



Designation: D 4899 – 99

## Standard Practice for Analysis of Vegetable Tanning Materials—General<sup>1</sup>

This standard is issued under the fixed designation D 4899; 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 approval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This practice is intended for use in the chemical analysis of all vegetable tanning materials.

1.2 *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:

- D 4900 Test Method for Lignosulfates (Sulfite Cellulose) in Tanning Extracts<sup>2</sup>
- D 4901 Practice for Preparation of Solution of Liquid Vegetable Tannin Extracts<sup>2</sup>
- D 4902 Test Method for Evaporation and Drying of Analytical Solutions<sup>2</sup>
- D 4903 Test Method for Total Solids and Water in Vegetable Tanning Material Extracts<sup>2</sup>
- D 4904 Practice for Cooling of Analytical Solutions<sup>2</sup>
- D 4905 Practice for Preparation of Solution of Solid, Pasty and Powdered Vegetable Tannin Extracts<sup>2</sup>
- D 6401 Test Method for Determining Non-Tannins and Tannin in Extracts of Vegetable Tanning Materials<sup>2</sup>
- D 6402 Test Method for Determining Soluble Solids and Insolubles in Extracts of Vegetable Tanning Materials<sup>2</sup>
- D 6403 Test Method for Determining Moisture in Raw and Spent Materials<sup>2</sup>
- D 6404 Practice for Sampling Vegetable Materials Containing Tannin<sup>2</sup>
- D 6405 Practice for Extraction of Tannins from Raw and Spent Materials<sup>2</sup>
- D 6406 Test Method for Analysis of Sugar in Vegetable Tanning Materials<sup>2</sup>
- D 6407 Test Method for Analysis of Iron and Copper in Vegetable Tanning Materials<sup>2</sup>
- D 6408 Test Method for Analysis of Tannery Liquors<sup>2</sup>

- D 6409 Practice for Color Tests with Sheepskin Skiver<sup>2</sup>
- D 6410 Test Method for Determining Acidity of Vegetable Tanning Liquors<sup>2</sup>
- 2.2 *ALCA Methods:*
  - A1 Analysis of Vegetable Tanning Materials—General<sup>3</sup>
  - A5 Extraction of Raw and Spent Materials<sup>3</sup>
  - A6 Moisture in Raw and Spent Materials<sup>3</sup>
  - A10 Preparation of Solution of Liquid Extracts<sup>3</sup>
  - A11 Preparation of Solution of Solid, Pasty, and Powdered Extracts<sup>3</sup>
  - A12 Cooling of Analytical Solutions<sup>3</sup>
  - A13 Evaporation and Drying of Analytical Solutions<sup>3</sup>
  - A20 Total Solids and Water<sup>3</sup>
  - A21 Soluble Solids and Insolubles<sup>3</sup>
  - A22 Non-Tannins and Tannin<sup>3</sup>
  - A25 Analysis of Tannery Liquors<sup>3</sup>
  - A30 Sugar in Tanning Materials<sup>3</sup>
  - A31 Copper and Iron in Tanning Materials<sup>3</sup>
  - A40 Color Tests with Sheepskin Skiver<sup>3</sup>
  - A50 Lignosulfates (Sulfite Cellulose)<sup>3</sup>
  - A60 Official Certification<sup>3</sup>
  - J10 Sampling of Vegetable Materials Containing Tannin<sup>3</sup>

#### 2.3 Federal Specification

- DD-V-582 Volumetric Apparatus, Glass<sup>4</sup>

### 3. Significance and Use

3.1 Vegetable tanning materials are natural products containing various substances of varying composition, concentration and quality.

3.2 The methods referenced are useful for analyzing and testing vegetable tanning materials for moisture, water-extractable substances, cold-soluble fractions, tannins, non-tannins, acidity, tanning properties, the color of tanned leather, and the presence or absence of certain admixtures.

### 4. Samples and Specimens

4.1 The preparation of the composite sample of a vegetable tanning material for analysis purposes shall be as described in ALCA Method J10.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee D-31 on Leather and is the direct responsibility of Subcommittee D31.01 on Vegetable Leather. This practice has been adapted from and is a replacement for Method A1 of the Official Methods of the American Leather Chemists Association.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 15.04.

<sup>3</sup> Official Methods of the American Leather Chemists Association. Available from the American Leather Chemists Association (ALCA), University of Cincinnati, P.O. Box 210014, Cincinnati, OH 45221-0014.

<sup>4</sup> Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.