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Coconut Oil

Coconut oil
CAS RN®: 8001-31-8.

DEFINITION

Coconut Oil is the refined fixed oil of the seeds of *Cocos nucifera* L. (Fam. Palmae).

IDENTIFICATION

- **A.** It meets the requirements in *Specific Tests* for [Fats and Fixed Oils, Fatty Acid Composition \(401\)](#).

IMPURITIES

Change to read:

- **▲** [ARSENIC \(211\), Procedures, Procedure 2](#) **▲** (CN 1-JUN-2023) : NMT 0.5 µg/g
- **ALKALINE IMPURITIES**
Sample: 10 mL of Coconut Oil
Analysis: Mix 10 mL of freshly distilled acetone and 0.3 mL of water, and add 0.05 mL of bromophenol blue TS. Neutralize the solution to a green color if necessary with 0.01 N hydrochloric acid or 0.01 N sodium hydroxide. Add the *Sample*, shake, and allow to stand. Titrate with 0.01 N hydrochloric acid VS to change the color of the upper layer to yellow.
Acceptance criteria: NMT 0.1 mL of 0.01 N hydrochloric acid VS is required.

SPECIFIC TESTS

- **FATS AND FIXED OILS, Acid Value (401):** NMT 0.5, determined on 20.0 g
- **FATS AND FIXED OILS, Fatty Acid Composition (401):** Coconut Oil exhibits the composition profile of fatty acids, shown in [Table 1](#).

Table 1

Carbon-Chain Length	Number of Double Bonds	Percentage (%)
6	0	≤1.5
8	0	5.0–11.0
10	0	4.0–9.0
12	0	40.0–50.0
14	0	15.0–20.0
16	0	7.0–12.0
18	0	1.5–5.0
20	0	≤0.2
16	1	≤1.0

Carbon-Chain Length	Number of Double Bonds	Percentage (%)
18	1	4.0–10.0
18	2	1.0–3.0
18	3	≤0.2
20	1	≤0.2

- **FATS AND FIXED OILS, Peroxide Value (401):** NMT 5.0
- **FATS AND FIXED OILS, Unsaponifiable Matter (401):** NMT 1.0%
- **MELTING RANGE OR TEMPERATURE (741):** 23°–26°
- **WATER DETERMINATION, Method I (921):** NMT 0.1%, 50 mL of chloroform being used as the solvent instead of 35–40 mL of methanol

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in tight, light-resistant, well-filled containers. No storage requirement specified.

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

Topic/Question	Contact	Expert Committee
COCONUT OIL	Documentary Standards Support	CE2020 Complex Excipients

Chromatographic Database Information: [Chromatographic Database](#)

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