

ICS 73.080

CCS D53



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

GB/T 14506.22-2010

Replacing GB/T 14506.22-1993

**Methods for chemical analysis of silicate rocks - Part 22:
Determination of vanadium content**

硅酸盐岩石化学分析方法 第22部分：钒量测定

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Standardization Administration of China**

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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 14506.22-2010 is the Chinese national standard on methods for chemical analysis of silicate rocks - part 22: determination of vanadium 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 vanadium silicate rocks. This section applies to the amount of vanadium silicate rock Determination, also applies to the measurement of soil and stream sediments vanadium content. Measuring range. polarography, 10µg/g ~ 800µg/g of vanadium. Spectrophotometry, 10µg/g ~ 2000µg/g of vanadium.

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 sulfuric acid - phenyl acetic acid - potassium chlorate medium polarographic indirect

3.1 Principle Vanadium (V) in slightly acidic benzene acetic acid - potassium chlorate solution under heating, to make benzene glycolic acid is decomposed into benzoic acid itself is also Original generated vanadium (IV) were oxidized to potassium chlorate and vanadium (V). Vanadium is not consumed only play catalysis. Time under controlled heating conditions, Product diffusion current proportional to the concentration of benzoic acid and vanadium. On the oscilloscope Polarograph starting potential is -0.70V, half-wave potential that is derivative Wave peak potential of about -0.96V (saturated calomel electrode). Determination of benzoic acid and thus indirectly reducing the current determination of vanadium content.

3.2 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.

3.2.1 sodium peroxide.

3.2.3 sulfuric acid (11), pure class distinctions. Warning

--- improper dilution risk prone

3.2.4 sulfuric acid (19), pure class distinctions. Warning

--- improper dilution risk prone

3.2.5 benzene glycolic acid solution (19).

3.2.6 potassium chlorate solution (60g/L).

3.2.7 Vanadium standard solution.