

## CANDELILLA WAX

*Revised specifications prepared at the 65<sup>th</sup> JECFA (2005) and published in FNP 52 Add 13 (2005), superseding specifications prepared at the 39<sup>th</sup> JECFA (1992) and published in FNP 52 Add 1 (1992), and incorporating the decisions on the metals and arsenic specifications agreed at the 63<sup>rd</sup> JECFA (2004) and published in FNP 52 Add 12 (2004). The 65<sup>th</sup> JECFA (2005) considered the additive to be of no toxicological concern for the functional uses listed.*

### SYNONYMS

INS no. 902

### DEFINITION

Crude candelilla wax is obtained by first boiling the dried stalks of the candelilla plant (*Euphorbia antisyphilitica*) in water acidified with sulfuric acid to release the wax. The molten wax is then skimmed off and allowed to solidify and refined by further treatment with sulfuric acid and subsequent passage through filter-presses.

Candelilla wax consists primarily of odd-numbered n-alkanes (C<sub>29</sub> to C<sub>33</sub>), together with esters of acids and alcohols with even-numbered carbon chains (C<sub>28</sub> to C<sub>34</sub>). Free acids, free alcohols, sterols, neutral resins, and mineral matter are also present.

C.A.S. number

8006-44-8

### DESCRIPTION

Yellowish-brown hard, brittle, lustrous solid with an aromatic odour when heated

**FUNCTIONAL USES** Glazing agent, texturizer for chewing gum base, surface-finishing agent, carrier for food additives (including flavours and colours), clouding agent

### CHARACTERISTICS

#### IDENTIFICATION

Solubility (Vol. 4)

Insoluble in water; soluble in toluene

Infrared absorption

The infrared spectrum of the sample, melted and prepared for analysis on a potassium bromide plate, corresponds to that of a candelilla wax standard (see Appendix).

#### PURITY

Melting range (Vol. 4)

68.5° - 72.5°

Acid value (Vol. 4)

Between 12 and 22

Saponification value  
(Vol. 4)

Between 43 and 65

Lead (Vol. 4)

Not more than 2 mg/kg  
Determine using an atomic absorption technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on the principles of the methods described in Volume 4, "Instrumental Methods".

Infrared spectrum of Candelilla Wax