



Designation: **D2810—07 D2810 – 13**

Standard Test Method for pH of Leather¹

This standard is issued under the fixed designation D2810; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This test method covers the determination of the pH of all types of leather. This 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:*

[D2813 Practice for Sampling Leather for Physical and Chemical Tests](#)

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 The pH of a solution has been defined as the negative logarithm of the hydrogen ion activity. A solution of pH 7 is neutral at 24°C. Lower numbers indicate increasing acidity; higher numbers, increasing alkalinity.

4. Significance and Use

4.1 This test method is designed to measure the pH of a distilled-water extract of leather. This is considered to be a measure of the acidity or alkalinity of the leather. Excessive acidity or alkalinity may have a deleterious effect on the aging characteristics of leather.

4.2 This test method is suitable for development, control, and service evaluation of leather.

5. Interferences

5.1 If the leather contains an excessive amount of fats or greases or has been treated with a material to obtain water repellency, the wettability and consequently the extractability may be affected.

5.2 If the specimen is difficult or impossible to wet, it may be treated by any of the following procedures:

5.2.1 A vacuum may be used to effect wetting.

5.2.2 Mix with the required amount of water for 1 min in a disintegrator.²

5.2.3 Extract the weighed specimen with a fat solvent in a Soxhlet apparatus for 5 h. Allow the specimen to air until all solvent has evaporated; then proceed as outlined in Section 9.10.

6. Apparatus

6.1 *pH Meter*, either battery or ~~line-operated~~, line-operated with a ~~glass electrode and reference electrode or suitable combination~~ suitable electrode. The meter shall have a resolution of 0.1/0.01 pH unit, and shall have a relative accuracy of $\pm 0.1/0.01$ pH unit.

6.2 *Analytical Balance*, sensitive to 0.01 g.

¹ This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of Subcommittee D31.06 on Chemical Analysis. This test method was developed in cooperation with the American Leather Chemists Assn. (Standard Method B20 – 1969).

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² A Waring Blender has been found satisfactory.