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

GB 1260-2008

Working chemical - Zinc oxide

工作基准试剂 氧化锌

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Foreword

The standard Chapter 4,

5.3.2 are mandatory, other provisions are recommended. This standard replaces GB 1260-1990 "work reference reagent (capacity) zinc oxide," compared with GB 1260-1990, major changes as follows:

- Standard name was changed to "work reference reagent zinc oxide";
- Modify the Content Measurement (1990 version 4.1, this version 5.3);
- Abolition of the "standard solution formulated Appendix A (Supplement)" (1990 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 is drafted by: Beijing Institute of chemical reagents. The main drafters of this standard. Han Baoying, strong Jing Lin. This standard replaces the standards previously issued as follows:
- GB 1260-1977, GB 1260-1990. Working Standard reagent zinc oxide Molecular formula. ZnO Molecular Weight. 81.389 (according to 2005 international relative atomic mass).

1 Scope

GB 1260-2008 is the Chinese national standard on working chemical - zinc oxide, in the field of chemical technology. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 18 June 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 June 2009. Classification: ICS 71.040.30, CCS G61. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the

tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the job reference reagent zinc oxide properties, specifications, testing, packaging and inspection rules and signs. This standard applies to titration analysis work reference reagent zinc oxide test.

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. Preparation of

GB/T 601 chemical reagent standard titration solution

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 9723-2007 Chemicals flame atomic absorption spectrometry General

GB/T 9728 General method for determination of chemical reagents sulfate (GB/T 9728-2007, ISO 6353-1. 1982, NEQ)

GB/T 9729 General method for determination of chloride Chemicals (GB/T 9729-2007, ISO 6353-1. 1982, NEQ)

GB 10738 Job reference reagent titration Determination General Weighing

GB 15346 chemical reagent packaging and marking

HG/T 3484 standard chemical reagents glass emulsion and clarity standards

HG/T 3921 Chemicals sampling and acceptance rules

3 Characters

This reagent is white or light yellow crystalline powder, insoluble in water, soluble in acid, ammonia and alkali metal hydroxide solution, the absorption in air Carbon dioxide and water.

4 Specification

Zinc oxide as shown in Table 1. Table

5 Test

5.1 Warning Reagents used in this test method are toxic or corrosive, some of the testing process can lead to dangerous situations, the operator should take Appropriate safety and health practices.

5.2 General Provisions Unless specified otherwise in this chapter, the use of standard titration solution, standard solution, preparations and products, according to GB/T 601, GB/T 602, Regulations preparation, test water should be consistent with GB/T 6682 specifications in three water samples according to precise weighing 0.01g, the use of GB/T 603's Solution "%" are represented by the mass fraction.

5.3 Content Measured according to GB 10738 requirements.

5.3.1 disodium EDTA standard titration solution of zinc oxide material standard titration Weigh 0.1g to 800 °C burning zinc oxide material to a constant standard of accuracy to 0.00001g, placed in a reaction flask with a little water Wetting, was added dropwise a solution of hydrochloric acid (20%) to the zinc oxide dissolved, add 75mL water, the solution was adjusted to pH 8 with aqueous ammonia solution (10%), plus 10mL ammonia - ammonium chloride buffer solution A (pH10) and 3 drops of chrome black T indicator solution (5g/L), with disodium EDTA standard titration solution [Ba (EDTA) = 0.05mol/L] titration solution from purple to pure blue. Weighing disodium EDTA standard titration solution, precise To 0.0001g. Determination

5.3.2 Content Determination with 5.3.1, measuring the sample after loss on ignition instead of the standard substance. Zinc oxide content and its value is "%" means, according to equation (1). (1) Where. B

--- Standard Substance content of zinc oxide (mass fraction), the value to "%" means;

5.4 Clarity test 6g weighed sample was dissolved in 94mL 6mL water and sulfuric acid, which must not be greater than clarity turbidity standard HG/T 3484 stipulated 2.

5.5 loss on ignition Weigh 1.5g sample, accurate to 0.0001g, has been placed at 800 °C to constant burning platinum crucible in a high temperature furnace gradually warming To 800 °C to constant and burning. Samples retained after constant for determination. Loss on ignition 1, the value in the "%" means, according to equation (2). 100 (2) Where.

5.6 free base Weigh 2g sample, add 20mL water, boiled, filtered, cooled. The filtrate was added 2 drops of phenolphthalein indicator solution (10g/L), the solution may not form powder red.

5.7 Chloride Weigh 1g sample, add 5mL water was added dropwise a solution of nitric acid (25%) to dissolve the sample, diluted to 20mL, according to GB/T 9729 regulations Determination. The turbidity of the solution was not greater than the standard turbidity solution. Standard preparation turbid solution is to take the ratio of 0.01mg containing chloride (Cl) standard solution was diluted to 20mL, and at the same time with the same volume of test solution Sample processing.

5.8 sulfur compounds Weigh 1g sample, add water 15mL, 0.2mL of anhydrous sodium carbonate solution (50g/L), and 1mL "30% hydrogen peroxide", slowly boil To bubble Yat do, a solution of hydrochloric acid solution (20%) was dissolved, evaporated to near dryness on a water bath, dissolved in water and diluted to 20mL, according to GB/T 9728 regulations Fixed determination. The turbidity of the solution was not greater than the standard turbidity solution. Standard preparation turbid solution is to take the ratio of 0.05mg containing sulfate (SO₄) standard solution was diluted to 20mL, at the same time with the same volume of test solution The same treatment.

5.9 Nitrate Weigh 0.5g sample was dissolved in 10mL water, 1mL sodium chloride solution (100g/L) and indigo carmine solution 1mL [Ba (C₁₆H₈N₂Na₂O₈S₂) = 0.001mol/L], with shaking in the 10s ~ 15s add 10mL sulfuric acid, placed 10min, shaking By slowly added 10mL of water and shake. The solution can not be a pale blue standard colorimetric solution. Preparation of the standard developing solution containing 0.015mg is to take the ratio of nitrate (NO₃) standard solution, the same treatment simultaneously with the sample.

5.10 Magnesium Determined according to the provisions of GB/T 9723-2007 of.

5.10.1 Instrument Conditions Source. magnesium hollow cathode lamp; Wavelength. 285.2nm; Flame. acetylene - air.