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

GB 1886.91-2016

**National Food Safety Standard -- Food Additives -- Magnesium
Stearate**

Issued on: August 31, 2016

Implemented on: January 1, 2017

**Issued by: National Health and Family Planning Commission of the
People's Republic of China, State Food and Drug Administration**

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1 Scope

This standard applies to the magnesium oxide and edible grade solid mixed fatty acids (mainly stearic acid) after the combination of refined food additives hard Magnesium magnesium sulfate.

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 State loose powder, delicate, no sand grain Take the appropriate amount of sample in a clean, dry white porcelain dish Under the 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 Magnesium stearate content (in MgO), w /% 6.8 to 8.3 Appendix A, A.3 Dry reduction, w /% ≤ 4.0 GB 5009.3 direct drying method a Lead (Pb)/(mg/kg) ≤ 5.0 GB 5009.12 a drying temperature of 105 degrees 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 tertiary water specified in GB/T 6682 were used in the analysis. Used in the analysis Standard titration solution, standard solution for impurities determination, preparation and products, in the absence of other requirements, according to GB/T 601, GB/T 602,

GB/T 603. The solution used in this test does not specify what kind of solvent preparation, refers to the aqueous solution.

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 For magnesium 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.2.3 insoluble in water, soluble in ethanol and ether.

A.3 Magnesium stearate content (measured in MgO)

Accurately weighed about 1g sample, add 50mL concentration of 0.1mol/L hydrochloric acid solution, boil about 30min, or to the fatty acid layer to clarify, If necessary, add water to keep the original volume. Cooling, filtering, thoroughly washing the filter 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 EDTA disodium solution of about 30mL, plus 5mL ammonia - ammonium chloride buffer solution and 0.15mL chromium black T test solution. then Continue titration to blue finish. 0.05 mol/L EDTA disodium solution per milliliter corresponds to 2.015 mg of magnesium oxide (MgO).

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