

The International Intoxicating Cannabinoid Product Symbol (IICPS): A symbol of best practices in cannabis regulation

Doctors for Cannabis Regulation and ASTM International created the International Intoxicating Cannabinoid Product Symbol (IICPS, see Figure 1) as the universal cannabis product symbol for all authorities having jurisdiction (AHJs) in the United States and around the world. The IICPS is defined by the international consensus standard ASTM D8441.^{1,2}

SAFETY SIGNS IN CONSENSUS STANDARDS

The IICPS is based upon existing consensus standards, which are technical specifications issued by standards development organizations like NIST, UL, ASTM, and ISO. They are developed in an open environment to ensure public safety and promote best practices through collaboration by professionals from both the public and private sectors.



Figure 1: The IICPS for light and dark backgrounds

The bedrock consensus standard for safety signs, originally published in 1984, is ISO 3864,³ which requires that a standard warning sign include a black graphical symbol within a black-bordered yellow triangle (see Figure 2 for examples).⁴ ISO 3864 corresponds to the harmonized consensus standard ANSI Z535, which defines “warning sign yellow” as Pantone 109c (Hex: #ffd100; RGB: 255,209,0; CMYK: 0,18,100,0).⁵

ISO 3864-3 specifies that the graphical symbol inside a warning symbol should:

- Utilize objects, concepts, and activities, or a combination of these, which are familiar to the target group
- Contain only those details that contribute to an understanding of the symbol
- Exclude any alphanumeric characters or punctuation
- Be readily associated with its intended meaning
- Be easily distinguishable from other graphical symbols⁶

For cannabis products, the only symbol that satisfies these criteria is a cannabis leaf. It is far and away the most familiar graphical symbol associated with cannabis. Alphanumeric characters (e.g., “THC” or “21+”)

¹ ASTM D8441/D8441M, Standard Specification for International Symbol for Identifying Consumer Products Containing Intoxicating Cannabinoids. ASTM International: Approved February 25, 2022. https://www.astm.org/d8441_d8441m-22.html

² Wikipedia. “ASTM D8441/D8441M,” accessed December 27, 2022. https://en.wikipedia.org/wiki/ASTM_D8441/D8441M

³ ISO 3864-1:2011, *Graphical symbols—Safety colours and safety signs—Design principles for safety signs and safety markings*. International Organization for Standardization: Second edition, 2011-04-15. <https://www.iso.org/standard/51021.html>

⁴ ISO 3864-2:2016, *Graphical symbols—Safety colours and safety signs—Design principles for product safety labels*. International Organization for Standardization: Second edition, 2016-12-15. <https://www.iso.org/standard/66836.html>

⁵ ANSI Z535.1-2017, *American National Standard for Safety Colors*. American National Standards Institute, Inc. (Secretariat: National Electrical Manufacturers Association): Approved October 20, 2017.

https://www.nema.org/docs/default-source/standards-document-library/ansi-z535_1-2017-contents-and-scope.pdf?sfvrsn=d7266ce_2

⁶ ISO 3864-3:2012(en), *Graphical symbols—Safety colours and safety signs—Design principles for graphical symbols for use in safety signs*. International Organization for Standardization: Second edition, 2012-02-01; Corrected version 2012-06-15. <https://www.iso.org/obp/ui/#iso:std:iso:3864:-3:ed-2:v2:en>

and punctuation marks (e.g., an exclamation point) are prohibited by ISO 3864 (the sole exception being the basic warning sign with an exclamation point, which is defined in a separate standard⁷).

The use of the term “THC” within the symbol itself assumes that the intoxicating effects of cannabis are solely based upon THC content. While currently unregulated, there are products containing other cannabinoids, such as hexahydrocannabinol (HHC),⁸ which are themselves intoxicating. Such products will likely merit labeling with the cannabis product symbol in the future, even if those products do not contain THC.

DEVELOPMENT OF THE IICPS (ASTM D8441)

The International Intoxicating Cannabinoid Product Symbol (IICPS) was developed through collaboration between Doctors for Cannabis Regulation (DFCR) and ASTM International.⁹



Figure 2: Examples of ISO 3864 compliant signs in use around the world.

When designing a truly universal cannabis product symbol, the creators met and exceeded the requirements of safety sign standards, stipulating that it must satisfy a strict set of criteria:

- Communicate a simple public health message: “Caution with Cannabis”
- Use the simplest possible design to fit within the allotted space, so that everyone – especially the visually impaired – will immediately ascertain the meaning of the symbol
- Incorporate symbology that transcends age, language, culture, literacy, knowledge of the Latin alphabet, and specialized knowledge about cannabis
- Accommodate the addition of optional text below or next to the symbol to comply with existing consensus standards and meet the needs of authorities having jurisdiction
- Limit printing/package costs by using only two colors (inclusive of black and white)
- Avoid package inventory waste by reducing the chance that the symbol would need to be replaced as a result of future changes in science or public policy
- Facilitate recognition at reduced sizes and low resolution, which is critical for printing on small packages and printing or embossing directly onto the surface of cannabis products
- Permit use of the symbol free of charge by all legalized jurisdictions around the world.

The IICPS meets all of these criteria.

The IICPS was approved as a standalone consensus standard by ASTM International’s Committee D37 on Cannabis.¹⁰ It passed by a unanimous vote of over 200 members on its first ballot in early 2022. It now

⁷ ISO 7010:2019, *Graphical symbols—Safety colours and safety signs—Registered Safety Signs*. International Organization for Standardization: Third edition, 2019-07; Corrected version 2020-06.
<https://www.iso.org/obp/ui/#iso:std:iso:7010:ed-3:v2:en>

⁸ European Monitoring Centre for Drugs and Drug Addiction. “EMCDDA technical expert meeting on hexahydrocannabinol (HHC) and related Cannabinoids.” Lisbon: December 19, 2022.
https://www.emcdda.europa.eu/news/2022/emcdda-technical-expert-meeting-hexahydrocannabinol-hhc-and-related-cannabinoids_en

⁹ Doctors for Cannabis Regulation. “Universal Cannabis Symbol.” DFCR website. Accessed July 21, 2022.
<https://www.dfcr.org/universal-cannabis-symbol>

¹⁰ ASTM International. “New Standard Provides International Symbol for Intoxicating Cannabinoids.” ASTM International News Release, March 15, 2022. <https://newsroom.astm.org/new-standard-provides-international-symbol-intoxicating-cannabinoids>

bears the official designation ASTM D8441, making it the first and only cannabis labeling consensus standard in the world.

As specified by ISO 3864 and ASTM D8441, the IICPS is designed to accommodate alphanumeric or special characters below or next to the symbol for supplemental information (see Figure 3). This allows for consistency in the symbol while meeting the varying needs of authorities having jurisdiction (AHJs) in the United States and around the world.

Montana was the first U.S. state to adopt the IICPS in late 2021.¹¹ In early 2022, New Jersey¹² and Vermont¹³ incorporated the IICPS design into their state symbols. Other states, including Alaska,¹⁴ are currently considering adoption of the IICPS. See Figure 4 for examples of cannabis packages utilizing the IICPS.



Figure 3: Examples of the IICPS with text

CONCLUSION

The IICPS is designed to promote public health and safety by differentiating products containing intoxicating cannabis from other products. It also serves the needs of social justice by ensuring correct identification by people of any age, culture, literacy level, or education by following the international convention of using graphical symbols rather than alphanumeric characters in the design. Finally, it empowers every authority having jurisdiction (AHJ) to add supplemental text in a way that meets their constituents' needs. AHJs can easily change supplemental text in the future without needing to modify the symbol itself.

Doctors for Cannabis Regulation urges all government cannabis regulatory bodies to adopt the IICPS as the “universal symbol” to be printed on cannabis product packages within their jurisdictions. This action will demonstrate cannabis regulators’ commitment to public health, safety, and existing consensus standards, with flexibility to anticipate future changes in the nascent regulated cannabis industry.

As part of its ongoing commitment to public health and safety through the effective regulation of cannabis, DFCR commits to making these designs available in multiple file formats for use by all AHJs around the world.

For questions about anything included in this letter, please contact Doctors for Cannabis Regulation at labeling@dfcr.org.

¹¹ Montana Department of Revenue, General Labeling Requirements, accessed July 21, 2022. <https://mtrevenue.gov/cannabis/labeling-and-packaging/>

¹² New Jersey Cannabis Regulatory Commission, Business Resources, accessed July 21, 2022. <https://www.nj.gov/cannabis/businesses/resources/>

¹³ Vermont Cannabis Control Board, Rule 2: Regulation of Cannabis Establishments, November 2021. <https://ccb.vermont.gov/sites/ccb/files/2021-11/Proposed%20Rule%202%20-%20Regulation%20of%20Cannabis%20Establishments.pdf>

¹⁴ Helms, Rick & Sawyer, Jane. “Summary of the Special Working Group on Drinkables.” *State of Alaska, Alcohol & Marijuana Control Office*. January 13, 2022. https://www.commerce.alaska.gov/web/Portals/9/pub/MCB/Minutes/2022/01.19/Tab5.pdf?TSPD_101_R0=0890181cafab200031065b505ac3806f348b370f84a4dcc94d3983acfc50f839de8183bf52d100c308838a62b5143000ea2d317d39703484c245e7338ff0a59d125343ff9249db2153c5efee36ee6ce59a2c98315f814287c531e0ccab349d0f



Figure 4: Examples of cannabis products and packages bearing the IICPS. **A:** A childproof bag containing gummies from Montana. Note the label produced on a home/office printer. **B:** A cannabis oil tincture labeled with the IICPS on the outer box and bottle. **C:** A vape cartridge labeled with the IICPS and “THC”. **D:** A mold for edibles for use in Vermont. **E:** A bottle of infused syrup with the IICPS for use in Montana. **F:** A jar of cannabis flower labeled with the IICPS for use in New Jersey. **G:** Cannabis-infused chocolates embossed with the IICPS for use in Vermont. **H:** A cannabis flower pre-roll from Montana.

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