Analytical Report

Report To:
Connecticut Pharmaceutical Solutions
Attn: Rino Ferrarese, Mark June-Wells
& Kim Provera & Nancy Poltrack
47 Lower Main St
Portland CT 06480

E-Mail: **rino.ferrarese@ctpharma.com**
mark.june.wells@ctpharma.com
kim.provo@ctpharma.com
npoltrack@gmail.com

Date Received: **8/31/2016**

Date Tested: **8/31/2016**
Laboratory Report#: **NCPS092216-01**

Report Date: **9/22/2016**

Sample Site:	**CONNECTICUT PHARMACEUTICAL SOLUTIONS** • **47 LOWER MAIN STREET, PORTLAND CT**
Date Collected:	**8/31/2016 11:30** **Collected by: CA of NELabs**
Laboratory ID #:	**1667159 – 01**
Product Description:	**GRK 042916**

Parameter	Result	Units		Recommended Limits *
Total Aerobic Microbial Count	7,500	per gram	PASS	100,000
Total Yeast & Mold Count	2,300	per gram	PASS	10,000
Bile Tolerant Gram Negative Bacteria	<100	per gram	PASS	1,000
Coliform	<100	per gram	PASS	1,000
Enteropathogenic E.coli	Not Detected	per gram	PASS	Not Detected
Salmonella species	Not Detected	per gram	PASS	Not Detected

*** RECOMMENDED LIMITS: per American Herbal Pharmacopoeia (2013)**

PASS = Product meets Microbial and Fungal Recommended Limits per American Herbal Pharmacopoeia (2013)

METHODS: USP 2021, USP 2022, FDA-BAM, AOAC 996.09

Comments:
- Results are based on sample/s submitted to Northeast Laboratories, Inc. on: 8/31/2016

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Alan C. Johnson, Laboratory Director

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Date Tested: **9/8 – 9/9 2016**
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HEAVY METALS:

Parameter	Result	Units		Limits
Arsenic, Total	<0.0005	µg/kg BW/day	PASS	<0.14
Cadmium, Total	<0.002	µg/kg BW/day	PASS	<0.09
Lead, Total	<0.002	µg/kg BW/day	PASS	<0.29
Mercury, Total	<0.005	µg/kg BW/day	PASS	<0.29

Daily Dose: 1 gram
Body Weight: 50 kilograms

METHODS: **USP <232> and <233> (Modified)**
AOAC 986.15, 935.50, 971.21
FCC 7, Appendix 3

LIMITS: per American Herbal Pharmacopoeia (2013)

PASS = Product meets Heavy Metals Recommended Limits per American Herbal Pharmacopoeia (2013)

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EXPANDED TERPENES (% Dry Weight)	**Result**	**Units**
a-pinene	1.24	%
camphene	0.20	%
sabinene	---	%
b-pinene	---	%
b-myrcene	0.11	%
a-phellandrene	---	%
3-carene	---	%
a-terpinene	---	%
limonene	---	%
eucalyptol	---	%
ocimene	---	%
b-terpinene	---	%
Terpineol	---	%
terpinolene	---	%
linalool	---	%
(+)-fenchone	---	%
L(-)fenchone	---	%
fenchol	---	%
(-)isopulegol	---	%
camphor	---	%
isoborneol	---	%
(-)-borneol	---	%

METHODS: **GC, GC/MS**

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EXPANDED TERPENES (% Dry Weight)	**Result**	**Units**
menthol	---	%
geraniol	---	%
nerol	---	%
(+)-pulegol	---	%
trans-b-farnesene	---	%
geranyl acetate	---	%
a-cedrene	---	%
b-caryophyllene	0.51	%
b-farnesene	---	%
humulene	0.30	%
a-farnesene	---	%
valencene	---	%
cis-nerolidol	---	%
trans-nerolidol	---	%
guaiol	---	%
caryophyllene oxide	0.72	%
cedrol	---	%
b-eudesmol	---	%
a-bisabolol	---	%

METHODS: **GC, GC/MS**

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PESTICIDES LC (MS/MS)

Parameter	Result	Units		Limits
Abamectin	<0.01	mg/kg	PASS	15
Acequinocyl	<0.01	mg/kg	PASS	14
Azadiractin	<0.01	mg/kg	PASS	60
Bifenazate	<0.01	mg/kg	PASS	6
Bifenthrin	<0.01	mg/kg	PASS	12
Chlormequat Chloride	<0.01	mg/kg	PASS	30
Cyfluthrin	<0.01	mg/kg	PASS	12
Daminozide	<0.01	mg/kg	PASS	270
Etoxazole	<0.01	mg/kg	PASS	24
Fenoxycarb	<0.01	mg/kg	PASS	32
Imazalil	<0.01	mg/kg	PASS	6
Imidacloprid	<0.01	mg/kg	PASS	36
Myclobutanil	<0.01	mg/kg	PASS	18
Paclobutrazol	<0.01	mg/kg	PASS	13
Pyrethrum	<0.01	mg/kg	PASS	3
Spinosad	<0.01	mg/kg	PASS	12
Spiromesifen	<0.01	mg/kg	PASS	15
Spirotetramat	<0.01	mg/kg	PASS	30
Trifloxystrobin	<0.01	mg/kg	PASS	60

LOQ = 1.0 µg/kg LOD = 0.1 µg/kg

METHODS: **LC – MS/MS (Restek Method)**
LIMITS: per FAO - WHO

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MYCOTOXINS

Parameter	Result	Units		Limits
Method: USP 561-II				
Aflatoxin B1	<5	µg/kg	PASS	5
Aflatoxin B2	<5	µg/kg	PASS	5
Aflatoxin G1	<5	µg/kg	PASS	5
Aflatoxin G2	<5	µg/kg	PASS	5
Method: USP 561-II (Mod)				
Ochratoxin-A	<5	µg/kg	PASS	5

METHODS: **USP <561>**
Articles of Botanical Origin: Aflatoxins Method 2 (modified for Ochratoxin)

LIMITS: per American Herbal Pharmacopoeia (2013)

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Date Collected:	**9/15/2016 11:30** **Collected by: CA of NELabs**
Laboratory ID #:	**1667336 – 10**
Product Description:	**GRK 042916 – D**

CANNABINOIDS (% weight)	Result	Units
CBDV	----	% weight
CBDA	----	% weight
CBGA	1.85	% weight
CBG	----	% weight
CBD	----	% weight
THCV	----	% weight
CBN	----	% weight
THC	0.80	% weight
CBC	----	% weight
THCA	21.06	% weight

METHODS: **HPLC**

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