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**NATIONAL STANDARD OF THE  
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**Leather chemicals - Determination of tannin content in tanning  
agent - Filter method**

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## Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to modify and adopt ISO 14088..2012 "Leather Chemical Test Filter Analysis of Tanning Agents".

Compared with ISO 14088..2012, this standard has undergone the following technical modifications to adapt to China's actual situation.

--- Regarding the normative references, this standard has made adjustments with technical differences. The adjustments are reflected in Chapter 2

In the "general reference documents", the specific adjustments are as follows.

\* ISO 3696 was replaced by GB/T 6682, which adopted the international standard.

--- clarified the pH adjustment requirements of "4.4 gelatin solution" and added "4.3 hydrochloric acid solution".

--- Deleted the specification requirements of "5 instruments and equipment" for glass instruments.

--- Adjust the "5.1 Orange Dryer" "with orange silica gel" to "with color-changing silica gel".

- Increased the requirements of "5.4 oven" working conditions.
- Removed the range requirement of "5.5 Analytical Balance".
- Removed "5.6 Industrial Balance".
- Modified the inner diameter of capillary glass tube in Proctor clock (see 5.6).
- Adjust the "5.8 polyethylene pipe" in the original international standard to "5.7 polyethylene pipe or silicone pipe".
- "5 Instruments and Equipment" added "5.14 absorbent cotton".
- The drying methods in "7.3 Detanning of Analytical Solution (Determination of Non-tanning)" and "7.4 Determination of Soluble Substances" are defined by "water bath". The "pot" was changed to "80 ° C ~ 90 ° C oven".
- Deleted "7.3 Detanning of Analytical Solution (Determination of Non-tanning)" "7.4 Determination of Soluble Substances" and "7.5 Measurement of Total Solids". The requirement for constant weight time in the "setting" is "about (18 +/- 2) h".
- "7.4 Determination of Soluble Substances" has added provisions for centrifugation speed and centrifugation time.
- "7.4 Determination of Soluble Substances" and "7.5 Determination of Total Solids" have correspondingly added the mass code in the formula.
- Formulas (4) to (7) have added descriptions of letter codes.

The following editorial changes have been made to this standard.

- Modify the standard name to "Determination of Tannin Content in Leather Chemical Tanning Filter";
- Deleted the note in 4.1;
- Deleted the informative appendix C;
- Added notes in 7.1.1 ~ 7.1.5, 7.3, 7.4 respectively.

This standard is proposed by the China Light Industry Federation.

This standard is under the jurisdiction of the National Leather Industry Standardization Technical Committee (SAC/TC252).

This standard was drafted. Sichuan University, Guangdong Huizhou Quality Metrology Supervision and Inspection Institute, Zhejiang Shenghui Chemical Co., Ltd., Guangdong Xinhui

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## 1 Scope

This standard specifies the filtration method to determine the tannin content in tanning agents.

This standard applies to the determination of tannin content in various tanning vegetable tanning agents and synthetic tanning agents.

## 2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 6682 Analytical laboratory water specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD)

## 3 Principle

The tannins in plant tanning agents or synthetic tanning agents were fixed with low chromium content skin powder, and then the tannin content was determined by indirect gravimetric method.

## 4 Reagents and materials

4.1 General requirements. Unless otherwise specified, the reagents used are analytical grade, and the test water should meet the requirements of Grade III water in GB/T 6682.

### 4.3 Hydrochloric acid solution, 0.1mol/L.

4.4 Gelatin solution, 1g gelatin and 10g sodium chloride, make up to 100mL with distilled water, and then adjust the pH = 4.7 with 0.1mol/L hydrochloric acid solution.

### 5.1 Dryer with air-tight lid and equipped with color-changing silica gel.

5.2 Evaporation dish, suitable for slowly evaporating water. Short flat bottom, inner diameter 7.0cm ~ 8.5cm. Silver evaporation dish should be used, stainless steel can be used for evaporation

If necessary, ceramic or glass evaporating dishes can also be used.

### 5.3 Water bath.

5.4 The temperature of the oven should be controlled in the range of (102 +/- 2) degrees C,

and it can work without air circulation.

**5.5 Analytical balance with an accuracy of 0.2 mg.**

5.6 Proctor clock (see Figure 1), a cylindrical glass bell cover (Cylinder part length.  $(90 \pm 1)$  mm, inner diameter.

$(28 \pm 1)$  mm]. The top of the bell is plugged with a perforated rubber plug. A capillary glass with two right-angle elbows is inserted into the hole of the rubber plug

Tube (inner diameter 2.0mm), as shown in Figure 1.

5.7 Polyethylene tube or silicone tube, its size should match the capillary glass tube of Proctor bell.