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

SN/T 2233-2020

Replacing SN/T 2233-2008

**Determination of Fenpropathrin Residues in Exported
Plant-derived Foods**

出口植物源性食品中甲氰菊酯残留量的测定
(English Translation)

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Foreword

This document is compiled in accordance with the rules given in GB/T 1.1-2009.

This document replaces SN/T 2233-2008 "Methods for the Determination of Fenpropathrin Residues in Imported and Exported Foods", and is revised to be consistent with SN/T 2233-2008, in addition to editorial changes, the main technical changes are as follows.

--Modified the file name;

--The scope of application of the document is extended to tomatoes, carrots, sweet peppers, red cabbage, spinach, leeks, celery, Chinese cabbage, eggplant, apples Fruits, citrus, grapes, mushrooms, wheat, soybeans and tea.

--- Added gas chromatography tandem mass spectrometry as the first method in the document; the original standard gas chromatography as the second method;

- Modified the pre-processing method.

--The sampling step is omitted.

Please note that certain contents of this document may involve patents, and the issuing agency of this document does not bear the responsibility for identifying these patents.

This document was proposed and managed by the General Administration of Customs of the People's Republic of China.

1 Scope

The first method of this document specifies the method for determination and confirmation of fenpropathrin residues in foods of plant origin for export by gas chromatography-tandem mass spectrometry.

The second law stipulates the gas chromatography-electron capture detector (ECD) method for the determination of fenpropathrin residues in exported plant-derived foods.

This document applies to tomatoes, carrots, sweet peppers, red cabbage, spinach, leeks, celery, Chinese cabbage, eggplant, apples, citrus, Determination and confirmation of fenpropathrin residues in grapes, mushrooms, wheat, soybeans and tea.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations Only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable Used in this document.

GB/T 6682 Analytical laboratory water specifications and test methods Method One Gas Chromatography Tandem Mass Spectrometry

3 Terms and definitions

There are no terms and definitions that need to be defined in this document.

4 Method summary

The residual fenpropathrin in the sample is extracted with acetonitrile or acetonitrile (containing 1% glacial acetic acid), and the dispersive solid phase extraction method is used for purification.

(EI) The gas chromatography-mass spectrometer/mass spectrometer of the ion source is used for quantification and confirmation detection, and the matrix standard solution external standard method is used for quantification.

5 Reagent materials

Unless otherwise specified, the reagents used are of analytical grade, and the water is the first grade water specified in GB/T 6682.

5.1

Acetonitrile. chromatographically pure.

5.2

n-Hexane. chromatographically pure.

5.3

Acetone. chromatographically pure.

5.4

Glacial acetic acid.

5.5

Anhydrous Magnesium Sulfate. Bake in a muffle furnace at 500°C for about 4 hours, and store in an airtight container for later use after cooling.

5.6

Sodium chloride.

5.7

Sodium citrate.

5.8

Disodium hydrogen citrate.

5.9

C18 adsorbent. 40 μm ~ 63 μm .

5.10

Graphitized carbon (Carbon-GCB) adsorbent. 120 mesh ~ 400 mesh.

5.11

Ethylenediamine-N-propylsilane (PSA) adsorbent. 40 μm ~ 60 μm .

5.12

Anhydrous sodium acetate. Bake in a muffle furnace at 500°C for about 4 hours, and store in a closed container for later use after cooling.

5.13

Acetonitrile (containing 1% acetic acid). Add 1 mL of acetic acid to 100 mL of acetonitrile, and mix well.

5.14

Fenpropathrin standard material (Fenpropathrin), the purity is greater than 95%. The Chinese and English name, CAS number, and minute of fenpropathrin See the table A.1 in Appendix A for the sub-formula and other information.

5.15

Preparation of fenpropathrin standard stock solution. accurately weigh an appropriate amount of standard substance, dissolve it with acetonitrile and prepare it to a concentration of 1.0 mg/mL Store the standard stock solution at -18°C in the dark.

5.16

Preparation of standard intermediate solution. Pipette 1.0 mL of the above standard stock solution into a 100 mL volumetric flask, dilute with acetonitrile and determine Make it up to the mark, prepare a mixed standard intermediate solution of about 10µg/mL, and store at 0°C ~ 4°C in the dark.

5.17

Organic phase needle filter membrane. 0.22µm.

6 Apparatus and equipment

6.1

Gas chromatography-mass spectrometer/mass spectrometer. equipped with electron impact ionization source (EI).

6.2

Analytical balance. Sensitivity is 0.1mg and 0.01g respectively.

6.3

Vortex mixer.

6.4

Nitrogen blowing concentrator.

6.5

Centrifuge. the speed is not less than 4000r/min.

6.6

Grinder.