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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3603-2013

Quantitative screening of anthracene oil in rubber products. Gas chromatography-mass spectrometry method

橡胶制品中蒽油的快速筛选测定 气相色谱-质谱联用法

(English Translation)

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Foreword

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

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

This standard was drafted. People's Republic of China, Ningbo Entry-People's Republic of China Guangdong Entry-Exit Inspection and Quarantine Bureau.

1 Scope

This standard specifies by gas chromatography - mass spectrometry method of rubber products anthracene oil rapid screening measurement.

This standard applies to the determination of rubber products for rapid screening of anthracene oil, anthracene oil measurement results for acenaphthylene, fluorene, phenanthrene, anthracene, carbazole, fluoranthene and other major the sum of the characteristics of the compound divided by the maximum risk factor of 0.4, measured anthracene oil lower limit of 50mg/kg.

2 Terms and definitions

The following terms and definitions apply to this document.

Anthracene oil Anthraceneoil A complex of hydrocarbons, coal tar by carbonization to obtain approximate distillate range between 300 °C ~ 400 °C, the main ingredient Including acenaphthylene, fluorene, phenanthrene, anthracene, carbazole, fluoranthene compound characteristics, CAS number. 90640-80-5.

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3 Method summary

The samples were ultrasonic extraction, gas chromatography - mass spectrometry to detect the amount of internal standard to give the main features of anthracene oil compound Acenaphthylene, fluorene, phenanthrene, anthracene, carbazole, fluoranthene content, add and divided by the greatest risk factor 0.4, anthracene oil content meter.

4 Reagents and materials

Unless otherwise specified, use only analytical reagent.

4.1
methylene chloride, chromatography.

4.2
Nitrogen. purity >=99.99%.

4.3
Internal standard. deuterated Philippines, purity >=97%.

4.4
Standard substance. acenaphthene, fluorene, phenanthrene, anthracene, carbazole, fluoranthene standard substance, purity >=97%.

4.5
formulated internal standard stock solution (500mg/L). Weigh accurately the internal standard (4.3) 0.05g (accurate to 0.1mg) to 100mL volumetric flask the methylene chloride was added to dissolve, dilute to the mark and shake.

4.6
formulated internal standard solution (5mg/L). accurate Pipette 5mL internal standard stock solution (4.5) to a 500mL flask with dichloromethane to volume shake.

4.7
preparation of mixed standard stock solution (1000mg/L). Weigh accurately each standard substance (4.4) 0.1g (accurate to 0.1mg) to 100mL flask, add internal standard solution (4.6) to dissolve, dilute to the mark and shake.

Preparation 4.8 mixed standard working solution. accurately Pipette the appropriate amount of mixed standard stock solution (4.7), using the internal standard solution (4.6) to the desired volume concentration.

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5 Apparatus

5.1

Gas chromatography - mass spectrometry. EI source and with autosampler.

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