

ICS 91.100.10

CCS Q 62



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

GB/T 9489.1-1988

Replacing GB/T 9489-2008

**Methods for chemical analysis of alundum powder
(English Translation)**

Issued on: November 28, 2024

Implemented on: June 1, 2025

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document replaces GB/T 9489-2008 "Chemical analysis method of corundum powder". Compared with GB/T 9489-2008, in addition to the structural adjustment in addition to editorial changes, the main technical changes are as follows.

Added "Warning" (see Warning); a) the concentration of "Silicon Dioxide Standard Solution" and the volume of the volumetric flask during the preparation process have been changed (see 5.3.8, 5.3.8 of the 2008 edition); b) the flame type of the elements "Ca, Mg" has been changed (see 6.4.4, 6.4.4 of the 2008 edition); c) Changed the "Test Solution Preparation" in the atomic absorption spectrophotometry (see 6.5.1, 6.5.1 of the 2008 edition); d) the order of adding "borax and sodium carbonate mixed flux" has been changed (see 7.5.1, 9.5.2.1, 7.5.1, 9.5.2.2 of the 2008 edition).

9.5.2.1);

Added the requirement of "storage temperature" of silica standard solution (see 9.5.1, 9.5.2.2); f) the determination range of titanium dioxide colorimetric method has been changed (see 10.1, 10.1 of the 2008 edition); g) the volume of titanium dioxide standard solution to be pipetted in "Drawing the working curve" has been changed (see 10.5.1,

10.5.1 of the 2008 edition). h)

1 Scope

This document describes the content of aluminum oxide, calcium oxide, magnesium oxide, silicon dioxide, iron oxide, titanium dioxide, Determination methods for potassium, sodium oxide, chloride ion, carbon and sulfur, pH value and loss on ignition.

This document is applicable to the chemical analysis of corundum powder with an aluminum oxide content (mass fraction) of not less than 90%.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies.

in this document.

GB/T 4676 Sampling method for common abrasives GB/T 6682 Specifications and test methods for water used in analytical laboratories GB/T 8170 Rules for rounding off values and expression and determination of limit values

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 General requirements

4.1

The specifications of water used in solution preparation and analysis should conform to Grade III or above water specified in GB/T 6682.

4.2

Unless otherwise specified, the purity of the reagents used in the determination should be better than analytical grade.

When a standard solution is prepared with a metal, its purity should be better than 99.99%.

4.3

Except for specially specified solvents, all solutions used in analysis are aqueous solutions.