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

GB 1986-2007

Replacing GB 1986-1989

**Food additive -- Glyceryl mono-and distearate
(English Translation)**

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Foreword

The standard Chapter 3 Technical requirements are mandatory, others are recommended.

The technical requirements of the standard reference used by the US "Food Chemical Codex" (FCC, V) technical specifications.

This standard replaces GB 1986-1989 "food additive glyceryl monostearate (40%)." this standard compared with GB 1986-1989 The main changes are as follows.

--- Changing the name of the standard;

--- Sensory requirements instead of the original appearance of the requirements;

Cancel --- physical and chemical indicators of iodine value, freezing point, free acids, heavy metals and iron indices, increased acid value, free glycerol, and residue on ignition Lead indicators;

--- Providing Test Method monoglyceride content, iodine value, saponification value and the melting point for the user of this standard reference.

Appendix A of this standard is an informative annex.

The standard proposed by China National Light Industry Council.

This standard by the National Food Fermentation Standardization Center.

This standard was drafted. China Food Additive Production and Application Industry Association, Hangzhou Oil Chemical Co., Ltd., China Food Fermentation Industry Institute.

1 Scope

This standard specifies the list of food additives, technical requirements for double glyceryl stearate, test methods, inspection rules, marking, packaging, transportation, Storage and shelf life.

This standard applies to hydrogenated palm oil or stearic acid with glycerol reaction containing mono-, di- glyceryl stearate, stearic acid and small amounts of three Gan Ester oil products in the food industry as an emulsifier.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

Preparation of GB/T 601 chemical reagent standard titration solution GB/T 603 chemical reagent test method Preparations of articles (GB/T 603-2002, ISO 6353-1 with. 1982, NEQ) GB/T 617 chemical reagent melting range of common measurement method (GB/T 617-2006, ISO 6353-1. 1982, NEQ) GB /5009.11 Determination of total arsenic in food T and inorganic arsenic Determination of GB/T 5009.12 of lead in food GB/T 5534 Determination of saponification value of animal fat (GB/T 5534-1995, idt ISO 3657. 1988) GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-1992, neq ISO 3696. 1987) GB/T 9741 Determination of residue on ignition Chemicals General method (GB/T 9741-1988, eqv ISO 6353-1. 1982) GB/T 18953 Rubber compounding ingredients stearic definitions and test methods (GB/T 18953-2003, ISO 8312:1999, MOD) Packing Administration of Quality Supervision, Inspection and Quarantine Commodity Measurement Supervision and Administration of the 75th Decree Food additives and health

management approach the Ministry of Health [2002] 26 of Decree

3.1 Sensory requirements

Milky white or pale yellow waxy solid, free of impurities, odorless and tasteless.

3.2 Physical and Chemical Indicators

Shall comply with the requirements in Table 1.

Table 1 Physical and Chemical Indicators

Item Index

Acid value (in dollars KOH)/(mg/g) ≤ 5.0 Free glycerol /% ≤ 7.0 Residue on ignition /% ≤ 0.5 Arsenic (As)/(mg/kg) ≤ 2.0 Lead (Pb)/(mg/kg) ≤ 2.0 Test Method 4 Unless otherwise indicated in the analysis using only recognized as analytical reagents and GB/T 6682 set forth in the water.

4.1 Sensory test

The sample was placed in a clean, dry white porcelain dish, under natural light, observe its color, smell its flavor.

4.2 Identification Test

A proper amount of sample, add equal parts of water, heated to above the melting point $2^{\circ}\text{C} \sim 5^{\circ}\text{C}$, and maintained at this temperature, it should form irreversible gels.

4.3 TESTING

4.3.1

an acid value

4.3.1.1 Reagents and materials

- a) Ethanol. 95%.
- b) potassium hydroxide standard solution. 0.1mol/L , according to GB/T 601 method of preparation.
- c) phenolphthalein indicator solution. 1%, prepared according to GB/T 603 methods.

4.3.1.2 Analysis step

Weigh 10g sample (accurate to 0.001g), placed in a conical flask, add 50mL neutral hot ethanol (added to the heated ethanol 2mL phenolphthalein indicator solution with 0.1mol/L potassium hydroxide standard solution to a reddish color does not fade and maintain 30s)

to dissolve the sample, with 0.1mol/L potassium hydroxide standard solution titration to reddish and maintain 30s does not fade as the end point.

4.3.1.3 Calculation Results

Acid value according to equation (1).

Where.

X1 --- acid value (in dollars KOH) in milligrams per gram (mg/g);

Potassium hydroxide standard titration solution volume V_p --- when consumed in milliliters (mL);

--- Ba concentration of standard solution of potassium hydroxide, in units of moles per liter (mol/L);

--- 56.1 mmol of potassium hydroxide mass in grams per millimole (g/mmol);

4.3.1.4 Allowable difference

The results mean of two parallel determination results shall prevail (to one decimal place). Twice under repeated condition alone Li measurement results and the arithmetic mean of the absolute difference should not exceed 0.2mg/g.

4.3.2.1 Reagents and materials

a) acetic acid. chemically pure.

b) chloroform. chemically pure, and should meet the following conditions. Take three 500mL flasks, acid-soluble periodate were added 20mL Liquid, in which the two conical flask 50mL chloroform and 10mL water, and the other just add 50mL water, and then further each cone 20mL vial was added potassium iodide solution were uniformly mixed, placed 1min ~ 5min, in accordance with step 4.3.2.2 Analysis 0.1mol/L sodium thiosulfate standard solution titration with chloroform and chloroform without dropping quantitative difference does not exceed 0.5mL.

c) periodic acid solution. dissolve 2.7g periodic acid in a mixture of 50mL and 950mL of acetic acid in water, stored in the dark in a clean stoppered Glass bottles.

d) a solution of potassium iodide. mass fraction of 15%.

e) sodium thiosulfate standard solution. 0.1mol/L, according to GB/T 601 method of preparation and calibration.

f) Starch indicator solution. 0.5%, prepared according to GB/T 603 methods.