

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SN/T 3323.4-2012

**Mill scale. Part 4: Determination of arsenic and mercury. Atomic
fluorescence spectrometric method
(English Translation)**

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Foreword

SN/T 3323 "iron skin" is divided into five parts.

- Part 1. Determination of ferrous oxide dichromate method;
- Part 2. Determination of sulfur content - High frequency combustion infrared absorption method;
- Part 3. lead, chromium, cadmium was measured by inductively coupled plasma atomic emission spectrometry;
- Part 4. arsenic, mercury atomic fluorescence spectrometry;
- Part 5. total iron and silicon, calcium, phosphorus, manganese, aluminum, titanium and magnesium determination of X-ray fluorescence spectrometry.

This section SN/T 3323 Part 4.

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.

1 Scope

SN/T 3323 provisions of this part of the oxide scale atomic fluorescence spectrometry Arsenic and mercury content measurement method.

This section applies to Atomic Fluorescence Spectrometry arsenic, mercury content in the oxide scale. Determination of arsenic and mercury in the lower limit. arsenic 0.2 μ g/g, Mercury 0.1 μ g/g.

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 Laboratory use specifications and test methods GB/T 6682 Analysis GB/T 21191 atomic fluorescence spectrometer

3 Method summary

Sample decomposition with hydrochloric acid, thiourea and ascorbic acid mixed solution as a reducing agent and a masking agent, by hydride generation atomic fluorescence Spectroscopy to detect.

4 Reagents

Unless otherwise indicated in the analysis using only recognized as analytical reagent water to comply with two water GB/T 6682 regulations.

4.1

hydrochloric acid ($\rho = 1.19\text{g/mL}$), pure class distinctions.

4.2

nitric acid ($\rho = 1.42\text{g/mL}$), pure class distinctions.

Thiourea 4.3.

4.4

ascorbic acid.

4.5

potassium hydroxide.

4.6

potassium borohydride.

4.7

dichromate, pure class distinctions.

4.8

high-purity iron, the mass fraction of greater than 99.98%.

4.9

hydrochloric acid solution (11).

4.10

hydrochloric acid solution (19).

4.11

hydrochloric acid solution (119).

4.12

nitric acid solution (119).

4.13

potassium hydroxide (5g/L) solution. Weigh 5g of potassium hydroxide (4.5), dissolved in water and diluted to 1000mL.

4.14

potassium borohydride (15g/L) solution. Weigh 7.5g potassium borohydride (4.6), was dissolved in 500mL of potassium hydroxide solution (4.13), and when used Now equipped.