



Certificate of Analysis

Sample: CA10209001-002
Harvest/Lot ID: 1
Seed to Sale #leaf
Batch Date : 12/05/20
Batch#: MV 12-05-20
Sample Size Received: 10 gram
Retail Product Size: 3.5
Ordered : 02/02/21
sampled : 02/02/21
Completed: 02/15/21 Expires: 02/15/22
Sampling Method: SOP Client Method

Feb 15, 2021 | H&H Hemp Co

Heber City, , 84032, US



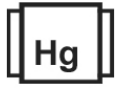
TESTED

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PRODUCT IMAGE SAFETY RESULTS



Pesticides
PASSED



Heavy Metals
PASSED



Microbials
PASSED



Mycotoxins
PASSED



Residuals
Solvents
NOT TESTED



Filtration
PASSED



Water Activity
PASSED



Moisture
TESTED



Terpenes
TESTED

MISC.

CANNABINOID RESULTS



Total THC
1.191%



Total CBD
11.634%



Total Cannabinoids
15.405%

Filtration PASSED

Analyzed By	Weight	Extraction date	Extracted By	NA
1048	NA	NA	NA	Result
Analyte			LOD	0
Insect fragments, hairs & mammalian excreta			0.1	
Analysis Method -SOP.T.40.013		Batch Date : 02/10/21 10:03:50		
Analytical Batch -CA000712FIL		Reviewed On - 02/10/21 10:05:15		
Instrument Used :				

This includes but is not limited to hair, insects, feces, packaging contaminants, and manufacturing waste and by-products. An SH-2B/T Stereo Microscope is used for inspection.

Water Activity PASSED

Analyte	Analyzed by Weight	Ext. date	LOD	A.L	Result
WATER ACTIVITY	1048	NA	NA	0.001 Aw	0.65Aw 0.530 aW
Analysis Method -Water activity: Expanded measurement of uncertainty: 0.016. Expanded measurements of uncertainties are statistically derived from QC data at 95% confidence level (k=1.96) for a normal distribution.					
Analytical Batch -CA000706WAT		Batch Date : 02/09/21 13:06:59			
Instrument Used : Rotronic Water Meter HygroPalm23-AW (MO-WA-01)		Reviewed On - 02/09/21 13:58:51			

Moisture TESTED

Analyte	Analyzed by Weight	Ext. date	LOD	A.L	Result
MOISTURE CONTENT	1048	0.545g	NA	0.1 %	10.280 %
Analysis Method -SOP.T.40.011 Batch Date : 02/09/21 13:11:35					
Analytical Batch -CA000707MOI Reviewed On - 02/09/21 14:04:11					
Instrument Used : Shimadzu UniBloc Moisture Content Analyzer (MO-MA-01)					

CBDV	CBD	CBG	THCV	CBDA	CBGA	CBN	D9-THC	D8-THC	CBC	THCA-A
0.217%	0.208%	0.074%	ND	11.665 %	0.439%	ND	ND	ND	ND	1.219%
2.170 mg/g	2.080 mg/g	0.740 mg/g	ND	116.650 mg/g	4.390 mg/g	ND	ND	ND	ND	12.190 mg/g
LOD 0.02 %	0.01 %	0.01 %	0.02 %	0.02 %	0.02 %	0.01 %	0.02 %	0.02 %	0.01 %	0.01 %

Cannabinoid Profile Test

Analyzed by	Weight	Extraction date :	Extracted By :
1068	0.529g	NA	NA
Analysis Method -SOP.T.40.020, SOP.T.30.050		Reviewed On - 02/10/21 14:13:15 Batch Date : 02/10/21 10:21:08	
Analytical Batch -CA000713POT		Instrument Used : HPLC-3Dplus(MO-HPLC-01)	

Reagent	Dilution	Consums. ID
120120.03	20	200110
113020.05		VAV-09-1020
020821.R01		VAV-09-1020
020821.R03		80081-188
		YO189AF0002398
		842751369
		K471831
		L327011
		288036252

Full spectrum cannabinoid analysis utilizing High Performance Liquid Chromatography with UV detection (HPLC-UV). (Method: SOP.T.30.050 for sample prep and Shimadzu High Sensitivity Method SOP.T.40.020 for analysis. LOQ for all cannabinoids is 0.5 mg/L). The results of total THC, total CBD and total Cannabinoids in plant sample are reported on a dry weight basis. Expanded measurements of uncertainties are statistically derived from QC data at 95% confidence level (k=1.96) for a normal distribution.

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Haifei Yin
Lab Director

State License # NA
ISO Accreditation #
L18-47-1



Signature

02/15/2021

Signed On



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Sample Method : SOP Client Method

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Heber City, , 84032, US

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Terpenes

TESTED

Terpenes	LOD (%)	mg/g	%	Result (%)	Terpenes	LOD(%)	mg/g	%	Result (%)
ALPHA-PINENE	625	ND	ND						
ALPHA-TERPINENE	625	ND	ND						
ALPHA-BISABOLOL	625	ND	ND						
BETA-CARYOPHYLLENE	625	7723.7600	772.3760						
BETA-MYRCENE	625	ND	ND						
BETA-PINENE	625	6294.7800	629.4779						
CAMPHENE	625	ND	ND						
(-)-CARYOPHYLLENE OXIDE	625	ND	ND						
CIS-NEROLIDOL	537.5	ND	ND						
D-LIMONENE	625	ND	ND						
DELTA-3-CARENE	625	ND	ND						
EUCALYPTOL	625	ND	ND						
GAMMA TERPINENE	625	ND	ND						
GERANIOL	625	ND	ND						
GUAIOL	625	ND	ND						
HUMULENE	625	ND	ND						
ISOPULEGOL	625	ND	ND						
LINALOOL	625	ND	ND						
OCIMENE ISOMER 1	375	ND	ND						
P-CYMENE	625	ND	ND						
OCIMENE ISOMER 2	875	ND	ND						
TERPINOLENE	625	ND	ND						
TRANS-NEROLIDOL	712.5	ND	ND						



Terpenes

TESTED

Analyzed by 1050 **Weight** 0.545g **Extraction date** NA **Extracted By** NA

Analysis Method -SOP.T.40.091
Analytical Batch -CA000714TER **Reviewed On - 02/11/21 09:43:06**
Instrument Used : GC-2030 FID(MO-GCFID-01)
Running On :
Batch Date : 02/10/21 11:21:24

Reagent	Dilution	Consums. ID
113020.05		REST-21764
041320.10		33011020200006
041320.07		
081420.R01		

Terpene: Terpenoid profile screening is performed using GC-FID which can screen 21 terpenes using Method SOP.T.40.091. Expanded measurements of uncertainties are statistically derived from QC data at 95% confidence level (k=1.96) for a normal distribution.

Total (%)	1401.853	0.1402

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Haifei Yin
Lab Director

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Sample Method : SOP Client Method

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Pesticides

PASSED

Pesticides	LOD	Units	Action Level	Result	Pesticides	LOD	Units	Action Level	Result
DAMINOZIDE	0.016	ug/g	0.016	ND	CHLORPYRIFOS	0.014	ug/g	0.014	ND
ACEPHATE	0.0012	ug/g	0.1	ND	HEXYTHIAZOX	0.0031	ug/g	0.1	ND
OXAMYL	0.0099	ug/g	0.5	ND	ETOXAZOLE	0.0030	ug/g	0.1	ND
FLONICAMID	0.0150	ug/g	0.1	ND	SPIROMESIFEN	0.0029	ug/g	0.1	ND
THIAMETHOXAM	0.0048	ug/g	5	ND	CYFLUTHRIN	0.1724	ug/g	2	ND
METHOMYL	0.0070	ug/g	1	ND	CYPERMETHRIN	0.0059	ug/g	1	ND
IMIDACLOPRID	0.0071	ug/g	5	ND	FENPYROXIMATE	0.0032	ug/g	0.1	ND
ACETAMIPRID	0.0058	ug/g	0.1	ND	PYRIDABEN	0.0033	ug/g	0.1	ND
MEVINPHOS	0.0081	ug/g	0.0081	ND	ABAMECTIN B1A	0.0322	ug/g	0.1	ND
DIMETHOATE	0.0044	ug/g	0.0044	ND	ETOFENPROX	0.0048	ug/g	0.0048	ND
THIACLOPRID	0.0046	ug/g	0.0046	ND	BIFENTHRIN	0.0044	ug/g	3	0.028
IMAZALIL	0.0029	ug/g	0.0029	ND	ACEQUINOCYL	0.0074	ug/g	0.1	ND
ALDICARB	0.018	ug/g	0.018	ND	SPINOSADS	0.0010	ug/g	0.1	ND
PROPOXUR	0.018	ug/g	0.018	ND	PYRETHRINS	0.00190	ug/g	0.5	ND
DICHLORVOS	0.029	ug/g	0.029	ND	PERMETHRINS	0.0016	ug/g	0.5	ND
CARBOFURAN	0.011	ug/g	0.011	ND	PCNB *	0.01873	ug/g	0.1	ND
CARBARYL	0.0114	ug/g	0.5	ND	PARATHION-METHYL *	0.01356	ug/g	0.1	ND
NALED	0.0055	ug/g	0.1	ND	CAPTAN *	0.03668	ug/g	0.7	ND
CHLORANTRANILIPROLE	0.0216	ug/g	10	ND	CHLORDANE *	0.02115	ug/g	0.1	ND
METALAXYL	0.0019	ug/g	2	ND	CHLORFENAPYR *	0.01981	ug/g	0.1	ND
PHOSMET	0.0058	ug/g	0.1	ND					
AZOXYSTROBIN	0.0056	ug/g	0.1	ND					
FLUIDIXONIL	0.0067	ug/g	0.1	ND					
SPIROXAMINE	0.0028	ug/g	0.0028	ND					
BOSCALID	0.0047	ug/g	0.1	ND					
METHIOCARB	0.010	ug/g	0.01	ND					
PACLOBUTRAZOL	0.0028	ug/g	0.0028	ND					
MALATHION	0.0034	ug/g	0.5	ND					
DIMETHOMORPH	0.0026	ug/g	2	ND					
MYCLOBUTANIL	0.0038	ug/g	0.1	ND					
BIFENAZATE	0.0041	ug/g	0.1	ND					
FENHEXAMID	0.0022	ug/g	0.1	ND					
SPIROTETRAMAT	0.0348	ug/g	0.1	ND					
FIPRONIL	0.0041	ug/g	0.0041	ND					
ETHOPROPHOS	0.0037	ug/g	0.0037	ND					
FENOXYCARB	0.0039	ug/g	0.0039	ND					
KRESOXIM-METHYL	0.0056	ug/g	0.1	ND					
TEBUCONAZOLE	0.0018	ug/g	0.1	ND					
COUMAPHOS	0.0033	ug/g	0.0033	ND					
DIAZINON	0.0031	ug/g	0.1	ND					
PROPICONAZOLE	0.0029	ug/g	0.1	ND					
CLOFENTEZINE	0.0034	ug/g	0.1	ND					
SPINETORAM	0.0008	ug/g	0.1	ND					
TRIFLOXYSTROBIN	0.0026	ug/g	0.1	ND					
PRALLETHRIN	0.0060	ug/g	0.1	ND					
PIPERONYL BUTOXIDE	0.0026	ug/g	3	0.222					

Pesticides PASSED

Analyzed by 1051, 1051 **Weight** 0.502g **Extraction date** NA **Extracted By** NA
Analysis Method - SOP.T.30.060, SOP.T.40.060, Pesticide screen is performed using GC-MS which can screen down to below single digit ppb concentrations for regulated Pesticides. Currently we analyze for 5 Volatile Pesticides. (Method: SOP.T.30.060 Sample Preparation for Pesticides Analysis and SOP.T.40.070 Procedure for Pesticide Quantification Using GCMS).
Analytical Batch - CA000705PES, CA000710V0L **Reviewed On** - 02/10/21 10:05:15
Instrument Used : LCMS-8060 (PES) (MO-LCMS-001), GCMS-TQ8050_DER(MO-GCMSTQ-01) **Batch Date** : 02/09/21 11:51:48
Running On :

Reagent	Dilution	Consums. ID
111730.03	5	200110
091820.02		VAV-09-1020
020221.802		66022-060
111920.803		ALB-09-1414
020421.807		80081-188
072920.01		19210465
072220.01		L398261
012621.801		L422921
		L371381
		470228-424
		SFN-BV-1025
		76124-646

Expanded measurements of uncertainties are statistically derived from QC data at 95% confidence level (k=1.96) for a normal distribution. *

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Haifei Yin
 Lab Director
 State License # NA
 ISO Accreditation #
 L18-47-1


 Signature

02/15/2021
 Signed On



Certificate of Analysis

TESTED

H&H Hemp Co

Sample : CA10209001-002

Harvest/LOT ID: 1

Batch# : MV 12-05-20

Sample Size Received : 10 gram

Sampled : 02/02/21

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Ordered : 02/02/21

Sample Method : SOP Client Method

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Microbials

PASSED



Mycotoxins

PASSED

Analyte	LOD	Result	Analyte	LOD	Units	Result	Action Level (PPB)
SALMONELLA		not present in 1 gram.	OCHRATOXIN A+	5.000	µg/kg	ND	20
ASPERGILLUS_FLAVUS		not present in 1 gram.	AFLATOXIN B1	0.5	ug/kg	ND	20
ASPERGILLUS_FUMIGATUS		not present in 1 gram.	AFLATOXIN G1	0.5	ug/kg	ND	20
ASPERGILLUS_NIGER		not present in 1 gram.	AFLATOXIN G2	1	ug/kg	ND	20
ASPERGILLUS_TERREUS		not present in 1 gram.	AFLATOXIN B2	0.5	ug/kg	ND	20
SHIGA TOXIN-PRODUCING ESCHERICHIA. COLI		not present in 1 gram	TOTAL AFLATOXINS (SUM OF B1, B2, G1 &G2)	7.2	µg/kg	ND	20

Analysis Method -SOP.T.40.043

Analytical Batch -CA000720MIC Batch Date : 02/12/21

Instrument Used : Sensovation SensoSpot Fluorescence

Running On :

Analyzed by	Weight	Extraction date	Extracted By
1069	1.05g	NA	NA

Analysis Method -SOP.T.30.060, SOP.T.40.060

Analytical Batch -CA000709MYC | Reviewed On - 02/10/21 12:44:02

Instrument Used : LCMS-8060 (MYC) (MO-LCMS-001)

Running On :

Batch Date : 02/09/21 16:52:22

Reagent Consums. ID	Consums. ID	Consums. ID	Consums. ID	Consums. ID
120920.04	200103-274	13-681-506	209058	RU14275
010620.24	10025-726	76322-134	216215	RU12041
010920.22	200103274	26219028	QU26793	842730950
	89012-778	6980A10	QU27364	960550291
	215918	107400-31-060120	QU27000	QU24028
	J188541H	107533-17-071520	RU13471	QU28720

Analyzed by	Weight	Extraction date	Extracted By
1051	NA	NA	NA

Expanded measurements of uncertainties are statistically derived from QC data at 95% confidence level (k=1.96) for a normal distribution.

Microbiological testing for Fungal and Bacterial Identification via Polymerase Chain Reaction (PCR) method consisting of sample DNA amplified via tandem Polymerase Chain Reaction (PCR) as a crude lysate which avoids purification. (Method SOP.T.40.043) If a pathogenic Escherichia Coli, Salmonella, Aspergillus fumigatus, Aspergillus flavus, Aspergillus niger, or Aspergillus terreus is detected in 1g of a sample, the sample fails the microbiological-impurity testing.



Heavy Metals

PASSED

Reagent	Reagent
010220.01	101920.02
030220.11	
012021.R02	
120219.03	
020320.02	
110920.R09	

Metal	LOD	Unit	Result	Action Level (PPM)
ARSENIC	0.0007	µg/g	0.027	0.2
CADMIUM	0.0036	µg/g	<0.011	0.2
LEAD	0.0085	µg/g	0.042	0.5
MERCURY	0.0029	µg/g	0.019	0.1

Analyzed by	Weight	Extraction date	Extracted By
1050	0.533g	NA	NA

Analysis Method -SOP.T.40.050, SOP.T.30.052

Analytical Batch -CA000711HEA | Reviewed On - 02/10/21 12:19:22

Instrument Used : ICPMS-2030(MO-ICPMS-01)

Running On :

Batch Date : 02/10/21 09:07:19

Heavy Metals screening is performed using ICP-MS (Inductively Coupled Plasma - Mass Spectrometer) which can screen down to below single digit ppb concentrations for regulated heavy metals using Method SOP.T.30.052 Sample Preparation for Heavy Metals Analysis via ICP-MS and SOP.T.40.050 Heavy Metals Analysis via ICP-MS. Expanded measurements of uncertainties are statistically derived from QC data at 95% confidence level (k=1.96) for a normal distribution.

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