

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

SN/T 0837.3-2011

Replacing SN/T 0837.3-1999

**Method for chemical analysis of arsenic trioxide for import and
export. Part 3: Determination of iron content**

进出口三氧化二砷化学分析方法 第3部分：铁含量的测定

(English Translation)

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Foreword

SN/T 0837 "Importers and chemical analysis of arsenic trioxide" series of standards is divided into four parts.

Determination of Arsenic trioxide content. --- Part 1

--- Part 2. Determination of moisture content

--- Part 3. Determination of iron content

--- Part 4. Determination of chlorine ion content this section SN/T Section 30837 of.

The partial replacement of SN/T 0837.3-1999 "Determination of arsenic trioxide in the export of iron." This portion of the SN/T 0837.3-Compared to 1999, the main changes are as follows.

--- The lower limit of the measurement range from 0.001% to 0.002% or modification;

--- In Chapter 6, "sample", the increased size of the requirements by deleting the content on sample preparation and preservation. Notes to modify the warning After the first on this Part;

--- In Chapter 3, "Methods and Principles", the low-temperature burning arsenic removal to removal of arsenic dissolved in hydrochloric acid;

--- Flame atomic absorption spectrometry and O - phenanthroline UV spectrophotometry same parts blend together;

--- In Chapter 4, "agent", the hydrochloric acid (21) instead of hydrochloric acid (11), of iron standard solution (1mg/mL) to switch to a commercial standard solution;

--- In Chapter 7, "analysis step", the increase of the parallel determination requirements. In addition to the direct low-temperature burning arsenic dissolved in hydrochloric acid to lower Temperature arsenic removal. The residue was dissolved to adjust the amount of acid, so that a consistent sample and standard solution acidity;

--- Will allow differential expression changed to regulate the expression of precision;

--- Delete the original contents of Appendix A "atomic absorption spectrophotometer performance indicators", performance metrics defined in Chapter 5.

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

1 Scope

This section provides a method for the import and export of iron content determination of arsenic trioxide.

This section applies to the determination of arsenic trioxide and export of iron content. Measurement range. 0.002% to 1.0% (mass fraction).

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 21187-2007 atomic absorption spectrophotometer JB/T 9324-1999 Vis

3 PRINCIPLE OF THE METHOD

Sample was dissolved with hydrochloric acid, low temperature to remove arsenic chloride evaporated, the residue was dissolved with hydrochloric acid. By flame atomic absorption spectrometry or Phenanthroline spectrophotometric Spectrophotometric determination of iron content. Flame Atomic Absorption Spectrometry. air - acetylene flame at a wavelength at 248.3nm measured absorbance; phenanthroline Luo spectrophotometry method. with ascorbic acid ferric reduced to ferrous iron, an appropriate amount of ammonium acetate in the presence of divalent iron to generate Phenanthroline Orange-red complex, at the wavelength of 510nm measured absorbance.

4 Reagents

Unless otherwise specified, use only analytical grade reagents and distilled or deionized water or equivalent purity.

4.1

hydrochloride ($\rho=1.19\text{g/mL}$).

4.2

hydrochloride (11).

4.3

hydrochloride (298).

4.4

iron standard stock solution (1000 μ g/mL).

4.5

iron standard solution (100 μ g/mL). Pipette 10.00mL iron standard stock solution (4.4) in 100mL flask, add 4mL salt Acid (4.2), diluted with water to the mark.

4.6

iron standard solution (10.0 μ g/mL). Pipette 1.00mL iron standard stock solution (4.4) in 100mL flask, add 4mL salt Acid (4.2), diluted with water to the mark.

4.7

ammonium acetate solution (400g/L).

4.8

ascorbic acid solution (10g/L), the time is now equipped with.

4.9

Phenanthroline solution (1g/L). dissolve 0.1g Phenanthroline in 100mL of water, stored in a colored bottle, if there is color, should be re