

ICS 65.080
CCS G 20



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

GB/T 43349-2023

**Liming material - Determination of neutralizing value -
Titrimetric methods**

石灰质材料 中和值的测定 滴定法

(English Translation)

Issued on: November 27, 2023

Implemented on: June 1, 2024

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

Table of Contents

Foreword
1 Scope
2 Normative reference documents
4 Method summary

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

This document is equivalent to ISO 20978:2020 "Titration method for determination of neutralization value of calcareous materials". This document has made the following minimal editorial changes.

---In order to comply with my country's usage habits, the chemical formula of hydroxide ion is changed from "HO-" to "OH-";

---Revise the printing error and change "CaO" in the header of Table B 5 to "OH-".

1 Scope

This document describes a method for the determination of the neutralization value of calcareous materials with a P₂O₅ content of less than 3%.

Method A is applicable to all calcareous materials except silicate calcareous materials.

Note 1: Hard calcareous materials such as limestone and dolomite; soft calcareous materials such as chalk, marl and hydrated lime. Method B is suitable for all calcareous materials.

Neither method takes into account the potential neutralization value of calcareous materials containing more than 3% P₂O₅. In order to more accurately determine P₂O₅ containing more than Neutralization efficiency for 3% calcareous material samples, see EN 14984.

Note 2: The determination of P₂O₅ content can be based on ISO 6598 and ISO 7497. For more P₂O₅ content determination methods, see references [9] and [10].

Note 3: Carbonate reacts with H in the aqueous solution to generate H₂O and CO₂ to reduce the acidity of the aqueous solution. And orthophosphate reacts with H in aqueous solution It will not produce molecular products and will not reduce the acidity of the aqueous solution. Therefore, backtitration of this partial acid using a base will result in a neutralization value On the low side.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

ISO 3310-1 Technical requirements and inspection of test sieves Part 1. Test sieves with braided wire mesh (Testsieves-Technical Note: GB/T 6003.1-2022 Technical requirements and inspection of test sieves Part 1: Wire braided mesh test sieves (ISO 3310-1:2016, MOD) and test methods)

Note: GB/T 6682-2008 Specifications and test methods for water used in analytical laboratories (ISO 3696:1987, MOD) stances-Vocabulary)

Note: GB/T 6274-2016 Terminology for fertilizers and soil conditioners (ISO 8157:1984, NEQ)

ISO 14820-2 Sampling and sample preparation of fertilizers and calcareous materials Part 2. Sample preparation (Fertilizers and li- 3 Terms and definitions The terms and definitions defined in ISO 8157 apply to this document.

4 Method summary

The sample is dissolved in a certain amount of hydrochloric acid standard solution, and the excess acid is back-titrated with sodium hydroxide standard solution.

Note: For products containing iron, the iron must be pre-oxidized in method B.