



Designation: ~~D2876 – 00 (Reapproved 2010)~~ **D2876 – 00 (Reapproved 2016)**

Standard Test Method for Water-Soluble Matter of Vegetable-Tanned Leather¹

This standard is issued under the fixed designation D2876; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers the determination of the water-soluble materials in all types of vegetable-tanned leathers. This test method does not apply to wet blue.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D3495 Test Method for Hexane Extraction of Leather

3. Summary of Test Method

3.1 The test method gives the amount of water-soluble matter extracted from the leather at 35°C by 1 L of water in 3 h. The leather is first freed of hexane-extractable material by extraction with hexane and leaving at ambient temperature in an exhaust hood to remove the hexane.

4. Significance and Use

4.1 The test method is useful for determining the water-soluble materials in vegetable-tanned leathers.

4.2 The water-soluble matter includes the soluble nontanning components of the tanning materials used, sugars and materials of a similar nature, and inorganic compounds such as Epsom salts, Glauber's salts, borax, and other soluble salts added during curing and tannery processing.

5. Apparatus

5.1 *Crystallizing Dish*, borosilicate glass, 50 mm tall, 70 mm in outside diameter, and weighing between 30 and 39 g.

5.2 *Extractor, Reed-Churchill Type*³—The extraction tube shall have an internal diameter of 45 ± 2 mm and a length of 233 ± 10 mm. See **Fig. 1**.

5.3 *Water Bath*, equipped to control the temperature at $35 \pm 0.5^\circ\text{C}$.

5.4 *Circulating Air Oven*, capable of maintaining a temperature of $99 \pm 1^\circ\text{C}$.

6. Test Specimen

6.1 The specimen shall consist of the 5-g leather sample that has been extracted with hexane as directed in Test Method **D3495**. Any deviation from this sample size should be included with the analytical results.

¹ This test method is under the jurisdiction of ASTM Committee **D31** on Leather and is the direct responsibility of Subcommittee **D31.01** on Vegetable Leather. This test method was developed in cooperation with the American Leather Chemists Assn. (Standard Method B8–1954).

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Reed, H. C. and Churchill, J. B., "An Extractor for Water Soluble in Leather," *Journal of the American Leather Chemists Association*, JALCA, Vol 14, 1919, p. 137.

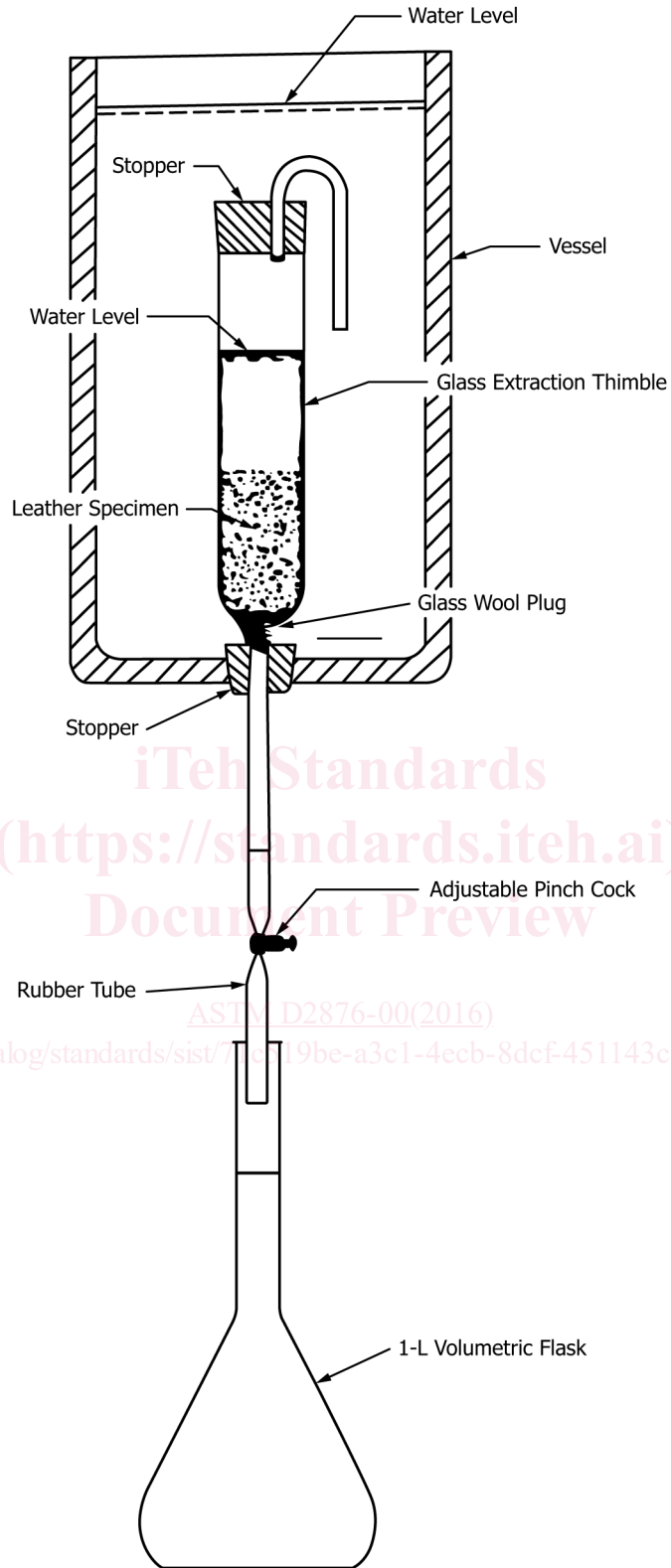


FIG. 1 Reed-Churchill Type Extractor