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

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**Determination of nitrates and nitrites in surfactants-ion
chromatography method**

表面活性剂中硝酸盐和亚硝酸盐的测定 离子色谱法

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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 is required.

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 China Light Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Surfactants and Detergents (SAC/TC 272).

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Determination of Nitrate and Nitrite in Surfactants Ion chromatography

1 Scope

This document describes a method for the determination of nitrate and nitrite in surfactants by ion chromatography.

This document applies to the determination of residual nitrate and nitrite in surfactants.

2 Normative references

This document has no normative references.

3 Terms and definitions

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

4 Principle

The solid phase extraction column IC-ODS was used to remove organic matter in the sample, and then a 0.45 μm water filter membrane was used to remove impurities in the sample.

Sodium hydroxide solution was used as eluent, anion chromatography column was used for separation, conductivity cell detector was used for detection, retention time was used for qualitative analysis, external standard method was used for quantitative analysis of nitric acid. acid ions and nitrite ions.

5 Reagents

Unless otherwise specified, only reagents of confirmed extra-pure grade and high-purity water with a resistivity of not less than 18 Mohm-cm were used in the analysis. 5.1 Methanol.

5.2 Eluent. Accurately weigh 0.24 g (weighed to 0.001 g) of sodium hydroxide in a 100 mL beaker, dissolve it in high-purity water, and transfer it to The eluent was prepared into a 1000 mL volumetric flask with a concentration of about 6 mmol/L. The eluent was filtered through a 0.22 μm organic filter membrane and then transferred to the Place the eluent in a bottle and degas by ultrasonic for 20 min for later use.

5.3 Standard stock solution. accurately weigh 0.1 g (accurate to 0.001 g) of sodium nitrate (reference reagent or standard substance/standard sample) and Sodium nitrate (reference reagent or standard substance/standard sample) is dissolved in a 100 mL beaker with high purity water and then transferred to a 1 000 mL volumetric flask.

The solution was diluted with high-purity water and stored at 4 °C for 7 days. The mass concentration of the solution was 100 mg/L.

5.4 Standard working solution. Accurately pipette 0.01 mL, 0.05 mL, 0.10 mL, 0.50 mL, and 1.00 mL of the standard stock solution (5.3) into In a 100 mL volumetric flask, dilute to volume with high-purity water; prepare the mass concentrations of 0.01 mg/L, 0.05 mg/L, 0.10 mg/L, 0.50 mg/L, 1.00 mg/L standard working solution, the solution is prepared and used immediately.

6 Instruments and equipment

6.1 Ion chromatography, equipped with conductivity detection cell, online degasser and chromatography workstation.

6.2 Laboratory diaphragm vacuum pump.