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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 5474-2016

Replacing GB/T 5474-1985

Plastics -- Phenol formaldehyde moulding -- Determination of free ammonia and ammonium compounds -- Colorimetric comparison method

塑料 酚醛模塑制品 游离氨和铵化合物的测定 比色法

(English Translation)

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 5474-1985 "Determination of free ammonia and ammonium compounds in phenolic molded products by colorimetric" GB/T 5474-1985 compared to the main technical changes are as follows.

--- standard name changed to "plastic phenolic molded products free ammonia and ammonium compounds determination of colorimetric method";

--- Added "preface";

--- removed the standard text "This standard is equivalent to the international standard ISO 120. 1977" plastic phenolic molding material free ammonia and the determination of ammonium compounds by colorimetric method "(see 1985 edition);

- the "use of the note" was deleted (see version 4.2 of 1985);

--- Added "7.1 samples" (see 7.1, 1985, Chapter 6);

--- to make the appropriate changes to the formula to meet the technical conditions of our country, the specific changes are as follows.

Use the formula "wa = m x D "Instead of the formula" m x D (See Chapter 8, Chapter 7 of 1985);

--- Remove the standard additional instructions.

This standard uses the translation method equivalent to ISO 120. 1977 "Determination of free ammonia and ammonium compounds in plastic phenolic molded products Color method ".

And the normative reference in this standard international documents are consistent with the relationship between China's documents are as follows.

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GB/T 6005-2008 Basic dimensions of test sieve wire braid, perforated plate and electroformed sheet sieve (ISO 565.:1990, MOD) GB/T 12808-1991 Laboratory glass instruments Single-line pipette (eqvISO 648..1997) this standard is proposed by the China Petroleum and Chemical Industry Association.

This standard by the National Plastics Standardization Technical Committee Thermosetting Plastics Subcommittee (SAC/TC15/SC11) centralized.

The drafting of this standard. Shanghai Eurasian Synthetic Materials Co., Ltd., in the blue dawn Chemical Research and Design Institute Co., Ltd., the national synthetic resin Quality Supervision and Inspection Center, Changshu Southeast Plastic Co., Ltd., Shaxian Hongsheng Plastic Co., Ltd., Shandong Shengquan Chemical Co., Ltd.

1 Scope

This standard specifies the semi-quantitative determination of phenolic molded products in the ammonia content of the colorimetric method.

Note: This standard does not apply to the determination of the absolute amount of ammonia.

When it is necessary to consider the corrosion or food contamination of the metal insert due to contact with the molded article, the content of ammonia in the molded article is measured is important.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

ISO 565 test sieve wire mesh, perforated plate and electroformed sheet sieve basic dimensions (Testsieves-Woven metalwireclothandpertoratedplate-Nominalsizesofapertures) ISO 648 laboratory glass instrument single standard line pipette (Laboratoryglassware-One-markpipettes)

3 Principle

The free ammonia was extracted from the powder sample with hot water. The water extract is distilled in the presence of potassium permanganate and sodium hydroxide solution. Distillate with Nessler reagents and color development, the color solution and a set of standard solution one by one color.

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4 Reagent

In the analysis only use the recognized ammonia-free chemical pure reagent, ammonia-free distilled water or the same purity of water.

4.1
Potassium permanganate.

4.2
Sodium hydroxide. A solution with a mass fraction of 2%.

4.3
Comparison standard stock solution. 10 mg ammonia per liter.

Dissolve 31.5 mg of ammonium chloride in 1000 mL of water.

4.4
Ness's reagent.

5 Instruments

General laboratory instruments and the following instruments.

5.1
Equipment for making molded products into powder.

5.2
Test sieve. Sieve size 250μm, in line with ISO 565 requirements.

5.3
balance. the amount of 0.01g.

5.4
with a plug mouth glass flask. capacity 250mL.

5.5
Distillation Unit. Milled flask. capacity 250mL, splash ball and straight condenser.

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