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

GB/T 45520-2025

**Textiles - Determination of 1-vinylimidazole and
2-methylimidazole**

纺织品 1-乙烯基咪唑和2-甲基咪唑的测定

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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 is required.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the 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/TC 209).

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Textiles 1-vinyl imidazole and 2-methyl imidazole Determination of Warning. Personnel using this document should have practical experience in regular laboratory work. This document does not address all possible safety issues.

The user is responsible for taking appropriate safety and health measures and ensuring that the conditions stipulated by relevant national laws and regulations are met.

1 Scope

This document describes the HPLC-DAD analysis of 1-vinylimidazole and 2-methylimidazole in textiles.

(HPLC-DAD) determination method.

This document applies to all types of textile products.

2 Normative references

GB/T 6682

GB/T 8170

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Principle

The sample was extracted with acetonitrile by ultrasonic wave, and the extract was filtered through a membrane and then determined by HPLC-DAD and quantified by external standard method.

5 Reagents

Unless otherwise stated, all reagents used were of analytical grade.

5.1 Water. Grade 1 water in accordance with GB/T 6682.

5.2 Acetonitrile. chromatographic grade.

5.3 Ammonia water. mass fraction 25%~28%.

5.4 Ammonia solution (volume fraction 0.05%). Pipette 0.5 mL of ammonia solution (5.3), dilute with water (5.1) to 1 000 mL, and shake well.

5.5 1-vinyl imidazole standard substance/standard sample. CAS No. 1072-63-5, purity $\geq 98.0\%$.

5.6 2-Methylimidazole standard substance/standard sample. CAS No. 693-98-1, purity $\geq 98.0\%$.

5.7 Standard stock solution (mass concentration ≥ 200 mg/L). Accurately weigh an appropriate amount of 1-vinyl imidazole standard substance/standard sample (5.5) and 2-methylimidazole standard substance/standard sample (5.6) and prepared by diluting with acetonitrile (5.2).

Note. This solution should be stored in a refrigerator at 0 °C ~ 4 °C away from light and has a shelf life of 6 months.

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