



# *The Definitive Green Dragon*



Here is the very successful result of a considerable amount of research into the elusive and magical Green Dragon.

This is a simple and efficient process.

## *Ingredients:*

5g high quality cannabis  
3 oz Bacardi Rum 151 proof or 94% Alcool(Best)

## *Process Summary:*

1. Chop cannabis very fine (coffee grinder works great)
2. Place in a shallow pan or aluminum foil and bake at 200°F for 20 minutes.
3. Remove from oven and place cannabis in 3 oz of 151 proof rum or 94% Alcool
4. Simmer in a water bath until half the alcohol is evaporated off. Maintain temperature of the rum/cannabis mixture between 170°F.
5. Strain the mixture and store.

## *Process details, references and rationalizations:*

### *1. Chop the cannabis:*

More surface area gives means a faster and more efficient extraction.

You can use a mini-prep, coffee grinder (or chop by hand) until it is quite fine. Then spread it out on a piece of aluminum foil which is placed directly on the oven rack. If you place the foil on a baking pan you will need to account for the additional mass of the pan which will increase your baking time.

### **-Leaf vs. Bud**

I have not tried the extraction with leaf. But you would obviously need loads more. The problem is you will also need much more alcohol. My guess is you should use somewhere on the order of 10 parts alcohol to 1 part leaf. Then once you are finished you will want to remove the spent leaf, and then concentrate the alcohol by boiling off most of it (using the water bath of course) until you have one ounce of GD remaining.

### *2. Bake the cannabis.*

Bake the Cannabis at 200 degrees Fahrenheit for 20 minutes.

Pre-baking should stink up the house. I turn on the stove vent fan.

Keep a close eye on it!

Do not rush this as too much water may be left in the plant material and the boil will take longer. Dry it out completely. Usually if the dried cannabis slides off the foil without sticking, it is dry.

### **Baking converts THCA to THC via a decarboxylation reaction.**

In whole-plant cannabis, THC content is expressed as THCA (tetrahydrocannabinolic acid) prior to decarboxylation into THC, which takes place when cannabis is heated during cooking, and smoked or vaporized ingestion. THCA is a mild analgesic and anti-inflammatory but does not have good affinity with our CB1 receptors, so in order to make a THC-rich tincture that has many of the same therapeutic effects as smoked ingestion, including rapid absorption, quick relief and ease of self titration, we must convert the THCA in the plant matter into THC prior to extracting it through an alcohol soak. THC vaporizes at about 380°F. We want to heat the cannabis to convert THCA to THC, but keep the temperature well under 380°F. That is why 200°F is used. Between four and five minutes your oven (and house) will start to smell very strong.

Notice also that there is considerable misinformation regarding heating the cannabis. It is true that you don't have to heat it to extract both THC and THCA, but the amount of THC in whole plant preparations is relatively small compared to after decarboxylation of the THCA. So if you want to maximize the strength of your tincture you must heat the cannabis prior to extraction.

### **3. Mix Ingredients:**

After the cannabis has been decarboxylized, pour the cannabis into the jar containing the alcohol. Make note of the increase in the total volume.

Use the highest proof alcohol available.

Alcool 94% is best. But if it not available, 151 Proof will work.

The higher the alcohol percentage, the more efficient the extraction will be.

Quebec and Ontario have Alcool at 94% which is perfect.

### **4. Simmer the mixture.**

Heating the alcohol mixture can be done very safely using a hot water bath:



Place about 1 to 2 inches of water in a saucepan. Bring the water to a low simmer. The rum/cannabis mixture should be in a 1 cup measuring cup to tell when half the alcohol has evaporated . Do NOT cover the cup!

You should have the oven fan on high. You will notice that any alcohol fumes are mixed with water vapour from the water bath and vented out the fan.

Note that this is alcohol boiling not water boiling. Alcohol boils with very fine bubbles as opposed to the rolling boil of water. (See above pic) Don't be too picky about the temps though. It will not burn if the temps are higher.

After 20 to 30 minutes, or longer, the alcohol should be reduced by about half. Be sure to take into account for the volume of the ground bud.

The purpose of the simmering is to heat the alcohol mixture to improve extraction rates and efficiencies. Heating during extraction increases the motion of the molecules (basic physics/chemistry) and drastically decreases extraction times. The boiling point of pure ethanol is 173°F (78°C). We will use the water bath to heat the rum/cannabis mixture to just below the boiling point of ethanol.

### **5. Strain and store.**

When you are done extracting you will have one ounce (or so) of GD. But it is mixed up with the 5 g of spent plant material. Here is how I recover the maximum amount of my extract.

First, I strain it through a regular kitchen mesh strainer. I use the back of a spoon to force out as much GD as possible.

Next (this is the cool part) use a garlic press to squeeze the remaining leaves. Put the squeezings into the plunger in batches, and squeeze the holy GD out of it. This trick has increased my overall recovery by about 15% A second straining, with a coffee filter in another kitchen strainer, is recommended to get the fine sediment out.

When you are finished with the extraction you will be left with about 50 ml of green dragon tincture after you have strained the extract. Notice that 1 1/2 ounces of the alcohol has evaporated.

This means that 5 g of good cannabis yields about 50 doses of tincture (1 dropper full is really all I need). For me it is much more pleasant than smoking (I've stopped smoking entirely).

A standard eyedropper will transfer about 1ml (or 1 gram) of liquid. There are 29 millilitres in one ounce. So you should end up with about 50 or so full eyedroppers (50 millilitres) of Green Dragon.

### **Final Colour and Smell**

The green dragon should be a greenish-brown colour (more brown than green). If it is emerald green and smells like grass (from the chlorophyll), it will be weak. Emerald green indicates that the pre-baking was not sufficient. The GD should smell like bud, somewhat floral.

## **6. Dosage. Titration.**

You will have to figure dosage with each batch. And you must test it on yourself. The way to do this is through titration (a fancy chemical term that means to determine the concentration of a solution). The concentration of GD will change based on the strength of the starting material, the amount of alcohol you boil off during the extraction, the efficiency of your pre-bake, etc.

Start with one or two full droppers (not drops! About 1 ml per dropper) and swallow them down. Check the time and note when you first feel effects, when you peak, the intensity of the peak, and how long it lasts. Make sure you can reproduce your titration (empty stomach, time of day, diluted in water?, etc). If you like what you feel, great. If too much or not good enough try again tomorrow with a different amount. With two points (high and low) you should have a pretty good idea of how it works on your body. Of course it might be different on someone considerably bigger or smaller.

For instance one batch I made was unbelievably strong--1 dropper full and I was flying. The next one took 3 droppers full for same effect (but the solution was more dilute as I ended up with 1.75oz instead of 1oz of final GD, the pot wasn't as good, and my pre-bake was a bit too short since I was using an unfamiliar oven and a baking pan instead of just aluminum foil).

### **How much is in an Eyedropper?**

An eyedropper holds about one millilitre of liquid, depending on how hard you squeeze the little bulb. For water based solutions one millilitre weighs about one gram. Thus each full eyedropper contains about one gram of liquid. Since there are about 29 grams in one ounce, you get about 29 full eyedroppers in every ounce. The eyedropper I initially used measured 34 full droppers in an ounce.

One millilitre (one full eyedropper) is very nice. Two puts you in space. But you must self-titrate (test it on yourself) as each batch will be slightly different. Effects take up to 1.5 hours to begin (at least in myself) and lasted for 5 hours (1 dropper) to 7-8 hours (2 droppers).

I place one eyedropper (1ml) of Green Dragon in a small glass. I then add a small amount of water (1-2 ml) and drink. Do this on an empty stomach for best results (about 20-30 minutes before eating a main meal is good).

Using my Green Dragon technique I find that one dropper will bring effects on in 30-90 minutes and last 5 hours with 1.5 hours of lingering aftereffects.

## **7. Storage**

Use the nice brown two-ounce dropper bottles from the health food store that are used for essential oils, tinctures, and/or other extracts. Only use brown glass bottles. THC degrades in the sunlight, so clear, green or any colour other than brown will not suffice.

## Combined Tips and Techniques

1. Don't put the stuff in your eye ;-). And don't put it under your tongue because it burns. I now place the GD in a tablespoon (or so) of water--yum.

2. When is it Ready

Right away. That is one of the nice things about this extraction process.

3. Taste

I find that after a week in the fridge (that's where I store mine) the flavor seems to mature into a heady, slightly floral elixir with bud overtones. I find it rather pleasant.

4. Double the Recipe?

Sure, why not. It should be fine.

5. Using an Ounce

The recipe should scale nicely from 1/8 to whole ounce. But, unless you have experience with smaller batches I'd recommend sticking with the recipe as written. It would be a shame to have something go wrong with a large batch. I strongly recommend making the GD a couple of times before trying to scale up.

6. Isopropyl Alcohol

**DON'T USE IT!!!!!!!!!!!!!!**

