



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

GB/T 33610.3-2019

**Textiles -- Determination of deodorant property -- Part 3: Gas
chromatography method**

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Foreword

GB/T 33610 "Textiles - Determination of deodorant property" includes the following 3 parts.

- Part 1.General principle;
- Part 2.Detector tube method;
- Part 3.Gas chromatography method.

This part is Part 3 of GB/T 33610.

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

This part uses the redrafting method to amend and adopt ISO 17299-3.2014 "Textiles - Determination of deodorant property - Part 3.Gas chromatography method".

Compared with ISO 17299-3.2014, this part has many structural adjustments.

Appendix A lists the comparisons of clause number of this part and ISO 17299-3.2014.

The main technical differences between this part and ISO 17299-3.2014 and the reasons are as follows.

- DELETE the method B and related clauses in the international standard, to increase operability and facilitate the implementation of the standard.

- DELETE the description of method B in the scope of application in Chapter

1 of ISO 17299-3.2014; INCORPORATE the description of method A into

the principle.

- Regarding normative references, this part has adjusted the technical differences, so as to adapt to the country's technical conditions. The adjustments are reflected in Chapter 2 "Normative reference". The specific adjustments are as follows.

- * USE the GB/T 6529 which modifies and adopts international standard to replace ISO 139;

- * DELETE the reference to ISO 3696.

- DELETE the reagents used in Method B such as 4.1 "acetic acid", 4.6 "sodium chloride", 4.8 "water" in Chapter 4 of ISO 17299-3.2014; ADD the reagent pure and CAS number, to improve the standard operability.

- Delete the devices used in Method B such as 5.3 "sample bottle", 5.6 "heating device" and 5.8 "rubber stopper and aluminum cap" in Chapter 5 of ISO 17299-3.2014; MODIFY the requirements for 5.4 "syringe" and 5.5 "airtight injection needle"; ADD the "volume flask" and "balance", to increase operability and facilitate the implementation of standards.

- DELETE 7.1 "General principles" in Chapter 7 of ISO 17299-3.2014, the parameters of Method B in Table 1 of 7.2, the test procedures of Method B in 7.4, to improve the operability of the standard.

- In Chapter 8, ADD "Retain the results to 1 decimal place", to facilitate the implementation of standards.

- ADD Chapter 9 "Test report", to make the standard more perfect.

- ADD the detector temperature and detector type in Appendix B "Gas

chromatography parameters".

This standard also made the following editorial changes.

- ADD the titles of 7.2.1 and 7.2.2, to keep the same level of clauses with titles;
- ADD the note in 7.2.4.6;
- ADD the note in 7.3.1 "General principles"; CITE the Appendix B.

This part was proposed by the China National Textile and Apparel Council.

This part shall be under the jurisdiction of the National Textile Standardization Technical Committee (SAC/TC 209).

The main drafting organizations of this part. Textile Industry Standardization Institute, Zhejiang Ruiyi Testing Technology Co., Ltd., Beijing Junyi Technology Co., Ltd., Guangdong Microbial Analysis and Testing Center, Shanghai Jieyikang Chemical Technology Co., Ltd., Shenzhen Kangyi Health Products Co., Ltd. Company, Microban International Trade (Shenzhen) Co., Ltd., Jinjiang China Textile Standard Testing Co., Ltd., Sanningtai Co., Ltd., Shanghai Aili Textile Technology Inspection Co., Ltd., Changle Flower Knitting Co., Ltd., China Science Textile Research Institute (Qingdao) Co., Ltd., Dongguan Zhengda Textile Technology Co., Ltd., Beijing Jiershuang High-tech Co., Ltd.

1 Scope

This part of GB/T 33610 specifies the method for determining the deodorization performance of textiles by gas chromatograph.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB/T 6529 Textiles - Standard atmospheres for conditioning and testing (GB/T 6529-2008, ISO 139.2005, MOD)

3 Principle

Add the odorous substance to the container without contact with the sample.

After the sample has been in contact with the odorous gas for a specified period of time, use a gas chromatograph (GC) to measure the concentration of odorous gas in the container with and without the sample.

4 Reagent

Indole (C₈H₇N). Analytically pure, CAS number. 120-72-9.

Isovaleric acid (C₅H₁₀O₂). Purity is 98.0%, CAS number. 503-74-2.

5 Materials and equipment

Gas chromatograph. Equipped with flame ionization detector (FID) or mass selective detector (MSD).

6 Humidity control and test environment

The sample humidity conditioning and pre-injection test shall be carried out under the standard atmospheric environment as specified in GB/T 6529.

7 Test procedure

Prepare six 500 mL glass conical flasks (5.1), of which 3 are used for sample testing and the other 3 are used for blank testing. Each odor chemical composition is tested separately.

Test the peak area of odorous gas in three blank conical flasks; calculate the average value, which is recorded as S_b .

8 Calculation of concentration reduction rate of odor chemical component

Calculate the reduction rate of the concentration of odorous chemical components according to formula (1). Keep the result to one decimal place.

Where.