

ICS 59.080.01
CCS W 04



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

GB/T 20388-2016

Replacing GB/T 20388-2006

**Textiles -- Determination of the phthalate content --
Tetrahydrofuran method**

纺织品 邻苯二甲酸酯的测定 四氢呋喃法

(English Translation)

Issued on: April 25, 2016

Implemented on: November 1, 2016

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

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009 and GB/T .20000.2-2009.

This standard replaces GB/T 20388-2006 "Determination of textile phthalate esters", compared with GB/T 20388-2006 the changes are as follows.

--- modified the standard name;

- adjust the type of phthalate target to be tested;

- Added Chapter 2 terms and definitions;

Pretreatment method Trichloromethane extraction method to tetrahydrofuran dissolution method;

Quantitative method from external standard method to internal standard method;

--- sample volume from 1g to 0.3g;

--- refinement of the standard stock solution and working fluid preparation;

--- modified the calculation of the results of the method, and increased the proportion of phthalates accounted for plasticized components of the formula;

- the deletion of the original standard Appendix A "13 kinds of phthalate ester type table", Appendix B "13 kinds of phthalate quantitative and Qualitative selection of ions and determination of low-limit table "and Appendix C" phthalate standard gas chromatography-mass spectrometry selective ion color Spectrum ";

- Added Appendix A, "Calculation of Quality of Plasticized Components in Samples", Appendix B "GC-MS Test Parameters Examples" and Appendix C "Chemistry Method to determine the quality of PVC coating ".

This standard uses the re-drafting method to modify ISO 14389.:2014 "Determination of textile phthalate tetrahydrofuran method" the main differences with ISO 14389.:2014 are as

follows.

- the introduction of the introduction of international standards, preface and some references;
- 5.6 of the pipette specifications increased by 0.5mL, 1mL;
- an increase of 5.10 "centrifugal device";
- Added a chromatogram of the phthalate standard in Appendix B;
- simplified information on Appendix C, the deletion of the information Appendix D;
- Replace the ISO 1833.1 in the reference with the corresponding GB/T 2910.1.

This standard is proposed by China Textile Industry Federation.

This standard is under the jurisdiction of the National Textile Standardization Technical Committee (SAC/TC209).

The drafting unit of this standard. China Textile Standard (Beijing) Inspection and Certification Center Co., Ltd., Jilin Entry-Exit Inspection and Quarantine Bureau.

1 Scope

This standard specifies the use of tetrahydrofuran as solvent, the use of gas chromatography-mass spectrometry (GC-MS) determination of phthalates in textiles Ester method.

This standard applies to textile products that may contain certain phthalates.

2 Terms and definitions

The following terms and definitions apply to this document.

Plasticizing material or softening material plasticized or softened material After the chemical treatment of more flexible plastic materials.

Note: The chemical substances in this standard are phthalates. Examples of plastic materials. coating agents, paint printing adhesives and so on.

Whole processing of textiles overall treated textile Continuous finishing, coating or printing and dyeing of textiles.

Local processing of textiles locally treated textile Non-continuous finishing, coating or printing and dyeing of textiles.

Representative sample representative specimen Samples obtained from different treatment sites of the sample.

3 Principle

Using an ultrasonic generator in tetrahydrofuran as a solvent, dissolving the plasticized polymer in the sample in whole or in part, using a suitable solvent (Acetonitrile, n-hexane, etc.) to precipitate the dissolved polymer and extract the phthalate. The extract was centrifuged and diluted and fixed Determination of Phthalate by Gas Chromatography - Mass Spectrometry (GC - MS) and quantification by internal standard method.

4 Reagent

Unless otherwise specified, the reagents used are of analytical grade.

4.1

tetrahydrofuran, CAS No. 109-99-9.

4.2

precipitants, for example.