

ICS 71.100.40

CCS G 72



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

GB/T 20199-2026

Replacing GB/T 20199-2006

**Surface active agents - Technical alkane sulfonates -
Determination of alkane monosulfonates content by direct
two-phase titration**

表面活性剂 工业烷烃磺酸盐 直接两相滴定法测定烷烃单磺酸盐含量

(English Translation)

Issued on: February 27, 2026

Implemented on: September 1, 2026

Issued by: State Administration for Market Regulation

Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and Definitions
4 Reagents
5 Instruments

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 replaces GB/T 20199-2006 "Determination of Alkane Sulfonate Content in Surfactant Industry (Direct)" Two-phase titration method. Compared with GB/T 20199-2006, apart from structural adjustments and editorial changes, the main technical changes are as follows.

---The principles have been removed (see Chapter 4 of the 2006 edition);

---Added the instrument "burette" (see 5.4);

---Precision requirements have been changed (see 7.2, 8.2 in the 2006 edition);

---The number of test personnel has been increased [see 8e).

This document is modified to adopt ISO 6121:1988 "Determination of Alkane Monosulfonates by Direct Two-Phase Titration in Surfactant Industry".

Salt content.

This document differs in structure from ISO 6121:1988. A summary table comparing the structural numbering changes between the two documents is attached.

Record A.

This document differs significantly from ISO 6121:1988 in several technical aspects. The relevant clauses are indicated in vertical single-line margins.

The lines (I) are marked. A summary of these technical differences and their causes can be found in Appendix B.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Surfactants and Detergents (SAC/TC272).

1 Scope

This document describes a method for determining the content of alkane monosulfonates in industrial alkane sulfonates containing small amounts of alkanes.

This document applies to all alkali metal salts of alkane sulfonation and sulfonation products.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 6682 Specifications and test methods for water used in analytical laboratories (GB/T 6682-2008, ISO 3696:1987, MOD) GB/T 11988 Determination of the average relative molecular weight and content of alkane sulfonates in the surfactant industry (GB/T 11988-2008, ISO 6845:1989, MOD) QB/T 2739 Common Test Methods for Detergent Products. Preparation of Test Solutions for Titration Analysis (Volume Analysis)

3 Terms and Definitions

The following terms and definitions apply to this document.

alkanemonosulfonate

Alkali metal monosulfonic acid salts found in industrial products of sulfonation and sulfonation of pure straight-chain alkanes containing 12 to 20 carbon atoms.

4 Reagents

Unless otherwise specified, only reagents confirmed to be of analytical grade and water conforming to GB/T 6682 grade III or above shall be used in the analysis.

4.1

Sodium sulfate solution, 200 g/L.

4.2

Chloroform, $\rho_{20}=1.48\text{g/mL}$, boiling range $59.5^{\circ}\text{C}\sim 61.5^{\circ}\text{C}$.

Note: If dichloromethane is chosen, confirm before use that the test results are not significantly different from those of trichloromethane, and specify the reagents used in the test report.

category.

4.3

Acidic mixed indicator solution, prepared according to the requirements of QB/T 2739.

4.4

Benzylthionium chloride standard titration solution, $c(\text{C}_{27}\text{H}_{42}\text{ClNO}_2)=0.004\text{mol/L}$, prepared and standardized according to the requirements of QB/T 2739.

5 Instruments

5.1

Volumetric flask, 250 mL.

5.2

Stoppered glass graduated cylinder, 100 mL.

5.3

Pipettes, 10mL and 20mL.