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SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3605-2013

Determination of mercury content in liquid petroleum products. Direct injection method

液体石油产品汞含量的测定 直接进样法

(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-Exit-Entry Inspection and Guangxi People's Republic of China Quarantine Bureau.

1 Scope

This standard specifies the direct injection of liquid petroleum products - Determination of mercury content.

This standard applies to the determination of naphtha, diesel oil, fuel oil and other liquid petroleum products in the mercury content of mercury detection limit was 2μg/kg.

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.

Preparation of standard solution of GB/T 602 Determination of impurities in chemical reagents GB/T 4756 petroleum liquids hand sampling method Laboratory use specifications and test methods GB/T 6682 Analysis

3 Method summary

Sample decomposition furnace thermal decomposition gases produced with the carrier gas entering the catalytic furnace further catalyze the decomposition generated by halogen,

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sulfur Oxides and nitrogen oxides are adsorbed by the adsorbent; mercury vapor into the amalgamator to form gold amalgam trapped; then rapidly heated amalgamator Release mercury vapor into the atomic absorption photometer detection, absorbance was measured at 253.7nm, using external standard.

4 Reagents and materials

Unless otherwise stated, use only analytical grade reagents and in line with GB/T 6682 provisions of secondary water.

4.1
nitric acid (rho = 1.42g/cm3).

4.2
xylene, pure class distinctions.

4.3
alumina, at (700 ± 50) °C heated 2h to remove mercury, after cooling stand.

4.4
nitric acid solution (595), the volume fraction.

4.5
mercury standard stock solution (1000μg/mL). according to GB/T 602 standard preparation, or direct use of certified reference materials.

4.6
mercury standard solution (10.0μg/mL). accurate Pipette 0.1mL mercury standard stock solution (4.5) in 10mL volumetric flask, with nitric acid Solution (4.4) constant volume, mix, now equipped with time.

4.7
mercury standard solution. Take mercury standard solution (4.6), progressively diluted nitric acid solution (4.4) to 0.05μg/mL, 0.1μg/mL, 0.2μg/mL, 0.3μg/mL, 0.5μg/mL, mercury standard 1.0μg/mL working solution series, now equipped with time.

5 Apparatus

5.1
Direct Injection Mercury Analyzer. a low-pressure mercury lamp with a wavelength of 253.7nm, with a series of single-beam measuring cell or double beam spectrometer, thermal Decomposition furnace, catalytic stoves and amalgamated the like.

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5.2

Sample boat. made of quartz or ceramics.

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