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Peanut Oil

CAS RN®: 8002-03-7.

DEFINITION

Peanut Oil is the fully-refined (alkali-refined, bleached, and deodorized at 230°–260°) oil obtained from the seed kernels of one or more of the cultivated varieties of *Arachis hypogaea* L. (Fam. Leguminosae). It may contain suitable antioxidants.

IDENTIFICATION

• **A. IDENTITY BY FATTY ACID COMPOSITION**

Analysis: Proceed as directed in the test for [Fats and Fixed Oils \(401\)](#), [Procedures, Fatty Acid Composition](#).

Acceptance criteria: Meets the composition profile of fatty acids in [Table 1](#)

• **B. IDENTITY BY TRIGLYCERIDE PROFILE**

Analysis: Proceed as directed in [Identification of Fixed Oils by Thin-Layer Chromatography \(202\)](#), [Identification, Method I](#) or [Method II](#).

Acceptance criteria: Meets the requirements in the chapter

IMPURITIES

• **ALKALINE IMPURITIES**

Sample: 10 mL of Peanut Oil

Analysis: Mix 10 mL of freshly opened acetone and 0.3 mL of water, and add 0.05 mL of bromophenol blue TS. 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 is required.

SPECIFIC TESTS

• **FATS AND FIXED OILS (401)**, [Procedures, Fatty Acid Composition](#): Peanut Oil exhibits the composition profile of fatty acids in [Table 1](#).

Table 1

Carbon-Chain Length	Number of Double Bonds	Percentage (%)
<14	0	≤0.1
14	0	≤0.2
16	0	7.0–16.0
16	1	≤1.0
18	0	1.3–6.5
18	1	35.0–72.0
18	2	13.0–43.0
18	3	≤0.6

Carbon-Chain Length	Number of Double Bonds	Percentage (%)
20	0	0.5–3.0
20	1	0.5–2.1
22	0	1.0–5.0
22	1	≤0.5
24	0	0.5–3.0

• **RANCIDITY**

Sample: 1 mL of a solution (1 in 10) of Peanut Oil in ether

Analysis: Shake the *Sample* with 1 mL of hydrochloric acid, and add 1 mL of a solution (1 in 1000) of phloroglucinol in ether.

Acceptance criteria: No red or pink color develops.

- **FATS AND FIXED OILS (401), Procedures, Acid Value:** NMT 0.2
- **FATS AND FIXED OILS (401), Procedures, Peroxide Value:** NMT 5.0
- **FATS AND FIXED OILS (401), Procedures, Unsaponifiable Matter:** NMT 1.5%
- **WATER DETERMINATION (921), Method I, Method Ic:** NMT 0.1%

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in tight, light-resistant containers, and prevent exposure to excessive heat.
- **LABELING:** Label it to indicate the name and quantity of any added antioxidant. Where Peanut Oil is intended for use in the manufacture of injectable dosage forms, it is so labeled.
- **OTHER REQUIREMENTS:** For Peanut Oil intended for use in injectable dosage forms, which is specified in *Labeling*, the requirements under [Injections and Implanted Drug Products \(1\), Product Quality Tests Common to Parenteral Dosage Forms, Specific Tests, Vehicles and Added Substances, Nonaqueous Vehicles](#), must be met.

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

Topic/Question	Contact	Expert Committee
PEANUT OIL	Documentary Standards Support	CE2020 Complex Excipients
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	CE2020 Complex Excipients

Chromatographic Database Information: [Chromatographic Database](#)

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