



What is Decarboxylation?

Exposing cannabis to combustion, convection or low controlled heat can expand the number of therapeutic compounds called cannabinoids. When this happens, the right amount of heat for the right amount of time, changes some cannabinoids into others that have stronger, more therapeutic qualities. This conversion process is called decarboxylation.

I have found that different patients have different temperature and time frame preferences when it comes to decarboxylating cannabis flower. Usually, the focus is on the most famous cannabinoid by converting THCA to THC.

While THCA is known not to get patients elevated or euphoric, studies indicate that it can provide anti-inflammatory, anti-proliferative and anti-emetic affects. When THCA is converted into THC, in addition to the effects of THCA, THC is very well-known for inducing elevated euphoria. THC can also help most patients with pain, reduce their dependence on opioids, increase appetite, calm spasms in muscle tissue and with its antioxidant properties, can provide neuroprotective effects on the nervous system.



How to Decarboxylate Cannabis Using A Kitchen Oven

The temperature and length of time that I use for decarboxylation has worked the best for me. You may have a decarboxylation machine or a decarb bath available to you, but all you really need is an oven. Here is what you will need to get the process started:

- 1- Convection oven that is big enough for your dish and lid that also has enough extra space to evenly heat the dish.
- 1- Pyrex Casserole Dish with Pyrex lid. I prefer glass dishes and lids.
- 1- Sheet of parchment paper cut to length. Make sure the paper does not interfere with the dish lid seal.
- 7 grams (quarter ounce) of your favorite dried, cured cannabis. Do not grind! Gently break the buds into baby-finger nail sized nuggets that are uniform in size and thickness. At the same thickness, the buds will decarboxylate more evenly. The less you handle the nuggets, the more the trichomes that contain the cannabinoids and terpenes will stay intact.
- 1- Storage container for the final product. I prefer 4-ounce glass canning jars or 1-cup glass storage containers with food grade silicon lift off lids. Storage containers must be freezer safe.
- 1- Label. Log the strain and the approximate total potency (See Potency Calculation Details).

Here is the process:

Line your casserole dish with parchment paper. Cut to fit so it does not interfere with the seal of the glass lid.

Gently break up all your buds into baby-finger sized nuggets.

Arrange your cannabis nuggets in a single layer on top of the parchment paper inside the dish. Check to see how moist it is, cover.

Pre-heat your oven to 240 degrees Fahrenheit. When the oven says it is at that temperature, use an oven thermometer to check the temperature. You want to make sure the oven is at the right temperature.

In the oven, decarboxylate the THC dominant cannabis nuggets at 240 degrees Fahrenheit for about 45 minutes. If you are using a predominantly CBDA strain, decarboxylate at 245 degrees Fahrenheit for about 60 minutes.

Do a visual check at the 20-minute mark to see if the cannabis is toasting evenly.

The total time of decarboxylation may need to be adjusted 5 or 10 minutes according to the moisture content of your herb.

Remove the dish from the oven and let it cool down. The final product should appear brownish green and crispy.

After the decarboxylated cannabis is cool, curl the parchment into a funnel, then transfer into the labeled storage container. Log the strain and the approximate total potency per gram, then put into the freezer.

Stored in the freezer, cannabis can last up to 6 months.



Advanced Decarboxylation Calculations

The weight loss from decarboxylating cannabis is about 10%. In this example, at the start we had 7 grams, now we have about 6.3 grams of decarboxylated flower. Using the example of our Super Lemon Haze flower from the Potency Calculation Detail Sheet, let's find the approximate potency of our 6.3 grams of decarboxylated flower. The first thing we need to do is to convert the potential percentage of THC into mg per gram of flower. This is easily done by multiplying the potential percentage of THC by 10.

1 g of Super Lemon Haze at 17.7% THC.
 $17.7 \times 10 = 177$ mg of THC per g of flower.

About 20% of the THC is considered “lost” to the process. To account for this 20% loss of THC in our calculation, the 177 mg of THC per g of the Super Lemon Haze flower is multiplied by 80% or 0.8.

For example: $177 \text{ mg} \times 80\% (0.8) = 141.6$ mg per g of THC.

Now we can estimate to have approximately 141.6 mg of THC in 1 gram of the decarboxylated Super Lemon Haze Flower. Multiply that number by the 6.3 g of decarboxylated flower to find the total strength.

$141.6 \text{ mg per g} \times 6.3 \text{ g of decarboxylated flower} = 892$ mg of THC in 6.3 g of decarboxylated flower is the total.

If you are not too concerned about getting your dose or “chunk” accurate, you can steep a tiny amount of decarboxylated herb in your tea, chew it up and swallow. If you want to have more “chunk” control with your tea, you can weigh out the flower to the quarter gram, use half cured/half decarboxylated flower or use a CBD dominant strain.



How to Infuse Butter with a Magical Butter Machine

A key thing to remember when infusing THC, CBD and other cannabinoids into anything is that they are sticky, oily substances that dissolve better in fat or are fat soluble.

Using 15% THC flower keeps the amount of cannabis needed for each butter or oil infusion at about 7 grams if you want to keep your edibles in the range of 10 mg each (see *Marijuana Edibles*, page 20-21). Balancing the preparation with some CBD dominant flower can help prevent the person eating it from getting too elevated and provide extra anti-inflammatory benefits as well.

If you are like me, nothing beats customizing your cannabis medicine. I enjoy adding spices like garlic, rosemary, sage, and black pepper to my clarified butter infusions for my electric vegetable recipes. I also make a stand-alone clarified cannabis butter to use in baking, cooking or to add in my chai tea. See our Potency Calculation Sheet to help approximate the potency in your edibles.

Taking out the milk solids and moisture from your butter before you infuse it, gives it the benefits of a longer shelf life, makes it easier to infuse, it will not burn in recipes at higher temperatures, and clarifying will intensify the buttery flavor. See a great tutorial on YouTube [Allrecipes.com](https://www.youtube.com/watch?v=...) “How to Clarify Butter”.

Gently melt and simmer a little over 24 ounces (2 ½ cups) of butter in a pan. Skim off the milk solids and surface foam. Then strain the liquid through a cheese cloth lined mesh strainer. Retain the clear golden liquified butter fat for your infusion.

Here is a list of the equipment you are going to need to infuse your butter:

- MagicalButter Machine
- 16 ounces (2 cups) of unsalted butter, softened, clarified for best results.
- 2 tablespoons liquid organic sunflower lecithin. Assists with bioavailability, stabilizes, darkens mixture. (optional)
- 7 grams of decarboxylated cannabis close to 15% THC.
- 4 cup Pyrex measuring cup.
- A fine mesh strainer and /or cheese cloth.
- 4- 4-ounce quilted glass canning jars.
- Silicon spatula.
- Silicon Molds to make butter cubes (optional).

I use the MagicalButter Machine for the infusion process because of how easy it is.

Place 16 ounces (2 cups) of clarified butter and the rest of the ingredients into the pitcher of the MagicalButter machine and secure the head.

Press the temperature button and select 160 degrees Fahrenheit, then press the 2 Hours/Butter button.

When the cycle is complete, unplug the unit at the outlet then remove the head of the appliance.

Pour the mixture through the cheese cloth lined strainer into the 4 cup Pyrex measuring cup, then from the measuring cup into the 4-ounce storage containers. Wipe the jar rim, cool, cover, refrigerate or freeze.

The infused clarified cannabis butter keeps in the refrigerator for 3 months or in the freezer for 6 months.

If you find making butter too time consuming for your busy schedule, all our dispensaries sell THC infused olive and vegetable oil you can add directly to your recipes.