A Methodology for the Preparation of Amorphous Textured Cannabinoids Delta-9THC/THCA with Minor Phyto-Cannabinoids Present.

Abstract:

The Babylon Company set out to find an easier way to make amorphous structured cannabinoid products, (e.g. Wax, Crumble, and Cake Batter) 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 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.

*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 ½ inch 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.

Prepare ice bath for placement of beaker on a lab jack under the probe.

Set Qsonica Sonicator to 77-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. Resuming sonication after a brief stirring.

For Wax textures – 4 minutes total. (See Attached Lab Reports)

For Cake Batter textures – 5 minutes total. (See Attached Lab Reports)

For Crumble textures – 6-8 minutes total. (See Attached Lab Reports)



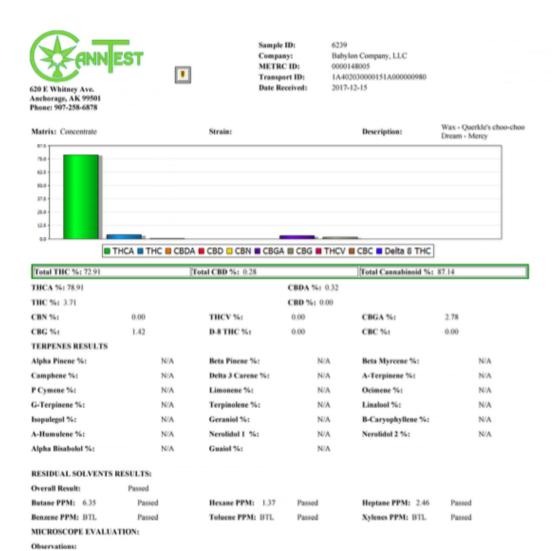
Finishing process for post-sonication.

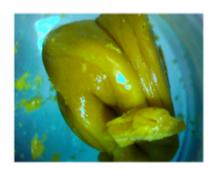
Once sonication times have been achieved, a gentle whipping stir is all that is needed to complete the experiment. For softer textures, remove from beaker and the experiment is complete. For Cake batter and Crumble type textures, place in vacuum oven, pull down pressure to -30mmHg for two/five minutes. Upon breaking the vacuum, the color will lighten slightly, and relative moisture will be within desired range for textures.

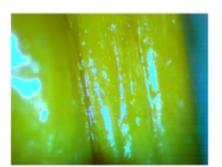


Lab Reports:

Wax:









Crumble:



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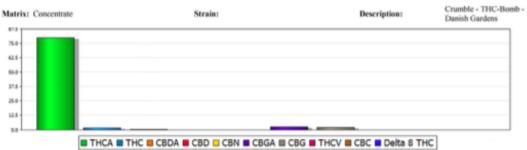
Sample ID: Company: METRC ID: 7658

Babylon Company, LLC 0000203802

Transport ID: Date Received:

1A402030000151A000001151

te Received: 2018-02-07



Total THC %: 71.57		Total CBD %: 0.29		Total Cannabinoid %: 86.11	
THCA %: 79.72			CBDA %: 0.34		
THC %: 1.65			CBD %: 0.00		
CBN %1	0.00	THCV %1	0.00	CBGA %:	2.37
CBG %1	2.03	D-8 THC %1	0.00	CBC %1	0.00
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		

Passed

Passed

Hexane PPM: 0.59

Toluene PPM: BTL

MICROSCOPE EVALUATION:

Observations:

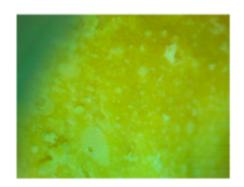
Butane PPM: 0.73

Benzene PPM: BTL



Passed

Passed



Heptane PPM: 2.30

Xylenes PPM: BTL

Passed

Passed.



Cake Batter:



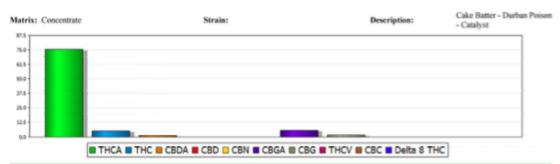
Sample ID: Company:

Babylon Company, LLC

METRC ID: 0000188403 Transport ID: 1A40203000

1A402030000151A000001102

Date Received: 2018-01-24



Total THC %: 71.22		Total CBD %: 0.88		Дочин санишения	
THCA %: 75.43			CBDA %: 1.01		
THC %: 5.06			CBD %: 0.00		
CBN %:	0.00	THCV %:	0.00	CBGA %:	5.76
BG %:	1.71	D-8 THC %:	0.00	CBC %:	0.00
TERPENES RESULTS					
Alpha Pinene %:	N/A	Beta Pinene %:	N/A	Beta Myrcene %:	N/A
amphene %:	N/A	Delta 3 Carene %:	N/A	A-Terpinene %:	N/A
Cymene %:	N/A	Limonene %:	N/A	Ocimene %:	N/A
-Terpinene %:	N/A	Terpinolene %:	N/A	Linalool %:	N/A
sopulegol %:	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		

Passed

Passed

Hexane PPM: 0.45

Toluene PPM: BTL

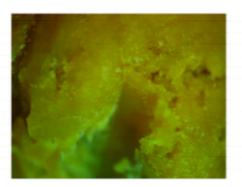
Benzene PPM: BTL Passed MICROSCOPE EVALUATION:

Observations:

Overall Result: Butane PPM: 0.64



Passed



Heptane PPM: 2.05

Xylenes PPM: BTL

Passed

Passed.

