Chinastandards.org

SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3301-2012

Determination of manganese, iron, lead in gasoline. Inductively coupled plasma atomic emission spectrometry(ICP-AES)

汽油中锰、铁、铅含量的测定 电感耦合等离子体原子发射光谱法

(English Translation)

Issued on: October 23, 2012 **Implemented on: May 1, 2013**

Issued by: General Administration of Customs

Preview: page 1 of 4 shown, 5 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3301-2012

Chinastandards.org

Table of Contents

Foreword
1 Scope
2 Normative references
3 Method summary
4 Reagents and materials
5 Apparatus

Foreword

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

Please note that some of the content of this document may involve patents. Distribution of this document Institutions do not assume the responsibility to identify these patents.

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

This standard was drafted. People's Republic of China Ningbo Exit Inspection and Quarantine.

1 Scope

This standard specifies the gasoline manganese, iron, lead a method for determination by inductively coupled plasma atomic emission spectrometry.

This standard applies to the determination of gasoline manganese, iron, lead content determination. Iron detection limit of 0.5mg/kg, manganese detection limits the detection limit of 0.1mg/kg, the lead element of 2.0mg/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.

GB/T 4756 petroleum liquids hand sampling method

Preview: page 2 of 4 shown, 5 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3301-2012

3 Method summary

A certain amount sufficiently homogenized sample, diluted with a solvent to obtain a sample solution, and then to prepare a standard solution in the same way, in order to fill Introducing the sample due to various errors compensation effect and cause, select an internal standard element added to the sample solution and the standard solution, the solution with a peristaltic pump Import ICP instrument for testing. By comparing the sample and standard solutions in emission intensity of a specific wavelength, calculate the sample solution Concentration of the detected elements, internal standard.

4 Reagents and materials

4.1
n-heptane. chromatographic pure, does not contain the measured elements.

4.2
toluene. chromatographic pure, does not contain the measured elements.

4.3
Mixed diluent. 3 volumes of n-heptane (4.1) and one volume of toluene (4.2) were mixed.

4.4
iron, manganese, lead elements of the organic standards. each element at a concentration of 100mg/kg mixed organic standards or single element can be organic standards.

4.5
yttrium internal standard. a concentration of 1000mg/kg.

5 Apparatus

5.1
Inductively Coupled Plasma Emission Spectrometer. As long as there have quartz torch and high-frequency inductively coupled plasma generator capable of forming, etc.

Plasma emission spectrometer (simultaneous determination of whether or sequential scan) can be used.

5.2
Spray chamber. plus circulating condensate or semiconductor refrigeration device can control the spray chamber temperature below 5 °C.

5.3
peristaltic pump inlet tubing. diluent in contact with at least 6h same type.

Preview: page 3 of 4 shown, 5 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3301-2012

Chinastandards.org

5.4

Vial. 30mL ~ 120mL screw-top PET plastic bottles.

5.5

sonicator (recommended). For easy removal of volatile gasoline samples substances.

5.6

oxygenase means. for improving the C spectrum interference and effective solution to the problem of carbon deposition.

5.7

Balance. a sense of the amount of 0.1mg.

Preview: page 4 of 4 shown, 5 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3301-2012