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NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

GB 1886.102-2016

National Food Safety Standard -- Food Additives -- Calcium stearate

食品安全国家标准 食品添加剂 硬脂酸钙

(English Translation)

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1 Scope

This standard applies to sodium stearate and calcium chloride solution after the interaction of refined and refined food additives from calcium stearate.

2.1 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Table 1 sensory requirements

The project requires a test method Color white to yellow and white State loose powder, delicate, lubricity, no sand grain Place the sample in a clean, dry white porcelain dish in nature Under light, observe the color and state

2.2 Physical and chemical indicators

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

Table 2 Physical and chemical indicators

Item Index Test Method Calcium stearate content (calculated as CaO on a dry basis), w /% 9.0 to 10.5 A.3 in Appendix A Dry reduction, w /% <= 4.0 GB 5009.3 direct drying method a Free acid (in stearic acid), w /% <= 3.0 Appendix A A.4 Lead (Pb)/(mg/kg) <= 2.0 GB 5009.12 a drying temperature of 105 °C, drying time of 2h.

Appendix A

Testing method

A.1 General provisions Unless otherwise stated, only the reagents identified as analytical reagents and the water specified in GB/T 6682 are used in the analysis. The criteria used in the analysis Titration solution, standard solution for the determination of impurities, preparations and products, in the absence of other requirements, according to GB/T 601, GB/T 602 and GB/T 603. The solution used in this test does not specify what kind of solvent preparation, refers to the aqueous solution.

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A.2 Identification test A.2.1 Take the sample 1g, mix with water 25mL and hydrochloric acid 5mL, heating, fatty acid is released, so that the oil layer of liquid surface. Water layer Calcium test should be positive.

A.2.2 Take the sample 25g, mixed with hot water.200mL, plus 1mol/L sulfuric acid solution 60mL, heating and stirring to the fatty acid precipitation and was transparent liquid. Wash the fatty acids with boiling water, until the sulphate is removed, collected in a small beaker, warm in the steam bath to fatty acids Completely separate from the water layer and transparent. Cooling, discarding the water layer, melting the fatty acid into a dry beaker and drying at 105 ° C for 20 min.

The freezing point of the refined fatty acid should not be lower than 54 ° C. The freezing point is determined by conventional methods.

A.3 Calcium stearate content (calculated as CaO on a dry basis) Accurately weighing about 1.2g sample, adding 50mL concentration of 0.1mol/L hydrochloric acid solution, boiling 10min, or to the fatty acid layer to clarify, If necessary, add water to keep the original volume. Cooling, filtering, thoroughly washing the filtrate and the flask with water, until the final lotion is no longer acidic to litmus.

The filtrate was neutralized with 1 mol/L sodium hydroxide test solution and to litmus. Was added with a 50 mL burette with sufficient stirring with a magnetic stirrer 0.05mol/L ethylenediamine tetraacetic acid disodium solution of about 30mL, plus 1mol/L sodium hydroxide test solution 15mL and hydroxy naphthol blue indicator 300mg, and continue titration to the blue finish. 0.05mol/L of ethylenediamine tetraacetic acid disodium solution per ml is equivalent to CaO2.804mg.

A.4 Determination of free acid (measured as stearic acid) Accurately weighed 2g sample, placed in 50mL acetone filled with 125mL dry conical flask, the bottle filled with air reflux condensation , Boiled in a steam bath for 10 min and then cooled. Filtered through two layers of filter paper, washed with 50 mL of acetone, filter and filter. In the filtrate Plus a few drops of phenolphthalein and 5 mL of water, titrated with 0.1 mol/L sodium hydroxide solution. While empty with 100 mL of acetone and 5 mL of water White test. 0.1mol/L sodium hydroxide solution per milliliter equivalent to 28.45mg stearic acid (C18H36O2).

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