



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 #	HP23219-1	Issue Date:	08/15/2023
Client:	DMSO Green	Client Email:	ezeziel@dmsogreen.com
Producer:	DMSO Green	Sample Type:	Transdermal
Description:	Patented DMSO + CBD/CBG Salve for pain relief		
Batch/Lot Number:	BHL-DGL070123	Date Received:	08/07/2023
Date Collected:	-	Collected By:	Self-Submitted




Notes:

Testing Summary

Status: FAIL

Analysis:	Testing Date:	Status:	Notes:
Cannabinoids	08/09/2023	PASS	
Foreign Matter	08/08/2023	PASS	
Microbials	Plating: 08/08/2023 PCR: 08/09/2023	PASS	
Pesticides	08/10/2023	PASS	
Heavy Metals	08/10/2023	PASS	
Residual Solvents	08/15/2023	PASS	
Mycotoxins	08/10/2023	PASS	

Approved By:  Date: 08/15/2023
 Brandon Forsyth, Ph.D
 State Chemist

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CERTIFICATE OF ANALYSIS

Cannabinoid Analysis

Status: PASS

Sample ID: HP23219-1	Description: Patented DMSO + CBD/CBG Salve for pain relief
Testing Date: 08/09/2023	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
Δ 9-Tetrahydrocannabinidiol	Δ 9-THC	1972-08-03	ND	ND
Δ 8-Tetrahydrocannabinidiol	Δ 8-THC	5957-75-5	ND	ND
Δ 9-Tetrahydrocannabinolic acid	THCA	23978-85-0	ND	ND
Δ 9-Tetrahydrocannabivarin	THCV	31262-37-0	ND	ND
Cannabidiol	CBD	13956-29-1	0.59%	5.9
Cannabidiolic acid	CBDA	1244-58-2	NQ	NQ
Cannabidivarin	CBDV	24274-48-4	ND	ND
Cannabinol	CBN	521-35-7	ND	ND
Cannabigerol	CBG	25654-31-3	0.62%	6.2
Cannabichromene	CBC	20675-51-8	ND	ND
Cannabigerolic acid	CBGA	25555-57-1	ND	ND
Cannabichromenic acid	CBCA	20408-52-0	ND	ND
9(R+S)- Δ 6a,10a-Tetrahydrocannabinidiol	Δ 3-THC	95720-01-07, 95720-02-8	ND	ND
(6aR,9R)- Δ 10-Tetrahydrocannabinidiol	(6aR,9R)- Δ 10-THC	95543-62-7	ND	ND
(6aR,9S)- Δ 10-Tetrahydrocannabinidiol	(6aR,9S)- Δ 10-THC	95588-87-7	ND	ND
Total Cannabinoids			1.21%	12.1
Total THC			ND	ND
Total CBD			0.59%	5.9

Unknown Cannabinoid Peak Area: 4.0%

Status: PASS

Notes:

Total Cannabinoids is calculated as the direct sum of each of the cannabinoid values.
Total THC is calculated as Δ 9-THC + (THCA x 0.877).
Total CBD is calculated as CBD + (CBDA x 0.877).

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CERTIFICATE OF ANALYSIS

Foreign Matter Analysis

Status: PASS

Sample ID: HP23219-1	Description: Patented DMSO + CBD/CBG Salve for pain relief
Testing Date: 08/08/2023	Reviewed By: Brooke Smith

Method: Analysis performed by visual inspection aided by magnification

Analyte	Foreign Matter Found	Status
Foreign Matter		PASS

Notes:

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CERTIFICATE OF ANALYSIS

Microbial Analysis

Status: PASS

Sample ID:	HP23219-1	Description:	Patented DMSO + CBD/CBG Salve for pain relief
Testing Date:	Plating: 08/08/2023 PCR: 08/09/2023	Reviewed By:	Brooke Smith

Method: Analysis performed using plating methods

Analyte	Result (cfu/g)	Allowed Limit	Status
TAC	<250	250	PASS
TYM	<250	250	PASS

Method: Analysis performed using Polymerase Chain Reaction (PCR)

Organism	Result	Required	Status
E. Coli	NT	<input type="checkbox"/>	--
Salmonella	NT	<input type="checkbox"/>	--
STEC	NT	<input type="checkbox"/>	--
Pseudomonas	ND	<input checked="" type="checkbox"/>	PASS
Aspergillus	NT	<input type="checkbox"/>	--
Staph	ND	<input checked="" type="checkbox"/>	PASS

Notes:

TNTC = To Numerous To Count, NT = Not Tested, ND = Not Detected, DET = Detected

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CERTIFICATE OF ANALYSIS

Pesticide Analysis

Status: PASS

Sample ID:	HP23219-1	Description:	Patented DMSO + CBD/CBG Salve for pain relief
Testing Date:	08/10/2023	Reviewed By:	Cameron Cheyne

Method: ACL.AM.008 Analysis performed using Liquid Chromatography - Mass Spectrometry (LC-MS/MS)

Analyte	CAS Number	Result (ppm)	Action Level (ppm)	Status	Analyte	CAS Number	Result (ppm)	Action Level (ppm)	Status
Abamectin	71751-41-2	ND	0.5	PASS	Imazilil	35554-44-0	ND	0.2	PASS
Acephate	30560-19-1	ND	0.4	PASS	Imidacloprid	138261-41-3	ND	0.4	PASS
Acequinocyl	57960-19-7	ND	2	PASS	Kresoxim-methyl	143390-89-0	ND	0.4	PASS
Acetamiprid	135410-20-7	ND	0.2	PASS	Malathion	121-75-5	ND	0.2	PASS
Aldicarb	0116-06-03	ND	0.4	PASS	Metalaxyl	57837-19-1	ND	0.2	PASS
Azoxystrobin	131860-33-8	ND	0.2	PASS	Methiocarb	2032-65-7	ND	0.2	PASS
Bifenazate	149877-41-8	ND	0.2	PASS	Methomyl	16752-77-5	ND	0.4	PASS
Bifenthrin	82657-04-03	ND	0.2	PASS	Methyl parathion	298-00-0	ND	0.2	PASS
Boscalid	188425-85-6	ND	0.4	PASS	MGK-264	113-48-4	ND	0.2	PASS
Carbaryl	63-25-2	ND	0.2	PASS	Myclobutanil	88671-89-0	ND	0.2	PASS
Carbofuran	1563-66-2	ND	0.2	PASS	Naled	300-76-5	ND	0.5	PASS
Chlorantraniliprole	500008-45-7	ND	0.2	PASS	Oxamyl	23135-22-0	ND	1	PASS
Chlorfenapyr	122453-73-0	ND	1	PASS	Paclobutrazol	76738-62-0	ND	0.4	PASS
Chlorpyrifos	2921-88-2	ND	0.2	PASS	Permethrins	52645-53-1	ND	0.2	PASS
Clofentezine	74115-24-5	ND	0.2	PASS	Phosmet	0732-11-6	ND	0.2	PASS
Cyfluthrin	68359-37-5	ND	1	PASS	Piperonyl Butoxide	51-03-6	ND	2	PASS
Cypermethrin	52315-07-08	ND	1	PASS	Prallethrin	23031-36-9	ND	0.2	PASS
Daminozide	1596-84-5	ND	1	PASS	Propiconazole	60207-90-1	ND	0.4	PASS
Dichlorvos	62-73-7	ND	0.1	PASS	Propoxur	114-26-1	ND	0.2	PASS
Diazinon	333-41-5	ND	0.2	PASS	Pyrethrins	8003-34-7	ND	1	PASS
Dimethoate	60-51-5	ND	0.2	PASS	Pyridaben	96489-71-3	ND	0.2	PASS
Ethoprophos	13194-48-4	ND	0.2	PASS	Spinosad	168316-95-8	ND	0.2	PASS
Etofenprox	80844-07-01	ND	0.4	PASS	Spiromesifen	283594-90-1	ND	0.2	PASS
Etoxazole	153233-91-1	ND	0.2	PASS	Spirotetramat	203313-25-1	ND	0.2	PASS
Fenoxycarb	72490-01-08	ND	0.2	PASS	Spiroxamine	118134-30-8	ND	0.4	PASS
Fenpyroximate	134098-61-6	ND	0.4	PASS	Tebuconazole	80443-41-0	ND	0.4	PASS
Fipronil	120068-37-3	ND	0.4	PASS	Thiacloprid	111988-49-9	ND	0.2	PASS
Flonicamid	158062-67-0	ND	1	PASS	Thiamethoxam	153719-23-4	ND	0.2	PASS
Fludioxonil	131341-86-1	ND	0.4	PASS	Trifloxystrobin	141517-21-7	ND	0.2	PASS
Hexythiazox	78587-05-0	ND	1	PASS					

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Heavy Metal Analysis

Status: PASS

Sample ID: HP23219-1	Description: Patented DMSO + CBD/CBG Salve for pain relief
Testing Date: 08/10/2023	Reviewed By: Cameron Cheyne

Method: ACL.AM.004 Analysis performed using Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)

Analyte	CAS Number	Result (ppm)	Action Level (ppm)	Status
Arsenic	7440-38-2	ND	2	PASS
Cadmium	7440-43-9	ND	0.82	PASS
Lead	7439-92-1	ND	1.2	PASS
Mercury	7439-97-6	ND	0.4	PASS

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CERTIFICATE OF ANALYSIS

Residual Solvent Analysis

Status: FAIL

Sample ID:	HP23219-1	Description:	Patented DMSO + CBD/CBG Salve for pain relief
Testing Date:	08/15/2023	Reviewed By:	Cameron Cheyne

Method: ACL.AM.007 Analysis performed using Gas Chromatography - Mass Spectrometry (GC-MS/FID)

Analyte	CAS Number	Result (ppm)	Action Level (ppm)	Status	Analyte	CAS Number	Result (ppm)	Action Level (ppm)	Status
Acetone	67-64-1	ND	5000	PASS	Ethyl Ether	60-29-7	ND	5000	PASS
Acetonitrile	75-05-8	ND	410	PASS	Ethylbenzene	100-41-4	ND	See Xylenes	--
Benzene	71-43-2	ND	2	PASS	Ethylene Glycol	107-21-1	ND	620	PASS
Butane	106-97-8	ND	5000	PASS	Ethylene Oxide	75-21-8	ND	50	PASS
1-Butanol	71-36-3	ND	5000	PASS	Heptane	142-82-5	ND	5000	PASS
2-Butanol	78-92-2	ND	5000	PASS	n-Hexane	110-54-3	<LOQ	290	PASS
2-Butanone	78-93-3	ND	5000	PASS	Isopropyl Acetate	108-21-4	ND	5000	PASS
Cumene	98-82-8	ND	70	PASS	Methanol	67-56-1	ND	3000	PASS
Cyclohexane	110-82-7	ND	3880	PASS	2-Methylbutane	78-78-4	ND	5000	PASS
Dichloromethane	75-09-2	ND	600	PASS	2-Methylpentane	107-83-5	ND	290	PASS
1,2-Dimethoxyethane	110-71-4	ND	100	PASS	3-Methylpentane	96-14-0	ND	290	PASS
Dimethyl Sulfoxide	67-68-5	42682	5000	N/A	Methylpropane	75-28-5	ND	5000	PASS
N,N-Dimethylacetamide	127-19-5	ND	1090	PASS	Pentane	109-66-0	ND	5000	PASS
1,2-Dimethylbenzene	95-47-6	ND	See Xylenes	--	1-Pentanol	71-41-0	ND	5000	PASS
1,3-Dimethylbenzene	108-38-3	ND	See Xylenes	--	Propane	74-98-6	ND	5000	PASS
1,4-Dimethylbenzene	106-42-3	ND	See Xylenes	--	1-Propanol	71-23-8	ND	5000	PASS
2,2-Dimethylbutane	75-83-2	ND	290	PASS	2-Propanol	67-63-0	<LOQ	5000	PASS
2,3-Dimethylbutane	79-29-8	ND	290	PASS	Pyridine	110-86-1	ND	100	PASS
N,N-Dimethylformamide	68-12-2	ND	880	PASS	Sulfolane	126-33-0	ND	160	PASS
1,4-Dioxane	123-9	ND	380	PASS	Tetrahydrofuran	109-99-9	ND	720	PASS
Ethanol	64-17-5	ND	5000	PASS	Toluene	108-88-3	ND	890	PASS
2-Ethoxyethanol	110-80-5	ND	160	PASS	Xylenes	1330-20-7	ND	2170	PASS
Ethyl Acetate	141-78-6	ND	5000	PASS					

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CERTIFICATE OF ANALYSIS

Mycotoxin Analysis

Status: PASS

Sample ID: HP23219-1	Description: Patented DMSO + CBD/CBG Salve for pain relief
Testing Date: 08/10/2023	Reviewed By: Cameron Cheyne

Method: ACL.AM.004 Analysis performed using Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)

Analyte	Result (ppb)	Action Level (ppb)	Status
AflatoxinB1	ND	See Total Aflatoxin	--
AflatoxinB2	ND	See Total Aflatoxin	--
AflatoxinG1	ND	See Total Aflatoxin	--
AflatoxinG2	ND	See Total Aflatoxin	--
Total Aflatoxin	0	20	PASS
Ochratoxin A	ND	20	PASS

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