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

**GB/T 9734-2008**

Replacing GB/T 9734-1988

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

化学试剂 铝测定通用方法

**(English Translation)**

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### Foreword

This standard and ISO 6353-1. 1982 "Chemical analysis of reagent --- Part 1. General test method" non-equivalent.

This standard replaces GB/T 9734-1988 "Determination of aluminum Chemicals General Method", compared with the GB/T 9734-1988 major changes as follows.

--- Increased Chromazurol S Determination of aluminum (Excerpts Chapter 1, 3.2).

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. Guangzhou Chemical Reagent Factory.

### 1 Scope

This standard specifies the Rose tricarboxylic acid ammonium (aluminum reagent) and chromium azure S colorimetric determination of aluminum in the general method. Rose tricarboxylic acid ammonium (aluminum reagent) Spectrophotometric detection range of 0.4 $\mu$ g/mL ~ 2 $\mu$ g/mL (calculated as Al), visual colorimetric detection range of 0.2 $\mu$ g/mL ~ 2 $\mu$ g/mL (calculated as Al); Chromium Azure S spectrophotometric detection range of 0.01 $\mu$ g/mL ~ 0.2 $\mu$ g/mL (calculated as Al), visual colorimetry the detection range of 0.008 $\mu$ g/mL ~ 0.2 $\mu$ g/mL (calculated as Al).

## 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 6682-2008, ISO 3696. 1987, MOD) GB/T 9721 Chemicals General molecular absorption spectrophotometry

## 3 PRINCIPLE OF THE METHOD

Rose 3.1 tricarboxylic acid ammonium (aluminum reagent) colorimetry Acetic acid medium at a pH of 4-5, aluminum does generate and Rose-tricarboxylic acid ammonium chelate red sparingly soluble, can be used for aluminum spectrophotometrically or visual colorimetric assay method. Added protective colloid solution allows stable color.

### 3.2 Chromium Azure S colorimetry

At a pH of about 6 acid medium, aluminum and chrome azure S and cetyl trimethyl ammonium bromide generated blue complex can be used Aluminum spectrophotometry or visual colorimetric assay.

## 4 Reagents and materials

This standard is used in the standard solution, preparations and products, according to GB/T 602, the provisions of GB/T 603 preparation, test water should be consistent GB/T 6682 specifications in three of water.

## 5 Instruments

### 5.1

General laboratory equipment.

### 5.2

Spectrophotometer. comply with GB/T 9721's.

## 6 Determination

Rose 6.1 tricarboxylic acid ammonium (aluminum reagent) colorimetry Sampling according to product standards and the preparation of the test solution (if necessary, the test solution was adjusted to neutral). Of 10mL test solution, add 1mL in acetic acid Liquid (mass fraction 30%), 1mL ascorbic acid solution (100g/L), shake, add 10mL of acetic acid - ammonium acetate buffer solution (pH value 4 ~

5), shake, add 3mL Rose tricarboxylic acid ammonium solution (0.5g/L), diluted to 25mL, shake, place 15min. Red and standard solution was Prospective comparative colorimetric solution.