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CCS D53



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

GB/T 14506.12-2010

Replacing GB/T 14506.12-1993

**Methods for chemical analysis of silicate rocks - Part 12:
Determination of fluorine content**

硅酸盐岩石化学分析方法 第12部分：氟量测定

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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 14506.12-2010 is the Chinese national standard on methods for chemical analysis of silicate rocks - part 12: determination of fluorine 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 provisions of this part of the determination of the amount of fluorine in silicate rocks. This section applies to the amount of fluorine in the determination of silicate rocks, is also applicable to the measurement of soil and stream sediments of fluorine content. Measuring range. 0.02% to 2% of the amount of fluorine.

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 Principle

3 Sample with an alkali melt, most of the water extraction and separation of metal ions in sodium citrate pH6 ~ pH8 medium to fluoride ion selective electrode As indicator electrode, a saturated calomel electrode as the reference electrode, measured on a solution of the ion gauge the potential difference, calculate the amount of fluorine.

4 Reagents

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

4.1 sodium peroxide.

4.2 sodium hydroxide.

4.3 ethanol. Ethanol 4.4 (11).

4.5 nitric acid (11).

4.6 Potassium hydroxide solution (100g/L).

4.7 sodium citrate buffer solution $c(\text{Na}_3\text{C}_6\text{H}_5\text{O}_7 \cdot 2\text{H}_2\text{O}) = 1\text{mol/L}$. Weigh 294g of sodium citrate were dissolved in 900mL of water, Add 10mL of nitric acid (4.5), add water to 1000mL, pH was 6.5 ± 0.1 . 4.8-fluoro standard solution.

a) fluoro standard stock solution (1.00mg/mL). Weigh 2.2101g advance after 105 °C drying 2h superior grade pure sodium fluoride (NaF), placed in a plastic beaker, dissolved in water and transferred to 1000mL volumetric flask, immediately diluted with water to the mark. fast Speed \u200b\u200binto dry plastic bottles saved;

b) fluoro standard working solution (100.0µg/mL). fluorine dispensing 20.0mL standard solution [4.8a)], set 200mL flask, Diluted with water to the mark. Into dry plastic bottles saved;

c) fluoro standard working solution (10.0µg/mL). fluorine dispensing 10.0mL standard solution [4.8b)], set 100mL flask, Diluted with water to the mark. Into dry plastic bottles saved. The time is now equipped with.