Aromatic Plant Research Center
230 N 1200 E STE 100
Lehi, UT 84043
www.aromaticplant.org

Comprehensive Analysis Report

Sample Overview

Lot# RDLBB1224

Client: Intrepid Alchemy
44 Main Street, American Fork, UT 84003
Sample Name: F&C Large Pet Tincture
Sample Matrix: Tincture
Sample Lot: IM22376

Date Received: 11/18/2022
APRC #: RMH221121B

Assay	Disposition	Date Tested
Cannabinoid Testing (Potency)	Tested	11-21-2022
Heavy Metals - Utah State Cannabis Panel	Tested	11-22-2022
Microbial Impurities	Tested	11-28-2022
Pesticide Screen (APRC Panel)	Tested	11-21-2022
Residual Solvents	Tested	11-21-2022
Mycotoxin Quantitation	Tested	11-21-2022

PJLA Testing
Accreditation #115229
Aromatic Plant Research Center is an ISO 17025:2017 certified laboratory.

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Instrument Analysis Report

Potency

Lot# RDLBB1224

Method: SOP 1-2026.01 Sample Name: F&C Large Pet Tincture APRC Lot Number: RMH221121B

Cannabinoid	RT	Total %	Total mg/g
Cannabidivarinic Acid (CBDVA)	ND	ND	ND
Cannabidivarin (CBDV)	2.20	0.01	0.14
Cannabidiolic Acid (CBDA)	ND	ND	ND
Cannabigerolic Acid (CBGA)	ND	ND	ND
Cannabinol (CBN)	ND	ND	ND
Cannabidiol (CBD)	3.23	4.26	42.59
Cannabigerol (CBG)	3.06	0.81	8.12
Tetrahydrocannabivarin (THCV)	ND	ND	ND
Tetrahydrocannabivarin Acid (THCVA)	ND	ND	ND
Delta-9-Tetrahydrocannabinol (Δ9-THC)	ND	ND	ND
Delta-8-Tetrahydrocannabinol (Δ8-THC)	ND	ND	ND
Tetrahydrocannabinolic acid (THCA-A)	ND	ND	ND
Cannabichromene (CBC)	ND	ND	ND
Cannabichromene Acid (CBCA)	ND	ND	ND
Δ10 and Δ6a,10a-Tetrahydrocannabinol	ND	ND	ND

Performed by: Sujan Timsina

Reviewed by: Spencer Kipfmueller

	%	mg/g
Total Cannabinoids	5.08	50.84
Total THC[t]	ND	ND
Total CBD[s]	4.26	42.59

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

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

LOD > 0.005% by mass, LOQ > 0.01% by mass

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Instrument Analysis Report

Heavy Metals

Lot# RDLBB1224

Method: CTLA

Sample Name: F&C Large Pet Tincture

APRC Lot Number: RMH221121B

Analyte	Result (ppm)	LOD (ppm)	Threshold (ppm)	Pass/Fail
Arsenic	0.032	0.001	2.00	Pass
Cadmium	0.001	0.001	0.82	Pass
Lead	0.004	0.001	1.20	Pass
Mercury	0.002	0.001	0.40	Pass

Heavy metal analysis is completed in partnership with Contract Testing Laboratories of America, Orem UT.

Performed by: CTLA

Reviewed by: William Deutschman

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Instrument Analysis Report

Microbial Impurities

Lot# RDLBB1224

Method: SOP 1-2034.01 Sample Name: F&C Large Pet Tincture APRC Lot Number: RMH221121B

Total Counts			
Microbial Group:	**Result (CFU/g):**	**Specification:**	**Disposition:**
Total Aerobic Bacteria	<10	≤10,000	Pass
Total Yeast and Mold	<10	≤1,000	Pass

Specific Organism Identification			
Microbial Organism:	**Result:**	**Specification:**	**Disposition:**
Aspergillus flavus	ND	Report Only	Tested
Aspergillus fumigatus	ND	Report Only	Tested
Aspergillus niger	ND	Report Only	Tested
Aspergillus terreus	ND	Report Only	Tested
Escherichia coli - Non shigella	ND	Not Detected	Pass
Escherichia coli - Shigella spp	ND	Not Detected	Pass
STEC	ND	Report Only	Tested
Listeria monocytogenes	ND	Report Only	Tested
Salmonella - Specific Gene	ND	Report Only	Tested
Staphylococcus aureus	ND	Not Detected	Pass
Pseudomonas aeruginosa	ND	Not Detected	Pass

Performed by: Jordan Morley

Notes: Foreign Matter: Not Detected.

Reviewed by: Riley Hunter

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Instrument Analysis Report

Pesticides

Lot# RDLBB1224

Method: Sample Name: F&C Large Pet Tincture APRC Lot Number: RMH221121B

Pesticide:	Finding	Action Limit (µg/g)	Pass/Fail
Abamectin	ND	0.5	Pass
Acephate	ND	0.4	Pass
Acequinocyl	ND	2.0	Pass
Acetamiprid	ND	0.2	Pass
Aldicarb	ND	0.4	Pass
Azoxystrobin	ND	0.2	Pass
Bifenazate	ND	0.2	Pass
Bifenthrin	ND	0.2	Pass
Boscalid	ND	0.4	Pass
Carbaryl	ND	0.2	Pass
Carbofuran	ND	0.2	Pass
Chlorantraniliprole	ND	0.2	Pass
Chlorfenapyr	ND	1.0	Pass
Chlorpyrifos	ND	0.2	Pass
Clofentezine	ND	0.2	Pass
Cyfluthrin	ND	1.0	Pass
Cypermethrin	ND	1.0	Pass
Daminozide	ND	1.0	Pass
Dichlorvos	ND	0.1	Pass
Diazinon	ND	0.2	Pass
Dimethoate	ND	0.2	Pass
Ethoprophos	ND	0.2	Pass
Etofenprox	ND	0.4	Pass
Etoxazole	ND	0.2	Pass
Fenoxycarb	ND	0.2	Pass
Fenpyroximate	ND	0.4	Pass
Fipronil	ND	0.4	Pass
Flonicamid	ND	1.0	Pass
Fludioxonil	ND	0.4	Pass

Pesticide:	Finding	Action Limit (µg/g)	Pass/Fail
Hexythiazon	ND	1.0	Pass
Imazal	ND	0.2	Pass
Imidacloprid	ND	0.4	Pass
Kresoxim-methyl	ND	0.4	Pass
Malathion A	ND	0.2	Pass
Metalaxyl	ND	0.2	Pass
Methiocarb	ND	0.2	Pass
Methomyl	ND	0.4	Pass
Methylparathion	ND	0.2	Pass
MGK-264	ND	0.2	Pass
Myclobutanil	ND	0.2	Pass
Naled	ND	0.5	Pass
Oxamyl	ND	1.0	Pass
Paclobutrazol	ND	0.4	Pass
Permethrins	ND	0.2	Pass
Phosmet	ND	0.2	Pass
Piperonylbutoxide	ND	2.0	Pass
Prallethrin	ND	0.2	Pass
Propiconazole	ND	0.4	Pass
Propoxur	ND	0.2	Pass
Pyrethrin	ND	1.0	Pass
Pyridaben	ND	0.2	Pass
Spinosad	ND	0.2	Pass
Spinetoram	ND	0.1	Pass
Spirotetramat	ND	0.2	Pass
Spiroxamine	ND	0.4	Pass
Tebuconazole	ND	0.4	Pass
Thiacloprid	ND	0.2	Pass
Thiamethoxam	ND	0.2	Pass
Trifloxystrobin	ND	0.2	Pass

Performed by: Noura Ahmed Reviewed by: Prabodh Satyal

Pesticide testing performed in a non-ISO 17025:2017 accredited facility.

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Instrument Analysis Report

Residual Solvents

Lot# RDLBB1224

Method: SOP 1-2027.02 Sample Name: F&C Large Pet Tincture APRC Lot Number: RMH221121B

Residual Solvent	Finding (µg/g)	Action Level (µg/g)	Pass/Fail
Dimethyl sulfoxide	ND	5000	Pass
N,N-dimethylacetamide	ND	1090	Pass
1,2 Dimethoxyethane	ND	100	Pass
1,4 Dioxane	ND	380	Pass
1-Butanol	ND	5000	Pass
1-Pentanol	ND	5000	Pass
1-Propanol	ND	5000	Pass
2-Butanone	ND	5000	Pass
2-Butanol	ND	5000	Pass
2-Ethoxyethanol	ND	160	Pass
2-Methylbutane	ND	5000	Pass
2-Propanol	ND	5000	Pass
Acetone	ND	5000	Pass
Acetonitrile	ND	410	Pass
Benzene	ND	2	Pass
Butane	ND	5000	Pass
Cumene	ND	70	Pass
Cyclohexane	ND	3880	Pass
Dichloromethane	ND	600	Pass
2,2-Dimethylbutane	ND	290	Pass
2,3-Dimethylbutane	ND	290	Pass
m,p-Xylene	ND	See Total Xylenes	Pass
o-Xylene	ND	See Total Xylenes	Pass
Ethanol	21.595	5000	Pass
Ethyl Acetate	ND	5000	Pass
Ethyl Benzene	ND	See Total Xylenes	Pass
Ethyl Ether	ND	5000	Pass
Ethylene Glycol	ND	620	Pass
Ethylene Oxide	ND	50	Pass

Residual Solvent	Finding (µg/g)	Action Level (µg/g)	Pass/Fail
Heptane	ND	5000	Pass
Hexane	15.669	290	Pass
Isopropyl Acetate	ND	5000	Pass
Methanol	ND	3000	Pass
Methylpropane	ND	5000	Pass
2-Methylpentane	ND	290	Pass
3-Methylpentane	ND	290	Pass
N,N-Dimethylformamide	ND	880	Pass
Pentane	ND	5000	Pass
Propane	ND	5000	Pass
Pyridine	ND	100	Pass
Sulfolane	ND	160	Pass
Tetrahydrofuran	ND	720	Pass
Toluene	ND	890	Pass
Total Xylenes	ND	2170	Pass

† Per Utah state code 4-41a-701(3) Section R68-29-6
‡ Total Xylenes is a combination of the following: o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene

Overall Disposition: Pass
Performed By: Anil Rokaya
Reviewed By: Spencer Kipfmueller

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Instrument Analysis Report

Mycotoxins

Lot# RDLBB1224

Method: Mycotoxin Sample Name: F&C Large Pet Tincture APRC Lot Number: RMH221121B

Mycotoxin	Finding (µg/kg)	Limit(µg/kg)	Pass/Fail
Aflatoxin B1:	ND		
Aflatoxin B2:	ND		
Aflatoxin G1:	ND		
Aflatoxin G2:	ND		
Total Aflatoxins:	0	20	Pass
Ochratoxin A:	ND	20	Pass

Performed by: Noura Ahmed

Reviewed by: Prabodh Satyal

Approved By:
William A. Deutschman, Ph.D.
Laboratory Director - APRC Lehi
11/30/2022

Utah Department of Agriculture and Food
Division of Laboratory Services
4451 South 2700 West
Taylorsville, Utah 84129
(801) 816-3840

CERTIFICATE OF ANALYSIS

Lot #: RDLBB1224

Sample Information

UDAF Lab #	HP23332-1	**Issue Date:**	12/01/2023
Client:	Farmer & Chemist	**Client Email:**	stevem@farmerandchemist.com
Producer:	Farmer & Chemist	**Sample Type:**	Pet Food
Description:	Ruff Dayz Tincture - Medium - Large Dogs		
Batch/Lot Number:	RDLBB1224	**Date Received:**	11/28/2023
Date Collected:		**Collected By:**	Self-Submitted

Notes:

Testing Summary

Status: PASS

Analysis:	Testing Date:	Status:	Notes:
Cannabinoids	11/30/2023	PASS	

Approved By: _____ Date: 12/01/2023

Brandon Forsyth, Ph.D
State Chemist

Utah Department of Agriculture and Food
Division of Laboratory Services
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CERTIFICATE OF ANALYSIS

Lot #: RDLBB1224

Cannabinoid Analysis **Status:** PASS

Sample ID:	HP23332-1	**Description:**	Ruff Dayz Tincture - Medium - Large Dogs
Testing Date:	11/30/2023	**Reviewed By:**	Cameron Cheyne

Method: ACL.AM.003 Analysis performed using High-Performance Liquid Chromatography (HPLC-DAD)

Analyte	Abbreviation	CAS Number	% (w/w)	mg/g
Δ9-Tetrahydrocannabidiol	Δ9-THC	1972-08-03	NQ	NQ
Δ8-Tetrahydrocannabidiol	Δ8-THC	5957-75-5	NQ	NQ
Δ9-Tetrahydrocannabinolic acid	THCA	23978-85-0	ND	ND
Δ9-Tetrahydrocannabivarin	THCV	31262-37-0	ND	ND
Cannabidiol	CBD	13956-29-1	3.63%	36.3
Cannabidiolic acid	CBDA	1244-58-2	ND	ND
Cannabidivarin	CBDV	24274-48-4	ND	ND
Cannabinol	CBN	521-35-7	NQ	NQ
Cannabigerol	CBG	25654-31-3	0.73%	7.3
Cannabichromene	CBC	20675-51-8	ND	ND
Cannabigerolic acid	CBGA	25555-57-1	ND	ND
Cannabichromenic acid	CBCA	20408-52-0	NQ	NQ
Cannabicitran	CBTC	31508-71-1	ND	ND
9(R+S)-Δ6a,10a-Tetrahydrocannabidiol	Δ3-THC	95720-01-07, 95720-02-8	ND	ND
(6aR,9R)-Δ10-Tetrahydrocannabidiol	(6aR,9R)-Δ10-THC	95543-62-7	ND	ND
(6aR,9S)-Δ10-Tetrahydrocannabidiol	(6aR,9S)-Δ10-THC	95588-87-7	NQ	NQ
Total Cannabinoids			4.36%	43.60
Total THC			ND	ND
Total CBD			3.63%	36.30
Total THC Analogs			ND	ND

Unknown Cannabinoid Peak Area: NQ **Status:** PASS

Notes:

Total Cannabinoids is calculated as the direct sum of each of the cannabinoid values.
Total THC is calculated as Δ9-THC + (THCA x 0.877).
Total CBD is calculated as CBD + (CBDA x 0.877).
Total THC Analogs is calculated as Δ9-THC + (THCA x 0.877) + Δ8-THC + CBTC.
ND = Not Detected, NQ = Not Quantifiable, NT = Not Tested, <LOQ = Below the limit of quantification