

CERTIFICATE OF ANALYSIS SUMMARY CHART



Product	Unit Weight	CBD mg/g	Total CBD mg /Unit	CBN mg/g	Total CBN mg / Unit	THC mg/g	Total THC mg / Unit
Restore 1000 Lotion	96 grams	9.5	912				

Heavy Metals	Microbials	Pesticides	Solvents	Mycotoxins			
PASS	PASS	PASS	PASS	PASS			



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

CERTIFICATE OF ANALYSIS

Sample Information


UDAF Lab #	HP24185-1	Issue Date:	07/09/2024
Client:	Muscle MX	Client Email:	mike@musclmx.com
Producer:	Muscle MX	Sample Type:	Transdermal
Description:	Restore CBD Lotion 1000mg		
Batch/Lot Number:	Lot24159	Date Received:	07/03/2024
Date Collected:		Collected By:	Self-Submitted



Notes:

Testing Summary

Analysis:	Testing Date:	Status:	Notes:
Cannabinoids	07/09/2024	--	

Approved By:  Date: 07/09/2024
 Brandon Forsyth, Ph.D
 State Chemist

The results reported herein pertain only to the indicated sample and may not be used as an endorsement of a product. The results are given under applicable provisions of the Utah Code and represent a true statement of the outcomes of the analyses conducted on the sample received by the laboratory. This report may not be reproduced, except in its entirety. © 2024 All Rights Reserved.



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CERTIFICATE OF ANALYSIS

Cannabinoid Analysis

Status: --

Sample ID:	HP24185-1	Description:	Restore CBD Lotion 1000mg
Testing Date:	07/09/2024	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-Tetrahydrocannabinidiol	Δ9-THC	1972-08-03	ND	ND
Δ8-Tetrahydrocannabinidiol	Δ8-THC	5957-75-5	ND	ND
Δ9-Tetrahydrocannabinolic acid	THCA	23978-85-0	ND	ND
Δ9-Tetrahydrocannabivarin	THCV	31262-37-0	NQ	NQ
Cannabidiol	CBD	13956-29-1	0.95%	9.5
Cannabidiolic acid	CBDA	1244-58-2	NQ	NQ
Cannabidivarin	CBDV	24274-48-4	ND	ND
Cannabinol	CBN	521-35-7	0.03%	0.3
Cannabigerol	CBG	25654-31-3	ND	ND
Cannabichromene	CBC	20675-51-8	0.03%	0.3
Cannabigerolic acid	CBGA	25555-57-1	ND	ND
Cannabichromenic acid	CBCA	20408-52-0	ND	ND
Cannabicitran	CBTC	31508-71-1	ND	ND
9(R+S)-Δ6a,10a-Tetrahydrocannabinidiol	Δ3-THC	95720-01-07, 95720-02-8	ND	ND
(6aR,9R)-Δ10-Tetrahydrocannabinidiol	(6aR,9R)-Δ10-THC	95543-62-7	ND	ND
(6aR,9S)-Δ10-Tetrahydrocannabinidiol	(6aR,9S)-Δ10-THC	95588-87-7	ND	ND
Total Cannabinoids			1.01%	10.10
Total THC			ND	ND
Total CBD			0.95%	9.50
Total THC Analogs			ND	ND

Unknown Cannabinoid Peak Area: NQ

Mass Per Piece: -- **Status:** --

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

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Comprehensive Analysis Report

Sample Overview

Client: Muscle MX

498 West 8360 South, Sandy, UT
84070

Date Received: 06/20/2024

Sample Name: Restore 1000 mg

APRC #: MMX240621J

Sample Matrix: Topical Applicant

Sample Lot: 24159



Assay	Disposition	Date Tested
Heavy Metals - Utah State Cannabis Panel	Tested	06-27-2024
Microbial: Quantitative and Pathogen Detection Combo	Tested	06-24-2024
Pesticide Screen (APRC Panel)	Tested	06/21/2024
Hemp or R&D Residual Solvents	Tested	06-21-2024
Mycotoxin Quantitation	Tested	06-21-2024



Accreditation #115229

Aromatic Plant Research Center is an ISO 17025:2017 certified laboratory.

Instrument Analysis Report

Heavy Metals

Method: CTLA

Sample Name: Restore 1000 mg

APRC Lot Number: MMX240621J

Analyte	Result (ppm)	LOD (ppm)	Threshold (ppm)	Pass/Fail
Arsenic	<0.001	0.001	2.00	Pass
Cadmium	<0.001	0.001	0.82	Pass
Lead	0.130	0.001	1.20	Pass
Mercury	<0.001	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: Sophie Pearson



Instrument Analysis Report

Microbial Impurities

Method: SOP 1-2034.01 and 1-2035.01 Sample Name: Restore 1000 mg APRC Lot Number: MMX240621J

Total Counts			
Microbial Group:	Result (CFU/g):	Specification:	Disposition:
Total Aerobic Bacteria	<10	≤250	Pass
Total Yeast and Mold	<10	≤250	Pass

Specific Organism Identification			
Microbial Organism:	Result:	Specification:	Disposition:
Aspergillus flavus	NT	NT	Not Tested
Aspergillus fumigatus	NT	NT	Not Tested
Aspergillus niger	NT	NT	Not Tested
Aspergillus terreus	NT	NT	Not Tested
E. coli	NT	NT	Not Tested
STEC	NT	NT	Not Tested
Salmonella - Specific Gene	NT	NT	Not Tested
Staphylococcus aureus	Not Detected	Not Detected	Pass
Pseudomonas aeruginosa	Not Detected	Not Detected	Pass

Performed by: Jordan Morley

Notes: Foreign Matter: Not Detected.

Reviewed by: Tessa Crook

Instrument Analysis Report

Pesticides

Method:

Sample Name: Restore 1000 mg

APRC Lot Number: MMX240621J

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
Fonicamid	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: Nicholas Saichek Reviewed by: William Deutschman

Pesticide testing performed in a non-ISO 17025:2017 accredited facility. Pass/Fail determinations based on Utah Administrative Rule R68-29.

Instrument Analysis Report

Residual Solvents

Method: SOP 1-2027.03

Sample Name: Restore 1000 mg

APRC Lot Number: MMX240621J

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	6.401	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	ND	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	ND	290	Pass
Isopropyl Acetate	ND	5000	Pass
Methanol	12.014	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: Riley Hunter

Instrument Analysis Report

Mycotoxins

Method: Mycotoxin

Sample Name: Restore 1000 mg

APRC Lot Number: MMX240621J

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: Nicholas Saichek

Reviewed by: William Deutschman



Approved By:

Jordan Morley
 Laboratory Supervisor
 06/28/2024

Mycotoxin testing performed in a non-ISO 17025:2017 accredited facility. Pass/Fail determinations based on Utah Administrative Rule R68-29.