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

YS/T 1014.3-2014

**Chemical analysis methods of bismuth trioxide. Part
3: Determination of chlorine content. Silver chloride Comparison
of turbidity method**

三氧化二铋化学分析方法 第3部分：氯量的测定 氯化银比浊法
(English Translation)

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Foreword

YS/T 1014 "Methods for chemical analysis of bismuth trioxide" is divided into five sections.

- Part 1. bismuth trioxide Determination Na₂EDTA titration;
- Part 2. silver, copper, magnesium, nickel, cobalt, manganese, calcium, iron, cadmium, lead, zinc, antimony, aluminum, sodium, sulfur content - Inductively coupled plasma Atomic emission spectrometry;
- Part 3. Determination of chlorine content of silver chloride turbidimetry;
- Part 4. loss on ignition - Gravimetric method;
- Part 5. moisture content - Gravimetric method.

This section YS/T 1014 Part 3.

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

The non-ferrous metal part by the National Standardization Technical Committee (SAC/TC243) centralized.

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1 Scope

YS/T 1014 This section specifies the method for determination of bismuth trioxide in the amount of chlorine.

This section applies to the determination of bismuth trioxide in amounts of chlorine, Measuring range. 0.0015% to 0.015%.

2 Method summary

Sample dissolved in nitric acid, glycerol in the presence of silver nitrate and chlorine generated silver chloride emulsion was measured in a spectrophotometer at 510nm Chloro-absorbance standard curve by Richard chlorine content in a sample.

3 Reagents

Unless otherwise stated in this section is used only to confirm the excellent level of pure reagents and deionized water or equivalent purity.

3.1

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

3.2

nitric acid (11).

Glycerin 3.3 (11).

3.4

silver nitrate solution (17g/L). Weigh 17g of analytical grade silver nitrate, placed in a beaker of 500mL, 300mL of water, soluble Solution, water volume to 1000mL volumetric flask and mix.

3.5

Storage chlorine standard solution. Weigh 1.6485g reference sodium chloride (pre-ignition to constant weight at $400\text{ }^{\circ}\text{C} \sim 500\text{ }^{\circ}\text{C}$, cooled in a desiccator to room temperature) was dissolved in water and transferred to 1000mL volumetric flask, dilute with water to the mark. This chlorine solution 1mL 1mg.

3.6

Chlorine Standard Solution A. Pipette 10.00mL chlorine standard stock solution (3.5) into 100mL volumetric flask, dilute to the mark, shake uniform. This solution 1mL chlorine 100 μg .

3.7

chlorine standard solution B. Pipette 10.00mL chlorine standard solution A (3.6) into 100mL volumetric flask, dilute to the mark, shake.

This solution 1mL containing 10 μ g chlorine.

4 Instrument

Spectrophotometer.

5 Sample

Sample required uniform, dry and seal intact.

6.1 Sample

Table 1 sample was weighed, accurate to 0.0001g.