

## 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
Activate 350 Stick	75 grams	5.2	390				

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


<b>UDAF Lab #</b>	HP24172-18	<b>Issue Date:</b>	06/26/2024
<b>Client:</b>	Muscle MX	<b>Client Email:</b>	mike@musclmx.com
<b>Producer:</b>	Muscle MX	<b>Sample Type:</b>	Transdermal
<b>Description:</b>	Activate 350mg		
<b>Batch/Lot Number:</b>	ACS070124	<b>Date Received:</b>	06/20/2024
<b>Date Collected:</b>		<b>Collected By:</b>	Self-Submitted



Notes:

### Testing Summary

Analysis:	Testing Date:	Status:	Notes:
Cannabinoids	06/26/2024	--	

Approved By:  Date: 06/26/2024  
 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:** --

<b>Sample ID:</b>	HP24172-18	<b>Description:</b>	Activate 350mg
<b>Testing Date:</b>	06/26/2024	<b>Reviewed By:</b>	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	0.52%	5.2
Cannabidiolic acid	CBDA	1244-58-2	ND	ND
Cannabidivarin	CBDV	24274-48-4	ND	ND
Cannabinol	CBN	521-35-7	ND	ND
Cannabigerol	CBG	25654-31-3	<LOQ	<LOQ
Cannabichromene	CBC	20675-51-8	ND	ND
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
<b>Total Cannabinoids</b>			0.52%	5.20
Total THC			ND	ND
Total CBD			0.52%	5.20
Total THC Analogs			ND	ND

**Unknown Cannabinoid Peak Area:** 2.1%

**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

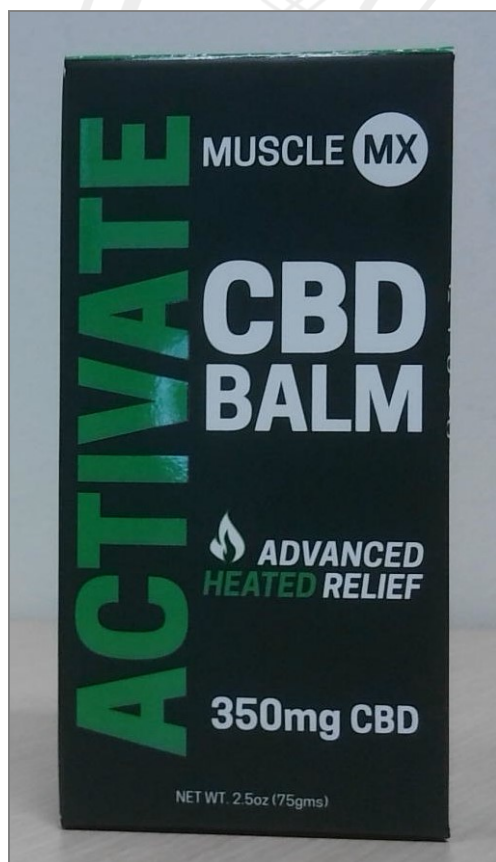
**Date Received:** 06/20/2024

**Sample Name:** Activate 350 mg

**APRC #:** MMX240621L

**Sample Matrix:** Topical Applicant

**Sample Lot:** ACS070124



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: Activate 350 mg

APRC Lot Number: MMX240621L

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	<0.001	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: Activate 350 mg      APRC Lot Number: MMX240621L

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

<b>Specific Organism Identification</b>			
<b>Microbial Organism:</b>	<b>Result:</b>	<b>Specification:</b>	<b>Disposition:</b>
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: Activate 350 mg

APRC Lot Number: MMX240621L

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: Activate 350 mg

APRC Lot Number: MMX240621L

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	10.036	5000	Pass
Acetone	16.856	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	26.488	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: Activate 350 mg

APRC Lot Number: MMX240621L

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.