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Chocolate

DEFINITION

Chocolate is a powder prepared from the roasted, cured kernels of the ripe seed of *Theobroma cacao* L. (Fam. Sterculiaceae). Chocolate yields NLT 10.0% and NMT 22.0% of nonvolatile ether-soluble extractive.

COMPOSITION

• CONTENT OF NONVOLATILE ETHER-SOLUBLE EXTRACTIVE

Sample: 10 g of Chocolate

Analysis: Extract the *Sample* with anhydrous ethyl ether in a continuous-extraction apparatus for 8 h. Allow the ether solution to evaporate spontaneously in a suitable tared container, dry at 105° for 1 h, and weigh the nonvolatile ether-soluble extractive.

[NOTE—Retain the ether-insoluble residue for the test for *Botanical Characteristics* and the tests for *Articles of Botanical Origin, Methods of Analysis, Total Ash; Acid-Insoluble Ash; and Crude Fiber.*]

Acceptance criteria: 10.0%–22.0%

CONTAMINANTS

• [MICROBIAL ENUMERATION TESTS \(61\)](#) and [TESTS FOR SPECIFIED MICROORGANISMS \(62\)](#): The total bacterial count does not exceed 5×10^3 cfu/g, and it meets the requirements of the tests for absence of *Escherichia coli*, a 10-g specimen being used.

• [ARTICLES OF BOTANICAL ORIGIN \(561\)](#), [Pesticide Residue Analysis](#): Meets the requirements

SPECIFIC TESTS

• BOTANICAL CHARACTERISTICS

Microscopic: It shows numerous broken parenchyma cells of the cotyledons containing a reddish brown or purplish brown to yellowish orange pigment; numerous starch grains; oil globules; aleurone grains; and occasionally acicular or prismatic crystals of fat. The starch grains are simple and two- to three-compound, the single grains up to 15 µm in diameter, and they stain slowly with iodine TS. The ether-insoluble residue retained from the *Content of Nonvolatile Ether-Soluble Extractive* shows few or no fragments of cocoa shells and no cereal starch grains.

• [ARTICLES OF BOTANICAL ORIGIN \(561\)](#), [Methods of Analysis, Total Ash](#)

Sample: Use the ether-insoluble residue from the *Content of Nonvolatile Ether-Soluble Extractive*.

Acceptance criteria: NMT 8.0%

• [ARTICLES OF BOTANICAL ORIGIN \(561\)](#), [Methods of Analysis, Acid-Insoluble Ash](#)

Sample: Use the ether-insoluble residue from the *Content of Nonvolatile Ether-Soluble Extractive*.

Acceptance criteria: NMT 0.4%

• [ARTICLES OF BOTANICAL ORIGIN \(561\)](#), [Methods of Analysis, Crude Fiber](#)

Sample: Use the ether-insoluble residue from the *Content of Nonvolatile Ether-Soluble Extractive*.

Acceptance criteria: NMT 7.0%

ADDITIONAL REQUIREMENTS

• **PACKAGING AND STORAGE:** Preserve in well-closed containers.

Topic/Question	Contact	Expert Committee
CHOCOLATE	Nam-Cheol Kim Scientific Liaison	BDSHM2020 Botanical Dietary Supplements and Herbal Medicines

Chromatographic Database Information: [Chromatographic Database](#)

Most Recently Appeared In:

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