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

GB 29936-2013

**Food additive -- Starch sodium phosphate
(English Translation)**

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Table of Contents

- 1 Scope
- 2 Technical Requirements
 - 2.1 Raw materials
 - 2.2 Sensory requirements
 - 2.3 Physical indicators

1 Scope

This standard applies to edible starch or arrowroot starch produced by a starch milk raw material obtained reaction system for raw materials and phosphorylation reagent Get food additive sodium starch phosphate, and a combination of enzymatic treatment, acid treatment, alkali treatment, bleaching treatment and pre-treatment of one or gelatinized Food Additives starch sodium phosphate after processing a variety of methods.

2.1.1 Raw materials

Food starch should be consistent with national standards or industry standards-related products.

2.1.2 Accessories

2.1.2.1

should meet the national standards or industry standards or the relevant provisions of the relevant requirements of the product.

2.1.2.2

phosphorylating reagent species. n orthophosphate, sodium or potassium, or sodium tripolyphosphate.

2.2 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Table 1 Sensory requirements

Project requires test methods Color white, white or light yellow Take 50 g sample in a clean white porcelain dish, under natural light, observation its color, state, smell the smell Status granular, flaked or without visible impurities Inherent odor product smell, no odor

2.3 Physical indicators

Physical and chemical indicators should be consistent with the provisions of Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method Loss on drying, w /% Cereal starch ≤ 15.0 GB/T 12087 other monomers starch ≤ 18.0 Potato starch ≤ 21.0 Total arsenic (As)/(mg/kg) ≤ 0.5 GB/T 5009.11 Lead (Pb)/(mg/kg) ≤ 1.0 GB 5009.12 Sulfur dioxide/(mg/kg) ≤ 30 GB/T 22427.13 the phosphate (As P) /% Potato or wheat starch ≤ 0.5 GB/T 22427.11 Other raw materials ≤ 0.4 Appendix A Testing method A.1 Safety Tips Reagents The standard test methods used for toxic or corrosive, the operation should be careful! As splashed on the skin should stand that is rinsed with water, severe cases should be treated immediately.

A.2 General Provisions Unless otherwise indicated in the analysis using only recognized as analytical reagents and GB/T 6682 stipulated three water. Test Methods the standard titration solution, impurity measurement standard solution, preparations and products, did not indicate when the other requirements, according to GB/T 601, GB/T 602 and 603 of the regulations prepared GB/T ; the solution when the solvent is not specified, refer to the aqueous solution.

A.3 Identification Test A.3.1 microscopy Gelatinized starch processing without holding sodium phosphate particle structure can be directly observed through a microscope to identify the starch granule shape, size and feature. Under polarized light microscope, it can be observed the typical birefringence.

A.3.2 iodine staining A sample of 1 g was added 20mL of water were suspended, several drops of iodine solution, the color should range from deep blue to reddish brown.

A.3.3 copper reduction A.3.3.1 formulated alkaline tartrate copper test solution A.3.3.1.1 Solution A. Copper Sulfate ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$) 34.66 g, should be no weathering or moisture absorption phenomenon, dissolved in water volume to 500 mL.

The solution was stored in a small sealed container.

A.3.3.1.2 Solution B. take potassium sodium tartrate ($\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$) 173 g sodium hydroxide 50 g, dissolved in water volume to 500 mL.

The solution was stored in a small container and alkali corrosion.

A.3.3.1.3 solutions A and B mixed in equal volumes, to obtain an alkaline tartrate copper test solution.

A.3.3.2 analysis step Weigh the sample 2.5 g, placed in a flask, 0.82 mol/L hydrochloric acid solution of 10 mL of water and 70 mL, mixing, boiling water bath Was refluxed for 3 h, cooled. Take 0.5 mL solution was cooled, added 5 mL hot alkaline copper tartrate solution, a large amount of red precipitate.