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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 14506.6-2010

Replacing GB/T 14506.6-1993

Methods for chemical analysis of silicate rocks - Part 6: Determination of calcium oxide content

硅酸盐岩石化学分析方法 第6部分：氧化钙量测定

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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 14506.6-2010 is the Chinese national standard on methods for chemical analysis of silicate rocks - part 6: determination of calcium oxide 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 determination of calcium oxide content of silicate rocks. This section applies to the determination of the oxidation of calcium silicate rocks, and is also applicable to the measurement of soil and stream sediments of calcium oxide content. Measurement range. ethylene glycol diethyl ether diamine tetra-acetic acid (EGTA) complexometric titration, 1% to 15% of calcium oxide. Flame atomic absorption Spectrophotometry, 0.1% to 5% of calcium oxide. NOTE. silicate rock samples EGTA complexometric titration of strontium, barium greater than 0.4% of the total amount is not applicable.

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 EGTA complexometric titration

3.1 Principle After separating the filtrate silica with triethanolamine masking interfering elements iron, aluminum and the like. Nickel, copper and other elements of interference masking sodium fluoride, or After hexamethylenetetramine, after the separation of interfering elements copper reagent in pH>=12 conditions to calcein - Barry phenolphthalein indicating complexing agent Agents, standard solution titration with EGTA, calcium oxide was calculated.

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 hydroxylamine hydrochloride.

3.2.2 hexamethylenetetramine.

3.2.3 Potassium hydroxide (excellent pure).

3.2.4 potassium hydroxide solution (500g/L). Stored in plastic bottles.

3.2.6 hydrochloric acid (11).

3.2.7 ammonia (1 l).

3.2.8 triethanolamine (11).

3.2.9 potassium cyanide solution (50g/L). Warning

--- potassium cyanide solution is a highly toxic reagent must be strictly regulated use and storage. NOTE. You can not join under acidic conditions, sodium cyanide, after use, is added ferrous ammonium sulfate (Mohs salt) only into the sewer after treatment.

3.2.10 sucrose solution (20g/L).

3.2.11 diethyl dithiocarbamate (DDTC) solution (20g/L). the time is now equipped with.

3.2.12 calcium oxide standard solution. Weigh 0.8924g pre-dried 120 °C 2h of high purity calcium carbonate ($CaCO_3$), placed in 400mL