



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

GB/T 19942-2019

**Leather and fur - Chemical tests - Determination of banned azo
colorants**

Issued on: December 31, 2019

Implemented on: July 1, 2020

Issued by: SAMR; SAC

Table of Contents

Foreword...	3
1 Scope...	6
2 Normative references...	6
3 Terms and definitions...	7
4 Principle...	8
5 Reagents and materials...	8
6 Apparatus...	9
7 Sampling and preparation of samples...	10
8 Test procedure...	11
9 Calculation and expression of results...	12
10 Method feasibility...	13
11 Test report...	14

Foreword

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

This Standard replaces GB/T 19942-2005 "Leather and fur - Chemical tests - Determination of banned azo colourants".

Compared with GB/T 19942-2005, the main technical changes of this Standard are as follows.

- In "Normative references", delete the year number cited to GB/T 6682; ADD the reference to "GB/T 33392" (see Clause 2; Clause 2 of the 2005 edition);
- In "Principle" clause, delete specific test conditions; ADD the method for determination of amine (see Clause 4; Clause 4 of the 2005 edition);
- ADD the purity requirement for methanol (see 5.2);
- ADD ethyl acetate (see 5.3);
- ADD the purity requirement and descriptive note for tert-butyl methyl ether (see 5.4);
- ADD the requirement for the storage time after the preparation of sodium

dithionite solution (see 5.6);

- Modify the pre-heating temperature requirement for citrate buffer (see 5.11;

6.9 of the 2005 edition);

- In "Apparatus", modify the types of chromatographic analysis equipment (see 6.12; 5.11 of the 2005 edition);

- ADD the requirements for sampling of printed and multi-color splicing samples, and samples composed of leather and fur of different qualities (see 7.1);

- In reductive cleavage, add the temperature range of room temperature (see 8.2);

- In the liquid-liquid extraction, add the filtration operation of the solution before chromatographic analyses (see 8.3);

- ADD the requirement that each batch of samples be analyzed respectively with standard working solution (see 8.5; Clause 9 of the 2005 edition);

- Adjust the chromatographic analysis parameters to Annex C; ADD liquid chromatographic parameters (see Annex C; 10.1 of the 2005 edition);

- Modify the symbols in the calculation formula (see Clause 9; Clause 11 of the 2005 edition);

- Adjust "Method feasibility" to Clause 10; ADD descriptions of aromatic amines numbered 5, 6 and 22 (see Clause 10; 8.4 of the 2005 edition);

- Modify the content of test report (see Clause 11; Clause 12 of the 2005 edition).

This Standard uses the redraft law to modify and adopt ISO 17234-1.2015

"Leather - Chemical tests for the determination of certain azo colorants in dyed leathers - Part 1. Determination of certain aromatic amines derived from azo colorants".

Compared with ISO 17234-1.2015, this Standard has many adjustments in structure. Annex A lists the comparison table for clause-subclause number of

this Standard and ISO 17234-1.2015.

Compared with ISO 17234-1.2015, this Standard has technical differences.

Annex B gives a list of corresponding technical differences and their reasons.

For ease of use, this Standard has also made the following editorial changes.

- CHANGE the standard name to "Leather and fur - Chemical tests - Determination of banned azo colorants";
- Delete the example of the material model in the note of ISO 17234-1.2015 "6.5 Extraction column"; ADD the note that commodity columns can be purchased;
- ADD a note to ISO 17234-1.2015 "7.2 Tert-butyl methyl ether";
- ADD a note "the content exceeds 30 mg/kg; then the sample is deemed to have used banned azo colorants during processing and treatment" to 9.2;
- ADD the GC/MS total ion chromatogram of aromatic amine standard substance to ISO 17234-1.2015, Annex A;
- Delete Annex B and Annex C in ISO 17234-1.2015.

This Standard was proposed by China National Light Industry Council.

This Standard shall be under the jurisdiction of National Technical Committee

252 on Leather Industry of Standardization Administration of China (SAC/TC

252).

Drafting organizations of this Standard. Jiaxing Fur and Footwear Industry Research Institute, Chongqing Testing and Certification (Group) Co., Ltd., State Center of Supervision and Test for Leather (Zhejiang), Guangzhou Quality Supervision and Testing Institute, Jihua 3514 Leather and Footware Co., Ltd., Sungoal (Dongguan) Advanced Materials Tech Co., Ltd., Saturday Co., Ltd. Main drafters of this Standard. Jiang Sujie, Zhang Li, Shen Yun, Zhong Xihao, Huo Jianchun, Li Xiaolong, Zeng Hao, Sun Dong, Li Li, Zhao Xiangxu.

The previous editions of the standard replaced by this Standard were released

as follows.

- GB/T 19942-2005.

Leather and fur - Chemical tests - Determination of

banned azo colorants

WARNING - The personnel using this Standard shall have practical experience in regular laboratory work. The aromatic amines are classified as substances known to be or suspected to be human carcinogens. This Standard does not point out all possible safety problems. It is the responsibility of the user to take appropriate safety and health measures and ensure compliance with the conditions of relevant national and local laws and regulations.

1 Scope

This Standard specifies the determination method for banned azo colorants that can release carcinogenic aromatic amines in dyed leather and fur.

2 Normative references

The following documents are indispensable for the application of this document.

For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 6682 Water for analytical laboratory use - Specification and test methods (GB/T 6682-2008, ISO 3696:1987, MOD)

3 Terms and definitions

The following term and definition applies to this document.

The colorant which can cleave one or more azo groups to produce the aromatic amines listed in Table 1.

4 Principle

PLACE the degreased sample in a closed vessel; at a certain temperature, in