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

GB 24568-2009

Calcium hydrogen phosphate for tooth-paste industry

牙膏工业用磷酸氢钙

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10 Philippines spectrophotometry method (ISO 6685. 1982, IDT)

Foreword

This standard Chapters 4 and 7 chapters are mandatory, others are recommended. The standard proposed by China Petroleum and Chemical Industry Association. This standard by the National Standardization Technical Committee chemical inorganic chemicals Club (SAC/TC63/SC1) centralized. This standard was drafted. CNOOC Tianjin Chemical

Research Institute, Yunnan days Technology Co., Ltd., Hubei Xingfa Chemical Group shares have Ltd., Yunnan Province Chemical Research Institute, Lianyungang Debang Fine Chemical Co., Ltd. Drafters of this standard. Li Guangming, Guo Yongxin, Long Ping, Xiong Ping, Huangqian Jun, Liu Zhen. This standard is the first release. Industrial toothpaste DCP

1 Scope

GB 24568-2009 is the Chinese national standard on calcium hydrogen phosphate for tooth-paste industry, 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 30 October 2009 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 2010. Classification: ICS 71.060.50, CCS G12. 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 toothpaste industry with calcium hydrogen phosphate (also known as. calcium hydrogen phosphate dihydrate toothpaste, toothpaste or toothpaste dicalcium phosphate dihydrate Dicalcium) requirements, test methods, inspection rules, marking, labeling, packaging, transportation and storage. This standard applies to industrial use toothpaste DCP. The products are mainly used as toothpaste friction agent.

1.00 Stability tests by Fluoride Stability Test by Test - Loss on ignition, /%

25.0 to 26.5 60 °C Loss on drying, /% <=

0.6 Heavy metals (Pb), /% <=

0.002 Arsenic (As), /% <= 0.0003 Iron (Fe), /% <=

0.01 Fluoro (F), /% <=

0.005 Chloride (Cl dollars), /% <=

0.03 Carbonate by testing Sulfate, /% <=

0.5 Sulfide by test Hydrochloric acid insoluble matter, /% <=

0.2 Cfu/(a /

g) <= 200 Fecal Coliform Not Detected Pseudomonas aeruginosa can not be detected Staphylococcus aureus not detected Molds and the total number of yeast/(a /

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 research in accordance with this standard agreement Study whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 191-2008 Packaging - Pictorial signs (ISO 780.1997, MOD)

GB/T 3049-2006 industrial chemical products used in the general method of determination of iron content 1,

4 Requirements

4.1 Appearance. white powder.

4.2 Toothpaste industrial DCP is divided into two models. I type

--- fluorine stable calcium hydrogen phosphate; II type

4.3 DCP toothpaste industry should meet the requirements of Table 1. Table

1 Requirements project index Fluorine stable common type Calcium oxide (CaO), /% 31.4 ~

32.9 Phosphorus pentoxide (P₂O₅), /% 40.7 ~

42.5 Whiteness (Wg)/degree $\geq$ 93 pH (20% suspension) of

5 Test methods

5.1 Safety Tips Reagents used in this test method are toxic or corrosive, be careful when operating! As splashed on the skin or eyes should stand That is rinsed with water, severe cases should be treated immediately.

5.2 General Provisions This standard reagents and water, did not indicate when the other requirements, refer to three analytical reagent and GB/T 6682-2008 specified in water. Used in the test standard titration solution, impurity standard solution, preparations and products, did not indicate when the other requirements, according to HG/T 3696.1, HG/T 3696.2, the provisions prepared HG/T 3696.3 of.

5.3 Visual inspection In natural light, determined by visual appearance.

5.4 Determination of calcium oxide content

5.4.1 Method summary In the test solution, adding an excess of disodium edetate solution, complexes with calcium to acid chrome blue K- naphthol green B as indicator solution, With

zinc sulfate heptahydrate standard titration solution titrate excess of disodium edetate solution.

5.4.2 Reagents

5.4.2.1 hydrochloric acid solution. 1 + 4;

5.4.2.2 ammonia - ammonium chloride buffer solution A. pH~10;

5.4.2.3 disodium edetate solution. Ba (EDTA) ~0.05mol/L;

5.4.2.4 zinc sulfate heptahydrate standard titration solution. Ba ($\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$) ~0.05mol/L; Preparation. Weigh 15g of zinc sulfate heptahydrate, dissolved in water, diluted with water to 1000mL, shake. Calibration. Pipette 25mL zinc sulfate heptahydrate standard titration solution prepared, placed in a conical flask, add 10mL ammonia - chloride Ammonium buffer solution A and 75mL water, add about 0.02g chrome black T indicator, using 0.05mol/EDTA standard titration solution to titrate L Solution from purple to pure blue, and keep the 30s does not fade, is the end. At the same time a blank test. Zinc sulfate standard titration solution concentration heptahydrate (Ba) according to equation (1). $Ba = (V_p - V_0) Ba_1 (1)$ Where. Value V_p

--- titration consumed disodium edetate (EDTA) standard titration solution volume in milliliters (mL); V_0 value standard titration solution volume consumed in the blank test

--- disodium edetate (EDTA), milliliters (ML of); Ba_1

--- disodium edetate (EDTA) Standard Solution accurate value in units of moles per liter (mol/L); Pipette value V_p

--- zinc sulfate heptahydrate standard titration solution volume in milliliters (mL).

5.4.2.5 Acid chrome blue K- naphthol green B mixed indicator solution (KB indicator solution).

5.4.3 Analysis of step Weigh about 0.4g samples, accurate to 0.0002g, placed in a beaker of 100mL, 12mL of hydrochloric acid was added to dissolve the solution, transferred to a 250mL volumetric flask, dilute to the mark, shake. Pipette 25mL of this solution in 250mL conical flask, with a pipette 25.00mL edetate disodium solution, 50 mL of water and 10mL of ammonia - ammonium chloride buffer solution A, was added 4 drops of placing 5min KB indicator solution with zinc sulfate heptahydrate standard titration solution titration until the solution changed from blue to purple, the purple does not disappear in the 30s is in the final point. While doing the blank test. In addition to the blank test without the sample, the addition of reagents and other operations of the kind and amount (other than the standard titration solution) with the same Test.

5.4.4 Calculation Results Calcium oxide content of calcium oxide (CaO) mass fraction of 1 meter, expressed in%, according to equation (2). $1 = [(V_p - V_0)/1000] Ba M 100 (2)$ Where.