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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 7130-2016

Replacing GB/T 7130-1986

Plastics -- Phenol-formaldehyde moulding -- Determination of free phenols -- Iodometric method

塑料 酚醛模塑制品 游离酚的测定 碘量法

(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 7130-1986 "Determination of free phenol in phenolic molded articles by iodometric method", and GB/T 7130-1986 phase the main technical changes are as follows.

--- standard name changed to "plastic phenolic molded products free phenol determination iodometric method";

--- Added "preface";

--- removed the standard text "This standard is equivalent to the international standard ISO 119. 1977" plastic phenolic molding material free phenol (See 1986 edition);

--- modify the reagent concentration unit, with "molar concentration" instead of "equivalent concentration" (see Chapter 3, 1986 edition of Chapter 3);

- the use of the test sieve has been removed (see 4.2, 1986, 4.2);

--- modified the formula (see Chapter 7, 1986, Chapter 7);

--- Remove the standard additional instructions.

This standard uses the translation method equivalent to ISO 119. 1977 "Determination of free phenol in plastic phenolic molded products by iodometric method".

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

GB/T 12805-2011 Laboratory Glass Burettes (ISO 385.:2005, NEQ) GB/T 6005-2008 Basic dimensions of test sieve wire braid, perforated plate and electroformed sheet sieve (ISO

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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 iodometric method for semi-quantitative determination of free phenol content in phenolic molded articles.

Note: This standard does not provide an absolute amount of free phenol.

The free phenol content in the molded article is mainly affected by the degree of cure. When it is necessary to consider food or other due to contact with the molded article when the material is contaminated, it is also important to determine the free phenol content.

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 385 burette (Burettes) 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 phenol was extracted from the powder sample with hot water. The extract is iodized and acidified with iodine solution in the presence of sodium tetraborate. Then immediately use sulfur Sodium titanate standard titration solution titrated excess iodine, starch solution as indicator. Assume that six iodine atoms are reacted with the phenol of each molecule should calculate the result.

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4 Reagent

Only the approved analytical reagent, distilled water or the same purity of water was used in the analysis.

4.1
Sodium tetraborate. (Na2B4O7 · 10H2O).

4.2 Sulfuric acid. c (

2H2SO4

) = 1 mol/L.

4.3 Iodine. c (

2I2

) = 0.025 mol/L.

In about 40 mL (500 g/L) of potassium iodide solution, 6.35 g of iodine was dissolved and diluted to 1000 mL with water.

4.4 sodium thiosulfate. standard titration solution, c (Na2S2O3) = 0.05mol/L.

4.5 Starch solution. 2.5 g/L.

5 Instruments

General laboratory instruments and the following instruments.

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