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

GB/T 29874-2013

**Plastics -- Homopolymer and copolymer resins of vinyl chloride
-- Determination of residual vinyl chloride monomer by
gas-chromatographic analysis of dry powder**

塑料 氯乙烯均聚和共聚树脂 气相色谱法对干粉中残留氯乙烯单体的测定

(English Translation)

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Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and Definitions
5 Apparatus and materials

Foreword

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

This standard uses redrafted modification method using ISO 24538:2008 "Plastics - Vinyl chloride homopolymer and copolymer resins by gas chromatography Determination of dry residual vinyl chloride monomer. " 2008 compared to the presence of structural changes, listed in Appendix B of this standard and ISO 24538.. This standard and ISO 24538 2008 reg series no change control list.

This standard and ISO 24538:2008 technical differences and for the following reasons.

- Remove the "scope" in the chapter "Notes" and its contents;
- In order to meet our technical conditions to equivalent international standards of GB/T 2035 instead of ISO 472;
- Added "5.3 Thermostats", provides precision temperature control, to ensure the accuracy of detection;
- Increasing the accuracy of 0.01g balance requirements;
- In the "Methods" section adds "In the arbitration method A method" regulation, improve the detection result of the determination of operability, to avoid disputes.

For ease of use, this standard made the following editorial changes.

- In "µg/g" instead of "mg/kg" as the residual vinyl chloride resin powder units;
- Added Appendix B (informative).

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standardization Technical Committee of plastic PVC resin product Club (SAC/TC15/SC7) centralized.

This standard was drafted. Hangzhou Electrochemical Group Co., Ltd., Xinjiang Zhongtai

Chemical Co., Jinxi Chemical Industry Research Institute Co., Friends of Tangshan chlor-alkali limited liability company.

1 Scope

This standard specifies the vinyl chloride homopolymer and copolymer resins of vinyl chloride Determination of residual monomers.

The method is based on static headspace gas chromatography (ie analysis at a constant temperature of the gas phase and solid phase equilibrium) for a variety of powdered chlorine Ethylene homopolymer and copolymer resins.

Composite materials, pellets, extrudates, films residual vinyl chloride monomer GB/T 4615 were measured.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 2035 plastic terms and their definitions (GB/T 2035-2008, ISO 472:1999, IDT)

3 Terms and Definitions

Terms and definitions GB/T 2035, as defined in applicable to this document.

Principle 4

The sample was weighed in a glass vial sealed and heated some time to make vinyl chloride monomer (VCM) in the powder and the gas phase reaches balance. Obtained from headspace gas sample was injected into a gas chromatograph, for example, by automatic injection. Flame ionization by fractionation in the column Detector.

5 Apparatus and materials

5.1

Gas chromatograph, with a fixed headspace autosampler or manual injection device. It should be selected to make VCM and impurities completely separate chromatography Column and conditions.

Note: See Appendix A. Suitable column 5.2 flame ionization detector (FID).

5.3

thermostat can be controlled at $(120 \pm 2) ^\circ\text{C}$.

5.4

glass vials, A common method of volume of (22 ± 0.5) mL, Method B was (10 ± 0.2) mL, with PTFE lined silicone rubber or butyl pads and aluminum caps, pads should not produce VCM can interfere with the determination of the peak.

5.5

rolled and hat tool for sealing and restart glass vials.