What Is a Standard THC Unit for Cannabis?

A PRIMER ON UNDERSTANDING A STANDARD THC UNIT

CCSA Senior Research and Policy Analyst Robert Gabrys, PhD
CCSA Senior Knowledge Broker Shea Wood, PhD

Canadian Centre
on Substance Use
and Addiction



Background

People in Canada who consume cannabis have access to an increasingly diverse range of cannabis products. While this provides greater choice, it also creates challenges for consistently measuring cannabis use in research and in communicating lower-risk cannabis use guidance (Wood et al., 2024). Accordingly, the 2024 legislative review of the *Cannabis Act* recommended that

> Health Canada should develop a "**standard dose**" or "**unit dose**" (as appropriate for different classes of cannabis). The development of a standard dose should be prioritized and accompanied by regulatory amendments to require it as an element on cannabis product labels (Rosenberg et al., 2024).

This primer aims to increase understanding of a standard THC unit by summarizing its definition, function and potential applications, while addressing common misconceptions about its meaning and intended use.

What is “a Standard THC Unit”?

THC (delta-9-tetrahydrocannabinol) is the primary psychoactive component of cannabis and is responsible for the “high” that individuals experience. A standard THC unit is a set amount of THC, measured in milligrams, and applied across all cannabis products and methods of use (Freeman et al., 2026).

WHAT IS THE PURPOSE OF A STANDARD THC UNIT?

A standard THC unit provides a practical, standardized metric for measuring and communicating THC content across different cannabis products and methods of use (e.g., smoking, vaping, eating, drinking). Similar to how a standard drink provides a common measure of alcohol content across beer, wine, cooler, cider, ready-to-drink beverages and spirits (CCSA, 2025), a standard THC unit communicates a cannabis product’s THC content through a single, comparable metric that provides common understanding across audiences.

A standard THC unit supports:

- Comparison of THC content across products and methods of use;
- Consumer education and lower-risk guidance;
- Research on cannabis (THC)–related health outcomes; and
- Public health monitoring of patterns of use and retail sales.

THE RECOMMENDED STANDARD UNIT FOR CANADA: 2.5 mg

Freeman and Lorenzetti (2019) identified several key parameters for establishing the value of a standard THC unit, including experimental data, ecological data, and public health and policy considerations from an international perspective.

Building on this work, the Parameters for a Standard THC Unit in Canada Working Group considered these same factors, while incorporating additional considerations within the Canadian context (aligning with the *Cannabis Act*, considering the diversity of people who consume cannabis, aligning with existing public education and lower risk use guidelines).

Based on these considerations, the working group and others have recommended a 2.5 mg as the standard THC unit for Canada (Freeman et al., 2026; Wood, et al., 2024).



Clearing Up Common Misconceptions

A standard THC unit is not intended to communicate how "high" a person will get.

Intoxication is influenced by many factors, and a THC unit will not affect everyone the same way.

A standard THC unit is not a recommended dose.

It is not a starting or target amount for all consumers, but individuals can use it to make informed decisions about their own use and track the amount of THC they consume. It can also inform cannabis policy and lower-risk guidance.

The effects of a given amount of THC may vary based on factors such as:

- Method of use (smoking, vaping, eating, drinking, etc.)
- Product composition (e.g., the presence of other cannabinoids)
- Frequency of use and tolerance
- Individual biology and metabolism
- Context of use

A standard THC unit does not mean THC effects are the same across cannabis products or methods of use.

It's still unclear whether the same amount of THC has similar effects when used differently. However, by serving as a common metric to measure and report THC consumption, a standard THC unit can support research and public health messaging on effects of different cannabis products and methods of use at comparable levels of THC exposure, as well as total THC consumption across all product types. It can also improve the comparability of findings across studies and facilitate evidence syntheses (e.g., systematic reviews and meta-analyses).

A standard THC unit is not intended to ignore other cannabinoids.

The cannabis plant and cannabis products contain a wide range of cannabinoids and other constituents (e.g., terpenes) that may influence the overall effects and experiences associated with its use. While more research is needed to understand the interaction between cannabinoids and other constituents, the implementation of a standard THC unit in research, product labels or public education is not intended to ignore or minimize other cannabinoids. A standard THC unit can help to understand the impact of other cannabinoids or constituents when the level of THC is accounted for.

A standard THC unit is not intended to replace existing THC metrics on product labels.

The standard THC unit is meant to complement, rather than replace, existing measures such as THC concentration (% THC), THC content (mg) and THC content per gram (mg/g). The standard THC unit is intended to improve and simplify communication of THC content and strengthen common understanding among diverse audiences.

FURTHER READING: KEY CCSA REPORTS

Parameters for a Standard THC Unit in Canada — key parameters for setting a standard THC unit and the rationale for establishing a standard THC unit for Canada.

A Standard THC Unit in Canada: Recommendations for Implementation — recommendations for a path toward implementing a standard THC unit in Canada.

Implementing a Standard THC Unit Canada: What We Heard — findings from two consultations on implementing a standard THC unit in Canada for research and surveillance and product labelling.

A Standard THC Unit and Its Value in Cannabis Research, Public Education and Regulation in Canada — discussion on the value of a standard THC unit and potential areas of implementation.

RESOURCES & REFERENCES

Canadian Centre on Substance Use and Addiction. (2025). Know your standard drink [Poster]. https://www.ccsa.ca/en/know-your-standard-drink-summary-poster

Freeman, T., Gabrys, R., Lees Thorne, R., Wadsworth, E., Margolese, S., Onyegbule, C., … Wood, S. (2026). Parameters for a standard THC unit in Canada. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. https://www.ccsa.ca/en/parameters-for-a-standard-thc-unit-in-canada

Freeman, T. P., & Lorenzetti, V. (2019). 'Standard THC units': A proposal to standardize dose across all cannabis products and methods of administration. Addiction, 115(7), 12071216. https://doi.org/10.1111/add.14842

Gabrys, R., Wood, S., Freeman, T., Lorenzetti, V., Rueda, S., Donnan, J., Conus, F., Simms, C., Veitch, E., Ramji, J., Fry, M., Hébert, F., Lees Thorne, R., Wadsworth, E., Maillet, M., & Hammond, D. (2026). Implementing a standard THC unit Canada: What we heard. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. https://www.ccsa.ca/en/implementing-a-standard-thc-unit-in-canada-what-we-heard

Lorenzetti, V., Hammond, D., Wood, S., Gabrys, R., & Freeman, T. P. (2025). Standard THC units as a unit of measurement: Differences & complementarity with other THC metrics. International Journal of Drug Policy, 143, Article 104891. https://doi.org/10.1016/j.drugpo.2025.104891

Rosenberg, M., Ayonrinde, O., Conrod, P. J., Levesque, L., & Selby, P. (2024). Legislative Review of the Cannabis Act: Final Report of the Expert Panel. Ottawa, Ont.: Government of Canada. https://www.canada.ca/en/health-canada/services/publications/drugs-medication/legislative-review-cannabis-act-final-report-expert-panel.html

Wood, S., & Gabrys, R. (2024). A standard THC unit in Canada: Recommendations for implementation. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. https://www.ccsa.ca/en/standard-thc-unit-canada-recommendations-implementation

Wood, S., Gabrys, R., Freeman, T., & Hammond, D. (2024). Canada's THC unit: Applications for the legal cannabis market. International Journal of Drug Policy, 128, Article 104457. https://doi.org/10.1016/j.drugpo.2024.104457

Canadian Centre on Substance Use and Addiction. (2024). Drug checking symposium October 5–7, 2023. Ottawa, Ont.: Author. https://www.ccsa.ca/drug-checking-symposium-2023-report

ISBN: 978-1-77871-276-0

© Canadian Centre on Substance Use and Addiction, 2026