number. 10605-21-7), thiabendazole (thiabendazole, CAS number. 148-79-8).

4.12

standard stock solution. namely, accurately weighed amount of the above standards, prepared in methanol stock standard solution 1.0mg/mL of. Multi-strain After spirit must first dissolve a small amount of hydrochloric acid and then dissolved in methanol to volume. -18 °C stored in the dark.