ICS 83.080.20

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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

中华人民共和国国家标准

GB/T 4615-2008

Replace GB/T 4615-1984

Poly (vinyl chloride) - Determination of residual vinyl chloride monomer content - Gas chromatographic method

聚氯乙烯树脂 残留氯乙烯单体含量的测定 气相色谱法

(ISO 6401: 1985, Plastics -- Homopolymer and copolymer resins of vinyl chloride -- Determination of residual vinyl chloride monomer -- Gas chromatographic method NEQ)

Issued on June 04, 2008 **Implemented on December 01, 2008**

Issued by **General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China**

Standardization Administration of the People's Republic of China

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Foreword

This Standard corresponding to ISO 6401: 1985 *Plastics -- Homopolymer and copolymer resins of vinyl chloride -- Determination of residual vinyl chloride monomer -- Gas chromatographic method*. This Standard is not equivalent to ISO 6401: 1985 (E).

This Standard will replace GB/T 4615-1984 *Determination method of residual vinyl chloride monomer contents in polyvinyl chloride*.

Main differences between this Standard and GB/T 4615-1984 are as follows:

— Changed the name of standard;

— Deleted the diagram of sample bottle (Figure 1 in 1984 edition);

— Classified the vapor-liquid method as Method A, Annex A listed as Method B;

— Added the note of known concentration of standard gas (Note 2 in 6.1.2 and Note 2 in 7.1.2);

— Changed the volume of standard gas poured into standard sample preparation (Clause 9 in 1984, Clause 6 and 7 in this Standard);

— Changed the minimum detection limit of solid-head method (Section 3 of Annex A in 1984, Clause 1 in this Standard);

— Changed the Annex B as Annex A (Annex B in 1984, Annex A in this Standard).

Annex A of this Standard is informative annex.

This Standard is proposed by China Petroleum and Chemical Industry Association (CPCIA).

This Standard is under the jurisdiction of Subcommittee 7 of PVC Product of National Technical Committee 15 on Plastic of Standardization Administration of China.

Draft units of this Standard: Jinxi Chemical and Industry Research Institute and Xinjiang Tianye (Group) Co., Ltd.

Chief drafters of this Standard: Hao Jing, Chen Peiyun, Li Fang and Sun Lijuan.

This Standard was first issued on 1984.

Pay attention to partial contents of this Standard may be related to patent. Implementation institute of this Standard shall not bear the responsibility of identifying these patents.

Poly (vinyl chloride) - Determination of residual vinyl chloride monomer content - Gas chromatographic method

1 Scope

This Standard specifies two methods for determination of residual vinyl chloride monomer content (RVCM) in the poly (vinyl chloride) (PVC) through the gas chromatographic method, that is, Method A (liquid gas chromatographic method) and Method B (solid gas chromatographic method).

The Method A of This Standard applies to the determination of the residual vinyl chloride monomer content in the vinyl homopolymerization chloride, vinyl copolymerization chloride and their products; Method B applies to the determination of the residual vinyl chloride monomer content in the vinyl homopolymerization chloride (poly (vinyl chloride)).

For vinyl homopolymerization chloride, Method B is the arbitration method.

The minimum detectable amount in Method A in This Standard is 0.5 mg/kg, and the minimum detectable amount in Method B is 0.1 mg/kg.

2 Principles

2.1 Method A

The sample is dissolved in the closed glass bottle or is suspending in suitable reagent, and the solution is heated for certain time for adjustment to make the vinyl chloride reaches a gaseous-liquid balance, then the gas is taken from the headspace and injected into the gas chromatograph. The components are separated in the column, and are detected out by a flame ionization detector (FID).

2.2 Method B

The sample is sealed in the glass bottle, and heated for certain time for adjustment to make the vinyl chloride reaches a gaseous- liquid balance, then the gas is taken from the headspace and injected into the gas chromatograph. The components are separated in the column, and are

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