

High Performance Liquid Analytics

111 Westport Plaza Dr. 6th Floor
St. Louis, MO. 63146

Certificate of Analysis

June 15, 2020
Derma Thereal
SAFETY RESULTS

For informational purposes only.

Product Name: Better Sleep Oral Spray
Manufacturer: DermaThereal
Type: Topical
Test: Non-Compliance Full-Panel

PRODUCT IMAGE



Sample ID:-S013
Sample Size: 5ml
Retail Product Size: 50mg/8ml/.25oz
Ordered : 06/06/20
Sampled : 06/07/20
Completed: 06/15/20
Expires: 06/15/21
Sampling Method: SOP Client Method

PASSED

Page 1 of 5

MISC.

| | | | | | | | | |
|------------|--------------|------------|------------|-----------|--------|----------------|------------|----------|
| Pesticides | Heavy Metals | Microbials | Mycotoxins | Residuals | Filth | Water Activity | Moisture | Terpenes |
| PASSED | PASSED | PASSED | PASSED | PASSED | PASSED | NOT TESTED | NOT TESTED | TESTED |

CANNABINOID RESULTS

Total THC
0.0%

Total CBD
6.05mg/ml
CBD/Container: 48.40mg

Total Cannabinoids
48.40mg
Total Cannabinoids/Container: 48.40mg

| | | | | | | | | | | |
|------|------|------|------|------|---------|------|------|-------|---------|------|
| CBC | CBGA | CBG | CBN | THCV | D-8 THC | CBDV | CBDA | CBD | D-9 THC | THCA |
| ND | ND | ND | ND | ND | ND | ND | 0.05 | 30.25 | ND | ND |
| mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v |
| ND | ND | ND | ND | ND | ND | ND | 0.01 | 6.05 | ND | ND |
| mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v | mg/v |
| 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| LOD | LOD | LOD | LOD | LOD | LOD | LOD | LOD | LOD | LOD | LOD |

Foreign Matter PASSED

Analyzed By Weight Date LOD(ppm)
ID-710 .25ml. 06/12/20 N/A

Reviewed On - 06/15/20

Instrument Used : Filth/Foreign Material Microscope

This includes but is not limited to hair, insects, feces, packaging contaminants, and manufacturing waste and by-products.

Cannabinoid Profile Test

| | | | |
|-------------------------------------|----------|-----------------|--------------|
| Analyzed By | Weight | Extraction date | Extracted By |
| ID-710 | 5ml | 06/07/20 | ID-710 |
| Reviewed On - 06/15/20 | | | |
| Instrument Used : HPLA-1100-DAD-#01 | | | |
| Reagent | Dilution | | |
| 030520.03 | 400 | | |

Full spectrum cannabinoid analysis utilizing High Performance Liquid Chromatography with UV detection (HPLC-UV).

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C. Kukowski
LAB DIRECTOR

Signature

06-15-2020
Signed On

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Sampling Method: SOP Client Method

D5 GG9 8

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Terpenes

HYghYX

| HyfYbYg' | @C8'' | I b]hg'' | FYgi `hfl £ |
|-----------------------|-------|----------|-------------|
| 5 @<5!798F9B9C | 0.007 | % | ND |
| 5 @<5!<I AI @B9' | 0.007 | % | ND |
| 5 @<5!D-B9B9' | 0.007 | % | ND |
| 5 @<5!H9FD-B9B9' | 0.007 | % | ND |
| 69H5!AMF79B9' | 0.007 | % | ND |
| 69H5!D-B9B9' | 0.007 | % | ND |
| 6 CFB9C @ | 0.013 | % | ND |
| 7 5 AD<9B9' | 0.007 | % | ND |
| 7 5 AD<CF | 0.013 | % | ND |
| 7 5 FMCD<M@@B9'CL-89' | | | |
| 7 98 FC @ | 0.007 | % | ND |
| 5 @<5!6-G56C @ @ | 0.007 | % | ND |
| G56-B9B9 | 0.007 | % | ND |
| G56-B9B9'<M8F5H9 | 0.007 | % | ND |
| H9FD-B9C @ | 0.007 | % | ND |
| H9FD-BC @B9 | 0.007 | % | ND |
| 69H5!75 FMCD<M@@B9' | 0.007 | % | ND |
| HF5 BG!B9FC @8C @ | 0.007 | % | ND |
| J5 @B79B9' | 0.007 | % | ND |
| DI @; CB9' | 0.007 | % | ND |
| 5 @<5!D<9 @G B8F9B9' | 0.007 | % | ND |
| C7-A9B9' | 0.007 | % | ND |
| B9FC @ | 0.007 | % | ND |
| @B5 @C @ | 0.007 | % | ND |
| @ACB9B9' | 0.007 | % | ND |
| ; I 5-C @ | 0.007 | % | ND |
| ; 9F5BM@579H5H9 | 0.007 | % | ND |
| ; 9F5B-C @ | 0.007 | % | ND |
| ; 5AA5!H9FD-B9B9 | 0.007 | % | ND |
| : 9B7<CB9 | 0.007 | % | ND |
| : 5FB9G9B9' | 0.007 | % | ND |
| HcHJ' | \$' | | |

| HyfYbYg' | @C8'' | I b]hg'' | FYgi `hfl £ |
|-------------------|-------|----------|-------------|
| 9I 75 @DHC @ | 0.007 | % | ND |
| -GC6 CFB9C @ | 0.007 | % | ND |
| <9L5<M8FCH<MAC @ | 0.007 | % | ND |
| : 9B7<M@5 @7C<C @ | 0.007 | % | ND |
| '!75F9B9 | 0.007 | % | ND |
| 7-G!B9FC @8C @ | 0.007 | % | ND |
| -GCDI @; C @ | 0.007 | % | ND |

Terpenes

H9 GH9 8'

| | | |
|---|------------------|---------------|
| 5bUmYX'Vmi K YJ[\ h | 9I HfUWjcb'XUH | '9I HfUWYX'6m |
| ID-710 | 1.0045g 06/08/20 | ID-710 |
| FYj JYk YX'Cb - 06/15/20 | | |
| -ghfi a Ybhl gYX'. Liquid Injection GCMS QP2010 | | |

| FYU[Ybhi | 8]i Hcb' | 7cbgi a g"-8' |
|------------|----------|---------------|
| 021420.11 | 10 | 180111 |
| 012120.R13 | | 280653964 |

Terpenoid profile screening is performed using GC-MS with Liquid Injection (Gas Chromatography – Mass Spectrometer) which can screen 38 terpenes using Method SOP.T.40.091 Terpenoid Analysis Via GC/MS.

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Pesticides

PASSED

| Pesticides | LOD | Units | Action Level | Result | Pesticides | LOD | Units | Action Level | Result |
|----------------------|------|-------|--------------|--------|------------------------|-------|-------|--------------|--------|
| ABAMECTIN B1A | 0.01 | ppm | 0.3 | ND | METHOMYL | 0.01 | ppm | 0.1 | ND |
| ACEPHATE | 0.01 | ppm | 3 | ND | METHYL PARATHION | 0.005 | ppm | 0.1 | ND |
| ACEQUINOCYL | 0.01 | ppm | 2 | ND | MEVINPHOS | 0.01 | ppm | 0.1 | ND |
| ACETAMIPRID | 0.01 | ppm | 3 | ND | MYCLOBUTANIL | 0.01 | ppm | 3 | ND |
| ALDICARB | 0.01 | ppm | 0.1 | ND | NALED | 0.025 | ppm | 0.5 | ND |
| AZOXYSTROBIN | 0.01 | ppm | 3 | ND | OXAMYL | 0.05 | ppm | 0.5 | ND |
| BIFENAZATE | 0.01 | ppm | 3 | ND | PACLOBUTRAZOL | 0.01 | ppm | 0.1 | ND |
| BIFENTHRIN | 0.01 | ppm | 0.5 | ND | PHOSMET | 0.01 | ppm | 0.2 | ND |
| BOSCALID | 0.01 | ppm | 3 | ND | PIPERONYL BUTOXIDE | 0.1 | ppm | 3 | ND |
| CAPTAN | 0.07 | ppm | 3 | ND | PRALLETHRIN | 0.01 | ppm | 0.4 | ND |
| CARBARYL | 0.05 | ppm | 0.5 | ND | PROPICONAZOLE | 0.01 | ppm | 1 | ND |
| CARBOFURAN | 0.01 | ppm | 0.1 | ND | PROPOXUR | 0.01 | ppm | 0.1 | ND |
| CHLORANTRANILIPROLE | 0.1 | ppm | 3 | ND | PYRETHRINS | 0.05 | ppm | 1 | ND |
| CHLORFENAPYR | 0.01 | ppm | 0.1 | ND | PYRIDABEN | 0.02 | ppm | 3 | ND |
| CHLORMEQUAT CHLORIDE | 0.05 | ppm | 3 | ND | SPINETORAM | 0.02 | ppm | 3 | ND |
| CHLORPYRIFOS | 0.01 | ppm | 0.1 | ND | SPIROMESIFEN | 0.01 | ppm | 3 | ND |
| CLOFENTEZINE | 0.02 | ppm | 0.5 | ND | SPIROTETRAMAT | 0.01 | ppm | 3 | ND |
| COUMAPHOS | 0.01 | ppm | 0.1 | ND | SPIROXAMINE | 0.01 | ppm | 0.1 | ND |
| CYFLUTHRIN | 0.05 | ppm | 1 | ND | TEBUCONAZOLE | 0.01 | ppm | 1 | ND |
| CYPERMETHRIN | 0.05 | ppm | 1 | ND | THIACLOPRID | 0.01 | ppm | 0.1 | ND |
| DAMINOZIDE | 0.01 | ppm | 0.1 | ND | THIAMETHOXAM | 0.05 | ppm | 1 | ND |
| DIAZANON | 0.01 | ppm | 0.2 | ND | TOTAL CONTAMINANT LOAD | 0 | ppm | 20 | ND |
| DICHLORVOS | 0.01 | ppm | 0.1 | ND | (PESTICIDES) | | | | |
| DIMETHOATE | 0.01 | ppm | 0.1 | ND | TOTAL PERMETHRIN | 0.01 | ppm | 1 | ND |
| DIMETHOMORPH | 0.02 | ppm | 3 | ND | TOTAL SPINOSAD | 0.01 | ppm | 3 | ND |
| ETHOPROPHOS | 0.01 | ppm | 0.1 | ND | TRIFLOXYSTROBIN | 0.01 | ppm | 3 | ND |
| ETOFENPROX | 0.01 | ppm | 0.1 | ND | | | | | |
| ETOXAZOLE | 0.01 | ppm | 1.5 | ND | | | | | |
| FENHEXAMID | 0.01 | ppm | 3 | ND | | | | | |
| FENOXYCARB | 0.01 | ppm | 0.1 | ND | | | | | |
| FENPYROXIMATE | 0.01 | ppm | 2 | ND | | | | | |
| FIPRONIL | 0.01 | ppm | 0.1 | ND | | | | | |
| FLONICAMID | 0.01 | ppm | 2 | ND | | | | | |
| FLUDIOXONIL | 0.01 | ppm | 3 | ND | | | | | |
| HEXYTHIAZOX | 0.01 | ppm | 2 | ND | | | | | |
| IMAZALIL | 0.01 | ppm | 0.1 | ND | | | | | |
| IMIDACLOPRID | 0.04 | ppm | 3 | ND | | | | | |
| KRESOXIM-METHYL | 0.01 | ppm | 1 | ND | | | | | |
| MALATHION | 0.02 | ppm | 2 | ND | | | | | |
| METALAXYL | 0.01 | ppm | 3 | ND | | | | | |
| METHIOCARB | 0.01 | ppm | 0.1 | ND | | | | | |

Pesticides

PASSED

| | | | |
|-------------|---------|-----------------|--------------|
| Analyzed by | Weight | Extraction date | Extracted By |
| ID-710 | 1.0501g | 06/08/20 | ID-710 |

Reviewed On - 06/15/20
Instrument Used : Liquid Injection GCMS QP2010

| | | |
|------------|----------|-------------|
| Reagent | Dilution | Consums. ID |
| 013120.28 | 10 | 180111 |
| 031220.R10 | | 280653964 |
| 032320.R17 | | |

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Sampling Method: SOP Client Method

PASSED

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Residual solvents

PASSED

| Solvent | LOD | Units | Action Level (PPM) | Pass/Fail | Result | Analyzed by | Weight | Extraction date | Extracted By |
|----------------------|------|-------|--------------------|-----------|---------|--|----------------------|--|--------------|
| | | | | | | ID-710 | 0.0294g | 06/08/20 | ID-710 |
| 1,1-DICHLOROETHENE | 1 | ppm | 8 | PASS | ND | Reviewed On - 06/15/20 Instrument Used : Headspace GCMS | | | |
| 1,2-DICHLOROETHANE | 0.18 | ppm | 2 | PASS | ND | | | | |
| 2-PROPANOL | 45 | ppm | 500 | PASS | ND | | | | |
| ACETONE | 67.5 | ppm | 750 | PASS | ND | | | | |
| ACETONITRILE | 5.4 | ppm | 60 | PASS | ND | Reagent | Dilution 1 | Consums. ID 00279984 161291-1 24154107 | |
| BENZENE | 0.09 | ppm | 1 | PASS | ND | | | | |
| BUTANES (N-BUTANE) | 96 | ppm | 5000 | PASS | ND | | | | |
| CHLOROFORM | 0.18 | ppm | 2 | PASS | ND | | | | |
| DICHLOROMETHANE | 3.75 | ppm | 125 | PASS | ND | | | | |
| ETHANOL | 90 | ppm | 000000 | PASS | 776.749 | | | | |
| ETHYL ACETATE | 36 | ppm | 400 | PASS | ND | | | | |
| ETHYL ETHER | 45 | ppm | 500 | PASS | ND | | | | |
| ETHYLENE OXIDE | 0.6 | ppm | 5 | PASS | ND | | | | |
| HEPTANE | 45 | ppm | 5000 | PASS | ND | | | | |
| METHANOL | 22.5 | ppm | 250 | PASS | ND | | | | |
| N-HEXANE | 4.5 | ppm | 250 | PASS | ND | | | | |
| PENTANES (N-PENTANE) | 67.5 | ppm | 750 | PASS | ND | | | | |
| PROPANE | 120 | ppm | 5000 | PASS | ND | | | | |
| TOLUENE | 13.5 | ppm | 150 | PASS | ND | | | | |
| TOTAL XYLENES | 13.5 | ppm | 150 | PASS | ND | | | | |
| TRICHLOROETHYLENE | 2.25 | ppm | 25 | PASS | ND | | | | |

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Sampling Method: SOP Client Method

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Derma Thereal

Mycotoxins PASSED

| Analyte | LOD | Units | Result | Action Level (PPM) |
|---------------|-------|-------|--------|--------------------|
| AFLATOXIN G2 | 0.002 | ppm | ND | 0.02 |
| AFLATOXIN G1 | 0.002 | ppm | ND | 0.02 |
| AFLATOXIN B2 | 0.002 | ppm | ND | 0.02 |
| AFLATOXIN B1 | 0.002 | ppm | ND | 0.02 |
| OCHRATOXIN A+ | 0.002 | ppm | ND | 0.02 |

Aflatoxins B1, B2, G1, G2, and Ochratoxins A testing using LC-MS. (Method: SOP.T.30.065 for Sample Preparation and SOP.T.40.065 Procedure for Mycotoxins Quantification Using LCMS. LOQ 1.0 ppb). Aflatoxin B1, B2, G1, and G2 must individually be <20ug/Kg. Ochratoxins must be <20ug/Kg.

Heavy Metals PASSED

| Reagent | Dilution |
|------------|----------|
| 032420.R01 | 50 |
| 031820.R03 | |
| 031820.R02 | |
| 031920.R01 | |
| 111319.02 | |

| Metal | LOD | Unit | Result | Action Level (PPM) |
|---------|------|------|--------|--------------------|
| ARSENIC | 0.02 | ppm | ND | .5 |
| CADMIUM | 0.02 | ppm | ND | 0.5 |
| LEAD | 0.05 | ppm | ND | 0.5 |
| MERCURY | 0.02 | ppm | ND | 3 |

Microbials PASSED

| Analyte | Result |
|-------------------------------|------------------------|
| ASPERGILLUS_FLAVUS | not present in 1 gram. |
| ASPERGILLUS_FUMIGATUS | not present in 1 gram. |
| ASPERGILLUS_NIGER | not present in 1 gram. |
| ASPERGILLUS_TERREUS | not present in 1 gram. |
| ESCHERICHIA_COLI_SHIGELLA_SPP | not present in 1 gram. |
| SALMONELLA_SPECIFIC_GENE | not present in 1 gram. |
| TOTAL_YEAST_AND_MOLD | <100 |

| Analyzed by | Weight | Extraction date | Extracted By |
|-------------|---------|-----------------|--------------|
| ID-710 | 0.2808g | 06/07/20 | ID-710 |

Reviewed On - 06/15/20
Instrument Used : ICPMS-2030 B

Reviewed On - 06/15/20
Instrument Used : PathogenDX PCR_Array Scanner,PathogenDX PCR_DA-171

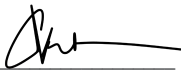
| Analyzed by | Weight | Extraction date | Extracted By |
|-------------|---------|-----------------|--------------|
| ID-710 | 1.0197g | 06/07/20 | ID-710 |

| Reagent | Dilution | Consums. ID |
|---------|----------|-------------|
| | | 181019-274 |

Microbiological testing for Fungal and Bacterial Identification via Polymerase Chain Reaction (PCR) method consisting of sample DNA amplified via tandem Polymerase Chain Reaction (PCR) as a crude lysate which avoids purification. (Method SOP.T.40.043) If a pathogenic Escherichia Coli, Salmonella, Aspergillus fumigatus, Aspergillus flavus, Aspergillus niger, or Aspergillus terreus is detected in 1g of a sample, the sample fails the microbiological-impurity testing.

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