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

GB 34456-2017

Feed additive-Sodium dihydrogen phosphate

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Foreword

The first chapter of this standard, Chapter 3 and Chapter 5 is mandatory, the rest are recommended. This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard is proposed and managed by the National Feed Industry Standardization Technical Committee (SAC/TC76). This standard was drafted Unit Feed Station in Sichuan Province, Sichuan Shu Xing Feed Co., Ltd. The main drafters of this standard. Li Yun, Wang Leilei, Chen Hong, Wu Chunqing, Lin Shunquan, Gao Qingjun, Bai Fan, Wang Yu-ping, Zhang Jing. Feed additive sodium dihydrogen phosphate

1 Scope

GB 34456-2017 is the Chinese national standard on feed additive-sodium dihydrogen phosphate, in the field of agriculture. 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 14 October 2017 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 May 2018. Classification: ICS 65.120, CCS B46. 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 requirements of feed additive sodium dihydrogen phosphate, test methods, inspection rules, labeling, packaging, transportation, storage and insurance Quality of life. This standard applies to the production of wet-process phosphoric acid feed additive sodium dihydrogen phosphate. Chemical name. Sodium dihydrogen phosphate. Molecular formula. $\text{NaH}_2\text{PO}_4 \cdot n\text{H}_2\text{O}$ ($n = 0, 1, 2$). Relative molecular mass .119.98 ($n = 0$), 137.99 ($n = 1$), 156.01 ($n = 2$) (according to International relative atomic mass in.2007).

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 6435 Determination of moisture in feed

GB/T 6682 analytical laboratory water specifications and test methods

GB 10648 feed label Determination of total arsenic in feedstuffs GB/T 13079-2006

GB/T 13080 Determination of lead in feed - Atomic absorption spectrometry Determination of fluoride in feed - Ion selective electrode method

GB/T 13088 Determination of chromium in feed

GB/T 14699.1 feed sampling National Food Safety Standard Food Additives sodium dihydrogen phosphate

2.0 Sulfate (SO_4^{2-}) /% ≤ 2.0

The standard test methods used reagents and water, did not indicate when the other requirements, refer to analytical reagents and GB/T 6682 provisions Three water.

4.1 Sensory test Visual and odor test products appearance and smell.

3 Requirements

3.1 Appearance and traits White crystal or powder, soluble in water, insoluble in ethanol,

slightly soluble in trichloromethane.

3.2 Specifications Technical indicators should be consistent with the provisions of Table 1.
Table 1 technical indicators Project Indicators Sodium dihydrogen phosphate (dry basis) /%
98.0 ~ 103.0 Sodium dihydrogen phosphate (in terms of P) (on a dry basis) /% 25.3 ~

26.6 Fluorine (F)/(mg/kg) $\leq$.200 Arsenic (As)/(mg/kg) $\leq$

4.2.1 Reagents and materials

4.2.1.1 Glacial acetic acid.

4.2.1.2 ammonia solution. Ammonia water = 23.

4.2.1.3 nitric acid solution. Nitric acid water = 18.

4.2.1.4 silver nitrate solution (17g/L). Weigh 1.7g of silver nitrate, dissolved in 100mL water.

4.2.2 Analysis steps

4.2.2.1 Identification of phosphate Weigh the sample 1.0g, dissolved in 20mL water, add silver nitrate solution (4.2.1.4), a yellow precipitate, the precipitate dissolved in excess ammonia dissolved Liquid (4.2.1.2) or nitric acid solution (4.2.1.3), insoluble in glacial acetic acid (4.2.1.1).

4.2.2.2 Identification of sodium ions Weigh the sample 1.0g, add 20mL water to dissolve. Dipped hydrochloric acid with platinum wire ring, the flame burning to colorless. Then dip the test solution on fire Burning flame, the flame should be bright yellow.

4.3 Determination of sodium dihydrogen phosphate

4.3.1 Principle In acidic medium, with Quimociac as precipitating agent, all the phosphate in the sample solution forms quinoline phosphomolybdate to precipitate, Filter, drying, weighing, calculation of sodium dihydrogen phosphate content.

4.3.2 Reagents and materials

4.3.2.1 Sodium molybdate.

4.3.2.2 Citric acid.

4.3.2.3 nitric acid solution. Nitric acid water = 1 1

4.3.2.4 Quinoline.

4.3.2.5 Acetone.

4.3.2.6 Quimociac solution Weigh 70g sodium molybdate (4.3.2.1) was dissolved in 100mL water (solution a); Weigh 60g citric acid (4.3.2.2) was dissolved in 150mL Water and 85 mL

of nitric acid solution (solution b); solution a was poured into solution b with stirring (solution c); in 100 mL of water Add 35mL nitric acid solution (4.3.2.3) and 5mL quinoline (4.3.2.4) (solution d); the solution d into solution c, after 12h, Filtration with glass sand crucible, then add 280mL acetone (4.3.2.5), diluted with water to 1000mL, mix. Store in polyethylene bottle.

4.3.3 Instruments and Equipment

4.3.3.1 glass sand crucible Pore size $5\mu\text{m} \sim 15\mu\text{m}$.

4.3.3.2 electric oven temperature.

4.3.4 Analysis steps

4.3.4.1 Preparation of test solution Weigh 1g (accurate to 0.0001g) of the sample dried at 105°C for 4h, placed in a 100mL beaker, dissolved in 50mL of water, Into a 250mL volumetric flask, water to volume, shake.

4.3.4.2 Preparation of blank test solution In addition to not adding the sample, the amount of other reagents added and the preparation of the test solution exactly the same, and the same sample with the same treatment.

4.3.4.3 Determination Pipette pipette 10mL test solution (4.3.4.1) and blank test solution (4.3.4.2) were placed in 250mL beaker, add water To a total volume of about 100mL, add 50mL Quimociac solution (4.3.2.6), cover the surface dish, in a $75^\circ\text{C} \pm 5^\circ\text{C}$ water bath heat insulation 30s (During the process of adding reagent and heating, no open flame or stirring shall be allowed to avoid agglomeration). Cool to room temperature during cooling Stirring three times to four times, with a pre-weighed $180 \pm 5^\circ\text{C}$ or $250^\circ\text{C} \pm 10^\circ\text{C}$ constant weight glass sand crucible sucked the supernatant by decantation Wash the sediment with a bottle washing 5 times to 6 times, each time about 20mL of water, and finally the precipitate was transferred to a glass sand crucible, the precipitate washed with water 3 times $\sim$ 4 times. The glass sand crucible with the precipitate placed in an electric oven, dried at $180^\circ\text{C} \pm 5^\circ\text{C}$ 45min or $250^\circ\text{C} \pm 10^\circ\text{C}$ Under the dry 15min. Remove, placed in a desiccator cooled to room temperature, weighed, accurate to 0.0001g.

4.3.5 Calculation and representation of results Sodium dihydrogen phosphate content of sodium dihydrogen phosphate (NaH_2PO_4) mass fraction w_1 , the value is expressed in%, according to equation (1) calculation. $w_1 = (m_1 - m_2) \times 0.0542 \text{ m} \times (10/250) \times 100\%$ (1) In the formula. m_1

--- test solution generated quinoline phosphomolybdate precipitation quality, in grams (g); m_2

--- blank test solution generated quinoline phosphomolybdate precipitation quality, in grams (g); 0.0542