



JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Joy Organics CBD Organic Salve Stick
PRODUCT STRENGTH: 250 mg
LOT NUMBER: 21160-06
BEST BY DATE: 06/10/2023
HEMP EXTRACT LOT: [C0125-001](#)

Click on the links to view third-party reports

Physical Attributes

Test	Method	Specification	Results
Color	SOP-100	Off-white, cream color	PASS
Odor	SOP-100	Neutral scent w/hint of hemp oil, sweet beeswax	PASS
Appearance	SOP-100	Firm textured salve in white roll-on container with cap	PASS
Primary Package Eval.	SOP-132	Container clean and free of filth. Container caps tight and tamper-evident label intact	PASS
Secondary Package Eval.	SOP-132	Labeling Compliance Checked, Cartons sturdy and clean. Sufficient cushion material exists. Box taped and secure.	PASS

Review of Third-Party Analysis

Panel	Method	Specification	Results*	Pass/Fail
Potency - Total CBD	SOP-111	237.5-312.5 mg CBD LOQ**†: 10 PPM† (0.001%)	282.1mg	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	ND	PASS
Compliant Pesticide Panel	SOP-111	Follows Oregon Action Limits for Pesticides	ND	PASS
Microbial - Stec E.Coli	SOP-111	Complies with USP 61/62	Below LOQ	PASS
Microbial - Salmonella	SOP-111	Complies with USP 61/62	Below LOQ	PASS
Microbial - Yeast/Mold	SOP-111	Complies with USP 61/62	Below LOQ	PASS
CA Compliant Heavy Metal Panel	SOP-111	Arsenic (As): ≤1.5 PPM Cadmium (Cd): ≤0.5 PPM Mercury (Hg): ≤1.0 PPM Lead (Pb): ≤0.5 PPM	Below LOQ	PASS
Residual Solvents Panel	SOP-111	Montana Public Health and Human Services Rule 37.107.316	Below LOQ	PASS

** Level of Quantitation, † Parts Per Million

Quality Certified

Kayla Kolber
 Kayla Kolber
 Quality Assurance Technician

06-22-2021

Date

certificate ID
1FK05

0.5oz Organic Salve Stick 250mg

7USC1639 Certificate of Analysis

LOT # OHSAL250-21160-06

rec'd 6/14/2021 11:08:07 AM

order 11016



total
cannabinoids
298.1mg

per
1/2oz

THC‡ ND
CBD‡ 282.1mg

**This Product Has Been
Tested and Complies
with 7USC1639o(1)**

Stillwater
Laboratories



Potency per 1/2oz stick

MSP-7.5.1.4

LOD LOQ (95%CI k=2) error

total cannabinoids	298.1mg	0.02 0.07 ±5.40mg
total THC‡	ND	0.02 0.07 ±0.07mg
total THC (THC+THCa)	ND	0.02 0.07 ±0.07mg
total CBD‡	282.1mg	0.02 0.07 ±5.12mg
total CBD (CBD+CBDA)	282.1mg	0.02 0.07 ±5.12mg
tetrahydrocannabinolic acid (THCa)	ND	0.02 0.07 ±0.07mg
Δ9-tetrahydrocannabinol (Δ9 THC)	ND	0.02 0.06 ±0.06mg
Δ8-tetrahydrocannabinol (Δ8 THC)	ND	0.03 0.09 ±0.09mg
tetrahydrocannabivarin (THCv)	ND	0.02 0.07 ±0.07mg
cannabidiolic acid (CBDA)	ND	0.02 0.06 ±0.06mg
cannabidiol (CBD)	282.1mg	0.02 0.07 ±5.12mg
cannabidivarin (CBDv)	0.8mg	0.02 0.07 ±0.08mg
cannabigerolic acid (CBGA)	ND	0.02 0.06 ±0.06mg
cannabigerol (CBG)	15.1mg	0.01 0.02 ±0.29mg
cannabinol (CBN)	ND	0.01 0.04 ±0.04mg
cannabichromene (CBC)	ND	0.02 0.07 ±0.07mg

Microbial

MSP-7.5.1.10

limit

LOD LOQ error result

E.coli	ND	OCFU	0.0 0.1 ±0.1CFU	PASS
Salmonella sp.	ND	OCFU	0.0 0.1 ±0.1CFU	PASS
molds	ND	10000CFU	1.8 5.5 ±5.5CFU	PASS
Ochratoxin A	ND	20 ppb	0.3 1.0 ±1.0 ppb	PASS
Aflatoxin B1B2G1G2	ND	20 ppb	0.3 1.0 ±1.0 ppb	PASS

Pesticides

MSP-7.5.1.8

limit

LOD LOQ error result

Abamectin	ND	0.30 ppm	0.005 0.016 ±0.016 ppm	PASS
Acephate	ND	5.00 ppm	0.006 0.017 ±0.017 ppm	PASS
Acequinocyl	ND	4.00 ppm	0.005 0.014 ±0.014 ppm	PASS
Acetamiprid	ND	5.00 ppm	0.004 0.012 ±0.012 ppm	PASS
Aldicarb	ND	0.00 ppm	0.002 0.005 ±0.005 ppm	PASS
Azoxystrobin	ND	40.00 ppm	0.002 0.005 ±0.005 ppm	PASS
Bifenazate	ND	5.00 ppm	0.001 0.004 ±0.004 ppm	PASS
Bifenthrin	ND	0.50 ppm	0.001 0.002 ±0.002 ppm	PASS
Boscalid	ND	10.00 ppm	0.016 0.047 ±0.047 ppm	PASS
Carbaryl	ND	0.50 ppm	0.006 0.019 ±0.019 ppm	PASS
Carbofuran	ND	0.00 ppm	0.001 0.004 ±0.004 ppm	PASS
Chloanthraniliprole	ND	40.00 ppm	0.015 0.045 ±0.045 ppm	PASS
Chlorfenapyr	ND	0.00 ppm	0.004 0.012 ±0.012 ppm	PASS
Chlorpyrifos	ND	0.00 ppm	0.031 0.093 ±0.093 ppm	PASS
Clofentezine	ND	0.50 ppm	0.006 0.017 ±0.017 ppm	PASS
Coumaphos	ND	0.00 ppm	0.004 0.012 ±0.012 ppm	PASS
Cyfluthrin	ND	1.00 ppm	0.006 0.017 ±0.017 ppm	PASS
Cypermethrin	ND	1.00 ppm	0.004 0.012 ±0.012 ppm	PASS
Daminozide	ND	0.00 ppm	0.021 0.064 ±0.064 ppm	PASS
Dichlorvos	ND	0.00 ppm	0.011 0.033 ±0.033 ppm	PASS
Diazinon	ND	0.20 ppm	0.001 0.003 ±0.003 ppm	PASS
Dimethoate	ND	0.00 ppm	0.002 0.005 ±0.005 ppm	PASS
Etoxazole	ND	1.50 ppm	0.003 0.009 ±0.009 ppm	PASS
Fenoxycarb	ND	0.00 ppm	0.003 0.008 ±0.008 ppm	PASS
Fenpyroximate	ND	2.00 ppm	0.001 0.003 ±0.003 ppm	PASS
Fipronil	ND	0.00 ppm	0.006 0.017 ±0.017 ppm	PASS
Flonicamid	ND	2.00 ppm	0.075 0.226 ±0.226 ppm	PASS
Fludioxonil	ND	30.00 ppm	0.005 0.015 ±0.015 ppm	PASS
Hexythiazox	ND	2.00 ppm	0.001 0.002 ±0.002 ppm	PASS
Imazail	ND	0.00 ppm	0.005 0.015 ±0.015 ppm	PASS
Imidacloprid	ND	3.00 ppm	0.001 0.003 ±0.003 ppm	PASS
Malathion	ND	5.00 ppm	0.004 0.012 ±0.012 ppm	PASS
Metalaxyl	ND	15.00 ppm	0.006 0.017 ±0.017 ppm	PASS
Methiocarb	ND	0.00 ppm	0.003 0.008 ±0.008 ppm	PASS
Methomyl	ND	0.10 ppm	<0.001 0.001 ±0.001 ppm	PASS
Methyl parathion	ND	0.00 ppm	0.001 0.002 ±0.002 ppm	PASS
Mevinphos	ND	0.00 ppm	0.004 0.012 ±0.012 ppm	PASS
Myclobutanil	ND	9.00 ppm	0.001 0.002 ±0.002 ppm	PASS
Naled	ND	0.50 ppm	0.004 0.012 ±0.012 ppm	PASS
Oxamyl	ND	0.20 ppm	0.002 0.005 ±0.005 ppm	PASS
Paclobutrazol	ND	0.00 ppm	0.002 0.006 ±0.006 ppm	PASS
Permethrin	ND	20.00 ppm	0.008 0.023 ±0.023 ppm	PASS
Phosmet	ND	0.20 ppm	0.002 0.007 ±0.007 ppm	PASS
Piperonylbutoxide	ND	8.00 ppm	0.008 0.023 ±0.023 ppm	PASS
Prallethrin	ND	0.40 ppm	0.003 0.009 ±0.009 ppm	PASS
Propiconazole	ND	20.00 ppm	0.003 0.009 ±0.009 ppm	PASS
Propoxur	ND	0.00 ppm	0.004 0.013 ±0.013 ppm	PASS

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

Metals

MSP-7.5.1.11

limit

LOD LOQ error result

Arsenic	ND	1500 ppb	6.4 19.1 ±19.1 ppb	PASS
Cadmium	ND	500 ppb	6.8 20.5 ±20.5 ppb	PASS
Lead	ND	500 ppb	10.7 32.0 ±32.0 ppb	PASS
Mercury	ND	300 ppb	5.4 16.1 ±16.1 ppb	PASS

Pesticides

MSP-7.5.1.8

limit

LOD LOQ error result

Pyrethrin	ND	1.00 ppm	0.002 0.006 ±0.006 ppm	PASS
Pyridaben	ND	3.00 ppm	0.001 0.002 ±0.002 ppm	PASS
Spinetoram	ND	3.00 ppm	0.003 0.008 ±0.008 ppm	PASS
Spinosad	ND	3.00 ppm	0.005 0.015 ±0.015 ppm	PASS
Spiromesifen	ND	12.00 ppm	0.002 0.007 ±0.007 ppm	PASS
Spirotetramat	ND	13.00 ppm	0.002 0.005 ±0.005 ppm	PASS
Spiroxamine	ND	0.00 ppm	0.001 0.002 ±0.002 ppm	PASS
Tebuconazole	ND	2.00 ppm	0.004 0.012 ±0.012 ppm	PASS
Thiacloprid	ND	0.10 ppm	0.001 0.002 ±0.002 ppm	PASS
Thiamethoxam	ND	4.50 ppm	0.002 0.007 ±0.007 ppm	PASS
Trifloxystrobin	ND	30.00 ppm	0.002 0.005 ±0.005 ppm	PASS

Certified by:



https://customer.a2la.org/index.cfm?event=directory_detail&labPID=423635B2-5128-4C6F-871A-419DCF43B0D7

Stillwater Laboratories Inc.
MT License L0001, L00007
6073 US93N Suite 5, Olney MT 59927
406-881-2019

INSTRUMENTS: Potency by HPLC (LC2030C-UV), solvents and terpenes by GCMS (QP2020/HS20), pesticides and mycotoxins by LCMSMS (LC8060), microbial by qPCR (AriaMx) and plating (Hardy Diagnostics), metals by ICPMS (ICPMS-2030)

All testing was completed onsite at 6073 US93N, Olney MT. Potency (cannabinoid concentration) is calculated as: [cannabinoid]_{HPLC} x volume_{dilution}/M_{dry}. Decarboxyated cannabinoid concentration is calculated XXX_{total} = 0.877 x XXX_A + XXX. Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; LOD is the limit of detection (3.3s), LOQ is the limit of quantification (3xLOD), and experimental error is calculated from weighing, dilution, and interpolation error using the formula s_e² = Σ (d_i/d_i)² s_e² where i is the contributor to error. The 95% confidence range is calculated from: (concentration) ± t_{CL,90} x s_e. Sampling error is not considered in error calculations. ND = not detected (< LOD), NT = not tested, NL = no limit, NA = not applicable. ‡ = decarbed

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total cannabinoids		CBD	THC
		total 83.9%	0.0%
89.4%	decarb total	83.87%	0%
25656			

This Product Has Been Tested and Complies with 7USC1639o(1) Definition of Hemp



Stillwater Laboratories

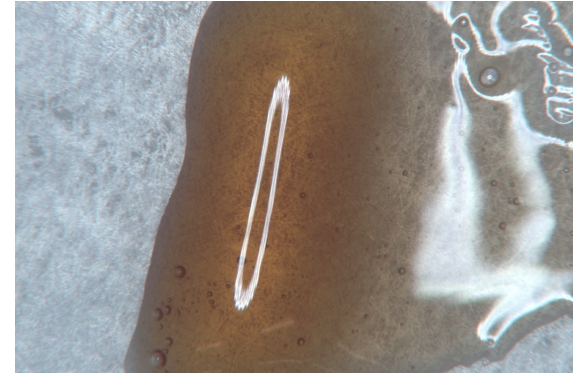
https://portal.a2la.org/scopepdf/4961-01.pdf

Sample Handling

test ID sample date 1/26/21 12:33 PM
 order 9634 labID 1AW04 weight
 source 1Z78V4E80196231002

Methods	method	equipment
weights	MSP-7.3.1.3	AUX120.1
potency	MSP-7.5.1.5	LC-2030
terpenes	MSP-7.5.1.7	QP2020/HS20
pesticides	MSP-7.5.1.8	LC-8060
mycotoxins	MSP-7.5.1.8	LC-8060
microbial	MSP-7.5.1.1	AriaMx/Hardy
solvents	MSP-7.5.1.6	QP2020/HS20
metals	MSP-7.5.1.11	ICPMS2030

concentrate



Potency	%	estimated error	Terpenes	%	estimated error	%	estimated error	%	estimated error
tetrahydrocannabinolic acid (THCa)	0%	± 0.02 %	terpenes not tested / not required						
Δ ⁹ -tetrahydrocannabinol (Δ ⁹ THC)	0%	± 0.02 %							
Δ ⁸ -tetrahydrocannabinol (Δ ⁸ THC)	0%	± 0.02 %							
tetrahydrocannabivarin (THCv)	0%	± 0.02 %							
cannabidiolic acid (CBDa)	0%	± 0.02 %							
cannabidiol (CBD)	83.87%	± 0.75 %							
cannabidivarin (CBDv)	.63%	± 0.07 %							
cannabigerolic acid (CBGa)	0%	± 0.02 %							
cannabigerol (CBG)	4.94%	± 0.18 %							
cannabinol (CBN)	0%	± 0.02 %							
cannabichromene (CBC)	0%	± 0.02 %							

Solvents	MT limit	1AW04	LOQ	Pesticides (MT)	MT limit	1AW04	LOQ	Pesticides (other)	1AW04	LOQ
propane	5,000	PASS	<10ppm	abamectin	2.50 ppm	PASS	<10ppb	acephate	0.00 ppm	<10ppb
butanes	5,000	PASS	<10ppm	acequinocyl	10.00 ppm	PASS	<10ppb	acetamidrid	0.00 ppm	<10ppb
pentanes	5,000	PASS	<10ppm	bifenazate	1.00 ppm	PASS	<10ppb	aldicarb	0.00 ppm	<10ppb
hexanes	290	PASS	<10ppm	bifenthrin	1.00 ppm	PASS	<10ppb	azoxystrobin	0.00 ppm	<10ppb
cyclohexane	3,880	PASS	<10ppm	chlormequat cl.	5.00 ppm	PASS	<10ppb	boscalid	0.00 ppm	<10ppb
heptanes	5,000	PASS	<10ppm	cyfluthrin	5.00 ppm	PASS	<80ppb	carbaryl	0.00 ppm	<10ppb
methanol	3,000	PASS	<10ppm	diaminozide	5.00 ppm	PASS	<10ppb	carbofuran	0.00 ppm	<10ppb
isopropanol	5,000	PASS	<10ppm	etoxazole	1.00 ppm	PASS	<10ppb	chloantranilprole	0.00 ppm	<10ppb
acetone	5,000	PASS	<10ppm	fenoxycarb	1.00 ppm	PASS	<10ppb	chlorpyrifos	0.00 ppm	<10ppb
ethyl acetate	5,000	PASS	<10ppm	imazalil	1.00 ppm	PASS	<10ppb	clofentezine	0.00 ppm	<10ppb
benzene	2	PASS	<0.2ppm	imidacloprid	2.00 ppm	PASS	<10ppb	cypermethrin	0.00 ppm	<10ppb
toluene	890	PASS	<10ppm	myclobutanil	0.60 ppm	PASS	<10ppb	diazinon	0.00 ppm	<10ppb
xylenes	2,170	PASS	<10ppm	paclobutrazol	2.00 ppm	PASS	<10ppb	dichlorvos	0.00 ppm	<10ppb
chloroform	2	PASS	<0.2ppm	pyrethrins	5.00 ppm	PASS	<10ppb	dimethoate	0.00 ppm	<10ppb
dichloromethane	600	PASS	<10ppm	spinosad	1.00 ppm	PASS	<10ppb	etofenprox	0.00 ppm	<10ppb
acetonitrile	NA	N/A	<10ppm	spiromesifen	1.00 ppm	PASS	<10ppb	fenpyroximate	0.00 ppm	<10ppb
ethanol	NA	N/A	<10ppm	spirotetramat	1.00 ppm	PASS	<10ppb	fipronil	0.00 ppm	<10ppb
tetrahydrofuran	NA	N/A	<10ppm	trifloxystrobin	1.00 ppm	PASS	<10ppb	flonicamid	0.00 ppm	<10ppb
								fludioxonil	0.00 ppm	<10ppb
								hexythiazox	0.00 ppm	<10ppb
								kresoxym-methyl	0.00 ppm	<10ppb
								malathion	0.00 ppm	<10ppb
								metalaxyl	0.00 ppm	<10ppb
								methiocarb	0.00 ppm	<10ppb
								methomyl	0.00 ppm	<10ppb
								oxamyl	0.00 ppm	<10ppb
								permethrins	0.00 ppm	<10ppb
								phosmet	0.00 ppm	<10ppb
								piperonyl butoxide	0.00 ppm	<10ppb
								prallethrin	0.00 ppm	<10ppb
								propiconazole	0.00 ppm	<10ppb
								pyridaben	0.00 ppm	<10ppb
								spiroxamine	0.00 ppm	<10ppb
								tebuconazole	0.00 ppm	<10ppb
								thiacloprid	0.00 ppm	<10ppb
								thiamethoxam	0.00 ppm	<10ppb

Toxic Metals	MT limit	1AW04	LOQ	Microbial	MT limit	1AW04	LOQ
arsenic	2 ppm	PASS	<10ppb	E. coli	10 CFU	PASS	<10 CFU/g
cadmium	4.1 ppm	PASS	<10ppb	Salmonella sp.	10 CFU	PASS	<10 CFU/g
lead	1.2 ppm	PASS	<10ppb	molds	10000 CFU	PASS	<10k CFU/g
mercury	0.4 ppm	PASS	<10ppb	Aflatoxin B1,B2,G1,G2	20 ppb	PASS	<20 ppb
				Ochratoxin A	20 ppb	PASS	<20 ppb

• All testing was completed onsite at 6073 US93N, Olney MT • Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]_{HPLC} x volume_{dilution} / m_{dry}. Terpene concentration is calculated from the equation: [terpene] = (terpene mass)_{GCMS} / m_{dry}. •• Decarboxyted cannabinoid concentration is calculated from the equation XXX_{total} = 0.877 x XXX_a + XXX ••• Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; this is combined with error from weighing and dilution using the propagation of error formula s_g² = Σ(∂f/∂i)²s_i² where i is the contributor to error. The 95% confidence range is calculated from the equation: (concentration) ± t_{CL90} X s_g. Sampling error is not

Certified by:

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