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

GB/T 30166-2024

Replacing GB/T 30166-2013

Textiles-Determination of acrylamide compounds

纺织品 丙烯酰胺类化合物的测定

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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.

This document replaces GB/T 30166-2013 "Determination of acrylamide in textiles". Compared with GB/T 30166-2013, except for the structure In addition to adjustments and editorial modifications, the main technical changes are as follows.

- Changed the scope of the standard (see Chapter 1, Chapter 1 of the 2013 edition);
- Deleted formic acid and formic acid solution (see 4.4 and 4.5 of the 2013 edition);
- Added "N-hydroxymethyl acrylamide standard" and "methacrylamide standard" (see 5.4 and 5.5);
- Changed the standard stock solution and standard working solution (see 5.6 and 5.7, 4.6 and 4.7 of the 2013 edition);
- Added analytical balance with a graduation value of 0.01g (see 6.3);
- Changed the limit of quantification (see 9.1, 8.1 of the 2013 edition);
- Deleted the recovery rate (see 8.2 of the 2013 edition).

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).

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The previous versions of this document and the documents it replaces are as follows.

- First published in 2013 as GB/T 30166-2013;
- This is the first revision.

Determination of acrylamide compounds in textiles Warning. Operators using this document should have practical experience in regular laboratory work. This document does not indicate all possible safety hazards.

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 a method for the determination of acrylamide compounds in textiles using high performance liquid chromatography.

This document is applicable to the testing of various types of textile products.

2 Normative references

GB/T 6682

3 Terms and definitions

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

4 Principle

The sample was extracted by water shaking, and the extract was filtered and purified, and then the acrylamide compounds in Appendix A were determined by high performance liquid chromatography.

Quantitative analysis was performed by external standard method.

5 Reagents

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

Grade 3 water as specified in GB/T 6682.

5.1 Methanol. Chromatographic grade.

5.2 Acetonitrile. chromatographic grade.

5.3 Acrylamide standard. purity not less than 99%.

5.4 N-Hydroxymethyl acrylamide standard product. purity not less than 98%.

5.5 Methacrylamide standard. purity not less than 98%.

5.6 Standard stock solution (1000 µg/mL). Accurately weigh appropriate amounts of acrylamide standard (5.3), N-hydroxymethyl acrylamide standard (5.4) and methacrylamide standard (5.5) were dissolved in water to make up to volume, and the standard stock solutions with a mass concentration of 1000 µg/mL were prepared respectively.

Note. The standard stock solution should be stored at 4°C~8°C away from light and has a validity period of 2 months.

5.7 Standard working solution (10 µg/mL). Accurately transfer 1.0 mL of the standard stock solution (5.6) into a 100 mL volumetric flask and add water.

Dilute to the scale to prepare a mixed standard working solution with a mass concentration of 10 µg/mL.

Note. The standard working solution should be stored at 4°C~8°C away from light and has a shelf life of 7 days.