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

GB/T 9731-2007

Replacing GB/T 9731-1988

**Chemical reagent -- General method for the determination of
sulphur compounds**

化学试剂 硫化合物测定通用方法

(English Translation)

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Foreword

This standard and ISO 6353-1. 1982 "Reagents for chemical analysis - Part 1. General test method" non-equivalent.

This standard replaces GB/T 9731-1998 "General method for determination of chemical reagents sulfur compounds." this standard was no difference with the previous version of the standard in technical content, according to GB/T 1.1-2000 requirements, and only made some editorial modify.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standardization Technical Committee Chemistry Chemicals Branch (SAC/TC63/SC3) centralized.

This standard was drafted. Sinopharm Chemical Reagent Co., Ltd.

1 Scope

This standard specifies converting the sulfur compounds to sulfates and the general method of nephelometry visually.

Inorganic sulfur compounds and organic sulfur compounds can be produced by the reaction of potassium xanthate and potassium hydroxide ethanol solution is applicable to the organic solvent Determination of the total composition. Detection range of 0.4 μ g/mL ~ 4 μ g/mL (in terms of SO₄).

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including

errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 602 Determination of impurities in chemical reagents prepared standard solution (GB/T 602-2002, ISO 6353-1. 1982, NEQ) with GB/T 603 chemical reagent test method Preparations of articles (GB/T 603-2002, ISO 6353-1 with. 1982, NEQ) GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-1992, neq ISO 3696. 1987) GB/T 9728 General method for determination of chemical reagents sulfate (GB/T 9728-2007, ISO 6353-1. 1982, NEQ)

3 PRINCIPLE OF THE METHOD

The organic solvent solution of potassium hydroxide in ethanol at reflux in the sample and inorganic sulfur compounds capable of forming a solution of potassium hydroxide in ethanol and the reaction Xanthan potassium organic sulfur compounds are converted to the corresponding salt with a suitable oxidizing agent capable of oxidizing these salts to sulfate. Available sulfuric acid Barium visual turbidimetry. The mass fraction of sulfur compounds Sulfate.

4 Reagents and materials

Unless otherwise specified in this standard, the standard solution, preparations and products, according to GB/T 602, the provisions of the preparation of GB/T 603, the experimental Water should be consistent with GB/T 6682 water in three specifications, are the mass fraction of the solution used in "%" represents.

5 Instruments and devices

5.1

General laboratory equipment.

5.2

mill mouth reflux device.

6 Determination

According to product standard sample was added 50mL potassium hydroxide - ethanol, heated under reflux for 30min. Joined from the upper end of the condenser 50mL water, remove the condenser, evaporated on a water bath. Add 5mL "30% hydrogen peroxide", and then incubated in a water bath 15min, with hydrochloric acid solution (20%) neutralized and excess 1mL, the solution was diluted to a certain volume, remove the portion of the solution was evaporated to dryness in a water bath. The residue was dissolved in water

plus 5mL (If necessary filter), (10g/L) and after, according to the provisions of GB/T 9728 Determination of sulfate with sodium hydroxide solution. While doing the blank test.

Standard preparation turbid solution is to take the ratio of the blank test solution and a predetermined amount of sulfate (SO_4) standard solution, the residue was dissolved in water and added 5mL (Filtered if necessary), with sodium hydroxide solution (10g/L) and the sample solution after the same treatment at the same time.