SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:
Oliphant Brewing LLC
350 Main St, Ste 2
Somerset, WI USA 54025

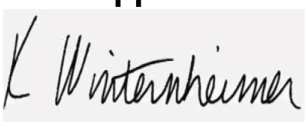
Ruin 013024

Batch ID or Lot Number:	Test:	Reported:	USDA License:
013024	**Potency**	**07Feb2024**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Unit	T000269427	05Feb2024	N/A
	Method(s):	Received:	Status:
	TM14 (HPLC-DAD)	02Feb2024	N/A

Cannabinoids

	LOD (mg)	**LOQ** (mg)	**Result** (mg)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	0.163	0.534	ND	ND	# of Servings = 1, Sample Weight=381g
Cannabichromenic Acid (CBCA)	0.149	0.489	ND	ND	
Cannabidiol (CBD)	0.471	1.564	5.410	0.00	
Cannabidiolic Acid (CBDA)	0.483	1.604	ND	ND	
Cannabidivarin (CBDV)	0.111	0.370	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.201	0.669	ND	ND	
Cannabigerol (CBG)	0.092	0.303	ND	ND	
Cannabigerolic Acid (CBGA)	0.386	1.268	ND	ND	
Cannabinol (CBN)	0.121	0.396	ND	ND	
Cannabinolic Acid (CBNA)	0.264	0.865	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.460	1.511	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.418	1.372	10.590	0.00	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.370	1.216	ND	ND	
Tetrahydrocannabivarin (THCV)	0.084	0.276	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.327	1.072	ND	ND	
Total Cannabinoids			**16.000**	**0.00**	
Total Potential THC			10.590	0.00	
Total Potential CBD			5.410	0.00	

Final Approval



Karen Winternheimer
07Feb2024
02:18:00 PM MST
PREPARED BY / DATE

Sam Smith
07Feb2024
02:21:00 PM MST
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/ba46e8c3-8615-4abe-ab02-15ece21cd6a9

Definitions
% = % (w/w) = Percent (weight of analyte / weight of product). ND = None Detected (defined by dynamic range of the method).
Total Potential Delta 9-THC or CBD is calculated to take into account the loss of a carboxyl group during decarboxylation step, using the following formulas: Total Potential Delta 9-THC = Delta 9-THC + (Delta 9-THCa *(0.877)) and Total CBD = CBD + (CBDa *(0.877)).

Cert #4329.02
ba46e8c386154abeab0215ece21cd6a9.3

SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:
SUPERIOR MOLECULAR LLC
4459 WHITE BEAR PKWY
WHITE BEAR LAKE, MN USA 55110

Full Panel WS Jan-Feb 2024 (CBD, CBN, CBG,D9)

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	Page 1 of 4
FP.WS.020124	Various	Concentrate	
Reported:	Started:	Received:	
05Feb2024	02Feb2024	02Feb2024	

Residual Solvents

Test ID: T000269758
Methods: TM04 (GC-MS): Residual Solvents

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Propane	95 - 1899	ND	
Butanes (Isobutane, n-Butane)	173 - 3467	ND	
Methanol	65 - 1291	ND	
Pentane	94 - 1871	ND	
Ethanol	93 - 1869	ND	
Acetone	103 - 2052	ND	
Isopropyl Alcohol	105 - 2096	ND	
Hexane	6 - 130	ND	
Ethyl Acetate	103 - 2066	ND	
Benzene	0.2 - 4.2	ND	
Heptanes	99 - 1980	ND	
Toluene	18 - 366	ND	
Xylenes (m,p,o-Xylenes)	124 - 2489	ND	

Final Approval

Sam Smith
05Feb2024
11:41:00 AM MST
PREPARED BY / DATE

Karen Winternheimer
05Feb2024
11:41:00 AM MST
APPROVED BY / DATE

SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:
SUPERIOR MOLECULAR LLC
4459 WHITE BEAR PKWY
WHITE BEAR LAKE, MN USA 55110

Full Panel WS Jan-Feb 2024 (CBD, CBN, CBG,D9)

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	
FP.WS.020124	Various	Concentrate	
Reported:	Started:	Received:	
05Feb2024	02Feb2024	02Feb2024	

Microbial Contaminants

Test ID: T000269756
Methods: TM25 (PCR) TM24, TM26, TM27 (Culture Plating)

	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10^0 CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter
Salmonella	TM25: PCR	10^0 CFU/25g	NA	Absent	
Total Yeast and Mold*	TM24: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	
Total Aerobic Count*	TM26: Culture Plating	10^2 CFU/g	$1.0x10^3$ - $1.5x10^5$	1.0x10^5 CFU/g	
Total Coliforms*	TM27: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	

Final Approval

Eden Thompson-Wright
05Feb2024
03:03:00 PM MST
PREPARED BY / DATE

Brianne Maillot
05Feb2024
03:32:00 PM MST
APPROVED BY / DATE

Heavy Metals

Test ID: T000269757
Methods: TM19 (ICP-MS): Heavy Metals

	Dynamic Range (ppm)	**Result** (ppm)	Notes
Arsenic	0.05 - 4.69	ND	
Cadmium	0.04 - 4.48	ND	
Mercury	0.05 - 4.78	ND	
Lead	0.05 - 4.75	ND	

Final Approval

Sam Smith
06Feb2024
04:47:00 PM MST
PREPARED BY / DATE

Karen Winternheimer
07Feb2024
11:12:00 AM MST
APPROVED BY / DATE

SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:
SUPERIOR MOLECULAR LLC
4459 WHITE BEAR PKWY
WHITE BEAR LAKE, MN USA 55110

Full Panel WS Jan-Feb 2024 (CBD, CBN, CBG,D9)

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	
FP.WS.020124	Various	Concentrate	
Reported:	Started:	Received:	
05Feb2024	02Feb2024	02Feb2024	

Pesticides

Test ID: T000269755
Methods: TM17

(LC-QQ LC MS/MS)	**Dynamic Range** (ppb)	**Result** (ppb)
Abamectin	322 - 2692	ND
Acephate	40 - 2713	ND
Acetamiprid	42 - 2711	ND
Azoxystrobin	46 - 2680	ND
Bifenazate	43 - 2700	ND
Boscalid	47 - 2707	ND
Carbaryl	42 - 2691	ND
Carbofuran	42 - 2677	ND
Chlorantraniliprole	48 - 2651	ND
Chlorpyrifos	48 - 2744	ND
Clofentezine	282 - 2731	ND
Diazinon	293 - 2717	ND
Dichlorvos	286 - 2745	ND
Dimethoate	41 - 2702	ND
E-Fenpyroximate	222 - 2857	ND
Etofenprox	44 - 2759	ND
Etoxazole	292 - 2664	ND
Fenoxycarb	41 - 2669	ND
Fipronil	50 - 2773	ND
Flonicamid	41 - 2768	ND
Fludioxonil	278 - 2672	ND
Hexythiazox	42 - 2774	ND
Imazalil	278 - 2725	ND
Imidacloprid	40 - 2726	ND
Kresoxim-methyl	43 - 2742	ND

	Dynamic Range (ppb)	**Result** (ppb)
Malathion	300 - 2685	ND
Metalaxyl	43 - 2693	ND
Methiocarb	42 - 2675	ND
Methomyl	41 - 2765	ND
MGK 264 1	145 - 1627	ND
MGK 264 2	110 - 1097	ND
Myclobutanil	50 - 2631	ND
Naled	44 - 2668	ND
Oxamyl	41 - 2770	ND
Paclobutrazol	45 - 2671	ND
Permethrin	300 - 2757	ND
Phosmet	42 - 2585	ND
Prophos	289 - 2668	ND
Propoxur	41 - 2692	ND
Pyridaben	286 - 2731	ND
Spinosad A	34 - 2091	ND
Spinosad D	67 - 674	ND
Spiromesifen	273 - 2744	ND
Spirotetramat	300 - 2772	ND
Spiroxamine 1	16 - 1015	ND
Spiroxamine 2	22 - 1572	ND
Tebuconazole	290 - 2684	ND
Thiacloprid	42 - 2720	ND
Thiamethoxam	42 - 2744	ND
Trifloxystrobin	44 - 2700	ND

Final Approval

Karen Winternheimer
07Feb2024
08:52:00 AM MST
PREPARED BY / DATE

Sam Smith
07Feb2024
08:55:00 AM MST
APPROVED BY / DATE

SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:

SUPERIOR MOLECULAR LLC

4459 WHITE BEAR PKWY
WHITE BEAR LAKE, MN USA 55110

Full Panel WS Jan-Feb 2024 (CBD, CBN, CBG,D9)

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	
FP.WS.020124	Various	Concentrate	
Reported:	Started:	Received:	
05Feb2024	02Feb2024	02Feb2024	

https://results.botanacor.com/api/v1/coas/uuid/f7ba33d5-94d6-4fc7-8f2c-46d528325346

Definitions

LOD = Limit of Detection, ULOQ = Upper Limit of Quantitation, LLOQ = Lower Limit of Quantitation, PPB = Parts per Billion, % = % (w/w) = Percent (weight of analyte / weight of product). ND = None Detected (defined by dynamic range of the method). Total Potential Delta 9-THC or CBD is calculated to take into account the loss of a carboxyl group during decarboxylation step, using the following formulas: Total Potential Delta 9-THC = Delta 9-THC + (Delta 9-THCa *(0.877)) and Total CBD = CBD + (CBDa *(0.877)). Fail equates to a concentration level of Delta 9-THC, on a dry weight basis, higher than 0.3 percent + or – the measurement uncertainty. Total Potential THC is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step. Total THC = THC + (THCa *(0.877)). ALOQ = Above Limit Of Quantitation (defined by dynamic range of the method), CFU/g = Colony Forming Units per Gram. Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form. Examples: 10^2 = 100 CFU, 10^3 = 1,000 CFU, 10^4 = 10,000 CFU, 10^5 = 100,000 CFU.

Cert #4329.02
f7ba33d594d64fc78f2c46d528325346.1