



Designation: D8449 – 23

Standard Specification for Label Content and Style, Format, Location, and Prominence of Elements for Consumer Products Containing Cannabinoids¹

This standard is issued under the fixed designation D8449; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification shall define the label content and style and format specifications for consumer products containing cannabinoids sold in an adult-use or medicinal-use marketplace.

1.2 This specification shall define clear product categories for which these specifications apply.

1.3 This specification shall apply to all consumer products containing cannabinoids packaged, distributed, and sold in an adult-use or medicinal-use marketplace regardless of the methods of obtention (source) of the cannabinoids.

1.4 This specification shall not apply to inhalable or topical consumer products containing less than 10 000 PPM (1 %) total cannabinoids², of which, no more than 3000 PPM (0.3 %) shall be total THC³.

1.5 This specification shall not apply to ingestible consumer products containing less than 250 PPM (0.025 %) total cannabinoids, of which, no more than 10 PPM (0.001 %) shall be total THC⁴.

1.6 This specification shall not define the label specifications for approved dietary supplements, over-the-counter drugs, or pharmaceuticals containing cannabinoids.

1.7 This specification shall not define the label specifications for non-consumer products containing cannabinoids such as bulk or in-process products.

1.8 This specification shall not define the design characteristics for label material, adhesives, ink, or other features unrelated to label content or style, format, location, and prominence of elements.

1.9 Where aspects of this specification differ from jurisdictional regulatory requirements, the stricter of the two shall take precedence.

1.10 Where aspects of this specification conflict with jurisdictional regulatory requirements, the authority having jurisdiction shall take precedence.

1.11 *Units*—The values stated in either SI units or US Customary units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

1.12 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.13 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:⁵

D8233 [Guide for Packaging and Labeling of Consumer Resin Cannabis Products for Sale to Adult Consumers, Legally Authorized Medical Users, and Caregivers in a Business-to-Consumer Retail Environment \(Retailers\)](#)
D8270 [Terminology Relating to Cannabis](#)

¹ This specification is under the jurisdiction of ASTM Committee D37 on Cannabis and is the direct responsibility of Subcommittee D37.04 on Processing and Handling.

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² 10 000 ppm is the limit that the US Pharmacopeia Cannabis Expert Panel has recommended as the threshold for labeling cannabinoids. A reference is provided in the Related Materials section of this specification.

³ 3000 ppm for total THC (delta-9-THC) is based on the harmonized specification for classifying Cannabis sativa L. plants as “hemp” in Europe and North and South America.

⁴ 10 ppm is the Health Canada limit for total THC (delta-9-THC) above which all consumer products containing cannabinoids must be labeled with a Universal Symbol.

⁵ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard’s Document Summary page on the ASTM website.

D8441/D8441M Specification for International Symbol for Identifying Consumer Products Containing Intoxicating Cannabinoids

2.2 *United States Pharmacopeia (USP)*:⁶

USP Chapter 17 Prescription Container Labeling

2.3 *NIST Standards*:⁷

NIST Handbook 130 Uniform Laws and Regulations in the Areas of Legal Metrology and Fuel Quality, Section IV, Part A – Uniform Packaging and Labeling Regulation

NIST Handbook 133 Checking the Net Contents of Packaged Goods

3. Terminology

3.1 Definitions:

3.1.1 *General*—Definitions are in accordance with Terminology **D8270**, unless otherwise indicated.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *adult-use, n*—any non-therapeutic application associated with the production/manufacture of products containing cannabinoids intended to be incorporated through any route of administration by adult⁸ consumers.

3.2.1.1 *Discussion*—When referring to adult-use marketplaces, the preferred term is “adult-use,” because ASTM Committee D37 does not want to associate consumer products containing cannabinoids intended for adult consumers, especially those with significant concentrations of delta-9-tetrahydrocannabinol, with those intended for general consumer populations.

3.2.2 *cannabis inflorescence (flower), n*—flowering tops of a cannabis plant.

3.2.2.1 *Discussion*—Cannabis flowers may occur singularly or in clusters (cola), possessing glandular trichomes, bracts, calyxes/sepals, and stigmas, and bear the reproductive structures (for example, stamens or pistils) involved in the development of seeds.

3.2.3 *cannabis resin, n*—terpenophenolic secondary metabolites produced within the secretory cells (glandular trichomes) of a cannabis plant, including the cannabinoids, terpenes, and other phytochemicals, whether refined or unrefined.

3.2.4 *concentrate, n*—cannabis resin preparations resulting from a separation process; or substance that results from the separation of the glandular trichomes of a cannabis plant.

3.2.5 *confusingly similar, adj*—in the case of goods and services, the likelihood that a reasonable person, exercising the degree of care typically afforded when purchasing similar goods or services, would be confused as to the origin, sponsorship, or approval of the goods or services.

3.2.6 *display panel, n*—that part, or those parts, of a package/container that is, or are, most likely to be used to affix a label or display required information.

3.2.6.1 *Discussion*—Depending on the packaging layer, the display panel in use and the principal display panel may be the same.

3.2.7 *exogenous, adj*—descriptive term used to define something as relating to or developing from external factors/sources/influences.

3.2.7.1 *Discussion*—When used to describe cannabinoids derived from sources other than a cannabis plant or any part thereof, refer to the cannabinoids as “exogenous cannabinoids.”

3.2.8 *extract, n*—cannabis resin preparation resulting from an extraction process; or substance that results from the extraction of the flowers and/or glandular trichomes of a cannabis plant.

3.2.9 *finished, adj*—refers to any product that is in the final form in which it will be sold/provided to an authorized consumer/purchaser.

3.2.9.1 *Discussion*—In other words, a packaged and labeled product intended for sale.

3.2.10 *label, n*—any written, printed, or graphic matter affixed to, applied to, attached to, blown into, formed, molded into, embossed on, debossed, or appearing upon or adjacent to a product/package, for the purposes of branding, identifying, or giving any information with respect to the commodity or to the contents of the package.

3.2.10.1 *Discussion*—An inspector’s tag or other non-promotional matter, affixed to or appearing upon a product/package, shall not be considered a label requiring the repetition of label information required by this specification.

3.2.11 *medicinal use, n*—any therapeutic application associated with the production/manufacture of products containing cannabinoids intended to be incorporated through any route of administration.

3.2.12 *operator, n*—refers to any entity or individual licensed/permitted by an authority having jurisdiction to cultivate, process, handle, package, distribute, or sell, or combinations thereof, a cannabis plant, its parts, or products, or combinations thereof.

3.2.13 *package, n*—the term “package,” whether standard (fixed), or random in quantity, means any product enclosed in a container or wrapped in any manner in advance of being offered or exposed for retail sale; or whose weight, measure, or count has been determined in advance of being offered or exposed for retail sale. **See also** *finished*.

3.2.13.1 *Discussion*—An individual item or lot of any adult-use or medicinal-use consumer product containing cannabinoids on which there is marked a declaration of quantity per unit of weight or of fluid measure or of count, or combinations thereof, shall be considered a package or packages.

3.2.14 *phytochemical, n*—any chemical that is derived from a botanical source.

3.2.15 *primary, adj*—descriptive term used to define the hierarchy of the term to follow, typically indicating the first in a series.

3.2.15.1 *Discussion*—When used to describe the container

⁶ Available from U.S. Pharmacopeial Convention (USP), 12601 Twinbrook Pkwy., Rockville, MD 20852-1790, <http://www.usp.org>.

⁷ Available from National Institute of Standards and Technology (NIST), 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899-1070, <http://www.nist.gov>.

⁸ The term “adult” shall be defined by the authority having jurisdiction.