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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 5195.19-2018

Fluorspar -- Determination of arsenic content -- Silver diethyldithiocarbamate spectrometric method

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Foreword

The analysis method of GB/T 5195 fluorite is divided into the following parts.

--- GB/T 5195.1 Determination of fluorite calcium fluoride content EDTA titration and distillation - potentiometric titration;

---GB/T 5195.2 Determination of fluorite carbonate content;

---GB/T 5195.3 Determination of the mass loss of fluorite 105 ° C;

--- GB/T 5195.4 Determination of fluorite content of fluorite - Iodometric method;

--- GB/T 5195.5 Determination of total sulfur content of fluorite - Tube furnace combustion - Potassium iodate titration;

--- GB/T 5195.6 Determination of fluorite phosphorus content by spectrophotometry;

--- GB/T 5195.7 Determination of zinc content of fluorite - Atomic absorption spectrometric method;

---GB/T 5195.8 Determination of fluorite silica content;

---GB/T 5195.9 Determination of the weight loss of fluorite burning;

--- GB/T 5195.10 Determination of fluorite iron content - phenanthroline spectrophotometric method;

--- GB/T 5195.11 Determination of manganese content of fluorite - periodate spectrophotometric method;

--- GB/T 5195.12 Determination of arsenic content of fluorite atomic fluorescence spectrometry;

---GB/T 5195.13 Determination of fluorite aluminum content EDTA titration;

--- GB/T 5195.14 Determination of magnesium content of fluorites by flame atomic absorption spectrometry;

--- GB/T 5195.15 Determination of calcium, aluminum, silicon, phosphorus, sulfur, potassium, iron, antimony and lead content of fluorite. Wavelength dispersive X-ray fluorescence spectrometry;

--- GB/T 5195.16 Determination of fluorite silicon, aluminium, iron, potassium, magnesium and titanium content by inductively coupled plasma atomic emission spectrometry;

---GB/T 5195.17 Determination of the content of fluorite flotation agent;

---GB/T 5195.18 Determination of fluorite strontium sulfate content by weight method;

--- GB/T 5195.19 Determination of arsenic content of fluorite - Diethyldithiocarbamate silver photometric method.

This part is the 19th part of GB/T 5195.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the redrafting method to modify the use of ISO 9505.1992 "All grades of fluorite arsenic content determination of diethyl dithio

Silver urethane photometric method.

This section has more structural adjustments than ISO 9505.1992. This section is listed in Appendix A with ISO 9505.1992.

Chapter and chapter comparison list.

This section has technical differences compared to ISO 9505.1992. This section and the technology of ISO 9505.1992 are given in Appendix B.

A list of sexual differences and their causes.

This section also made the following editorial changes.

--- In line with the existing standard series, the standard name was changed to "Fluorite

arsenic content determination of diethyl dithiocarbamate silver light

Degree method;

--- Added informative Appendix A and Appendix B to provide a comparison and technicality of this part with the structural changes of ISO 9505.1992

Description of the difference.

This part was proposed by the China Iron and Steel Association.

This part is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183).

This section drafted by. Shanghai Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China Industrial Products and Raw Materials Testing Technology Center, China Geology

University (Wuhan), Metallurgical Industry Information Standards Institute.

1 Scope

This part of GB/T 5195 specifies the spectrophotometric determination of arsenic content by silver diethyldithiocarbamate.

This section applies to the determination of arsenic in fluorite. Measuring range (mass fraction). 0.0002%~0.0500%.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply 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 experimental methods (GB/T 6682-2008, ISO 3696.1987, MOD)

GB/T 8170 Numerical Rounding Rules and Representation and Determination of Limit Values

GB/T 22564 Fluorite sampling and sample preparation (GB/T 22564-2008, ISO 8868.1989, IDT)

3 Principle

The sample is dissolved by a mixed acid composed of nitric acid, sulfuric acid, hydrochloric acid and saturated bromine water, and evaporated to sulfuric acid to start to smoke. In

hydrochloric acid medium, zinc

Reducing arsenic to hydrogen arsenate, and then absorbing arsenic hydride with silver diethyldithiocarbamate solution, dispersing silver colloid at a wavelength of about 530 nm

The purple color produced by the body was measured with a spectrophotometer.

4 reagents

Only the approved analytical reagents are used in the analysis, and only the secondary water or the equivalent purity of water according to GB/T 6682 is used.

4.10 sodium hydroxide solution, 40g/L.

4.11 Stannous chloride solution, 400g/L. weigh 40g of stannous chloride ($SnCl_2 \cdot 2H_2O$), dissolved in 100mL of hydrochloric acid (4.3), sealed

Store in a brown bottle.