

A Methodology for the Preparation of Liquid Textured Cannabinoids, Delta-9THC/THCA with Minor Phyto-Cannabinoids Present via Nano Emulsion

Abstract:

The Babylon Company set out to find an easier way to make liquid solution cannabinoid products, (e.g. Hash Oil) by using the Qsonica sonication apparatus. Our goal is to provide potential and existing users, an easy to read, easy to understand, step-by-step guide to making the products we have achieved via sonication. Any variety of material can be used in replicating the experiments The Babylon Company achieved. Our experiments consisted of using dry plant material being of a 50/50 flower to sugar trim ratio, extracted using research grade n-butane. The extracted material was purged as Shatter in a vacuum oven for a 100-hour minimum to ensure low residual ppm (under 10ppm) for the consumption in the recreational market in the State of Alaska. The Babylon Company used a starting weight of 100 grams to 200 grams. The following experiment was conducted for the filling of vape carts/tanks.

***Note: Please read all instructions and follow all safety guidelines provided by the manufacturer/s for proper operation of all equipment and apparatuses used in the preparation of this experiment.**

Equipment needed:

Qsonica Q700 Sonicator with 1/2" solid tip probe (part #4219).

Vacuum Oven.

Extraction Machine – Closed Loop System.

Magnetic Stirring Hotplate

500ml – 1000ml

Pyrex beaker.

Stainless steel lab scraper/stir rod.

Ice Bath.

Instructions:

In a closed loop extraction system, extract plant material. Live, Fresh Frozen, or Dry Material can all be used.

Thin film spread upon parchment paper or PTFE sheets upon extraction.

100-hour minimum purge, ensuring to "flip" the extracted solution on a 12- hour schedule or twice daily.

Once the 100-hour mark has been reached, remove Shatter from parchment or PTFE sheet.

Allow Shatter to cool, break into small pieces, and place into a 500ml beaker.

Apply heat (50c/60c) to melt Shatter down to a semi-smooth texture. Stirring occasionally, until smooth.

Add 300ml of 190/200 proof Ethanol to beaker. As the solution heats skim lipid layer. (Warm Winterization)

Reduce solution to nearly the starting weight. Add preferred catalyst for enthalpy of vaporization. e.g. Terpenes, MCT oil, PG/VG. The Babylon Company used a 1:1 ratio of hash oil to catalyst.

Prepare ice bath for placement of beaker on a lab jack under the probe. Set Qsonica Sonicator to 80-82-Amplitude.

Place beaker in ice bath and raise lab jack until the probe is submerged half way into the semi-smooth solution.

Start the Sonicator, and slowly rotate in a clockwise motion, pausing the sonicator on one (1) minute intervals for two minutes. Resuming sonication after a brief stirring.

Solution temperatures should not reach higher than 105c.

Sonicate for 5 – 8 Minutes constantly, 30,000j output should be obtained for maximum Nano-emulsion.

Return sonicated solution to magnetic stirring hotplate, at a temperature of 60c and a rpm of 300-320rpm, continue mixing for 72 hours.

Lab Report:

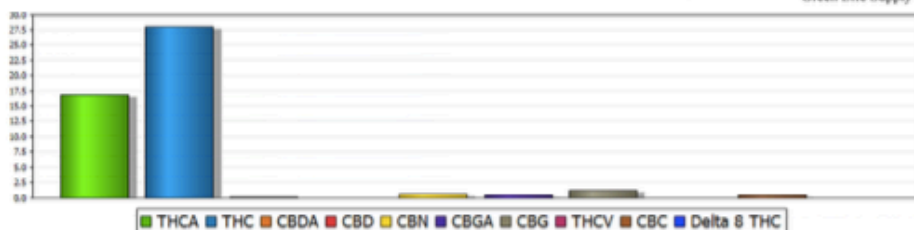
Hash Oil:



620 E Whitney Ave.
Anchorage, AK 99501
Phone: 907-258-6878

Sample ID: 7659
Company: Babylon Company, LLC
METRC ID: 0000203802
Transport ID: 1A402030000151A000001152
Date Received: 2018-02-07

Matrix: Concentrate Strain: Description: Hash Oil - 9# Hammer - Green Life Supply



Total THC %: 42.69 Total CBD %: 0.06 Total Cannabinoid %: 47.30

THCA %:	16.80	CBDA %:	0.07		
THC %:	27.95	CBD %:	0.00		
CBN %:	0.52	THCV %:	0.00	CBGA %:	0.42
CBG %:	1.11	D-8 THC %:	0.00	CBC %:	0.42
TERPENES RESULTS					
Alpha Pinene %:	N/A	Beta Pinene %:	N/A	Beta Myrcene %:	N/A
Camphene %:	N/A	Delta 3 Carene %:	N/A	A-Terpinene %:	N/A
P-Cymene %:	N/A	Limonene %:	N/A	Ocimene %:	N/A
G-Terpinene %:	N/A	Terpinolene %:	N/A	Linalool %:	N/A
Isopulegol %:	N/A	Geraniol %:	N/A	B-Caryophyllene %:	N/A
A-Humulene %:	N/A	Nerolidol 1 %:	N/A	Nerolidol 2 %:	N/A
Alpha Bisabolol %:	N/A	Guaiol %:	N/A		

RESIDUAL SOLVENTS RESULTS:

Overall Result:	Passed							
Butane PPM:	0.34	Passed	Hexane PPM:	0.13	Passed	Heptane PPM:	1.70	Passed
Benzene PPM:	BTL	Passed	Toluene PPM:	BTL	Passed	Xylenes PPM:	BTL	Passed

MICROSCOPE EVALUATION:

Observations:

