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

GB/T 14506.34-2019

**Methods for chemical analysis of silicate rocks - Part 34
:Determination of loss on ignition - Gravimetric method**

硅酸盐岩石化学分析方法 第34部分：烧失量的测定 重量法

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Foreword

GB/T 14506 "Chemical Analysis Method for Silicate Rocks" consists of the following 34 parts.

- Part 1. Determination of adsorbed water;
- Part 2. Determination of combined water content;
- 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 the amount of calcium oxide;
- 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 manganese oxide content;
- Part 11. Determination of potassium oxide and sodium oxide;
- Part 12. Determination of fluorine content;
- Part 13. Determination of sulfur content;

1 Scope

GB/T 14506.34-2019 is the Chinese national standard on methods for chemical analysis of silicate rocks - part 34 :determination of loss on ignition - gravimetric method, 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 18 October 2019 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2020. 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.

This part of GB/T 14506 specifies the gravimetric method for the determination of loss on ignition in silicate rock. This section applies to gravimetric determination of loss on ignition in silicate rock, and is also applicable to the determination of loss on ignition in soil and sediment samples. The method can determine a loss on ignition of greater than 0.1%.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 6379.2 Accuracy of measurement methods and results (accuracy and precision) Part 2. Determination of standard method of measurement Basic method of sex and reproducibility

GB/T 6379.4 Accuracy of measurement methods and results (accuracy and precision) Part 4. Determining the standard measurement method correctly Basic method of degree

GB/T 8170 Numerical Rounding Rules and Representation and Determination of Limit Values

GB/T 14505 General rules and general rules for chemical analysis of rocks and ores

3 Principle

During the burning process of silicate rock samples, fluorine, chlorine, sulfur, carbon dioxide and other components lose weight due to volatilization, while some components such as ferrous iron may be oxidized. Weight gain. The loss on ignition is the algebraic sum of mass changes before and after burning.

4 Instruments

4.1 Analytical balance. Sensitivity 0.1mg.

4.2 Muffle furnace. The maximum operating temperature is not less than 1100 °C, and it can automatically control the temperature.

4.3 Porcelain crucible or platinum crucible. capacity 10mL~25mL.

4.4 The equipment used in the test is qualified or calibrated and is within the validity period.

5 Samples

5.1 According to the relevant provisions of GB/T 14505, the particle size of the processed sample should be less than 74 μ m.

5.2 The sample shall be pre-dried at 105 ° C for 2 h, placed in a desiccator and cooled to room temperature.

6 Test steps

6.1 Place the open space (4.3) into the center of the muffle furnace (4.2), heat it to 1000 °C $\pm$ 25 °C, and burn for 2 hours to remove the crucible. After a little cold, set It was cooled in a desiccator for 30 min and weighed. The burning was repeated for another 30 minutes and then weighed until constant weight.