



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

GB/T 5195.5-2017

Replacing GB/T 5195.5-2006

**Fluorspar -- Determination of total sulfur content -- Pipe furnace
combustion iodine acid potassium titration method**

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Table of Contents

Foreword

1 Scope

2 Normative references

3 principle

4 Reagents and materials

4.1 flux, tungsten trioxide (sulfur content less than 0.001%), powder.

4.2 carbon dioxide absorbent, particle size range 0.5mm ~ 2mm.

4.3 anhydrous magnesium perchlorate, particle size range 0.5mm ~ 2mm.

4.5 potassium iodide solution, 30g/L.

4.6 Starch solution, 20g/L.

4.7 Potassium iodate standard titration solution.

Foreword

GB/T 5195 is divided into 16 parts.

- Part 1. Determination of fluorite calcium fluoride content EDTA titration and distillation - potentiometric titration;
- Part 2. Determination of fluorite carbonate content;
- Part 3. Fluorite 105 degrees C quality determination of the weight method;
- Part 4. Determination of fluorite sulfide content iodometric method;
- Part 5. Determination of total sulfur content of fluorite tube furnace combustion - potassium iodate titration;
- Part 6. Determination of fluorite content of phosphorus spectrophotometry;
- Part 7. Determination of zinc content of fluorite; atomic absorption spectrometry;
- Part 8. Determination of fluorite silica content;
- Part 9. Determination of weight loss of fluorite burning weight method;
- Part 10. Determination of iron content of fluorite phenanthroline spectrophotometry;
- Part 11. Determination of fluorspar content; Periodate spectrophotometry;
- Part 12. Determination of arsenic content of fluorite; atomic fluorescence spectrometry;

- Part 13. Determination of aluminum content of fluorite EDTA titration method;
- Part 14. Determination of magnesium content of fluorite flame atomic absorption spectrometry;
- Part 15. Determination of calcium, aluminum, silicon, phosphorus, sulfur, potassium, iron, barium and lead contents of fluorite; wavelength dispersive X - ray fluorescence spectrometry;
- Part 16. Determination of fluorite silicon, aluminum, iron, potassium, magnesium and titanium content Inductively coupled plasma atomic emission spectrometry.

This section GB/T 5195 Part 5.

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

This Part replaces GB/T 5195.5-2006 "Determination of total sulfur content of fluorite burning iodine method." This section and GB/T 5195.5-

Compared to.2006, the main technical changes are as follows.

- Modify the normative references (see Chapter 2,.2006 edition Chapter 2);
- The amount of potassium iodate was changed from 0.223g to 0.2225g (see 4.7.1,.2006 version 4.6);
- Increased titration of potassium iodate standard solution of the same standard/standard sample titration (see 4.7.2);
- Results calculated instead of using standard titration solution concentration or titration calculated in two ways (see 8.1,.2006 edition 8 chapter);
- Increasing the analysis of the results identified and expressed (see 8.2);
- Added a normative Appendix A (see Appendix A).

This part is proposed by China Iron and Steel Association.

This part of the National Standardization Technical Committee Steel (SAC/TC183) centralized.

This section drafted by. Shougang Corporation, Shougang Shuicheng Iron and Steel (Group) Co., Ltd., Metallurgical Industry Information Standards Institute.

1 Scope

GB/T 5195 provisions of this part of the tube furnace combustion - potassium iodate titration method for the determination of total sulfur content.

This section applies to the determination of total sulfur content in fluorite. The determination range (mass fraction) is 0.010% ~ 1.00%.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 6682 analytical laboratory water specifications and test methods

GB/T 8170 rounded repair rules and limit values of the representation and judgment

GB/T 12806 laboratory glassware single standard line capacity bottle

GB/T 12807 Laboratory glassware graduated pipette

GB/T 22564 fluorite sampling and sample preparation

3 principle

The sample is mixed with tungsten trioxide, heated and burned in a stream of nitrogen at 1200 ° C +/- 25 ° C to convert sulfur in the sample to sulfur dioxide,

Potassium iodide - starch solution to absorb sulfur dioxide, potassium iodate standard titration solution titration.

4 Reagents and materials

Unless otherwise indicated in the analysis, the use of only approved analytical reagents and in line with GB/T 6682 provisions of three or more distilled water or

Its purity of water.

4.3 anhydrous magnesium perchlorate, particle size range 0.5mm ~ 2mm.

Hydrochloric acid, 1 66.

4.6 Starch solution, 20g/L.

Weigh 2g soluble starch in 300mL beaker, add 10mL water mixed, add 50mL boiling water, stirring constantly, heat

Boiling about 1min, diluted with water to 100mL after cooling, mix.

4.7 Potassium iodate standard titration solution.

a) Potassium iodate standard titration solution [$c(1/6 \text{ KIO}_3) = 0.006237 \text{ mol/L}$]

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