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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3319.2-2012

Ferrophorus for import and export. Part 2: Determination of manganese content. Periodate spectrophotometric method

进出口磷铁 第2部分：锰含量的测定 高碘酸盐光度法

(English Translation)

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Foreword

SN/T 3319 "Importers phosphorus iron" is divided into two parts.

--- Part 1. Determination of the inductor phosphorus, manganese, silicon, titanium, vanadium, chromium coupled plasma atomic emission spectrometry;

--- Part 2. Determination of manganese content periodate spectrophotometry.

This section SN/T 3319 Part 2.

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

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

This section is drafted. Tianjin People's Republic of China Exit Inspection and Quarantine.

1 Scope

SN/T 3319 This section specifies the method of periodate spectrophotometric determination of phosphorus in the iron and manganese content.

This section applies to the determination of phosphorus in the iron and manganese content, the measurement range of 0.01% to 2.50%.

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 6379.2 measurement methods and results of Accuracy (trueness and precision) - Part 2. Determine the standard measurement method to repeat of the basic methods of reproduction Laboratory use specifications and test methods GB/T 6682 Analysis

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3 Method summary

Sample was dissolved in hydrofluoric acid, nitric acid and hydrochloric acid was added parathion mixed acid is heated until white smoke when sulfur trioxide, nitric acid solution of the sample solution Solution, the insoluble residue was filtered with filter paper, high temperature ashing by sulfuric acid, hydrofluoric acid treatment, high temperature melting potassium pyrophosphate, sulfuric acid leaching, high added Potassium iodate peroxide solution, after constant volume absorbance was measured at 530nm wavelength, determines the content from the working curve.

4 Reagents and materials

Unless otherwise noted, all reagents were analytical grade water to comply with two water GB/T 6682 regulations.

4.1
Hydrofluoric acid (rho = 1.15g/mL).

4.2
hydrochloric acid (rho = 1.19g/mL).

4.3
nitric acid (rho = 1.42g/mL).

4.4
phosphoric acid (rho = 1.70g/mL).

4.5
sulfate (rho = 1.84g/mL).

4.6
potassium pyrosulfate.

4.7
phosphate (11).

4.8
sulfate (11).

4.9
sulfate (14).

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4.10

high potassium iodate solution (50g/L). Weigh 5g potassium periodate placed in 250mL beaker, add 60mL water, add 15mL of nitric acid Warmed to dissolve, cooled to room temperature, transferred to 100mL volumetric flask, dilute to the mark with water and mix.

4.11

sodium nitrite solution (10g/L). Weigh 1g of sodium nitrite into 250mL beaker, add 60mL water, completely dissolved shift Into 100mL volumetric flask, dilute to the mark and mix.

4.12

Manganese standard solution.

4.12.1

manganese standard stock solution (1000mg/L). Manganese standard solution using a national certified reference materials.

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