

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

SN/T 1031.7-2003

**Method for the chemical analysis of crude antimony trioxide for
export. Determination of arsenic content**
(English Translation)

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Foreword

SN/T 1031 "Chemical Analysis Method for Import and Export Crude Oxide" is divided into the following seven parts.

- Part 1. Determination of mercury content;
- Part 2. Determination of total sputum;
- Part 3. Determination of the content of antimony trioxide;
- Part 4. Determination of fluorine content;
- Part 5. Determination of selenium content;
- Part 6. Determination of lead and iron content;
- Part 7. Determination of arsenic content.

This part is the seventh part of SN/T 1031.

This part is proposed and managed by the National Certification and Accreditation Administration of the People's Republic of China.

This section drafted by. Guangdong Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

1 Scope

This section specifies the method for determination of arsenic in crude cerium oxide for import and export.

This section applies to the determination of arsenic content in raw and exported crude cerium oxide. Measuring range. 0.010% to 1.20%.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. All dated references, followed by all Modifications (not including errata content) or revisions do not apply to this section, however, parties to agreements based on this standard are encouraged to study is it possible to use the latest version of these files? For undated references, the latest edition applies to this standard.

GB/T 3253.1-2001 Determination of arsenic content GB/T 3254.2-1998 Determination of arsenic content

3 Method summary

The sample is decomposed with sulfuric acid-potassium sulfate, and the arsenic trichloride is extracted with benzene in a hydrochloric acid solution having a concentration of not less than 9 mol/L to make the matrix and Coexisting impurities are separated. Re-extract arsenic with water and oxidize to pentavalent arsenic, add ammonium molybdate, then add barium sulfate to form arsenic molybdenum blue, in spectrophotometer the absorbance was measured at a wavelength of 660 nm.

4 Reagents

Unless otherwise stated, only analytically pure reagents and distilled or deionized water or water of comparable purity were used in the analysis.

4.1

Benzene.

4.2

Potassium sulfate.

4.3

Sulfuric acid ($\rho=1.84\text{g/mL}$).

4.4

Sulfuric acid (1+20).

4.5

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

4.6

Hydrochloric acid (3+1).

4.7

Hydrochloric acid (1+1).

4.8

Sulfurous acid (1+2).

4.9

Sodium hydroxide solution (300g/L). Store in plastic bottles.

4.10

Iodine solution (5g/L). Weigh 0.5g of iodine, 1g of potassium iodide in a 250mL beaker, add 5mL of water to dissolve, dilute with water to 100 mL, stored in brown glass bottles.

4.11

Ammonium molybdate solution (15g/L). Weigh 1.5g ammonium molybdate $[(\text{NH}_4)_6\text{Mo}_7\text{O}_{24}\cdot 4\text{H}_2\text{O}]$ in a 250mL beaker, add Dissolve 40 mL of water, add 50 mL of sulfuric acid (1+1), cool and transfer to a glass bottle, dilute to 100 mL with water, and mix.

4.12

Barium sulfate solution (0.5g/L).

4.13

Phenolphthalein ethanol solution (1g/L).

4.14

Arsenic standard storage solution. weigh 0.1320g and pre-cooled at 100 °C ~ 110 °C for 2h in a desiccator to cool to room temperature.