



Certificate of Analysis

QA SAMPLE - INFORMATIONAL ONLY

1 of 3

ICAL ID: 20240709-076
Sample: CA240709-028-099
Hop The Wave-Half&Half
Strain: Hop The Wave-Half&Half
Category: Ingestible
Type: Beverage

Hop The Wave Brewing
Lic. #
SD
SD, CA 92121
Lic. #

Batch#: 061924-945
Batch Size Collected:
Total Batch Size:
Collected: 07/11/2024; Received: 07/11/2024
Completed: 07/11/2024

Moisture NT	Δ 9-THC 5.06 mg/unit	CBD 5.19 mg/unit	Total Cannabinoids 10.24 mg/unit	Sum of Cannabinoids 10.24 mg/unit	Total Terpenes NT
Water Activity NT					

Summary	SOP Used	Date Tested	
Batch Cannabinoids	POT-PREP-002	07/10/2024	Complete Complete



Scan to see results

Cannabinoid Profile

1 Unit = can, 365.53 g. 1 mL = 1 g.

Analyte	LOQ (mg/g)	LOD (mg/g)	%	mg/g	mg/mL	mg/unit	Analyte	LOQ (mg/g)	LOD (mg/g)	%	mg/g	mg/mL	mg/unit
THCa	0.0128	0.0043	ND	ND	ND	ND	CBGa	0.0046	0.0015	ND	ND	ND	ND
Δ 9-THC	0.0046	0.0010	0.001	0.01	0.01	5.06	CBG	0.0046	0.0005	ND	ND	ND	ND
Δ 8-THC	0.0046	0.0014	ND	ND	ND	ND	CBN	0.0046	0.0005	ND	ND	ND	ND
THCV	0.0046	0.0006	ND	ND	ND	ND	Total THC			0.00	0.01	0.01	5.06
CBDa	0.0049	0.0016	ND	ND	ND	ND	Total CBD			0.00	0.01	0.01	5.19
CBD	0.0046	0.0008	0.001	0.01	0.01	5.19	Total			0.00	0.03	0.03	10.24
CBDV	0.0046	0.0004	ND	ND	ND	ND	Sum of Cannabinoids			0.00	0.03	0.03	10.24
CBC	0.0076	0.0025	ND	ND	ND	ND							

Total THC=THCa * 0.877 + d9-THC + d8-THC; Total CBD = CBDa * 0.877 + CBD. Total Cannabinoids=(Acidic Cannabinoids)*0.877+Non-acidic Cannabinoids; Sum of Cannabinoids=Acidic Cannabinoids+Non-acidic Cannabinoids. LOD= Limit of Detection, LOQ= Limit of Quantitation, ND= Not Detected, NR= Not Reported. Potency is reported on a dry weight basis. Instrumentation and analysis SOPs used: Cannabinoids:UHPLC-DAD(POT-INST-005),Moisture:Moisture Analyzer(MOISTURE-001),Water Activity:Water Activity Meter(WA-INST-002), Foreign Material:Microscope(FOREIGN-001). Density measured at 19-24 °C, Water Activity measured at 0-90% RH. All QA submitted by the client, All CA State Compliance sampled using SAMPL-SOP-001.

Terpene Profile

Analyte	LOQ (mg/g)	LOD (mg/g)	%	mg/g	Analyte	LOQ (mg/g)	LOD (mg/g)	%	mg/g
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NR= Not Reported (no analysis was performed), ND= Not Detected (the concentration is less than the Limit of Detection (LOD)). Analytical instrumentation used: HS-GC-MS; samples analyzed according to SOP TERP-INST-003.



Infinite Chemical Analysis Labs
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San Diego, CA
(858) 623-2740
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Lic# C8-0000047-LIC

Josh M Swider

Josh Swider
Lab Director, Managing Partner
07/11/2024

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Hop The Wave-Half&Half
Strain: Hop The Wave-Half&Half
Category: Ingestible
Type: Beverage

Hop The Wave Brewing
Lic. #
SD
SD, CA 92121
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Batch#: 061924-945
Batch Size Collected:
Total Batch Size:
Collected: 07/15/2024; Received: 07/15/2024
Completed: 07/15/2024

Moisture NT Water Activity NT	Δ9-THC NT	CBD NT	Total Cannabinoids NT	Sum of Cannabinoids NT	Total Terpenes NT
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Summary	SOP Used	Date Tested	
Batch	RS-PREP-001	07/10/2024	Pass
Residual Solvents	MICRO-PREP-001	07/12/2024	Pass
Microbials	PESTMICO-LC-PREP-001	07/10/2024	Pass
Mycotoxins	HM-PREP-001	07/10/2024	Pass
Heavy Metals	FM-PREP-001	07/09/2024	Pass
Foreign Matter	PESTMICO-LC-PREP-001 /	07/10/2024	Pass
Pesticides	PEST-GC-PREP-001		



Scan to see results

Cannabinoid Profile

Analyte	LOQ (mg/g)	LOD (mg/g)	%	mg/g	Analyte	LOQ (mg/g)	LOD (mg/g)	%	mg/g
---------	------------	------------	---	------	---------	------------	------------	---	------

Total THC=THCa * 0.877 + d9-THC + d8-THC; Total CBD = CBDA * 0.877 + CBD. Total Cannabinoids=(Acidic Cannabinoids)*0.877+Non-acidic Cannabinoids; Sum of Cannabinoids=Acidic Cannabinoids+Non-acidic Cannabinoids. LOD= Limit of Detection, LOQ= Limit of Quantitation, ND= Not Detected, NR= Not Reported. Potency is reported on a dry weight basis. Instrumentation and analysis SOPs used: Cannabinoids:UHPLC-DAD(POT-INST-005),Moisture:Moisture Analyzer(MOISTURE-001),Water Activity:Water Activity Meter(WA-INST-002), Foreign Material:Microscope(FOREIGN-001). Density measured at 19-24 °C, Water Activity measured at 0-90% RH. All QA submitted by the client, All CA State Compliance sampled using SAMPL-SOP-001.

Terpene Profile

Analyte	LOQ (mg/g)	LOD (mg/g)	%	mg/g	Analyte	LOQ (mg/g)	LOD (mg/g)	%	mg/g
---------	------------	------------	---	------	---------	------------	------------	---	------

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2 of 3

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Hop The Wave-Half&Half
Strain: Hop The Wave-Half&Half
Category: Ingestible
Type: Beverage

Hop The Wave Brewing
Lic. #
SD
SD, CA 92121
Lic. #

Batch#: 061924-945
Batch Size Collected:
Total Batch Size:
Collected: 07/15/2024; Received: 07/15/2024
Completed: 07/15/2024

Residual Solvent Analysis

Category 1	LOQ	LOD	Limit	Status	Category 2	LOQ	LOD	Limit	Status	Category 2	LOQ	LOD	Limit	Status			
	µg/g	µg/g	µg/g	µg/g		µg/g	µg/g	µg/g	µg/g		µg/g	µg/g	µg/g	µg/g			
1,2-Dichloro-Ethane	ND	0.264	0.088	1	Pass	Acetone	ND	51.246	0.716	5000	Pass	n-Hexane	ND	0.281	0.027	290	Pass
Benzene	ND	0.052	0.017	1	Pass	Acetonitrile	ND	0.42	0.14	410	Pass	Isopropanol	ND	2.86	0.614	5000	Pass
Chloroform	ND	0.076	0.025	1	Pass	Butane	ND	4.849	0.748	5000	Pass	Methanol	ND	2.602	0.867	3000	Pass
Ethylene Oxide	ND	0.579	0.179	1	Pass	Ethanol	270.7	7.575	2.525	5000	Pass	Pentane	ND	5.075	1.692	5000	Pass
Methylene-Chloride	ND	0.729	0.08	1	Pass	Ethyl-Acetate	ND	2.288	0.175	5000	Pass	Propane	ND	9.709	3.236	5000	Pass
Trichloroethene	ND	0.145	0.028	1	Pass	Ethyl-Ether	ND	2.869	0.389	5000	Pass	Toluene	ND	0.864	0.067	890	Pass
						Heptane	ND	2.859	0.496	5000	Pass	Xylenes	ND	2.572	0.326	2170	Pass

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Heavy Metal Screening

	LOQ	LOD	Limit	Status	
	µg/g	µg/g	µg/g	µg/g	
Arsenic	ND	0.009	0.003	1.5	Pass
Cadmium	ND	0.002	0.001	0.5	Pass
Lead	ND	0.004	0.001	0.5	Pass
Mercury	ND	0.014	0.005	1.5	Pass

NR= Not Reported (no analysis was performed), ND= Not Detected (the concentration is less than the Limit of Detection (LOD)). Analytical instrumentation used: ICP-MS; samples analyzed according to SOP HM-INST-003.

Microbiological Screening

	Limit	Result	Status
	CFU/g	CFU/g	
Aspergillus flavus		Not Detected	Pass
Aspergillus fumigatus		Not Detected	Pass
Aspergillus niger		Not Detected	Pass
Aspergillus terreus		Not Detected	Pass
STEC		Not Detected	Pass
Salmonella SPP		Not Detected	Pass

ND=Not Detected. Analytical instrumentation used:qPCR; samples analyzed according to SOP MICRO-INST-001.



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Hop The Wave-Half&Half
Strain: Hop The Wave-Half&Half
Category: Ingestible
Type: Beverage

Hop The Wave Brewing
Lic. #
SD
SD, CA 92121
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Batch#: 061924-945
Batch Size Collected:
Total Batch Size:
Collected: 07/15/2024; Received: 07/15/2024
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Chemical Residue Screening

Category 1	LOQ	LOD	Status	Mycotoxins	LOQ	LOD	Limit	Status		
	µg/g	µg/g	µg/g		µg/kg	µg/kg	µg/kg	µg/kg		
Aldicarb	ND	0.065	0.022	Pass	B1	ND	7.88	2.6	Tested	
Carbofuran	ND	0.030	0.009	Pass	B2	ND	6.18	2.04	Tested	
Chlordane	ND	0.075	0.025	Pass	G1	ND	8.99	2.97	Tested	
Chlorfenapyr	ND	0.075	0.025	Pass	G2	ND	5.72	1.89	Tested	
Chlorpyrifos	ND	0.053	0.018	Pass	Ochratoxin A	ND	11.72	3.87	20	Pass
Coumaphos	ND	0.056	0.018	Pass	Total Aflatoxins	ND		20	Pass	
Daminozide	ND	0.079	0.026	Pass						
Dichlorvos	ND	0.067	0.022	Pass						
Dimethoate	ND	0.036	0.012	Pass						
Ethoprophos	ND	0.053	0.017	Pass						
Etofenprox	ND	0.030	0.008	Pass						
Fenoxycarb	ND	0.043	0.014	Pass						
Fipronil	ND	0.045	0.015	Pass						
Imazalil	ND	0.047	0.016	Pass						
Methiocarb	ND	0.047	0.016	Pass						
Mevinphos	ND	0.042	0.014	Pass						
Paclobutrazol	ND	0.040	0.013	Pass						
Parathion Methyl	ND	0.024	0.008	Pass						
Propoxur	ND	0.047	0.016	Pass						
Spiroxamine	ND	0.032	0.011	Pass						
Thiacloprid	ND	0.042	0.014	Pass						

Category 2	LOQ	LOD	Limit	Status	Category 2	LOQ	LOD	Limit	Status		
	µg/g	µg/g	µg/g	µg/g		µg/g	µg/g	µg/g	µg/g		
Abamectin	ND	0.030	0.010	0.3	Pass	Kresoxim Methyl	ND	0.038	0.012	1	Pass
Acephate	ND	0.050	0.016	5	Pass	Malathion	ND	0.035	0.012	5	Pass
Acequinocyl	ND	0.059	0.019	4	Pass	Metalaxyl	ND	0.031	0.010	15	Pass
Acetamiprid	ND	0.044	0.015	5	Pass	Methomyl	ND	0.048	0.016	0.1	Pass
Azoxystrobin	ND	0.029	0.010	40	Pass	Myclobutanil	ND	0.055	0.018	9	Pass
Bifenazate	ND	0.035	0.012	5	Pass	Naled	ND	0.051	0.017	0.5	Pass
Bifenthrin	ND	0.040	0.013	0.5	Pass	Oxamyl	ND	0.046	0.015	0.3	Pass
Boscalid	ND	0.060	0.020	10	Pass	Pentachloronitrobenzene	ND	0.054	0.018	0.2	Pass
Captan	ND	0.358	0.120	5	Pass	Permethrin	ND	0.030	0.008	20	Pass
Carbaryl	ND	0.049	0.016	0.5	Pass	Phosmet	ND	0.038	0.012	0.2	Pass
Chlorantraniliprole	ND	0.063	0.021	40	Pass	Piperonyl Butoxide	ND	0.030	0.008	8	Pass
Clofentezine	ND	0.039	0.013	0.5	Pass	Prallethrin	ND	0.068	0.023	0.4	Pass
Cyfluthrin	ND	0.056	0.019	1	Pass	Propiconazole	ND	0.059	0.019	20	Pass
Cypermethrin	ND	0.044	0.015	1	Pass	Pyrethrins	ND	0.030	0.004	1	Pass
Diazinon	ND	0.030	0.006	0.2	Pass	Pyridaben	ND	0.035	0.012	3	Pass
Dimethomorph	ND	0.042	0.014	20	Pass	Spinetoram	ND	0.030	0.006	3	Pass
Etoxazole	ND	0.030	0.008	1.5	Pass	Spinosad	ND	0.030	0.004	3	Pass
Fenhexamid	ND	0.039	0.013	10	Pass	Spiromesifen	ND	0.042	0.014	12	Pass
Fenpyroximate	ND	0.030	0.010	2	Pass	Spirotetramat	ND	0.041	0.013	13	Pass
Flonicamid	ND	0.081	0.027	2	Pass	Tebuconazole	ND	0.044	0.014	2	Pass
Fludioxonil	ND	0.046	0.015	30	Pass	Thiamethoxam	ND	0.055	0.018	4.5	Pass
Hexythiazox	ND	0.078	0.026	2	Pass	Trifloxystrobin	ND	0.031	0.010	30	Pass
Imidacloprid	ND	0.071	0.023	3	Pass						

Other Analyte(s): pH: 3.14

NR= Not Reported (no analysis was performed), ND= Not Detected (the concentration is less than the Limit of Detection (LOD)). Analytical instrumentation used: LC-MS-MS & GC-MS-MS; samples analyzed according to SOPs PESTMYCO-LC-INST-004 and PEST-GC-INST-003.



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Sample Name	Hop The Wave-Half&Half	ICAL ID	20240709-076
Batch	061924-945	Registering Laboratory	San Diego
Client	Hop The Wave	Contact	Customer Service Team
Address		Address	8312 Miramar Mall San Diego, CA 92121
Telephone		Telephone	(858) 623-2740
Email		Email	questions@infinitecal.com
Sampler		COA Issue Date	July 15, 2024

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Definitions

| <: Less Than | >: Greater Than | RP: Result Pending | MPN: Most Probable Number | CFU: Colony Forming Units | ---: Not Requested | NA: Not Applicable | ND: Not Detected | MDL: Method Detection Limit | LCMRL: Lowest Concentration Minimum Reporting Level | NT: Not Tested | ~: Estimated | TBA: To Be Advised | TNTC: Too numerous to count |

Microbial Plate Panel

Analyte	CFU/g	MDL	Client Limit ¹	Status ²
Aerobic (APC)	NT	10	---	---
Coliforms	<MDL	10	---	---
<i>E. coli</i>	<MDL	10	---	---
Yeast & Mold	<MDL	10	---	---
<i>Enterobacteriaceae</i>	NT	10	---	---
<i>Salmonella spp.</i>	<MDL	10	---	---
<i>Listeria spp.</i>	<MDL	10	---	---

Analysis Location

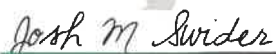
All analyses were completed by Infinite Chemical Analysis – San Diego.

Analysis Comments

Method ID: MICRO-PLATE-001

¹Client limit is self-selected and will be replaced by official CA state limits when they become available.

²Status of Pass/Fail based on client limit selected.



Josh Swider
Lab Director, CEO
July 15, 2024

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Address		Address	8312 Miramar Mall San Diego, CA 92121
Telephone		Telephone	(858) 623-2740
Email		Email	questions@infinitelab.com
Sampler		COA Issue Date	July 25, 2024

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Coliforms	<MDL	10	---	---
<i>E. coli</i>	<MDL	10	---	---
Yeast & Mold	<MDL	10	---	---
<i>Enterobacteriaceae</i>	NT	10	---	---
<i>Salmonella spp.</i>	<MDL	10	---	---
<i>Listeria spp.</i>	<MDL	10	---	---

Analysis Location

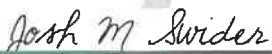
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