



HAWAII MEDICAL CANNABIS NEWSLETTER

The Science

How is the cannabis plant medicinal?

The cannabis plant contains over 500 distinct compounds, with over 100 different phytocannabinoids that have effects on the endocannabinoid system (ECS). The following cannabinoids have been studied for their potential medicinal effects.¹

Cannabidiol (CBD) – non-intoxicating

- Reduces some types of seizures²
- Protects nervous system (for ALS, MS, and glaucoma)²
- Pain relief for multiple conditions³
- Reduces inflammation (for lupus, rheumatoid arthritis, and Crohn's disease)²

Cannabigerol (CBG)⁴ – non-intoxicating

- Reduces eye pressure (for glaucoma)
- Stimulates appetite (for wasting syndrome, HIV, and cancer)
- Protects nervous system (for ALS, MS, and glaucoma)
- Reduces inflammation (for lupus, rheumatoid arthritis, and Crohn's disease)
- Pain relief for multiple conditions

Cannabinol (CBN)⁵ – mildly intoxicating

- Protects nervous system (for ALS, MS, and glaucoma)
- Reduces inflammation (for lupus, rheumatoid arthritis, and Crohn's disease)
- Pain relief for multiple conditions

Tetrahydrocannabinol (THC)⁶ – intoxicating

- Pain relief for multiple conditions
- Reduces nausea and vomiting for multiple conditions
- Protects nervous system (for ALS, MS, and glaucoma)
- Reduces severe and persistent muscle spasms
- Reduces some types of seizures
- Stimulates appetite (for wasting syndrome, HIV, and cancer)



FDA has approved Epidiolex (cannabis-derived CBD) for seizures, Marinol and Syndros (synthetic THC) for nausea caused by chemotherapy and weight loss from HIV, and Cesamet (synthetic THC) for nausea caused by chemotherapy.

Regular use of high potency THC products can form habits for some patients and lead to cannabis use disorder (CUD) or similar unwanted effects. It is critical to learn about the potential harms of all cannabinoids used. CBD and THC can interact with over-the-counter and prescription drugs. Talk to your medical provider for treatment advice.

[1] Health Canada, 2018. Cannabinoids are chemical compounds that act on the endocannabinoid receptors throughout our bodies. See Hawaii Medical Cannabis Newsletter May 2024 issue for a review of the endocannabinoid system. [2] Bhunia et al., 2022 [3] Rapin et al., 2021 [4] Calapai et al., 2022 [5] Stone et al., 2020 [6] NASMH, 2017.

Hawaii Medical Cannabis

Understand what's on your medical cannabis label

Information on the labels of products sold at Hawaii's dispensaries help patients make informed purchases. Let's explore two different product labels.

Flower product label



● **Product name and description:**

- If the product contains flower, the label may include the chemovar (strain) name and plant species (sativa, indica, or a hybrid). For example, Nalu Breeze is the chemovar name, hybrid is the plant species.
- **These do not indicate the product's effects. Instead, look at the cannabinoid content to understand potential therapeutic effects.**

● **Ingredients:**

- Cannabis ingredients include the parts of the cannabis plant used, how the cannabinoid(s) was extracted, and other non-cannabis ingredients in the final product.

● **Net weight:**

- Total weight in grams (g) and ounces (oz) of products in the package
- For all products other than flower, net weight includes all ingredients, not just cannabinoids.
- You are allowed 4 oz (113.4 g) of dried flower, or the equivalent in other forms, every 15 days.
- Your dispensary can help you stay within your allowance.
- For example, you make 2 purchases only:
 - 1 oz (28.4 g) on January 1
 - 2 oz (56.7 g) on January 2
 - Until January 15, you can buy up to 1 oz (28.4 g). This is because the amounts on January 1 and January 2 add up to 3 oz.
 - On January 16, you can buy up to 2 oz (56.7 g). This is because only January 2 falls within the past 15 days. Your purchase on January 1 no longer counts.

Cannabinoid content

Manufactured product label

● Percentage (%):

- Concentration of cannabinoids per gram of flower
- For example, 20.83% Total THC in the flower label on the previous page means that of 1 gram of flower, 20.83% of that consists of Total THC.

● mg/g or mg/mL:

- Milligrams (mg) of cannabinoid in one gram (g) of solid products or milliliters (mL) of liquid products
- **This is the key information for determining how much of each cannabinoid is in the product.**
- For edibles, the mg is provided for each serving (mg/serving). Note that one gummy or score of a chocolate bar is not always the same as per serving. For example, a chocolate bar may be scored into 10 pieces, but each piece may be more than 1 serving. In this case, the dispensary must provide a guide to help you know how much to cut.
- If mg/package is not available, you can calculate this by multiplying mg/g by net weight. This package has a total THC of 96.1 mg (= 2.17 mg/g x 44.34 g).

● Total THC:

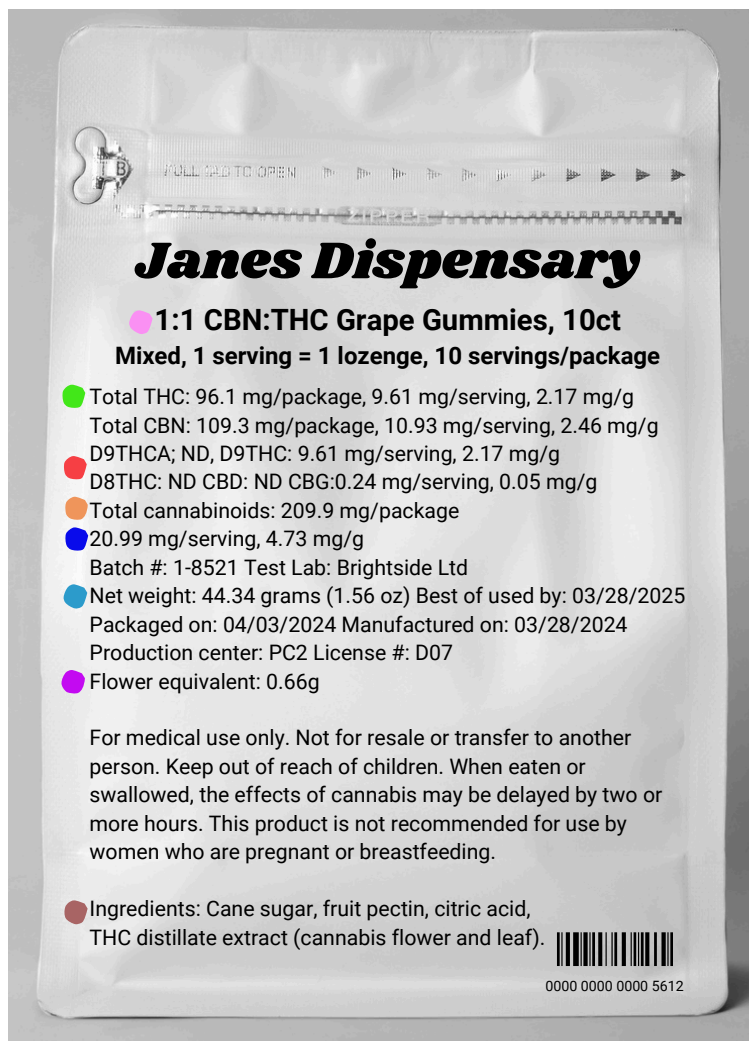
- Includes cannabinoids D8-THC, D9-THC, D9-THCa
- Total THC is the intoxicating potential of the product through decarboxylation of THCA, which is non intoxicating. Flower will mainly have THCA and very little THC. When THCA is exposed to high heat, the acids undergo decarboxylation, changing into active THC which produces the "high". THCA also naturally degrades into THC.
- The higher the total decarboxylated THC in your product, the more intoxicating.

● Other cannabinoids

- May be in the product but are not required to be listed.
- You can ask the dispensary to see the Certificate of Analysis (COA) to find out what other cannabinoids which have been tested are in the product.

● Total cannabinoids

- May not always equal the amounts of the listed cannabinoids added together because some cannabinoids tested are not included in the label.



● Flower equivalent:

- Weight of the dried flower used to make the manufactured product.
- For manufactured products, the flower equivalent, not the net weight, affects your 15 day allotment of 4 oz (113.4 grams) of cannabis equivalent weight per 15 days from the last purchase.

Talk to your medical provider to find out what kind of products and how much you need. Cannabis can help with some conditions, but it can also cause unpleasant effects. The benefits and risks depend a lot on the type of product and how much you use, as well as your own unique body (endocannabinoid system).

WHAT'S NEW

Changes to Hawaii's law relating to caregivers and grow sites

This past legislative session, the OMCCR supported House Bill 2443 (HB 2443) to allow caregivers to continue to grow cannabis for their patients. This bill did not pass.

What this means for you

Beginning January 1, 2025, if you are registered to grow cannabis, you can continue to do so, but your caregiver may no longer grow cannabis for you. **There are exceptions to this:** Your caregiver can still grow cannabis for you if you are a minor patient, registered as an adult patient lacking legal capacity, or live on an island where there are no licensed dispensaries.

Also, a location can only be used by up to five (5) patients to grow cannabis. If you are growing at a site with over five patients, then you will need to change your designated grow site by December 31, 2024.

Please refer to an email titled "Patient and Caregiver Notice HB2443" sent to your registered email address on 5/17/2024 for more information.

ASK MALIA



Howzit Malia,

As a cannabis patient wanting to try pre-rolls, I want to know how these pre-rolls are tested to ensure their quality and safety.

Mahalo Kimo

Aloha Kimo,

After each batch of pre-rolls is rolled at the production center, a sample is sent to a lab with the filter attached in its final form for testing. The filter is removed, then the paper and the flower in the pre-roll are ground up and tested together using the same testing process for any other manufactured cannabis products, including for solvents, heavy metals, pesticides, mycotoxins, microbials, and cannabinoid potency. In addition, pre-rolls are tested for water activity (how much water is available for bacteria to grow). The filter is tested separately for all of the above except for cannabinoid potency. You can ask the dispensary to see the Certificate of Analysis (CoA).

References

1. Health Canada. Information for Health Care Practitioners - Cannabis (Marihuana, Marijuana) and the cannabinoids, 2018.
2. Bhunia S, Kolishetti N, Arias AY, Vashist A, Nair M. Cannabidiol for neurodegenerative disorders: A comprehensive review. *Front Pharmacol* 2022; 13: 989717.
3. Rapin L, Gamaoun R, El Hage C, Arboleda MF, Prosk E. Cannabidiol use and effectiveness: real-world evidence from a Canadian medical cannabis clinic. *J Cannabis Res* 2021; 3(1): 19.
4. Calapai F, Cardia L, Esposito E, et al. Pharmacological Aspects and Biological Effects of Cannabigerol and Its Synthetic Derivatives. *Evid Based Complement Alternat Med* 2022; 2022: 3336516.
5. Stone NL, Murphy AJ, England TJ, O'Sullivan SE. A systematic review of minor phytocannabinoids with promising neuroprotective potential. *Br J Pharmacol* 2020; 177(19): 4330-52.
6. National Academies of Sciences, Engineering, Medicine, Health. The National Academies Collection: Reports funded by National Institutes of Health. The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research. Washington (DC): National Academies Press (US); 2017.

Have questions about cannabis in Hawaii? Please email us at medicalcannabis@DOH.Hawaii.gov

