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

GB 25571-2011

Replacing GB 25571-2010

National food safety standard -- Food additives -- Activated clay

食品添加剂 活性白土

(English Translation)

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Foreword

This standard replaces GB 25571-2010 "national food safety standards for food additives activated clay." this standard compared with GB 25571-2010 main changes are as follows.

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This standard replaces the standards previously issued as follows.

--GB 25571-2010.

National Food Safety Standard Food additives activated clay

1 Scope

This standard applies to industrial sulfuric acid, water and bentonite as raw materials to produce food additives activated clay.

Formula 2

$\text{Al}_2\text{O}_3 \cdot 4\text{SiO}_2 \cdot n\text{H}_2\text{O}$

3 Technical requirements

3.1

Sensory requirements. comply with Table 1.

Table 1 Sensory requirements

Project requires test methods Color white or gray, pale pink proper amount of sample is placed in 50mL beaker, in natural light Observe the color and texture. Organization Status powder

3.2

Physical indicators. to comply with Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method the specific surface area, $\text{m}^2/\text{g} \geq 130$ Appendix A A.4 Free acid (H_2SO_4 dollars), $w/\% \leq 0.30$ Appendix A A.5 Water, $w/\% \leq 12.0$ A.6 in Appendix A Fineness (0.075mm test sieve), $w/\% \geq 90$ Appendix A A.7 Filtration rate by testing in Appendix A A.8 Bulk density, g/mL 0.55 ± 0.10 A.9 Appendix A pH (50g/L suspension) of 2.2 to 4.8 A.10 Appendix A Heavy metals (Pb)/(mg/kg) ≤ 40 Appendix A A.11 Arsenic (As)/(mg/kg) ≤ 3 Appendix A A.12 Appendix A Testing method A.1 Warning Reagents The standard test methods used for toxic or corrosive, the operation should be careful as the water splashed on the skin should immediately Flushing, 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 Three water regulations. Test with the standard titration solution, impurity standard solution, preparations and products, did not indicate when the other requirements, according HG/T 3696.1, HG/T 3696.2, the provisions of HG/T 3696.3 of preparation.

A.3 Identification

A.3.1 Reagents and materials A.3.1.1 potassium nitrate.

A.3.1.2 anhydrous sodium carbonate.

A.3.1.3 hydrochloric acid.

A.3.1.4 sodium hydroxide solution. 10mol/L;

Weigh 40g of sodium hydroxide dissolved in 100mL of water.

A.3.1.5 ammonium chloride solution. 2mol/L;

Weigh 10.7g ammonium chloride, dissolved in 100mL of water.

A.3.2 Identification Test Weigh about 0.5g sample in a metal crucible, was added 1g and 3g of anhydrous potassium carbonate, heated to a molten, cooled and 20mL boiling Water in the residue, stirred, and filtered. The residue was washed with 50mL, add hydrochloric acid 1mL, 5mL water in the residue and filtered. 1mL was added to the filtrate Sodium hydroxide solution, filtered, and the filtrate was added 3mL solution of ammonium chloride, there is gelatinous, white precipitate formed.

A.4 Determination of the specific surface area According to GB/T 19587 was measured.

A.5 Determination of free acid A.5.1 Reagents and materials A.5.1.1 sodium hydroxide standard titration solution. $c(\text{NaOH}) = 0.02\text{mol}/\text{L}$;

Pipette 50mL press HG/T 3696.1 formulated accurately known concentration of sodium hydroxide standard titration solution [$c(\text{NaOH})$ about 0.1mol/L], placed 250mL flask with carbon dioxide-free water to dilute to the mark.

A.5.1.2 phenolphthalein indicator solution. 10g/L.

A.5.2 Analysis step

Weigh about 2g samples, accurate to 0.000 2g, placed in 150mL beaker. Add 50mL water, boil 3min, in 250mL conical filter Flask with 50mL water and washed 4 to 5 times. The filtrate was all boiled 2min, covered with a rubber plug alkali asbestos drying tube, and cooled to room temperature.

Add 2 drops to 3 drops of phenolphthalein indicator solution, titration with sodium hydroxide standard titration solution to light red and holding 30s does not fade as the end point.

At the same time a blank test. But without addition of the sample, the other test reagent was added and the amount of the same, with the same sample processing.

A.5.3 Calculation Results Free acid content of sulfuric acid (H_2SO_4) mass fraction w_1 and its value is expressed in%, according to formula (A.1) Calculated.

1000) (01

$MV V_c$

Where.

Numerical sodium hydroxide standard titration solution consumed V_1 -- titration solution volume in milliliters (mL);

V_0 -- value titration blank test solution of sodium hydroxide standard titration solution volume consumed in milliliters (mL);

c - accurate sodium hydroxide standard titration solution concentration value in units of moles per liter (mol/L);

m - the value of the sample mass, in grams (g);

Numerical M -- sulfate ($1/2 \text{H}_2\text{SO}_4$) molar mass of the units of grams per mole (g/mol) ($M = 49.00$).

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 0.04%.

A.6 Determination of Moisture A.6.1 Instruments and Equipment A.6.1.1 weighing bottle. $\Phi 40\text{mm} \times 25\text{mm}$.

A.6.1.2 electric oven. temperature can be controlled at $105^\circ\text{C} \pm 2^\circ\text{C}$.

A.6.2 Analysis step

Weigh about 2g samples, accurate to 0.000 2g, previously placed at $105^\circ\text{C} \pm 2^\circ\text{C}$ dried to constant mass weighing bottle and placed in an electric Thermostatic oven, at $105^\circ\text{C} \pm 2^\circ\text{C}$ for drying to constant mass. Removed, placed in a desiccator to cool to room temperature, and weighed.

A.6.3 Calculation Results Moisture mass fraction w_2 and its value is expressed in%, according to formula (A.2) Calculated.

012 x

Where.

Numerical m_0 -- dried sample mass, expressed in grams (g);

Value after m_1 -- dried sample mass, expressed in 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 0.5%.

A.7 Determination of fineness A.7.1 Instruments and Equipment Test sieves. R40/3 series, Phi200 x 50-0.075/0.050 (GB/T 6003.1 -1997).

A.7.2 Analysis step

It weighs about 20g sample to the nearest 0.01g. Exposed in a test sieve, constantly shaking, beating, and gently brushing with a dry brush, the sample by the end, the underlying black paper sieve, sieve lightly until the sample pad black paper no trace. The sieve residue transferred to a known mass Petri dish weighed to the nearest 0.000 2g.

A.7.3 Calculation Results Fineness mass fraction w_3 and its value is expressed in%, according to formula (A.3) Calculated.

013 x

Where.

Numerical m -- sample mass, expressed in grams (g);

Numerical quality m_1 -- sieve residue in 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 2%.

Determination A.8 filtration rate A.8.1 Reagents and materials Alkali refining soybean oil. soap containing not more than 0.004%.

A.8.2 Instruments and Equipment A.8.2.1 Buchner funnel. a diameter of 80mm.

A.8.2.2 vacuum pump.

A.8.3 Analysis step

Added 100.0g $\pm$ 0.1g in 400mL beaker alkali refining soybean oil, weighed 10.00g $\pm$ 0.01g sample was placed in alkali refining soybean oil, the beaker Moved to 100 °C constant temperature oil bath or water bath, stirring while heating 30min, at 20 °C ~ 25 °C laboratory temperature, hot medium speed qualitative filter paper Filtration (vacuum up to 5.3kPa)