

# CERTIFICATE OF ANALYSIS

Prepared for:

## **Bent Paddle Brewing Co**

1912 W Michigan St. Duluth, MN USA 55806

Batch ID or Lot Number: 110122	Test, Test ID and Methods: Various	Matrix: Unit	Page 1 of 4	
Reported: <b>03Nov2022</b>	Started: 02Nov2022	Received: 02Nov2022		

#### Cannabinoids -+ 10. TOOODOC 450

Methods: TM14 (HPLC-DAD)	LOD (mg)	<b>LOQ</b> (mg)	Result (mg)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.177	0.500	ND	ND	# of Servings = 1
Cannabichromenic Acid (CBCA)	0.162	0.457	ND	ND	Sample
Cannabidiol (CBD)	0.482	1.424	5.180	0.00	Weight=355g
Cannabidiolic Acid (CBDA)	0.494	1.461	ND	ND	
Cannabidivarin (CBDV)	0.114	0.337	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.206	0.609	ND	ND	
Cannabigerol (CBG)	0.101	0.284	<loq< td=""><td><loq< td=""><td></td></loq<></td></loq<>	<loq< td=""><td></td></loq<>	
Cannabigerolic Acid (CBGA)	0.420	1.186	ND	ND	
Cannabinol (CBN)	0.131	0.370	ND	ND	
Cannabinolic Acid (CBNA)	0.287	0.809	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.501	1.413	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.455	1.284	4.490	0.00	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.403	1.137	ND	ND	
Tetrahydrocannabivarin (THCV)	0.091	0.258	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.356	1.003	ND	ND	
Total Cannabinoids			9.670	0.00	
Total Potential THC			4.490	0.00	
Total Potential CBD			5.180	0.00	

#### **Final Approval**

Sawantha Smoll 03Nov2022 10:47:00 AM MDT

Sam Smith

PREPARED BY / DATE

APPROVED BY / DATE

Karen Winternheimer Wintersheimen 03Nov2022 10:50:00 AM MDT

THC+



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1912 W Michigan St. Duluth, MN USA 55806

THC+		Duluth,	MN USA 55806	
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### Microbial Contaminants

Test ID: T000226460 Methods: TM25 (PCR) TM24, TM26,			Quantitation		
TM27 (Culture Plating)	Method	LOD	Range	Result	Notes
STEC	TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	Free from visual mold, mildew, and – foreign matter
Salmonella	TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	
Total Yeast and Mold*	TM24: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	_
Total Aerobic Count*	TM26: Culture Plating	10 <sup>2</sup> CFU/g	1.0x10 <sup>3</sup> - 1.5x10 <sup>5</sup>	None Detected	-
Total Coliforms*	TM27: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	m

#### **Final Approval**

Breanne Maillob	Brianne M 07Nov20 10:52:00
PREPARED BY / DATE	

nne Maillot ov2022 2:00 AM MST

Eden Thompson APPROVED BY / DATE Eden Thompson-Wright 07Nov2022 03:09:00 PM MST

#### **Heavy Metals**

Test ID: T000226461 Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.04 - 4.23	ND	
Cadmium	0.04 - 4.13	ND	
Mercury	0.04 - 4.11	ND	
Lead	0.04 - 4.05	ND	

#### **Final Approval**

	Sam S
Samantha Smoll	07No
annumer offer	09:00
PREPARED BY / DATE	

Sam Smith 07Nov2022 09:00:00 AM MST

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Karen Winternheimer 07Nov2022 09:04:00 AM MST

APPROVED BY / DATE

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### Pesticides

Test ID: T000226459 Methods: TM17

(LC-QQ LC MS/MS)	<b>Dynamic Range</b> (ppb)	Result (ppb)	
Abamectin	257 - 2735	ND	М
Acephate	40 - 2786	ND	Μ
Acetamiprid	37 - 2747	ND	Μ
Azoxystrobin	41 - 2744	ND	Μ
Bifenazate	41 - 2713	ND	Μ
Boscalid	33 - 2752	ND	Μ
Carbaryl	38 - 2723	ND	M
Carbofuran	40 - 2722	ND	Na
Chlorantraniliprole	43 - 2728	ND	O
Chlorpyrifos	41 - 2741	ND	Pa
Clofentezine	270 - 2744	ND	Pe
Diazinon	281 - 2758	ND	Pł
Dichlorvos	281 - 2794	ND	Pr
Dimethoate	38 - 2745	ND	Pr
E-Fenpyroximate	272 - 2716	ND	Ру
Etofenprox	40 - 2720	ND	Sp
Etoxazole	284 - 2705	ND	Sp
Fenoxycarb	41 - 2740	ND	Sp
Fipronil	31 - 2850	ND	Sp
Flonicamid	42 - 2776	ND	Sp
Fludioxonil	298 - 2755	ND	Sp
Hexythiazox	41 - 2735	ND	Te
Imazalil	265 - 2771	ND	Th
Imidacloprid	43 - 2732	ND	Th
Kresoxim-methyl	42 - 2789	ND	Tr

	<b>Dynamic Range</b> (ppb)	Result (ppb)
Malathion	284 - 2744	ND
Metalaxyl	40 - 2747	ND
Methiocarb	39 - 2742	ND
Methomyl	36 - 2758	ND
MGK 264 1	164 - 1614	ND
MGK 264 2	104 - 1124	ND
Myclobutanil	13 - 2760	ND
Naled	53 - 2773	ND
Oxamyl	36 - 2749	ND
Paclobutrazol	41 - 2698	ND
Permethrin	276 - 2738	ND
Phosmet	42 - 2720	ND
Prophos	274 - 2715	ND
Propoxur	40 - 2729	ND
Pyridaben	281 - 2684	ND
Spinosad A	32 - 2240	ND
Spinosad D	46 - 482	ND
Spiromesifen	257 - 2742	ND
Spirotetramat	265 - 2801	ND
Spiroxamine 1	18 - 1151	ND
Spiroxamine 2	22 - 1568	ND
Tebuconazole	279 - 2707	ND
Thiacloprid	40 - 2733	ND
Thiamethoxam	36 - 2764	ND
Trifloxystrobin	42 - 2750	ND

#### **Final Approval**



Karen Winternheimer 10Nov2022 Munhumen 12:28:00 PM MST

Sam Smith Samantha Smith 10Nov2022 12:30:00 PM MST

APPROVED BY / DATE



THC+

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Definitions

https://results.botanacor.com/api/v1/coas/uuid/30d3c8c9-82bf-436d-8422-e12b3abe30e7

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-THC a\*(0.877)) and Total CBD = CBD + (CBD a\*(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 by dynamic range of the method), during decarboxylation step. Total Potential THC is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step. Total Potential THC is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step. Total POTEC = 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.

Testing results are based solely upon the sample submitted to SC Laboratories, Inc., in the condition it was received. SC Laboratories, Inc., warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited by A2LA. Some tests listed on this COA may not be within our scope of A2LA accreditation. Please visit A2LA for more details.



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