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CCS D53



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

GB/T 14506.3-2010

Replacing GB/T 14506.3-1993

**Methods for chemical analysis of silicate rocks - Part 3:
Determination of silicon dioxide content**

硅酸盐岩石化学分析方法 第3部分：二氧化硅量测定

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Foreword

GB/T 14506 "Methods for chemical analysis of silicate rocks" 30 consists of the following components.

- Part 1. Determination of water absorption;
- Part 2. Determination of combined water;
- Part 3. Determination of the amount of silica;
- Part 4. Determination of the amount of aluminum oxide;
- Part 5. Determination of total iron content;
- Part 6. Determination of calcium oxide content;
- Part 7. Determination of the amount of magnesium oxide;
- Part 8. Determination of the amount of titanium dioxide;
- Part 9. Determination of the amount of phosphorus pentoxide;
- Part 10. Determination of the amount of manganese oxide;
- Part 11. Determination of the amount of sodium hydroxide and oxide;
- Part 12. Determination of the amount of fluorine;
- Part 13. Determination of sulfur content;

1 Scope

GB/T 14506.3-2010 is the Chinese national standard on methods for chemical analysis of silicate rocks - part 3: determination of silicon dioxide content, in the field of mining and minerals. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 10 November 2010 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in

force since 1 February 2011. Classification: ICS 73.080, CCS D53. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

GB/T 14506 in this section specifies the method for the determination of silicon dioxide content of silicate rocks. This section applies to the amount of silica in the determination of silicate rocks, is also applicable to the measurement of soil and stream sediments in the amount of silica. Measurement range. more than 5% of the amount of silica.

2 Normative references

The following documents contain provisions which, through reference

GB/T 14506 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section. Laboratory use specifications and test methods GB/T 6682 Analysis

GB/T 14506.1 Silicate rocks - Part 1. Determination of water adsorption

3 Weight polyethylene oxide method

3.1 Principle Sample melted with sodium carbonate, hydrochloric acid leach, evaporated to a small volume, added ethylene oxide condensed silicic acid, filtering, burning, and weighed. Hydrogenation fluorine Acid, sulfuric acid, silicon is removed as silicon tetrafluoride, weighed and then calcined. Before and after treatment is poor quality of the precipitated silica amount. The residue was molten potassium pyrophosphate, water extraction incorporated silica filtrate. After the filtrate was measured by depolymerization of residual dioxide molybdenum blue spectrophotometry Silicon, and the sum of the two is the amount of silica in a sample.

3.2 Reagents Unless otherwise stated in this section are consistent with the use of analytical reagent and GB/T 6682 requirements for analytical laboratory use in the analysis.

3.2.1 anhydrous sodium carbonate (excellent pure).

3.2.2 sodium peroxide.

3.2.3 boric acid.

3.2.4 coke potassium sulfate.

3.2.7 Ethanol (64).

3.2.8 hydrochloric acid ($\rho=1.19\text{g/mL}$), pure class distinctions.

3.2.9 hydrochloric acid (11).

3.2.10 hydrochloric acid (595).

3.2.11 hydrochloric acid $c(\text{HCl}) = 1\text{mol/L}$.

3.2.12 hydrofluoric acid ($\rho=1.15\text{g/mL}$). Warning

--- toxic and corrosive hydrofluoric acid, wear gloves when operating, to prevent skin contact.

3.2.13 nitrate ($\rho=1.42\text{g/mL}$), pure class distinctions.