

Status: Currently Official on 17-Feb-2025  
Official Date: Official as of 01-Aug-2024  
Document Type: NF Monographs  
DocId: GUID-DCC92926-A205-4723-8128-B1BFCC91A56A\_5\_en-US  
DOI: [https://doi.org/10.31003/USPNF\\_M88970\\_05\\_01](https://doi.org/10.31003/USPNF_M88970_05_01)  
DOI Ref: wp8u3

© 2025 USPC  
Do not distribute

# Carnauba Wax

## DEFINITION

Carnauba Wax is obtained from the leaves of *Copernicia cerifera* Mart. (Fam. Palmae).

## IDENTIFICATION

- **A.** [SPECTROSCOPIC IDENTIFICATION TESTS \(197\)](#), [Infrared Spectroscopy: 197F or 197A](#)

## IMPURITIES

- [RESIDUE ON IGNITION \(281\)](#).

**Sample:** 2 g  
**Analysis:** Heat the *Sample* in an open porcelain or platinum dish over a flame; it volatilizes without emitting an acrid odor. Ignite.  
**Acceptance criteria:** The weight of the residue is NMT 5 mg, corresponding to NMT 0.25%.

## SPECIFIC TESTS

- [MELTING RANGE OR TEMPERATURE \(741\)](#), [Procedures, Procedure for Class II](#) : 80°–86°

- **ACID VALUE**

**Sample:** 3 g  
**Analysis:** Weigh the *Sample* into a 250-mL flask attached to a reflux condenser. Add 50 mL of a mixture of isopropyl alcohol and toluene (5:4), and boil gently until the wax is completely dissolved. Remove the flask from the condenser, add 1 mL of [phenolphthalein TS](#), and immediately titrate with [0.5 N alcoholic potassium hydroxide VS](#) to a faint, reddish-yellow color. [NOTE—Do not allow the solution to cool. Titrate at warm temperature after refluxing.]  
Calculate the acid value as the number of milligrams of potassium hydroxide required to neutralize the free acids in 1 g of Carnauba Wax.  
**Acceptance criteria:** 2–7

**Change to read:**

- [FATS AND FIXED OILS \(401\)](#), [Saponification Value](#)

**Sample:** Use the solution from the test for *Acid Value*.  
**Analysis:** To the *Sample* add 15.0 mL of [0.5 N alcoholic potassium hydroxide VS](#), reflux for 3 h, and titrate the excess alkali with [0.5 N hydrochloric acid VS](#) to a yellow-amber color. Perform a blank determination (see ▲ [Titrimetry \(541\)](#), [Types of Titrations](#), [Blank Corrections](#) ▲ (CN 1-Aug-2024) ).  
Calculate the ester value. The saponification value is the sum of the ester value and the acid value.  
**Acceptance criteria:** 78–95

## ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in well-closed containers.
- [USP REFERENCE STANDARDS \(11\)](#).  
[USP Carnauba Wax RS](#)

**Auxiliary Information** - Please [check for your question in the FAQs](#) before contacting USP.

| Topic/Question | Contact                                       | Expert Committee          |
|----------------|-----------------------------------------------|---------------------------|
| CARNAUBA WAX   | <a href="#">Documentary Standards Support</a> | CE2020 Complex Excipients |

| Topic/Question             | Contact                                                                     | Expert Committee          |
|----------------------------|-----------------------------------------------------------------------------|---------------------------|
| REFERENCE STANDARD SUPPORT | RS Technical Services<br><a href="mailto:RSTECH@usp.org">RSTECH@usp.org</a> | CE2020 Complex Excipients |

**Chromatographic Database Information:** [Chromatographic Database](#)

**Most Recently Appeared In:**

Pharmacopeial Forum: Volume No. PF 41(5)

**Current DocID:** GUID-DCC92926-A205-4723-8128-B1BFCC91A56A\_5\_en-US

**DOI:** [https://doi.org/10.31003/USPNF\\_M88970\\_05\\_01](https://doi.org/10.31003/USPNF_M88970_05_01)

**DOI ref:** [wp8u3](#)

OFFICIAL