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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3601-2013

Determination of total sulfur in graphite. Infrared absorption spectrometry

石墨中全硫含量的测定 红外吸收光谱法

(English Translation)

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Preview: page 1 of 4 shown, 4 in the full document. Complete English PDF, instant download:
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Table of Contents

Foreword
1 Scope
2 Method summary
3 Reagents and materials
4 Instrument
5 Sample
6 Step, Analysis
6.1 Curve
6.2 Check the curve

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. Tianjin People's Republic of China Exit Inspection and Quarantine.

1 Scope

This standard specifies the method of infrared absorption spectrometry determination of total sulfur content of graphite in high temperature combustion.

This standard applies to the determination of flake graphite, artificial graphite, electrode and graphite products in the total sulfur content. Measurement range (mass fraction Number). 0.0010% to 2.5%.

2 Method summary

Analysis of samples at 1300 °C ~ 1350 °C high temperature in a stream of oxygen combustion decomposition. Gas (water vapor and particles) after burning through Negative pressure is transmitted to the infrared absorption cell, wherein the determination of sulfur dioxide by infrared detection system.

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3 Reagents and materials

3.1
Standard substances. graphite certified reference materials with total sulfur content.

3.2
oxygen. not less than 99.5% purity.

3.3
Desiccant. magnesium perchlorate, AR.

4 Instrument

4.1
Infrared measuring sulfur analyzer. You can set the temperature range of 1000 °C ~ 1350 °C, accuracy ± 10 °C.

4.2
Balance. a sense of the amount of 0.1mg.

4.3
porcelain boat. temperature above 1300 °C, placed in a desiccator.

5 Sample

The sample size should be less than 100μm.

6 Step, Analysis

Warning. The specimen used porcelain boat due to high temperature, remove the tray placed in the mouth at a time, to achieve cooling, pay attention to safety, in order to avoid scald.

6.1 Curve

To establish a method working curve. Select multiple graphite standard samples with different sulfur contents, weighed similar quality was measured, these standards Sulfur content of reference material should be able to cover the range of sulfur content in the tested sample.

Read the results from the instrument.

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6.2 Check the curve

Check the recommended working curve at the beginning and end of each batch of samples to be tested, the test sample is large when the middle of adding 1 or 2 times.

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