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SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3695.2-2014

Determination of mirex in electrical and electronic products. Part 2: Gas chromatography-mass spectrometry method

电子电气产品中灭蚁灵的测定 第2部分：气相色谱-质谱法

(English Translation)

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Foreword

SN/T 3695 "electrical and electronic products, mirex determination" is divided into two parts.

--- Part 1. Gas chromatography - flame ionization detector method;

--- Part 2. Gas chromatography - mass spectrometry.

This section SN/T Section 23695 of.

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

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

This section is responsible for drafting unit. People's Republic of China Guangdong CIQ.

1 Scope

SN/T 3695 provisions of this part of the electrical and electronic products, mirex content by gas chromatography - mass spectrometry method.

This section applies to the determination of electrical and electronic goods and plastic parts mirex.

2 Method summary

Samples with n-hexane - isopropyl alcohol (11) extraction, the extract was dried C18 SPE column purified, concentrated, constant volume, gas chromatography -Mass spectrometry, internal standard.

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3 Reagents and materials

3.1
hexane. chromatographically pure, purity >=99%.

3.2
Isopropanol. chromatography, the purity of >=99%.

3.3
Mirex (perchlorethylene rings decane, CAS number. 2385-85-5). Purity >=97%.

3.4
octa-chlorinated naphthalene (CAS Registry Number. 2234-13-1). Purity >=97%.

3.5
hexane - isopropyl alcohol (11). n-hexane (3.1) and isopropanol (3.2) at equal volume were mixed to homogeneity.

3.6
standard stock solution (1000mg/L). Weigh accurately 25mg (accurate to 0.1mg) Mirex (3.3), placed in 25mL volumetric flask, Dissolved and set the volume of isopropyl alcohol (11) (3.5) - n-hexane.

3.7
internal standard stock solution (1000mg/L). Weigh accurately 25mg (accurate to 0.1mg) octa-chlorinated naphthalene (3.4), placed in 25mL volumetric flask, Dissolved and set the volume of isopropyl alcohol (11) - n-hexane.

3.8
intermediate internal standard solution (100mg/L). accurate Pipette 5mL internal standard stock solution (3.7) in 50mL volumetric flask with n-hexane - isopropanol (11) (3.5) volume.

3.9
standard solution. accurate Pipette appropriate volume of stock standard solution (3.6) with n-hexane - isopropanol serial dilution (11) and into the Appropriate volume of the internal standard solution (3.8), formulated as mirex concentrations of 1mg/L, 2mg/L, 5mg/L, 10mg/L, 20mg/L, 50mg/L, and includes eight chlorine naphthalene concentration was 10mg/L of standard working solution.

3.10
C18 SPE column. 3mL/500mg, before use with 5mL hexane - isopropyl alcohol (11) activation.

The organic phase was 3.11 membrane. 0.45μm.

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4 Instruments and equipment

4.1

Gas chromatography - mass spectrometry. with electron impact ionization (EI).

4.2

microwave extraction instrument. rated power not less than 200W.

4.3

vacuum rotary evaporator.

4.4

Freezer Mill.

4.5

Balance. a sense of the amount of 0.1mg.

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