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

GB/T 46397-2025

Textiles - Determination of cresol compounds

纺织品 甲酚类物质的测定

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China National Textile and Apparel Council. This document is under the jurisdiction of the National Technical Committee on Standardization of Textiles (SAC/TC209). This document was drafted by: Hangzhou Institute of Quality and Metrology, Anhui Yuejiao Furniture Co., Ltd., and Shanghai Mercury Home Textiles Co., Ltd. Limited Liability Company, Zhejiang Xiaoxuan Window Home Furnishings Co., Ltd., Shenzhen Shangshi Technology Co., Ltd., China Textile Standard (Zhejiang) Testing Co., Ltd., Nantong Universities, China Jiliang University, Zhejiang Water Resources and Hydropower College, China Textile Standard Testing & Certification Co., Ltd., Guangdong Qiyue Future Technology Co., Ltd. Dongguan On-site Testing Technology Co., Ltd., Shaoxing Zhongfang Chemical Co., Ltd., Hangzhou Xiruidi Technology Co., Ltd., and Wanxi University. The main drafters of this document are. Qin Xin, Long Xiaoyun, Wu Zhongping, Xu Yunyang, Gu Hu, Zhang Ruijie, Liu Zhenhui, Ma Yanfen, Ma Longbo, and Liu Hongmei. Zhou Guoxuan, Jing Yi, Wang Xiaojie, Cheng Weihua, Fang Fang, Li Lingang, Li Qi, Jin Hua. Determination of cresols in textiles Warning

---Personnel using this document should have practical experience working in a formal laboratory. This document does not specify all possible safety precautions. All issues. Users are responsible for taking appropriate safety and health measures and ensuring compliance with relevant national regulations.

1 Scope

GB/T 46397-2025 is the Chinese national standard covering cresols in textiles - the extraction, the chromatographic separation of the ortho, meta and para isomers, the mass

spectrometric confirmation, and the quantification limits, on residues that come from dyeing auxiliaries and preservatives. First edition, under the China National Textile and Apparel Council. In force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document describes the use of gas chromatography-mass spectrometry (GC-MS) to determine the presence of three isocresols (o-cresol, m-cresol, and p-cresol) in textiles. Test methods for isomeric cresols. This document applies to all types of textiles.

2 Normative references

This document has no normative references.

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4. Principles The sample was extracted with methanol by ultrasonic extraction, and the extract was filtered and analyzed by gas chromatography-mass spectrometry (GC-MS) with external standard method for quantification.

5 Reagents and Materials

5.1 Methanol, chromatographic grade.

5.2 o-Cresol standard sample/standard substance. CAS No. 95-48-7, purity $\geq 99.6\%$.

5.3 m-Cresol Standard Sample/Standard Material. CAS No. 108-39-4, purity $\geq 99.6\%$.

5.4 p-Cresol standard sample/standard substance. CAS No. 106-44-5, purity $\geq 99.6\%$.

5.5 Standard Stock Solutions. Weigh out o-cresol (5.2), m-cresol (5.3), and p-cresol (5.4) standard substances/standard samples respectively, and dilute with methanol. Prepare a standard stock solution with a mass concentration of 1000 mg/L.

Note. The standard stock solution should be stored in a refrigerator at $0^{\circ}\text{C}\sim 4^{\circ}\text{C}$ away from light, and has a shelf life of 12 months.

5.6 Standard working solution. Accurately transfer an appropriate amount of standard stock solution (5.5), and dilute it stepwise with methanol to prepare a solution with a mass concentration of

0.2 mg/L. 20 mg/L standard working solution.

Note. The standard working solution should be stored in a refrigerator at $0^{\circ}\text{C}\sim 4^{\circ}\text{C}$ away from light and has a shelf life of 1 month.

5.7 Filter membrane. organic phase, pore size $0.45\mu\text{m}$.

6 Instruments and Equipment

6.1 Gas Chromatography-Mass Spectrometry (GC-MS). Equipped with an electron impact ionization source (EI).

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