

QB

**LIGHT INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

QB/T 2464.23-1999

**Determination Method for Color Fastness of Leather to
Perspiration
(English Translation)**

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Foreword

This Standard equivalently adopts international standard ISO 11641.1993 Leather - Tests for Color Fastness - Color Fastness to Perspiration.

This Method adopts artificial perspiration solution to simulate the action of human perspiration for tests. During the tests, the color of leather might change; the adjacent fabrics might be stained.

Generally speaking, freshly produced human perspiration is weakly acidic, then, microorganisms would trigger it to change; pH is usually weakly alkaline (pH 7.5 ~ 8.5). Alkaline perspiration has a greater effect on the color of leather than acid perspiration. Therefore, alkaline perspiration is usually used, instead of acid perspiration, to simulate the most common conditions in practice.

Since the perspiration of different people varies, it is impossible to design a generally effective method. However, the result of artificial alkaline perspiration test stipulated in this Standard is consistent with most natural perspirations.

In the international standard ISO 11641.1993, Appendix A recommends commercial sources for apparatus and materials used in the test method in this Standard; Appendix B states the title and serial No. of IUF international standards that are related with this

Standard, and they are not quoted in this Standard.

This Standard was proposed by Industry Management Division of China Light Industry Bureau.

This Standard shall be under the jurisdiction of National Technical Committee on Leather of Standardization Administration of China.

The responsible drafting organization of this Standard. China Leather Industry Research Institute.

1 Scope

This Standard stipulates the determination method for leather's color fastness to perspiration.

This Standard is applicable to all leather in various processing stages, especially clothing, gloving and lining leathers. Meanwhile, it is also applicable to leather for the uppers of unlined shoes.

2 Normative References

Through the reference in this Standard, the clauses contained in the following standards become clauses of this Standard. When this Standard is published, all the indicated versions are valid. Since all the standards might be amended, all parties adopting this Standard shall probe into the possibility of using the latest version of the following standards.

GB 250-1995 Gray Scale for Assessing Changing in Color;

GB 251-1995 Gray Scale for Assessing Staining;

GB/T 6682-92 Water for Analytical Laboratory Use - Specification and Test Methods;

3 Principle

Respectively soak leather sample and adjacent fabrics in artificial perspiration solution. Then, closely cling the sample to the adjacent fabrics to make a composite sample; place it in a suitable apparatus. Maintain it at a certain temperature and pressure;

4.1 Test Apparatus

It shall be able to maintain the composite sample under an even pressure of 1.23 N/cm² (equivalent to 125 g/cm² of pressure after loading heavy objects).

4.2 Weighted Block

Flat bottom, 4.5 kg.

4.7 Vacuum Pump

Be able to evacuate the desiccator (4.6) to 5 kPa (50 mbar) of vacuum within 4 min.

4.8 Distilled Water or Deionized Water

Comply with the stipulations of Grade-3 water in GB/T 6682.

4.9 Artificial Perspiration Solution

Each liter of artificial perspiration solution contains the following elements.

Sodium chloride (NaCl) 5.0 g;

5.1 If the leather does not have a finish, or, if the leather has a finish and is to be tested

together with the finish, merely cut a test sample of 100 mm x 36 mm.

6.1 Respectively immerse the leather sample and the adjacent fabrics in different

vessels of artificial perspiration; maintain the immersion (if several samples are simultaneously tested, several pieces of adjacent fabrics may be immersed in the same vessel, but each leather sample shall be respectively immersed in different vessels). Place the vessel in the vacuum desiccator (4.6); generate 5 kPa of vacuum within 4 min; maintain for 2 min. Then, restore to the normal pressure.

1 h. Place the composite sample, which is sandwiched between two glass plates, into

the test apparatus (4.1).

6.3 After 3 h, remove the weighted block. Remove the composite sample from the apparatus. From one corner, stitch the composite sample together. Under the standard conditions (temperature. 20 °C; relative humidity. 65%) stipulated in QB/T 3812.2, dry it by hanging.

6.4 Use gray scale for assessing staining that complies with GB 251 to assess the

degree of color staining of adjacent fabrics.

Use gray scale for assessing changing in color that complies with GB 250 to assess color change of leather sample.

7 Test Report

Test report shall include the following content.

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