Designation: D6408 – 99 (Reapproved2009)

Standard Test Method for Analysis of Tannery Liquors[1]

This standard is issued under the fixed designation D6408; 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 analysis of tannery liquors made up from vegetable tanning materials.

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]

D4903 Test Method for Total Solids and Water in Vegetable Tanning Material Extracts

D4904 Practice for Cooling of Analytical Solutions

D6401 Test Method for Determining Non-Tannins and Tannin in Extracts of Vegetable Tanning Materials

D6402 Test Method for Determining Soluble Solids and Insolubles in Extracts of Vegetable Tanning Materials

D6404 Practice for Sampling Vegetable Materials Containing Tannin

D6410 Test Method for Determining Acidity of Vegetable Tanning Liquors

2.2 *ALCA Methods:*

A25 Analysis of Tannery Liquors[3]

3. Terminology

3.1 *Definitions:*

3.1.1 *tannery liquor*—water solutions containing vegetable tannin that are made up and used in a vegetable tannery.

3.1.2 *tannin*—an astringent substance found in the various parts of plants such as bark, wood, leaves, nuts, fruits, roots, etc. Also, quantitatively, tannins are operationally defined as the non-volatile materials present in tannin extracts and raw or spent materials that are dissolved or suspended in water, are part of the soluble solids determined by Test Method D6402, and do react with or bind to hide powder when mixed as in this test method.

3.1.3 *vegetable tannins*—mixtures of substances (natural products) obtained from plant tissues by water extraction which have the chemical and physical properties necessary to convert animal hides and skins into leather.

4. Summary of Test Method

4.1 An analytical solution is prepared from the sample of tannery liquor (Practice D6404). Specimen aliquots from this analytical solution are then analyzed for total solids (Test Method D4903), soluble solids and insolubles (Test Method D6402), non-tannins and tannin (Test Method D6401), and total acidity (Test Method D6410).

5. Significance and Use

5.1 This test method is used to determine the chemical properties of tannery liquors which are relevant for the vegetable tanning process and influence the astringency of vegetable tanning liquors. The astringency of liquors is dependent upon the solids and tannin content and the acidity. This method provides a standard procedure for determining these properties for any sample of vegetable tanning liquor.

5.2 The specimens are aliquots from the analytical solution prepared from the sample of tannery liquor collected for this purpose.

5.3 The total solids, soluble solids, and non-tannins content are determined and then the tannin content of the liquor sample is calculated. Because the amount of tannin per liter of analytical solution is less than that required for Test Method D6401, a table specifying the quantity of prepared hide powder to be used for solutions with lower tannin concentrations is included in this test method.

[1] This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of Subcommittee D31.01 . This test method has been adapted from and is a replacement for Method A25 of the Official Methods of the American Leather Chemists Association.

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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] Official Methods of the American Leather Chemists Association. Available from the American Leather Chemists Association, University of Cincinnati, P.O. Box 210014, Cincinnati, OH 45221-0014.