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

GB/T 13530.1-1992

Replacing GB/T 13530-2008

**Test methods for sodium ethoxylated alkyl sulfate
(English Translation)**

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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:

This document replaces GB/T 13530-2008 "Test Method for Sodium Ethoxylated Alkyl Sulfate": Compared with GB/T 13530-2008, except Apart from structural adjustments and editorial changes, the main technical changes are as follows:

- a) Changed the requirements for strongly acidic cation exchange resins and strongly basic anion exchange resins in the determination of unsulfated content (see 5.1:2:5 and 5.1:2:6, 5:2:5 and 5:2:6 of the:2008 edition);
- b) Changed the weighing amount of the ion exchange resin method to determine the content of unsulfated substances (see 5.1:4:1, 5:4:1 of the:2008 edition);
- c) The calculation formula for determining the content of unsulfated substances by the ion exchange resin method has been changed (see 5.1:5, 5:5 of the:2008 edition);
- d) Added the stirring exchange method in the ion exchange resin method to determine the content of unsulfated substances (see 5.1:4:3:2);
- e) Added gas chromatography (fast method) to determine the content of unsulfated substances (see 5.2):

This document is modified to adopt ISO 6842:1989 "Sulphate total active content of surfactant ethoxylated alcohols and alkylphenols Determination", ISO 6843:1988 "Determination of the Average Relative Molecular Weight of Sulfate of Surfactant Ethoxylated Alcohols and Alkylphenols", ISO 8799:2009 "Determination of Sulfate Unsulfated Content of Surfactant Ethoxylated Alcohols and Alkylphenols":

Compared with ISO 6842:1989, ISO 6843:1988, and ISO 8799:2009, this document has more adjustments in structure:

A comparison list of structure number changes between this document and ISO documents

is given:

Compared with ISO 6842:1989, ISO 6843:1988, ISO 8799:2009, this document has many technical differences:

The position of the outer margin of the paragraph is marked with a vertical single line (|):
See Appendix B for a list of these technical differences and their causes:

The following editorial changes have been made to this document:

---Modified the standard name:

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

1 Scope

This document describes the determination of total active content, unsulfated content, average relative molecular mass in sodium ethoxylated alkyl sulfates method:

This document applies to the determination of sodium ethoxylated alkyl sulfate:

The method for the determination of total active matter in this document is also applicable to the determination of total active matter of ethoxylated alkylphenol sodium sulfate, the total active matter includes soluble Alcohol-based organics: sodium ethoxylated alkyl sulfates (or sodium ethoxylated alkylphenol sulfates), polyethylene glycol sulfates, and nonionic components; flat the method for determining the average relative molecular mass is applicable to ethoxylated sodium alkyl sulfate products with no more than 20 oxyethylene groups in each molecule:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references for documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 5173 Determination of the content of anionic active substances in surfactant detergents Direct two-phase titration method (GB/T 5173-2018, ISO 2271:1989, MOD)
GB/T 6682 Analytical laboratory water specifications and test methods (GB/T 6682-2008, ISO 3696:1987, MOD) GB/T 13173 Surfactant detergent test method (GB/T 13173-2021, ISO 607:1980, ISO 697:

1981, ISO 4313:1976, ISO 4321:1977, ISO 4325:1990, ISO 21264:2019, MOD) QB/T 2739 Preparation of test solutions for titration analysis (volume analysis) of commonly used test methods for washing products

3 Terms and Definitions

The following terms and definitions apply to this document:

total active matter all ethanol solubles after chloride subtraction:

Note: When customers have objections to the content of anionic active substances, choose to measure the total active substance content:

Anionic active matter Sulfated anionic moiety in sodium ethoxylated alkyl sulfates:

Unsulfated matter There are no sulfated nonionic moieties (polyethoxylated fatty alcohols, fatty alcohols, alkanes) in sodium ethoxylated alkyl sulfates:

The mass of sodium ethoxylated alkyl sulfate per mole, i.e. the total mass of sodium ethoxylated alkyl sulfate and the mass of ethoxylated alkyl sulfate determined by two-phase titration the ratio of the amount of sodium sulfate to the substance: