

ICS 71.100.40
CCS G 72



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

GB/T 5551-2010

Replacing GB/T 5551-1992

**Surface active agents -- Determination for total calcium ion and
magnesium ion contents in dispersing agents**

表面活性剂 分散剂中钙、镁离子总含量的测定方法

(English Translation)

Issued on: January 14, 2011

Implemented on: December 1, 2011

Issued by: Standardization Administration of China

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 4 Reagents and materials
- 5 Apparatus

Foreword

This standard replaces GB/T 5551-1992 "Determination of calcium method surfactant dispersants magnesium total content." this standard is in the original standard of the main differences.

- Format prepared by the GB/T 1.1-2009 "Standardization Guide Part 1. Standard structure and writing";
- The name of the standard was changed to "calcium determination surfactant dispersants magnesium total content";
- Increasing the foreword;
- Increasing the pH combination electrode;
- Purchase automatic titrator this standard electrode potential detection instruments;
- Original standard instrument resolution of 0.1mV resolution to 1mV;
- Delete the original standard copper reagent;
- Increasing the test sections of the report.

This standard is the international standard ISO 2482. 1973 "--- sodium chloride for industrial use - Determination of calcium and magnesium content --- EDTA complexometric titration" the non-equivalent.

This standard is the international standard ISO 2482. 1973 is the major technological change.

- Modify the measurement principle, the original medium with B11 as an indicator to determine the endpoint with EDTA titration method, modify it became the electrode potential changes in the use of jump to determine the end point;
- Modification and increased the normative references;

--- Remove the ISO 2482. 1973 in 5.2,5.5,5.8 and 5.9;

--- Modified ISO method formulated in 5.6 and 5.7 EDTA standard volume of the solution from the original 0.02mol/L and 0.002mol/L into a modified two standard volume of solution 0.010mol/L.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the Shanghai Research Institute Co., Ltd. under the jurisdiction of the dye.

This standard was drafted. Shanghai Dyestuffs Research Institute Co., Ltd., Liaoning Occitan Chemical Company.

1 Scope

This standard specifies the determination of surfactant dispersant products calcium and magnesium ions total content method.

This standard applies dispersants calcium, class of surfactant in the total content of magnesium ions.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the edition are not applicable to the present file. For undated references, the latest edition (including any amendments) applies to this document.

Preparation of GB/T 601 chemical reagent standard titration solution GB/T 603 chemical reagent test method Preparations of articles (GB/T 603-2002, ISO 6353-1 with. 1982, NEQ) GB/T 9725 General Chemical Reagents potentiometric titration (GB/T 9725-2007, ISO 6353-1. 1982, MOD) Principle 3 the sample was dubbed quantitative solution, in the presence of masking agents, the use of EDTA standard solution complexometric titration, ion selective electrode as Indicator electrode, measuring the change in electrode potential solution, jump change in electrode potential is determined according to the end, according to the consumption of EDTA standard solution Volume was calculated from a sample of calcium and magnesium ions total content.

4 Reagents and materials

4.1

laboratory distilled water. Three water.

4.2

hydrochloric acid. chemically pure, $c(\text{HCl}) = 0.2\text{mol/L}$.

Triethanolamine 4.3. 14 dilution solution.

4.4

Sodium hydroxide solution. chemically pure, 10% (mass fraction).

4.5

disodium edetate (EDTA) standard titration solution. $c(\text{EDTA}) = 0.010\text{mol/L}$, according to GB/T 601 formulated in 4.15 and calibration.

4.6

ammonium hydroxide - ammonium chloride buffer solution ($\text{pH} \sim 10$). according to GB/T 603 formulated in 4.4.9.

5 Apparatus

5.1

Beaker. Capacity 150mL, 250mL.

5.2

volumetric flask. capacity 500mL.

5.3

Buret. Capacity 10mL, brown acid burette.

5.4

Pipette. Capacity 50mL, 1mL.

5.5

automatic electrode titrator or similar instrument performance, sub-scale is 1mV.