

## CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** Broad Spectrum CBD Oil (0.0% THC)

**PRODUCT CODE:** BO-NO-Y-Z-A

**LOT NUMBER:** CONO20-40

**DATE OF MANUFACTURE:** 06NOV2020  
(DDMMYYYY)

**EXPIRATION DATE:** 06NOV2022

*(Expiration date is 24 months  
under sealed conditions.)*

**INGREDIENTS:** Broad Spectrum CBD Oil (0.0% THC)

Parameter	Method <sup>1</sup>	Specification	Results
Appearance		Viscous Oil, Possible Crystal Formation	Pass
Color	QCU002	Pale yellow to amber to brown	Pass
Dissolution		Soluble and translucent	Pass
<b>Cannabinoids</b>		<b>LOQ (ppm)</b>	<b>Wt. (%)</b>
CBD		20	86.249
CBD-A		20	< LOQ
$\Delta^9$ -THC		5	0.27
THC-A		5	< LOQ
CBN		5	0.28
CBN-A		5	< LOQ
CBG	QCU001	5	< LOQ
CBC	(UHPLC-DAD)	5	< LOQ
CBC-A		5	< LOQ
$\Delta^8$ -THC		5	< LOQ
CBDV		5	1.390
CBDV-A		5	< LOQ
THCV		5	< LOQ
Potency – Total CBD		NLT 80.0 wt%	86.2 wt%
Total THC		0.0%	0.0%
Identity – CBD		Retention Time $\pm$ 0.05min of Standard	-0.01 min
Terpenes		For Information Only	
$\beta$ -Caryophyllene			0.25%
Caryophyllene Oxide			0.14%
Guaiol	GC-MS		0.14%
$\alpha$ -Humulene	(CannaSafe)		< LOQ
Linalool			0.04%

This product is not intended to diagnose, treat, cure, or prevent any disease and has not been evaluated by the FDA.

Parameter	Method <sup>1</sup>	Specification	Results
Pesticides	LC/MS GC/MS (CannaSafe)	Conforms to EPA limits	Pass
<b>Residual Solvents</b>			
Ethanol		5000 ppm	Pass
Methanol	USP	3000 ppm	Pass
Pentane	<467>	5000 ppm	Pass
Acetone		5000 ppm	Pass
Isopropyl Alcohol	GC FID (CannaSafe)	5000 ppm	Pass
Heptane		5000 ppm	Pass
Hexane		290 ppm	Pass
<b>Heavy Metals</b>			
Arsenic	USP	<1.5 ppm	Pass
Cadmium	<2232>	<0.5 ppm	Pass
Lead	ICP-MS	<0.5 ppm	Pass
Mercury	(CannaSafe)	<0.2 ppm	Pass
<b>Microbial Limits</b>			
Total aerobic plate count	USP	<1000 cfu/g	Pass
Total yeast & mold	<2023>	<100 cfu/g	Pass
Enterobacteriaceae		<10 MPN/g	Pass
Aspergillus	(CannaSafe)	Absent	Pass
E. coli		Absent	Pass
Salmonella		Absent	Pass
<b>Mycotoxins</b>			
Aflatoxin B1	USP	<5ppb	Pass
Aflatoxin B2	<561>	<5ppb	Pass
Aflatoxin G1		<5ppb	Pass
Aflatoxin G2	LC-MS	<5ppb	Pass
Total Aflatoxins	(CannaSafe)	<20ppb	Pass
Ochratoxin A		<10ppb	Pass

Notes: <sup>1</sup>according to Voluum Biosciences internal analytical methods, US Pharmacopeia or 3<sup>rd</sup> party contract laboratory method  
ND=Not Detected


The above certificate of analysis is based on Product Specification (QA-FRM3-0005 BO-NO-Y-Z-A)

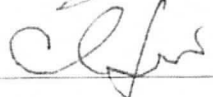
Revision No. 01

Results conform to all specifications:  Yes or No

**Note:** When sampling, manufacturing, or formulating with this oil, the oil MUST first be heated and liquefied at 70-75°C and mixed thoroughly. Attempting to sample the oil when it is in a semi solid state will not result in accurate analytical results.

**Storage:** Room Temperature, Protect from Light, Heat and Moisture

Prepared by: Blake Breitmeyer  Date: 17 Mar 2021  
Quality Control,

Reviewed by: Chris Didomenico  Date: 17 MAR 2021  
Quality Control,

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