

Certificate of Analysis

Twin Arbor Analytical

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PREPARED FOR:

PL Supplements
1230 NW 5th St
Oklahoma City, OK 73106

Batch ID: OT1000-200214-2

Report Date

2/24/2020

Sample ID

Broad Spec 1000 MCT

Sample Type

Tincture

Internal Sample ID

200218-75-3.1

Lab Batch ID

200224-1

Date of Analysis

2/24/2020

Analysis: Cannabinoids

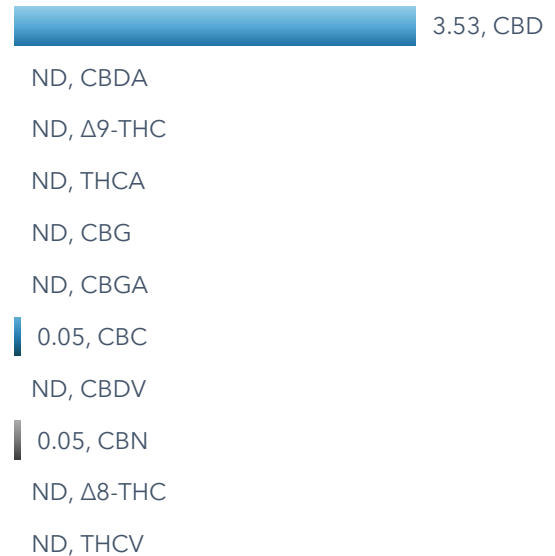
Instrumentation: HPLC/DAD

Instrument ID: HPLC 1

Method: TM0002 (Twin Arbor Analytical Proprietary)

	LOD / LOQ (mg/g)	mg/g	% by weight
CBD	0.17/0.51	35.3	3.53
CBDA	0.31/0.94	ND	ND
Total CBD *		35.3	3.53
Δ 9-THC	0.21/0.65	ND	ND
THCA	0.39/1.19	ND	ND
Total THC *		N/A	N/A
CBG	0.008/0.024	ND	ND
CBGA	0.09/0.28	ND	ND
Total CBG *		N/A	N/A
CBC	0.024/0.073	0.5	0.05
CBDV	0.018/0.055	ND	ND
CBN	0.009/0.029	0.5	0.05
Δ 8-THC	0.38/1.16	ND	ND
THCV	0.13/0.41	ND	ND
Total Tested Cannabinoids		36.3	3.63

% by weight



Moisture Content: **NT**

NOTE:

With a density of 0.965 g/mL, the CBD concentration converts to 34.1 mg/mL or 1004 mg per 1 oz. bottle.

Revision 1 - Retested CBC, CBDV, CBG and CBN with higher sensitivity - 2/28/2020 - CG

ND = Not Detected

NT = Not Tested

* Totals account for decarboxilation of the acid and equal $XXX + (XXXX * 0.877)$

For example: Total THC = Δ 9-THC + (THCA * 0.877)

Forrest Richmond
Laboratory Manager

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Product Specification Sheet

Product Name: Broad Spectrum THC-NDT Hemp Extract Tincture 1000 mg, Unflavored

Item #: 80003

Product Description: Unflavored liquid tincture in 1 oz glass amber bottle.

Active Ingredient Per 1 mL	Label Claim
Broad Spectrum Hemp Extract	40 mg
Minimum naturally occurring phytocannabinoids	33.33 mg
Other Ingredients: MCT Oil	

Allergen Statement:	This product contains tree nuts (coconut).
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Organoleptic & Physical Properties	
Color	Natural
Condition	Liquid
Aroma	Characteristic

Microbiological Testing Limits		
Test	Limit	Testing Method
Total Plate Count	<10 ⁷ cfu/g	USP <2021>
Yeast and Mold	<10 ⁵ cfu/g	USP <2021>
Enterobacteriaceae	<10 ⁴ cfu/g	USP <2021>
Escherichia coli	Negative	USP <2022>
Salmonella spp.	Negative	USP <2022>
Staphylococcus aureus	Negative	USP <2022>

Heavy Metal Testing Limits		
Test	Limit	Testing Method
Cadmium	<0.5 µg/g	EPA 6010C / 7471B
Arsenic	<1.5 µg/g	EPA 6010C / 7471B
Lead	<0.5 µg/g	EPA 6010C / 7471B
Mercury	<1.5 µg/g	EPA 6010C / 7471B

Mycotoxin Testing Limits		
Test	Limit	Testing Method
Total Aflatoxin	20 µg/g	UHPLC/MS
Total Ochratoxin	20 µg/g	UHPLC/MS


Cannabinoid Profile & Potency		
Test	Specification	Testing Method
D9-THC	≤0.009%	HPLC
CBD	33.33 mg/ml ± 5%	HPLC

Pesticides			
All test results must be below stated LOD (ND)			
Test	Testing Method	Test	Testing Method
Aldicarb	UHPLC/MS	Cyfluthrin	UHPLC/MS
Carbofuran	UHPLC/MS	Cypermethrin	UHPLC/MS
Chlordane	UHPLC/MS	Diazinon	UHPLC/MS
Chlorfenapyr	UHPLC/MS	Dimethomorph	UHPLC/MS
Chlorpyrifos	UHPLC/MS	Etoxazole	UHPLC/MS
Coumaphos	UHPLC/MS	Fenhexamid	UHPLC/MS
Daminozide	UHPLC/MS	Fenpyroximate	UHPLC/MS
DDVP (Dichlorvos)	UHPLC/MS	Flonicamid	UHPLC/MS
Dimethoate	UHPLC/MS	Fludioxonil	UHPLC/MS
Ethoprop (hos)	UHPLC/MS	Hexythiazox	UHPLC/MS
Etofenprox	UHPLC/MS	Imidacloprid	UHPLC/MS
Fenoxycarb	UHPLC/MS	Kresoxim-methyl	UHPLC/MS
Fipronil	UHPLC/MS	Malathion	UHPLC/MS
Imazalil	UHPLC/MS	Metalaxyl	UHPLC/MS
Methiocarb	UHPLC/MS	Methomyl	UHPLC/MS
Methyl parathion	UHPLC/MS	Myclobutanil	UHPLC/MS
Mevinphos	UHPLC/MS	Naled	UHPLC/MS
Paclobutrazol	UHPLC/MS	Oxamyl	UHPLC/MS
Propoxur	UHPLC/MS	Pentachloronitrobenzene	UHPLC/MS
Spiroxamine	UHPLC/MS	Permethrin	UHPLC/MS
Thiacloprid	UHPLC/MS	Phosmet	UHPLC/MS
Abamectin	UHPLC/MS	Piperonylbutoxide	UHPLC/MS
Acephate	UHPLC/MS	Prallethrin	UHPLC/MS
Acequinocyl	UHPLC/MS	Propiconazole	UHPLC/MS
Acetamiprid	UHPLC/MS	Pyrethrins	UHPLC/MS
Azoxystrobin	UHPLC/MS	Pyridaben	UHPLC/MS
Bifenazate	UHPLC/MS	Spinetoram	UHPLC/MS
Bifenthrin	UHPLC/MS	Spinosad	UHPLC/MS
Boscalid	UHPLC/MS	Spiromesifin	UHPLC/MS
Captan	UHPLC/MS	Spirotetramat	UHPLC/MS
Carbaryl	UHPLC/MS	Tebuconazole	UHPLC/MS
Chlorantraniliprole	UHPLC/MS	Thiamethoxam	UHPLC/MS
Clofentezine	UHPLC/MS	Trifloxystrobin	UHPLC/MS

Residual Solvents		
Test	Limit	Testing Method
Propane	5000 µg/g	GC MS
Butanes	5000 µg/g	GC MS
Pentane	5000 µg/g	GC MS
Ethanol	5000 µg/g	GC MS
Acetone	5000 µg/g	GC MS
Isopropyl Alcohol	5000 µg/g	GC MS
Heptane	5000 µg/g	GC MS
Hexane	290 µg/g	GC MS
Benzene	1 µg/g	GC MS
Toluene	890 µg/g	GC MS
Xylenes	2170 µg/g	GC MS

Packaging:	1 fl oz glass amber bottle with black dropper.
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Shelf-Life and Storage Requirements:	The product shelf-life is two (2) years. Store in cool, dry conditions.
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 Quality Assurance Signature of Approval	Date: 01/09/2020 Version: 02
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