GB

NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

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National Food Safety Standard -- Food Additive -- Sodium Starch Octenyl Succinate

食品安全国家标准　食品添加剂 辛烯基琥珀酸淀粉钠

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National Food Safety Standard -- Food Additive -- Sodium Starch Octenyl Succinate

1 Scope

This Standard applies to the food additive sodium starch octenyl succinate produced by esterification of starch and octenyl succinic anhydride, as well as a combination of enzyme treatment, dextrinization, acid treatment, bleaching treatment, and pregelatinization.

2 Technical requirements

2.1 Sensory requirements

Sensory requirements should comply with Table 1.

2.2 Physical and chemical indicators

The physical and chemical indicators should comply with the provisions of Table 2.

Annex A

Inspection methods

A.1 General

Unless other requirements are specified, the reagents and water used in this Standard refer to analytically pure reagents and grade three water specified in GB/T 6682. The standard solutions, standard solutions for impurity determination, preparations and products used in the test shall be prepared in accordance with the provisions of GB/T 601, GB/T 602 and GB/T 603, unless other requirements are specified. The solutions used in the test refer to aqueous solutions unless the solvent used to prepare them is specified.

A.2 Identification tests

A.2.1 Iodine staining test

Weigh 1 g of the specimen and add it to 20 mL of water to form a suspension. Add a few drops of iodine solution. The color is dark blue to brownish red.

A.2.2 Copper reduction test

A.2.2.1 Reagents and materials

Hydrochloric acid solution: 7+93.

A.2.2.2 Analysis steps

Weigh 2.5 g of the specimen and place it in a long-neck flask. Add 10 mL of hydrochloric acid solution and 70 mL of water. Well mix them. Reflux for 3 h. Cool them down. Take 0.5 mL of cooled solution. Add 5 mL of hot alkaline copper tartrate TS. A large amount of red precipitate is produced.

To prepare alkaline copper tartrate test solution, follow the steps below.

a) Solution A: Weigh 34.66 g of copper sulfate crystals ($CuSO_4 \cdot 5H_2O$). The crystals should show no signs of weathering or moisture absorption. Add water to dissolve and adjust the volume to 500 mL. Keep this solution in a small airtight container.

b) Solution B: Weigh 173 g of potassium sodium tartrate crystals ($KNaC_4H_4O_6 \cdot 4H_2O$) and 50 g of sodium hydroxide (NaOH). Add water to dissolve and adjust the volume to 500 mL. Store this solution in a small, alkali-resistant container.

c) Mix solution A and solution B in equal volumes to obtain alkaline copper tartrate

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