



CERTIFICATE OF ANALYSIS

PRODUCT NAME: Broad Spectrum CBD Hemp Oil

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


LOT NUMBER: CONO20-19

DATE OF MANUFACTURE: 20JAN2020
(DDMMYYYY)

EXPIRATION DATE: 20JAN2022
(Expiration date is 24 months under sealed conditions.)

INGREDIENTS: Broad Spectrum CBD Oil

Parameter	Method ¹	Specification		Results
Appearance		Viscous Oil, Possible Crystal Formation		Pass
Color	QCU002	Pale yellow to amber to brown		Pass
Dissolution		Soluble and translucent		Pass
Cannabinoids		LOQ (ppm)	Wt. (%)	(mg/g)
CBD		20	87.738	877.379
CBD-A		20	< LOQ	< LOQ
Δ9-THC		5	< LOQ	< LOQ
THC-A		5	< LOQ	< LOQ
CBN		5	0.028	0.276
CBN-A		5	< LOQ	< LOQ
CBG	QCU001	5	< LOQ	< LOQ
CBC	(UHPLC-	5	< LOQ	< LOQ
CBC-A	DAD)	5	< LOQ	< LOQ
Δ8-THC		5	< LOQ	< LOQ
CBDV		5	1.410	14.099
CBDV-A		5	< LOQ	< LOQ
THCV		5	< LOQ	< LOQ
Potency – Total CBD		NLT 80.0 wt%		87.7 wt%
Total THC		0.0%		0.0%
Identity – CBD		Retention Time ± 0.05min of Standard		0.01min
Terpenes		For Information Only		
β-Caryophyllene				0.057%
Caryophyllene Oxide				0.063%
Cis-Nerolidol	GC-MS			< LOQ
Guaiol	(Green Scientific)			0.039%
Linalool				0.024%

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Parameter	Method ¹	Specification	Results
Pesticides	LC/MS GC/MS (Green Scientific)	Conforms to EPA limits	Conforms to EPA limits
Residual Solvents			
Ethanol		5000 ppm	< LOQ
Methanol	USP	3000 ppm	ND
Pentane	<467>	5000 ppm	ND
Acetone		5000 ppm	< LOQ
Isopropyl Alcohol	GC FID (Green Scientific)	5000 ppm	ND
Heptane		5000 ppm	ND
Hexane		290 ppm	< LOQ
Heavy Metals			
Arsenic	USP	<1.5 ppm	< LOQ
Cadmium	<2232>	<0.5 ppm	< LOQ
Lead	ICP-MS	<0.5 ppm	< LOQ
Mercury	(Green Scientific)	<0.2 ppm	< LOQ
Microbial Limits			
Total aerobic plate count	USP	<1000 cfu/g	Below Threshold
Total yeast & mold	<2023>	<100 cfu/g	Below Threshold
Total coliforms	(Green Scientific)	None	Below Threshold
E. coli		None	Below LOD
Salmonella		None	Below LOD
Mycotoxins			
Aflatoxin B1	USP	<5ppb	ND
Aflatoxin B2	<561>	<5ppb	ND
Aflatoxin G1	LC-MS	<5ppb	ND
Aflatoxin G2	(Green Scientific)	<5ppb	ND
Total Mycotoxins		<20ppb	ND

Notes: ¹according to Folium Biosciences internal analytical methods, US Pharmacopeia or 3rd party contract laboratory method.
ND=Not Detected; LOD=Limit of Detection; LOQ=Limit of Quantitation

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

Prepared by:  Date: 09 Aug 2020
Quality Control, Folium Biosciences

Reviewed by:  Date: 05 Aug 2020
Quality Control, Folium Biosciences