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

GB/T 9730-2007

Replacing GB/T 9730-1988

**Chemical reagent -- General method for the determination of
oxalates**

化学试剂 草酸盐测定通用方法

(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 9730-1988 "General method for determination of chemical reagents oxalates," compared with the GB/T 9730-1988 Cancel 1988 edition Appendix A.

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 the oxalate to convert azo compound with the general method of colorimetric determination.

This standard applies to the determination of trace organic reagent oxalate.

Spectrophotometric detection range of $1\mu\text{g/mL} \sim 20\mu\text{g/mL}$ (in C_2O_4 meter), visual colorimetric detection range of $0.4\mu\text{g/mL} \sim 20\mu\text{g/mL}$ (in C_2O_4 dollars).

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 9721 Chemicals General molecular absorption spectrophotometry (UV and visible part)

3 PRINCIPLE OF THE METHOD

In the medium of hydrochloric acid, oxalic acid with zinc reduced to glyoxylic acid, glyoxylic acid and hydrochloric acid phenylhydrazine reaction of glyoxylic acid phenylhydrazone. Adding an oxidizing agent, the excess phenylhydrazine is converted to a diazonium salt, and then reacted with glyoxylic acid phenylhydrazone, generating azo compounds, pink in an acidic medium, it may be visually Colorimetric or spectrophotometric determination of oxalate.

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 in the three water specifications.

5 Instruments

5.1

General laboratory equipment.

5.2

Spectrophotometer shall comply with GB/T 9721's.

6.1 Visual colorimetry

Sampling according to product standards and test solution preparation. Take 5mL sample solution into 25mL colorimetric tube, add 2mL of hydrochloric acid, 1g arsenic-free Zinc, immediately incubated in a boiling water bath for 1min, standing out 2min, containing 0.25mL immediately poured into a solution of phenylhydrazine hydrochloride (10g/L) ratio of the color Tube (without rendering zinc particles poured), washed three times with water colorimetric tube (using a pipette operation), each 1mL, will be incorporated into the lotion containing phenylhydrazine hydrochloride solution Colorimetric tube (the volume of the solution at this time should not exceed 10mL). Incubated in a boiling water bath for 1min, rapidly cooled in running water, diluted hydrochloric acid to 25mL, plus 0.25mL iron

potassium cyanide solution (50g/L), and shake. The solution was pink with the standard comparative colorimetric solution.

Preparation of the standard developing solution is a specified amount than the oxalate (C₂O₄) standard solution, was diluted to 5mL, at the same time with the same volume of the same test solution