

**Report To:**

Connecticut Pharmaceutical Solutions
Rino Ferrarese & Mark June-Wells, Ph.D.
Kim Provera & Nancy Polltrack
 47 Lower Main St
 Portland CT 06480

Date Received: 3/08/2016
 Date Tested: 3/08/2016

Laboratory Report#: N1665359 - 07
 1st Email Report via C.Appell 3/09/2016

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COA Report Date: 3/14/2016 ★

Sample Site:	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT	
Date Collected:	3/08/2016 10:50 am	Collected By: CA of NELabs
Laboratory ID #:	1665359 - 07	
Product Description:	OC0033 ★	

★ = Note: Per Mark June Well's 3/09/2016 email, product #OC0033's pedigree is (e.g. was made from):

- **OC0033 = per NELabs' Sample ID #N1665359 - 07,** was received for Terpenes and Cannabinoids
 - Cannabinoids were tested on 3/08/2016, 1st emailed by C.Appell on 3/09/2016;
 - Terpenes were tested on 3/10/2016
 - see results below (Terpenes = pg. 1 herein, Cannabinoids = pg. 2 herein)...

as derived from...

- **C0031 = Cannabinoids Report #N1562439 - 08**
 - the sample was received for Cannabinoids analysis only, on 6/03/2015, and tested on 6/04/2015, with results emailed by R.Picard on 6/05/2015.

AND as derived from...

- **CTS #060115 (a/k/a Canna-Tsu) = Full Range Report #N1563767 - 01**
 - the sample was received on 9/17/2015, and with Cannabinoids tested on 9/21/2016 (with results 1st emailed by R.Picard on 9/21/2015); and Terpenes tested on 9/23/2015
 - The Full Range Results (pages 1 thru 6) then were reported on 9/29/2016

AND as derived from...

- **CTS #072215 (a/k/a Canna-Tsu Flower) = Full Range Report #N1564279 - 01**
 - the sample was received on 11/09/2015, and with Cannabinoids tested on 9/21/2016 (with results 1st emailed by R.Picard on 11/09/2015); and Terpenes tested on 11/10/2015
 - The Full Range Results (pages 1 thru 6) then were reported on 11/17/2016

TERPENE PROFILE	★ = Sample #OC0033	
(% Dry Weight)	Results	Units
Monoterpenoids		
a-pinene	---	%
b-pinene	---	%
b-myrcene	0.02	%
limonene	0.03	%
ocimene	---	%
terpinolene	0.03	%
linalool	0.15	%
Sesquiterpenoids		
b-caryophyllene	0.28	%
humulene	0.12	%
trans-nerolidol	---	%
caryophyllene oxide	---	%
b-eudesmol	0.32	%

METHODS: GC, GC/MS

Comments: Results are based on sample/s submitted to Northeast Laboratories, Inc. on: 3/08/2016

Approved By: 

Alan C. Johnson, Laboratory Director

Northeast Laboratories, Inc. 129 Mill Street Berlin, CT 06037 www.nelabsct.com

Telephone: 860-828-9787 Toll Free (In State) 800-826-0105 (Out of State) 800-654-1230 Fax: 860-829-1050
 CT Cert. #PH-0404 EPA Cert. #CT-024 USDA Cert. #0976 FDA Reg. #086650488 DEA Reg.: Federal #RN0281852 + CT #624



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COA Report Date: 3/14/2016 ★

<u>Sample Site:</u>	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT		
<u>Date Collected:</u>	3/08/2016 10:50 am	Collected By: CA of NELabs	
<u>Laboratory ID #:</u>	1665359 - 07		
Product Description:	OC0033 ★		

★ = Note: Per Mark June Well's 3/09/2016 email, product #OC0033's pedigree is (e.g. was made from):

- **OC0033 = per NELabs' Sample ID #N1665359 - 07, was received for Terpenes and Cannabinoids**
 - Cannabinoids were tested on 3/08/2016, 1st emailed by C.Appell on 3/09/2016;
 - Terpenes were tested on 3/10/2016
 - see results below (Terpenes = pg. 1 herein, Cannabinoids = pg. 2 herein)...

as derived from...

- **C0031 = Cannabinoids Report #N1562439 - 08**
 - the sample was received for Cannabinoids analysis only, on 6/03/2015, and tested on 6/04/2015, with results emailed by R.Picard on 6/05/2015.

AND as derived from...

- **CTS #060115 (a/k/a Canna-Tsu) = Full Range Report #N1563767 - 01**
 - the sample was received on 9/17/2015, and with Cannabinoids tested on 9/21/2016 (with results 1st emailed by R.Picard on 9/21/2015); and Terpenes tested on 9/23/2015
 - The Full Range Results (pages 1 thru 6) then were reported on 9/29/2016

AND as derived from...

- **CTS #072215 (a/k/a Canna-Tsu Flower) = Full Range Report #N1564279 - 01**
 - the sample was received on 11/09/2015, and with Cannabinoids tested on 9/21/2016 (with results 1st emailed by R.Picard on 11/09/2015); and Terpenes tested on 11/10/2015
 - The Full Range Results (pages 1 thru 6) then were reported on 11/17/2016

CANNABINOIDS		
★ = Sample #OC0033		
(% weight)	Result	Units
CBDV	----	% weight
CBDA	46.09	% weight
CBGA	0.99	% weight
CBG	0.68	% weight
CBD	4.16	% weight
THCV	----	% weight
CBN	0.09	% weight
THC	9.57	% weight
CBC	0.60	% weight
THCA	20.80	% weight

METHODS: HPLC

Comments: Results are based on sample/s submitted to Northeast Laboratories, Inc. on: 3/08/2016

Approved By:

Alan C. Johnson, Laboratory Director

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 CT Cert. #PH-0404 EPA Cert. #CT-024 USDA Cert. #0976 FDA Reg. #086650488 DEA Reg.: Federal #RN0281852 + CT #624

**Report To:**

Connecticut Pharmaceutical Solutions

Attn: Rino Ferrarese

47 Lower Main St

Portland CT 06480

Date Received: 11/09/2015

Date Tested: 11/09/2015

Laboratory Report#: N1564279

Report Date: 11/17/2015

E-Mail: rino.ferrarese@ctpharma.com

Sample Site:	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT
Date Collected:	11/09/2015 12:35 PM
Collected by:	CA of NELabs
Laboratory ID #:	1564279 - 01
Product Description:	CANNA TSU FOLWER, BATCH # CTS072215

<u>Parameter</u>	<u>Result</u>	<u>Units</u>		<u>Recommended Limits *</u>
Total Aerobic Microbial Count	300	per gram	PASS	100,000
Total Yeast & Mold Count	100	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: 11/09/2015

Approved By:

Alan C. Johnson, Laboratory Director

**Report To:**

Connecticut Pharmaceutical Solutions

Attn: Rino Ferrarese

47 Lower Main St

Portland CT 06480

Date Received: 11/09/2015**Date Tested:** 11/12+13/2015**Laboratory Report#:** N1564279**Report Date:** 11/17/2015**E-Mail:** rino.ferrarese@ctpharma.com

Sample Site:	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT
Date Collected:	11/09/2015 12:35 PM
Collected by:	CA of NELabs
Laboratory ID #:	1564279 - 01
Product Description:	CANNA TSU FOLWER, BATCH # CTS072215

HEAVY METALS:

<u>Parameter</u>	<u>Result</u>	<u>Units</u>		<u>Limits</u>
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)

Comments:

- Results are based on sample/s submitted to Northeast Laboratories, Inc. on: 11/09/2015

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Alan C. Johnson, Laboratory Director

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Date Received: 11/09/2015**Date Tested:** 11/10/2015**Laboratory Report#:** N1564279**Report Date:** 11/17/2015**E-Mail:** rino.ferrarese@ctpharma.com

Sample Site:	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT
Date Collected:	11/09/2015 12:35 PM
Collected by:	CA of NELabs
Laboratory ID #:	1564279 – 01
Product Description:	CANNA TSU FOLWER, BATCH # CTS072215

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
Chloromequat 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**Comments:**

- Results are based on sample/s submitted to Northeast Laboratories, Inc. on: 11/09/2015

Approved By:

Alan C. Johnson, Laboratory Director

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Date Received: 11/09/2015

Date Tested: 11/10/2015

Laboratory Report#: N1564279

Report Date: 11/17/2015

E-Mail: rino.ferrarese@ctpharma.com

Sample Site:	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT
Date Collected:	11/09/2015 12:35 PM
Collected by:	CA of NELabs
Laboratory ID #:	1564279 - 01
Product Description:	CANNA TSU FOLWER, BATCH # CTS072215

MYCOTOXINS				
Parameter	Result	Units		Limits
<u>Method: USP 561-II</u>				
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
<u>Method: USP 561-II (Mod)</u>				
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)**Comments:**

- Results are based on sample/s submitted to Northeast Laboratories, Inc. on: 11/09/2015

Approved By:

Alan C. Johnson, Laboratory Director

**Report To:**

Connecticut Pharmaceutical Solutions

Attn: Rino Ferrarese

47 Lower Main St

Portland CT 06480

Date Received: 9/17/2015**Date Tested:** 9/17/2015**Laboratory Report#:** N1563767**Report Date:** 9/29/2015**E-Mail:** rino.ferrarese@ctpharma.com

Sample Site:	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT
Date Collected:	9/17/2015 14:10
Collected by:	CA of NELabs
Laboratory ID #:	1563767 - 01
Product Description:	CANNA-TSU -- BATCH #060115

<u>Parameter</u>	<u>Result</u>	<u>Units</u>		<u>Recommended Limits *</u>
Total Aerobic Microbial Count	<100	per gram	PASS	100,000
Total Yeast & Mold Count	500	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: 9/17/2015

Approved By:

Alan C. Johnson, Laboratory Director

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Connecticut Pharmaceutical Solutions

Attn: Rino Ferrarese

47 Lower Main St

Portland CT 06480

Date Received: 9/17/2015

Date Tested: 9/29/2015

Laboratory Report#: N1563767

Report Date: 9/29/2015

E-Mail: rino.ferrarese@ctpharma.com

Sample Site:	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT
Date Collected:	9/17/2015 14:10
Collected by:	CA of NELabs
Laboratory ID #:	1563767 – 01
Product Description:	<u>CANNA-TSU -- BATCH #060115</u>

HEAVY METALS:

<u>Parameter</u>	<u>Result</u>	<u>Units</u>		<u>Limits</u>
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	<0.0005	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)

Comments:

- Results are based on sample/s submitted to Northeast Laboratories, Inc. on: 9/17/2015

Approved By:

Alan C. Johnson, Laboratory Director

**Report To:**

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Attn: Rino Ferrarese
47 Lower Main St
Portland CT 06480

Date Received: 9/17/2015

Date Tested: 9/24/2015

Laboratory Report#: N1563767

Report Date: 9/29/2015

E-Mail: rino.ferrarese@ctpharma.com

Sample Site:	CONNECTICUT PHARMACEUTICAL SOLUTIONS • 47 LOWER MAIN STREET, PORTLAND CT
Date Collected:	9/17/2015 14:10
Collected by:	CA of NELabs
Laboratory ID #:	1563767 – 01
Product Description:	CANNA-TSU -- BATCH #060115

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
Chloromequat 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**Comments:**

- Results are based on sample/s submitted to Northeast Laboratories, Inc. on: 9/17/2015

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Date Received: 9/17/2015

Date Tested: 9/23/2015

Laboratory Report#: N1563767

Report Date: 9/29/2015

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Date Collected:	9/17/2015 14:10
Collected by:	CA of NELabs
Laboratory ID #:	1563767 – 01
Product Description:	CANNA-TSU -- BATCH #060115

MYCOTOXINS			
Parameter	Result	Units	Limits
<i>Method: USP 561-II</i>			
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
<i>Method: USP 561-II (Mod)</i>			
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)**Comments:**

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