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

GB 25587-2010

**National food safety standards of food additive magnesium
carbonate**

食品添加剂 碳酸镁

(English Translation)

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Foreword

Appendix A of this standard is a normative appendix.

National Food Safety Standard Magnesium carbonate food additives

1 Scope

This standard applies to the carbon dioxide reacted with magnesium hydroxide or sodium carbonate emulsion prepared by the reaction with a soluble magnesium carbonate food additives magnesium.

2 Normative references

The standard file referenced in the application of this standard is essential. For dated references, only the dated edition of fitness for this standard. For undated references, the latest edition (including any amendments) applies to this standard.

Formula 3

$x\text{MgCO}_3 \cdot y\text{Mg}(\text{OH})_2 \cdot n\text{H}_2\text{O}$

4 Requirements

4.1

Sensory requirements. comply with Table 1.

Table 1 Sensory requirements

Project requires test methods Color, odor white, odorless take appropriate sample is placed in 50mL beaker, observe the color in natural light and texture. Smell the odor. Organization Status powder

4.2

Physical indicators. to comply with Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method Magnesium oxide (MgO), w /% 40.0 ~ 44.0 Appendix A A.4 Acid insoluble, w /% ≤ 0.05 Appendix A A.5 Calcium oxide (CaO), w /% ≤ 0.60 A.6 in Appendix A Soluble salts, w /% ≤ 1.0 Appendix A A.7 Arsenic (As)/(mg/kg) ≤ 3 Appendix A A.8 Heavy metals (Pb)/(mg/kg) ≤ 10 Appendix A A.9 Appendix A (Normative) Testing method A.1 Safety Tips Reagents The standard test methods used for toxic or corrosive shall be careful as splashed on the skin immediately with operation Rinse water, severe cases should be treated immediately.

A.2 General Provisions the standard test methods used in the reagents and water in the absence of other specified requirements, refer to analytically pure reagents and GB/T 6682-2008 in Regulation Given three water. Used in the test standard titration solution, impurity standard solution, preparations and products, did not indicate when the other requirements, according to HG/T 3696.1, HG/T 3696.2, HG/T 3696.3 regulations of preparation.

A.3 Identification Test A.3.1 Reagents and materials A.3.1.1 hydrochloric acid solution. 12.

A.3.1.2 ammonia. 13.

A.3.1.3 ammonium chloride solution. 100 g/L.

A.3.1.4 ammonium carbonate solution. 100 g/L.

A.3.1.5 disodium hydrogenphosphate solution. 100 g/L.

A.3.1.6 calcium hydroxide solution. 3 g/L.

A.3.2 Identification of magnesium A small amount of sample, hydrochloric acid solution to dissolve the sample. Neutralized with ammonia, ammonium chloride solution was added and a solution of ammonium carbonate does not precipitate, should further added a solution of disodium hydrogen phosphate to produce a white precipitate. The precipitate was isolated, add ammonia should not be dissolved.

Identification A.3.3 carbonate A small amount of sample should be generated after the bubble hydrochloric acid solution, the gas is introduced into a solution of calcium hydroxide should be produced a white precipitate.

A.4 Determination of magnesium oxide with HG/T 2959-2000 4.4.

A.5 Determination of acid-insoluble matter with HG/T 2959-2000 4.2.

A.6 Determination of calcium oxide with HG/T 2959-2000 4.3.

A.7 Determination of soluble salts A.7.1 Reagents and materials Propanol solution. 11.

A.7.2 Instruments and Equipment Electric oven. the temperature can be controlled at 105 °C ~ 110 °C.

A.7.3 Analysis step

Weigh about 2g samples, accurate to 0.01g, add 100mL n-propanol solution. With stirring and heated to boiling, cooled to room temperature. Transferred to 100mL Volumetric flask, add water to the mark, shake, dry filter, discard the filtrate prior to 15mL. Pipette 50mL filtrate was placed 105 °C ~ Dried to a constant mass beaker 110 °C, and evaporated to dryness on a steam bath. Moved in electric oven at 105 °C ~ 110 °C dried to a constant mass.

A.7.4 Calculation Results Soluble salt mass fraction w_1 and its value is expressed in%, according to formula (A.1) Calculated.

w (A.1)

Where.

m_0 -- beaker quality value in units of grams (g);

Numerical m_1 -- beaker and residue mass in grams (g);

Quality m -- sample value in units of grams (g).

Take the arithmetic mean of the parallel determination results of the measurement results, the results of two parallel determination of the absolute difference is not more than 0.2%.

A.8 Determination of Arsenic A.8.1 diethyl dithiocarbamate silver spectrophotometry (Arbitration Act) with GB/T 5009.76-2003 of Chapter 2.

A.8.2 Gutzeit method Weigh $1.00 \text{ g} \pm 0.01\text{g}$ sample was placed in a conical flask arsenic measuring device, plus 5mL (1 3) was dissolved hydrochloric acid, the following according to GB/T Chapter 11 5009.76-2003 operation.

Limits formulated solution. Pipette 3.00mL arsenic standard solution [1mL solution containing arsenic (As) $1.0\mu\text{g}$], and treated in the same sample at the same time.

A.9 heavy metals (Pb) Determination Weigh $1.00\text{g} \pm 0.01\text{g}$ sample plus 10mL (1 3) hydrochloric acid solution to dissolve the sample, as the sample solution.

Pipette 1.00mL lead standard solution [1mL solution containing lead (Pb) 0.01mg] as a standard solution, the following according to GB/T 5009.76-2003 of Chapter 6 is measured.