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Testing method of 8-Hydroxyquinoline

Name: 8-Hydroxyquinoline

Cas.no.: 148-24-3

Molecular weight: 145.16

1. Purpose: This specifies the testing method for 8-hydroxyquinoline.

2. Scope of application:

Used for the management and control of 8-hydroxyquinoline testing within the company.

3. Responsibility:

QC Department - responsible for the formulation and review of this regulation, conducting inspections on Harquino in accordance with this regulation, and taking responsibility for the inspection results.

QA department - responsible for approving this regulation and supervising and inspecting the inspection process and results.

4. Content

4.1 Name: 8-Hydroxyquinoline

4.2 Analytical Method

4.2.1 Appearance: This product is white or off white with a special odor of cresol

Testing method: visual inspection

4.2.2 Identification

A) Take 20mg of the sample and place it in filter paper. Add 5mL of 2M NaOH absorption solution to the combustion bottle, ignite the exposed filter paper, and quickly transfer it into the combustion bottle. Secure the plug and seal it with water. Be careful not to let the burnt sample fall into the absorption solution. After burning, vigorously shake for 5 minutes. Place 3mL of water at

the bottle mouth, slowly open the stopper, remove the solution from the bottle to a 25mL volumetric flask, and then dilute the absorption solution with water to a quantitative level. Take 5mL of this solution and place it in 100mL. Add 1mL of AgNO3, and brown sediment will form; Add 5mL of 5M ammonia water, shake, filter, and acidify the filtrate with nitric acid to produce white sediment.

4.2.3 Dry weight loss:

Not more than 0.5%, sample size 2.0g, 60 ℃, vacuum degree 70cm/Hg, phosphorus pentoxide needs to be added to the oven; 3 hours. 4.2.4 Acidity: Weigh 0.5g of the sample, add 100mL of chloroform and 25mL of water, shake, and let stand for layering; Test the pH value of the water phase, pH：6.0-6.5。 4.2.5 Chlorine:

Weigh 1.5g of the sample, add 50mL of chloroform and 50mL of water, shake, and let stand for layering; Dilute 4mL of aqueous phase with water to 15mL, then add 1mL of 2M HNO3 and immediately add 1mL of 0.1MAgNO3. Let it stand in the dark for 2 minutes. Under a black background, its milky white light should not be stronger than the milky white light of a mixed solution of 10mL chlorine standard solution (5ppm) and 5mL water.

4.2.6 Sulfate:

Take 15mL of residual chlorine aqueous phase, add 1mL of 25% (w/v) BaCl2 aqueous solution and shake, let it stand for 1 minute. Add 0.5mL of 0.5M glass acetic acid. After 5 minutes, visually compare the turbidity, and its milky white light cannot be stronger than 15mL SO42- standard solution (10ppm) treated with the same method.

4.2.7 Ash content:

Not exceeding 0.2%, sample size 1.0g, 600 ℃ 3hr

4.2.8 Content:

(a) Chromatographic conditions and system suitability test:

Column：Thermo Quest Hypersil C8； 4.6mm × 150mm ； 5 μ

Wavelength: 254nm

Flow rate: approximately 1.3 mL/min

Injection volume: 10 μ L

Mobile phase: 0.5g EDTA-2Na+350mL water+4mL Triethylamine mix, adjust pH to 3.0 with phosphoric acid, add 600mL methanol, and quantitatively prepare 1000mL with water

(b) Standard solution:

Accurately weigh 15mg of 8-Hydroxyquinoline as a reference standard and place it in a 20ml volumetric flask. Dissolve in methanol and quantify to the mark.

(c) Sample solution:

Accurately weigh 50mg of the sample and place it in a 20mL volumetric flask. Dissolve in methanol and quantify to the mark.