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

GB 31628-2014

National Food Safety Standard -- Food Additives -- Kaolin

食品安全国家标准 食品添加剂 高岭土

(English Translation)

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1 Scope

This standard applies to kaolin as starting material, crushed, washed with water, and dried to obtain a food additive kaolin.

2.1 Sensory requirements

Shall comply with the requirements in Table 1.

Table 1 Sensory requirements

Project requires test methods Color status White to yellow-white or gray powder Proper amount of sample is placed in a 50mL beaker, self Observed under natural light, the color and state

2.2 Physical and Chemical Indicators

Shall be in accordance with Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method Appendix A carbonate by experiment A.4 Iron through the test A.5 by sulfide test A.6 in Acid (w) /% ≤ 2.0 A.7 Loss on ignition (w) /% ≤ 15.0 A.8 Inorganic arsenic (As)/(mg/kg) ≤ 3 A.9 Lead (Pb)/(mg/kg) ≤ 10 A.10 Appendix A Testing method A.1 Warning Reagents of this standard test method for use in corrosive or toxic, the operation should take appropriate safety and protective measures.

A.2 General Provisions this standard reagent in the absence of water and other requirements stated, refer to three analytical reagent and water 6682 in a predetermined GB/T . test the determination of impurities using standard solutions, products and preparations, in the absence of other requirements specified, the test according to GB/T 603 specified prepared. Used when a solution which does not indicate formulated with a solvent, refer to the aqueous solution.

A.3 Identification Test A.3.1 Reagents and materials A.3.1.1 sulfuric acid.

Ammonia solution A.3.1.2. 23.

A.3.2 identification method Weigh 1.0g sample is placed in an evaporating dish, was added 10mL of water, 5mL of sulfuric acid was slowly added, and mixed. Placed on the furnace steam until nearly dry, Heating was continued until the white smoke of sulfur trioxide take remove. After cooling, 20mL of water was added carefully, filtered with qualitative filter paper after boiling a few minutes.

Gray silica remaining in the funnel, the filtrate was added aqueous ammonia solution, white aluminum hydroxide gel should precipitate formed, this precipitate Insoluble in excess aqueous ammonia solution.

Determination carbonate A.4 A.4.1 Reagents and materials sulfuric acid.

A.4.2 Analysis step

Weigh 1.0g sample in a 50mL beaker. Added 10mL of water, and mix. While cooling 5mL of sulfuric acid was slowly added. In Canada Acid process, no air bubbles, that is, by experiment.

A.5 iron by

A.5.1 Reagents and materials Sodium salicylate.

A.5.2 Analysis step

2.0g sample was weighed, placed in a mortar, was added 10mL of water uniformly polished, was added 0.5g sodium salicylate, when the reddish color not deeper than, that is, by experiment.

Determination of sulfide A.6 A.6.1 Reagents and materials Hydrochloric acid solution

A.6.1.1. 13.

Lead acetate solution A.6.1.2. 95g/L. 9.5g of lead acetate $[\text{Pb}(\text{CH}_3\text{COO})_2 \cdot 3\text{H}_2\text{O}]$ was dissolved in boiled water new dilution to 100mL.

A.6.2 Analysis step

1.0g sample was weighed, placed in 250mL Erlenmeyer flask, was added 25mL of water, 15 mL hydrochloric acid solution immediately wetted with a solution of lead acetate Filter paper in the bottle cap, heated to boiling and boiled for a few minutes. No brown paper produced, that is, by experiment.

Determination of acid-soluble substance A.7 A.7.1 Reagents and materials Hydrochloric acid solution. 13.

A.7.2 Instruments and Equipment Electric oven. temperature can be controlled to $105\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$.

A.7.3 Analysis step

Weigh about 1g sample accurately to 0.0002g. Beaker, was added 20mL of hydrochloric acid solution, stirred, allowed to stand 15min filtration and washed. The filtrate was collected in a 50mL volumetric flask, diluted with water to the mark. 25mL filtrate was pipetted beforehand at $105\text{ }^{\circ}\text{C} \pm$ and dried to constant mass in $2\text{ }^{\circ}\text{C}$ evaporating dish and evaporated to dryness, evaporating dish was placed $105\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ the electric oven dried to mass Amount constant.

A.7.4 calculation results Mass fraction by w_1 in Acid of Formula (A.1) is calculated.

$m_1 \times 50$

$m \times 25 \times$

100% (A.1)

Where.

--- the mass M_1 of the dried residue, in grams (G);

50 Volume --- volumetric flask, milliliters (mL);

Sample mass m ---, in grams (G);

25 --- pipetted volume of the test solution, in milliliters (mL).

The test result to the arithmetic mean of replicates results. Obtained in two independent determination results under repeatability conditions of absolute difference Value is not more than 0.2%.

Determination of loss on ignition A.8 A.8.1 Instruments and Equipment Furnace temperature. the temperature can be controlled to $575\text{ }^{\circ}\text{C} \pm 25\text{ }^{\circ}\text{C}$.

A.8.2 Analysis step

Weigh about 2g sample, accurate to 0.0002g. Placed in a pre fired at $575\text{ }^{\circ}\text{C} \pm 25\text{ }^{\circ}\text{C}$ to constant mass in a porcelain crucible at $\pm 25\text{ }^{\circ}\text{C}$ the ignition in a high temperature oven $575\text{ }^{\circ}\text{C}$ to constant mass.

A.8.3 calculation results Ignition loss of mass fraction w_2 by the formula (A.2) is calculated.

$m - m_1$

$m \times 100\%$

Where.

Sample mass m ---, in grams (G);

After the burning mass M_1 --- residue, in grams (g).

The test result to the arithmetic mean of replicates results. Obtained in two independent determination results under repeatability conditions of absolute difference Value is not more

than 0.3%.

A.9 Determination of inorganic arsenic (As) is it weighs about 10g sample to the nearest 0.01g. Was placed in 250mL flasks, was added 50mL of hydrochloric acid solution (123). Continued reflux Condenser, was heated in a steam bath for 30min, and cooled. The supernatant was filtered into a 100mL volumetric flask, retaining as much of the flask Insoluble matter, the residue was washed three times with 30mL of hot water and the flask, the filtrate was collected to each flask, and finally filtered off and washed with 15mL of hot water paper. The filtrate was cooled to room temperature, diluted with water to the mark. This solution is a solution of the test A, the inorganic arsenic (As) and lead (Pb) of Determination.

Pipette a certain amount of test solution A, was measured by the method of GB/T 5009.76 or GB/T 5009.11 predetermined.

A.10 measurement lead (Pb) of Pipette a certain amount of test solution A (A.9), was measured by the method specified in GB 5009.12.