SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:
Surly Brewing Co
4811 Dusharme Dr
Brooklyn Center, MN USA 55429

Cheech & Chong High and Dry Grapefruit Twist

Batch ID or Lot Number:	Test:	Reported:	USDA License:
MT004 Best By: 5/21/25 10:12	**Potency**	**05Feb2024**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Unit	T000269913	05Feb2024	N/A
	Method(s):	Received:	Status:
	TM14 (HPLC-DAD)	05Feb2024	N/A

Cannabinoids

	LOD (mg)	**LOQ** (mg)	**Result** (mg)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	0.156	0.511	ND	ND	# of Servings = 1, Sample Weight=355g
Cannabichromenic Acid (CBCA)	0.142	0.468	ND	ND	
Cannabidiol (CBD)	0.502	1.509	ND	ND	
Cannabidiolic Acid (CBDA)	0.515	1.548	ND	ND	
Cannabidivarin (CBDV)	0.119	0.357	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.215	0.646	ND	ND	
Cannabigerol (CBG)	0.088	0.290	<LOQ	<LOQ	
Cannabigerolic Acid (CBGA)	0.370	1.214	ND	ND	
Cannabinol (CBN)	0.115	0.379	ND	ND	
Cannabinolic Acid (CBNA)	0.252	0.828	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.440	1.446	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.400	1.313	5.390	0.00	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.354	1.164	ND	ND	
Tetrahydrocannabivarin (THCV)	0.080	0.264	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.313	1.026	ND	ND	
Total Cannabinoids			**5.390**	**0.00**	
Total Potential THC			5.390	0.00	
Total Potential CBD			ND	ND	

Final Approval

Sam Smith
05Feb2024
02:27:00 PM MST
PREPARED BY / DATE

Karen Winternheimer
05Feb2024
02:33:00 PM MST
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/f53ec709-c35a-4f9a-bf4e-6eaa3c69c8e7

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)).

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CERTIFICATE OF ANALYSIS

Prepared for:
Surly Brewing Co
4811 Dusharme Dr
Brooklyn Center, MN USA 55429

C&C Grapefruit MT004

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	Page 1 of 6
MT004	Various	Finished Product	
Reported:	**Started:**	**Received:**	
27Nov2023	24Nov2023	24Nov2023	

Microbial Contaminants

Test ID: T000262852
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

Brett Hudson
27Nov2023
11:18:00 AM MST
PREPARED BY / DATE

Eden Thompson-Wright
27Nov2023
12:15:00 PM MST
APPROVED BY / DATE

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Prepared for:
Surly Brewing Co
4811 Dusharme Dr
Brooklyn Center, MN USA 55429

C&C Grapefruit MT004

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	
MT004	Various	Finished Product	
Reported:	Started:	Received:	
27Nov2023	24Nov2023	24Nov2023	

Mycotoxins

Test ID: T000262855
Methods: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins

	Dynamic Range (ppb)	**Result** (ppb)	**Notes**
Ochratoxin A	2.30 - 134.28	ND	N/A
Aflatoxin B1	0.94 - 32.52	ND	
Aflatoxin B2	0.94 - 32.82	ND	
Aflatoxin G1	1.01 - 33.01	ND	
Aflatoxin G2	1.10 - 33.17	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval

Sam Smith
29Nov2023
02:03:00 PM MST
PREPARED BY / DATE

Karen Winternheimer
29Nov2023
02:08:00 PM MST
APPROVED BY / DATE

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CERTIFICATE OF ANALYSIS

Prepared for:
Surly Brewing Co
4811 Dusharme Dr
Brooklyn Center, MN USA 55429

C&C Grapefruit MT004

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	
MT004	Various	Finished Product	
Reported:	Started:	Received:	
27Nov2023	24Nov2023	24Nov2023	

Residual Solvents

Test ID: T000262854
Methods: TM04 (GC-MS): Residual

Solvents	**Dynamic Range** (ppm)	**Result** (ppm)	**Notes**
Propane	88 - 1757	ND	
Butanes (Isobutane, n-Butane)	173 - 3451	ND	
Methanol	64 - 1282	ND	
Pentane	94 - 1887	ND	
Ethanol	101 - 2023	1620	
Acetone	99 - 1981	ND	
Isopropyl Alcohol	107 - 2131	ND	
Hexane	6 - 122	ND	
Ethyl Acetate	103 - 2053	ND	
Benzene	0.2 - 4.0	ND	
Heptanes	98 - 1961	ND	
Toluene	18 - 370	ND	
Xylenes (m,p,o-Xylenes)	135 - 2699	ND	

Final Approval

Karen Winternheimer
30Nov2023
12:48:00 PM MST
PREPARED BY / DATE

Sam Smith
30Nov2023
12:50:00 PM MST
APPROVED BY / DATE

Heavy Metals

Test ID: T000262853
Methods: TM19 (ICP-MS): Heavy

Metals	**Dynamic Range** (ppm)	**Result** (ppm)	**Notes**
Arsenic	0.04 - 4.32	ND	
Cadmium	0.04 - 4.28	ND	
Mercury	0.04 - 4.24	ND	
Lead	0.04 - 4.34	ND	

Final Approval

Sam Smith
30Nov2023
07:58:00 AM MST
PREPARED BY / DATE

Karen Winternheimer
30Nov2023
08:00:00 AM MST
APPROVED BY / DATE

SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:
Surly Brewing Co
4811 Dusharme Dr
Brooklyn Center, MN USA 55429

C&C Grapefruit MT004

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	
MT004	Various	Finished Product	
Reported:	Started:	Received:	
27Nov2023	24Nov2023	24Nov2023	

Pesticides

Test ID: T000262851
Methods: TM17

(LC-QQ LC MS/MS)	**Dynamic Range** (ppb)	**Result** (ppb)		**Dynamic Range** (ppb)	**Result** (ppb)
Abamectin	385 - 3277	ND	Malathion	280 - 2762	ND
Acephate	43 - 2767	ND	Metalaxyl	46 - 2743	ND
Acetamiprid	42 - 2720	ND	Methiocarb	47 - 2707	ND
Azoxystrobin	44 - 2764	ND	Methomyl	44 - 2802	ND
Bifenazate	44 - 2711	ND	MGK 264 1	164 - 1610	ND
Boscalid	41 - 2623	ND	MGK 264 2	113 - 1089	ND
Carbaryl	43 - 2708	ND	Myclobutanil	17 - 2632	ND
Carbofuran	44 - 2682	ND	Naled	46 - 2642	ND
Chlorantraniliprole	50 - 2579	ND	Oxamyl	43 - 2793	ND
Chlorpyrifos	50 - 2781	ND	Paclobutrazol	48 - 2595	ND
Clofentezine	283 - 2691	ND	Permethrin	260 - 2759	ND
Diazinon	289 - 2727	ND	Phosmet	43 - 2585	ND
Dichlorvos	283 - 2752	ND	Prophos	303 - 2679	ND
Dimethoate	43 - 2726	ND	Propoxur	45 - 2707	ND
E-Fenpyroximate	286 - 2761	ND	Pyridaben	298 - 2830	ND
Etofenprox	43 - 2781	ND	Spinosad A	32 - 2128	ND
Etoxazole	287 - 2702	ND	Spinosad D	65 - 685	ND
Fenoxycarb	30 - 2714	ND	Spiromesifen	273 - 2747	ND
Fipronil	49 - 2636	ND	Spirotetramat	267 - 2754	ND
Flonicamid	43 - 2740	ND	Spiroxamine 1	16 - 1027	ND
Fludioxonil	315 - 2625	ND	Spiroxamine 2	28 - 1553	ND
Hexythiazox	42 - 2753	ND	Tebuconazole	286 - 2594	ND
Imazalil	263 - 2804	ND	Thiacloprid	43 - 2746	ND
Imidacloprid	43 - 2776	ND	Thiamethoxam	40 - 2752	ND
Kresoxim-methyl	45 - 2761	ND	Trifloxystrobin	46 - 2738	ND

Final Approval

Karen Winternheimer
01Dec2023
09:36:00 AM MST
PREPARED BY / DATE

Sam Smith
01Dec2023
09:42:00 AM MST
APPROVED BY / DATE

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C&C Grapefruit MT004

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	Page 6 of 6
MT004	Various	Finished Product	
Reported:	**Started:**	**Received:**	
27Nov2023	24Nov2023	24Nov2023	

https://results.botanacor.com/api/v1/coas/uuid/d1af2e47-6114-480a-91dd-93545b61a26f

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.

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