

ICS 71.060.01
CCS G 10



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

GB/T 23941-2025

Replacing GB/T 23941-2009

Analytical methods of calcium chloride for industrial use

工业氯化钙分析方法

Issued on: June 30, 2025

Implemented on: January 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms and Definitions

4 Test methods

4.1 General Provisions

4.2 Appearance Inspection

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.

This document replaces GB/T 23941-2009 "Analysis method for industrial calcium chloride". Compared with GB/T 23941-2009, except for the structural adjustment Besides the editorial changes, the main technical changes are as follows.

- a) The scope has been changed (see Chapter 1, Chapter 1 of the 2009 edition);
- b) The test method for magnesium and alkali metal salts (calculated as NaCl) has been deleted (see Chapter 7 of the 2009 edition);
- c) Added test methods for total alkali metal chloride content, iron content, total magnesium content and pH (see 4.5, 4.8, 4.9 and 4.10);
- d) Added the visual turbidimetric method for determining sulfate (see 4.7.2).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China Petroleum and Chemical Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Chemical Standardization (SAC/TC63).

This document was drafted by: Qingdao Alkali Industry Development Co., Ltd., Shandong Haihua Co., Ltd., CNOOC Tianjin Chemical Research and Design Institute Co., Ltd., Changshu Huayu Environmental Technology Co., Ltd., Da Qaidam Geely Chemical Co., Ltd., and Hubei Xingfa Chemical Group Co., Ltd.

The main drafters of this document are: Zhang Yanyan, Chang Gang, Wang Ying, Wang Guoping, Dong Ligang, Yu Yanling, Gong Mingming, Gao Yunrong, Zhang Kai, Wang Zhiwei, Chen Shuang and Wang Fengkang.

The previous versions of this document and the documents it replaces are as follows.

- First published in 2009 as GB/T 23941-2009;
- This is the first revision.

1 Scope

This document gives the general provisions and appearance inspection of the industrial calcium chloride analysis method, and describes the calcium chloride in the industrial calcium chloride analysis method.

Methods for determination of content, alkalinity, total alkali chloride, water-insoluble matter, sulfate, iron, total magnesium, and pH.

This document applies to industrial calcium chloride products in solid and solution form.

2 Normative references

GB/T 3049-2006

GB/T 6682-2008

GB/T 8170

GB/T 23769

GB/T 23844-2019

3 Terms and Definitions

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

4 Test methods

Warning. Some of the reagents used in this test method are toxic or corrosive. Operators should be careful. If they splash on the skin, they should be removed immediately.

Rinse with water and seek medical treatment immediately if serious. When using flammable materials, do not use open flames to heat them.

4.1 General Provisions

The reagents and water used in this document, unless otherwise specified, refer to analytical reagents and those specified in GB/T 6682-2008.

The standard titration solutions, preparations and products used in the test shall be in accordance with HG/T 3696.1 and Prepared in accordance with the provisions of HG/T 3696.3.

4.2 Appearance Inspection

Under natural light, the appearance of calcium chloride solid is determined by visual inspection on a white surface dish or white porcelain plate.

The appearance of the product was determined visually on a white porcelain plate.