Aromatic Plant Research Center 230 N 1200 E STE 100 Lehi, UT 84043





Tincture

Company Name: Farmer and Chemist Sample Received: 7/28/2020
Company Lot Number: OYH01EXP.8.21 Release Date: 8/5/2020
Sample Matrix: Tincture APRC Lot Number: RMH200728G

Total THC Total CBD Cannabinoids 6.06 % 0.15 % 5.60 % Residual Terpene **Heavy Metals Pesticides** Microbial Solvents **Analysis Not Tested** Not Detected **Not Tested Not Detected Tested**

Prepared By: C. Wiscombe

Reviewed By: C. Gunn





Quantitative Terpene Analysis Report

Certificate of Analysis

Tincture

Company Name: Farmer & Chemist Sample Received: 07-28-20

Company Lot Number: N/A APRC Lot Number: RMH200728G

Sample Matrix: Tincture Release Date: 08-03-20

Compound	Total % (w/w)	Total (mg/g)	Compound	Total % (w/w)	Total (mg/g)
α-Pinene	ND_	ND_	Terpinolene	ND	ND
Camphene	ND /	ND	Linolool	ND	ND
β-Pinene	0.01	0.13	Isopulegol	ND	ND
β-Myrcene	0.02	0.24	Geraniol	ND	ND
Δ-3-Carene	ND	ND	β-Caryophyllene	I ND	ND
α-Terpinene	ND	ND	α-Humulene	ND M	ND
p-Cymene	ND /	ND /	<i>cis</i> -Nerolidol	ND	ND
Limonene	0.11	1.13	trans-Nerolidol	ND	ND
α-Ocimene	0.06	0.62	Caryophyllene oxide	ND	ND
Eucalyptol	ND	ND	Guaiol	ND	ND
β-Ocimene	ND	ND	α-Bisabolol	0.03	0.34
γ-Terpinene	ND	ND	Total Terpenes	0.25	2.47

Prepared By: C. Wiscombe

Reviewed By: C. Gunn





Residual Solvents Analysis Report

Certificate of Analysis

Tincture

Company Name: Farmer & Chemist Sample Received: 7-28-2020

Company Lot Number: NA APRC Lot Number: RMH200728G

Sample Matrix: Topical Applicant Release Date: 8-5-2020

Analyte	Limit (μg/g) [†]	Concentration (μg/g)	Disposition
1,2 Dimethoxyethane	100	ND	Pass
1,4 Dioxane	380	ND 1	Pass
1-Butanol	5000	ND	Pass
1-Pentanol	5000	ND	Pass
1-Propanol	5000	ND	Pass
2-Butanol	5000	ND U	Pass
2-Butanone	5000	ND I	Pass
2-Ethoxyethanol	160	ND,	Pass
2-methylbutane	5000	ND	Pass
2-Propanol (Isopropyl Alcohol)	5000	ND ND	Pass
Acetone	5000	ND ()	Pass
Acetonitrile	410	ND	Pass
Benzene	2	ND	Pass
Butane	5000	ND	Pass
Cumene	70	ND	Pass
Cyclohexane	3880 6	ND	Pass
Dichloromethane (Methylene Chloride)	600	ND	Pass
2,2-dimethylbutane	290 ND		Pass
2,3-dimethylbutane	290	ND	Pass
1,2-dimethylbenzene (<i>o</i> -Xylene)	See Xylenes	ND	Pass
1,3-dimethylbenzene (<i>m</i> -Xylene)	See Xylenes	ND	Pass
1,4-dimethylbenzene (p-Xylene)	See Xylenes	ND	Pass
Dimethyl Sulfoxide (DMSO)	5000	ND	Pass
Ethanol	5000	ND	Pass

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Analyte	Limit (μg/g) [†]	Concentration (µg/g)	Disposition
Ethyl Acetate	5000	ND	Pass
Ethylbenzene	See Xylenes	ND	Pass
Ethyl ether	5000	ND	Pass
Ethylene glycol	620	ND	Pass
Ethylene Oxide	50	ND	Pass
Heptane	5000	ND	Pass
Hexane	290	ND	Pass
Isopropyl acetate	5000	ND	Pass
Methanol	3000	ND	Pass
Methylpropane	5000	ND \	Pass
2-Methylpentane	290	ND	Pass
3-Methylpentane	290	ND	Pass
N,N-dimethylacetamide	1090	ND	Pass
N,N-dimethylformamide	880	ND ND	Pass
Pentane	5000	ND ND	Pass
Propane	5000	ND	Pass
Pyridine	100	ND	Pass
Sulfolane	160	ND	Pass
Tetrahydrofuran	720	ND	Pass
Toluene	890	ND	Z Pass
Xylenes [‡]	2170	ND	Pass

[†] Per Utah state code 4-41a-701(3) Section R68-29-6

Overall Disposition: Pass

Prepared By: A. Anderson

Reviewed By: C. Gunr

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[‡] Total Xylenes is a combination of the following: o-Xylene, m-Xylene, p-Xylene, and Ethylbenzen





HPLC Analysis Report

Cannabinoid Profile Certificate of Analysis

Client: Farmer and Chemist Date

Date Received: 07-28-2020

Sample Name: Tincture

Date Tested: 07-30-2020

Sample Matrix: Tincture

APRC#: RMH200728G

Sample Lot: N/A

ID#	Cannabinoid	Ret		%	mg/g
		Time	(µg/mL)	(w/w)	
1	Cannabidivarin (CBDV)	2.164	3.829	0.03	0.30
2	Cannabidiolic acid (CBDA)	ND	ND	NA	N/A
3	Cannabigerolic acid (CBGA)	<loq< td=""><td><loq< td=""><td>N/A</td><td>N/A</td></loq<></td></loq<>	<loq< td=""><td>N/A</td><td>N/A</td></loq<>	N/A	N/A
4	Cannabigerol (CBG)	3.007	4.742	0.04	0.38
5	Cannabidiol (CBD)	3.170	704.500	5.60	56.00
6	Tetrahydrocannabivarin (THCV)	<loq< td=""><td><l0q< td=""><td>N/A</td><td>N/A</td></l0q<></td></loq<>	<l0q< td=""><td>N/A</td><td>N/A</td></l0q<>	N/A	N/A
7	Cannabinol (CBN)	ND	ND	N/A [II]	N/A
8	Δ9-Tetrahydrocannabidinol (Δ9-THC)	5.868	18.663	0.15	1.48
9	Δ8-Tetrahydrocannabidinol (Δ8-THC)	6.155	1.767	0.01	0.14
10	Cannabichromene (CBC)	7.358	28.319	0.23	2.25
11	Δ9-Tetrahydrocannabidinolic acid (THCA-A)	<loq< td=""><td><loq< td=""><td>N/A</td><td>N/A</td></loq<></td></loq<>	<loq< td=""><td>N/A</td><td>N/A</td></loq<>	N/A	N/A

	(2)			/0///	1118/8
Analyzed by:	C. Wiscombe		Total Cannabinoids	6.06	60.56
		17	Total THC [†]	0.15	1.48
Reviewed by:	C. Gunn		Total CBD [‡]	5.60	56.00

[†] Total THC is calculated by Δ9-THC +(THCA-A*0.877)

Notes:

[‡] Total CBD is calculated by CBD + (CBDA*0.877)





ICP-MS Analysis Report

Heavy Metal Certificate of Analysis

Client: Farmer and Chemist Date

Date Received: 7/28/2020

Sample Name: Tincture

Date Released: 8/4/2020

Sample Matrix: Tincture

APRC#: RMH200728G

Sample Lot: N/A

	Analyte	Conc. (ppm)	Specification [†] (ppm)	Disposition
Arsenic	75A	0.081	\$2.00	Pass
Cadmium		<0.001	< 0.82	Pass
Lead		0.001	< 1.20	Pass
Mercury		0,001	< 0.40	Pass

Prepared by: Cierra Gunn

† Rer Utah State Code 4-41a-701 (3) section R68-29-7

Reviewed by: Cody Wiscombe

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