

# Certificate of Analysis Cover Page

## Twin Arbor Analytical

3990 Ruth Way Suite D  
Paso Robles, CA 93446  
(805) 369-2123



### PREPARED FOR:

Hempsi  
815 Grand Blvd  
Vancouver, WA 98661

Report Date 1/21/2022  
Sample ID Broad Spectrum Tincture  
Sample Name #12112111

## Results

### Analysis

#### Cannabinoids

CBD (mg/mL) **77.5**  
Total THC **PASS**

#### Pesticides and Mycotoxins

Result **PASS**

#### Residual Solvents

Result **PASS**

#### Heavy Metals

Result **PASS**

#### Microbial

Result **PASS**

#### Water Activity

Result NT

NT = Not Tested

Forrest Richmond  
Laboratory Manager

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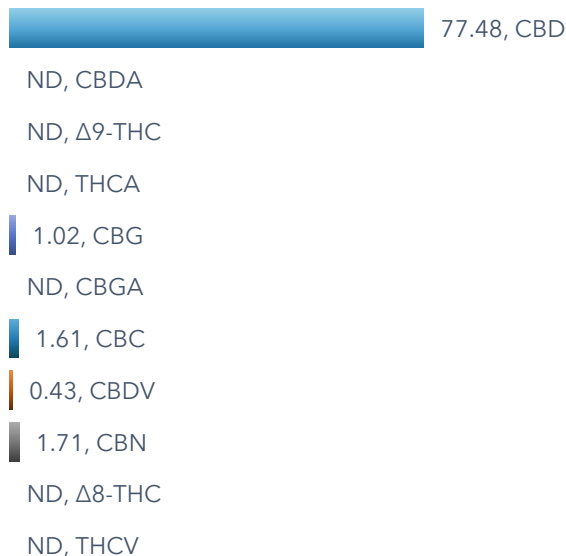
Report Date 1/19/2022  
Sample ID Broad Spectrum Tincture  
Sample Type #12112111  
Internal Sample ID 220113-049-3  
Lab Batch ID 220114-4  
Date of Analysis 1/17/2022

### Analysis: Cannabinoids

Instrumentation: HPLC/DAD    Instrument ID: HPLC 1    Method: TM0002 (Twin Arbor Analytical Proprietary)

	LOD / LOQ (mg/g)	mg/g	%	mg/mL
CBD	0.07 / 0.2	81.28	8.128	77.48
CBDA	0.07 / 0.2	ND	ND	ND
<b>Total CBD *</b>		<b>81.28</b>	<b>8.128</b>	<b>77.48</b>
Δ9-THC	0.07 / 0.2	ND	ND	ND
THCA	0.07 / 0.2	ND	ND	ND
<b>Total THC *</b>		<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
CBG	0.07 / 0.2	1.07	0.107	1.02
CBGA	0.07 / 0.2	ND	ND	ND
<b>Total CBG *</b>		<b>1.07</b>	<b>0.107</b>	<b>1.02</b>
CBC	0.07 / 0.2	1.68	0.168	1.61
CBDV	0.07 / 0.2	0.45	0.045	0.43
CBN	0.07 / 0.2	1.79	0.179	1.71
Δ8-THC	0.07 / 0.2	ND	ND	ND
THCV	0.07 / 0.2	ND	ND	ND
<b>Total Tested Cannabinoids</b>		<b>86.28</b>	<b>8.63</b>	<b>82.25</b>

### mg / mL



Density (g/ml): 0.9533  
Moisture Content: NT

ND = Not Detected

NT = Not Tested

\* Totals account for decarboxylation of the acid and equal  $XXX + (XXXA * 0.877)$   
For example: Total THC = Δ9-THC + (THCA \* 0.877)

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Report Date 1/21/2022  
Sample ID Broad Spectrum Tincture  
Batch / LOT # #12112111  
Internal Sample ID 220113-049-3  
Lab Batch ID 220119-3  
Date of Analysis 1/19/2022

### Analysis: Pesticides and Mycotoxins

Instrumentation: LC-Mass Spectrometer    Instrument ID: LCMS 1    Method: TM0004 (Twin Arbor Analytical Proprietary)

Mycotoxins	Pass / Fail	Results (µg/g)	Action Limit (µg/g)	LOD / LOQ (µg/g)
Aflatoxin B1	Pass	ND	0.02	0.000 / 0.001
Aflatoxin B2	Pass	ND	0.02	0.001 / 0.004
Aflatoxin G1	Pass	ND	0.02	0.000 / 0.001
Aflatoxin G2	Pass	ND	0.02	0.001 / 0.004
Ochratoxin A	Pass	ND	0.02	0.004 / 0.013

Category I	Pass / Fail	Results (µg/g)	Action Limit (µg/g)	LOD / LOQ (µg/g)
Aldicarb	Pass	ND	ND	0.033 / 0.100
Carbofuran	Pass	ND	ND	0.033 / 0.100
Chlordane	Pass	ND	ND	0.100 / 0.300
Chlorfenapyr	Pass	ND	ND	0.033 / 0.100
Chlorpyrifos	Pass	ND	ND	0.033 / 0.100
Coumaphos	Pass	ND	ND	0.033 / 0.100
Daminozide	Pass	ND	ND	0.033 / 0.100
DDVP (Dichlorvos)	Pass	ND	ND	0.033 / 0.100
Dimethoate	Pass	ND	ND	0.033 / 0.100
Ethoprop(hos)	Pass	ND	ND	0.033 / 0.100
Etofenprox	Pass	ND	ND	0.033 / 0.100
Fenoxycarb	Pass	ND	ND	0.033 / 0.100
Fipronil	Pass	ND	ND	0.033 / 0.100
Imazalil	Pass	ND	ND	0.033 / 0.100
Methiocarb	Pass	ND	ND	0.033 / 0.100
Methyl parathion	Pass	ND	ND	0.033 / 0.100
Mevinphos	Pass	ND	ND	0.017 / 0.050
Paclobutrazol	Pass	ND	ND	0.033 / 0.100
Propoxur	Pass	ND	ND	0.033 / 0.100
Spiroxamine	Pass	ND	ND	0.033 / 0.100
Thiacloprid	Pass	ND	ND	0.033 / 0.100

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# Analysis: Pesticides and Mycotoxins (continued)

Instrumentation: LC-Mass Spectrometer

Instrument ID: LCMS 1

Method: TM0004 (Twin Arbor Analytical Proprietary)

Category II	Pass / Fail	Results (µg/g)	Action Limit (µg/g)	LOD / LOQ (µg/g)
Abamectin	Pass	ND	0.30	0.017 / 0.050
Acephate	Pass	ND	5.00	0.017 / 0.050
Acequinocyl	Pass	ND	4.00	0.017 / 0.050
Acetamiprid	Pass	ND	5.00	0.017 / 0.050
Azoxystrobin	Pass	ND	40.00	0.017 / 0.050
Bifenazate	Pass	ND	5.00	0.017 / 0.050
Bifenthrin	Pass	ND	0.50	0.017 / 0.050
Boscalid	Pass	ND	10.00	0.017 / 0.050
Captan	Pass	ND	5.00	0.033 / 0.100
Carbaryl	Pass	ND	0.50	0.017 / 0.050
Chlorantraniliprole	Pass	ND	40.00	0.017 / 0.050
Clofentezine	Pass	ND	0.50	0.017 / 0.050
Cyfluthrin	Pass	ND	1.00	0.033 / 0.100
Cypermethrin	Pass	ND	1.00	0.017 / 0.050
Diazinon	Pass	ND	0.20	0.017 / 0.050
Dimethomorph	Pass	ND	20.00	0.017 / 0.050
Etoxazole	Pass	ND	1.50	0.017 / 0.050
Fenhexamid	Pass	ND	10.00	0.017 / 0.050
Fenpyroximate	Pass	ND	2.00	0.017 / 0.050
Fonicamid	Pass	ND	2.00	0.017 / 0.050
Fludioxonil	Pass	ND	30.00	0.017 / 0.050
Hexythiazox	Pass	ND	2.00	0.017 / 0.050
Imidacloprid	Pass	ND	3.00	0.017 / 0.050
Kresoxim-methyl	Pass	ND	1.00	0.017 / 0.050
Malathion	Pass	ND	5.00	0.017 / 0.050
Metalaxyl	Pass	ND	15.00	0.017 / 0.050
Methomyl	Pass	ND	0.10	0.017 / 0.050
Myclobutanil	Pass	ND	9.00	0.017 / 0.050
Naled	Pass	ND	0.50	0.017 / 0.050
Oxamyl	Pass	ND	0.20	0.017 / 0.050
Pentachloronitrobenzene	Pass	ND	0.20	0.017 / 0.050
Permethrin	Pass	ND	20.00	0.017 / 0.050
Phosmet	Pass	ND	0.20	0.017 / 0.050
Piperonylbutoxide	Pass	ND	8.00	0.017 / 0.050
Prallethrin	Pass	ND	0.40	0.017 / 0.050
Propiconazole	Pass	ND	20.00	0.017 / 0.050
Pyrethrins	Pass	ND	1.00	0.017 / 0.050
Pyridaben	Pass	ND	3.00	0.017 / 0.050
Spinetoram	Pass	ND	3.00	0.017 / 0.050
Spinosad	Pass	ND	3.00	0.017 / 0.050
Spiromesifen	Pass	ND	12.00	0.017 / 0.050
Spirotetramat	Pass	ND	13.00	0.017 / 0.050
Tebuconazole	Pass	ND	2.00	0.017 / 0.050
Thiamethoxam	Pass	ND	4.50	0.017 / 0.050
Trifloxystrobin	Pass	ND	30.00	0.017 / 0.050

LOD = Limit of Detection

LOQ = Limit of Quantification

ND = Not Detected

NT = Not Tested



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Laboratory Manager

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Report Date 1/21/2022  
Sample ID Broad Spectrum Tincture  
Batch / LOT # #12112111  
Internal Sample ID 220113-049-3  
Lab Batch ID 220118-2  
Date of Analysis 1/18/2022

### Analysis: Residual Solvents

Instrumentation: GC-MS    Instrument ID: GCMS1    Method: TM0006 (Twin Arbor Analytical Proprietary)

	Pass / Fail	Results (µg/g)	Action Limit (µg/g)	LOQ (µg/g)
1,2-Dichloroethane	PASS	< LOQ	1.0	0.41
Benzene	PASS	< LOQ	1.0	0.42
Chloroform	PASS	< LOQ	1.0	0.41
Ethylene oxide	PASS	< LOQ	1.0	0.42
Methylene chloride	PASS	< LOQ	1.0	0.4
Trichloroethylene	PASS	< LOQ	1.0	0.43
Acetone	PASS	< LOQ	5000	59.2
Acetonitrile	PASS	< LOQ	410	60.92
Butane	PASS	< LOQ	5000	39.64
Ethanol	PASS	< LOQ	5000	59.54
Ethyl acetate	PASS	< LOQ	5000	59.96
Ethyl ether	PASS	< LOQ	5000	59.1
Heptane	PASS	< LOQ	5000	59.24
Hexane	PASS	< LOQ	290	59.28
Isopropyl alcohol	PASS	< LOQ	5000	59.3
Methanol	PASS	< LOQ	3000	59.3
Pentane	PASS	< LOQ	5000	59.56
Propane	PASS	< LOQ	5000	40
Toluene	PASS	< LOQ	890	59.3
Total xylenes (ortho-, meta-, para-)	PASS	< LOQ	2170	59.2



Forrest Richmond  
Laboratory Manager

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Report Date 1/21/2022  
Sample ID Broad Spectrum Tincture  
Batch / LOT # #12112111  
Internal Sample ID 220113-049-3  
Lab Batch ID 220121-2  
Date of Analysis 1/21/2022

### Analysis: Heavy Metals

Instrumentation: ICP-MS    Instrument ID: ICPMS1    Method: TM0005 (Twin Arbor Analytical Proprietary)

	Pass / Fail	Results (µg/g)	Action Limit (µg/g)	LOQ (µg/g)
Arsenic	PASS	< LOQ	0.2	0.013
Cadmium	PASS	< LOQ	0.2	0.013
Lead	PASS	< LOQ	0.5	0.013
Mercury	PASS	< LOQ	0.1	0.013



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LOQ = Limit of Quantification

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Hempsi  
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Vancouver, WA 98661

### Report Date

1/21/2022

### Sample ID

Broad Spectrum Tincture

### Batch / LOT #

#12112111

### Internal Sample ID

220113-049-3

### Lab Batch ID

220113-049

### Date of Analysis

1/17/2022

## Analysis: Microbial Impurities

Instrumentation: RT-PCR    Instrument ID: BAX1    Method: AOAC-RI 091301 (modified)

	Action Limit	Pass / Fail
STEC (Shiga-toxigenic E. coli)	ND	PASS
Salmonella sp.	ND	PASS
Pathogenic Aspergillus	ND	NT

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