SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:
Duluth Cider, LLC
2307 W Superior St
Duluth, MN USA 55806

Raspberry White Chocolates

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	Page 1 of 3
0223_01	Various	Unit	
Reported:	Started:	Received:	
15Feb2023	13Feb2023	10Feb2023	

Cannabinoids

Test ID: T000234986
Methods: TM14 (HPLC-DAD)

	LOD (mg)	**LOQ** (mg)	**Result** (mg)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	0.087	0.248	ND	ND	# of Servings = 1, Sample Weight=4.4g
Cannabichromenic Acid (CBCA)	0.080	0.227	ND	ND	
Cannabidiol (CBD)	0.229	0.725	ND	ND	
Cannabidiolic Acid (CBDA)	0.234	0.743	ND	ND	
Cannabidivarin (CBDV)	0.054	0.171	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.098	0.310	ND	ND	
Cannabigerol (CBG)	0.050	0.141	ND	ND	
Cannabigerolic Acid (CBGA)	0.207	0.588	ND	ND	
Cannabinol (CBN)	0.065	0.184	ND	ND	
Cannabinolic Acid (CBNA)	0.141	0.401	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.247	0.701	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.224	0.637	4.840	1.10	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.199	0.564	ND	ND	
Tetrahydrocannabivarin (THCV)	0.045	0.128	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.175	0.498	ND	ND	
Total Cannabinoids			**4.840**	**1.10**	
Total Potential THC			4.840	1.10	
Total Potential CBD			ND	ND	

Final Approval

Sam Smith
16Feb2023
06:14:00 PM MST
PREPARED BY / DATE

Karen Winternheimer
16Feb2023
06:17:00 PM MST
APPROVED BY / DATE

Heavy Metals

Test ID: T000234989
Methods: TM19 (ICP-MS): Heavy Metals

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Arsenic	0.05 - 4.89	ND	
Cadmium	0.05 - 4.74	ND	
Mercury	0.04 - 4.30	ND	
Lead	0.04 - 3.87	ND	

Final Approval

Sam Smith
17Feb2023
01:27:00 PM MST
PREPARED BY / DATE

Karen Winternheimer
17Feb2023
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Pesticides

Test ID: T000234987
Methods: TM17

(LC-QQ LC MS/MS)	**Dynamic Range** (ppb)	**Result** (ppb)		**Dynamic Range** (ppb)	**Result** (ppb)
Abamectin	297 - 2792	ND	Malathion	302 - 2702	ND
Acephate	41 - 2796	ND	Metalaxyl	41 - 2735	ND
Acetamiprid	44 - 2777	ND	Methiocarb	42 - 2747	ND
Azoxystrobin	45 - 2726	ND	Methomyl	40 - 2767	ND
Bifenazate	41 - 2722	ND	MGK 264 1	169 - 1608	ND
Boscalid	41 - 2792	ND	MGK 264 2	110 - 1130	ND
Carbaryl	41 - 2718	ND	Myclobutanil	40 - 2752	ND
Carbofuran	45 - 2698	ND	Naled	44 - 2720	ND
Chlorantraniliprole	41 - 2742	ND	Oxamyl	43 - 2765	ND
Chlorpyrifos	38 - 2737	ND	Paclobutrazol	44 - 2698	ND
Clofentezine	273 - 2731	ND	Permethrin	288 - 2744	ND
Diazinon	291 - 2730	ND	Phosmet	42 - 2720	ND
Dichlorvos	263 - 2800	ND	Prophos	295 - 2742	ND
Dimethoate	41 - 2748	ND	Propoxur	44 - 2713	ND
E-Fenpyroximate	294 - 2737	ND	Pyridaben	310 - 2696	ND
Etofenprox	44 - 2698	ND	Spinosad A	35 - 2226	ND
Etoxazole	309 - 2713	ND	Spinosad D	52 - 493	ND
Fenoxycarb	45 - 2730	ND	Spiromesifen	285 - 2749	ND
Fipronil	42 - 2729	ND	Spirotetramat	289 - 2741	ND
Flonicamid	50 - 2770	ND	Spiroxamine 1	18 - 1159	ND
Fludioxonil	307 - 2813	ND	Spiroxamine 2	4 - 1599	ND
Hexythiazox	42 - 2732	ND	Tebuconazole	289 - 2696	ND
Imazalil	291 - 2750	ND	Thiacloprid	43 - 2750	ND
Imidacloprid	43 - 2771	ND	Thiamethoxam	41 - 2792	ND
Kresoxim-methyl	40 - 2749	ND	Trifloxystrobin	46 - 2706	ND

Final Approval



Karen Winternheimer
17Feb2023
01:56:00 PM MST
PREPARED BY / DATE



Sam Smith
17Feb2023
01:59:00 PM MST
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Microbial Contaminants

Test ID: T000234988
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	$1.0x10^3$ - $1.5x10^5$	None Detected	
Total Coliforms*	TM27: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	

Final Approval

Brianne Maillot
19Feb2023
04:16:00 PM MST
PREPARED BY / DATE

Eden Thompson-Wright
20Feb2023
09:40:00 AM MST
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/fe38eb22-40b7-4edd-9946-4151c8662d09

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.

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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