

ICS 73.080

CCS D53



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

GB/T 14506.7-2010

Replacing GB/T 14506.7-1993

**Methods for chemical analysis of silicate rocks - Part 7:
Determination of magnesium oxide content**

硅酸盐岩石化学分析方法 第7部分：氧化镁量测定

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 EDTA complexometric titration

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 14506.7-2010 is the Chinese national standard on methods for chemical analysis of silicate rocks - part 7: determination of magnesium 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 provisions of this part of the determination of the amount of magnesium silicate rocks. This section applies to the amount of magnesium silicate rocks in the determination also applies to the measurement of soil and stream sediments magnesium oxide content. Measurement range. ethylene glycol diethyl ether diamine tetra-acetic acid (EGTA) complexometric titration, 1% to 10% of the magnesium oxide content. Flame atomic absorption Spectrophotometry, from 0.01% to 1% of the magnesium oxide content.

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

GB/T 14506.3 Silicate rocks - Part 3. Determination of the amount of silica

3 EDTA 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 masking interference with sodium cyanide, or After hexamethylenetetramine, after the separation of interfering elements copper reagent, in pH10 ammonia medium, add complex calcium EGTA solution to the acid Chrome Blue K- naphthol green B as indicator, with EDTA standard solution titration, calculate the amount of magnesium oxide.

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).

3.2.5 hydrochloric acid (11).

3.2.6 Ammonia ($\rho=0.91\text{g/mL}$).

3.2.7 ammonia (11).

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 potassium cyanide under acidic conditions, after use, is added ferrous ammonium sulfate (Mohs salt) only into the sewer after treatment.

3.2.10 diethyl dithiocarbamate (DDTC) solution (2%). The time is now equipped.

3.2.11 ammonia - ammonium chloride buffer solution (pH10). Weigh 67.5g of ammonium chloride dissolved in 200mL of water, ammonia is added 570mL