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# INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# SN/T 3600-2013

## Determination of residual monomers and other volatile low-molecular-mass compounds in raw rubber. Dynamic headspace-gas chromatography method

生胶中残留单体和其他挥发性低分子量化合物的测定 动态顶空-气相色谱法

**(English Translation)**

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## Foreword

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

This revised standard adopts ISO 17052:2007 Determination of thermal desorption "raw rubber residual monomers and other volatile low molecular weight compounds (Dynamic headspace) capillary gas chromatography "(in English).

This standard and ISO 17052:2007 as compared to doing the following editorial changes.

--- The "this International Standard" be replaced by "this standard";

--- Remove the ISO 17052:2007 directory, foreword, introduction, references;

--- The Normative references to international standards in our respective national standards;

--- All "ppm" to "μg/g";

--- For ease of use, to modify the contents of the original Appendix C and adjustment to Chapter 9;

--- Added Appendix C (informative) "GC conditions." Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents.

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

This standard was drafted. People's Republic of China Ningbo Exit Inspection and Quarantine.



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## 1 Scope

This standard specifies a dynamic headspace (thermal analysis) - capillary gas chromatography raw rubber low residual monomers and other volatile the method of molecular weight compounds, including a general method applicable to all types of raw rubber and two specific types of raw rubber (attached Appendix A and Appendix B).

This standard applies to raw rubber residual monomers, solvents and low molecular weight determination of boiling point between butane and dodecane between compounds.

Determination of the standard low limit of 1μg/g.

## 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 2941 rubber physical test method for preparing and conditioning General Procedure (GB/T 2941-2006, ISO 23529:2004, IDT) GB/T 6038 Rubber test feed ingredients, mixing and vulcanization - Equipment and procedures (GB/T 6038-2006, ISO 2393.

1994, MOD)

GB/T 15340 natural, synthetic rubber raw sampling and sample preparation method (GB/T 15340-2008, ISO 1795:2000, IDT)

## 3 Terms and Definitions

The following terms and definitions apply to this document.

Relative response factor; RRF Target compounds calibrator response ratio values.

## 4 Method summary

After the sample was heated to a set temperature of the air carrier, with the carrier gas through a cold trap, the volatile compounds are adsorbed cold trap, the cold trap is rapidly heated to After a certain temperature, the volatile compounds are parsed and were determined by gas chromatography, external standard.

## 5 Reagents and materials

Unless otherwise specified, use only analytical reagent.



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**5.1**
cyclohexane.

**5.2**
isoprene. Purity >=99%.

**5.3**
Styrene. Purity >=99%.

**5.4**
Acrylonitrile. Purity >=99%.



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