Nano Emulsified THC (Water Soluble) SOP

I have written this SOP for the cannabis community and to give back to all the people that helped me get where I am, as well as in hopes it will keep encouraging this community to share and develop together. If you paid for this SOP I am sorry.

-Zack

Equipment and Supply List

1. Ultrasonic Homogenizer(must reached 20Khz frequency)
2. Heated magnetic Stir Plate
3. 2000ML Beaker x1
4. 1000ML Beaker x6
5. Magnetic Stir Rods
6. Distillate of your target cannabinoid
7. Surfactant Blend (for this SOP I use Sonomechanics ALL in One)
8. Small Vacuum Pump
9. .2um Sterile Filter PES Fast Filter(foxxlifesciences or cole parmer) \*it is crucial that it is a fast filter model or you will not have a fun time filtering your final product. Link to filters below

<https://www.coleparmer.com/p/cole-parmer-high-flow-bottletop-filtration-systems/68427>

1. GL45 1000ml Bottles x3
2. Ice
3. Large bowl
4. Distilled Water

For this example I will be showing you how to roughly get 300mg per 10ml of water soluble.

The ratio of surfactant to distillate will be 5:1 so for 30g of distillate we will need 150g of all in one.

Step 1

Place the 2000ml beaker on the magnetic stir plate and set the temperature to 50C. Then place the 150g of surfactant and allow it to melt down

Step 2

Heat up the 30g of distillate so that it can flow into the melted surfactant evenly and throw in a magnetic stir rod. Allow the magnetic stir rod to mix the surfactant and distillate for 30 minutes.

Step 3

Measure out 1000ml of distilled water then pour it slowly into the mixture. Turn up the rpm for the magnetic stir rod till you see the solutions start to funnel downward. Allow the solution to mix for 30-40 minutes. (it is normal to see distillate and surfactant stuck on the walls of the glass don’t try to scrape it down)

Step 4

Once the mixture looks like a thick white milk and there Is nothing left on the walls of the beaker you are ready to start sonicating your solution

You will need to pour 300ml increments into two of the 1000ml beakers.

 Place one 1000ml beaker in a bowl of ice with a little water to help transfer the colder temp of the ice to the outside of the beaker and the other inside your ultrasonic homogenizer.

Step 5

Make sure that the horn of your ultrasonic is as close to the bottom of the beaker without touching the glass, this will increase cavitation of the molecules.

Step 6

Turn on the ultrasonic and set the controls to be on for 15 seconds with 3 second breaks. It is absolutely vital that you set the temperature stop to 48 C. The ultrasonic will boil and destroy your work if you do not set the over temp to 48 C.

Step 7

Once the solution reaches 48 C you will take it out of the ultrasonic and swap it with the other 1000ml beaker (300ml inside) that is sitting in the ice bath

Step 8

Repeat steps 6 and 7 until each 300ml increment has been in the ultrasonic 4 times. At this point you will notice that the solution is no longer a milky color it will be a yellow transparent liquid.

Step 9

Once you have put all of the mixture through the ultrasonic homogenizer the appropriate amount of times it is time to pull out a .2um sterile filter and a GL45 bottle.

Screw the Filter onto the GL45 bottle

Connect one end of the vacuum tubing to your hose barb that comes with each filter and the other end to the vac in port on the vac pump.

Step 10

Pour your emulsified solution into the filter and turn on the vac pump. Allow the entire solutions to be filtered, This should only take 1-3 minutes tops if your particle size has been done right.

Take off the filter and dispose of it properly.

Step 11

Knowing that 1ml equals roughly 30mg (depending on the purity of your starting distillate) dose out drinks or syrups accordingly

Keep in mind it will be bitter. This is due to the fact that when distillate is in its natural state the molecules are too big to penetrate our taste buds hence why distillate real taste and feels like bland oil in your mouth. However when its down to 20-40 nano meters its true bitter flavor floods our taste buds and can be overwhelming if not masked.

I hope you all enjoyed this SOP

* Zack