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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

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Rubber, raw - Determination of residual monomers and other volatile low-molecular-mass compounds by capillary gas chromatography - Thermal desorption(dynamic headspace)method

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1.Structure and Drafting Rules for Standardization Documents"

drafting.

This document is equivalent to ISO 17052.2007 "Determination of residual monomers and other volatile low molecular weight by capillary gas chromatography of raw rubber

Thermal Desorption of Compounds (Dynamic Headspace) Method.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document specifies a thermal desorption (dynamic headspace)-capillary column gas chromatography analysis technique for the determination of residual monomers and

Methods for other volatile low-molecular-weight compounds, including general sections applicable to all types of raw rubber and types-specific sections

Two appendices.

The advantage of this method is that no solvent is needed, and the volatile compounds can be concentrated and accurately introduced into the gas chromatograph.

This document is applicable to the determination of residual monomers, solvents and other low components with a boiling point range between C4~C12 hydrocarbons in raw rubber

quantum compound.

Note. The detection limit of this method is 1 μg/g.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

Note. GB/T 15340-2008 Natural and synthetic raw rubber sampling and sample preparation method (ISO 1795.2000, IDT)

ISO 2393 Rubber test compound batching, mixing and vulcanization equipment and operating procedures (Rubbertestmixes-

Note. GB/T 6038-2006 Rubber test rubber batching, mixing and vulcanization equipment and operating procedures (ISO 2393.1994, MOD)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

The ratio of the response of the analyte to the calibrator.

4 principles

The sample is heated to a specified temperature in the carrier gas flow and maintained for a period of time, and the volatile compounds are captured by the cold trap along with the carrier gas flow. cold trap in