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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3811-2014

Determination of arsenic and antimony in petroleum naphthas - Hydride generation atomic fluorescence spectrometric method

石脑油中砷和锑的测定 氢化物发生原子荧光光谱法

(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 Fujian Exit Inspection and Quarantine.

1 Scope

This standard specifies the atomic fluorescence spectrometric method Naphtha total arsenic and antimony content of total hydride generation.

This standard applies to the determination of arsenic and antimony naphtha. Detection limit are 5μg/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.

Laboratory use specifications and test methods GB/T 6682 Analysis

3 Method summary

Samples with sodium hypochlorite, sulfuric acid solution were extracted after digestion extract was added L- cysteine to pentavalent arsenic to trivalent pre-reduction Arsenic, pentavalent antimony, trivalent antimony prereduction, the reaction cell hydride and sodium borohydride generates arsine, stibine, the argon gas introduced into the hydride Atomic fluorescence spectrometry.

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4 Reagents and materials

Unless otherwise indicated, the reagents used were of analytical grade, water as a secondary water GB/T 6682 regulations.

4.1
sulfuric acid (rho = 1.84g/mL), pure class distinctions.

4.2
hydrochloric acid (rho = 1.16g/mL), pure class distinctions.

4.3
nitric acid (rho = 1.40g/mL), pure class distinctions.

4.4
sodium hydroxide.

4.5
of sodium borohydride.

4.6
L- cysteine, chemical reagents.

4.7
sodium hypochlorite.

4.8
ammonium oxalate.

4.9
iso-octane.

4.10
Hydrogen peroxide (30% aqueous solution).

4.11
sodium hydroxide solution (4g/L). Weigh 4g of sodium hydroxide, dissolved in water, dilute to 1L.

4.12
sodium borohydride solution (20g/L). Weigh sodium borohydride 10g, was dissolved in 500mL sodium hydroxide solution (4.11), the mix, now with Active.

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4.13

L- cysteine solution (100g/L). Weigh L- cysteine 20g, was added a small amount of water infiltration reagent was added 20mL salt Acid (4.2), dissolved in water, dilute to 200mL.

4.14

sodium hypochlorite solution (0.5g/L). Weigh 5g of sodium hypochlorite, dissolved in water, dilute to 100mL.

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