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NATIONAL STANDARD OF THE PEOPLE'S

REPUBLIC OF CHINA

中华人民共和国国家标准

GB/T 19941-2005

**Leather and Fur-Chemical Tests – Determination of
Formaldehyde Content**

皮革和毛皮 化学试验 甲醛含量的测定

**(ISO/TS 17226: 2003, Leather—Chemical tests—Determination of formaldehyde
content in leather, MOD)**

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Quarantine of the People's Republic of China
Standardization Administration of the People's Republic of China
(SAC)**

Foreword

This Standard is revision of International Standard ISO/TS 17226: 2003, *Leather—Chemical tests—Determination of formaldehyde content in leather*.

The methods used in ISO/TS 17226:2003 are based on the IUC/19 standard of IULTCS, two methods are included: the spectrophotometric method is easier and more convenient for using the relevant instruments in the lab; the chromatography method requires more complicated lab instruments (HPLC) and is alternative, the color of extract liquid does not interfere with the test.

For convenient comparison, the comparison table of the terms of this standard and the international standard is listed in the informational Annex B.

The table of technical differences and reasons is offered for reference in the informational Annex C.

Based on the actual condition of the country, this standard is modified while adopting ISO/TS 17226:2003. Vertical single lines can be marked in the margins of the related terms for the technical differences.

For ease of use, following changes for this Standard have been made:

- a) Delete the foreword in International Standard;
- b) Change the “this International Standard” as “this Standard”;
- c) Replace comma “,” by decimal point “.”.

Annex A, B and C of this Standard are informative annex.

This Standard is proposed by China National Light Industry.

This Standard is under the jurisdiction of National Technical Committee 252 on Leather of Standardization Administration of China.

Chief draft units of this Standard: China Industry Research Institute of Leather and Shoemaking, Suzhou Institute of Technology, Entry-Exit Inspection and Quarantine Bureau of Jiaxing, P.R. China, Xinji Tengyue Co., Ltd.

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Leather and Fur-Chemical Tests – Determination of Formaldehyde Content

1 Scope

This Standard specifies the determination method of free and hydrolyzed formaldehyde content in leather and fur products.

This Standard is applicable to different leathers and fur products

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 6682-1992 Water for analytical laboratory use - Specification and test methods (neq ISO 3696: 1987)

QB/T 1266 Fur products – Position and marking of sample

QB/T 1267 Fur products – Preparation and chemical analysis of sample

QB/T 2706 Fur – Chemical, physical, mechanical and color fastness test – Sample position (QB/T 2706-2005, ISO 2418: 2002, MOD)

QB/T 2707 Fur – Chemical and mechanical test – Preparation and conditioning of sample (QB/T 2707-2005, ISO 2419: 2002, MOD)

QB/T 2716 Fur – Preparation of chemical test piece (QB/T 2716-2005, ISO 4044: 1977, MOD)

3 Preparation and Standardization of Formaldehyde Stock Solution

3.1 Reagents

Unless otherwise stated only analytical grade chemicals are to be used. The water must be demineralised, grade 3 in accordance with GB/T 6682-1992.

3.1.1 Formaldehyde solution, approx. 37% to 40%;

3.1.2 0.05M iodine solution (i.e. 12,68g iodine per l)

3.1.3 2M sodium hydroxide;

3.1.4 1.5M sulphuric acid;

3.1.5 0.1M sodium thiosulphate solution;

3.1.6 1% starch solution, (i.e. 1g in 100 ml water)

3.2 Procedure for the determination of formaldehyde in the stock solution

3.2.1 5ml of the formaldehyde solution (3.1.1) is pipetted into a 1000ml volumetric flask which contains approximately 100ml demineralised water and is subsequently filled with demineralised water up to the mark. This solution is the formaldehyde stock solution.

3.2.2 From this solution, 10ml is pipetted into a 250ml Erlenmeyer flask and mixed with 50ml iodine solution (3.1.2) and sodium hydroxide (3.1.3) is added until it turns yellow. It is allowed to



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