

Order #: 55983 Order Name: Royal Earth -Tincture - Natural - 2000mg Batch#: TNAT20000001 Received: 06/18/2020

Completed: 06/25/2020



Royal Earth 6285 Mcleod Drive, Unit 4 Las Vegas NV, 89120 (855) 510-8273 info@royalearth.com



Sample



N/D D9-THC 7.273% Total CBD

2,108.5 mg Cannabinoids per unit 2,062.0 mg CBD per unit

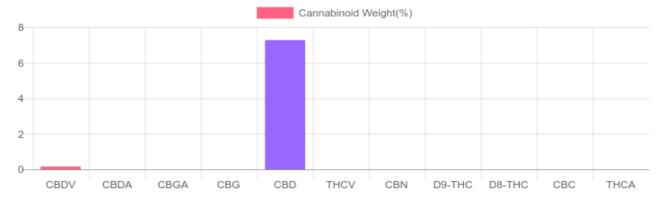
1 unit = 30 ml per unit x density (.945) x Cannabinoid concentration

Cannabinoids Test

SHIMADZU INTEGRATED UPLC-PDA

GSL SOP 400 **PREPARED:** 06/19/2020 12:03:53

Cannabinoids	LOQ	weight(%)	mg/g	mg/unit
D9-THC	10 PPM	N/D	N/D	N/D
THCA	10 PPM	N/D	N/D	N/D
CBD	10 PPM	7.273%	72.733	2,062.0
CBDA	20 PPM	N/D	N/D	N/D
CBDV	20 PPM	0.164%	1.640	46.5
CBC	10 PPM	N/D	N/D	N/D
CBN	10 PPM	N/D	N/D	N/D
CBG	10 PPM	N/D	N/D	N/D
CBGA	20 PPM	N/D	N/D	N/D
D8-THC	10 PPM	N/D	N/D	N/D
THCV	10 PPM	N/D	N/D	N/D
TOTAL D9-THC		N/D	N/D	N/D
TOTAL CBD*		7.273%	72.733	2,062.0
TOTAL CANNABINOIDS		7.437%	74.373	2,108.5



Reporting Limit 10 ppm
*Total CBD = CBD + CBDA x 0.877

N/D - Not Detected, B/LOQ - Below Limit of Quantification

Dr. Andrew Hall, Ph.D., Chief Scientific Officer

Ben Witten, MS, MT., Lab Director

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GSL SOP 404

Prepared: 06/19/2020 17:17:02

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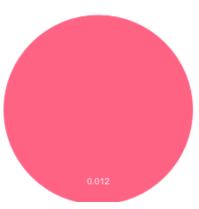


TERPENES: TOTAL (0.022%)

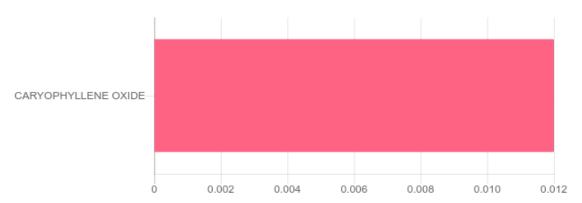
Headspace GCMS - Shimadzu GCMS QP2020 with HS20

Terpene	Results (%)	LOQ (%)	LOD (%)
CARYOPHYLLENE	B/LOQ	0.0067%	0.0063%
CARYOPHYLLENE OXIDE	0.012%	0.0067%	0.0063%
GUAIOL	B/LOQ	0.0067%	0.0063%

Terpenes Breakdown



Top Terpenes Results:



Tested for but not present:

ALPHA-PINENE, CAMPHENE, BETA-MYRCENE, BETA-PINENE, 3-CARENE, ALPHA-TERPINENE, TRANS-BETA-OCIMENE, LIMONENE, P-CYMENE, CIS-BETA-OCIMENE, EUCALYPTOL, GAMMA-TERPINENE, TERPINOLENE, LINALOOL, ISOPULEGOL, GERANIOL, HUMULENE, CIS-NEROLIDOL, TRANS-NEROLIDOL, ALPHA-BISABOLOL

Dr. Andrew Hall. Ph.D..Chief Scientific Officer

D., Chief Scientific Officer Ben Witten, MS, MT., Lab Director

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PESTICIDE ANALYSIS:

GSL SOP 401 **PREPARED:** 06/19/2020 15:46:25

GCMS-MS - Shimadzu GCMS-TQ8040

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
CAPTAN	0.700	N/D	0.003	0.001
CHLORDANE	0.100	N/D	0.003	0.001
CHLORFENAPYR	0.100	N/D	0.003	0.001
COUMAPHOS	0.100	N/D	0.003	0.001

Pesticide	Action Level	LOQ	LOD	
resticide	(ppm)	(ppm)	(ppm)	(ppm)
CYFLUTHRIN	2.000	N/D	0.003	0.001
CYPERMETHRIN	1.000	N/D	0.003	0.001
PARATHION-METHYL	0.100	N/D	0.003	0.001
PENTACHLORONITROBENZENI	E 0.100	N/D	0.003	0.001

LCMS-MS - Shimadzu LCMS-8060

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)	Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ABAMECTIN B1A	0.100	N/D	0.005	0.001	IMIDACLOPRID	5.000	N/D	0.005	0.001
ACEPHATE	0.100	N/D	0.001	0.001	KRESOXIM-METHYL	0.100	N/D	0.010	0.005
ACEQUINOCYL	0.100	N/D	0.001	0.001	MALATHION	0.500	N/D	0.005	0.001
ACETAMIPRID	0.100	N/D	0.005	0.001	METALAXYL	2.000	N/D	0.001	0.001
ALDICARB	0.100	N/D	0.005	0.001	METHIOCARB	0.100	N/D	0.005	0.001
AZOXYSTROBIN	0.100	N/D	0.001	0.001	METHOMYL	1.000	N/D	0.001	0.001
BIFENAZATE	0.100	N/D	0.005	0.001	MEVINPHOS	0.100	N/D	0.001	0.001
BIFENTHRIN	3.000	N/D	0.005	0.001	MYCLOBUTANIL	0.100	N/D	0.005	0.001
BOSCALID	0.100	N/D	0.005	0.001	NALED	0.100	N/D	0.005	0.001
CARBARYL	0.500	N/D	0.003	0.001	OXAMYL	0.500	N/D	0.001	0.001
CARBOFURAN	0.100	N/D	0.001	0.001	PACLOBUTRAZOL	0.100	N/D	0.005	0.001
CHLORANTRANILIPROLE	10.000	N/D	0.005	0.005	PERMETHRINS	0.500	N/D	0.005	0.001
CHLORPYRIFOS	0.100	N/D	0.001	0.001	PHOSMET	0.100	N/D	0.005	0.001
CLOFENTEZINE	0.100	N/D	0.001	0.001	PIPERONYL	3.000	N/D	0.001	0.001
DAMINOZIDE	0.100	N/D	0.005	0.001	BUTOXIDE	3.000	IN/D	0.001	0.001
DIAZINON	0.100	N/D	0.001	0.001	PRALLETHRIN	0.100	N/D	0.005	0.005
DICHLORVOS	0.100	N/D	0.005	0.001	PROPICONAZOLE	0.100	N/D	0.010	0.005
DIMETHOATE	0.100	N/D	0.001	0.001	PROPOXUR	0.100	N/D	0.001	0.001
DIMETHOMORPH	2.000	N/D	0.005	0.001	PYRETHRINS	0.500	N/D	0.005	0.005
ETHOPROPHOS	0.100	N/D	0.001	0.001	(PYRETHRIN I)	0.300	IV/D	0.003	0.005
ETOFENPROX	0.100	N/D	0.001	0.001	PYRIDABEN	0.100	N/D	0.005	0.001
ETOXAZOLE	0.100	N/D	0.010	0.005	SPINETORAM	0.100	N/D	0.001	0.001
FENHEXAMID	0.100	N/D	0.005	0.001	SPINOSAD	0.100	N/D	0.001	0.001
FENOXYCARB	0.100	N/D	0.005	0.001	SPIROMESIFEN	0.100	N/D	0.005	0.001
FENPYROXIMATE	0.100	N/D	0.001	0.001	SPIROTETRAMAT	0.100	N/D	0.001	0.001
FIPRONIL	0.100	N/D	0.003	0.001	SPIROXAMINE	0.100	N/D	0.001	0.001
FLONICAMID	0.100	N/D	0.025	0.010	TEBUCONAZOLE	0.100	N/D	0.005	0.001
FLUDIOXONIL	0.100	N/D	0.003	0.001	THIACLOPRID	0.100	N/D	0.001	0.001
HEXYTHIAZOX	0.100	N/D	0.005	0.001	THIAMETHOXAM	5.000	N/D	0.001	0.001
IMAZALIL	0.100	N/D	0.005	0.001	TRIFLOXYSTROBIN	0.100	N/D	0.001	0.001

 ${\sf N/D} = {\sf Not\ Detected}, A/{\sf LOQ} = {\sf Above\ LOQ\ Level}, B/{\sf LOQ} = {\sf Below\ LOQ\ Level}, B/{\sf LOD} = {\sf Below\ LOD\ Level}$

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RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

Prepared: 06/19/2020 17:04:44

Residual Solvent	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
1,1-DICHLOROETHENE	8	N/D	0.63	0.63
1,2- DICHLOROETHANE	2	N/D	0.12	0.02
ACETONE	5,000	N/D	140	20
ACETONITRILE	410	N/D	25	1
BENZENE	1	N/D	1	0.5
BUTANE	5,000	N/D	50	10
CHLOROFORM	1	N/D	1	0.5
CIS 1,2-DICHLOROETHENE	5	N/D	0.73	0.18
ETHANOL	5,000	N/D	140	20
ETHYL ACETATE	5,000	N/D	140	20
ETHYL ETHER	5,000	N/D	140	20
ETHYLENE OXIDE	1	N/D	0	0
ISOPROPYL ALCOHOL	5,000	N/D	140	20
METHANOL	3,000	N/D	100	20
METHYLENE CHLORIDE	125	N/D	0.15	0.15
N-HEPTANE	5,000	N/D	140	20
N-HEXANE	290	N/D	18	10
PENTANE	5,000	N/D	140	20
PROPANE	5,000	N/D	20	1
TOLUENE	890	N/D	53	1
TRANS 1,2-DICHLOROETHENE	5	N/D	0.73	0.18
TRICHLOROETHENE	1	N/D	1	0.5
XYLENES	150	N/D	130	20



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Microbial Analysis:

Microbial Analysis GSL SOP 406

Uploaded: 06/23/2020 16:16:15

PCR - Agilent AriaMX Test	Test Method Used	Device Used	LOD	Allowable Criteria	Actual Result	Pass/Fail
STEC E.COLI*	USP 61/62†	ARIAMX PCR	2 COPIES OF DNA	PRESENCE / ABSENT	BELOW LOD	PASS
SALMONELLA*	USP 61/62†	ARIAMX PCR	5 COPIES OF DNA	PRESENCE / ABSENT	BELOW LOD	PASS
ASPERGILLUS	USP 61/62†	ARIAMX PCR	ASP_LOD***	PRESENCE / ABSENT	BELOW LOD	PASS
YEAST AND MOLD	USP 61/62†	ARIAMX PCR	363.05518 CFU/G**	1,000	BELOW THRESHOLD	PASS
TOTAL AEROBIC BACTERIA	USP 61/62†	ARIAMX PCR	0.25316 CFU/G**	10,000	BELOW THRESHOLD	PASS
COLIFORM	USP 61/62†	ARIAMX PCR	3.41539 CFU/G**	100	BELOW THRESHOLD	PASS
ENTEROBACTERIACEAE	USP 61/62†	ARIAMX PCR	0.32951 CFU/G**	100	BELOW THRESHOLD	PASS

[†] USP 61 (enumeration of bacteria TAC, TYM, and ENT/Coliform), USP 62 (identifying specific species E.coli Aspergillus etc) * STEC and Salmonella run as Multiplex

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^{**} CFU/g Calculation based on Select Category Type Gummy MIP/Extract Flower matrix

^{***} Flavus = 2 Copies of DNA / Furnigatis = 2 Copies of DNA Niger = 20 Copies of DNA / Terrus = 10 copies of DNA



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Mycotoxin Analysis:

LC-MS - Shimadzu LCMS-8060 GSL SOP 401

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Analyte	Action Lvl (ppb)	Results (ppb)	
AFLATOXIN B1	20	N/D	
AFLATOXIN B2	20	N/D	
AFLATOXIN G1	20	N/D	
AFLATOXIN G2	20	N/D	
OCHRATOXIN A	20	N/D	

LOQ is 4ppb, LOD is 1ppb

Moisture Analysis:

Shimadzu MOC63U Moisture Balance - GSL SOP 411

Uploaded: 06/19/2020 17:06:40

Moisture %

3.3%

Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030

GSL SOP 403

Uploaded: 06/23/2020 15:09:17

Metal	Action Level (ppb)	Result (ppb)
ARSENIC (AS)	200	B/LOQ
CADMIUM (CD)	200	B/LOQ
MERCURY (HG)	100	B/LOQ
LEAD (PB)	500	B/LOQ

Lower Limit of Quantitation (LOQ) is 75 ppb

Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 06/19/2020 17:06:40

Water

0.68

Filth and Foreign Materials Analysis:

Microscope - Amscope Simul-Focal Trinocular Stereo Zoom Microscope - GSL SOP 409

Uploaded: 06/22/2020 17:43:32

Pass: No Foreign Materials Detected

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