CERTIFICATE OF ANALYSIS

STATUS: RELEASED **REVISION**: 00
DATE: 02/25/2022

CUSTOMER INFORMATION	SAMPLE INFORMATION
Company Name:	**Submitted Sample Name:**
Medterra CBD	Medterra 250mg CBD Rapid Recovery Cooling Roll On 2oz
Address:	**Submitted Sample Lot:**
9805 Research Dr; Irvine, California 92618 USA	B18221-250
Phone Number:	**Submitted Sample Description:**
800-972-1288	Off White Viscous Material in Plastic Container; Stored Rm Temp
Contact Name / Email:	**Submitted Sample Product Type / Matrix:**
support@medterracbd.com	Hemp Extract / Topical

TOTAL THC ASSAY (COMPLIANCE, USDA)

Analysis	Test Method	LOD	LOQ	Specifications	Test Results			Pass / Fail
					Replicate 1	Replicate 2	Average	
Δ9-THC	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: NMT 0.300 mg/g: NMT 3.00 *(Δ9-THC States Only)*	< LOD < LOQ	< LOD < LOQ	< LOD < LOQ	PASS
THCa	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	< LOD < LOQ	< LOD < LOQ	Results Reported
Total THC	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: NMT 0.300 mg/g: NMT 3.00	< LOD < LOQ	< LOD < LOQ	< LOD < LOQ	PASS
Measurement Uncertainty (MU) = 0.02% at 0.3% THC					Total Potential THC = (THCa x 0.877)+ (Δ9-THC)			

CBD LABEL CLAIM

Analysis	Test Method	LOD	LOQ	Specifications	Test Results			Pass / Fail
					Replicate 1	Replicate 2	Average	
CBD	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	mg/unit: Report Only* *Target: 250 mg/unit*	260.065 mg/unit	257.195 mg/unit	258.630 mg/unit	Results Reported
CBD	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	% Label Claim: 90.0 to 110.0% *Target: 100%*	Replicate 1	Replicate 2	Average	PASS
					104.0%	102.9%	103.5%	
*Unit Size = 2 oz = 56.7 grams								

CANNABINOIDS ASSAY

Analysis	Test Method	LOD	LOQ	Specifications	Test Results	Pass / Fail
CBD	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	0.456 w/w% 4.561 mg/g	Results Reported
CBDa	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
Δ9-THC	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
Δ8-THC	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
Exo-THC	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
THCa	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
CBG	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
CBGa	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
CBN	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
CBNa	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
CBC	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported

CANNABINOIDS ASSAY						
Analysis	**Test Method**	**LOD**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
CBCa	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
CBL	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
CBDV	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
CBDVa	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
THCV	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
THCVa	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	< LOD < LOQ	Results Reported
Total Cannabinoids	UHPLC-DAD	0.0007 w/w%	0.002 w/w%	w/w%: Report Only mg/g: Report Only	0.456 w/w% 4.561 mg/g	Results Reported

RESIDUAL SOLVENTS ASSAY						
Analysis	**Test Method**	**LOD**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
1,1-Dichloroethene	USP <467> by GC-MS	0.007 ppm	0.4 ppm	NMT 8 ppm	< LOD < LOQ	PASS
1,1,1-Trichloroethane	USP <467> by GC-MS	1.25 ppm	75 ppm	NMT 1,500 ppm	< LOD < LOQ	PASS
1,2-Dichloroethane	USP <467> by GC-MS	0.005 ppm	0.25 ppm	NMT 5 ppm	< LOD < LOQ	PASS
Benzene	USP <467> by GC-MS	0.002 ppm	0.1 ppm	NMT 2 ppm	< LOD < LOQ	PASS
Carbon tetrachloride	USP <467> by GC-MS	0.004 ppm	0.2 ppm	NMT 4 ppm	< LOD < LOQ	PASS
1,2-dichloroethene (E,Z)	USP <467> by GC-MS	1.560 ppm	93.5 ppm	NMT 1870 ppm	< LOD < LOQ	PASS
1,2-Dimethoxyethane	USP <467> by GC-MS	0.090 ppm	5 ppm	NMT 100 ppm	< LOD < LOQ	PASS
1,2,3,4-tetrahydronapthalene	USP <467> by GC-MS	0.090 ppm	5 ppm	NMT 100 ppm	< LOD < LOQ	PASS
1,4-Dioxane	USP <467> by GC-MS	0.320 ppm	19 ppm	NMT 380 ppm	< LOD < LOQ	PASS
2-Hexanone	USP <467> by GC-MS	0.042 ppm	2.5 ppm	NMT 50 ppm	< LOD < LOQ	PASS
4-methyl-2-pentanone	USP <467> by GC-MS	4.20 ppm	225 ppm	NMT 4,500 ppm	< LOD < LOQ	PASS
Acetonitrile	USP <467> by GC-MS	0.350 ppm	20.5 ppm	NMT 410 ppm	< LOD < LOQ	PASS
Chlorobenzene	USP <467> by GC-MS	0.30 ppm	18 ppm	NMT 360 ppm	< LOD < LOQ	PASS
Chloroform	USP <467> by GC-MS	0.05 ppm	3 ppm	NMT 60 ppm	< LOD < LOQ	PASS
Cumene	USP <467> by GC-MS	0.06 ppm	3.5 ppm	NMT 70 ppm	< LOD < LOQ	PASS
Cyclohexane	USP <467> by GC-MS	3.3 ppm	194 ppm	NMT 3,880 ppm	< LOD < LOQ	PASS
Dichloromethane	USP <467> by GC-MS	0.50 ppm	30 ppm	NMT 600 ppm	< LOD < LOQ	PASS
Ethylbenzene	USP <467> by GC-MS	1.81 ppm	108.5 ppm	NMT 2,170 ppm	< LOD < LOQ	PASS
Hexane, n-	USP <467> by GC-MS	0.250 ppm	14.5 ppm	NMT 290 ppm	< LOD < LOQ	PASS
Methanol	USP <467> by GC-MS	2.5 ppm	150 ppm	NMT 3,000 ppm	< LOD < LOQ	PASS

RESIDUAL SOLVENTS ASSAY						
Analysis	**Test Method**	**LOD**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
Methylcyclohexane	USP <467> by GC-MS	0.98 ppm	59 ppm	NMT 1,180 ppm	< LOD < LOQ	PASS
Nitromethane	USP <467> by GC-MS	0.045 ppm	2.5 ppm	NMT 50 ppm	< LOD < LOQ	PASS
Pyridine	USP <467> by GC-MS	0.20 ppm	10 ppm	NMT 200 ppm	< LOD < LOQ	PASS
Sulfolane	USP <467> by GC-MS	0.60 ppm	8 ppm	NMT 160 ppm	< LOD < LOQ	PASS
Tetrahydrofuran	USP <467> by GC-MS	0.750 ppm	36 ppm	NMT 720 ppm	< LOD < LOQ	PASS
Toluene	USP <467> by GC-MS	0.07 ppm	44.5 ppm	NMT 890 ppm	< LOD < LOQ	PASS
Trichloroethene	USP <467> by GC-MS	1.3 ppm	4 ppm	NMT 80 ppm	< LOD < LOQ	PASS
Xylene, m-	USP <467> by GC-MS	1.81 ppm	108.5 ppm	NMT 2,170 ppm	< LOD < LOQ	PASS
Xylene, o-	USP <467> by GC-MS	1.81 ppm	108.5 ppm	NMT 2,170 ppm	< LOD < LOQ	PASS
Xylene, p-	USP <467> by GC-MS	4.2 ppm	108.5 ppm	NMT 2,170 ppm	< LOD < LOQ	PASS
1-Butanol	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
1-Pentanol	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
1-Propanol	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
2-Butanol	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
2-Butanone	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
2-methyl-1-propanol	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
2-Propanol	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
3-methyl-1-butanol	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Acetone	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Anisole	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Butyl acetate	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Ethanol	USP <467> by GC-MS	4.2 ppm	250 ppm	Report Only	48,102.98 ppm	Results Reported
Ethyl acetate	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Ethyl ether	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Ethyl formate	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Heptane, n-	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Isobutyl acetate	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Isopropyl acetate	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Methyl acetate	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS

RESIDUAL SOLVENTS ASSAY						
Analysis	**Test Method**	**LOD**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
N,N-Dimethylsulfoxide	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Pentane, n-	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Propyl acetate	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
t-Butyl Methyl Ether	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Triethylamine	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Butane, iso-	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Butane, n-	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
Propane	USP <467> by GC-MS	4.2 ppm	250 ppm	NMT 5,000 ppm	< LOD < LOQ	PASS
1,1-Dichloroethene	USP <467> by GC-MS	0.007 ppm	0.4 ppm	NMT 8 ppm	< LOD < LOQ	PASS
1,1,1-Trichloroethane	USP <467> by GC-MS	1.25 ppm	75 ppm	NMT 1,500 ppm	< LOD < LOQ	PASS

HEAVY METAL ASSAY						
Analysis	**Test Method**	**LOD**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
Lead	USP <232> <233> by ICP-MS	3 ppb	10 ppb	NMT 1000 ppb	< LOD < LOQ	PASS
Mercury	USP <232> <233> by ICP-MS	2 ppb	5 ppb	NMT 500 ppb	< LOD < LOQ	PASS
Cadmium	USP <232> <233> by ICP-MS	3 ppb	10 ppb	NMT 300 ppb	< LOD < LOQ	PASS
Arsenic	USP <232> <233> by ICP-MS	3 ppb	10 ppb	NMT 1500 ppb	< LOD < LOQ	PASS

MICROBIOLOGICAL ASSAY					
Analysis	**Test Method**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
Total Aerobic Plate Count (TAPC)	Isolation Agar	10 CFU/gm	NMT 1,000 CFU/gm	< LOQ	PASS
Total Yeast & Mold (TYM)	Isolation Agar	10 CFU/gm	NMT 100 CFU/gm	< LOQ	PASS
Escherichia coli (E. coli)	Isolation Agar	1 CFU/gm	Absent	Absent	PASS
Campylobacter	Isolation Agar	1 CFU/gm	Absent	Absent	PASS
Listeria Monocytogenes	Isolation Agar	1 CFU/gm	Absent	Absent	PASS
Salmonella	Isolation Agar	1 CFU/gm	Absent	Absent	PASS
Shiga-Toxin E.coli (STEC)	Isolation Agar	1 CFU/gm	Absent	Absent	PASS
Staphylococcus aureus	Isolation Agar	1 CFU/gm	Absent	Absent	PASS
Yersinia	Isolation Agar	1 CFU/gm	Absent	Absent	PASS

PESTICIDES ASSAY						
Analysis	**Test Method**	**LOD**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
Acetamiprid	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Aldicarb	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.400 ppm	< LOD < LOQ	PASS
Azoxystrobin	LC-MS/MS & GC-MS/MS	0.003 ppm	0.010 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Bifenazate	LC-MS/MS & GC-MS/MS	0.002 ppm	0.005 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Boscalid	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Carbaryl (Sevin)	LC-MS/MS & GC-MS/MS	0.040 ppm	0.100 ppm	NMT 0.500 ppm	< LOD < LOQ	PASS
Carbofuran	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Chlorantraniliprole	LC-MS/MS & GC-MS/MS	0.040 ppm	0.100 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Chlorpyrifos	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.600 ppm	< LOD < LOQ	PASS
Cypermethrin	LC-MS/MS & GC-MS/MS	0.009 ppm	0.025 ppm	NMT 18.0 ppm	< LOD < LOQ	PASS
Diazinon	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 2.600 ppm	< LOD < LOQ	PASS
Dichlorvos	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.100 ppm	< LOD < LOQ	PASS
Ethoprophos (Prophos)	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.400 ppm	< LOD < LOQ	PASS
Etofenprox	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.400 ppm	< LOD < LOQ	PASS
Fipronil	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 1.000 ppm	< LOD < LOQ	PASS
Flonicamid	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 1.000 ppm	< LOD < LOQ	PASS
Imidacloprid	LC-MS/MS & GC-MS/MS	0.002 ppm	0.005 ppm	NMT 0.400 ppm	< LOD < LOQ	PASS
Metalaxyl	LC-MS/MS & GC-MS/MS	0.040 ppm	0.100 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Methiocarb	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.400 ppm	< LOD < LOQ	PASS
Methomyl	LC-MS/MS & GC-MS/MS	0.070 ppm	0.200 ppm	NMT 0.400 ppm	< LOD < LOQ	PASS
Methyl parathion	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 8.500 ppm	< LOD < LOQ	PASS
Myclobutanil	LC-MS/MS & GC-MS/MS	0.002 ppm	0.005 ppm	NMT 0.300 ppm	< LOD < LOQ	PASS
Oxamyl	LC-MS/MS & GC-MS/MS	0.090 ppm	0.250 ppm	NMT 1.000 ppm	< LOD < LOQ	PASS
Permethrin (mix of isomers)	LC-MS/MS & GC-MS/MS	0.007 ppm	0.020 ppm	NMT 1.100 ppm	< LOD < LOQ	PASS
Pyridaben	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Spiroxamine	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 2.000 ppm	< LOD < LOQ	PASS
Tebuconazole	LC-MS/MS & GC-MS/MS	0.002 ppm	0.005 ppm	NMT 0.400 ppm	< LOD < LOQ	PASS
Thiacloprid	LC-MS/MS & GC-MS/MS	0.020 ppm	0.050 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS
Thiamethoxam	LC-MS/MS & GC-MS/MS	0.009 ppm	0.025 ppm	NMT 0.200 ppm	< LOD < LOQ	PASS

MYCOTOXINS ASSAY						
Analysis	**Test Method**	**LOD**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
Total Aflatoxins	LC-MS/MS	2 ppm	5 ppb	NMT 20 ppb (20 mcg/kg)	< LOD < LOQ	PASS
Aflatoxin B1	LC-MS/MS	2 ppm	5 ppb	Report Only	< LOD < LOQ	Results Reported
Aflatoxin B2	LC-MS/MS	2 ppm	5 ppb	Report Only	< LOD < LOQ	Results Reported
Aflatoxin G1	LC-MS/MS	2 ppm	5 ppb	Report Only	< LOD < LOQ	Results Reported
Aflatoxin G2	LC-MS/MS	2 ppm	5 ppb	Report Only	< LOD < LOQ	Results Reported
Ochratoxin A	LC-MS/MS	2 ppm	5 ppb	NMT 20 ppb (20 mcg/kg)	< LOD < LOQ	PASS

ASPERGILLUS ASSAY					
Analysis	**Test Method**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
Aspergillus flavus	RT-PCR	1 CFU/g	Absent	Absent	PASS
Aspergillus fumigatus	RT-PCR	1 CFU/g	Absent	Absent	PASS
Aspergillus niger	RT-PCR	1 CFU/g	Absent	Absent	PASS
Aspergillus terreus	RT-PCR	1 CFU/g	Absent	Absent	PASS

TESTING FACILITY INFORMATION	SAMPLE INFORMATION
Santé Laboratories 8201 East Riverside Drive, STE 650 Austin, Texas 78744 USA	**Santé Sample ID:** 220710 **Receipt Date:** 02/21/2022 / 09:52 AM CST / M. Cardona **Receipt Condition:** Good **Analysis Start Date:** 02/22/2022

ADDITIONAL REPORT NOTES

The reported results presented in this document are only applicable to samples submitted to Santé Laboratories for testing and may not represent the entire lot and/or batch produced by the manufacturer. **Specifications provided by Sponsor. Cannabinoids tested according to performance methods by AOAC SMPR 2019.003.**

VERSION HISTORY		
Version	**Effective Date**	**Summary of Changes**
00	02/25/2022	Initial Release

REVIEWED AND APPROVED BY

DocuSigned by:
Brian Sloat
1DA7685D65C740B...

25 February 2022 | 12:59:13 PM PST

DD-MM-YY

Brian Sloat, Ph.D.
Chief Scientific Officer / Quality Manager
Santé Laboratories

Date