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2-Amino-4-acetamino anisole

2-氨基-4-乙酰氨基苯甲醚

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Standardization Administration of the People's Republic of China.

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Foreword

This Standard was proposed by China Petroleum and Chemical Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee 134 on dyestuff of Standardization Administration of China.

Drafting organizations of this Standard: Zhejiang Jihua Group Co., Ltd., and Shenyang Research Institute of Chemical Industry.

Main drafters of this Standard: Chen Meifen, and Ji Hao.

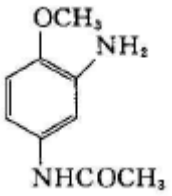
2-Amino-4-acetamido anisole

1 Scope

This Standard specifies 2-Amino-4-acetamido anisole's product requirements, sampling, test methods, inspection rules, marks, labels, packaging, transport and storage.

This Standard applies to product quality control of 2-Amino-4-acetamido anisole.

Structural formula:



Molecular formula: $C_9H_{12}N_2O_2$

Relative molecular mass: 180.20 (According to 2007 international relative atomic mass)

CAS RN.: 6375-47-9

2 Normative references

The articles contained in the following documents have become part of this Standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 601 Chemical reagent - Preparation of standard volumetric solutions

GB/T 603 Chemical reagent - Preparation of preparations and products used in the test method (GB/T603-2002, neq ISO 6353-1:1982)

GB/T 2386-2006 Dye and dye intermediate - Determination of the moisture

GB/T 6678-2003 General rules for sampling chemical products

GB/T 6682 Analyze the specification for water using and test methods of the laboratory (GB/T 6682-2008, ISO 3696:1987, MOD)

GB/T 8170-2008 Representation and determination of rounding and limit values

5.3 Determination of content of 2-Amino-4-acetamido anisole (amino value, calculated in dry product)

5.3.1 Reagent and solvent

a) Hydrochloric acid solution: Volume ratio of hydrochloric acid to water is 1:1;

b) Sodium nitrite standard titration solution: c($NaNO_2$)=0.1mol/L, during calibration, use starch-potassium iodide test paper to determine the end point;

c) Potassium bromide solution: 100g/L;

d) Starch - potassium iodide test paper.

5.3.2 Analytical steps

Weigh about 0.5g (accurate to 0.1mg) of sample; place in a 400mL beaker; add 200mL of hot water to dissolve it; add 30mL of 1+1 hydrochloric acid solution and 20mL of potassium bromide solution; cool to 5°C ~ 10°C; use sodium nitrite standard solution to perform titration till the potassium iodide starch test paper appears in light blue, and lasts for 5min without disappearing, that is the end point; perform blank test at the same time.

5.3.3 Result calculation

Content of 2-Amino-4-acetamido anisole (amino value, calculated in dry product), counted in mass fraction w_1, its value is expressed in %, is calculated according to Formula (1):

$$w_1 = \frac{[(V - V_0)/1\,000]cM}{m} \times 100 \qquad \cdots\cdots(1)$$

Where:

V — The consumption value of standard sodium nitrite volumetric solution volume for specimen, in unit of milliliter (mL);

V_0 — The consumption value of standard sodium nitrite titration solution for blank test, in unit of milliliter (mL);

c — The actual value of the standard sodium nitrite titration solution concentration, in unit of mole per liter (mol/L);

M — Molar mass of 2-Amino-4-acetamido anisole, in unit of gram per mole (g/mol [$M(C_9H_{12}N_2O_2)$=180.20];

m — The value of test sample's mass (calculated in dry product), in unit of gram (g).

Calculation result is rounded to two decimal places.

5.3.4 Permissible error

e) Sample injection: 5μL.

Choose the appropriate operation conditions of chromatogram according to different instruments.

5.4.5 Analytical steps

Weigh about 25mg of sample (accurate to 1mg); place it in a 25mL volumetric flask; add methanol to dissolve and fix the volume; place in an ultrasonic generator to dissolve fully; take it out; shake well for standby application.

After the instrument operates stably, use a micro syringe to absorb the sample solution to inject into an injection valve; perform the result processing after the last component flows out (see Figure 1).

5.4.6 Result calculation

The purity of 2-Amino-4-acetamido anisole, counted in w_2, its value is expressed in %, is calculated according to Formula (2).

$$w_2 = \frac{A}{\sum A_i} \times 100 \qquad \cdots\cdots (2)$$

Where,

A — The peak area value of 2-Amino-4-acetamido anisole;

∑Ai — A sum of peak area values of various components in the sample.

Calculation result is rounded to two decimal places.

5.4.7 Permissible error

The difference between two parallel determination results shall not be greater than 0.2%; take the arithmetic mean of them as the determination result.

5.4.8 Chromatogram

Chromatogram is shown in Figure 1.

7 Marks, labels, packaging, transportation and storage

7.1 Marks and labels

Each package of 2-Amino-4-acetamido anisole shall be coated with a firm and clearly marked, and be noted with product name, specification, registered trademark, product license number, logo (if applicable), net content, manufacturer name and address, standard number, batch number, and production date. Batch number and production date can also be printed on the label. The label and product qualification certificate shall be placed outside the plastic bag in the packing barrel.

7.2 Packaging

2-Amino-4-acetamido anisole is packaged with a woven bag that is lined with a plastic bag; net weight of each pad is 50kg. Other packaging can be determined through negotiation with the user.

7.3 Transport

During transport, it shall prevent solarization, dampness and rain, and avoid strong squeezing and collision.

7.4 Storage

2-Amino-4-acetamido anisole shall be stored in a cool, dry and ventilated storeroom, prevented from dampness and heating, kept away from the fire, and stored and transported according to provisions of chemicals.

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